# COVERSHEET DOCUMENTS POSTED ON BUILDER'S EXCHANGE OF WASHINGTON



Project Name	Beverly Lake Sewer Replacement and Lift Station #47 Project, City of Everett, WA #UP-3529
Contractor Name	Faber Construction Corporation
Bid Opening Date	April 1, 2025
City Clerk's Digital Certification Stamp	

# **CITY OF EVERETT, WASHINGTON**

**DEPARTMENT OF PUBLIC WORKS** 

# SPECIFICATIONS, PROPOSAL AND CONTRACT DOCUMENTS FOR

# **BEVERLY LAKE SEWER REPLACEMENT & LIFT STATION #47**

WO # UP3529

03/11/2025



PREPARED BY:

# **CITY OF EVERETT**

PUBLIC WORKS 3200 Cedar Street Everett, WA 98201



Daniel T. Enrico, P.E.
Principal Engineer—Public Works
(425) 257-8981

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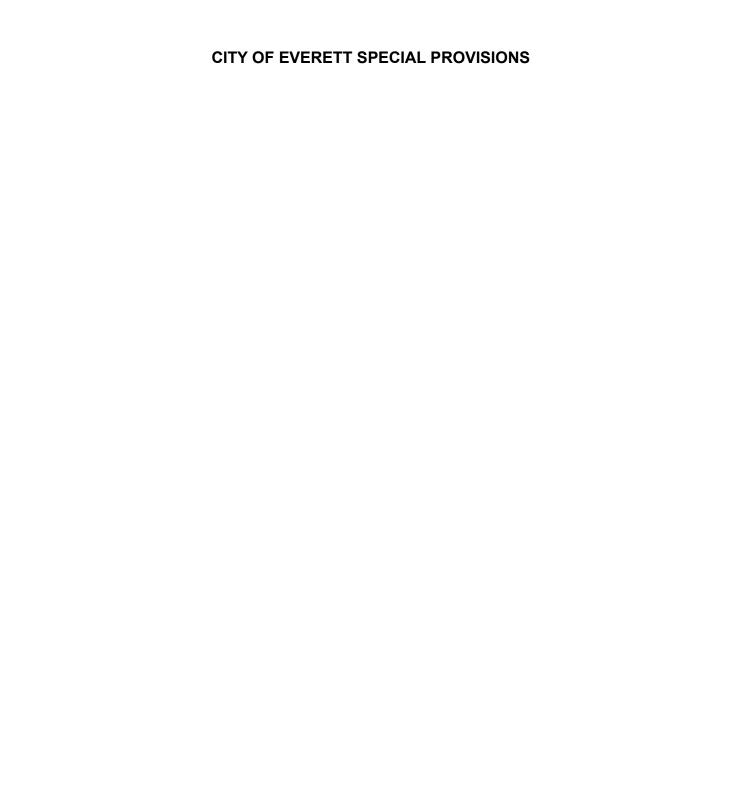
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#### **CITY OF EVERETT, WASHINGTON**

# LIFT STATION 47 - BEVERLY LAKE SEWER REPLACEMENT PROJECT

**WO NO. UP 3529** 

# NOTICE TO CONTRACTORS ADVERTISEMENT FOR BIDS

Notice is hereby given that sealed bids for the Lift Station 47 - Beverly Lake Sewer Replacement Project will be received at the office of the City Clerk, Suite 1A, Wall Street Building, 2930 Wetmore Avenue, Everett, Washington 98201, until 2:00 p.m. on *Tuesday*, *April 1, 2025*. At the appointed time, all bids will be opened at the Procurement Office on the 9th floor and read aloud publicly via live streaming. Interested parties are encouraged to watch via live streaming, however, bidders may also attend the bid opening in person. The engineer's estimate for this Project is \$3,254,847.00

Work to include installation of a new lift station including the vaults, wet well, foundation, roofing, piping, painting, pumps, buried structures, motors, electrical, instrumentation, communication, force main, new electrical service, water service and miscellaneous accessories; abandoning existing sewer facilities; modifications to and installation of new yard piping; restoration of site grading/work, brush removal and trimming; and the installation of fencing, asphalt, concrete paving and other such appurtenances and performing all Work as required by the Contract Documents.

Free-of-charge access to project bid documents (plans, specifications, addenda, and Bidders List) is provided to Prime Bidders, Subcontractors, and Vendors by going to <a href="www.bxwa.com">www.bxwa.com</a> and clicking on "Posted Projects", "Public Works", and "City of Everett". This online plan room provides Bidders with fully usable online documents with the ability to: download, view, print, order full/partial plan sets from numerous reprographic sources, and a free online digitizer/take-off tool. It is recommended that Bidders "Register" in order to receive automatic e-mail notification of future addenda and to place themselves on the "Self-Registered Bidders List". Bidders that do not register will not be automatically notified of addenda and will need to periodically check the on-line plan room for addenda issued on this project. Contact Builders Exchange of Washington at (425) 258-1303 should you require assistance with access or registration.

All bids must be made upon the City forms provided for this purpose and must be accompanied by a bid bond or certified check or cashier's check in an amount not less than five percent (5%) of the total amount of the Bid, all as set forth in the Contract Documents. One hundred percent (100%) Payment and Performance Bonds will be required of the successful Bidder to guarantee faithful performance of the contract. **Optional Pre-Bid meetings will be held at 3200 Cedar St, Everett WA 98201 on Tuesday March 18 at 10AM and on Tuesday March 25 at 1PM.** 

The City reserves the right to reject any and all bids and to waive any irregularities or informalities. No Bidder may withdraw its Bid after the hour set for the opening thereof, except as may be provided in the Contract Documents. The City further reserves the right to make the bid award as deemed in the best interest of the City. The right is reserved by the City to postpone the award for a period of forty-five (45) days after bid opening.

The Contractor will be required to comply with all local, State, and Federal laws and regulations pertaining to equal employment opportunities.

By order of the City Council, Everett, Washington.

Dated at Everett, Washington.

MARISTA JORVE, CITY CLERK

ft Station 47 – Beverly Lake Sewer R ork Order UP 3529	Replacement Projec	t		



# DIVISION P - PROPOSAL CITY OF EVERETT, WASHINGTON LIFT STATION 47 – BEVERLY LAKE SEWER REPLACEMENT PROJECT WO No. UP 3529

To the City Council Everett, Washington

The undersigned Bidder declares that it has carefully examined the Notice to Contractors and the Contract Documents (including without limitation Plans and Specifications, Standard Specifications, Special Provisions, Appendix, Proposal, and Contract) for the construction of approximately Work being performed includes furnishing all labor, materials and equipment necessary to construct approximately 480 linear feet of water service and approximately 700 linear feet of sanitary sewer main, 560 linear feet of sewer force main, 6-48" Sewer Manholes, Lump sum Lift Station Below-Grade, Lump sum Lift Station Above-Grade, 415 ton of HMA, 950 feet of electrical conduit, 3 each Electrical Junction Boxes and other such appurtenances and performing all Work as required by the Contract, in accordance with the Contract Plans and Contract Provisions. And, other such Work as may be necessary, in accordance with the Contract. The undersigned Bidder declares that the Bidder has made such investigations as are necessary to determine the conditions to be encountered, and that, if this Proposal is accepted, the undersigned will enter into a contract with the City of Everett, Washington, in the form of Contract hereto annexed, the undersigned will, to the extent required, provide the necessary equipment, tools, apparatus, and other means of construction, and the undersigned will furnish all labor and materials necessary to complete the Work in the manner herein specified and according to the requirements of the Engineer.

The undersigned Bidder certifies that this Proposal is in all respects fair and is made without collusion on the part of any person, firm or corporation mentioned below, and no officer or employee of the City of Everett is personally or financially interested, directly or indirectly, in the Proposal or in any purchase of or sale of any materials or supplies for the Work to which it relates, or any portion of the profits thereof.

The undersigned Bidder agrees that the undersigned will complete the Work in all respects as required by **Division C, Section 2. Contract Time** and that the Bidder will pay liquidated damages to the City in the amount specified in the Contract Documents.

Accompanying this Proposal is a bid bond or certified check or cashier's check in the amount of five percent (5%) of the Proposal according to the conditions of the "Notice to Contractors" and "Division 1 - General Requirements" hereby incorporated. If this Proposal shall be accepted by the City of Everett, Washington, and the undersigned shall fail to execute a satisfactory contract and bond, as stated in the Division 1 – General Requirements hereto incorporated, within 14 calendar days after the Award Date, then the City may, at its option, determine that the undersigned has abandoned the Contract and the amount of the bid bond or certified check or cashier's check accompanying this Proposal shall be forfeited and become the property of the City of Everett, Washington.

Note: Unit prices for all items, all extensions, and the total amount bid must be shown. Where conflict occurs between the unit price and the total amount named for any item, the unit price shall prevail, and totals shall be corrected to conform thereto. All entries must be typed or entered in ink.

# **BID SCHEDULE**

<b>BIDDER:</b>	
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# CITY OF EVERETT SCHEDULE A LIFT STATION NO. 47 - BEVERLY LAKE SEWER REPLACEMENT PROJECT

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTIT Y	UNIT PRICE	TOTAL AMOUNT
1	MOBILIZATION	LS	1	N/A	\$
2	SURVEYING	LS	1	N/A	\$
3	SPCC PLAN / TEMPORARY EROSION AND SEDIMENTATION CONTROL	LS	1	N/A	\$
4	TRENCH AND EXCAVATION SAFETY SYSTEM	LS	1	N/A	\$
5	TEMPORARY PUMPING / BYPASS	LS	1	N/A	\$
6	DEMOLITION - CURB, ASPHALT, FENCING, SEWER ABANDONMENT, PAVEMENT, CONCRETE, MH, CB, FENCING, LANDSCAPING, ELECTRICAL, VEGETATION	LS	1	N/A	\$
7	TRAFFIC CONTROL LABOR	HR	400		\$
8	MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL	LS	1	N/A	\$
9	STREET CLEANING AND SITE CLEANUP	HR	50		\$
10	STRUCTURAL FILL	TN	750		\$
11	CRUSHED SURFACING BASE COURSE	TN	790		\$
12	SAWCUT PAVEMENT FULL DEPTH	LF	590		\$
13	SAWCUT CONCRETE CURB, GUTTER AND SIDEWALK	LF	20		\$
14	LIFT STATION STRUCTURE BELOW GRADE - CONCRETE BASE SLAB, REINFORCEMENT, HATCHES, GROUT FILL, VAULTS ETC	LS	1	N/A	\$

15	LIFT STATION ABOVE GRADE - ELECTRICAL SHELTER, ELECTRICAL RACK, WATER SERVICE, CONCRETE ETC	LS	1	N/A	\$
16	SUBMERSIBLE PUMP ASSEMBLIES - PUMPS, FRAME, DISCHARGE ASSEMBLY, SENSORS, DI PIPE TO 6" FM ETC	EA	2		\$ 
17	ELECTRICAL, VFD PANEL INSTALL	LS	1	N/A	\$
18	ELECTRICAL - CONTROLS AND INSTRUMENTATION, PULSAR LEVEL SENSOR, ETC	LS	1	N/A	\$
19	PLC CONTROL CABINET INSTALL AND TERMINATIONS				
20	ELECTRICAL MISCELLANEOUS - SITE POWER, HOUSE POWER, LIGHTING, ELECTRICAL RACK AND SHELTER ETC	LS	1	N/A	\$
21	STANDBY GENERATOR - TRANSFER SWITCH, LOAD BANK, DOCKING STATION ETC	LS	1	N/A	\$
22	TRENCH EXCAVATION INCLUDING HAUL	CY	427	N/A	\$
23	TEMP ACCESS PATH AND REMOVAL	TN	150		\$
24	FORCE ACCOUNT	FA	1	N/A	\$ 95,500.00
25	HDPE SANITARY SEWER MAIN, 8-Inch Diam. (Horizontal Directional Drill [HDD] - and/or Trenched)	LF	590		\$
26	HDPE SANITARY SIDE SEWER AND FORCE MAIN, 6-Inch Diam. (HDD)	LF	645		\$
27	HDPE SANITARY SEWER MAIN (TRENCHED), 8-Inch Diam.	LF	50		\$
28	PVC SANITARY SIDE SEWER LATERAL, 6-Inch Diam.	LF	150		\$
29	MANHOLE TYPE 3, 48"	EA	6		\$
30	MANHOLE TYPE 3, 48" (MORE THAN 7' DEEP)	LF	24		\$
31	HDPE FORCE MAIN, 6-Inch Dia Trenched	LF	50		\$
32	WATER SERVICE, 1-INCH ENCASED IN 4" HDPE (HDD)	LF	1100		\$
33	WATER SERVICE CONNECTION, 1-INCH	EA	1		\$
34	UG POWER FROM LS TO JCT BOX .(2-2" Conduit HDD)	LF	475		\$

35	TOPSOIL FOR LANDSCAPE RESTORATION (TYPE A)	CY	600		\$
36	UG POWER FROM SnoPUD POLE TO JCT BOX (2" CONDUIT IN TRENCH	LF	80		\$
37	UG POWER JUNCTION BOX (4'-8"x7' PUD JUNCTION BOX H20 DIAMOND PLATE HATCH)	EA	1		\$
38	REPAIR TRAFFIC LOOPS AND UG POWER FOR ENTRY GATE DETECTION	LF	100		\$
39	PLUMBING WATER SERVICE "HOTBOX"	LS	1	N/A	\$
40	MISC LIFT STATION PIPING - WETWELL VAULT, WYE VAULT, BAR SCREEN VAULT CONNECTIONS	LS	1	N/A	\$
41	LANDSCAPING AND RESTORATION INCLUDING IRRIGATION, ROCKERIES AND RETAINING STRUCTURES	LS	1	N/A	\$
42	HMA SURFACING PARKING LOT	TN	305		\$
43	HMA SURFACING WALKING PATH	TN	88		\$
44	HMA SURFACING ROW	TN	22		\$
45	PLANING BITUMINOUS PAVEMENT (2" DEEP)	SY	1550		\$
46	CONCRETE CURB AND GUTTER (TYPE A-1)	LF	30		\$
47	EXTRUDED CEMENT CONCRETE CURB	LF	100		\$
48	RESTORE CONCRETE SIDEWALK AND DRIVEWAY	SY	60		\$
49	BLOCK WALL AT LIFT STATION SITE	SF	484		\$
50	CHAIN LINK FENCING AND GATES	LF	200		\$
51	ASSIST COE IN CONNECTING TO EXISTING WATERMAIN	EA	1		\$

52	TEMPORARY PAVEMENT PATCH	SY	150		\$
53	TEMPORARY ROADWAY AND PARKING LOT PATCH	LS	1	N/A	\$
54	PERMANENT PAVEMENT MARKING	LS	1	N/A	\$
55	APPRENTICESHIP UTILIZATION	N/A	N/A	N/A	\$5,000.00
				SUBTOT AL	\$
			Washingto Sales Tax (		\$
				TOTAL BID	\$

#### PROPOSAL SIGNATURE SHEET

The undersigned Bidder understands that the quantities mentioned herein are approximate only and are subject to increase or decrease, and hereby proposes to perform all quantities of Work as either increased or decreased in accordance with the provisions of the Contract Documents and at the unit prices bid in the Bid Schedule, unless such schedule designates lump sum bids, or force account items.

The full names and residences of all persons and parties interested in the foregoing Bid as principals are as follows: Name Title Address Bidder acknowledges receipt of Addenda \_\_\_\_\_\_ through\_\_\_\_\_ Bidder has reviewed the insurance provisions of the Contract and hereby certifies that coverage will be provided as required. Yes No In preparing this Bid, Bidder is especially directed to consider 1-07.1(7) NOISE, 1-07.23(1) CONSTRUCTION UNDER TRAFFIC, 1-08.4(2) SPECIAL-CONSTRUCTION CONSTRAINTS, which contains information that must be taken into consideration when preparing this bid. This notice is only a convenience to the Bidder during bidding and in no way relieves the Bidder from fully reading and taking into account all Contract Documents when preparing its Bid. The undersigned Bidder also hereby certifies that, within the three-year period immediately preceding the bid solicitation date for this Project, the Bidder has not been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW. The undersigned hereby declares under penalty of perjury under the laws of the State of Washington that the foregoing sentence is true and correct. Name of Bidder: State of Washington Contractor's License No.\_\_\_\_\_ Signature of Bidder's Authorized Agent: \_\_\_\_\_ City and State Where Signed: Email Address of Bidder's Authorized Agent: This email address may be used by the City to provide notice of any kind to the Bidder. A notice is considered delivered to the Bidder on the date it is emailed to the email address. Dated at: Date:

#### SUBCONTRACTORS FORM

- 1. For heating, ventilation, air conditioning, plumbing (as defined by RCW Chap. 18.106) and electrical work (as defined by RCW Chap. 19.28), and structural steel installation and rebar installation. Bidder MUST either identify itself or Subcontractors in the chart below. If Bidder believes such work is not part of the scope of Work, Bidder shall write "NO WORK".
- Bidder shall not list more than one Subcontractor for each category of work identified, unless 2. Subcontractors vary with bid alternates, in which case the Bidder must indicate which Subcontractor will be used for which alternate.
- 3. Bidder's bid shall be deemed nonresponsive and void if:
  - For heating, ventilation, air conditioning, plumbing, electrical, structural steel installation and rebar installation, Bidder fails (1) to submit as part of the Bid the names of such Subcontractors, (2) to name itself to perform such Work, or (3) to write "No Work"; or
  - Bidder names two or more Subcontractors to perform the same work. В.
- The requirement to name the Bidder's proposed heating, ventilation and air conditioning, plumbing, 4. electrical, structural steel installation and rebar installation subcontractors applies only to proposed heating, ventilation and air conditioning, plumbing, electrical, structural steel installation and rebar installation subcontractors who will contract directly with the general contractor submitting the Bid to the City.
- The heating, ventilation and air conditioning, plumbing, electrical portions of the chart below must be 5. submitted with the bid proposal or within one hour of the published bid submittal time.
- The structural steel installation and rebar installation portions of the chart below must be submitted with 6. the bid proposal or within forty-eight hours of the published bid submittal time.

Type/Scope of Work	Name and Address of Subcontractor/Or Bidder
HEATING	
Subcontractor, bidder or "no work" MUST be	
stated	
VENTILATION AND AIR CONDITIONING	
Subcontractor, bidder or "no work" MUST be	
stated Philipping ( 1 1 1 1 Poly Cl 10 10 C)	
PLUMBING (as described in RCW Chap. 18.106)	
Subcontractor, bidder or "no work" MUST be stated	
ELECTRICAL (as described in RCW Chap.	
19.28)	
Subcontractor, bidder or "no work" MUST be	
stated	
STRUCTURAL STEEL INSTALLATION	
Subcontractor, bidder or "no work" MUST be	
stated	
REBAR INSTALLATION	
Subcontractor, bidder or "no work" MUST be	
stated	

#### **SECTION 00 4539 – RCW 35.22.650 CERTIFICATION**

A set percentage of minority group member employees or minority business subcontracts is not required in the performance of the Work under this Contract. However, RCW 35.22.650 requires bidders (a) to actively solicit (i) employment of minority group members and (ii) subcontract bids from minority businesses, and (b) to submit evidence of its compliance with these requirements for active solicitations:

#### RCW 35.22.650

All contracts by and between a first-class city and contractors for any public work or improvement exceeding the sum of ten thousand dollars, or fifteen thousand dollars for construction of water mains, shall contain the following clause:

"Contractor agrees that the contractor shall actively solicit the employment of minority group members. Contractor further agrees that the contractor shall actively solicit bids for the subcontracting of goods or services from qualified minority businesses. Contractor shall furnish evidence of the contractor's compliance with these requirements of minority employment and solicitation. Contractor further agrees to consider the grant of subcontracts to said minority bidders on the basis of substantially equal proposals in the light most favorable to said minority businesses. The contractor shall be required to submit evidence of compliance with this section as part of the bid."

As used in this section, the term "minority business" means a business at least fiftyone percent of which is owned by minority group members. Minority group members include, but are not limited to, blacks, women, native Americans, Asians, Eskimos, Aleuts, and Hispanics.

I.	Bidder confirms that it actively solicits employment of minority group members [yes or no]
II.	Please estimate the percentage of Bidder's employees on this Project that will be made up of minority group members: [state estimated percentage]
III.	Please estimate the percentage of goods and services that will be subcontracted to minority businesses on this Project: [state estimated percentage]
IV.	List all minority businesses from whom bids or quotes for goods or services on this Project have been solicited (attach additional sheet if necessary):

	Minority Business Name	Address	Goods or Services Involved	Certification Number*	
			etc.) are found at Office pliance.com/FrontEnd/Sea		
	If a minority business d	loes not have a certificat	ion number, the Bidder rat least fifty-one percent	must provide with this	
	group members.		at least my one percent	- owned by minority	
During Contract performance, or in any event prior to final payment, Bidder shall provide the City with the names and addresses of all minority businesses actually awarded subcontracts under the Contract. In the event that a subcontract bid or quote is solicited and listed above and a subcontract is not awarded to the minority business so listed, Contractor shall state the reasons such subcontract was not awarded to the minority business and shall provide the minority business quote together with the actual subcontract price paid and the name of the subcontractor to whom the subcontract was subsequently awarded.					s under the subcontract subcontract ogether with
FAILURE TO PROPERLY COMPLETE AND SUBMIT THIS CERTIFICATION FORM WITH THE BID WILL RESULT IN REJECTION OF BID. THE BIDDER CERTIFIES UNDER PENALTY OF PERJURY UNDER THE LAWS OF THE STATE OF WASHINGTON THAT THE ABOVE IS TRUE AND COMPLETE CORRECT TO THE BEST OF ITS KNOWLEDGE AND BELIEF AND FURTHER AGREES TO PROVIDE INFORMATION AS REQUESTED BY THE CITY REGARDING MINORITY BUSINESS SUBCONTRACTS AND EMPLOYMENT OF MINORITY GROUP MEMBERS.					
Signati	ure:		Date:		

# NON-COLLUSION AFFIDAVIT

STATE OF WASHINGTON ) ) ss COUNTY OF SNOHOMISH )			
The Undersigned, being first duly sworn, on oath so of collusive bid, or made in the interest or on be further says that the Bidder has not directly or indesupplies to put in a sham bid, or any person or cor in any manner sought by collusion to secure an ad-	chalf of any person irectly induced or so poration to refrain f	not therein named; and the under olicited any Bidder on the above W rom bidding; and that said Bidder	rsigned Vork of
Firm Name	Authorized Signa	ature	
SUBSCRIBED and SWORN to before me this	day of	, 20	
		IC in and for the State of ding at	
	My commission	expires:	
NOTICE	TO ALL BIDDER	.s	
To report bid rigging activities call:			
1-8	800-424-9071		
The U.S. Department of Transportation (USDOT) of 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with fraudulent activities should use the "hotline" to rep	n knowledge of poss		
The "hotline" is part of USDOT's continuing effort fraud and abuse and is operated under the direction treated confidentially and caller anonymity will be	n of the USDOT Ins		

# **BID DEPOSIT**

	Certified check
	Cashier's check
	Bid Bond
	Signature
	BID BOND
	Bond No
	Project: Lift Station 47 - Beverly Lake Sewer Replacemen
	W.O. #: UP3529
KNOV	W ALL MEN BY THESE PRESENTS,
that under Washi  organi the Sta	W ALL MEN BY THESE PRESENTS,  [Contractor], a corporation organized the laws of the State of, and registered to do business in the State of ngton as a contractor, as Principal, and  [Surety], a corporation zed under the laws of the State of and registered to transact business in ate of Washington, as Surety, their heirs, executors, administrators, successors and s, are jointly and severally held and bound to the City of Everett, Washington, hereinafter
thatunder Washi organi the Sta assign called	[Contractor], a corporation organized the laws of the State of, and registered to do business in the State of ngton as a contractor, as Principal, and [Surety], a corporation zed under the laws of the State of and registered to transact business in ate of Washington, as Surety, their heirs, executors, administrators, successors and s, are jointly and severally held and bound to the City of Everett, Washington, hereinafte "City", and are similarly held and bound unto the City in the sum of and/100's Dollars (\$), the payment of which
thatunder Washi organi the Sta assign called well a	[Contractor], a corporation organized the laws of the State of, and registered to do business in the State of ngton as a contractor, as Principal, and[Surety], a corporation zed under the laws of the State of and registered to transact business in ate of Washington, as Surety, their heirs, executors, administrators, successors and s, are jointly and severally held and bound to the City of Everett, Washington, hereinafte "City", and are similarly held and bound unto the City in the sum of

- 1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to the City upon default of Bidder the penal sum set forth on the face of this Bond.
- 2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the bidding documents the executed Contract required by the bidding documents, any performance and payment bonds required by the bidding documents and Contract Documents, and evidence of insurance required by the bidding documents and Contract Documents.
- 3. This obligation shall be null and void if:
  - 3.1. City accepts Bidder's bid and Bidder delivers within the time required by the bidding documents (or any extension thereof agreed to in writing by City) the executed Contract required by the bidding documents, any performance and payment bonds required by the bidding documents and Contract Documents, and evidence of insurance required by the bidding documents and Contract Documents, or
  - 3.2. All bids are rejected by City, or
- 4. Payment under this Bond will be due and payable upon default of Bidder and within thirty (30) calendar days after receipt by Bidder and Surety of written notice of default from the City, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
- 5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue notice of award agreed to in writing by City and Bidder, provided that the time for issuing notice of award including extensions shall not in the aggregate exceed one hundred twenty (120) days from Bid Due Date without Surety's written consent.
- 6. No suit or action shall be commenced under this Bond prior to thirty (30) calendar days after the notice of default required in paragraph 4 above is received by Bidder and Surety. Any suit or action under this bond must be instituted within the time period provided by applicable law.
- 7. The laws of the State of Washington shall apply to the determination of the rights and obligations of the parties hereunder. Venue for any dispute or claim hereunder shall be the state courts of Washington in Snohomish County, Washington.
- 8. Notice required hereunder shall be in writing sent to Bidder and Surety. Such notices may be sent by personal delivery, commercial courier or United States Registered or Certified Mail, return receipt requested, postage prepaid, and shall be deemed to be effective upon receipt by the party concerned.
- 9. Surety shall cause to be attached to this Bond current and effective Power of Attorney evidencing authority of the officer, agent or representative to execute this Bond on behalf of Surety to execute and deliver such Bond and bind the Surety thereby.
- 10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of the Bond conflicts with any applicable provision of any applicable statue, then the provision of said statue shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.

11. The term "bid" as used herein includes a bid, offer or proposal as applicable.

BIDDER	SURETY
	( 1)
Bidder's Name	(seal)
Bidder's Name	Surety's Name and Corporate Seal
By:	By:
Signature, Title, and Date	Signature, Title, and Date
Address:	Address:
Attest:	Attest:
Signature, Title and Date	Signature, Title and Date
~ 15	~ 18

# **DIVISION B - BID ITEM DESCRIPTIONS**

#### **Bid Item 1 - Mobilization**

Measurement and Payment: Lump Sum (LS)

The lump sum bid for mobilization shall constitute complete compensation for all of Contractor's preconstruction costs of preparatory work and operations including, but not limited to, those necessary for the movement of the Contractor's personnel, equipment, supplies and incidentals to the Project; for the establishment of its offices, buildings and other facilities necessary for Work on this Project; for premiums on bonds and insurance for the Project, and for Work and operations that the Contractor must perform or costs it must incur before beginning production work on the various items on the Project. Mobilization also includes, but is not limited to, posting construction identification signs, securing permits, establishing safety and security measures, preparing a traffic control plan(s), preconstruction photographs, developing a Schedule of Values for lump sum bid items, submitting the project schedule and providing product and material submittals, and posting of notices and jobsite posters as required by WSDOT 1-07.9(2). Also include mobilization costs for all subcontracted work along with all costs for utility coordination noted on the Plans and in the Specifications.

Items not included in this item include, but are not limited to:

- (a) Work covered by a specific bid item or Work that is to be included in a bid item or items.
- (b) Profit, interest on borrowed money, overhead or management costs.

Partial payments will be made for the lump sum contract price for "Mobilization" as follows:

- (a) When 5% of the total original contract amount is earned from other bid items, 50% of the amount bid for mobilization, or 5% of the total original contract amount, whichever is the least, will be paid.
- (b) When 10% of the total original contract amount is earned from other bid items. 100% of the amount bid for mobilization, or 10% of the total contract amount, whichever is the least, will be paid.

Upon substantial completion, payment of any amount bid for mobilization in excess of 10% of the total original contract amount will be paid.

# Bid Item 2 - Surveying

Measurement and Payment: Lump Sum (LS)

The lump sum bid for surveying includes, but is not limited to, all costs associated with furnishing all labor, tools, survey instruments materials, and other equipment necessary for the setting and monitoring the location, elevation, alignment and grade of the Work as specified in 1-05.4 CONFORMITY WITH AND DEVIATIONS FROM PLANS AND STAKES and the Plans.

The lump sum bid item also includes, but is not limited to, all costs associated with furnishing all labor, tools, survey instruments, materials and other equipment necessary for verifying the rim and invert elevations, prior to construction, of all existing manholes and pipes where connections are to be made.

The lump sum also includes, but is not limited to, all costs associated with furnishing all labor, tools, survey instruments, materials and other equipment necessary for obtaining the "as constructed" location and elevations of the Work, in particular, sewer pipe invert elevations

and other information necessary for production of the Record Drawing (As-Constructed) documents meeting the requirements defined in RECORD DRAWINGS of these Special Provisions.

Partial payments will be made for the lump sum contract price for "Surveying" as follows:

- (a) When 10% of the total original contract amount is earned from other bid items, 50% of the amount bid for surveying will be paid.
- (b) When redlines are received for preparing RECORD DRAWINGS, including all information described above, 100% of the amount bid for surveying will be paid.

#### Bid Item 3 - SPCC Plan / TESC

Measurement and Payment: Lump Sum (LS)

The lump sum bid for the Spill Prevention, Control and Countermeasures (SPCC) Plan includes, but is not limited to, all costs associated with complying with the requirements of Section 1-07.15(1) of the Standard Specification.

# **Bid Item 4 - Trench Excavation Safety Systems**

Measurement and Payment: Lump Sum (LS)

The bid item includes the costs directly allocated to the safety system for trenches and all other excavations including, but not limited to, shoring, benching, bracing, excavation, sheeting, and trench box. This Work shall be accomplished in accordance with Divisions 1, 2, 7, and 8 of the Standard Specifications and these Special Provisions. Payment per lump sum includes all equipment, materials, labor, installation, and removal, and all other work required to meet the trench excavation and safety system requirements.

# **Bid Item 5 -** Temporary Bypass Pumping

Measurement and Payment: Lump Sum (LS)

The lump sum bid item for Temporary Bypass Pumping shall be full compensation for materials, work, labor and equipment necessary to furnish, install, and maintain temporary facilities necessary to maintain the continual sewer flow and to prevent wastewater discharge to the environment throughout the duration of constructing new or rehabilitating existing sanitary sewer or combined sewer mains, or both, within the Project. A "Cutover/Bypass Plan" must be submitted within 15-days of Notice To Proceed for review and approval. The LS price shall be full compensation to complete the Work in accordance with the Plans, COE Standard Drawings, and Section 7-21 of these Special Provisions

Measurement and payment for temporary bypass pumping shall be as a lump-sum item, complete.

#### **Bid Item 6 - Demolition**

Measurement and Payment: Lump Sum (LS)

The lump sum bid item includes full compensation for providing

All costs associated with abandoning and/or removing and disposing of existing manholes, sewer, asphalt, catch basins, pavement, concrete, curbs, fencing, landscape features, unused electrical conductors, and vegetation as shown on the plans shall be included in the unit price for this bid item.

Measurement and payment for Demolition shall be as a lump-sum item, complete.

#### **Bid Item 7 - Traffic Control Labor**

Measurement and Payment: Unit Price per Hour (HR)

The unit price per hour for item includes all costs associated with traffic control labor as identified in 1-10.3 FLAGGING, SIGNS, AND ALL OTHER TRAFFIC CONTROL DEVICES of these Special Provisions.

Furnish all personnel for flagging to control traffic, including pedestrians, during construction operations in accordance with Section 1-10 of the Standard Specifications (as amended by the Special Provisions), the Plans, approved traffic control plans, these Special Provisions and as directed by the City.

Also included is cost associated with preparation and distribution of public notices involving parking, street access or traffic issues.

#### **Bid Item 8 - Maintenance and Protection of Traffic Control**

Measurement and Payment: Lump Sum (LS)

Measurement for Maintenance and Protection of Traffic Control shall be the ratio of the number of working days completed to the total number of working days authorized in the Contract.

This lump sum bid item includes the maintenance and protection of traffic control materials, tools, and equipment necessary to accomplish the Work in accordance with 1-10.3(2) MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL, including yet not limited to, signs, barricades, cones, flashers, reader boards, and temporary pavement markings.

# **Bid Item 9 - Street Cleaning and Site Clean-up**

Measurement and Payment: Unit Price per Hour (HR)

The unit price per hour for Street Cleaning & Sweeping shall be full compensation for all labor, tools, incidentals, and equipment necessary to provide the street sweeping, site cleaning, and dust control water required for this project.

Measurement for street sweeping and cleaning will be by the hour for the actual time consumed in pavement sweeping, cleaning and debris removal. No allowance will be made for time consumed in making repairs to the equipment or for moving the equipment to or from the site on which the street cleaning is ordered. No separate payment will be made for water required for dust control and the normal operation of the pickup sweepers.

# Bid Item 10 - Structural Fill

Measurement and Payment: Unit Price per TON (TN)

The unit price bid per ton for structural fill shall constitute full compensation for all labor, materials and equipment required to furnish and place structural fill as a foundation material per Standard Specifications, the Special Provisions and as shown on the Contract Plans.

Measurement for structural fill shall be limited to maximum excavation widths defined in the work descriptions for other bid items.

Payment for structural fill will be per TN as recorded on certified weight tickets per Section 1-09.1 at the unit price for this bid item

#### **Bid Item 11 - CRUSHED SURFACING BASE COURSE**

Measurement and Payment: Unit Price per Ton (TN)

Measurement for crushed surfacing base course will be by the ton as recorded on certified weight tickets in accordance with 1-09.2 WEIGHING EQUIPMENT and limited to dimensions defined in the Work, descriptions for other bid items, shown on the Plans, details or COE Standard Drawings or as otherwise approved by the Engineer. In addition to surfacing, this product will be paid by the ton for sewer and storm pipe bedding. Crushed Surfacing Base Course material placed exceeding "neatline" quantities without advance authorization by the Inspector will not be paid for.

The unit price per ton shall be full compensation for all labor, compaction, material, tools, and equipment necessary to furnish, haul, stockpile, place, grade, and compact imported crushed surfacing base course for the Work as required, from a Contractor supplied source in accordance with the Standard Specifications and these Special Provisions.

The unit price for crushed surfacing base course also includes all costs for controlling moisture content and all costs for dewatering.

Also included in this bid item shall be the cost of all equipment required to remove existing soils to attain proper elevations, compaction of native subgrade soils, as well as to uniformly spread and compact the crushed surfacing material.

The unit price for this bid item includes all costs for removing, loading and disposing of displaced unsuitable material, including haul.

Include in this bid item the cost of sprinkling during dry periods prior to placement of the crushed surfacing and while spreading and compacting the material.

Payment for crushed surfacing base course will be by the ton of material placed and approved by the Inspector.

# Bid Item 12 - SAWCUT PAVEMENT FULL DEPTH

Measurement and Payment: Unit Price per Linear Foot (LF)

Measurement for saw-cutting will be per linear foot along the true length of the surface cut.

The unit price per lineal foot for the final saw-cutting of asphalt, concrete, steel rail, wood tie, roadway debris material, or any combination of materials thereof, regardless of depth or location of materials, shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the Work as specified in Section 2-02.3(3) of these Special Provisions and as shown on the Plans. The unit price per lineal foot for saw-cutting includes, but is not limited to, the saw-cutting necessary for the final joint between existing improvements and permanent HMA pavement.

Include cost of cleanup by vacuum collection and disposal of the cuttings slurry with this bid item as there will be no separate payment for cleanup. Any necessary re-cutting due to damage during excavation will not be remeasured for payment.

#### Bid Item 13 - SAW-CUTTING CONCRETE CURB & GUTTER & SIDEWALK

Measurement and Payment: Unit Price per Linear Foot (LF)

Measurement for saw-cutting will be per linear foot along the true length of the surface cut.

The unit price per lineal foot for the final saw-cutting of concrete curb and gutter and sidewalk, shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the Work as specified in Section 2-02.3(3) of these Special Provisions and as shown on the Plans. The unit price per lineal foot for the final saw-cutting of concrete

curb and gutter and sidewalk includes, but is not limited to, the saw-cutting necessary for the final joint between existing concrete sidewalk or curb and permanent concrete repair.

Include cost of cleanup by vacuum collection and disposal of the cuttings slurry with this bid item as there will be no separate payment for cleanup.

Measurement and payment for the SAWCUT CONCRETE CURB, GUTTER AND SIDEWALK shall be per Linear Foot (LF), complete.

## **Bid Item 14 - PUMP STATION BELOW GRADE**

Measurement and Payment: Lump Sum (LS)

The lump sum bid item for the pump station below grade shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these Specifications, and as shown on the Contract Plans.

The installation of the pump station structure below grade shall include, but is not limited to, the following: excavation, structural fill, hauling, forming, foundation, fabrication, erection, concrete, structural steel supports, "wye" vault with H-20, hatches, bar screen vault with H-20 hatches, bar screen assembly, wet well and access with H-20 hatches, concrete base slab, grout, fill, and other miscellaneous and appurtenant work.

Measurement and payment for the pump station structure below grade shall be as a lumpsum item, complete.

# **Bid Item 15 - PUMP STATION STRUCTURE ABOVE GRADE**

Measurement and Payment: Lump Sum

The unit contract price for the pump station structure above grade by lump sum and shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these Specifications, and as shown on the Contract Plans.

The installation of the pump station structure above grade shall include, but is not limited to, the following: electrical shelter, electrical rack, framing, fabrication, erection, concrete, steel brackets, anchor bolts, reinforcement, steel roof, framing, flashing, roof sheeting, grating, shelter framing and supports, coatings, standby generator foundation/pad, transformer pad, site low voltage and electrical conduits and other miscellaneous and appurtenant work.

Measurement and payment for the pump station structure above grade shall be as a lumpsum item, complete.

#### **Bid Item 16 - SUBMERSIBLE PUMP ASSEMBLIES**

Measurement and Payment: Per Unit Price (EA)

The unit contract price for the pump assemblies by (EA) and shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the

work as defined in the Standard Specifications, Standard Drawings, these Specifications, and as shown on the Contract Plans

The installation of pump assemblies shall include, but is not limited to, the following: fabrication, installation of two (2) new Flygt 3127N or approved equal submersible pump assemblies, frames, discharge assembly, sensors, piping, piping transitions, controls, conduits, wiring, terminations, controls testing, and other miscellaneous and appurtenant work.

Measurement shall be per Each (EA) submersible pump installed as measured upon completion.

# Bid Item 17 - ELECTRICAL, VFD PANEL INSTALL

Measurement and Payment: Lump Sum (LS)

The lump sum bid item for the electrical – Owner Furnished VFDs and Owner Furnished VFD Panel shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these specifications, and as shown on the Contract Plans.

The work shall include, but is not limited to, the following: Owner Furnished Variable Frequency Drive (VFD) Panel and Owner Furnished VFDs. Conduits, wiring and cabling, terminations, testing, supports, anchorage, switches, disconnects, grounding, overcurrent protection devices, metering, panelboards, and other miscellaneous and appurtenant work required to complete this item of work.

Measurement and payment for electrical VFDs, VFD panel will be on a lump sum basis, complete.

# **Bid Item 18 - ELECTRICAL CONTROLS AND INSTRUMENTATION**

Measurement and Payment: Lump Sum (LS)

The lump sum bid item for the ELECTRICAL - CONTROLS AND INSTRUMENTATION, LS shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these specifications, and as shown on the Contract Plans.

The work shall include, but is not limited to, the following: Pulsar Level Sensor (or approved equal), conduits, wiring, cabling, terminations, testing, supports, anchorage, switches, disconnects, grounding, overcurrent protection devices, metering, panelboards, and other miscellaneous and appurtenant work required to complete this item of work.

Measurement and payment for electrical controls and instrumentation, PLC Control Cabinet Etc. will be on a lump sum basis, complete.

#### Bid Item 19 - PLC CONTROL CABINET INSTALL AND TERMINATIONS

Measurement and Payment: Lump Sum (LS)

The lump sum bid item for the PLC CONTROL CABINET, LS shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these specifications, and as shown on the Contract Plans.

The work shall include, but is not limited to, the following: Installation of Owner Furnished PLC Control Cabinet, conduits, wiring, cabling, terminations, testing, supports, anchorage, switches, disconnects, grounding, and other miscellaneous and appurtenant work required to complete this item of work.

Measurement and payment for PLC Control Cabinet Etc. will be on a lump sum basis, complete.

#### **Bid Item 20 - ELECTRICAL MISCELLANEOUS**

Measurement and Payment: Lump Sum (LS)

The lump sum bid item for the ELECTRICAL MISCELLANEOUS shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these specifications, and as shown on the Contract Plans

The work shall include, but is not limited to, the following: PUD meter can, service disconnect, panelboard, 120/240 mini power zone, site power, lighting, house power, LED house lights, conduits, wiring, cabling, terminations, testing, supports, anchorage, switches, disconnects, grounding, overcurrent protection devices, testing, and other miscellaneous and appurtenant work required to complete this item of work.

Measurement and payment for Electrical Miscellaneous – electrical rack and shelter, site power etc. will be on a lump sum basis, complete.

# **Bid Item 21 - STANDBY GENERATOR, TRANSFER SWITCH, LOAD BANK, DOCKING STATION ETC**

Measurement and Payment: Lump Sum

The lump sum bid item for the STANDBY GENERATOR shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these specifications, and as shown on the Contract Plans.

The work shall include, but is not limited to, the following: Installation of Owner Furnished generator with integral fuel tank, Owner Furnished automatic transfer switch, Owner Furnished load bank docking station, conduits, wiring and cabling, terminations, testing, supports, anchorage, switches, disconnects, grounding, overcurrent protection devices, metering, panelboards, and other miscellaneous and appurtenant work required to complete this item of work.

Measurement and payment for Standby Generator – transfer switch, load bank etc. will be on a lump sum basis, complete.

#### **Bid Item 22 - TRENCH EXCAVATION INCLUDING HAUL**

Measurement and Payment: Unit Price per Cubic Yard

The unit price bid per ton for trench excavation including haul shall constitute full compensation for all labor, materials and equipment required to excavate, haul and dispose of trench excavation spoils per Standard Specifications, the Special Provisions and as shown on the Contract Plans.

Measurement for trench excavation including haul shall be limited to maximum excavation widths defined in the work descriptions for other bid items.

Payment for trench excavation including haul will be per cubic yard as recorded on certified tickets per Section 1-09.1 at the unit price for this bid item

#### Bid Item 23 - TEMP ACCESS PATH AND REMOVAL

Measurement and Payment: Unit Price per Ton (TN)

Measurement for Temp Access Road and Removal shall be by the ton, recorded on certified weight tickets in accordance with 1-09.2 WEIGHING EQUIPMENT, and placed within the limits of dimensions defined in the Work, descriptions for other bid items, shown on the Plans, or COE Standard Drawings, or as otherwise approved by the Engineer.

Measurement for temp access road shall be limited to maximum limits defined in the work descriptions for other bid items and by engineer.

The unit price per ton, based on certified weight tickets, for gravel borrow shall be full compensation for all labor, materials, tools and equipment necessary to furnish imported aggregate for gravel base (2" to 4" aggregate) per Std Spec 9-03.10 for the temporary access path as shown in the contract documents and as required, from a Contractor-supplied source in accordance with 2-03.3(14)J of the Standard Specifications and these Special Provisions.

A suitable geotextile or geogrid is required to protect the existing grass and shall be considered incidental to Bid Item 23.

The unit price for temp access road (gravel base (4"-minus)) shall include all costs of furnishing, hauling, stockpiling, placing, grading and compacting the material in place.

Payment for temp access road will be by the ton of material placed and approved by the Engineer

#### Bid Item 24 - FORCE ACCOUNT

Measurement and Payment: Force Account (FA)

This Force Account bid item shall be accomplished in accordance with 1-09.6 FORCE ACCOUNT: except, as modified below.

The Force Account bid item has been included for specific miscellaneous work items listed below and for any additional work directed by the Engineer that is not required by the original Contract and to address changed conditions or unanticipated work. The amount indicated in the Proposal for this bid item is to provide a common bid amount. The actual amount paid under this bid item may vary from no payment to the full amount of the bid item. Work performed under this bid item will be initiated with a work directive issued by the Engineer.

In lieu of the preceding prescribed method of determining payment for Force Account work, payment may be made at unit prices or lump sum prices agreed to by the Engineer and the Contractor prior to beginning the Force Account work.

The following miscellaneous construction work will be paid for by Force Account as specified in 1-09.6 FORCE ACCOUNT. For the purpose of providing a common Proposal for all Bidders, and for that purpose only, the City has estimated an amount and included it in the bid item for Force Account work to become part of the total Bid by the Contractor.

- (a) The contractor will provide potholing for establishing and confirming utility location and depth of utilities that are not shown on the plans, not incidental to a separate bid-item, or for potholing requested by the Engineer. Potholing of utilities that are shown on the plans shall be considered incidental to the associated work items and no separate payment will be made. Potholing of utilities not shown on the plans, not incidental to a separate bid item or as directed by the Engineer prior to proceeding with the work, will be paid under this section. Includes all costs of labor, equipment, permits and incidentals to excavate, identify and survey the utility and restore if necessary.
- (b) Cost for additional excavation, hazmat abatement, fittings, and labor to make grade adjustments to the new utilities for unknown underground conflicts and conflicts due to being unmarked or mismarked utilities in the field. Unanticipated underground conflicts is one we typically see, private improvement restoration and other modifications is another, sewer work changes, water pipe installation changes, and above ground conflicts.
- (b) Restoration of existing special private improvements including, but not limited to, brick or stone walkways, decorative concrete walks or driveways, concrete masonry or stone walls, rockery's, fences, landscape plantings, including but not limited to, hedges, trees, flowerbeds, irrigation systems, yard lighting, rockeries, retaining walls, or steps.

## **Bid Item 25 - HDPE SANITARY SEWER MAIN, 8-Inch Diam (HDD and/or TRENCHED).**

Measurement and Payment: Unit Price per Linear Foot (LF)

Per linear foot pipe measurement shall be based on the slope distance from point to point. The point of beginning or ending of measurement in any particular run of pipe shall be the vertical intersection of the centerline of the pipe measured with the centerline of the intersection pipe, or with the beginning or ending of any new linear length of valves or couplings contained within the measured length. At changes in pipe size connected by a reducer, the point of measurement shall be taken as the midpoint of the reducer.

The unit contract price for HDPE SANITARY SEWER MAIN, 8-Inch Diam., shall constitute full compensation for all labor, materials, tools and equipment necessary to furnish and install

the pipe, restrained joints (where shown on the Plans or as required by the Standard Specifications and Special Provisions), and all fittings, including tees, crosses, reducers, couplings, material transitions and sleeves required for complete installation along the run of each pipe size, as shown on the Plans and specified herein, and additionally, shall include, but not be limited to, the following:

- (c) Removal of structures or obstructions not specifically covered under other Bid Items. This shall include, but not be limited to, removal and disposal of the existing asphalt or concrete pavement, sidewalk, curb, thrust blocks, miscellaneous landscaping, and sod as indicated on the Plans.
- (d) All required potholing to verify locations of water service crossings and existing utilities. The costs for pot-holing and excavation required to determine exact depths and locations of other utilities shall be included with this Work with no direct compensation made.
- (e) Utility or light pole holding in conformance with the requirements of the applicable utility including, if necessary, arranging for the utility to hold poles and paying the associated fees.
- (f) Where trench excavation or HDD is proposed, dewatering, installation of pipe, furnishing, placing, and compacting sand backfill for pipe bedding, furnishing, placing and compacting suitable native material for trench backfill and placing and compacting imported backfill material. No extra payment shall be made for removing, loading, hauling, and disposing of displaced and unsuitable material or handling and disposal of drilling fluids and cuttings
- (g) At least 7 days prior to mobilizing equipment Contractor shall submit a detailed installation plan to the Engineer. The plan shall include a detailed plan and profile of the bores and be plotted at a scale no smaller than 1 inch equals 20 feet horizontal and vertical
- (h) Maintenance, restoration and/or relocation, if required, of existing culverts, storm drainage pipe, other utilities and structures affected by construction that are to remain.
- (i) Temporary and permanent thrust blocking and dead man blocks, and temporary and permanent restraint systems.
- (j) Ethafoam pads or sand backfill between sewer and other pipes.
- (k) Maintenance of existing sewer and provisions for interim service.
- (I) Extra depth, including excavation, backfill and compaction required to clear known buried utilities or other known obstacles.
- (m) Abandonment of existing sewers as shown on the Plans, including cutting, draining water and properly disposing, and plugging pipe at each end with a minimum of 2-feet of Commercial concrete or CDF. Include the concrete or CDF work with this work with no direct compensation being made. Abandon existing mains in place where possible. Include cost of removal, hauling, and disposal of existing main with these Bid items when abandoning in place is not possible. Include closing existing valves, and plugging where noted, to be abandoned and removing the lids and valve boxes.

# **Bid Item 26 -** HDPE SANITARY SIDE-SEWER and FORCE MAIN, 6-Inch Diam (DIRECTIONALLY DRILLED).

Measurement and Payment: Unit Price per Linear Foot (LF)

Per linear foot pipe measurement shall be based on the slope and radius distance from point to point. The point of beginning or ending of measurement in any particular run of pipe shall

be the vertical intersection of the centerline of the pipe measured with the centerline of the intersection pipe, or with the beginning or ending of any new linear length of valves or couplings contained within the measured length. At changes in pipe size connected by a reducer, the point of measurement shall be taken as the midpoint of the reducer.

The unit contract price for HDPE SANITARY SIDE SEWER, 6-Inch Diam., shall constitute full compensation for all labor, materials, tools and equipment necessary to furnish and install the pipe, via HDD restrained joints (where shown on the Plans or as required by the Standard Specifications and Special Provisions), and all fittings, including tees, crosses, reducers, couplings, material transitions and sleeves required for complete installation along the run of each pipe size, as shown on the Plans and specified herein, and additionally, shall include, but not be limited to, the following:

- (n) Removal of structures or obstructions not specifically covered under other Bid Items. This shall include, but not be limited to, removal and disposal of the existing asphalt or concrete pavement, sidewalk, curb, thrust blocks, miscellaneous landscaping, and sod as indicated on the Plans.
- (o) All required potholing to verify locations of utility crossings and existing utilities. The costs for potholing and excavation required to determine exact depths and locations of other utilities shall be included with this Work with no direct compensation made.
- (p) Utility or light pole holding in conformance with the requirements of the applicable utility including, if necessary, arranging for the utility to hold poles and paying the associated fees.
- (q) Where trench excavation or HDD is proposed, dewatering, installation of pipe, furnishing, placing, and compacting sand backfill for pipe bedding, furnishing, placing and compacting suitable native material for trench backfill and placing and compacting imported backfill material. No extra payment shall be made for removing, loading, hauling, and disposing of displaced and unsuitable material or handling and disposal of drilling fluids and cuttings
- (r) At least 7 days prior to mobilizing equipment Contractor shall submit a detailed installation plan to the Engineer. The plan shall include a detailed plan and profile of the bores and be plotted at a scale no smaller than 1 inch equals 20 feet horizontal and vertical
- (s) Maintenance, restoration and/or relocation, if required, of existing culverts, storm drainage pipe, other utilities and structures affected by construction that are to remain.
- (t) Temporary and permanent thrust blocking and dead man blocks, and temporary and permanent restraint systems.
- (u) Ethafoam pads or sand backfill between sewer and other pipes.
- (v) Maintenance of existing side sewer and provisions for interim service.
- (w) Extra depth, including excavation, backfill and compaction required to clear known buried utilities or other known obstacles.
- (x) Abandonment of existing sewers as shown on the Plans, including cutting, draining water and properly disposing, and plugging pipe at each end with a minimum of 2-feet of Commercial concrete or CDF. Include the concrete or CDF work with this work with no direct compensation being made. Abandon existing mains in place where possible. Include cost of removal, hauling, and disposal of existing main with these Bid items when abandoning in place is not possible. Include closing existing valves, and plugging where noted, to be abandoned and removing the lids and valve boxes.

## **Bid Item 27 - HDPE SANITARY SEWER (TRENCHED), 8-inch**

Measurement and Payment: Unit Price per Linear Foot (LF)

Per linear foot pipe measurement shall be based on the slope distance from point to point. The point of beginning or ending of measurement in any particular run of pipe shall be the vertical intersection of the centerline of the pipe measured with the centerline of the intersection pipe, or with the beginning or ending of any new linear length of valves or couplings contained within the measured length. At changes in pipe size connected by a reducer, the point of measurement shall be taken as the midpoint of the reducer.

The unit contract price for PVC SANITARY SEWER MAIN, 8-Inch Diam., shall constitute full compensation for all labor, materials, tools and equipment necessary to furnish and install the pipe, restrained joints (where shown on the Plans or as required by the Standard Specifications and Special Provisions), and all fittings, including tees, crosses, reducers, couplings, material transitions and sleeves required for complete installation along the run of each pipe size, as shown on the Plans and specified herein, and additionally, shall include, but not be limited to, the following:

- (a) Removal of structures or obstructions not specifically covered under other Bid Items. This shall include, but not be limited to, removal and disposal of the existing asphalt or concrete pavement, sidewalk, curb, thrust blocks, miscellaneous landscaping, and sod as indicated on the Plans.
- (b) All required potholing to verify locations of water service crossings and existing utilities. The costs for potholing and excavation required to determine exact depths and locations of other utilities shall be included with this Work with no direct compensation made.
- (c) Utility or light pole holding in conformance with the requirements of the applicable utility including, if necessary, arranging for the utility to hold poles and paying the associated fees.
- (d) Where trench excavation is proposed, dewatering, installation of pipe, furnishing, placing, and compacting sand backfill for pipe bedding, furnishing, placing and compacting suitable native material for trench backfill and placing and compacting imported backfill material. No extra payment shall be made for removing, loading, hauling, and disposing of displaced and unsuitable material.
- (e) Maintenance, restoration and/or relocation, if required, of existing culverts, storm drainage pipe, other utilities and structures affected by construction that are to remain.
- (f) Ethafoam pads or sand backfill between sewer and other pipes.
- (g) Maintenance of existing sewer and provisions for interim service.
- (h) Extra depth, including excavation, backfill and compaction required to clear known buried utilities or other known obstacles.

#### Bid Item 28 - PVC SIDE SEWER LATERAL, 6-inch

Measurement and Payment: Unit Price per Linear Foot (LF)

Per linear foot pipe measurement shall be based on the slope distance from point to point. The point of beginning or ending of measurement in any particular run of pipe shall be the vertical intersection of the centerline of the pipe measured with the centerline of the intersection pipe, or with the beginning or ending of any new linear length of valves or couplings contained within the measured length. At changes in pipe size connected by a reducer, the point of measurement shall be taken as the midpoint of the reducer.

The unit contract price for PVC SIDE SEWER LATERAL, 6-Inch Diam., shall constitute full compensation for all labor, materials, tools and equipment necessary to furnish and install the pipe, restrained joints (where shown on the Plans or as required by the Standard Specifications and Special Provisions), and all fittings, including tees, crosses, reducers, couplings, material transitions and sleeves required for complete installation along the run of each pipe size, as shown on the Plans and specified herein, and additionally, shall include, but not be limited to, the following:

- (i) Removal of structures or obstructions not specifically covered under other Bid Items. This shall include, but not be limited to, removal and disposal of the existing asphalt or concrete pavement, sidewalk, curb, thrust blocks, miscellaneous landscaping, and sod as indicated on the Plans.
- (j) All required potholing to verify locations of water service crossings and existing utilities. The costs for potholing and excavation required to determine exact depths and locations of other utilities shall be included with this Work with no direct compensation made.
- (k) Utility or light pole holding in conformance with the requirements of the applicable utility including, if necessary, arranging for the utility to hold poles and paying the associated fees.
- (I) Where trench excavation is proposed, dewatering, installation of pipe, furnishing, placing, and compacting sand backfill for pipe bedding, furnishing, placing and compacting suitable native material for trench backfill and placing and compacting imported backfill material. No extra payment shall be made for removing, loading, hauling, and disposing of displaced and unsuitable material.
- (m) Maintenance, restoration and/or relocation, if required, of existing culverts, storm drainage pipe, other utilities and structures affected by construction that are to remain.
- (n) Ethafoam pads or sand backfill between sewer and other pipes.
- (o) Maintenance of existing sewer and provisions for interim service.
- (p) Extra depth, including excavation, backfill and compaction required to clear known buried utilities or other known obstacles.

## **Bid Item 29 - Manhole**, Type 3, 48-inch DIA.

Measurement and Payment: Unit Price per Each (EA)

The unit price per each manhole shall be full compensation for all labor, material, tools and equipment necessary to satisfactorily complete the work as defined in these Contract Documents.

The unit price per each manhole shall be full compensation for furnishing, hauling, and assembling in place the completed installation including all manholes, frames and covers, pipe connections, special fittings, joint materials and penetrations.

The unit price of per each manhole shall also include, but not be limited to, all costs for excavation; hauling and disposing of surplus or unsuitable material; dewatering; sewer flow bypassing; furnishing and installing couplings; furnishing and installing steps or ladder; placing and compacting native backfill; furnishing, placing, and compacting foundation material as required; cleaning and flushing manholes; reconnecting existing sanitary sewer connections; and replacing, protecting and maintaining utilities.

All costs associated with abandoning and/or removing and disposing of existing manholes as shown on the plans shall be included in the unit price for this bid item.

Adjusting new manhole rings and covers to final grade shall be included in the unit price for this bid item.

Installation of field-formed concrete channels and benches inside all manhole bases shall be included in this bid item. Pre-cast or pre-formed channel bases are not acceptable.

The cost of connection of trenched and HDD installed pipes to the manhole and drop connections, are incidental and shall be included in the unit price for this bid item. This includes intercepting HDD installed pipe.

Measurement shall be per each manhole installed as measured upon completion.

# **Bid Item 30 - MANHOLE, TYPE 3 (MORE THAN 7' DEEP), 48-inch DIA.**

Measurement and Payment: Unit Price per Linear Foot (LF)

In addition to the measurement per each, manhole in excess of 7 feet in height will be measured per linear foot for each additional foot of total height over 7 feet as measured from the flow line to the surface of the Work.

The unit price per linear foot shall be full compensation for all labor, material, tools and equipment necessary to satisfactorily complete the Work as defined in these Contract Documents.

Measurement of manhole height for payment purposes shall be the distance from the flowline of the outlet pipe to the surface of the Work measured to the nearest foot.

## **Bid Item 31 - HDPE FORCE MAIN - TRENCHED, 6-Inch Diam (HDD).**

Measurement and Payment: Unit Price per Linear Foot (LF)

Per linear foot pipe measurement shall be based on the distance from point to point. The point of beginning or ending of measurement between the Receiving Pit and the new MH in 75<sup>th</sup> St and shall be the vertical intersection of the centerline of the pipe measured with the centerline of the intersection pipe, or with the beginning or ending of any new linear length of valves or couplings contained within the measured length. At changes in pipe size connected by a reducer, the point of measurement shall be taken as the midpoint of the reducer.

The unit contract price for HDPE FORCE MAIN – TRENCHED, 6-Inch Diam., shall constitute full compensation for all labor, materials, tools and equipment necessary to furnish and install the pipe, drop-connections, restrained joints (where shown on the Plans or as required by the Standard Specifications and Special Provisions), and all fittings, including tees, crosses, reducers, couplings, material transitions and sleeves required for complete installation along the run of each pipe size, as shown on the Plans and specified herein, and additionally, shall include, but not be limited to, the following:

- (q) Removal of structures or obstructions not specifically covered under other Bid Items. This shall include, but not be limited to, removal and disposal of the existing asphalt or concrete pavement, sidewalk, curb, thrust blocks, miscellaneous landscaping, and sod as indicated on the Plans.
- (r) All required potholing to verify locations of utility crossings and existing utilities. The costs for potholing and excavation required to determine exact depths and locations of other utilities shall be included with this Work with no direct compensation made.

- (s) Utility or light pole holding in conformance with the requirements of the applicable utility including, if necessary, arranging for the utility to hold poles and paying the associated fees.
- (t) Where trench excavation is proposed, dewatering, installation of pipe, furnishing, placing, and compacting sand backfill for pipe bedding, furnishing, placing and compacting suitable native material for trench backfill and placing and compacting imported backfill material. No extra payment shall be made for removing, loading, hauling, and disposing of displaced and unsuitable material or handling and disposal of drilling fluids and cuttings
- (u) At least 7 days prior to mobilizing equipment Contractor shall submit a detailed installation plan to the Engineer. The plan shall include a detailed plan and profile of the bores and be plotted at a scale no smaller than 1 inch equals 20 feet horizontal and vertical including traffic control
- (v) Maintenance, restoration and/or relocation, if required, of existing culverts, storm drainage pipe, other utilities and structures affected by construction that are to remain.
- (w) Ethafoam pads or sand backfill between FM and other pipes.
- (x) Maintenance of existing side sewer and provisions for interim service.
- (y) Extra depth, including excavation, backfill and compaction required to clear known buried utilities or other known obstacles.

#### **Bid Item 32 - WATER SERVICE, 1-INCH ENCASED IN 4" HDPE (HDD)**

Measurement and Payment: Unit Price per Lineal Foot (LF).

The unit contract price for Water Service, 1-inch PVC encased in 4" HDPE (DIRECTIONALLY DRILLED), shall constitute full compensation for all labor, materials, tools and equipment necessary for new service lines continuous and unspliced from the LS Service to a new meter setter in accordance with Parts C-G of COE Standard Drawing No. 501, or Parts D-G of COE Standard Drawing No. 502, including yet not limited to, connecting to service connection saddle, street pavement, concrete curb, concrete curb and gutter, concrete driveway, and concrete sidewalk removal, unless installed using approved boring methods; furnishing, installing, and testing to curb stop, valves, fittings, and installation of service line, and appurtenances; providing a #10 copper tracer wire for polyethylene pipe, compaction, connection to existing or new meter setter including fittings; dewatering; testing; removal or abandonment of existing service connection.

## **Bid Item 33 - WATER SERVICE CONNECTION, 1-INCH**

Measurement and Payment: Unit Price per Each (EA)

The unit contract price for Water Service Connection, 1-Inch, shall constitute full compensation for all labor, materials, tools and equipment necessary to connect new 1-inch service lines off existing 12-Inch WM and connecting with the new service line in accordance with Detail 4, Drawing D1. Work includes, yet not limited to, tee, trench excavation, backfill and compaction; street pavement, concrete curb, concrete curb and gutter, concrete driveway and concrete sidewalk removal; clearing and grubbing; testing; lawn restoration including seeding or sodding; dewatering; and removal or abandonment of existing service connection.

# **Bid Item 34 -** UG POWER FROM LS TRANFORMER VAULT TO SNOPUD JCT BOX .(2-3" CONDUIT HDD)

Measurement and Payment: Unit Price per Lineal Foot (LF).

The unit contract price for UG POWER FROM LIFT STATION TO SNOPUD JCT BOX 2-2" CONDUIT HDPE (Directionally Drilled) is per LF with conductors, shall constitute full compensation for all labor, materials, tools and equipment necessary for shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these specifications, and as shown on the Contract Plans.

The work shall include, but is not limited to, conduits, wiring and cabling, testing, supports, anchorage, switches, disconnects, grounding, overcurrent protection devices, metering, panelboards, and other miscellaneous and appurtenant work required to complete this item of work. See Appendix "F".

Measurement and payment for UG POWER FROM LS TO SNOPUD JCT BOX 2-2" CONDUIT HDPE (HDD). will be on a LF basis, complete

#### **Bid Item 35 - TOPSOIL FOR LANDSCAPE RESTORATION**

Measurement and Payment: Unit Price per cubic-yard (CY).

The unit contract price for TOPSOIL FOR LANDSCAPE RESTORATION is CY and shall constitute full compensation for all labor, materials, tools and equipment necessary for installation of TOPSOIL for landscape and lawn restoration as directed by the Inspector and as stipulated in paragraph 9-14.1.

Measurement and payment for TOPSOIL FOR LANDSCAPE RESTORATION will be on a CY basis, complete.

#### **Bid Item 36 - UG POWER FROM PUD POLE TO JCT BOX (2" CONDUIT IN TRENCH)**

Measurement and Payment: Unit Price per Lineal Foot (LF).

The unit contract price for UG POWER FROM SnoPUD POLE TO JCT BOX (2" CONDUIT IN TRENCH is per LF with conductors, shall constitute full compensation for all labor, materials, tools and equipment necessary for shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these specifications, and as shown on the Contract Plans.

The work shall include, but is not limited to, conduits, , testing, supports, anchorage, switches, disconnects, grounding, overcurrent protection devices, metering, panelboards, and other miscellaneous and appurtenant work required to complete this item of work.

Measurement and payment for UG POWER FROM LS TO SnoPUD JCT BOX 2-2" CONDUIT HDPE (HDD). will be on a LF basis, complete

## Bid Item 37 - UG POWER JUNCTION BOX (4'-8"x7' PUD JUNCTION BOX H20 **DIAMOND PLATE HATCH)**

Measurement and Payment: Unit Price per EACH (EA).

The unit contract price for UG POWER JUNCTION BOX (4'-8"x7' PUD JUNCTION BOX H20 DIAMOND PLATE HATCH) is EA and shall constitute full compensation for all labor, materials, tools and equipment necessary for installation of PUD junction box V0207 (or approved equal) including yet not limited to, all costs for H20 rated non-slip hatches, excavation; hauling and disposing of surplus or unsuitable material; dewatering; furnishing and installing; placing and compacting native backfill: furnishing, placing, and compacting foundation material as required: intercepting existing HDD installed 2-2" HDPE Conduits (installed by Bid Item 33).; and replacing, protecting and maintaining existing utilities.

Measurement and payment for UG POWER JUNCTION BOX (4'-8"x7' PUD JUNCTION BOX H20 DIAMOND PLATE HATCH) LDINGS will be on a EA basis, complete

## Bid Item 38 - REPAIR TRAFFIC LOOPS AND UG POWER FOR ENTRY GATE **DETECTION**

Measure and Payment: Unit Price per Lineal Foot (LF).

Measurement for REPAIR TRAFFIC LOOPS AND UG POWER FOR ENTRY GATE DETECTION, for both loop perimeter and home run, shall be by linear foot of neat line sawcut. The unit price per linear foot shall include saw cutting, cleaning, and drying of pavement, installing loops and home runs, loop wire, sealant, splice kit, and splicing between loop wire and lead-on cable, any work necessary to access a junction box, and testing of the vehicle detectors as defined in Section 8-20.3(14)D.

Measurement and payment for REPAIR TRAFFIC LOOPS AND UG POWER FOR ENTRY GATE DETECTION will be on a LF basis, complete.

#### **Bid Item 39 - PLUMBING WATER SERVICE "HOTBOX"**

Measurement and Payment: Unit Price per EACH (EA).

The unit contract price for PLUMBING WATER SERVICE "HOTBOX" is EA and shall constitute full compensation for all labor, materials, tools and equipment necessary for installation of HOTBOX Model HB1.5 (or approved equal) including yet not limited to, all costs for excavation; backfill, hauling and disposing of surplus or unsuitable material; dewatering; furnishing and installing; placing and compacting native or suitable backfill; furnishing, placing, and compacting foundation material as required; concrete leveling pad, anchor bolts, piping, valves, drains, hydrants complete and replacing, protecting and maintaining existing utilities.

Measurement and payment for the PLUMBING WATER SERVICE "HOTBOX" grade shall be as EA item, complete.

#### Bid Item 40 - MISC LIFT STATION PIPING - WETWELL VAULT, WYE-VAULT, BAR **SCREEN VAULT CONNECTIONS**

Measurement and Payment: Lump Sum (LS)

The lump sum bid item for the MISCELLANEOUS PIPING - METER VAULT, BAR SCREEN VAULT CONNECTIONS shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these Specifications, and as shown on the Contract Plans.

The installation of the MISCELLANEOUS PIPING - WETWELL VAULT, WYE VAULT, BAR SCREEN VAULT CONNECTIONS shall include, but is not limited to, the following: trenching, excavation, hauling, forming, foundation, fabrication, erection, concrete, structural steel supports, piping between "wye" vault and wet well, piping between barscreen vault and wetwell; and other miscellaneous piping and appurtenant work at the lift station site.

Measurement and payment for the MISCELLANEOUS PIPING - WETWELL VAULT, WYE VAULT, BAR SCREEN VAULT CONNECTIONS shall be as a lump-sum item, complete.

## **Bid Item 41 - LANDSCAPING AND RESTORATION INCLUDING IRRIGATION**, **ROCKERIES AND RETAINING STRUCTURES**

Measurement and Payment: Unit Price per Lump Sum (LS)

Measurement for providing LANDSCAPING AND RESTORATION INCLUDING IRRIGATION, ROCKERIES AND RETAINING STRUCTURES will be lump sum.

Payment for Landscape Restoration, Lump Sum, will be limited to dimensions and work limits defined on drawings or as otherwise approved by the Engineer.

Restoration of existing special private improvements including, but not limited to, brick or stone walkways, decorative concrete walks or driveways, concrete masonry or stone walls, rockery's, fences, landscape plantings, including but not limited to, hedges, trees, flowerbeds, irrigation systems, yard lighting, rockeries, retaining walls, or steps

Measurement and payment for the LANDSCAPING AND RESTORATION INCLUDING IRRIGATION, ROCKERIES AND RETAINING STRUCTURES shall be as a lump-sum item, complete.

#### Bid Item 42 - HMA, SURFACING PARKING LOT

Measurement and Payment: Unit Price per Ton (TN)

Measurement for HMA, SURFACING PARKING LOT for overlay shall be by the ton, recorded on certified weight tickets in accordance with 1-09.2 WEIGHING EQUIPMENT for HMA placed within the limits of dimensions defined in the Work or shown on the Plans, Standard Specifications, Section 5-06 of these Special Provisions, Standard Plan 305, or as otherwise approved by the Engineer. The measurement and payment limits for measuring the width of this bid item shall not exceed the saw-cut limits shown on the Drawings. No deduction will be made for the weight of asphalt binder, blending sand, mineral filler, or other component of the mixture.

The unit price for this bid item shall include all labor, materials, equipment and related work necessary to furnish, machine-place, compact, roll and perform density tests on multiple lifts of HMA - CL  $\frac{1}{2}$ " PG 64-22 pavement including parking lots, streets, alleys, and street crossings, as shown on the Plans.

Furnishing and applying tack coat, prime coat, joint seal and crack sealing asphalt is to be included in this bid item with no direct compensation made. All costs for "Anti Stripping Additive" and "Compaction Adjustment" shall be included in the unit contract price per ton of the HMA with no direct compensation made.

The unit price for this bid item shall include all labor, materials, equipment and related work necessary to furnish, place, compact, roll and perform density tests on ATB placed in accordance with the Plans, Standard Specifications, and these Special Provisions

## **Bid Item 43 - HMA, WALKING PATH**

Measurement and Payment: Unit Price per Ton (TN)

Measurement for HMA, WALKING PATH shall be by the ton, recorded on certified weight tickets in accordance with 1-09.2 WEIGHING EQUIPMENT for HMA placed within the limits of dimensions defined in the Work or shown on the Plans, Standard Specifications, Section 5-06 of these Special Provisions, or as otherwise approved by the Engineer. The measurement and payment limits for measuring the width of this bid item shall not exceed the saw-cut limits shown on the Drawings. No deduction will be made for the weight of asphalt binder, blending sand, mineral filler, or other component of the mixture.

The unit price for this bid item shall include all labor, materials, equipment and related work necessary to furnish, machine-place, compact, roll and perform density tests on multiple lifts of HMA – CL 1/2" PG 64-22 pavement including parking lots, streets, alleys, and street crossings, as shown on the Plans.

Furnishing and applying tack coat, prime coat, joint seal and crack sealing asphalt is to be included in this bid item with no direct compensation made. All costs for "Anti Stripping Additive" and "Compaction Adjustment" shall be included in the unit contract price per ton of the HMA with no direct compensation made.

The unit price for this bid item shall include all labor, materials, equipment and related work necessary to furnish, place, compact, roll and perform density tests on ATB placed in accordance with the Plans, Standard Specifications, and these Special Provisions

#### **Bid Item 44 - HMA, SURFACING ROW**

Measurement and Payment: Unit Price per Ton (TN)

Measurement for HMA, SURFACING ROW shall be by the ton, recorded on certified weight tickets in accordance with 1-09.2 WEIGHING EQUIPMENT for HMA placed within the limits of dimensions defined in the Work or shown on the Plans, Standard Specifications, Section 5-06 of these Special Provisions, Standard Plan 302, or as otherwise approved by the Engineer. The measurement and payment limits for measuring the width of this bid item shall not exceed the saw-cut limits shown on the Drawings. No deduction will be made for the weight of asphalt binder, blending sand, mineral filler, or other component of the mixture.

The unit price for this bid item shall include all labor, materials, equipment and related work necessary to furnish, machine-place, compact, roll and perform density tests on multiple lifts of HMA - CL  $\frac{1}{2}$ " PG 64-22 pavement including parking lots, streets, alleys, and street crossings, as shown on the Plans.

Furnishing and applying tack coat, prime coat, joint seal and crack sealing asphalt is to be included in this bid item with no direct compensation made. All costs for "Anti Stripping Additive" and "Compaction Adjustment" shall be included in the unit contract price per ton of the HMA with no direct compensation made.

## **Bid Item 45 - PLANING BITUMINOUS PAVEMENT (2" DEEP)**

Measurement and Payment: Unit Price per Square Yard (SY)

Measurement for Planing Bituminous Pavement (2" Deep) shall be per square yard as delineated by the Contractor and approved by the Inspector. The unit price for this bid item shall be full payment for all costs incurred to perform the Work described in Section 5-04.3(14), to complete the work in accordance with the Plans, COE Standard Drawings, Standard Specifications and these Special Provisions.

Measurement and payment for the Planing Bituminous Pavement (2" Deep) shall be per Square Yard (SY), complete.

#### **Bid Item 46 - CONCRETE CURB AND GUTTER (TYPE A-1)**

Measurement and Payment: Unit Price per Linear Foot

The unit contract price for CONCRETE CURB AND GUTTER (TYPE A-1) per linear foot shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings, these Specifications and as shown on the Contract Plans.

The installation of CONCRETE CURB AND GUTTER (TYPE A-1) shall include, but is not limited to, the following: finish grading, base surfacing, compaction, formwork, concrete, expansion joint material, cleanup, and other miscellaneous and appurtenant work.

Measurement for CONCRETE CURB AND GUTTER (TYPE A-1) shall be per linear foot as delineated by the Contractor and approved by the Inspector.

#### Bid Item 47 - EXTRUDED CEMENT CONCRETE CURB

Measurement and Payment: Unit Price per Linear Foot

The unit contract price for EXTRUDED CEMENT CONCRETE CURB per linear foot shall be full compensation for all labor, material, tools, and equipment necessary to satisfactorily complete the work as defined in the Standard Specifications, Standard Drawings (Standard Drawing No. 311), these specifications and as shown on the Contract Plans and as directed by the Inspector.

The placement of EXTRUDED CEMENT CONCRETE CURB shall include, but is not limited to, the following: base material, general earthwork, excavation (regardless of depth) and removal of insitu materials, and other miscellaneous work.

The cost of removing and disposal of existing EXTRUDED CEMENT CONCRETE CURB shall be considered incidental and included in the unit price for this bid item.

Measurement for EXTRUDED CEMENT CONCRETE CURB shall be per Linear Foot (LF) as delineated by the Contractor and approved by the Inspector prior to removal.

#### **Bid Item 48 - RESTORE CONCRETE SIDEWALK AND DRIVEWAY**

Measurement and Payment: Unit Price per Square Yard (SY)

Measurement for RESTORE CONCRETE SIDEWALK AND DRIVEWAY shall be per square yard as delineated by the Contractor and approved by the Inspector prior to removal.

The unit price per square yard for restoration of existing concrete sidewalks shall be full compensation for final sawcut and all materials, tools, labor and equipment necessary to complete the work in accordance with the Plans, COE Standard Drawings (Standard Drawing No. 312 and Standard Drawing No. 315), Standard Specifications and these Special Provisions.

Measurement for RESTORE CONCRETE SIDEWALK AND DRIVEWAY shall be per Square Yard (SY) as delineated by the Contractor and approved by the Inspector.

#### Bid Item 49 - BLOCK WALL AT LIFT STATION SITE

Measurement and Payment: Unit Price per Square Foot (SF)

Payment for BLOCK WALL AT LIFT STATION SITE will be limited to dimensions and work limits defined on drawings or as otherwise approved by the Inspector.

The unit price per Square Foot for installation of BLOCK WALL AT LIFT STATION SITE shall be full compensation but is not limited to materials, tools, labor and equipment, finish grading, base surfacing, compaction, formwork, concrete, cleanup, and other miscellaneous and appurtenant work necessary to complete the work in accordance with the Plans, COE Standard Drawings, Standard Specifications (6-13.3(5)) and these Special Provisions.

Measurement for BLOCK WALL AT LIFT STATION SITE shall be per Square Foot (SF) as delineated by the Contractor and approved by the Inspector.

#### Bid Item 50 - CHAIN LINK FENCING AND GATES W/ PRIVACY SCREEN

Measurement and Payment: Unit Price per Linear Foot (LF)

The unit price bid per linear foot for CHAIN LINK FENCING shall be full compensation for all labor, material, incidentals, tools, and equipment necessary to satisfactorily complete the work as defined in Section 8-12 of the Standard Specifications and these specifications and as shown on the Contract Plans.

Measurement shall be Linear Feet (LF) of fencing, measured from station to station and will include the length through bends. The Contractor will be responsible for providing sufficient materials for completion of fence. These items shall include, but not be limited to, the following: installation, hole excavation, concrete, rebar, chain link fabric, posts and coatings, privacy screen, rails, gates, tensioning wire, tensioning bars, tensioning rods, wire ties, tying of wires, splicing, hog rings, bracing, components, accessories, material testing, and other miscellaneous work. The gates shall be the type and size as indicated on the Plans.

Temporary construction security chain link fencing is considered incidental to bid item #1.

Measurement and payment for CHAIN LINK FENCING AND GATES shall be per Linear Foot (LF).

#### Bid Item 51 - ASSIST COE IN CONNECTING TO EXISTING WATERMAIN

Measurement and Payment: Unit Price per Each (EA)

The unit contract price to Assist COE in Connecting to Existing Watermain shall constitute full compensation for all labor, materials, tools and equipment necessary for connection to existing system, in accordance with 7-09.3(19)A including, yet not limited to; all costs for traffic control, excavation, shoring, dewatering, haul and disposal of excavated materials, furnishing, installing and compacting bedding and backfill materials; restoration of pavement; labor and equipment required for the complete installation of the connection as specified.

Unit contract price shall include all coordination efforts with the City and assistance as City forces make the actual connection. Connection of a water service line to the watermain and connection of new water service line to existing water service line will not be considered a connection to the existing system.

#### **Bid Item 52 - TEMPORARY PAVEMENT PATCH**

Measurement and Payment: Unit Price per Square Yard (SY)

Measurement for Temporary Pavement Patch shall be by the square yard placed within the sawcut neatlines limits of dimensions defined in the Work, descriptions for other bid items, shown on the Plans, or COE Standard Drawings, or as otherwise approved by the Engineer.

The unit price per square yard for Temporary Pavement Patch in accordance with Standard Specifications, 5-06.3(6) of these Special Provisions and as shown on the Plans shall be full compensation for all work necessary to complete Temporary Pavement Patch in accordance with these specifications.

Regardless of duration or sequence of work, this item will be measured and paid one time.

#### Bid Item 53 - TEMPORARY ROADWAY AND PARKING LOT PATCH

Measurement and Payment: Lump Sum (LS)

No measurement will be made for the lump sum item Temporary Roadway Patch.

Payment for the lump sum item Temporary Roadway Patch shall be a one-time lump sum regardless of how many times Temporary Roadway Patch is placed, removed, replaced, or relocated. The lump sum price shall be full compensation for all labor, material, tools and equipment necessary to satisfactorily complete the Work as defined in Section 5-06.3(6) of these Special Provisions and as shown on the Plans.

#### **Bid Item 54 - PERMANENT PAVEMENT MARKING**

Measurement and Payment: Lump Sum (LS)

This lump sum bid item includes all costs associated with furnishing all labor, materials, and other equipment necessary for restoring and replacing permanent traffic marking, including and not limited to, stop bars, turn arrows, parking stalls lettering, crosswalks, reflectors, delineators, and lane or fog-line striping removed or damaged by the Contractor's work in accordance with the COE Standard Drawing No. 720, Special Provisions and Plans.

#### **Bid Item 55 - APPRENTICESHIP UTILIZATION**

Measurement and Payment: Incentive Amount

This bid item includes the obligation of an Apprentice Utilization Requirement. Fifteen percent or more of project Labor Hours shall be performed by Apprentices. Apprentice Utilization will be determined using the L&I online Prevailing Wage Intent & Affidavit (PWIA) system

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## **CITY OF EVERETT, WASHINGTON**

#### **CONTRACT**

THIS CONTRACT is made and entered into by and between the City of Evere corporation existing under the laws of the State of Washin ("Cont	
In consideration of the sums to be paid to it by the City, Contractor hereby covall labor, tools, materials, equipment, and supplies required to complete in work, improvements, and appurtenances in accordance with the Specification Contract Documents entitled: "" (the "Project").	a workmanlike manner the
<b>1. Contract Documents.</b> This Contract is the written agreement signed betwand includes Division C – CONTRACT, Division P - PROPOSAL, DESCRIPTIONS, Special Provisions, Contract Plans, Standard Specification as of the date Bids are opened, Addenda, supplemental agreements, chang affidavits required by this Contract and by law, and Federal requirements that Project, all of which are referred to as the "Contract Documents" and all of who by reference. A copy of the Contract Documents that were posted for the Project of Washington (www.bxwa.com) as of Bid Opening Date is maintained by single pdf and is available as follows:	Division B – BID ITEM ns, Standard Plans in effect ge orders, certifications and at apply to this Contract and nich are hereby incorporated bject on Builder's Exchange

Link to PDF	

Contractor acknowledges that Contractor has downloaded and reviewed this pdf prior to signing this Contract. City and Contractor agree that this pdf contains all posted Contract Documents as of the Bid Opening Date. City and Contractor further agree that this pdf may contain some other documents (such as Reference Information) that are not Contract Documents.

- **2. Contract Time.** Substantial completion shall be achieved within <u>one-hundred twenty</u> (120) working days after the effective date of the Notice to Proceed. Physical completion shall be within <u>Ten</u> (10) working days after the actual date of issuance of substantial completion.
- 3. Liquidated Damages. The parties agree the City will suffer damage and be put to additional expense in the event that the Contractor does not complete the work in all respects and have it ready for use by the substantial completion date stated. Because it is difficult to accurately compute the amount of such costs and damages, the Contractor hereby covenants and agrees to pay to the City liquidated damages as computed in Section 1-08.9 of the Standard Specifications, as may be amended by the Special Provisions, for each and every working day required to accomplish substantial completion of the work in excess of the period established above for substantial completion. For overruns in contract time occurring after the physical completion date, liquidated damages shall be assessed at the rate computed in Section 1-08.9 of the Standard Specifications, as may be amended by the Special Provisions, until the work is physically complete.

**4. Contract Sum.** The Contract Sum of this Contract is:

+ WA Sales Tax (as applicable)	
Contract Sum	

This is based on the proposal/bid submitted by Contractor dated \_\_\_\_\_\_. A copy of such proposal/bid is attached hereto. The basis for final payment will be the actual amount of work performed according to the Contract Documents and payments, whether partial or final, shall be made as specified therein.

- 5. Withholding. Five percent (5%) of amounts due Contractor shall be retained and withheld to comply with RCW Chap. 60.28. Retained amounts shall only be released: (A) as required by law or (B) sixty (60) days after completion of all contract work if there are no claims against the retained funds. In addition to the amounts required by RCW 60.28 to be withheld from the progress or retained percentage payments to the Contractor, the City may, in its sole discretion, withhold any amounts sufficient to pay any claim against the Contractor of which the City may have knowledge and regardless of the informalities of notice of such claim arising out of the performance of this Contract. The City may withhold the amount until either the Contractor secures a written release from the claimant, obtains a court decision that such claim is without merit, or satisfies any judgment in favor of the claimant on such claim. The City shall not be liable for interest during the period the funds are so held.
- **6.** Compliance with Employment and Wage Laws. Contractor agrees to comply with all state and federal laws relating to the employment of labor and wage rates to be paid.

#### 7. Vacant

#### 8. Indemnification.

- A. Contractor will defend, indemnify and hold harmless the City from any and all Claims arising out of or relating to any acts, errors, omissions, or conduct by Contractor in connection with its performance of this Contract, including without limitation (and without limiting the generality of the foregoing) all Claims resulting from Contractor's performance of, or failure to perform, its express and implied obligations under the Contract. The Contractor will defend and indemnify and hold harmless the City whether a Claim is asserted directly against the City, or whether a Claim is asserted indirectly against the City, e.g., a Claim is asserted against someone else who then seeks contribution or indemnity from the City. The amount of insurance obtained by, obtainable by, or required of the Contractor does not in any way limit the Contractor's duty to defend and indemnify the City. The City retains the right to approve Claims investigation and counsel assigned to said Claim and all investigation and legal work regarding said Claim shall be performed under a fiduciary relationship to the City. This Section 8 is in addition to any other defense or indemnity or hold harmless obligation in the Contract Documents.
- B. The Contractor's obligations under this Section 8 shall not apply to Claims caused by the sole negligence of the City. If (1) RCW 4.24.115 applies to a particular Claim, and (2) such Claim is caused by or results from the concurrent negligence of (a) the Contractor and (b) the City, then the Contractor's liability under this Section 8 shall be only to the extent of the Contractor's negligence.
- C. As used in this section: (1) "City" includes the City's officers, employees, agents, and representatives; (2) "Claims" include all losses, claims, demands, expenses (including, but not limited to, attorney's fees and litigation expenses), suits, judgments, or damage, whether threatened, asserted or filed against the City, whether such Claims sound in tort, contract, or any other legal theory, whether such Claims have been reduced to judgment or arbitration award, irrespective of the type of relief sought or demanded (such

as money or injunctive relief), and irrespective of the type of damage alleged (such as bodily injury, damage to property, economic loss, general damages, special damages, or punitive damages); and (3) "Contractor" includes Contractor, its employees, agents, representatives and subcontractors. If, and to the extent, Contractor employs or engages subcontractors, then Contractor shall ensure that each such subcontractor (and subsequent tiers of subcontractors) shall expressly agree to defend and indemnify and hold harmless the City to the extent and on the same terms and conditions as the Contractor pursuant to this section.

- **9. Insurance.** The Contractor shall purchase and maintain such insurance as set forth in the Contract Documents. Failure to maintain such insurance shall be a material breach of the Contract. The City shall be entitled to damages for such a breach that include, but are not limited to, any loss (including, but not limited to, third party litigation expenses and professional fees) suffered by the City if the City is determined to be solely or concurrently negligent, and if the City suffers any loss or must pay or defend against any such claim, suit, demand or damage as a result of such breach.
- 9. Waiver of Industrial Insurance Immunity. Contractor waives any right of contribution against the City. It is agreed and mutually negotiated that in any and all claims against the City, its agents or employees, the Contractor, a subcontractor, anyone directly or indirectly employed by the Contractor or subcontractor, or anyone for whose acts any of them may be liable, the defense and indemnification obligations hereunder shall not be limited in any way by any limitation on the amount of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under industrial worker's compensation acts, disability benefit acts, or other employees' benefit acts. Contractor's and City's signatures hereto indicate specific waiver of Contractor's industrial insurance immunity in order to fulfill the indemnities hereunder. Solely for the purpose of indemnification and defense as provided in this Contract, the Contractor specifically waives any immunity under the State Industrial Insurance Law, Title 51 RCW. The Contractor expressly acknowledges that this waiver of immunity under Title 51 RCW was the subject of mutual negotiation and was specifically entered into pursuant to the provisions of RCW 4.24.115.
- **10. Repair of Damage**. The Contractor agrees to repair and replace all property of the City and all property of others damaged by it, its employees, subcontractors, suppliers and agents.
- 11. Pre-Bid Inspection and Risk of Loss. It is understood that the whole of the work under this contract is to be done at the Contractor's risk and that: (1) prior to submitting its proposal or bid, it became familiar with the conditions of excavation, subsurface, backfill, materials, climatic conditions, location, traffic, and other contingencies that may affect the work and has made its bid or proposal accordingly and (2) that it assumes the responsibility and risk of all loss or damage to materials or work that may arise from any cause whatsoever prior to completion.
- **12. Headings for Convenience Only**. The headings in this document are for convenience only, and shall not be used or considered to interpret or construe this document.
- 13. Effective Date. This Contract is effective as of the date of the last person to sign it, and may be executed in multiple counterparts, each of which shall be deemed an original. This Contract may be signed with AdobeSign, and any such signature is fully binding.

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CITY OF EVERET WASHINGTON	T		
	ATTEST:		
By:Cassie Franklin, May	Sie Franklin, Mayor  Office of the City Clerk		
Date	STANDARD DOCUMENT APPROVED AS TO FORM OFFICE OF THE CITY ATTORNEY (9.21.23)		
CONTRACTOR: Poentity.	lease fill in the spaces and sign in the box appropriate for your business		
Corporation			
Limited Liability Company	[Contractor's Complete Legal Name]		
Partnership			
	By:		
Signature			
	Typed/Printed Name of Signer:		
Title of Signer:			
	Date:		
Sole Proprietorship			
	[Typed/Printed Name]		
	Signature		
	Date:		

# PAYMENT BOND

Bond No	
The City of Everett has awarded to the project designated as <b>Lift Station 47 – Beverly Lake</b> Washington (Contract), and said Principal is required und in accord with Title 39.08 Revised Code of Washington (I	der the terms of that Contract to furnish a payment bond
The Principal, and and licer laws of the State of and licer and named in the current list of "Surety Companies Acce Register by the Audit Staff Bureau of Accounts, U.S. Treat bound to the City of Everett in the sum of (\$), which is the Contract States.	ptable in Federal Bonds" as published in the Federal asury Dept., are jointly and severally held and firmly
This statutory payment bond shall become null and void, administrators, successors, or assigns shall pay all person including all workers, laborers, mechanics, subcontractor supply such contractor or subcontractor with provisions a taxes incurred on said Contract under Title 50 and 51 RC RCW; and if such payment obligations have not been full. The Surety agrees to indemnify, defend, and protect the resulting from the failure of the Principal, its heirs, execut subcontractors or lower tier subcontractors of the Principal tier subcontractors material persons, and all persons who provisions and supplies for the carrying on of such work.	if and when the Principal, its heirs, executors, ons in accordance with RCW Titles 39.08 and 39.12 is, and material suppliers, and all persons who shall and supplies for the carrying on of such work, and all acw and all taxes imposed on the Principal under Title 82 filled, this bond shall remain in full force and effect.  City of Everett against any claim of direct or indirect loss ors, administrators, successors, or assigns, (or the al) to pay all laborers, mechanics, subcontractors, lower
The Surety for value received agrees that no change, ext Contract, the specifications accompanying the Contract, any way affect its obligation on this bond, and waives not addition to the terms of the Contract or the work performs the terms and conditions of the Contract that increase the increase the obligation of the Surety on this bond and no obligation.	or to the work to be performed under the Contract shall in ice of any change, extension of time, alteration or ed. The Surety agrees that modifications and changes to e total amount to be paid the Principal shall automatically
This bond may be executed in two (2) original counterpar officers. This bond will only be accepted if it is accompan the officer executing on behalf of the surety. The Surety Washington and subjected to the jurisdiction of the state	ied by a fully executed and original power of attorney for agrees to be bound by the laws of the state of
PRINCIPAL	SURETY
Printed Name:	Printed Name:
Title:	Title:
STANDARD BOND FORM OFFICE OF THE CITY ATTORNEY APPROVED AS TO FORM APPROVED AS TO CITY CHARTER § 4.1	Local Office/ Agent of Surety: Name: Address: Phone Number:
	Email:



# PERFORMANCE BOND

Bond No.:	
The City of Everett has awarded tothe project designated as <b>Lift Station 47 – Beverly Lake</b> Washington (Contract), and said Principal is required to fu Contract.	
and named in the current list of "Surety Companies Accep	sury Dept., are jointly and severally held and firmly bound
This statutory performance bond shall become null and vo administrators, successors, or assigns shall well and faith Contract and fulfill all the terms and conditions of all duly a Contract that may hereafter be made, at the time and in the obligations have not been fulfilled, this bond shall remain	fully perform all of the Principal's obligations under the authorized modifications, additions, and changes to said ne manner therein specified; and if such performance
The Surety agrees to indemnify, defend, and protect the Cresulting from the failure of the Principal, its heirs, execute employees, subcontractors, or lower tier subcontractors or	ors, administrators, successors, or assigns (or any of the
The Surety for value received agrees that no change, exter Contract, the specifications accompanying the Contract, cany way affect its obligation on this bond, and waives not to the terms of the Contract or the work performed. The S and conditions of the Contract that increase the total amount the obligation of the Surety on this bond and notice to Surety.	or to the work to be performed under the Contract shall in ce of any change, extension of time, alteration or addition urety agrees that modifications and changes to the terms unt to be paid the Principal shall automatically increase
This bond may be executed in two (2) original counterpart officers. This bond will only be accepted if it is accompanithe officer executing on behalf of the surety. The Surety a and subjected to the jurisdiction of the state of Washingto	ed by a fully executed and original power of attorney for grees to be bound by the laws of the state of Washington
PRINCIPAL	SURETY
Printed Name:	Printed Name:
Title:	Title:
STANDARD BOND FORM	Local Office/ Agent of Surety:
OFFICE OF THE CITY ATTORNEY APPROVED AS TO FORM APPROVED AS TO CITY CHARTER § 4.1	Name:
	Address:
	Phone Number:Email:

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#### **DIVISION 1 – GENERAL REQUIREMENTS**

Supplement Division 1 by adding the following:

# General Description and Location of Project (\*\*\*\*\*)

Work being performed includes furnishing all labor, materials and equipment necessary to construct approximately 480 linear feet of water service and approximately 700 linear feet of sanitary sewer main, 560 linear feet of sewer force main, 6-48" Sewer Manholes, Lump sum Lift Station Below-Grade, Lump sum Lift Station Above-Grade, 415 ton of HMA, 950 feet of electrical conduit, 3 each Electrical Junction Boxes and other such appurtenances and performing all Work as required by the Contract, in accordance with the Contract Plans and Contract Provisions.

The Project is in Everett, Washington, and is generally located at 747 75<sup>th</sup> Street; 801 75th Street; 701 75th Street and 7404 Evergreen Way.

# Design Engineer (\*\*\*\*\*\*)

Questions and inquiries about these Contract Documents should be directed in writing to the attention of Daniel Enrico, P.E., City Project Manager, Denrico@everettwa.gov

## **Standard Specifications**

All Work under this Contract shall be performed in accordance with the following Specifications except as may be exempted or modified by other sections of these Contract Documents. These Specifications are incorporated by reference, made a part of this Contract and shall control and guide all activities within this Project whether referred to directly, paragraph by paragraph.

WSDOT/APWA "2025 Standard Specifications for Road, Bridge and Municipal Construction", hereinafter referred to as the "Standard Specifications."

The Standard Specifications, as modified or supplemented by these Special Provisions, all of which are made a part of the Contract Documents, shall govern all of the Work. The following latest edition of other specifications and standard plans shall apply to the extent to which they are called out in the Contract Documents:

- 1. City of Everett "Design and Construction Standards and Specifications", latest edition as found on the Web at "http://everettwa.gov/DocumentCenter/View/243".
- 2. "Standard Plans for Road and Bridge Construction", as prepared by WSDOT.
- 3. "Manual on Uniform Traffic Control Devices (MUTCD)."
- 4. APWA Standards.
- 5. AWWA Standards.
- 6. National Electrical Code (NEC) 2023 edition.

Each Provision of these Special Provisions either 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.

Sections and subsections in the Special Provisions labeled under the headers with (\*\*\*\*\*\*) indicate City of Everett Provisions.

#### 1-01 DEFINITIONS AND TERMS

#### 1-01.3 Definitions

Delete the three paragraphs under the heading Completion Dates, and substitute the following:

Substantial Completion Date: The day the Engineer determines the City has full and unrestricted use and benefit of the facilities, both from the operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the Physical Completion of the total Contract.

Physical Completion Date: The day all of the Work is physically completed on the project. All documentation required by the Contract and required by law does not necessarily need to be furnished by the Contractor by this date.

Completion Date: Date on which Project is ready for Final Acceptance. All physical work, including Punch List, is complete and Contractor has completed and fulfilled all contractual obligations except any maintenance of landscaping. Contractual obligations that must be fulfilled prior to achievement of the Completion Date include, and are not limited to; the Contractor's furnishing all documentation, including correct, complete and accurate as-built or record drawings and operation and maintenance manuals and transfer of warranties.

(This definition replaces the definition in WSDOT 1-01.3 for Completion Dates.)

Revise the following definitions to read as follows:

Award: The decision by Everett City Council to award a contract and authorize the Mayor to sign the Contract. No contract is formed until the Mayor signs the contract. (This definition replaces the definition in WSDOT 1-01.3 for Bid Documents.)

Bid Documents: The component parts of the proposed Contract which may include, but are not limited to, the Proposal Form, the proposed Contract Provisions, the proposed Contract Plans, and Addenda. (This definition replaces the definition in WSDOT 1-01.3 for Bid Documents.)

Contract: Written agreement signed between the City and Contractor and includes Division C - CONTRACT, Division P - PROPOSAL, Division B - BID ITEM DESCRIPTIONS, Special Provisions, Contract Plans, Standard Specifications and amendments, Standard Plans in effect as of the date Bids are opened, Addenda, supplemental agreements, change orders, certifications and affidavits required by this Contract and by law, and Federal requirements that apply to this Contract and Project. (This definition replaces the definition in WSDOT 1-01.3 for Contract.)

Contract Bond(s): The separate performance bond and payment bond, as set forth in and required by the Contract Documents. (This definition supplements the definition in WSDOT 1-01.3 for Contract Bond.)

Engineer: The City's representative who administers the construction program for the City. Provisions in the Contract Documents that state the Engineer "shall" or "will" shall be deemed to mean that the Engineer shall or will take such action if requested in writing by the Contractor. (This definition replaces the definition in WSDOT 1-01.3 for Engineer.)

Specifications: Includes 2021 WSDOT/APWA Standard Specifications and latest Amendments, and all other specifications (including these Special Provisions) for the prescribed Work in this Contract. (This definition replaces the definition in WSDOT 1-01.3 for Specifications.)

**Working Drawings:** Drawings, shop drawings, plans, diagrams, or calculations, including a schedule of submittal dates for Working Drawings where specified, which the Contractor must submit to the Engineer. (This definition replaces the definition in WSDOT 1-01.3 for Working Drawings.)

Supplement Section 1-01.3 by adding the following:

All references in the Standard Specifications to the terms "State", "Department of Transportation", "Washington State Transportation Commission", "Commission", "Secretary of Transportation", "Secretary", "Headquarters", and "State Treasurer" shall be revised to read "City."

All references to the terms "State" or "state" shall be revised to read "City" unless the reference is to an administrative agency of the State of Washington, a State statute or regulation, or the context reasonably indicates otherwise.

All references to "State Materials Laboratory" shall be revised to read "City designated location."

All references to "final contract voucher certification" shall be interpreted to mean the City form(s) by which final payment is authorized, and final completion and acceptance granted.

**Additive**: A supplemental unit of work or group of bid items, identified separately in the Proposal, that may, at the discretion of the City, be awarded in addition to the base Bid.

**Alternative or Alternate:** One of two or more units of Work or groups of bid items, identified separately in the Proposal, from which the City may make a choice between different methods or material of construction for performing the same Work.

**Award Date**: The date of the formal action by the Everett City Council to accept the lowest responsible and responsive Bidder for the Work.

**Bid Opening Date**: The date the Everett City Clerk publicly opens and reads the Bids. **Business Day:** A business day is any day from Monday through Friday except holidays as listed in 1-08.5.

**Change Order**: Reference to Change Order shall include all rights of the City and Contractor under <u>1-04.4 CHANGES</u>. Agreed Change Orders shall be in the form attached as Appendix C. Unilateral Change Orders shall be in the form attached as Appendix C.

**City:** The City of Everett, Washington. "City" and "Owner" and "Contracting Agency" mean the same.

**City's Representative**: The person designated in writing by the City to act as its representative at the construction site and to perform construction inspection service and administrative functions relating to this Contract. The terms "Engineer", "Architect", or "Owner's Representative" shall be interchangeable with City's Representative.

**Contract Claim**: Any request by the Contractor for additional time or money resulting in adjustment of Contract Sum or Contract Time irrespective of the cause or reason for the request. Contract Claims include, but are not limited to, requests by the Contractor for additional time or money due to Extra Work, inefficiencies, Delays, interferences, and problems with the design. Contract Claim includes, but is not limited to, claims or requests by Subcontractors for extensions of Contract Time, adjustment of Contract Sum, additional compensation that the Contractor attempts to pass through or assert against the City, or claims against the City arising out of a third party's claim against the Contractor. Certified Claim means the same as Contract Claim.

**Contract Documents**: All of the items that together make up the complete Contract. See definition for "Contract."

Contract Execution Date: The date the Mayor of the City of Everett signs the Contract or the date that the Contractor signs the Contract, whichever date is later. This officially binds the Contractor to the Contract.

Contract Sum: The price in dollars stated in the Contract to be paid by the City to the Contractor for the Work described in the Contract Documents, as modified by Change Orders.

Contract Time: The period of time established by the terms and conditions of the Contract within which the Work must be physically completed.

**Delay**: Any increase in the duration of the critical path of the Project.

**Dispute:** Any controversy or disagreement.

Equipment: Mechanical, electrical, instrumentation, or other devices with one or more moving parts, or devices requiring an electrical, pneumatic, electronic, or hydraulic connection.

Extended Overhead: The increase in Overhead costs attributable to an extension of Contract Time.

Extra Work: Providing materials and Equipment and the performance of Work not directly called for in, or implied by, the Contract Documents, such that Contractor would be entitled to an adjustment of Contract Sum and possibly an extension of Contract Time.

Final Acceptance: Formal action by Everett City Council determining that all of the Contractor's Work has been completed, except for any landscaping maintenance.

Float: The amount of time between the early start date and the late start date, or the early finish date and the late finish date of an activity in the Project schedule.

**Force Account**: Costs of performing Work as defined in 1-09.6 FORCE ACCOUNT.

Furnish: To deliver items, Equipment, or material to the job site or other specified location.

Install: Placing, erecting, or constructing complete in place items, Equipment, or material.

May: Conduct that is permitted, but not required.

Notice: A signed, written communication by the Contractor to the City as described in 1-04.5 NOTICE BY CONTRACTOR of these Special Provisions.

Notice of Award: The written notice from the City of Everett to the successful Bidder signifying the City's acceptance of the Bid. No Contract is formed until the Contract Execution Date.

Notice to Proceed: The written Notice from the City or City's Representative to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract Time begins. Multiple and partial Notices to Proceed may be issued on a single Project.

Over absorbed Overhead: Over recovery of fixed indirect costs that occurs when a Contractor performs more overall Work than it otherwise would have performed.

#### Overhead

In general, Overhead for the purpose of calculating additional compensation under this section of the Contract shall include only those costs that are expended for the administration of the business as a whole. Such costs usually accrue or are incurred

due to the passage of time, or cannot be traced to a particular project or contract, or both.

Examples of possible Overhead costs include, but are not limited to, General and Administrative salaries and benefits, rent, general company insurance, exclusive of insurance on owned equipment that is directly job costed, depreciation on office facilities, utilities, maintenance, office supplies, general company accounting and legal fees, exclusive of amounts expended directly on any specific project, personal property taxes, general company business licenses, dues and subscriptions.

The following costs and expenses are excluded from the definition and calculation of Overhead. Overhead costs that vary substantially with the volume of Work performed, as measured by billings, shall not be included in Overhead for the purpose of determining additional compensation for Extended or Unabsorbed Home Office Overhead, or both.

Examples of costs that are not included in Overhead include: travel and business meetings, telephones, professional fees expended for the benefit of a specific project, union welfare benefits, payroll taxes and equipment rental.

If related party transactions are included in a Contractor's Overhead, they must be explicitly identified as related party transactions and must not exceed amounts that would be incurred in an arms-length transaction for the provision of the same or similar goods and services. If such transactions exist and the amounts paid by the Contractor and included in Overhead are in excess of that which would normally be expended in an arms-length transaction, an adjustment, in the form of a reduction in the amount for calculation purposes, must be included in any calculation in determining the amount of Allocable Overhead.

Overhead shall not include any cost directly attributable to a particular project. If a cost can be traced to a particular contract, the Contractor may not classify the cost as Overhead.

Indirect or home office costs that vary substantially with the amount of Work performed shall not be included in the group of costs comprising Overhead.

Overhead shall not include any costs specifically disallowed by Federal Acquisition Regulations, Subpart 31.2 – Contracts with Commercial Organizations, or its successor. Further, "Overhead" shall not include the costs of any "field support services" that are more closely direct costs in nature, regardless of the manner in which the Contractor normally accounts for such costs. An example of such disallowed cost would be for material handling and expediting, which are costs incurred for the direct support and benefit of any specific project(s).

In addition to compliance with Federal Acquisition Regulations, Subpart 31.2 examples of specific costs not allowed in a calculation under this Section of the Contract are Incentive Compensation paid to personnel classified as Overhead and otherwise includable under this Section of the Contract, travel and business meetings, employer paid benefits and taxes on direct payroll costs of any project, insurance costs directly identifiable to any specific project, penalties, and any costs incurred regarding company owned equipment normally classified as a direct project costs,.

Includes individuals, associations, firms, companies, corporations, Person: partnerships, and joint ventures.

**Project:** The undertaking to be performed under the provisions of the Contract.

**Provide:** Furnish and Install, complete in place.

Punch List: List of incomplete items of Work and of items of Work that do not conform to the requirements of the Contract Documents. The Punch List is prepared after Substantial Completion.

**RCW:** Means the Revised Code of Washington

Schedule of Values: Allocation of Contract Sum to items of Work as described in 1-09.9 PAYMENTS of these Special Provisions.

Shall: Required conduct.

**Shown:** Refers to information presented on the Plans, with or without reference to the Plans.

**Specify:** Refers to information described, shown, noted or presented in any manner in the Contract.

Submittals: The information required by the Contract Documents provided by Contractor to the City's Representative or City.

Total Float: The amount of time a given activity or path of activities may be delayed before it will affect the Completion Date.

Traffic: Both vehicular and non-vehicular traffic, such as pedestrians, bicyclists, wheelchairs, and equestrian traffic.

Unabsorbed Overhead: The reduction or loss of contribution to recovery of the Contractor's Overhead costs realized by the result of reduced Project or Contractor billings, or both, due to any reason whatsoever, including a Project extension.

**Unit Price Work:** Refers to items of Work identified by unit prices in the Proposal.

#### 1-02 BID PROCEDURES AND CONDITIONS

## 1-02.1 Prequalifications of Bidders

Delete 1-02.1 and substitute the following:

#### 1-02.1 Bidder Responsibility Criteria (\*\*\*\*\*)

#### **Mandatory Bidder Responsibility Criteria** 1-02.1(1) (\*\*\*\*\*)

Bidder shall meet mandatory responsibility criteria in accordance with RCW 39.04.350(1). The City may require Bidder to submit documentation demonstrating compliance with the criteria under this 1-02.1(1). Bidder must:

- 1. Registration. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of Bid submittal; and
- 2. UBI. Have a current Washington Unified Business Identifier (UBI) number; and
- 3. State Requirements. If applicable:
  - a. Have Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
  - b. Have a Washington Employment Security Department number, as required in Title 50 RCW; and
  - c. Have a Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW.
- 4. Disqualification. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065(3).

- 5. Prevailing Wage Training. Unless Bidder has completed three or more public works projects and had a valid business license for three or more years. Bidder must have received Department of Labor and Industries training on the requirements related to public works and prevailing wage under RCW 39.12 and RCW 39.04.
- 5. Certification of Wage Compliance. Within the three-year period immediately preceding the date of the bid solicitation, not have been determined by a final and binding citation and notice of assessment issued by the department of labor and industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of chapter 49.46, 49.48, or 49.52 RCW.
- 6. Apprentices. If the Project is subject to the apprenticeship utilization requirements in RCW 39.04.320, not have been found out of compliance by the Washington state apprenticeship and training council for working apprentices out of ratio, without appropriate supervision, or outside their approved work processes as outlined in their standards of apprenticeship under chapter 49.04 RCW for the one-year period immediately preceding the date of the bid solicitation.

#### 1-02.1(2) Supplemental Bidder Responsibility Criteria (\*\*\*\*\*)

This Project will not be subject to supplemental bidder responsibility criteria.

#### 1-02.2 Plans and Specifications

Delete all paragraphs in 1-02.2 and substitute the following:

Information as to where Bid Documents can be obtained or reviewed will be found in the Call for Bids (Advertisement for Bids) for the Work.

After Award of the Contract, the Contractor will receive up to six sets of the reduced Plans (11" x 17") and accompanying Special Provisions. In addition, the City will supply up to three sets of full size plans (22" x 34"). All Plans and Special Provisions will be conformed with addenda unless Contractor requests otherwise.

Additional Plans and Special Provisions may be purchased by payment of the current printing costs.

## 1-02.4 Examination of Plans, Specifications, and Site of Work

#### 1-02.4(1) General

Delete the fifth paragraph of 1-02.4(1), beginning with "Bid prices shall reflect", and substitute the following:

Bid prices shall include everything necessary for the completion of the Work including, but not limited to, providing the materials, equipment, tools, plant and other facilities, and the management, superintendence, labor, and all necessary testing services.

Revise the first sentence in the paragraph that begins with "Any prospective Bidder desiring an explanation" to read as follows:

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

Supplement 1-02.4(1) by adding the following:

Bidder acknowledges that Bidder has not relied on representation or warranty of the City not expressly included in the Contract Documents.

The information provided by the City is not intended to be a substitute for, or a supplement to, the independent verification by Bidder to the extent such independent investigation of the Drawings and Specifications or Site conditions is deemed necessary or desirable by the Bidder. Bidder acknowledges that they have not relied upon City or Engineer furnished information regarding site conditions in preparing and submitting a Bid.

Further supplement 1-02.4(1) by adding the following:

#### 1-02.4(1)A **Interpretation of Contract Documents** (\*\*\*\*\*)

Should a Bidder find what is believed to be discrepancies in or omissions from the Plans, Specifications, or Special Provisions, or should the Bidder be in doubt as to their meaning, Bidder may submit to the Engineer a written request for an interpretation thereof. The Bidder submitting the request will be responsible for its prompt delivery. Any interpretation of the documents, if made, will be made only by addendum duly issued and a copy of such addendum will be mailed or delivered to each Bidder receiving a set of such documents. All requests for interpretations must be received by the City or Engineer no later than 7 calendar days prior to the Bid Opening Date. All questions regarding the Contract Documents shall be referred to the City or Engineer at the address provided in the Contract Documents.

#### 1-02.4(1)B **Prevailing Wages** (\*\*\*\*\*)

Bidder is directed to 1-07.9(1) of these Special Provisions for requirements regarding applying payment of prevailing wage rates for employment of labor on within Snohomish County.

#### 1-02.4(2) **Subsurface Information**

Delete the first paragraph and substitute the following:

If the City has made subsurface investigation of the site of the proposed Work, the boring log data and soil sample test data accumulated by the City will be made available for inspection by the Bidders. The boring logs and soil sample test data shall NOT be considered as part of the Contract, regardless of whether such data is supplied as an Appendix to the Special Provisions or not. In addition, the City makes no representation or warranty expressed or implied that:

- 1. The Bidders' interpretations from the boring logs are correct,
- 2. Moisture conditions and indicated water tables will not vary from those found at the time the borings were made, and
- 3. The ground at the location of the borings has not been physically disturbed or altered after the boring was made.

The City specifically makes no representations, guarantees, or warranties as to the condition, materials, or proportions of the materials between the specific borings regardless of any subsurface information the Contracting Agency may make available to the prospective Bidders.

#### 1-02.5 Proposal Form

Delete this section and substitute the following:

The Proposal Form identifies the project and its location and describes the Work. It also lists estimated quantities, units of measurement, the items of work, and the materials to

be furnished at the unit bid prices. Bidder shall complete spaces on the proposal form that call for, and are not limited to, unit prices; extensions; summations; the total bid amount; signatures; date; and, where applicable, retail sales taxes and acknowledgment of addenda; bidder's name, address, bidder's email address, telephone number, and signature; bidder's UDBE/DBE/M/WBE commitment, if applicable; a State of Washington Contractor's Registration Number; and a Business License Number, if applicable. Bids shall be completed by typing or shall be printed in ink by hand, preferably in black ink. The required certifications are included as part of the Proposal Form.

Bidder shall submit Bidder's Proposal on the Proposal Form provided in the Contract Documents.

The City reserves the right to arrange the proposal forms with alternates and additives, if such be to the advantage of the City. Bidder shall bid on all alternates and additives set forth in the Proposal Form unless otherwise specified.

## 1-02.6 Preparation of Proposal

Delete "unless it approves in writing" from the second sentence of the first paragraph of 1-02.6.

Revise the fourth paragraph of 1-02.6, beginning with "The Bidder shall submit with the Bid a completed Disadvantaged Business Enterprise (DBE) Utilization Certification", to read as follows:

Contractor agrees that the Contractor shall actively solicit the employment of minority group members. Contractor further agrees that the Contractor shall actively solicit Bids for the subcontracting of goods or services from qualified minority businesses. Contractor shall furnish evidence of the Contractor's compliance with these requirements of minority employment and solicitation. Contractor further agrees to consider the grant of subcontracts to said minority bidders on the basis of substantially equal proposals in the light most favorable to said minority businesses. The Contractor shall be required to submit evidence of compliance with this section as part of the Bid by submitting the RCW 35.22.650 Certification.

Delete the sixth paragraph of 1-02.6, which begins with "The Bidder shall submit with their Bid a completed Contractor Certification Wage Law Compliance form (WSDOT Form 272-009)."

## Supplement 1-02.6 by adding the following:

In the event that the product of a unit price and an estimated quantity does not equal the extended amount quoted, the unit price shall govern, and the correct product of the unit price and the estimated quantity shall be deemed to be the amount bid. If the sum of two or more items in a bidding schedule does not equal the total amounts quoted, the individual item amounts shall govern and the correct total shall be deemed to be the amount bid. Do not qualify Proposal, since this will automatically be cause for rejection of the Proposal.

Bidders are warned against making erasures or alterations of any kind to the Proposal Form, and proposals that contain omissions, erasures, or irregularities of any kind may be rejected. No oral, electronic, fax, telegraphic, or telephonic proposals or modifications will be considered.

#### 1-02.7 Bid Deposit

Supplement 1-02.7 by adding the following:

Bid deposit shall serve as evidence of good faith and as a guarantee that if awarded the Contract the Bidder will execute the Contract and provide bonds as required by the Bid. Should the successful Bidder fail to enter into the Contract, furnish a satisfactory performance and payment bond, and furnish evidence of insurance within 14 calendar days after the Award Date, the certified check, cashier's check or bid bond shall, unless otherwise provided in the Contract Documents, be forfeited as liquidated damages.

Bid bonds shall contain the following:

- 1. City-assigned number for the Project;
- 2. Name of the Project;
- 3. The City of Everett named as obligee;
- 4. The amount of the bid bond stated either as a dollar figure or as a percentage that represents five percent of the maximum bid amount that could be awarded:
- 5. Signature of the Bidder's officer empowered to sign official statements. The signature of the person authorized to submit the Bid should agree with the signature on the bond, and the title of the person must accompany the said signature:
- 6. The signature of the surety's officer empowered to sign the bond and the power of attorney.

Bidder shall use the bond form included in the Bid Documents.

## 1-02.8 Noncollusion Declaration and Lobbying Certification

#### 1-02.8(1) Noncollusion Declaration

Delete the last paragraph of 1-02.8(1) and supplement by adding the following:

The City has determined every Bidder must submit a Non-Collusion Affidavit for every Project. Accordingly, the Bidder shall submit a signed and notarized "Non-Collusion Affidavit", contained in the Contract Documents, as part of the Proposal package. If the City has reason to believe that collusion exists among Bidders, the City will reject the Bids of the known participants in such collusion and may, at its option, require that all Bidders certify under penalty of perjury, that no collusion has occurred or exists.

## 1-02.9 Delivery of Proposal

Delete all of 1-02.9 and substitute the following:

Bidder shall submit Bidder's Proposal in a sealed opaque envelope that clearly and legibly notes the Project Name, the time and date of the bid opening, and the Bidder's name and address on the outside of the envelope.

The City will not open or consider any Proposal or any supplement to a Proposal that is received after the time specified for receipt of Proposals, or received in a location other than that specified for receipt of Proposals.

## 1-02.10 Withdrawing, Revising, or Supplementing Proposal

Delete 1-02.10 and substitute with the following:

After submitting a physical Proposal to the City, the Bidder may withdraw, revise, or supplement its Proposal if:

- 1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Proposals, and
- 2. The City receives the request before the time set for receipt of Bid Proposals, and

3. The revised or supplemented Proposal (if any) is received by the City before the time set for receipt of Proposals.

The original physical Bid Proposal may be supplemented, or revised and resubmitted as the official Proposal if the City receives it before the time set for receipt of Proposals. If the Bidder does not submit a revised or supplemented package in time, then its bid shall be considered withdrawn.

Email, fax or telephone requests to withdraw, revise, or supplement a Proposal are not acceptable.

Resubmitted Proposals shall be in full compliance with the bidding requirements. Bid deposit shall be in an amount sufficient for the Proposal as resubmitted.

After the scheduled time for opening Proposals, no Bidder will be permitted to withdraw Bidder's Proposal unless the award of contract is delayed for a period exceeding 45 calendar days. Proposals received after the scheduled closing for opening Proposals will be returned unopened to the Bidder.

# 1-02.12 Public Opening of Proposals

Supplement 1-02.12 by adding the following:

#### 1-02.12(1) **Postponement of Opening** (\*\*\*\*\*)

The City reserves the right to postpone the date and time for receiving or opening of Bids, or both, at any time prior to the date and time established in the Notice to Bidders. Postponement notices shall be provided to Bidders in the form of addenda.

Supplement 1-02.12 by adding the following:

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1-02.12(2) Video Conferencing
(*****)
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The City reserves the right to open and publicly read Bids by use of video-conferencing, such as by Microsoft Teams, Zoom or other application.

# 1-02.13 Irregular Proposals

Revise item 1 and 2 of 1-02.13 to read as follows:

- 1. A Proposal will be considered irregular and will be rejected if:
  - a.. The authorized proposal form furnished by the City is not used or is altered;
  - b. The completed proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
  - c. The Bidder adds provisions reserving the right to reject or accept the Award, or enter into the Contract;
  - d. A price per unit cannot be determined from the Bid Proposal;
  - e. The Proposal form is not properly executed;
  - f. The Bidder fails to submit or properly complete, on the form provided by the City, the Subcontractor list, if applicable, as required in 1-02.6;
  - q. The Bidder fails to submit or properly complete, on the form provided by the City, the RCW 35.22.650 Certification, as required in 1-02.6;
  - h. The Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation:
  - More than one proposal is submitted for the same project from a Bidder under the same or different names; or

- j. The Bidder fails to submit or properly complete, on the form provided by the City, the Non-Collusion Affidavit, as required in 1-02.8(1).
- 2. A Proposal may be considered irregular and may be rejected if:
  - a. The Proposal does not include a unit price for every Bid item;
  - b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the City, as determined by the City;
  - c. Receipt of Addenda is not acknowledged;
  - d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Proposals may be rejected); or
  - e. Proposal form entries are not made in ink.

# 1-02.14 Disqualification of Bidders

Revise 1-02.14 to read as follows:

A Bidder will be deemed not responsible if the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended, and noted in 1-02.1(1).

The City will verify that the Bidder meets the mandatory bidder responsibility criteria in RCW 39.04.350(1). To assess bidder responsibility, the City reserves the right to request documentation as needed from the Bidder and third parties concerning the Bidder's compliance with the mandatory bidder responsibility criteria.

If the City determines the Bidder does not meet the mandatory bidder responsibility criteria in RCW 39.04.350(1) and is therefore not a responsible Bidder, the City shall notify the Bidder in writing, with the reasons for its determination. If the Bidder disagrees with this determination, it may appeal the determination within two business days of the City's determination by presenting its appeal and any additional information to the City. The City will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Bidder is not responsible, the City will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the City's final determination.

If the Contract Documents contain supplemental responsibility criteria, then a Bidder will be deemed not responsible if the Bidder does not meet those criteria:

# 1-02.15 Pre-Award Information

Revise 1-02.15 to read as follows:

Before awarding any contract, the City may require one or more of these items or actions of the apparent lowest responsible Bidder:

- 1. A complete statement of the origin, composition, and manufacture of any or all materials to be used.
- 2. Samples of these materials for quality and fitness tests,
- 3. A progress schedule, in a form the City requires, showing the order of and time required for the various phases of the Work,
- 4. A breakdown of costs assigned to any bid item,
- 5. Attendance at a conference with the Engineer or representatives of the Engineer,

- 6. Obtain, and furnish a copy of, a business license to do business in the City of Everett.
- 7. A copy of State of Washington Contractor's Registration, or
- 8. Any other information or action taken that is deemed necessary to ensure that the Bidder is the lowest responsible bidder.

# 1-03 AWARD AND EXECUTION OF CONTRACT

#### 1-03.1 Consideration of Bids

Revise the first paragraph to read:

After opening and reading Proposals, the City will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit will control. If a minimum bid amount has been established for any item and the Bidder's unit or lump sum price is less than the minimum specified amount, the City will unilaterally revise the unit or lump sum price to the minimum specified amount and recalculate the extension. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or alternates as selected by the City, will be used by the City for Award purposes and to fix the awarded Contract Sum and the amount of the Contract Bond(s).

Revise the third and fourth paragraphs of 1-03.1 to read as follows:

Within 5 days after the opening of Proposals (or such longer time as the City may grant in writing), a Bidder who wishes to claim error shall submit a notarized affidavit signed by the Bidder, accompanied by original work sheets used in the preparation of the Proposal, requesting relief from the responsibilities of Award.

The affidavit shall describe the specific error(s) and certify that the work sheets are the originals used in the preparation of the Proposal. The Engineer will review the certified work sheets to determine the validity of the claimed error and make recommendation to the City. If the City concurs in the claim of error, the Bidder will be relieved of responsibility, and the bid deposit of the Bidder will be returned. Thereafter, at the discretion of the City, all Bids may be rejected or Award made to next lowest and responsive Bidder.

Supplement 1-03.1 by adding the following:

#### **Preference for Resident Contractors** 1-03.1(2) (\*\*\*\*\*)

In accordance with RCW 39.04.380, if a Bid is received from a nonresident contractor from a state that provides a percentage bidding preference and does not have an office located in Washington, then a comparable percentage disadvantage will be applied to the Bid of that nonresident contractor.

#### Award of Contract 1-03.2

Revise 1-03.2 to read as follows:

Within 45 days after the opening of Bids, the City will act either to accept the Bid from the lowest responsive, responsible Bidder, or to reject all Bids. The City reserves the right to request extensions of such Bid acceptance period. If the lowest responsible Bidder and the City cannot agree on an extension by the 45 day deadline, the City reserves the right to award the Contract to the next lowest responsible Bidder or reject all Bids.

The acceptance of a Bid will be evidenced by a written Notice of Award of Contract delivered in person or by certified mail to the Bidder whose Bid is accepted, together

with a request to furnish a Contract Bond and evidence of insurance and to execute the Contract set forth in the Contract Documents. No Contract is formed until the Contract Execution Date.

# 1-03.3 Execution of Contract

Revise 1-03.3 to read as follows:

Within 3 calendar days after receiving the Notice of Award (not including Saturdays, Sundays and Holidays), the successful Bidder shall provide to the City the information necessary to execute the Contract electronically. This information shall include contact information, including the full name, title, email address, and phone number for the authorized signer of the Bidder.

Successful Bidder has 14 calendar days after receiving the Notice of Award to complete the following:

- Execute the Contract upon receipt from the City's AdobeSign System.
- Submit to the City two original paper payment bonds and two original paper performance bonds submitted on forms contained in Contract Documents and fully executed, with proper power of attorney document(s).
- Submit to the City in pdf format certificate of Insurance and additional insured endorsements in accordance with the Contract Documents.

Until the City executes the Contract, no Bid shall bind the City nor shall any Work begin within the project limits or within City-furnished sites. The Bidder shall bear all risks for any Work begun outside such areas and for any materials ordered before the Contract is executed by the City.

If the Bidder experiences circumstances beyond its control that prevents return of the Contract, bonds, and insurance documents within 14-calendar days after receipt of the Notice of Award, the City may grant more time, provided the City deems the circumstances warrant it.

A Contract shall not be formed until the Contract is signed by the Mayor.

## 1-03.4 Contract Bond

Revise 1-03.4 to read as follows:

The Contractor shall provide a separate payment bond and performance bond, each in the amount of 100 percent of the Contract Sum and each in the form contained in the Contract Documents. These bonds shall serve as security for the faithful performance of the Work and as security for the faithful payment and satisfaction of the persons furnishing materials and performing labor on the Work. The bonds shall be issued by a corporation duly and legally licensed to transact surety business in the State of Washington. Such bonds shall remain in force throughout the period required to complete the Work, and thereafter for a period of 365 calendar days after Final Acceptance. The bonds must be executed by a duly licensed surety company, which is listed in the latest Circular 570 of the United States Treasury Department, as being acceptable as surety on federal bonds. No surety's liability on the bond shall exceed the underwriting limitations for the respective surety specified in Circular 570. The bonds must be signed by an officer of the Contractor empowered to sign binding instruments. The bonds must be accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety. The scope of the bonds or the form thereof prescribed in these Contract Documents shall in no way affect or alter the liabilities of the Contractor to the City as set forth in the Contract Documents.

# 1-03.5 Failure to Execute Contract

Supplement 1-03.5 by adding the following:

In addition to the items listed in the first paragraph of 1-03.5, failure to have or obtain a City of Everett business license prior to executing the Contract, unless immediately cured by Bidder after notice from the City, shall result in forfeiture of the proposal bond or deposit of this Bidder.

# 1-03.6 Return of Bid Deposit

Supplement 1-03.6 by adding the following:

Within 15 calendar days after the Bids are opened, the City will return the bid deposit accompanying the Bids that are not to be considered in making the Award.

#### 1-03.7 Judicial Review

Revise 1-03.7 to read as follows:

All protests by Bidders must be in accordance with Chapter 3.46 of the Everett Municipal Code. "Bid Protest Procedures."

The exclusive venue of all lawsuits shall be in Snohomish County Superior Court.

## 1-04 SCOPE OF THE WORK

## 1-04.1 Intent of the Contract

Supplement 1-04.1 by adding the following:

#### 1-04.1(3) **Specifications and Plans** (\*\*\*\*\*)

#### 1-04.1(3)A Interpretation of Specifications and Plans

The Specifications and Plans are intended to be explanatory and supportive of each other. Work specified on the Plans and not in the Specifications, or vice versa, shall be executed as if specified in both. In the event the Work to be done or matters relative thereto are not sufficiently detailed or explained in the Contract Documents. the Contractor shall immediately ask the City's Representative for further explanation and shall comply with such explanation. In the event of doubt or question arising respecting the true meaning of the Specifications or Plans, Contractor shall refer to the City's Representative for its decision.

#### 1-04.1(3)B **Division of Specifications and Plans**

Specifications and Plans are divided into groups for convenience. These divisions are not for the purpose of apportioning Work or responsibility for Work among Subcontractors, Suppliers and manufacturers. The Contractor is responsible for all Work shown or described, regardless of location(s) in the Contract Documents.

#### **Discrepancies in Specifications and Plans** 1-04.1(3)C

#### 1-04.1(3)C(1) **Errors and Omissions**

If the Contractor becomes aware of any errors or omissions in the Contract Documents or in the City's field work, it shall immediately inform the City's Representative in writing. The City's Representative will promptly review the matter and if it finds an error or omission has been made; it will determine the corrective actions and advise the Contractor accordingly. If the corrective work associated with an error or omission increases or decreases the amount of Work called for in the Contract, the City will issue an appropriate Change Order. After discovery by the Contractor of an error or omission, related Work performed by the Contractor shall be done at its risk unless authorized by the City's Representative and approved by the City.

# 1-04.1(3)C(2) Conflicting Provisions

In the event an item of Work is described differently in two or more locations on the Plans, in the Specifications and Special Provisions, the Contractor shall, upon request of the City's Representative, submit in writing to the City's Representative the description upon which the Contractor relied in preparing its Bid or laying out the Work.

# 1-04.1(3)D Utilities

# 1-04.1(3)D(1) General

The City has endeavored to determine the existence of public and private utilities at the site of the Work from the records of the owners of known utilities in the vicinity of the Work. The positions of these utilities as derived from such records are shown on the Plans. Unless otherwise noted, no excavations were made to verify the locations shown for underground utilities. The service connections to the gas, electric, cable TV and communication utilities are not shown on the Plans. Refer to 1-07.17 UTILITIES AND SIMILAR FACILITIES regarding Contractor's responsibility for locating and verifying underground public and private utilities.

# 1-04.1(3)D(2) Unknown/Incorrectly Marked Utilities

When a utility interferes with the Work and is either (1) not identified on the Plans or (2) located in a position significantly different from that specified on the Plans or in accordance with a particular utility's standard depth and location, Contractor shall follow the procedures of 1-04.7 DIFFERING SITE CONDITIONS (CHANGED CONDITIONS). Interference with the Work is defined as a utility that crosses or projects into the plane of the Work at an elevation between the top and bottom of the Work.

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

Revise the first and second paragraphs of 1-04.2 to read as follows:

The complete Contract includes Division C – CONTRACT, Division P - PROPOSAL, Division B – BID ITEM DESCRIPTIONS, Special Provisions, Contract Plans, Standard Specifications, Standard Plans in effect as of the date Bids are opened, Addenda, supplemental agreements, change orders, certifications and affidavits required by this Contract and by law, and Federal requirements that apply to this Contract and Project. These parts complement each other in describing a complete Work. Any requirement in one part binds as if stated in all parts. The Contractor shall provide any Work or materials clearly implied in the Contract even if the Contract does not mention it specifically.

Any inconsistency in the parts of the Contract shall be resolved by following this order of precedence:

- 1. Change Orders,
- 2. Addenda,
- 3. Division C CONTRACT,
- 4. Division P PROPOSAL.
- 5. Division B BID ITEM DESCRIPTIONS
- 6. Special Provisions,
- 7. Contract Plans,
- 8. City's Standard Drawings (if any)

- 9. WSDOT/APWA 2025 Standard Specifications for Road, Bridge, and Municipal Construction,
- 10. WSDOT/APWA Standard Plans for Road, Bridge and Municipal Construction.

Revise the seventh paragraph of 1.04.2 to read as follows:

In case of any ambiguity or dispute over interpreting the Contract, the Engineer's decision will be final as provided in 1-05.1 AUTHORITY OF THE ENGINEER.

## 1-04.3 Reference Information

Revise 1-04.3 to read as follows:

Reference Information provided to the Contractor is not part of the Contract. The City of Everett does not guarantee the accuracy of the Reference Information and is not responsible for the content of the Reference Information in any manner. Any use of Reference Information by the Contractor is done solely at the Contractor's risk.

# 1-04.4 Changes

Delete 1-04.4 and substitute the following:

# 1-04.4 Changes

# 1-04.4(1) City's Right to Direct Changes to the Work (\*\*\*\*\*\*)

The City reserves the right to change the Work at any time. Such changes shall not invalidate the Contract nor release the Surety, and the Contractor agrees to perform the Work as changed. Among others, these changes and alterations may include:

- 1. Deleting or omitting any part of the Work, Equipment or material to be provided under this Contract,
- 2. Increasing or decreasing quantities,
- 3. Altering Specifications, designs, or both,
- 4. Altering the way the Work is to be done,
- 5. Adding new Work or Extra Work,
- 6. Altering facilities, Equipment, materials, services, or sites, provided by the City, and
- 7. Ordering the Contractor to accelerate or Delay the Work.

If the Contractor and City do not agree upon scope of Work changed or adjustment to the Contract Sum and Contract Time, the City may, at its sole option, unilaterally direct the Contractor to implement City directed change by notice. The City shall not pay or be responsible or liable for changes implemented by the Contractor without explicit notice from the City to proceed.

# 1-04.4(2) Extra Work (\*\*\*\*\*\*)

At its sole option, the City may (1) perform Extra Work itself, (2) employ others to do it, (3) direct the Contractor to perform the Extra Work at existing unit Bid price, (4) direct the Contractor to perform the Extra Work at a mutually agreed upon price, or (5) direct the Contractor to perform the Extra Work on a Force Account basis.

# 1-04.4(3) Change Orders (\*\*\*\*\*)

Changes to the Work may result in an increase or decrease in Contract Sum, as provided in 1-09.4 Equitable Adjustment. Requests for an increase in Contract Time shall be made as provided in 1-08.3 PROGRESS SCHEDULE as applicable. Substantial changes in

Contract Time, Contract Sum or Work will often be negotiated and agreed between the Contractor and City before the City directs the Contractor to proceed with the change.

If the Contractor and City agree on the scope of Work and any changes to Contract Sum and Contract Time, the Contractor and City shall execute an agreed Change Order. However, if the Contractor and City do not agree, the City may, in its sole discretion, issue a unilateral Change Order in the form attached to the Contract Documents changing the scope of Work and making any adjustments to the Contract Sum pursuant to 1-09.4 EQUITABLE ADJUSTMENT and Contract Time pursuant to 1-08.8 EXTENSIONS OF TIME in such amount and for such time as the City believes appropriate. Contractor agrees to use the agreed Change Order form attached to the Contract Documents. The Contractor accepts all requirements, terms and conditions of a Change Order by: signing it; writing a separate acceptance; or by failing to notify the City immediately in writing that Contractor disagrees with the Change Order and does not intend to be bound by its terms.

The Contractor waives and is estopped from denying its agreement with any unilateral Change Order for which the Contractor does not immediately give Notice to the City as provided in 1-04.5 NOTICE BY CONTRACTOR in these Special Provisions and submitting a Contract Claim as provided in 1-09.11(2) CONTRACT CLAIMS in these Special Provisions. A unilateral Change Order that is not timely protested as provided in this section shall be full payment and final settlement of all asserted and unasserted Contract Claims for Contract Time and all costs of any kind, including costs of Delays, inefficiencies and impacts, related to, arising out of, or resulting from, any Work described in the Change Order.

The Contractor shall obtain written consent of the Surety or Sureties if the City's Representative requests such consent.

#### 1-04.4(4) Value Engineering and Cost Sharing (\*\*\*\*\*)

The Contractor may submit proposals for changing the Plans, Specifications, or other requirements of the Contract Documents and the City, in its sole discretion, may accept or reject such proposals. If accepted by the City and if the proposal decreases the direct, actual costs of constructing the Work, the Contract Sum shall be reduced by fifty percent (50%) of the direct, actual construction cost saved. Because the City has the sole discretion whether to consider, accept or reject the Contractor's proposal and the Contractor has no right to require the City to consider or accept such proposals, the City's decision is not reviewable by any court. This subsection applies only to change proposals initiated solely by the Contractor, or its Subcontractors and suppliers, and does not apply to change proposals requested or initiated by the City or the City's Representative. The City is not obligated or required to consider any Contractor initiated change proposals and may, in its sole discretion, refuse to do so. Under no circumstances shall the Contractor be entitled to additional compensation arising out of, or related to, the City's refusal to consider or approve a Contractor initiated change proposal. The Contractor shall do none of the following without the express written agreement of the City: fail to perform any Work; commence Work on proposed change; reduce its resources assigned to performance of the Work in order to prepare a change proposal or in anticipation of approval of a change proposal; adjust or change the project schedule or take action or fail to take action that would affect the Completion Date of the Work; take action or fail to take action arising out of the Contractor's change proposal that would result in the Contractor seeking an adjustment upward of the Contract Sum.

# Procedure, Protest, and Dispute by the Contractor

Delete all of 1-04.5 and substitute the following:

# 1-04.5 Notice by Contractor (\*\*\*\*\*\*)

# 1-04.5(1) When Notice Must Be Given

# Whenever:

- 1. The Contractor disagrees with any requirement, direction, interpretation or determination by the City or City's Representative;
- 2. The Contractor disagrees with anything required in a change order, or the Engineer's Written Determination or decision for which the Contractor believes it is entitled to an increase in the Contractor price or time;
- 3. The Contractor knows, or should with the reasonable exercise of ordinary care know, of a differing site condition as provided in 1-04.7 DIFFERING SITE CONDITIONS (CHANGED CONDITIONS);
- 4. The Contractor knows, or should with the reasonable exercise of ordinary care know, of a Delay or an event that may cause a Delay;
- 5. The Contractor believes, or with the reasonable exercise of ordinary care should believe, it is entitled to an adjustment of Contract Sum or Time, even if the total or exact amount or impact cannot yet be determined;
- 6. The Contractor believes it is required or directed to perform work that is outside the scope of the Contract Documents; or
- 7. An event occurs, or fails to occur, that the Contractor believes, or should reasonably foresee, may result in a Contract Claim; or
- 8. The actual quantities of Unit Price Work vary sufficiently from the original estimate that Contractor may be entitled to an equitable adjustment of Contract Sum as provided in 1-04.6 VARIATION IN INCREASED OR DECREASED QUANTITIES;

The Contractor shall immediately give Notice to the City or City's Representative as provided in this section and elsewhere in the Contract Documents and Specifications.

Timely and adequate Notice is a condition precedent to a Contract Claim.

Requests for extensions of Contract Time shall be made and evaluated in accordance with 1-08.3 PROGRESS SCHEDULE and 1-08.8 EXTENSIONS OF TIME.

Irrespective of any request for additional compensation or Contract Time or a Contract Claim that Work is extra and not part of the original scope of Work, the Contractor shall proceed expeditiously and promptly with the Work as the City orders.

If the Contractor fails to follow the procedures of this Contract, including failing to give Notice, the Contractor completely waives any Contract Claims. In its sole discretion, the City may waive strict compliance with procedures, but any such waiver of one or more items or elements does not waive the necessity for Contractor's strict compliance with any other item or element, nor shall such waiver be admissible in any legal proceeding for any reason.

## 1-04.5(2) Form of Notice

The Notice shall be in writing and include the following minimum information:

- 1. A complete and accurate description of the event(s) giving rise to the Notice, including dates, times, and locations;
- 2. A preliminary list of persons involved in such event;
- 3. A statement whether the Contractor believes the event may result in a Contract Claim for additional Contract Time or adjustment of the Contract Sum;

4. A date by which Contractor shall begin providing Supplemental Information as provided in this section.

#### **Supplemental Information** 1-04.5(3)

Contractor shall supplement the written Notice as soon as possible with a written statement providing the following:

- 1. The date of the event, incident, direction, instruction, interpretation or determination:
- 2. The nature and circumstances giving rise to the Notice;
- 3. The contract provisions relating to the event, incident, direction, instruction, interpretation or determination;
- 4. The estimated dollar cost, if any, of the Extra Work, Delay, change or disruption and detailing how the dollar amount estimate was determined; and
- 5. An analysis of the progress schedule showing the impact to the schedule resulting from the change or disruption, if the Contractor is asserting a schedule change or disruption;

Throughout any work related to a Notice, the Contractor shall keep complete and accurate records of costs, expenses, and time incurred for which Contractor will or may seek an adjustment. Contractor waives and is estopped from seeking an adjustment of Contract Sum or Contract Time where Contractor fails to keep and maintain cost, timekeeping, and scheduling records segregated and contemporaneously allocated to the subject work for which an adjustment is sought. For example, failure to keep contemporaneous labor and equipment time records specifically and only allocated to each item of claimed Extra Work shall constitute a waiver of any Contract Claim for reimbursement or additional Contract Time for each such item of Extra Work. The Contractor shall permit the City access to these and any other records needed for evaluating requests for additional Contract Time or Contract Sum.

#### 1-04.5(4) **Contract Claim**

A Contractor dissatisfied with the City's response or (non-response) to a Notice provided under Section 1-04.5 completely waives any claims related to such Notice unless the Contractor submits a Contract Claim in accordance with Section 1-09.11.

#### 1-04.7 Differing Site Conditions (Changed Conditions)

Delete all of 1-04.7 and substitute the following:

Upon discovery and before such conditions are disturbed, the Contractor shall promptly provide Notice to the City's Representative of:

Pre-existing subsurface or latent physical conditions at the site differing materially from those indicated in this Contract, or

Pre-existing unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inhering in work of the character provided for in this Contract.

Upon written request, the City's Representative shall determine whether the actual conditions encountered by the Contractor conditions are materially different and, if so, are the cause of a material increase or decrease in the Contractor's cost of performance of the Work, or extend the duration of the critical path of the schedule. Upon such determination, the City's Representative will make an adjustment of Contract Sum or Contract Time, as appropriate. Extensions of Contract Time will be evaluated in accordance with 1-08.3 PROGRESS SCHEDULE.

The City's Representative's determination that differing site conditions do not exist and/or the appropriate adjustment in Contract Sum or Contract Time (if any) shall be

final. If there is a decrease in the cost or time required to perform the Work, failure of the Contractor to notify the City's Representative of the differing site condition shall not affect the City's right to make an adjustment in the Contract Sum or Contract Time. Additionally, no Contract Claim or adjustment of Contract Sum or Contract Time shall be allowed unless the Contractor has followed the procedures provided for in this Contract, including, but not limited to, furnishing timely Notice of the event and its effect on Contract Time and Contract Sum as required herein.

Contractor shall in no event be entitled to a Contract Claim or adjustment of Contract Sum or Contract Time based on an allegation that the pre-existing subsurface or latent physical conditions at the site differ materially from those indicated in this Contract unless Contractor establishes that it reasonably relied on the conditions indicated in this Contract when making its bid, that the actual conditions encountered on the site differed materially from those indicated in this Contract, and that such materially-different conditions were not foreseeable at the time of its bid.

# 1-05 CONTROL OF WORK

# 1-05.1 Authority of the Engineer

Delete 1-05.1 and substitute the following:

The City, and the City's Representative, shall have the authority to act as the sole judge of the Work and materials with respect to both quantity and quality as set forth in the Contract. It is expressly stipulated that the Plans, Specifications and other Contract Documents set forth the requirements as to the nature of the completed Work and do not purport to control the method of performing Work except in those instances where the nature of the completed Work is dependent on the method of performance.

The City has the authority to act, do, perform, and make all decisions and actions authorized by the Contract Documents, including, but not limited to, Change Orders, progress payments, contract decisions, acceptability of the Contractor's Work, and early possession. The City has the authority to accept or reject requests for progress payments that have been submitted by the Contractor and recommended by the City's Representative. The City has the authority to make determinations of the acceptability of the Work. The City also has the authority to accept or reject the City's Representative's recommendations regarding retention of defective Work.

# 1-05.1(2) Requests for Information (RFI)

No Claim shall be allowed because of ambiguities in the Contract if:

- 1. The Contractor discovers an ambiguity but fails to notify the City, or
- 2. The Contractor failed to discover a patent ambiguity that would be discovered by a reasonably prudent Contractor.

If the Contractor discovers an ambiguity in the Contract or desires an explanation or interpretation of the Contract, the Contractor shall request the explanation or interpretation in writing by way of a Request for Information (RFI). The RFI shall clearly define the ambiguity and have enough detail for the Engineer to provide an explanation or interpretation. If such detail is not provided, the Engineer will return the RFI as incomplete. Should the RFI require a change to the Contract, the Contractor will indicate in the RFI that it includes a request for change (RFC).

A RFI shall not be used nor constitute a notice required in accordance with Sections 1-04.5 and 1-04.7. The Contractor may submit an RFI for the one of following reasons:

- 1. The Contractor believes there is information missing from the Contract Documents (Missing Information).
- 2. The Contractor believes a clarification of one or more of the Contract requirements is necessary (Clarification).
- 3. The Contractor needs to repair or otherwise correct a deficiency in the Work that requires a Change to the Contract to be acceptable (RFC – Construction Deficiency/ Repair procedure). Requests submitted for this reason shall be submitted in accordance with Section 1-05.7(1).
- 4. The Contractor needs to substitute a material that provides an equal or better level of performance as the one specified in the Contract (RFC - Material Substitution). Requests shall indicate the location(s), quantity, and shall describe how the material provides an equal or better level of performance as the material originally specified.
- 5. The Contractor may submit a RFI that requests a change to the Contract requirements for a reason other than one listed in items 1-4 of this section (RFC - Other). To be considered, the request must not meet the requirements of a Value Engineering Change Proposal. To be considered, the request shall describe how the change is beneficial to the project

Unless otherwise determined by the City in writing, the Engineer will respond, in writing, to RFIs within 14 calendar days in the order they are received. If the Engineer cannot respond within 14 calendar days due to the nature and complexity of the RFI, the Engineer will respond to the RFI stating how many additional days are needed for a full response. This does not relieve the Contractor of its responsibility to request a time extension in accordance with Section 1-08.8. If the Contractor needs to prioritize a RFI it shall indicate so as part of the RFI. Oral explanations, interpretations, or instructions given by anyone other than the Engineer will not be binding on the Contracting Agency. A response to a RFI shall be considered a Written Determination.

If the Contractor's Request for Information requires a change order, the Engineer's response will indicate whether they are authorizing the Contractor to proceed with the changed work prior to an executed change order. Without this authorization, the Contractor shall not proceed with the changed work until a Change Order has been processed. If the Contractor believes the response requires a change order and the Engineer does not specifically state that a change order is necessary, the Contractor shall submit its Notice in accordance with Section 1-04.5. Proceeding without Notice shall waive the Contractor's rights to Claim.

The Contractor shall bear all risk and all costs of any Work delays caused by rejection or non-approval of any RFI that Requests a Change (RFC). The Contractor agrees the Engineer is under no obligation to accept an RFC. The Engineer's decision to accept or reject all or part of a RFI that requests a change is final and not subject to protest.

Unit Bid prices shall cover all costs of submitting RFIs.

# 1-05.2 Authority of Assistants and Inspectors

Delete 1-05.2 and substitute the following:

#### 1-05.2 City's Representative (\*\*\*\*\*)

The City's Representative shall be satisfied that all the Work is being done in accordance with the requirements of the Contract. The Contract and Specifications give the City's Representative authority over the Work. Whenever it is so provided in this Contract, the decision of the City's Representative shall be final.

The City's Representative's decisions will be final on all questions including, but not limited to, the following:

- 1. Quality and acceptability of materials and Work;
- 2. Measurement of Work, whether lump sum, Force Account, or unit price;
- 3. Acceptability of rates of progress on the Work;
- 4. Interpretation of Plans and Specifications;
- 5. Determination as to the existence of changed or differing site conditions;
- 6. Fulfillment of the Contract by the Contractor;
- 7. Payments under the Contract including adjustment;
- 8. Suspension(s) of Work;
- 9. Termination of the Contract for default or public convenience; and
- 10. Approval of working or detail Plans and Submittals.

If the Contractor fails to respond promptly to the requirements of the Contract or orders from the City's Representative:

- 1. The City's Representative may use the City's resources, other contractors, or other means to accomplish the Work, and
- 2. The City will not be obligated to pay the Contractor, and will deduct from the Contractor's payments, costs that result when other means are used to carry out the Contract requirements or City's Representative's orders.

At the Contractor's risk, the City's Representative may suspend all or part of the Work if:

- 1. The Contractor fails to fulfill Contract terms, to carry out the City's Representative's orders, or to correct unsafe conditions of any nature; or
- 2. It is in the public interest.

The City's Representative and City shall have complete access to the Work and to the site of the Work and to the places where Work is being prepared or where materials, Equipment, and machinery are being obtained for the Work. If requested by the City's Representative or City, the Contractor shall provide the assistance necessary for obtaining such access, and shall provide information related to the inspection of construction. Absence of such access or information, as needed, may result in the City's refusal to accept the Work.

The City's Representative has the authority to recommend Change Orders, but does not have authority to approve Change Orders. Proposed Change Orders are subject to review and approval by the City. No proposed Change Order or any change of Contract Sum or Contract Time is effective or binding upon the City unless and until the Mayor or its designee signs it, as authorized by City Council or by ordinance.

To detail and illustrate the Work, the City's Representative may furnish to the Contractor additional drawings and explanations consistent with the original Plans. The Contractor shall perform the Work according to these additional drawings and explanations.

The City's Representative may appoint assistants and inspectors to assist in determining that the Work and materials meet the Contract requirements. Assistants and inspectors have the authority to reject defective material and suspend Work that is being done improperly, subject to the final decisions of the City's Representative or, when appropriate, the City.

Assistants and inspectors are not authorized to accept Work, to accept materials, to issue instructions, or to give advice that is contrary to the Contract. Work done or material furnished that does not meet the Contract requirements shall be at the Contractor's risk and shall not be a basis for a Contract Claim even if the inspectors or assistants purport to change the Contract.

Assistants and inspectors may advise the Contractor of any faulty work or materials or infringements of the terms of the Contract; however, failure of the City's Representative or the assistants or inspectors to advise the Contractor does not constitute acceptance or approval.

#### 1-05.3 Working Drawings

Revise the second paragraph to read as follows:

- 1. Type 1 Submitted for City information. Submittal must be received by the City a minimum of 7 working days before Work represented by the submittal begins.
- 2. Type 2 Submitted for City review and comment. Unless otherwise stated in the Contract, the Engineer will require up to 15 working days from the date the Working Drawing is received until it is returned to the Contractor. The Contractor shall not proceed with the Work represented by the Working Drawing until comments from the Engineer have been addressed.
- 3. Type 2E Same as a Type 2 Working Drawing with Engineering as described below.
- **4. Type 3** Submitted for City review and approval. Unless otherwise stated in the Contract, the Engineer will require up to 20 working days from the date the Working Drawing is received until it is returned to the Contractor. The Contractor shall obtain the Engineer's written approval before proceeding with the Work represented by the Working Drawing.
- **5. Type 3E** Same as a Type 3 Working Drawing with Engineering as described below. Supplement 1-05.3 as follows:

The Contract Documents include Plans that show such details as are reasonably necessary to give a comprehensive understanding of the Work. The Contractor shall submit alterations affecting the requirements and information in the Plans in writing to the Engineer for approval prior to performing such Work.

The Engineer may supplement the Plans with additional drawings and explanations, consistent with the purpose and intent of the original Plans, to detail and illustrate the Work. The Contractor shall perform the Work according to these supplemental drawings and explanations.

In addition to supplemental drawings furnished by the Engineer, the Contract Documents may also be supplemented by Type 1, Type 2 or 2E, and Type 3 or 3E Working Drawings prepared by the Contractor, material supplier, or manufacturer, when necessary or as required by the Contract Documents to detail and illustrate portions of the Work. All types of Working Drawings shall be reviewed by the Engineer before work pursuant to those Working Drawings is performed. Type 3 and 3E Working Drawings may include, and not be limited to, shop details, erection plans, masonry lay-out diagrams, reinforcing steel and bending diagrams, post tensioning plans, shoring, cribbing, cofferdam, or falsework plans, formwork plans, or hydraulic items. Type 2 and 2E Working Drawings may include, and not be limited to, Catalog cuts or standard plans for commonly used manufactured items.

The Contractor shall be fully responsible for the accuracy of dimensions and details on Working Drawings, and for complete conformity with the Contract Documents, even if the Working Drawings have been approved by the Engineer, or if the Contractor and the Engineer agree on dimensions and details. The City does not accept Working Drawings as accurate or adequate, and does not take responsibility for, or warrant that Working Drawings will meet Contract requirements.

Engineer's review of Working Drawings shall not relieve Contractor from responsibility for variation from the requirements of the Contract Documents unless Contractor has in writing called the Engineer's attention to each such variation at the time of submission,

and the Engineer has given written approval of each such variation by a specific written notation thereof incorporated in or accompanying the returned Working Drawing; nor will review by Engineer relieve Contractor from responsibility for errors or omissions in the Working Drawings or from responsibility for having complied with the provisions of this section.

The Bid prices shall include all costs for furnishing Working Drawings and Submittals.

The following listed sections of the Standard Specifications and Special Provisions require Working Drawings that may or may not be applicable to this specific project. This list is supplied as an aid to the Contractor and is by no means complete. Submittal requirements may be found in 1-05.3(1) or elsewhere in these Special Provisions.

## **DIVISION 2 EARTHWORK**

2-09.3(3)D Shoring, Cribbing, and Cofferdams-Shop Drawings

## **DIVISION 6 STRUCTURES**

6-01 General Requirements

6-01.9 Working Drawings

6-02 Concrete Structures

6-02.3(13) Expansion Joints-Shop Drawings

6-02.3(16) Plans for Falsework and Forms-Shop Drawings

6-02.3(26)A Shop Drawings

6-03 Steel Structures

6-03.3(7) Shop Plans

6-03.3(25) Welding and Repair Welding-Shop Drawings

# DIVISION 7 DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS

7-02 Culverts

7-02.2 Materials-Catalog Cuts or Standard Plans

7-04 Storm Sewers

7-04.2 Materials-Catalog Cuts or Standard Plans

7-05 Manholes, Inlets, Catch Basins, and Drywells

7-05.2 Materials-Catalog Cuts or Standard Plans

7-15 Service Connections

7-15.2 Materials-Catalog Cuts or Standard Plans

7-17 Sanitary Sewers

7-17.2 Materials-Catalog Cuts or Standard Plans

**DIVISION 8 MISCELLANEOUS CONSTRUCTION** 

8-12 Chain Link Fence and Wire Fence

8-12.2 Materials-Catalog Cuts or Standard Plans

8-13 Monument Cases

8-13.2 Materials-Standard Plans

Deviations from Standard Plans will be subject to a Working Drawing submitted by the Contractor and approved by the Engineer. Where a Working Drawing is required by the Specifications, related Work performed prior to completion of the Engineer's review of the pertinent submission will be the sole expense and responsibility of the Contractor.

Supplement 1-05.3 by adding the following:

#### **Submittals** 1-05.3(1) (\*\*\*\*\*)<sup>`</sup>

Where required by the Contract Documents, the Contractor shall submit information, such as Working Drawings that will enable the City's Representative to advise the City whether the Contractor's proposed materials, Equipment or methods of work are in general conformance to the design concept and in compliance with the Plans and Specifications. Approval or acceptance of a Submittal does not relieve Contractor from complying with Contract requirements. The City's approval of a Submittal does not constitute a waiver of the Contract requirements. The City will not be obligated to accept or pay for Work performed by the Contractor that may be affected by materials, Equipment, or methods of work not submitted in a timely manner so that final review can be accomplished before the affected Work is complete. The City shall not be responsible for Delays, inefficiencies, or any additional costs or expenses caused in whole or in part by Contractor's failure to submit required information in sufficient time for review, comment, and correction. Contractor's failure to submit required information in sufficient time for review, comment and correction shall be deemed a waiver of any and all Contract Claims for adjustment of Contract Sum or Contract Time arising out of, or related to, such a Submittal. Contractor acknowledges and agrees that it may not rely upon receiving the City's response to a Submittal in less than 14 calendar days, unless the City explicitly changes this section by a signed Change Order.

#### 1-05.3(2) **Requests for Information** (\*\*\*\*\*)

Reguests for information or clarification from the Contractor to the City shall be treated as a Submittal pursuant to 1-05.3(1) SUBMITTALS.

#### Conformity With and Deviations From Plans and Stakes 1-05.4

Delete all of 1-05.4 and substitute the following:

The Contractor shall be responsible for setting and maintaining all alignment stakes, slope stakes, and grades necessary for the construction of the roadbed, surfacing, paving, channelization, illumination, signing, bridges, and retaining walls, if such construction is included in this Project. Except for the survey control data to be furnished by the City, calculations, surveying, and measuring required for setting and maintaining the necessary lines and grades shall be the Contractor's responsibility. The Contractor shall provide the City with copies of such calculations and staking data when requested by the Engineer. Copies of the City provided survey control data are available for the Bidder's inspection at the office of the Project Engineer.

Any staking requirements for the Project that do not fit field conditions will be reviewed and if necessary adjusted by the Engineer. Any necessary revisions to the staking information will be provided to the Contractor for use in completing the Work.

Stakes, marks, and other reference points, including existing monumentation, set by the City shall be carefully preserved by the Contractor. The Contractor will be charged for the costs of replacing stakes, markers and monumentation that were not to be disturbed but were destroyed or damaged by the Contractor's operations. This charge will be deducted from monies due or to become due to the Contractor.

To facilitate the establishment of these lines and elevations, the City will provide the Contractor with the following survey control:

## ROADWAY, SURFACING AND PAVING

Establish elevation bench marks and center or base line alignment control points for the mainline, one time only. Provide right of way stakes where applicable.

Provide rights-of-way, easements or right-of-entry.

Provide the Contractor with technical advice if requested.

Computed grades where needed.

Provide horizontal and vertical curve data.

One copy of transit notes showing reference to horizontal and vertical control points.

#### OTHER STRUCTURES

Centerline or offset coordinates to centerline of the structure.

A sufficient number of bench marks for levels to enable the Contractor to set grades at reasonably short distances.

Monuments and control points as shown on the Plans.

The Contractor shall give the City three weeks notification to allow adequate time to provide the above data.

The Contractor shall ensure a surveying accuracy within the following tolerances:

1.	Slope stakes	±0.1 foot
2.	Subgrade blue tops	±0.01 foot
3.	Stationing	±0.01 foot
4.	Alignment	±0.01 foot
5.	Surfacing red & yellow tops	±0.01 foot
6.	Superstructure elevations	±0.01 foot (from pla

plan elevations) 7. Substructure ±0.02 foot (from plan elevations)

The Contractor shall slope stake the roadway before any construction may proceed. Slope stakes shall be set at 50' maximum intervals on tangents and 25' on curves.

Subgrade bluetops and surfacing red and yellow tops shall be set at 50' intervals in tangent sections, 25' intervals in curve sections, and 10' intervals in intersection radii.

The Contractor's surveyor shall be a licensed surveyor in the State of Washington. The Contractor shall keep updated survey field notes in a standard field book and in a format set by the Engineer. These field notes shall include all survey work performed by the Contractor's surveyor in establishing line, grade and slopes for the construction work. Copies of these field notes shall be provided to the Engineer upon request and upon completion of the Contract Work; the field book shall be submitted to the Engineer and become property of the City.

If the survey work provided by the Contractor does not meet the standards of the Engineer, then the Contractor shall, upon the Engineer's written request, remove the individual or individuals doing the survey work and the survey work will be completed by the Engineer at the Contractor's expense. Costs for completing the survey work required by the Engineer will be deducted from monies due or to become due the Contractor.

The City may spot-check the Contractor's surveying. These spot-checks will not change the requirements for normal checking and testing as described elsewhere, and do not relieve the Contractor of the responsibility of producing a finished product that is in accordance with the Contract.

In all disputes concerning accuracy of lines and elevations, the City shall be assumed correct and the Contractor shall correct the discrepancies before construction work may proceed. No additional compensation will be paid for this corrective Work.

Payment: The lump sum contract price for "Surveying" shall be full pay for all costs involved in furnishing all labor, tools, survey instruments, materials, and other equipment necessary for the setting and maintaining of the alignment and grade as specified.

# 1-05.6 Inspection of Work and Materials

Supplement 1-05.6 by adding the following:

# 1-05.6(1) Demonstration of Compliance with Contract Requirements (\*\*\*\*\*\*)

The burden of proving the constructed Work complies with the Contract Documents shall be on the Contractor at all times. The Contractor shall grant the City's Representative access to the Work and work site and to places where Work is being prepared, or where materials, Equipment, or machinery are being obtained for the Work. The Contractor shall provide information requested by the City's Representative in connection with inspection work.

If the Contract Documents, laws, ordinances, or public regulatory authority requires parts of the Work to be specially inspected, tested, or approved, the Contractor shall give the City's Representative be not less than two working days prior written Notice of the availability of the subject Work for examination.

Inspection and quality control tests performed on the Contractor's work by the City's Representative shall not relieve the Contractor of its responsibility for errors or lack of quality therein and shall not be regarded as an assumption of risks or liability by the City's Representative for the Contractor's compliance with these Contract Documents. Contractor remains responsible and liable for all errors, defects or a lack of quality not discovered by inspection or observation.

# 1-05.6(2) Manufacturer's Directions (\*\*\*\*\*\*)

Manufactured articles, material and Equipment shall be transported, stored, applied, installed, connected, erected, adjusted, tested, operated and maintained as recommended by the manufacturer, unless otherwise specified in these Special Provisions. Contractor shall provide manufacturer's installation instructions and procedures to the City prior to installation of the manufactured articles, material and Equipment.

# 1-05.6(3) Materials and Equipment Furnished by City (\*\*\*\*\*\*)

Contractor shall install materials and Equipment furnished by the City as provided in the technical sections of the Specifications. Furnishing of material and Equipment by the City will be considered conclusive evidence of their acceptability for the purpose intended. If the Contractor discovers defects in material or Equipment furnished by the City, it shall immediately notify the City. After such discovery, the Contractor shall not proceed with Work involving City-furnished materials and Equipment unless authorized by the City. Unless otherwise noted or specifically stated, materials and Equipment furnished by the City, that are not of local occurrence or manufacture, are considered to be "FOB" railroad station or truck terminal nearest to the site of the Work. At no cost to the City, the Contractor shall unload, transport, store, and protect such material and Equipment from damage. The Contractor shall inspect such City-furnished material and Equipment on receipt and provide the City with written acceptance for the incorporation

of said material and Equipment into the Work. After receipt by the Contractor, the Contractor bears all risk of loss and casualty to City furnished materials and Equipment.

## Removal of Defective and Unauthorized Work

Supplement 1-05.7 by adding the following:

If the Contractor fails to remedy defective or unauthorized Work within the time specified in a written notice from the Engineer, or fails to perform Work required by the Contract Documents, the Engineer may correct and remedy such Work as may be identified in the written notice, with City forces or by such other means as the City 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 City or other forces. An emergency situation is a 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 City 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.

In its sole discretion, the City may retain Work that is not in compliance with the Contract. The City will determine the just and reasonable value for such defective Work and deductions will be made in the payments due or to become due to the Contractor. Final Acceptance will not act as a waiver of the City's right to recover from the Contractor an amount representing the deduction for retention of defective Work.

No adjustment in Contract Time or Contract Sum will be allowed because of the Delay in the performance of the Work attributable to the exercise of the City's rights provided by this section.

The rights exercised under the provisions of this section shall not diminish the City'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.

## 1-05.10 Guarantees

Supplement 1-05.10 by adding the following:

The Contractor further warrants to the City, the Engineer and the City's Representative that all materials and Equipment furnished under this Contract will be of highest quality and new unless otherwise specified by the City, free from faults and defects and in conformance with the Contract Documents. All Work not so conforming to these standards shall be considered defective. If required by the City's Representative, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and Equipment.

The Work furnished shall be of first quality and the workmanship shall be the best obtainable in the various trades. The Work shall be of safe, substantial and durable construction in all respects. For a period of 365 calendar days, commencing on the date of Final Acceptance, the Contractor shall, upon the receipt of Notice in writing from the City, promptly make all repairs arising out of defective materials, workmanship, or Equipment at no cost to the City. The City is hereby authorized to make such repairs if,

14 calendar days after giving of such notice to the Contractor, the Contractor has failed to make or undertake the repairs with due diligence. In case of an emergency where, in the opinion of the City, delay could cause serious loss or damage, repairs may be made prior to or concurrent with notice being sent to the Contractor. All costs and expenses incurred by the City in connection with repair or replacement of Contractor's Work under this Section, including but not limited to the cost of materials, Equipment, other contractor costs, additional staff costs (including overtime), inspection, design and construction management service costs shall be fully reimbursed to the City by the Contractor.

"Acceptance of the Work" shall not extinguish any covenant or agreement on the part of the Contractor to be performed or fulfilled under this Contract that has not, in fact, been performed or fulfilled at the time of such acceptance. All covenants and agreements shall continue to be binding on the Contractor until they have been fulfilled.

The City and the Contractor agree that the guarantee on the completed portions of the Work possessed and used by the City shall commence as to those portions on the date that the City takes possession of those portions and so notifies the Contractor in writing. City and Contractor further agree that such taking possession and use shall not be deemed as acceptance of the Work. Takeover of completed portions of the Work shall be at the City's option and will not be made until the Work can be put into routine service on a permanent basis.

The guarantee provided herein shall be in addition to those specific guarantee or warranty requirements for particular Equipment or Work items, or both, as indicated in the Specifications and Special Provisions.

# 1-05.11 Final Inspection

Delete 1-05.11 and substitute the following:

# 1-05.11 Final Inspections and Operational Testing (\*\*\*\*\*\*)

# 1-05.11(1) Substantial Completion Date

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

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

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

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

# 1-05.11(2) Final Inspection and Physical Completion Date

When the Contractor considers the Work physically complete and ready for final inspection, the Contractor, by written Notice, shall request the Engineer to schedule a final inspection. The Engineer will set a date for final inspection. The Engineer and the Contractor will then make a final inspection and the Engineer will notify the Contractor in writing of all particulars in which the final inspection reveals the Work incomplete or unacceptable. The Contractor shall immediately take such corrective measures as are necessary to remedy the listed deficiencies. Corrective work shall be pursued vigorously, diligently, and without interruption until physical completion of the listed deficiencies. This process will continue until the Engineer is satisfied the listed deficiencies have been corrected.

If action to correct the listed deficiencies is not initiated within seven 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 1-05.7 REMOVAL OF DEFECTIVE AND UNAUTHORIZED WORK.

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 under the authority of the Contract.

Upon correction of all deficiencies, the Engineer will notify the Contractor and the City, in writing, of the date upon which the Work was considered physically complete. That date shall constitute the Physical Completion Date of the Contract, but shall not imply acceptance of the Work or that all the obligations of the Contractor under the Contract have been fulfilled.

# 1-05.11(3) Operational Testing

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

The costs for power, gas, labor, material, supplies, and everything else needed to successfully complete operational testing, shall be included in the unit contract prices related to the system being tested, unless specifically set forth otherwise in the Proposal.

Operational and test periods, when required by the Engineer, shall not affect a manufacturer's guaranties or warranties furnished under the terms of the Contract.

# 1-05.12 Final Acceptance

Delete all of 1-05.12 and substitute the following:

The Contractor shall perform all the obligations under the Contract before the completion date can be established. A certificate of completion of the Work issued by the City will

establish the completion date and certify the Work as complete. The following shall occur before the completion date can be established:

The Final Contract Voucher Certification shall be signed by the Contractor verifying agreement to the final contract price.

The physical work on the Project shall be complete.

The Contractor shall furnish all documentation required by the Contract and required by law, necessary to allow the City to certify the Contract as complete.

A certificate of completion for the Work, signed by the City, will constitute acceptance of the Work. The issuance of this certificate of completion will not constitute acceptance of unauthorized or defective Work, Equipment, or materials.

The Contractor agrees that neither completion nor final acceptance shall relieve the Contractor of the responsibility to indemnify, defend, and protect the City against any claim or loss resulting from the failure of the Contractor, or the Subcontractors or lower tier subcontractors, to pay all laborers, mechanics, Subcontractors, material persons, or any other person who provides labor, supplies, or provisions for carrying out the Work or for any payments required for unemployment compensation under Title 50 RCW or for industrial insurance and medical aid required under Title 51 RCW.

Failure of the Contractor to perform all of the Contractor's obligations under the Contract shall not bar the City from unilaterally certifying the Contract complete so the Engineer may calculate a final contract price as provided in 1-09.9 PAYMENTS.

# 1-05.13 Superintendents, Labor and Equipment of Contractor

Delete 1-05.13.

# 1-05.14 Cooperation With Other Contractors

Delete all of 1-05.14 and substitute the following:

Nothing in the Contract shall be interpreted as granting to the Contractor exclusive occupancy of the Project area. The Contractor shall ascertain to its own satisfaction the scope of the Project and the nature of any other contracts that have been or may be awarded by the City in the construction of the Project, or to the end that the Contractor may perform this Contract in the light of such other contracts, if any.

The Contractor shall not cause unnecessary hindrance or Delay to others working on this or other projects. If the performance of a contract for the Project is likely to be interfered with by the simultaneous performance of some other contract or contracts, the Engineer will decide which Contractor shall cease Work temporarily and which Contractor shall continue, or whether the Work under the contracts can be coordinated so that the contractors may proceed simultaneously. On all questions concerning conflicting interest of contractors performing related Work, the decision of the Engineer shall be binding upon all contractors concerned and the City, the Engineer, the City's Representative, and their consultants shall not be responsible for any damages suffered or extra costs incurred by the Contractor resulting directly or indirectly from the Award or performance or attempted performance of any other contract or contracts on the Project or caused by a decision or omission of the Engineer respecting the order of precedence in the performance of the contracts.

If, through acts of neglect on the part of the Contractor, any others suffer loss or damage on the Work, the Contractor agrees to resolve such loss or damage fairly and expeditiously. If such other shall assert any claim against the City, the Engineer, the City's Representative, or their consultants on account of any damage alleged to have been so sustained, the City shall notify the Contractor, who shall hold harmless, indemnify, and defend the City, Engineer, the City's Representative, and their

consultants, and each of their directors, officers, employees, and agents against any such claim, including all attorney's fees and any other costs incurred by the indemnified parties relative to any such claim.

The Contractor shall coordinate its work with other contractors and utility companies that may have facilities in the Project area and cooperate with them. The Contractor shall also coordinate its activities with the City; and no water mains, individual water services, street, or private driveways may be closed off without a minimum of five working days notice to the City and the private property owner. Should the property owner or the City have adequate reason, as determined by the Engineer, to avoid access or water service shutoff at the scheduled time, the Contractor shall reschedule its work to meet the new condition.

Final grading to subgrade and subgrade preparation in those areas disturbed by the utilities companies shall be the responsibility of the Contractor and included in the street construction and no additional compensation will be paid.

The Contractor shall cooperate with the utility companies and their subcontractors and so conduct its operations that the necessary construction of their facilities can be accomplished to the mutual satisfaction of the City of Everett and the utility companies.

Supplement Section 1-05 by adding the following new subsections:

# 1-05.16 Water and Power (\*\*\*\*\*)

The Contractor shall make necessary arrangements and shall bear the costs for power and water necessary for the performance of the Work, unless the Contract includes power and water as a pay item.

Contractor shall pay all power and water costs until Substantial Completion, whether such power or water is provided by temporary or permanent facilities. City shall not be liable for any costs or Delays arising out of or caused by the availability or lack of availability of permanent power or utilities.

# 1-05.17 Oral Agreements

No oral agreement, representation, or conversation with or by any officer, agent, or employee of the City, either before or after execution of the Contract, shall affect or modify any of the terms or obligations contained in any of the documents comprising the Contract. Such oral agreement, representation or conversation shall be considered as unofficial information and in no way binding upon the City, unless subsequently put in writing and signed by the City.

# 1-05.18 Contractor **(\*\*\*\*\***)

# 1-05.18(1) Contractor's Representative

The Contractor shall notify the City in writing of the name of the person who will act as the Contractor's representative, will have the authority to act in matter relating to this Contract, and will be delegated with authority to act as the Contractor's emergency contact. This person shall have authority to carry out the provisions of the Contract and to supply materials, Equipment, tools and labor without delay for the performance of the Work.

Contractor shall employ and keep on site on a full time basis personnel experienced in the management of construction of projects of this size and type. These shall include, but not be limited to, a project manager and superintendent. Unless the City agrees otherwise in writing, neither the Contractor's project manager nor the superintendent shall have supervisory responsibility for other projects for the Contractor while assigned to this Project. Contractor shall employ and assign such additional, full time office, support and engineering personnel to support the project manager and superintendent and allow timely completion of the Project. The project manager and superintendent shall be approved by the City, and such approval shall not be unreasonably withheld. Contractor shall submit personnel qualifications within seven (7) days of Contractor's execution of the Contract. Basis for disapproval include, but are not limited to, lack of sufficient experience managing the construction of similar type or size projects or relationships on other projects unsatisfactory to the City or, if the Project is subject to supplemental bidder responsibility criteria and such criteria contain personnel qualifications, the personnel differ from those named by Bidder in its pre-Award supplemental bidder responsibility criteria submittals. City may require removal and replacement of Contractor's supervisory staff who are disruptive or who appear to lack sufficient competence to complete the Project successfully.

# 1-05.18(2) Construction Procedures

The Contractor shall supervise and direct the Work and determine the means, methods, techniques, sequences and procedures of construction, except in those instances where

the City, to define the quality of an item of Work, specifies in the Contract a means, method, technique, sequence or procedure for construction of that item of Work. The Contractor shall execute Work in conformity with the standard practice of the trade.

# 1-05.18(3) Responsibilities

#### **Manufacturers and Suppliers** 1-05.18(3)A

The Contractor shall be responsible for the adequacy, efficiency and sufficiency of manufacturers, Suppliers and their employees.

#### 1-05.18(3)B **Contractor's Employees**

The Contractor shall be responsible for the adequacy, efficiency and sufficiency of its employees. Workers shall have sufficient knowledge, skill and experience to perform properly the Work assigned to them.

#### 1-05.18(3)C **Payment for Labor and Materials**

The Contractor shall pay and require its Subcontractors to pay any and all accounts for labor including Worker's Compensation premiums, State Unemployment and Federal Social Security payments and other wage and salary deductions required by law. The Contractor also shall pay and cause its Subcontractors to pay any and all accounts for services, equipment, and materials used by him and its Subcontractors during the performance of Work under this Contract. Contractor shall pay such accounts as they become due and payable. If requested by the City, the Contractor shall promptly furnish proof of payment of such accounts to the City.

#### 1-05.18(3)D **Attention to Work**

The Contractor, either in person or acting through its representative, shall give personal attention to and shall manage the Work so that it shall be prosecuted faithfully and completed under the Project schedule. When its representative is not personally present at the Project site, its designated alternate shall be available and shall have the authority to act in matters relating to this Contract.

Where detailed construction requirements are not set forth in the Standard Specifications or these Special Provisions, the Contractor shall perform the Work of a quality comparable to the workmanship specified for other parts of the Work, from firms having established good reputations for similar Work, or by following industry standard practices. The Contractor shall perform all Work in compliance with and conforming to applicable building codes in effect at the time the Work is being performed.

#### 1-05.18(3)E Safety

The Contractor alone shall be responsible for safety on the job site, including, but not limited to, the safety of its and its Subcontractor's employees. The Contractor shall maintain the Project site and perform the Work in a manner that meets the City's responsibility under statutory and common law for the provision of a safe place to work.

#### 1-05.18(3)F Threats, Intimidation and Harassment Forbidden

Contractor shall not allow its employees, its Subcontractors, its Subcontractors' employees, or any other agents to threaten bodily injury or property damage, to intimidate or attempt to intimidate any person, or to assault or physically harass any person. Forbidden conduct includes, but is not limited to, threatening, appearing, or actually doing any of the following: pushing, shoving, striking, physically blocking a person or a person's vehicle, vandalism, malicious mischief, or any other act that a reasonable person would understand be intended to intimidate, cause personal

injury, or cause property damage. Contractor shall remove from the job site any person reasonably under its control or direction who the Contractor or City reasonably believes violated this section. The lack of a request from the City or City's Representative to the Contractor to remove someone from the job site does not relieve the Contractor from its obligation to remove someone.

# 1-05.18(3)G Weapons Forbidden

Contractor shall not allow its employees, its Subcontractors, its Subcontractors' employees, or any other agents or representatives to carry or possess, openly or concealed, explosives or weapons on the job site, except: (a) such explosives are as reasonably required for performance of the Work, such as those necessary for blasting or demolition work called for by the Contract Documents or (b) commissioned law enforcement officers or security personnel under authority of their commission. A weapon is any object, instrument or chemical that is (1) designed in such a manner to inflict harm or injury to another person; or (2) any item used in a manner threatening harm or injury to another person. Weapons include, but are not limited to, firearms, dangerous knives, dangerous chemicals, tear gas, martial arts weapons, blackjacks or other weapons. Further, weapons should include those described in EMC Chapter 10.78. Possession of mace, pepper spray or the like for defensive purposes is not a violation of this policy. Contractor shall remove from the job site any person reasonably under its control or direction who the Contractor or City reasonably believes violated this section. The lack of a request from the City or City's Representative to the Contractor to remove someone from the job site does not relieve the Contractor from its obligation to remove someone.

# 1-05.18(3)H Safety Standards

The Contractor shall comply with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-330) as supplemented by Department of Labor Regulations (29 CFR, Part 5). Under this Section, the Contractor shall not require any laborer or mechanic to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to its health and safety as determined under construction, safety, and health standards promulgated by the Secretary of Labor. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

# 1-05.18(3)I Public Safety and Convenience

The Contractor shall conduct its work so as to ensure the least possible obstruction to traffic and inconvenience to the general public, business, organizations and residents in the vicinity of the Work and to reasonably protect persons and property. No roads or street shall be closed to the public except with the permission of the City's Representative and the proper governmental authority. Fire hydrants on or adjacent to the Work shall be accessible to firefighting equipment. Temporary provisions shall be made by the Contractor for the use of sidewalks, private and public driveways and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses.

# 1-05.19 City-Contractor Coordination (\*\*\*\*\*\*)

# 1-05.19(1) Suggestions to Contractor

Nothing in these Contract Documents requires the City's Representative to provide the Contractor with direction or advice on how to do the Work, construction practices, or

means and methods. If the City's Representative approves, suggests or recommends any construction practice, means, method or manner for doing the Work or producing materials, the approval or recommendation shall not: (A) guarantee that following the method or manner will result in compliance with the Contract Documents; (B) relieve the Contractor of any risks or obligations under the Contract Documents; or (C) create liability by the City to the Contractor.

Suggestions as to the plans or methods of accomplishing the Work or Contract requirements by the City or the City's Representative to the Contractor but not specified or required, if adopted or followed by the Contractor in whole or in part, shall be used at the risk and responsibility of the Contractor. The City and the City's Representative assume no responsibility therefore and in no way will be held liable for any defects in the Work which may result from or be caused by use of such plan or method of Work.

# 1-05.19(2) Meetings with City

The Contractor shall have its duly authorized representative attend periodic informational meetings with the City's Representative and City staff, as reasonably required by the City.

Contractor, City, and City's Representative shall meet as often as determined by the City's Representative, but no less often than once each month. The purpose of the meeting is to review Project status in relation to the construction schedule; review value of Work completed during the previous month; and, if applicable, review Contractor's plans to return Project status to that required by the schedule. If requested by the City or City's Representative, the Contractor shall submit a written progress report within five days following this meeting, comprising:

The current construction schedule indicating percent complete, actual completion or start dates since the previous review, the estimated remaining duration for each activity in progress, Schedule of Values update, and narrative summary.

Reasons any activities are behind schedule and the corrective steps being taken.

# 1-05.19(3) Cooperation with Others

The Contractor agrees to permit entry to the work site by the City, its employees or other contractors performing Work on behalf of the City. The Contractor shall afford to the City, other contractors and their employees, reasonable facilities and cooperation and arrange its work and dispose of its materials in such a manner as to not interfere with the activities of the City or of others upon the site of Work. The Contractor shall promptly make good Contractor-caused injury or damage to persons or property that may be sustained by other contractors or employees of the City. The Contractor shall join its Work to that of others and perform its Work in proper sequence in relation to that of others.

If requested by the Contractor, the City will arrange meetings with other contractors performing Work on behalf of the City to plan coordination of construction activities. The Contractor shall inform itself of the planned activities of other contractors and will coordinate its Work with the other contractors.

Contractor shall notify the City of problems, interference or any difficulty with other contractors or workers engaged by the City. The Notice shall be sufficiently prompt and specific so as to allow the City to mitigate or avoid increased costs, time of performance, damages or injury. Contractor's failure to provide such Notice in a timely way shall be deemed a waiver and release of any and all Contract Claims relating to, arising out of, or caused by, any alleged interference, difficulty or problem with another contractor or worker engaged by the City.

# 1-06 CONTROL OF MATERIAL

Supplement Section 1-06 as follows:

References to materials shall also mean Contractor furnished Equipment, if any, as specified in these Special Provisions.

# 1-06.1 Approval of Materials Prior to Use

Revise the first paragraph of 1-06.1 to read as follows:

Prior to use, Contractor shall notify the Engineer of all proposed materials. Contractor may use the Qualified Product List (QPL) and the Aggregate Source Approval (ASA) Database. Contractor shall use the Request for Approval of Material (RAM) form.

Supplement 1-06.1 by adding the following:

Contractor shall provide product data, when specified, in accordance with 1-05.3(1) SUBMITTALS of these Special Provisions for inspecting, testing, operating, or maintaining Equipment and materials supplied as part of the Work. Unless otherwise specified, such data shall be provided at the time the referenced material or Equipment is delivered to the job site. Contractor shall provide data as specified and include, unless otherwise specified, but not be limited to shop drawings, erection drawings, reinforcing steel schedules, testing and adjusting instructions, operations manuals, maintenance procedures, parts lists, and record drawings. Contractor shall provide data as part of the Work under this Contract and its acceptability will be determined by the City in its sole discretion.

Further supplement 1-06.1 by adding the following:

# 1-06.1(5) Requests for Substitution (\*\*\*\*\*\*)

The City will not usually consider a substitution for material or Equipment specified by brand name or manufacturer or sole-sourced.

Only the Contractor may offer materials or Equipment of equal or better quality and performance as a substitution for those specified. The Contractor shall make substitution offers in writing to the City's Representative in accordance with 1-05.3(1) SUBMITTALS of these Special Provisions. The substitution offer must include sufficient data to enable the City's Representative to assess the acceptability of the material or Equipment for the particular application and requirements. The City and City's Representative are not required or obligated to consider or review a request for substitution and may, in their sole discretion and option, consider or review such requests.

If the offered substitution requires changes to or coordination with other portions of the Work, include, if any, drawings, and details showing such changes. The Contractor agrees to perform these changes as part of the substitution of material or Equipment at no additional cost to the City. Approval of a substitution request will not relieve the Contractor from responsibility for the efficiency, quality, and performance of the substitute material or Equipment, in the same manner and degree as the material and Equipment originally specified. Reflect cost differential associated with a substitution in the offer. If the City approves the substitution, the Contract Documents will be modified by a Change Order modifying the Contract Sum in the amount of the cost differential.

# 1-06.2 Acceptance of Materials

1-06.2(2)B Financial Incentive

Delete 1-06.2(2)B.

# 1-06.2(2)D Quality Level Analysis

Delete 1-06.2(2)D.

#### 1-06.3 Manufacturer's Certificate of Compliance

Supplement 1-06.3 by adding the following:

When authorized by the Standard Specifications or these Special Provisions and prior to use, the Engineer may accept certain Equipment on the basis of a Manufacturer's Certificate of Compliance as an alternate to Equipment inspection and testing.

A Manufacturer's Certificate of Compliance shall be reserved for cases where compliance to Contract requirements is not readily determinable through inspection and testing of materials or Equipment. The Contractor shall provide properly authenticated documents to the City's Representative that the materials and Equipment comply with the Contract requirements.

The Contractor shall pay all associated costs of providing each Manufacturer's Certificate of Compliance submitted for City acceptance.

The City reserves the right to refuse to accept Equipment on the basis of a Manufacturer's Certificate of Compliance.

#### 1-06.3(1) Inspection at Point of Manufacturing (\*\*\*\*\*)

The Contractor shall be responsible to reimburse the City for the costs of inspections at the point of manufacturing for inspections occurring outside of Whatcom, Skagit, Island, Snohomish, King, Pierce and Thurston counties. Costs to be paid or reimbursed by the Contractor include, but are not limited to, travel, subsistence, labor and lodging expenses of the City Inspector.

Point of manufacturing inspection will be required if:

Inspection and testing of materials or Equipment in the vicinity of the Work by the City is not practicable,

The Contractor requests the City to inspect and test material or Equipment at the point of manufacture, or

The Standard Specifications or these Special Provisions require that inspection, testing or witnessing of tests take place at the point of manufacture.

# 1-06.4 Handling and Storing Materials

Supplement 1-06.4 by adding the following:

Contractor shall store materials and Equipment so as to insure the preservation of their quality and fitness for the Work. Contractor shall store Equipment and materials at location that facilitates inspection. The Contractor shall be responsible for damages, loss or casualty occurring to materials and Equipment until Final Acceptance.

#### 1-06.6 Recycled Materials

Delete 1-06.6 and its subsections and substitute the following:

The Contractor shall make best effort to utilize recycled materials in the construction of the project as detailed in elsewhere in the Standard Specifications and these Special Provisions.

Prior to Physical Completion Contractor shall report the quantity of recycled materials utilized in the construction of the project for each of the items listed in Section 9-03.21. 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). Contractor shall provide report on DOT form 350-075A Recycled Materials Reporting.

#### 1-07 LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC

## 1-07.1 Laws to be Observed

# 1-07.1(1) General

Revise 1-07.1(1) by replacing the second sentence of the first paragraph with the following:

The Contractor shall indemnify, defend, and save harmless the City (including its agents, officers, and employees) against any claims that may arise because the Contractor (or any employee of the Contractor or Subcontractor or material person) violated a legal requirement.

# 1-07.1(2) Health and Safety

Supplement 1-07.1(2) by adding the following:

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

Supplement 1-07.1by adding the following:

# 1-07.1(6) Additional Requirements

The Contractor shall be in compliance with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act [42 U.S.C. 1857(h)], Section 508 of the Clean Water Act (33 U.S.C. 1368), Executive Order 11738, and Environmental Protection Agency Regulations (40 CFR Part 15). (Contracts, subcontracts, and subgrants of amounts in excess of \$100,000).

The Contractor shall comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub. L. 94-163).

The City advises all general contractors and subcontractors that numerous Federal, State, and Local regulations exist that could affect the procedures used in the completion of this project. The City advises each prospective Contractor that they are responsible to be aware of and comply with all applicable statutes and regulations. It is recommended that each Contractor contact the local office of the following agencies for a list of applicable regulations and requirements that might affect the implementation of this project:

- Federal Environmental Protection Agency
- Washington Department of Health
- Washington Department of Ecology
- Washington Department of Fisheries
- Washington Department of Wildlife
- Washington Department of Labor & Industries
- Puget Sound Air Pollution Control Agency
- Municipal Building Department
- Municipal Planning Department
- Municipal Public Works Department

If the scope of Work in this Contract includes Work at the City of Everett Water Filtration Plant or the Waste Water Pollution Control Facility, Contractor shall comply with the requirements of the Washington Department of Labor & Industries for such work including, but not limited to, Chapter 296-67 WAC. All costs associated or incurred in complying with these regulations or any other regulations listed above are included in the Contractor's Proposal.

In cases of conflict between different safety regulations, the more stringent regulation shall apply.

The Washington State Department of Labor and Industries shall be the sole and paramount administrative agency responsible for the administration of the provisions of the Washington Industrial Safety and Health Act of 1973 (WISHA).

The Contractor shall maintain at the project site office, or other well-known place at the project site, all articles necessary for providing first aid to the injured. The Contractor shall establish, publish, and make known to all employees, procedures for ensuring immediate removal to a hospital, or doctor's care, persons, including employees, who may have been injured on the project site. Employees should not be permitted to work on the project site before the Contractor has established and made known procedures for removal of injured persons to a hospital or a doctor's care.

The Contractor shall have sole responsibility for the safety, efficiency, and adequacy of the Contractor's plant, appliances, and methods, and for any damage or injury resulting from their failure, or improper maintenance, use, or operation. The Contractor shall be solely and completely responsible for the conditions of the project site, including safety for all persons and property in the performance of the Work. This requirement shall apply continuously, and not be limited to normal working hours. The required or implied duty of the Engineer to conduct construction review of the Contractor's performance does not, and shall not, be intended to include review and adequacy of the Contractor's safety measures in, on, or near the project site.

# 1-07.1(7) Noise

Work within 500 feet of residential properties between the hours of 10:00 p.m. and 7:00 a.m. during weekdays and between the hours of 6:00 p.m. and 8:00 a.m. on weekends or holidays are subject to noise control requirements if the work generates decibel levels of greater than 55 db(A). Contractor may apply for a Noise Variance a minimum of 30 days prior to performing work and pay \$100.00 application fee, using the following link information obtain latest on noise variance requirements: https://www.everettwa.gov/formcenter/human-resources-16/request-for-temporaryconstruction-noise-167. The Contractor must not assume that a Noise Variance will be granted. In no event will the Contractor be entitled to any adjustment of the Contract Sum or Contract Time if a Noise Variance is denied.

Typical requirements include, and not limited to, broadband backup alarms on all equipment requiring a backup alarm, anti-tail gate slamming devices, dump truck bed liners, and sawcutting, vacuum excavation, pavement breaking and loading export haul noise must be done between the hours of 7:00 a.m. and 10:00 p.m. during weekdays and between 8:00 a.m. and 6:00 p.m. on weekends.

Appendix E contains the City of Everett's Noise Ordinance for Bidder's reference.

Approval to continue Work during these hours may be revoked at any time the Contractor exceeds the City's noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor's operation. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.

## 1-07.2 State Taxes

Delete 1-07.2 and substitute the following:

## 1-07.2 State Sales Tax

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

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Section 1-07.2(3) describes this exception.

The City will pay the retained percentage 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 60.28.050). The City may deduct from its payments to the Contractor any amount the Contractor may owe the Washington State Department of Revenue, whether the amount owed relates to this Contract or not. Any amount so deducted will be paid into the proper State fund.

# 1-07.2(1) State Sales Tax — Rule 171 – Use Tax

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

#### State Sales Tax — Rule 170 - Retail Sales Tax 1-07.2(2)

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

For Work performed in such cases, the Contractor shall collect from the City, retail sales tax on the full Contract price. The City 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 City will not add in sales tax for a payment the Contractor or a Subcontractor makes on the purchase or rental of tools, machinery, equipment, or consumable supplies not integrated into the project. Such sales taxes shall be included in the unit bid item prices or in any other Contract amount.

#### 1-07.2(3) Services

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

#### 1-07.3 Fire Prevention and Merchantable Timber Requirements

Delete 1-07.3 in its entirety.

# 1-07.5 Environmental Regulations

#### 1-07.5(4) **Air Quality**

Delete all of 1-07.5(4) and substitute the following:

The Contractor shall comply with all rules of the Puget Sound Clean Air Agency (PSCAA) (800-552-3565). These rules include PSCAA Regulation I. Excerpts of Regulation I are included in the Appendix D as it relates to fugitive dust control. The Contractor shall submit a dust control plan including dust control measures for its activities related to this Contract that may cause dust. This plan shall be submitted to the Engineer prior to commencing activity at the job site.

#### 1-07.6 Permits and Licenses

Supplement 1-07.6 by adding the following:

A City of Everett business license is required for the Contractor and the Contractor's Subcontractors prior to commencing construction on this Contract.

Contractor shall obtain all necessary permits required by law and the City of Everett. All general building, electrical, plumbing permits will be issued at no cost to the Contractor. In addition, obtain all required permits for waste disposal sites. Waste disposal sites shall be in the United States, unless otherwise expressly stated in the Contract Documents or the City gives prior written approval.

This Project contains less than one acre of total disturbed area within the project limits and does not require Contractor to apply for Ecology's Construction Stormwater General Permit.

#### 1-07.9 Wages

#### 1-07.9(1) General

Delete the first paragraph of 1-07.9(1) and substitute the following:

This Contract is subject to the minimum wage requirements of RCW 39.12 and to RCW 48.28, as amended or supplemented. Workers shall receive no less than the prevailing rate of wage. Bidder shall use the Washington State Prevailing Wage Rates for Snohomish County, effective at the time of bid opening. Bidder is solely responsible to use the schedule in effect at the Bid Opening Date, determine the appropriate labor classification(s), and use the appropriate and correct prevailing wage and benefit rate(s). The hourly minimum rates for wages and fringe benefits can be obtained at the following URL:

http://www.lni.wa.gov/TradesLicensing/PrevWage/WageRates/default.asp

Printed copies of the current prevailing wage rates are available for viewing at City of Everett Public Works, 3200 Cedar St, Everett, WA and the City will mail a hard copy of the prevailing wage rates upon written request received within 7 days of the Bid Opening Date.

Delete the fifth paragraph of 1-07.9(1) and substitute the following:

If employing labor in a class not listed in the L & I prevailing wage rate schedule. the Contractor shall request a determination of the correct wage and benefits rate for that class and locality from the Industrial Statistician, Washington State Department of Labor and Industries (State L&I), and provide a copy of those determinations to the Project Engineer.

Delete the final paragraph of 1-07.9(1) that begins with "There are many work-ready . .

#### 1-07.9(5) **Required Documents**

Supplement 1-07.9(5) by adding the following:

The City may require payroll reports for the Contractor and every Subcontractor be submitted weekly to the Construction Division, Public Works Service Center, 3200 Cedar Street, Everett, Washington 98201. The payroll reports shall contain the following information:

- 1. Name and residence address of each worker.
- 2. Social Security number of each worker.
- 3. Classification of work performed by each worker. The classification shall be specific and match the classification categories listed in the Contract Documents.
- 4. Total number of hours employed each day.
- 5. Total number of hours employed during the payroll period.
- 6. Straight time and overtime hourly rate of wages paid to each worker.
- 7. Total or gross amount earned by each worker.
- 8. Deductions for Medical Aid, FICA, Federal withholding tax, and any other deductions taken.
- 9. Net amount paid each worker.
- 10. Contractor's, or Subcontractor's, name and address.
- 11. Days and dates worked.
- 12. Date of final day of pay period.

13. Whether fringe benefits were paid to each worker as part of the hourly wage rate or whether fringe benefits were paid into an approved plan, fund, or program.

Payrolls may be submitted on Federal payroll form WH-347, or equivalent. The reverse side of the form contains an affidavit that shall be filled out and signed. If the Contractor's payroll reports are computerized, the computerized reports may be submitted along with a Statement of Compliance affidavit photocopied from the back of form WH-347, or equivalent.

The first payroll submitted for the Work for both the Contractor and each Subcontractor shall be labeled "Initial." The last payroll submitted for the Work for both the Contractor and each Subcontractor shall be labeled "Final." Payrolls shall be sequentially numbered for all periods in which Work has been done. A certificate of completion for the Work, signed by the City, will constitute acceptance of the Work. The issuance of this certificate of completion will not constitute acceptance of unauthorized or defective Work or material.

1-07.9(3) Apprentices (July 8, 2024 APWA GSP)

Supplement this section with the following:

## **Apprentice Utilization**

This Contract includes an Apprentice Utilization Requirement. Fifteen percent or more of project Labor Hours shall be performed by Apprentices unless Good Faith Efforts are accepted. Apprentice Utilization will be determined using the Department of Labor and Industries (L&I) online Prevailing Wage Intent & Affidavit (PWIA) system.

## **Definitions**

For the purposes of this specification the following definitions apply:

- 1. Apprentice is a person enrolled in a State-approved Apprenticeship Training Program.
- 2. <u>Apprentice Utilization</u> is the apprentice labor hours, on the project, expressed as a percentage of project Labor Hours based on certified payrolls or the affidavits of wages paid, whichever is least. The percentage is not rounded up.
- 3. <u>Apprentice Utilization Requirement</u> is the minimum percentage of apprentice labor hours required by the Contract.
- 4. <u>Good Faith Effort(s) (GFE)</u> describes the Contractor's efforts to meet the Apprentice Utilization Requirement including but not limited to the specific steps as described elsewhere in this specification.
- 5. <u>Labor Hours</u> are the total hours performed by all workers receiving an hourly wage who are subject to prevailing wage requirements for work performed on the Contract as defined by RCW 39.04.310. Labor Hours are determined based on the scope of work performed by the individuals, rather than the title of their occupations in accordance with WAC 296-127.

- 6. <u>State-approved Apprenticeship Training Program</u> is an apprenticeship training program approved by the Washington State Apprenticeship Council.
- 7. <u>Apprentice Wage Rates</u> are the applicable wage rates that are to be paid for an apprentice registered in a training program, separate from Journey Level rates, as set by the Washington State Apprenticeship Training Council and Washington State Department of Labor and Industries (L&I).

# **Electronic Reporting**

The Contractor shall use the PWIA System to submit the "Apprentice Utilization Plan". Reporting instructions are available in the application.

# **Apprentice Utilization Plan**

The Contractor shall submit an "Apprentice Utilization Plan" by filling out the Apprentice Utilization Plan Form (WSDOT Form 424-004) within 30 calendar days of execution, however no later than the preconstruction meeting, demonstrating how and when they intend to achieve the Apprentice Utilization Requirement. The Plan shall be in sufficient detail for the Engineer to track the Contractor's progress in meeting the utilization requirements. An Apprentice Utilization Plan shall be updated and resubmitted as the Work progresses or when requested by the Engineer.

If the Contractor is unable to demonstrate the ability to meet the Apprentice Utilization Requirement with their initial Apprentice Utilization Plan submission, an effort must be made to find additional registered apprentices to perform on the contract. If after attempts have been made at every tier and every scope, the Contractor must submit GFE documentation to the Contracting Agency. The Contractor shall actively seek out opportunities to meet the Apprentice Utilization Requirement during the construction Work.

## **Contacts**

The Contractor may obtain information on State-approved Apprenticeship Training Programs by using the Apprentice Registration and Tracking System (ARTS) https://secure.lni.wa.gov/arts-public/#/program-search or contacting the Department of Labor and Industries directly at:

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

#### Compliance

The Contractor is expected to make attempts to employ Apprentices and shall include the requirement in any subcontracts at any tier. In the event that the Contractor is unable to achieve the Apprentice Utilization Requirement, the Contractor shall submit GFE documentation demonstrating the efforts and attempts they made. Final GFE documentation shall be submitted to the Contracting Agency after Substantial Completion but no later than 30 days after Physical Completion.

If the Contractor fails to actively attempt to employ Apprentices, submit GFE documentation, or if the Engineer does not approve the GFE, the Contractor will be assessed a penalty. The Engineer will provide the Contractor with a written notice at Final Acceptance of the project informing the Contractor of the failure to comply with this specification which will include a calculation of the penalty to be assessed as provided for in the Payment section in this special provision.

If the Contractor achieves the required Apprentice Utilization an incentive will be assessed with Final Payment.

## **Good Faith Efforts**

The GFE shall document the attempts (efforts) the Contractor (and any subcontractor at any tier) made to meet the Apprentice Utilization Requirement. Emails, letters, or other written communications with letterhead, titles, and contact information are required.

Documentation must include one or more of the following accepted GFEs:

- Demonstrated Lack of Availability of Apprentices. Correspondence from State-approved Apprenticeship Training Program(s), with project specific responses confirming there is a lack of availability of Apprentices for this project.
- 2. Demonstrated Disproportionate Ratio of Material/Equipment/Products to Labor Hours. Documentation explaining the bid includes a disproportionate high cost of material/equipment/products to Labor Hours. (E.g., a \$2 M estimated contract includes \$1 M or more in procurement costs of equipment to be installed.)
- 3. Demonstrated Lack of Necessary Labor Hours. Correspondence from a State-approved Apprentice Training Programs confirming there is not enough time in the project to meet required journey level to apprentice training ratios.
- 4. Demonstrated Lack of Available Approved Programs. Correspondence from State-approved Apprentice Training Programs, confirming there are no programs that train for the scopes included/anticipated on the project. Contractor and state programs to submit training program detail needs and details that could be used for future program creation.
- 5. Funding Precedent. Documentation that shows conflicting, more restrictive, or precedent requirements for other training on the Project. Examples include, but are not limited to, Tribal Employment Rights (TERO), Federal Training Hours, or Special Training that affect the ability to use state-registered apprentices.
- 6. Warranty Work. Documentation from Original Equipment Manufacturers, or similar, confirming that work performed must only be completed by certified journey-level installers or risk voiding warranty, or similar.
- 7. Other Effort. The Contractor may submit other evidence, documentation, or rationale for not being able to achieve the required Apprentice Utilization that are not covered in the other efforts named. Other efforts will still need to be corroborated by an independent, knowledgeable third-party.

Contractors may receive a GFE credit for graduated Apprentice hours through the end of the calendar year for all projects worked on as long as the Apprentice remains continuously employed with the same Contractor/subcontractor they were working for when they graduated. If an Apprentice graduates during employment on a project of significant duration, they may be counted towards a GFE credit for up to one year after their graduation or until the end of the project (whichever comes first). Determination of whether Contract requirements were met in good faith will be made by subtracting the hours from the journeyman total reported hours for the project

and adding them to the apprentice hour total. If the new utilization percentage meets the Contract requirement, the Contractor will be reported as meeting the requirement in good faith.

# **Approving Good Faith Efforts**

The Contracting Agency will review submitted Good Faith Efforts and issue a determination. The Engineer may request additional information, documentation, evidence or similar in order to approve such efforts. A determination by the Engineer is final. The approved Good Faith Efforts will be loaded into the PWIA system by the Contracting Agency.

# **Payment**

Payment will be made for the following Bid Items:

"Apprenticeship Incentive", by calculation

An incentive of \$5000 will be assessed with the Final Payment for Contractors who meet the Apprentice Utilization Requirement without a reduction by Good Faith Effort. For the purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the total bid by the Contractor.

"Apprenticeship Penalty", by calculation.

Apprenticeship Hours will be measured for each hour of work performed by an apprentice as shown on the Monthly Apprentice Utilization Report, based on certified payrolls or the affidavits of wages paid, whichever is least. The percentage is not rounded up. For the purpose of providing a common proposal for all bidders, the Contracting Agency has entered an amount in the proposal to become a part of the total bid by the Contractor.

When the Contractor fails to meet the Apprenticeship goal of 15%, a penalty will be assessed for each hour that is not achieved, unless a Good Faith Effort is approved by the Contracting Agency.

Apprenticeship Utilization Penalty will be calculated as described below:

Percent of goal met	Penalty per hour of unmet goal	
100%	\$0.00	
90% to 99%	\$2.00	
75% to 89%	\$3.50	
50% to 74%	\$5.00	
1% to 49%	\$7.50	
0%	\$10.00	

The Contractor shall include all related costs in the unit Bid prices of the Contract, included but not limited to implementing, developing, documenting, and administering an apprenticeship utilization program, recording and reporting hours and all other costs to comply with this provision.

# 1-07.11 Requirements for Nondiscrimination

Supplement 1-07.11 as follows:

The Contractor will be required to assure that equal employment opportunities will be in effect to all individuals throughout the length of this Contract, pursuant to 1-07.11 REQUIREMENTS FOR NONDISCRIMINATION. The Contractor must comply with all local, state and federal laws pertaining to non-discrimination and equal employment opportunity.

The City of Everett hereby gives public notice that it is the City's policy to assure full compliance with Title VI of the Civil Rights Act of 1964, the Civil rights Restoration Act of 1987, and related statutes and regulations in all programs and activities. Title VI requires that no person shall, on the grounds of race, color, sex, or national origin be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any Federal Aid Highway program or other activity for which the City receives Federal financial assistance.

Any person who believes they have been aggrieved by an unlawful discriminatory practice under Title VI has a right to file a formal complaint with the City of Everett. Any such complaint shall be in writing and filed with the City's Title VI Coordinator within 180 calendar days following the date of the alleged discriminatory occurrence. Title VI Discrimination Complaint Forms may be obtained from the Human Resources office at no cost to the complainant by calling (425) 257-8767.

Notification specific to bidders:

All bidders are hereby notified that the City of Everett will affirmatively ensure that in any contract entered into pursuant to this Invitation to Bid, minority business enterprises 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, sex, or national origin in consideration for an Award.

## **Title VI Assurance**

- a. The Contractor, with regard to the Work performed during the Contract, shall not discriminate on the grounds of race, color, sex or national origin in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in such discrimination, including discrimination in employment practices.
- b. In all solicitations either by competitive bidding or negotiations made by the Contractor for Work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential Subcontractor or suppler shall be notified by the Contractor of the Contractor's obligations under this Contract.
- c. The Contractor shall provide all information and reports required by federal regulations applicable to this Contract. The Contractor shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the City to be pertinent to ascertain compliance with applicable federal regulations. Where any information required of a Contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the City, and shall set forth what efforts it has made to obtain the information.
- d. In the event of the Contractor's noncompliance with the nondiscrimination provisions of this Contract, the City shall impose such Contract sanctions as it, or the City's funding agencies, may determine to be appropriate, including, but not

- limited to: (a) withholding of payments to the Contractor until the Contractor complies, and/or (b) termination or suspension of the Contract, in whole or in part.
- e. The Contractor shall include the provisions of paragraphs (a) through (e) in every subcontract, including contracts for procurement and leases of equipment, unless exempt by applicable federal regulations or directives issued pursuant thereto. The Contractor shall take such action, including sanctions for noncompliance, with respect to Subcontractors as the City or relevant federal agency may direct so as to enforce such provisions. Provided, however, in the event a Contractor becomes involved in, or is threatened with, litigation with a Subcontractor or supplier as a result of the foregoing direction, the Contractor may request that the City or the United States to enter into such litigation to protect their respective interests.

In the event of any inconsistency between the above supplemental requirements to 1-07.11 and the requirements of the 1-07.11 of the Standard Specifications, the more stringent requirements control, unless otherwise determined by the City in writing. In addition, the City may determine in writing that one or more provisions of 1-07.11 of the Standard Specifications are not applicable.

# 1-07.14 Responsibility for Damage

Delete 1-07.14 and replace with the following:

The City, and all officers and employees of the City, including but not limited to those of the Public Works Department, will not be responsible in any manner: for any loss or damage that may happen to the Work or any part; for any loss of material or damage to any of the materials or other things used or employed in the performance of Work; for injury to or death of any persons, either workers or the public; or for damage to the public for any cause which might have been prevented by the Contractor, or the workers, or anyone employed by the Contractor.

The Contractor shall be responsible for all liability imposed by law for injuries to, or the death of, any persons or damages to property resulting from any cause whatsoever during the performance of the Work, or before Final Acceptance.

Subject to the limitations in this Section, and RCW 4.24.115, the Contractor shall indemnify, defend, and save harmless the City and all its officers and employees from all claims, suits, or actions brought for injuries to, or death of, any persons or damages resulting from construction of the Work or in consequence of any negligence or breach of Contract regarding the Work, the use of any improper materials in the Work, caused in whole or in part by any act or omission by the Contractor or the agents or employees of the Contractor during performance or at any time before final acceptance. In addition to any remedy authorized by law, the City may retain so much of the money due the Contractor as deemed necessary by the Engineer to ensure the defense and indemnification obligations of this Section until disposition has been made of such suits or claims.

Pursuant to RCW 4.24.115, such claims, suits, or actions result from the concurrent negligence of (a) the indemnitee or the indemnitee's agents or employees and (b) the Contractor or the Contractor's agent or employees, the indemnity provisions provided in the preceding paragraphs of this Section shall be valid and enforceable only to the extent of the Contractor's negligence or the negligence of its agents and employees.

The Contractor shall bear sole responsibility for damage to completed portions of the project and to property located off the project caused by erosion, siltation, runoff, or other related items during the construction of the project. The Contractor shall also bear sole responsibility for any pollution of rivers, streams, ground water, or other waters that may occur as a result of construction operations.

The Contractor shall exercise all necessary precautions throughout the life of the Project to prevent pollution, erosion, siltation, and damage to property.

The City will forward to the Contractor all claims filed against the City that are deemed to have arisen in relation to the Contractor's Work or activities under this Contract, and, in the opinion of the City, are subject to the defense, indemnity, and insurance provisions of the Contract Documents. Claims will be deemed tendered to the Contractor and insurer, who has named the City as a named insured or an additional insured under the Contract's insurance provisions, once the claim has been forwarded via certified mail to the Contractor. The Contractor shall be responsible to provide a copy of the claim to the Contractor's designated insurance agent who has obtained/met the Contract's insurance provision requirements.

Within 60 calendar days following the date a claim is sent by the City to the Contractor, the Contractor shall notify the City Attorney's Office of the following:

- a. Whether the claim is allowed or is denied in whole or in part, and, if so, the specific reasons for the denial of the individual claim, and if not denied in full, when payment has been or will be made to the claimant(s) for the portion of the claim that is allowed, or
- b. If resolution negotiations are continuing. In this event, status updates will be reported no longer than every 60 calendar days until the claim is resolved or a lawsuit is filed.

If the Contractor fails to provide the above notification within 60 calendar days, then the Contractor shall yield to the City sole and exclusive discretion to allow all or part of the claim on behalf of the Contractor, and the Contractor shall be deemed to have WAIVED any and all defenses, objections, or other avoidances to the City's allowance of the claim, or the amount allowed by the City, under common law, constitution, statute, or the Contract and these Standard Specifications. If all or part of a claim is allowed, the City will notify the Contractor via certified mail that it has allowed all or part of the claim and make appropriate payments to the claimant(s) with City funds.

Payments of funds by the City to claimant(s) under this Section will be made on behalf of the Contractor and at the expense of the Contractor, and the Contractor shall be unconditionally obligated to reimburse the City for the "total reimbursement amount", which is the sum of the amount paid to the claimant(s), plus all costs incurred by the City in evaluating the circumstances surrounding the claim, the allowance of the claim, the amount due to the claimant, and all other direct costs for the City's administration and payment of the claim on the Contractor's behalf. The City will be authorized to withhold the total reimbursement amount from amounts due the Contractor, or, if no further payments are to be made to the Contractor under the Contract, the Contractor shall directly reimburse the City for the amounts paid within 30 days of the date notice that the claim was allowed was sent to the Contractor. In the event reimbursement from the Contractor is not received by the City within 30 days, interest shall accrue on the total reimbursement amount owing at the rate of 12 percent per annum calculated at a daily rate from the date the Contractor was notified that the claim was allowed. The City's costs to enforce recovery of these amounts are additive to the amounts owing.

The Contractor specifically assumes all potential liability for actions brought by employees of the Contractor and, solely for the purpose of enforcing the defense and indemnification obligations set forth in 1-07.14, the Contractor specifically waives any immunity granted under the State industrial insurance law, Title 51 RCW. This waiver has been mutually negotiated by the parties. The Contractor shall similarly require that

each Subcontractor it retains in connection with the project comply with the terms of this paragraph, waive any immunity granted under Title 51 RCW, and assume all liability for actions brought by employees of the Subcontractor.

The indemnity, defense and other obligations in this 1-07.14 are in addition to any indemnity, defense or other obligation that may be contained elsewhere in the Contract Documents.

## 1-07.17 Utilities and Similar Facilities

Supplement 1-07.17 by adding the following:

The Contractor shall review its responsibilities under Chapter 19.122 RCW, a law relating to underground utilities. Cost to the Contractor incurred as a result of complying with this law shall be at the Contractor's expense. In accordance with RCW 19.122, the Contractor shall call the **Utility Coordinating Council One Call Center, 1-800-424-5555**, for field location, not less than 2 nor more than 10 business days before the scheduled date for commencement of excavation that may affect underground utility facilities, unless otherwise agreed upon by the parties involved. A business day is defined as any day other than Saturday, Sunday, or a legal local, State, or Federal holiday.

The Contractor shall be responsible for determining the exact location, including service connections, of all public and private underground utilities marked at the site of the Work. The Contractor shall perform field verification prior to beginning Work that could result in damage to buried utilities, including but not limited to exploratory excavations, in sufficient time so as not to impede the progress of the Work or fabrication of materials to be incorporated into the Work. The Contractor shall immediately notify the City's Representative as to any utility discovered by him in a different position than shown on the Plans or that is not shown on the Plans.

No excavation shall begin until all known underground public and private utilities in the vicinity of the excavation area have been located and marked.

Utilities of record are shown on the Plans insofar as it is possible to do so. Failure of the City to show the existence of subsurface objects or installation on the Plans shall not relieve the Contractor from its responsibility to make an independent check on the ground, nor relieve Contractor from all liability for damages resulting from its operations.

It shall be entirely the responsibility of the Contractor to give proper notification to the agencies that have utilities in place and to coordinate with these agencies in the protection and relocation of the various underground installations. These agencies will give assistance in the location of the various utilities, but this shall not relieve the Contractor from responsibility for any damage incurred. The City shall require a notification of at least five working days. The Contractor shall hold the City harmless against any claim of any nature resulting from Delays in attending to same.

Following are addresses and telephone numbers of utilities in the Everett area for the Contractor's convenience as of December 15, 2022:

# CITY OF EVERETT UTILITIES (SANITARY CITY OF EVERETT, TRAFFIC SEWER, STORMWATER, WATER)

ATTENTION: GRANT MOEN TELEPHONE: (425) 257-8800 EMAIL: GMOEN@EVERETTWA.GOV

ADDRESS: PUBLIC WORKS DEPARTMENT

3200 CEDAR ST EVERETT, WA 98201

# **ALDERWOOD WATER & WASTEWATER** DISTRICT

ATTENTION: JOE SKEENS DESK PHONE: (425) 743-8912 CELL PHONE: (425) 478-8839 EMAIL: JSKEENS@AWWD.COM ADDRESS: 15204 35TH AVE W LYNNWOOD, WA 98087-5021

#### LUMEN

ATTENTION: CHRISTIAN MARSHALL DESK PHONE: (206) 485-5322 CELL PHONE: (206) 485-5322

EMAIL: CHRISTIAN.MARSHALL@LUMEN.COM

ADDRESS: 1208 NE 64TH STREET SEATTLE, WA 98115-6722

## ZIPLY COMMUNICATIONS

ATTENTION: SAMANTHA JOHNSTON

(EVERETT) **DESK PHONE:** 

CELL PHONE: (208) 810-5640

EMAIL: SAMANTHA.JOHNSTON1@ZIPLY.COM

ADDRESS:

ATTENTION: MIKE HAKAHAN (SILVER LAKE)

**DESK PHONE:** 

CELL PHONE: (425) 949-0230

EMAIL: MIKE.HAKAHAN@ZIPLY.COM

ADDRESS:

## **MUKILTEO WATER DISTRICT**

ATTENTION: RICK MATTHEWS DESK PHONE: (425) 355-3355 CELL PHONE: (425) 359-1021

EMAIL: RICKM@MUKILTEOWWD.ORG ADDRESS: 7824 MUKILTEO SPEEDWAY

MUKILTEO, WA 98275

PUBLIC WORKS DEPARTMENT

3200 CEDAR STREET

**EVERETT, WASHINGTON 98201** 

ATTN: COREY HERT TEL. (425) 257-8800

EMAIL: CHERT@EVERETTWA.GO

## WAVE/ASTOUND COMMUNICATION

ATTENTION: JIM BIGGS

DESK PHONE: (206) 786-8720

**CELL PHONE:** 

EMAIL: JIM.BIGGS@ASTOUND.COM WA-CONSTRUCTION@ASTOUND.COM

ADDRESS: 4766 1ST AVE S SEATTLE, WA 98134

#### **SPRINT**

2210 S 35TH ST **TACOMA. WA 98409** ATTN: STEVEN SCHAUER TEL. (360) 402-4159 (CELL)

EMAIL: STEVEN.SCHAUER@SPRINT.COM

#### **VERIZON**

**BRAD LANDIS** (425) 229-3123

BRAND.LANDIS@VERIZON.COM

## **SNOHOMISH COUNTY PUD #1**

ATTENTION: ANDRA SHAUGHNESSY FLAHERTY

DESK PHONE: (425) 783-4419 CELL PHONE: (425) 345-0312

EMAIL: ALFLAHERTY@SNOPUD.COM

ADDRESS: P.O. BOX 1107 EVERETT, WA 98206

#### SILVER LAKE WATER DISTRICT

ATTENTION: SCOTT SMITH

DESK PHONE: (425) 337-3647 EXT. 216

**CELL PHONE:** 

EMAIL: SSMITH@SLWSD.COM ADDRESS: 15205 41ST AVE SE BOTHELL, WA 98201-6114

**PUGET SOUND ENERGY** 

ATTENTION: MARDY PUNTENEY

**DESK PHONE:** 

CELL PHONE: (425) 754-8053

EMAIL: MARDY.PUNTENEY@PSE.COM

ADDRESS: 3630 RAILWAY AVE

EVERETT, WA 98201

**RUBATINO REFUSE** 

ATTENTION:

DESK PHONE: (425) 259-0044

**CELL PHONE:** 

EMAIL: INFO@RUBATINO.COM

**MAILING** 

ADDRESS: P.O. BOX 1029 EVERETT, WA 98206 **COMCAST** 

ATTENTION: JOHN WARRICK - RESIDENTIAL

DESK PHONE: (425) 263-5328 CELL PHONE: (425) 757-1794

EMAIL: JOHN WARRICK@CABLE.COMCAST.COM

ADDRESS: 1525 - 75TH ST SW STE #200

EVERETT, WA 98203

ATTENTION: CASEY BROWN DESK PHONE: (425) 263-5345 CELL PHONE: (425) 754-0064

EMAIL: CASEY BROWN2@CABLE.COMCAST.COM

ADDRESS: 1525 - 75TH ST SW STE #200

EVERETT, WA 98203

ATTENTION: SHANE TURNER

**DESK PHONE:** 

CELL PHONE: (425) 316-9405

EMAIL:

SHANE TURNER2@CABLE.COMCAST.COM

ADDRESS: 400 SEQUIOA DR BELLINGHAM, WA 98226

# 1-07.17(1) Utility Construction, Removal or Relocation by Contractor

Delete all three paragraphs of 1-07.17(1) and substitute the following:

If the Work requires removing or relocating a utility, utility owners or their contractors will furnish all work necessary to adjust, relocate, replace, or construct their facilities.

# 1-07.17(2) Utility Construction, Removal or Relocation by Others

Revise the first paragraph of 1-07.17(2) as follows:

Any authorized agent of the City or utility owners may enter the City right-of-way or easement to repair, rearrange, alter, or connect their equipment. The Contractor shall cooperate with such effort and shall avoid creating delays or hindrances to those doing the Work. The Contractor shall arrange to coordinate work schedules as needed.

# 1-07.18 Public Liability and Property Damage Insurance

Delete 1-07.18 and substitute the following:

# 1-07.18 Insurance (\*\*\*\*\*)

# 1-07.18(1) General Requirements

- The Contractor shall obtain the insurance described in this section from insurers approved by the State Insurance Commissioner pursuant to RCW Title 48. insurance shall be provided by an insurer with a rating of A-: VII or higher in the A.M. Best's Key Rating Guide, that is licensed to do business in the state of Washington, or issued as a surplus line by a Washington Surplus lines broker. The City reserves the right to approve or reject the insurance provided, based on the insurer (including financial condition), terms and coverage, the Certificate of Insurance, and endorsements.
- The Contractor shall keep this insurance in force during the term of the Contract and for 30 calendar days after the Physical Completion date, unless otherwise indicated in 1-07.18(1)C of this section.
- 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 shall state that coverage is claims made, and state the retroactive date. Claims-made form coverage shall be maintained by the Contractor for a minimum of 36 months following the Final Completion or earlier termination of this Contract, and the Contractor shall annually provide the City with proof of renewal. If renewal of the claims made form of coverage becomes unavailable, or economically prohibitive, the Contractor shall purchase an extended reporting period, "tail", or execute another form of guarantee acceptable to the City to assure financial responsibility for liability for services performed.
- D. The insurance policies shall contain a "cross liability" provision.
- E. The Contractor's and all subcontractors' insurance coverage shall be primary and non-contributory insurance as respects the City's insurance, self-insurance, or insurance pool coverage.
- All insurance policies and Certificates of Insurance shall include a requirement providing for a minimum of 30 days prior written notice to the City of any cancellation in any insurance policy.
- Upon request, the Contractor shall forward to the City a full and certified copy of the insurance policy(s). The Contractor shall not begin Work under the Contract until the required insurance has been obtained and approved by the City.
- Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of Contract, upon which the City 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 City on demand, or at the sole discretion of the City, offset against funds due the Contractor from the City.
- All costs for insurance shall be included in the unit or lump sum prices of the Contract and no additional payment will be made.
- J. The Contractor waives all rights against the City and its separate contractors, and their agents and employees, for damages caused by fire or other perils to the extent such damage cost is actually paid by property insurance applicable to the Work. The Contractor shall require similar waivers from all Subcontractors.
- The City may utilize third-party contractor(s), software and/or websites for uploading and verification of the Contractor's insurance. The Contractor will provide (by

upload or otherwise as directed by the City) insurance information and documentation as may be required by such third-party.

# 1-07.18(2) Additional Insured

All insurance policies, with the exception of Professional Liability and Workers Compensation, shall name the following listed entities as additional insured(s):

• The City and its elected officials, officers, employees, agents, and volunteers

The above-listed persons shall be additional insured(s) for the full available limits of liability maintained by the Contractor, whether primary, excess, contingent or otherwise, 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) of this section describes limits lower than those maintained by the Contractor.

# 1-07.18(3) Subcontractors

Contractor shall ensure that each Subcontractor of every tier obtains and maintains at a minimum the insurance coverages listed in 1-07.18(5)A and 1-07.18(5)B of this section. Upon request of the City, the Contractor shall provide evidence of such insurance as required in 1-07.18(4).

## 1-07.18(4) Evidence of Insurance

The Contractor shall deliver to the City a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the Work. The certificate and endorsements shall conform to the following requirements:

An ACORD certificate or a form determined by the City to be equivalent.

The Description of Operations in the certificate must read as: "All policies of insurance, except workers compensation, are endorsed to name the City of Everett, its elected officials, officers, employees, agents, and volunteers as additional insured(s). All such insurance is primary as respects the City of Everett, and any other insurance maintained by the City of Everett is excess and not contributing. The City of Everett will be given at least thirty (30) days prior written notice of any cancellation, non-renewal, or other material change in any insurance policy."

Copies of all endorsements naming City and all other entities listed in 1-07.18(2) of this section as Additional Insured(s), showing the policy number. The Contractor may submit a copy of a blanket additional insured clause from its policies instead of a separate endorsement. A statement of additional insured status on an ACORD Certificate of Insurance shall not satisfy this requirement.

Other amendatory endorsements to show the coverage required herein.

# 1-07.18(5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve the Contractor from liability in excess of such limits. All deductibles and self-insured retentions shall be disclosed and are subject to approval by the City. The cost of any claim payments falling within the deductible shall be the responsibility of the Contractor.

# 1-07.18(5)A Commercial General Liability

A policy of Commercial General Liability Insurance, including:

- Per project aggregate
- Premises/Operations Liability

- Products/Completed Operations for a period of one year following final acceptance of the Work.
- Personal/Advertising Injury
- Contractual Liability
- Independent Contractors Liability
- Stop Gap / Employers' Liability
- Explosion, Collapse, or Underground Property Damage (XCU)
- Blasting (only required when the Contractor's work under this Contract includes exposures to which this specified coverage responds)

Such policy must provide the following minimum limits:

\$2,000,000	Each Occurrence
\$5,000,000	General Aggregate
\$2,000,000	Products & Completed Operations Aggregate
\$2,000,000	Personal & Advertising Injury, each offence

Stop Gap / Employers' Liability

- \$1,000,000 Each Accident
- \$1,000,000 Disease Policy Limit
- \$1,000,000 Disease Each Employee

#### 1-07.18(5)B **Automobile Liability**

Automobile Liability for owned, non-owned, hired, and leased vehicles, with an MCS 90 endorsement and a CA 9948 endorsement attached if "pollutants" are to be transported. Such policy(ies) shall provide the following minimum limit:

\$1,000,000 combined single limit

#### 1-07.18(5)C **Workers' Compensation**

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the state of Washington.

#### Coverage for Working On, Over, or Near Navigable Waters 1-07.18(5)D

If this Contract involves Work on or adjacent to navigable water, as defined by the U.S. Department of Labor, then the Contractor shall provide proof of insurance coverage in compliance with the statutory requirements of the U.S. Longshore and Harbor Workers' Compensation Act as administered by the U.S. Department of Labor.

If the Contractor is working from barges or any other watercraft, owned or nonowned, the Contractor shall maintain Protection and Indemnity (P&I) insurance providing coverage for actions of the crew to third parties to the same limits stated under 1-07.18(5)A of this section for Commercial General Liability Insurance. The Contractor shall also provide proof of insurance coverage in compliance with the statutory requirements of the Merchant Marine Act of 1920 (the "Jones Act").

#### 1-07.18(5)E **Excess or Umbrella Liability**

The limits stated in this section 1-07.18 may be satisfied by a combination of liability and, if necessary, commercial umbrella/excess policies.

#### 1-07.18(5)F **Pollution Liability**

The Contractor shall provide a Pollution Liability policy, providing coverage for claims involving bodily injury, property damage (including loss of use of tangible property that has not been physically injured), cleanup costs, remediation, disposal or other handling of pollutants, including costs and expenses incurred in the investigation, defense, or settlement of claims arising out of:

Contractor's operations related to this project;

Remediation, abatement, repair, maintenance or other work with lead-based paint or materials containing asbestos; and

Transportation of hazardous materials away from any site related to this project.

Such Pollution Liability policy shall provide the following minimum coverage:

\$2,000,000 each loss and annual aggregate

#### 1-07.18(5)G **Professional Liability**

The Contractor, its Subcontractor and its design consultant providing construction management, value engineering, or other design-related non-construction professional services shall provide evidence of Professional Liability insurance covering professional errors and omissions. Such policy shall provide the following minimum limits:

\$2,000,000 per Claim

If the scope of such design-related professional services includes work related to pollution conditions, the Professional Liability insurance shall include Pollution Liability coverage.

If insurance is 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.

#### 1-07.18(5)H **Builder's Risk**

If the Project includes construction of a structure, the Contractor shall procure and maintain during the life of the Contract, or until acceptance of the project by the City, whichever is longer, "All Risk" Builders Risk or Installation Floater Insurance at least as broad as ISO form number CP0020 (Builders Risk Coverage Form) with ISO form number CP0030 (Causes of Loss - Special Form) including coverage for collapse, theft, off-site storage and property in transit. The coverage shall insure for direct physical loss to property of the entire construction project, for 100% of the replacement value thereof and include earthquake. The policy shall be endorsed to cover the interests, as they may appear, of the City, Contractor and subcontractors of all tiers with the City and sub-contractors listed as a Named Insured. In the event of a loss to any or all of the work and/or materials therein and/or to be provided at any time prior to the final close-out of the Contract and acceptance of the project by the City, the Contractor shall promptly reconstruct, repair, replace or restore all work and/or materials so destroyed. Nothing herein provided for shall in any way excuse the Contractor or its surety from the obligation of furnishing all the required materials and completing the work in full compliance with the terms of the Contract.

# 1-07.20 Patented Devices, Materials, and Processes

Delete the first paragraph of 1-07.20 and substitute the following:

The Contractor shall assume all costs arising from the use of patented devices, materials, or processes used on or incorporated in the Work, and agrees to indemnify, defend, and save harmless the City, and its officers, employees and agents from all actions of any nature for, or on account of the use of any patented devices, materials, or processes.

# 1-07.23 Public Convenience and Safety

Delete the last sentence of the first paragraph of 1-07.23 and substitute the following:

Nothing contained in this Contract is intended to create any third-party beneficiary rights in favor of the public or any individual utilizing the facilities being constructed or improved under this Contract.

# 1-07.23(1) Construction Under Traffic

Revise the third sentence of the second paragraph to read as follows:

Do NOT impair accessibility to existing or temporary pedestrian push buttons. City may allow activating pedestrian recall timing or other accommodations during construction.

Supplement 1-07.23(1) by adding the following:

If 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 p.m. on a day prior to a holiday or holiday weekend. A holiday weekend is defined as having a holiday fall on Friday, Saturday, Sunday or Monday.

Contractor shall provide a uniformed off-duty Police Officer to control traffic in critical situations as determined by the Engineer. The uniformed officer shall be paid under contract item "Traffic Control - Off-Duty Police Officer."

Contractor shall notify the local Fire, Police and Engineering Departments before the beginning of each phase of construction so that these agencies may re-route their emergency vehicles around the construction zone. The non-emergency phone number for Everett Police is 258-2484, for Fire Dispatch is 257-8757, and for Public Works Engineering is 257-8800.

Contractor shall notify City of Everett Transit at 425-257-8984 and Community Transit at 425-348-7100 of all street closures or delays at least 24 hours in advance to enable rerouting of buses.

Contractor shall notify the property owners at least 72 hours in advance to enable them to remove vehicles parked in the vicinity of Work. Towing vehicles shall be the responsibility of the Contractor and no additional payment will be made.

Further supplement 1-07.23(1) by adding the following:

#### 1-07.23(1)A **General Requirements Traffic** (\*\*\*\*\*)

The following general requirements apply to all Work on the Project:

Prepare and submit to Engineer a Traffic Control Plan in accordance with 1-10.2(2) TRAFFIC CONTROL PLANS.

Refer to 1-08.4(2) SPECIAL CONSTRUCTION CONSTRAINTS regarding construction constraints resulting from traffic control.

Notify all affected property owners prior to commencing the barricading of streets, sidewalks and driveways.

All business driveways shall remain open except as necessary to permit curing of construction materials or for short periods of time as required for excavations. However, at least one driveway per business shall remain open to vehicular traffic at all times unless otherwise approved by the Engineer and affected property owner in writing.

Signs and barricades shall be supplemented by lanterns or flasher units during the hours of darkness.

Drivers of motor vehicles used in connection with the construction shall obey traffic rules posted for such location in the same manner and under the same restrictions as provided for the drivers of private vehicles.

Conduct the Work, at all time throughout the project, in such a manner as will obstruct and inconvenience vehicular and pedestrian traffic as little as possible. Keep the streets, sidewalks and private driveways open except for the brief periods when actual Work is being done.

No lane closures will be permitted between 3:30 p.m. and 6:00 p.m., unless specifically approved by the Engineer.

# 1-07.23(3) Work Zone Clear Zone

Delete 1-07.23(3) in its entirety.

# 1-07.24 Rights of Way

Delete1-07.24 and substitute the following:

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

Generally, the City 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 on the Plans.

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 City from the owner of the private property. Copies of the easement agreements may be included in the Contract Documents or made available to the Contractor as soon as practical after they have been obtained by the Engineer.

The Contractor shall not proceed with any portion of the Work in areas where right of way, easements or rights of entry have not been acquired until the Engineer certifies to the Contractor that the right of way or easement is available or that the right of entry has been received. If the Contractor is delayed due to acts of omission on the part of the City in obtaining easements, rights of entry or right of way, the Contractor will be entitled to an extension of time. The Contractor agrees that Delay resulting from City obtaining easement or right of entry or right of way shall not be a breach of Contract.

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

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

# 1-07.27 No Waiver of State's Legal Rights

Delete 1-07.27 and substitute the following:

# 1-07.27 No Waiver of City's Legal Rights (\*\*\*\*\*\*)

The City shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the Work and payment therefor from showing the true amount and character of the Work performed and materials furnished by the Contractor, or from showing that any such measurement, estimate, or certificate is untrue or incorrectly made, or that the Work or materials do not conform in fact to the Contract. The City shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate, and payment in accordance therewith, from recovering from the Contractor and the Sureties such damages as it may sustain by reason of the Contractor's failure to comply with the terms of the Contract. Neither the acceptance by the Engineer nor any payment for the whole or any part of the Work, nor any extension of time, nor any possession taken by the City shall operate as a waiver of any portion of the Contract or of any power herein reserved or any right to damages herein provided, or bar recovery of any money wrongfully or erroneously paid to the Contractor. A waiver of any breach of the Contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor and the City recognize that the impact of overcharges to the City by the Contractor resulting from antitrust law violations by the Contractor's suppliers or Subcontractors adversely affects the City rather than the Contractor. Therefore, the Contractor agrees to assign to the City all claims for such overcharges.

# 1-07.29 Community Project Liaison (CPL) (\*\*\*\*\*\*)

The Contractor will provide a full-time "construction liaison" (Community Project Liaison, CPL) primarily responsible for addressing the needs of residents, institutions, schools, businesses etc. within and adjacent to the project area or as may otherwise be affected by the construction activities. The CPL will interface with the City of Everett, and, in particular, the inspector and construction manager. The CPL's role is intended to provide a single, responsive point of contact for the public so as to minimize the involvement of the City staff in addressing issues that can readily be resolved directly by the Contractor. The CPL shall be readily accessible by telephone or in person during normal business hours and during all hours of work throughout the duration of the project. The CPL will be responsible for communicating to the City, any project information intended for the general neighborhood area, media or outside agencies.

Examples of Construction Contractor and CPL responsibilities and interaction include, but are not limited to, the following:

- CPL shall provide timely and regular communications with the City, residents, business/institution owners, and managers and any other persons affected by the construction to inform them of the status of scheduled work activities as needed.
- If a complaint, question or issue should arise from the public (a resident, motorist, business owner etc.), that requires action by the Sewer O Utility Project construction team, the CPL shall communicate that information to the Construction Manager and otherwise interface as needed between the public and the contractor to assure that the issue is resolved promptly.
- CPL and the City's inspector and construction manager shall attempt to contact or otherwise meet with each individual business/institution owner or manager and affected residents to identify specific concerns in advance of construction and to

promptly address specific needs during construction.

- City's Public Works Information & Education Officer, in coordination with the CPL, shall provide notices of impending temporary closures of streets, alleys or driveways that are otherwise used for access to parking lots or buildings along the area of work. The text and information contained on any notices shall be jointly prepared by the Construction Manager and the CPL.
- Contractor, in coordination with the CPL, shall provide notices to business/institution owners and managers and/or affected residents of temporary shutdown of utilities.
   The text and information contained on any notices shall be jointly prepared by the Construction Manager and the CPL.
- Contractor and CPL shall provide assistance to business/institution owners and managers and/or affected residents to minimize and mitigate impacts during construction, including but not limited to; mail and package delivery, garbage and recycling pickup, freight delivery, handicap parking and access, customer/patient access and parking etc.
- Contractor and CPL will coordinate to ensure the needs of the community are incorporated into the contractor's construction schedule and timely updates furnished to the public. Contractor and CPL shall coordinate with the City during special events.
- CPL shall have phone numbers with 24-hour telephone message capability for business/institution owners and managers and/or affected residents to request assistance or information regarding issues related to the construction project.
- CPL will maintain a written log of all communications with businesses, institutions or residents that involve complaints or issues requiring response or action by the City or the construction contractor. This log will be made available for review by the Owner's Representative upon request.

# 1-08 PROSECUTION AND PROGRESS

Supplement Section 1-08 by adding the following:

# 1-08.0 Preliminary Matters

## 1-08.0(1) Preconstruction Conference

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

- 1. To review the initial progress schedule;
- 2. To establish a working understanding among the various parties associated or affected by the Work;
- 3. To establish and review, at a minimum, procedures for progress payment, notifications, approvals, and submittals;
- 4. To establish normal working hours for the Work;
- 5. To review safety standards and traffic control; and
- 6. To discuss such other related items as may be pertinent to the Work.

The Contractor shall prepare and submit at the preconstruction meeting the following:

1. A Schedule of Values of all lump sum items;

- 2. A preliminary schedule of working drawing submittals; and
- 3. A list of material sources for approval if applicable.

# 1-08.0(2) Hours of Work

Except in the case of emergency or unless otherwise required by 1-07.23(1) or otherwise noted and approved by the City within these Special Provisions, the normal straight time working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour lunch break and a 5-day work week. Should Contractor elect to work on a holiday or weekend, those normal working hours shall be from 9:00 a.m. to 6:00 p.m. The normal straight time 8-hour working period for the Contract shall be established at the preconstruction conference or prior to the Contractor commencing the Work.

When connecting to existing water mains and services are required, the City will obtain all necessary permissions and the normal hours of work shall be any consecutive 8-hour period between 6:00 p.m. and 7:00 a.m. Refer to 7-09.3(19)A regarding night or weekend connection work time requirements.

If a Contractor is required to or desires to perform Work on holidays, weekends, or before 7:00 a.m. or after 10:00 p.m. on any weekday, the Contractor shall apply in writing to the Engineer for permission to work such times. Permission to work longer than an 8-hour period between 7:00 a.m. and 6:00 p.m. is not required. Such requests shall be submitted to the Engineer no later than noon on the working day prior to the day for which the Contractor is requesting permission to work, unless a noise variance will be required. In such case provide request a minimum of 30 days prior to performing the work in accordance with 1-07.1(7) NOISE.

Permission to work Saturdays, Sundays, holidays or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain other conditions set forth by the City or Engineer. These conditions may include, and not be limited to; requiring the Contractor to reimburse the City for the costs in excess of straight-time costs for City employees and necessary assistants who worked during such times, on non-Federal aid projects. Assistants may include, and are not limited to, survey crews; personnel from the City's material testing lab; inspectors; and other City employees when in the opinion of the Engineer, such work necessitates their presence. The work performed on Saturdays, Sundays, and holidays will be considered as working days with regards to the Contract Time; and considering multiple work shifts as multiple working days with respect to Contract Time even though the multiple shifts occur in a single 24-hour period.

# 1-08.0(3) Reimbursement for Overtime Work of City Employees and Assistants

Where the Contractor elects to work on a Saturday, Sunday, or holiday, or longer than an 8-hour work shift on a regular working day, as defined in the Standard Specifications, such work shall be considered as overtime work. On all such overtime work an inspector will be present, and a survey crew may be required at the discretion of the Engineer. If such work is the result of Contractor's inability to complete work or coordinate materials, equipment and labor in accordance with agreed schedule, then the City may deduct from amounts due or to become due to the Contractor for the costs in excess of the straight-time costs for employees and assistants of the City required to work overtime hours.

The Contractor by these specifications does hereby authorize the Engineer to deduct such costs from the amount due or to become due to the Contractor.

# 1-08.1 Subcontracting

Delete 1-08.1(7)A Payment Certification and substitute the following:

On all projects funded only with City funds, the Contractor shall certify to the actual amounts paid Disadvantaged, Minority, or Women's Business Enterprise firms that were used as subcontractors, lower tier subcontractors, manufacturers, regular dealers, or service providers on the Contract. This certification shall be submitted to the Engineer on WSDOT form 140-542 within 20 calendar days after physical completion of the Contract.

Supplement 1-08.1 by adding the following:

The Contract Documents shall apply to Subcontractors and suppliers as if each had signed the Contract with the City. Contractor shall include the provisions of these Contract Documents or a "flow down" clause in each contract with Subcontractors and suppliers.

The City will not approve a Subcontractor that is also providing services to the City on the same project.

In addition to any other requirement in this Section, no Subcontractor or lower tier subcontractor will be permitted to perform Work under the Contract until the following documents have been completed and submitted to the Engineer:

- 1. Request to Sublet Work (Form 421-012), and
- 2. Contractor and Subcontractor or Lower Tier Subcontractor Certification for Federal-aid Projects (Form 420-004).

The Contractor's records pertaining to the requirements of this Special Provision shall be open to inspection or audit by representatives of the City during the life of the Contract and for a period of not less than three years after the date of acceptance of the Contract. The Contractor shall retain these records for that period. The Contractor shall also guarantee that these records of all Subcontractors and lower tier subcontractors shall be available and open to similar inspection or audit for the same time period.

In addition to any other requirement in this Section, Contractor shall not sublet to a single Subcontractor more than one-half of the Project. The City may refuse to approve any subcontract for any reason. Subcontractors will be considered agents of the Contractor and their work shall be subject to the provisions of the Contract. References in the Contract Documents to actions required of Subcontractors, manufacturers, suppliers, or any person other than the Contractor, the City or the City's Representative shall be interpreted as requiring that the Contractor shall require such Subcontractor, manufacturer, supplier or person to perform the specified action.

# 1-08.3 Progress Schedule

# 1-08.3(1) General Requirements

Delete 1-08.3(1) and substitute the following:

# 1-08.3(1) General (\*\*\*\*\*\*)

Because time is of the essence, diligent and expeditious progress and completion of the Work by the Contract Completion Date is required of the Contractor. Careful, adequate, accurate and complete planning and scheduling of the Work by the Contractor, both prior to the start of, and throughout, construction, is vital to the success of this Project for both the Contractor and the City. The purposes of the schedules and reports include:

- 1. Ensuring adequate planning and execution of the Work by the Contractor.
- 2. Assisting the City or its representative in monitoring construction.
- 3. Assessing the impact of any actual, potential or proposed change, including, but not limited to, the financial impact resulting from schedule changes and changes to the scope of Work.

- 4. Supporting the basis for construction payments.
- 5. Planning by City and tenants.
- 6. Avoiding additional or extra costs or expenses to the City.

All schedules will be reviewed by the City and the City's Representative. The City or City's Representative's review of any schedule shall not transfer the Contractor's responsibilities to the City. Review shall not constitute approval or acceptance of the Contractor's construction means, methods, sequencing, logic, order, precedence and succession of activities or Contractor's ability to complete the Work in a timely manner. Any mistakes or errors in any schedule, including, but not limited to, mistakes or errors of logic, order, precedence, and duration, are and remain the Contractor's. The City or City's Representative may, however, comment upon the schedule. The Contractor remains wholly responsible for completing the Work within the Contract duration. Any comments by City or City's Representative personnel regarding the schedule shall not be construed as approval or ratification, nor shall the Contractor incorporate or change its schedule as a result of City or City's Representative comments in the absence of an express written directive to that effect.

Contractor shall submit, update and maintain schedules as required by the Contract Documents.

The Contractor shall provide sufficient material, equipment, and labor to meet the interim milestones, Substantial Completion, Physical Completion and Completion Dates provided by the Contract Documents. The City allocates its resources to a Contract based on the total time allowed in the Contract. The Contractor may submit a schedule indicating Completion Date earlier than the end of Contract Time, but City cannot guarantee its resources will be available to meet such schedule. City shall not pay or be liable for any additional compensation if the Contractor is not able to meet a schedule that indicates a Completion Date earlier than the end of Contract Time.

Failure to schedule City furnished or installed materials and Equipment for installation on or after its planned arrival pursuant to the City's Contract with the supplier or failure to notify the City in writing of tasks dependent upon the fact or date of arrival of such City furnished materials and Equipment, constitute a waiver by Contractor of any Contract Claim arising out of or related to the timeliness of the furnishing or installation of such material and Equipment. All schedules shall allow for timely incorporation of any other's work under separate contract with City and for timely incorporation of any work provided and installed by City. Unless otherwise expressly authorized in writing by the City's Representative, the Contractor shall integrate the schedules with the Schedule of Values and unit price items so that each construction activity is represented by a dollar value.

Float in a progress schedule belongs to the City.

Subcontractors shall review all schedules prior to submission to the City and City's Representative. At the City's option and sole discretion, City may require Contractor to obtain written acceptance of each schedule by Subcontractors as practical and feasible, as the schedule relates to Subcontractors' work.

Contractor shall not schedule any activity with an unrealistic, unduly long, or unduly short duration. Contractor shall use its best efforts in good faith to set reasonable durations for all activities. Contractor shall not attempt to "grab the Float" or make an effort to use Float in the Progress Schedule for the benefit of the Contractor, rather than the benefit of the Project. Contractor shall use its best efforts in good faith to minimize dependencies, minimize the number of critical paths, and schedule the Project to be complete as expeditiously as reasonably possible.

Contractor shall submit with each application for payment or progress pay estimate an updated progress schedule, but no less often than monthly. If requested by the City's Representative or the City, Contractor shall prepare and submit updated progress schedules from time to time that may be more frequent than monthly.

The Contractor hereby expressly agrees and acknowledges that any failure by Contractor to provide accurate, complete, current and updated schedules at least monthly constitutes a waiver of any and all claims or requests for adjustment of Contract Sum or Time that arise out of, result from, or are caused by, any Delay on the Project or scheduling of the Work. Timely submission of updated schedules at least monthly is a condition precedent to any later or subsequent Contract Claim or request for an adjustment of either Contract Sum or Time related to or arising out of time, an alleged Delay, or the schedule or sequence of Work. Similarly, the parties agree the City may withhold progress pay estimates if updated schedules are not timely submitted monthly. These remedies are cumulative and not exclusive of other remedy. The City's use of one or more of these remedies does not constitute an election or prevent the City from pursuing other remedies for this or other defaults.

No later than the pre-construction conference, Contractor shall submit a preliminary schedule ("Preliminary Schedule") for the entire Work to City's Representative and City. Contractor shall prepare such schedule in consultation with its Subcontractors.

# 1-08.3(2) Project Schedule Types

Delete 1-08.3(2), including its subsections, and substitute the following:

# 1-08.3(2) Project Schedule Requirements For Contracts Exceeding \$500,000 (\*\*\*\*\*\*)

# 1-08.3(2)A Scheduler

Contractor represents and warrants that it employs, or will engage prior to preparation of the Preliminary Schedule, a qualified scheduler. A "qualified scheduler" is a person who has at least five years of full time, construction project scheduling experience, who is familiar, competent and professional in creating, maintaining and updating time scaled and resource loaded critical path schedules. Contractor shall submit to the City the name, address, and qualifications of the qualified scheduler to the City for approval no later than the pre-construction conference.

## 1-08.3(2)B Baseline Schedule

The progress schedule submitted to the City's Representative and City after their review of the Preliminary Schedule shall be the Baseline Schedule. The Baseline Schedule shall be the baseline schedule against which all future schedules are compared and updated, and job progress is measured. The Baseline Schedule shall not be reset or changed without the written agreement of City's Representative and City.

# 1-08.3(2)C Updates

Contractor shall submit with each application for payment or progress pay estimate an updated progress schedule, but no less often than monthly. If requested by City's Representative or the City, Contractor shall prepare and submit updated progress schedules from time to time, which may be more frequent than monthly.

An updated progress schedule shall identify progress of the Project or Work to the date of submission. It shall include, but not be limited to: (1) identification of all actual start and completion dates occurring prior to the submission of the schedule; (2) comparison of actual start and completion dates to the planned start and completion dates shown on the Baseline Schedule; and (3) comparison of expected

start and completion dates for work to occur after submission updated progress schedule to the planned start and completion dates shown on the Baseline Schedule. Work remaining to be completed at the end of a period for an activity should show the remaining duration required to complete that activity. The percent complete for that activity should also be shown. If during the course of construction the Contractor desires or feels it necessary to make changes in the schedule logic, these changes should be identified, highlighted, and specifically and expressly brought to the attention of the City's Representative and City along with the schedule update.

An updated progress schedule shall show changes occurring since submission of the previous updated progress schedule such as:

- 1. Major changes in scope;
- 2. Activities modified since previous submission;
- 3. Revised projection for construction completion, as applicable; and
- 4. Any other changes.

Contractor shall submit an updated progress schedule for review by the City and City's Representative, at the weekly construction meeting or as otherwise as requested by City's Representative or City. Any deviation from the Baseline Schedule shall be explained by the Contractor, including the cause and effect of the deviation. Contractor shall state in writing the corrective measures it will take to bring the progress of the Work back in line with the Baseline Schedule.

Once an actual start or completion date is stated in a submitted progress schedule, Contractor shall not change schedule without prior written agreement of the City and City's Representative.

With each submitted updated progress schedule, Contractor shall provide a written narrative report that identifies anticipated or actual deviations from the Baseline Schedule, causes of the deviations, and the impact of the deviations on the schedule and describes the corrective action taken or proposed, and its effect.

#### 1-08.3(3) **Schedule Updates**

Delete 1-08.3(3) and substitute the following:

#### 1-08.3(3) Schedule Format And Content (\*\*\*\*\*)

#### **Schedule Format** 1-08.3(3)A

All schedules shall be in the following form:

- Network analysis system using the current version of Microsoft Project software (or other software acceptable to the City Representative) and the critical path method, as outlined in The Associated General Contractors of America (AGC) publication "The Use of CPM in Construction - A Manual for General Contractors."
- 2. Sequence of Listings: The chronological order of the start of each activity of Work. Listings on Progress Schedule and Schedule of Values shall be the same.
- 3. Scale and Spacing: To provide space for notations and revisions.
- 4. Each schedule and update shall be provided in three (3) paper copies and one electronic copy in current Microsoft Project format (or other format acceptable to the City Representative). Paper copies shall be on a single sheet of paper and of sufficient size to allow legibility of schedule. Pieces of the schedule on separate sheets of paper that must be taped

together to form schedule are not permitted. Electronic copies shall be submitted on either separate CD-ROMs or as email attachment to City's Representative or as otherwise acceptable to the City Representative.

5. Updated Progress Schedules shall indicate progress of the Work to the date of submission by drawing a vertical line down the schedule to represent Work completed to date.

#### 1-08.3(3)B **Schedule Contents**

All Progress Schedules shall:

- 1. Include essential sub-schedules of related activities.
- 2. Allow for timely incorporation of any other's work under separate contract with City.
- 3. Allow for timely incorporation of work provided and installed by City.
- 4. Include submittals to agencies required for performance of Work with sufficient, adequate and reasonable time for review, comment and return submittals.
- 5. Allow for appropriate durations to complete activities that may be affected by weather during the time of year the activities are performed.
- 6. Identify logical connections, dependency upon preceding or succeeding activities, restraints or constraints, planned start and completion dates, duration, actual start and completion dates, and variances.
- 7. Activity durations shall not exceed twenty (20) days. The activities shall be related to early and late start, early and late finish, and Float dates.

Activities listed in the Preliminary Schedule shall be included in all subsequent schedules. No activity in the Preliminary Schedule shall be deleted without prior written consent of the Representative and City.

Contractor shall notify City's Representative and City in writing and highlight the addition of all activities to the schedule after the Preliminary Schedule.

The Baseline Schedule shall be part of the Contract.

Each activity shall be identified with a number that incorporates the Specification section number.

Activities shall be consistent and identified with the Schedule of Values (if applicable) or unit prices of the bid schedule. All elements and items in the Schedule of Values or unit prices in the bid schedule shall appear in the Progress Schedules.

Contractor shall provide sub-schedules for each stage/phase of Work as required by City, City's Representative, or Subcontractor.

Contractor shall provide sub-schedules to define major portions of the entire schedule. Include long-lead-time items for Equipment and material that requires long fabrication time. Order these well in advance of required delivery time to sequence with overall construction schedule.

Each schedule shall show accumulated percentage of completion of each activity, and total percentage of Work completed, as of the date of payment application.

Contractor shall include in each schedule as activities the submission, review, and correction of Submittals, Shop Drawings, Product Data and Samples. The schedule should show:

1. The dates for Contractor's Submittals.

- 2. A minimum of 14 calendar days duration for City or City's Representative's review.
- 3. Indicate decision data for selection of finishes.
- 4. Show Submittal preparation, submission, review, and breakdown at a minimum. Show individual parts of major Submittals.

Contractor shall identify any and all Work furnished by City and installed by City on the construction schedule.

# 1-08.3(4) Measurement

Delete 1-08.3(4).

# 1-08.3(5) Payment

Delete 1-08.3(5) and substitute the following:

Costs incurred in performance of this Work shall be included in the contract bid items and no direct compensation shall be paid.

# 1-08.4 Prosecution of Work

Delete 1-08.4 and substitute the following:

# 1-08.4 Notice to Proceed and Prosecution of Work (\*\*\*\*\*\*)

The City will issue a Notice to Proceed after the Contract has been executed and the Contract Bonds and evidence of insurance have been approved and filed by the City. The Contractor shall not commence with the Work until the Notice to Proceed has been given by the City. The Contractor shall commence construction activities on the Project site within 14 calendar 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.

The City is not obligated to accept or pay for Work performed by the Contractor or be liable for any Delays, prior to delivery of the Notice to Proceed. The City's knowledge of Work being performed prior to delivery of the Notice to Proceed will not obligate the City to accept or pay for such Work. Contractor waives any and all Contract Claims for an adjustment of Contract Sum or Contract Time arising out of, or related to, Work it performs prior to receipt of the Notice to Proceed.

The City may issue partial Notices to Proceed. Contractor may seek permission in writing to perform some Work prior to issuance to the Notice to Proceed, such as shop drawings, equipment and material Submittals, or surveying and the City or City's Representative may, in its sole discretion, approve in writing such Work prior to the issuance of the Notice to Proceed.

Supplement 1-08.4 by adding the following:

# 1-08.4(1) Construction Progress (\*\*\*\*\*\*)

The Contractor shall furnish all labor, materials, facilities and Equipment necessary to ensure the prosecution and completion of the Project within the interim milestones, Substantial Completion, Physical Completion and Completion Dates of the Contract. If Work falls seven calendar days or more behind the reviewed Preliminary Schedule, the Contractor agrees that, at its sole cost and expense, it will take all actions necessary to return the Project to the accepted schedule. These actions may include the following:

a. Increase labor in quantities and crafts.

- b. Increase the number of working hours per shift, shifts per working day, working days per week, or the amount of Equipment, or any combination of the foregoing.
- c. Reschedule activities.

If requested by the City's Representative, the Contractor shall prepare a proposed schedule revision demonstrating a plan to make up the lag in progress and insure completion of the Work within the Contract Time. All actions taken to return the Project to the accepted schedule are at the Contractor's expense.

The Contractor shall pay all costs incurred by the City that result from the Contractor's action to return the Project to its accepted schedule, including, but not limited to, additional, overtime, or third party inspection, design and construction management service costs. Contractor agrees that City shall deduct such charges from payments due the Contractor. It is further understood and agreed that none of the services performed by the City's Representative in monitoring, reviewing and reporting Project status and progress shall relieve the Contractor of responsibility for planning and managing construction Work in conformance with the construction schedule.

# 1-08.4(2) Special Construction Constraints (\*\*\*\*\*\*)

Refer to 1-08.0(2) for work hours.

Refer to 1-07.23(1) for construction under traffic and 1.07.23(1)A for general traffic requirements.

Phase construction and provide rolling two-week look-ahead schedules in such a manner that:

**7404 Evergreen Way** – Construction on this site should occur on weekends or in the evenings if possible (Noise Variance required). Otherwise access to the frontage parking the south driveway and southwest parking area shall be always maintained with traffic control. Planned impacts to this property must be planned and shared with the City at each weekly Progress Meeting. Impact planning should include Task Description; Pedestrian & Parking Impacts; Traffic Control Plans; and Schedule of Activities

**801 75**<sup>th</sup> **St SE Beverly Village Apartments** – Construction at Beverly Village shall be accessed through the NE corner of the Shoreside Apartment parking lot. Planned impacts to this property must be documented and shared with the City at each weekly Progress Meeting. *Impact Planning* should include Task Description; Pedestrian & Parking Impacts; Traffic Control Plans; and Schedule of Activities. Contractor shall secure and safeguard work on the Beverly Village site at the end of each work day.

**747 75**<sup>th</sup> **St SE Lakeside Apartments** – Construction at Lakeside shall be accessed through the SE and SW entrances to the Lakeside complex. Pedestrian and traffic and parking access should be always allowed unless previous notice has been provided to the City and property owner's representative three-days in advance. Impacts to this property must be planned and shared with the City at each weekly Progress Meeting. *Impact Planning* should include Task Description; Pedestrian & Parking Impacts; Traffic Control Plans; and Schedule of Activities. The contractor shall secure and safeguard work on the Lakeside site at the end of each work day.

**701 75**<sup>th</sup> **St SE Shoreside Village** – Construction at Shoreside Village shall be accessed through the NW corner of the Shoreside Apartment parking lot. Contractor shall secure and safeguard work on Shoreside Village site at the end of each work day. Impacts to this property must be planned and shared with the City at each weekly Progress Meeting. *Impact Planning* should include Task Description; Pedestrian & Parking Impacts; Traffic Control Plans; and Schedule of Activities

Upon completion of pipe installation and trench backfilling to specifications, promptly restore street, driveway and sidewalk surfaces using Temporary Pavement Patch in accordance with Section 5-06.3(6) TEMPORARY PAVEMENT PATCHING and permit public use and access for City inspection activities.

Parking spaces are normally very limited in most areas of the project and the Contractor will be required to cooperate with the City and Property Owners in resolving parking issues and traffic flow. In general, businesses and residents who rely on private property parking and are displaced by the construction shall be given notice through the City weekly in advance of unavailability of parking, duration of parking disruption so the property owner can provide for the nearest available parking location alternative. The Contractor's employees will be required to park their personal vehicles away from the area of construction.

This 1-8.4(2) is not a complete list of all constraints that may be in the Contract Documents. Contractor is responsible for all constraints in the Contract Documents.

# 1-08.5 Time for Completion

Delete all of 1-08.5 and substitute the following:

# 1-08.5(1) General

The Contractor shall complete all physical Contract Work within the number of "working days" stated in the Contract Provisions or as extended by the Engineer in accordance with Section 1-08.8. Every day will be counted as a "working day" unless it is a nonworking day or an Engineer determined unworkable day. A nonworking day is defined as a Saturday, a Sunday, a whole or half day on which the Contract specifically prohibits Work on the critical path of the Contractor's approved progress schedule, or one of these holidays: January 1, the third Monday of January, the third Monday of February, Memorial Day, June 19, July 4, Labor Day, November 11, Thanksgiving Day, the day after Thanksgiving, and Christmas Day. When any of these holidays fall on a Sunday, the following Monday shall be counted a nonworking day. When the holiday falls on a Saturday, the preceding Friday shall be counted a nonworking day. The days between December 25 and January 1 will be classified as nonworking days.

An unworkable day is defined as a half or whole day the Engineer declares to be unworkable because of weather or conditions caused by the weather that prevents satisfactory and timely performance of the Work shown on the critical path of the Contractor's approved progress schedule. Other conditions beyond the control of the Contractor may qualify for an extension of time in accordance with Section 1-08.8.

Contract Time shall begin on the effective date of the Notice to Proceed. The Contract Documents may specify another starting date for Contract Time, in which case, Contract Time will begin on the starting date the Contract Documents specify.

Each working day shall be charged to the Contract as it occurs, beginning on the effective date of the Notice to Proceed, unless otherwise provided in the Contract Documents, until the Contract Work is physically complete. Each week the Engineer will provide the Contractor a statement that shows the number of working days: (1) charged to the Contract the week before; (2) specified for the physical completion of the

Contract; and (3) remaining for the physical completion of the Contract. The statement will also show the nonworking days and partial or whole day the Engineer declares as unworkable. Within 14 calendar days after the date of each statement, the Contractor shall file a written protest of any alleged discrepancies in it. To be considered by the Engineer, the protest shall be in sufficient detail to enable the Engineer to ascertain the basis and amount of time disputed. By not filing such detailed protest in that period, the Contractor shall be deemed as having accepted the statement as correct. If the Contractor elects to work ten hours a day and four days a week (a 4-10 schedule) and the fifth day of the week in which a 4-10 shift is worked would ordinarily be charged as a working day then the fifth day of that week will be charged as a working day whether or not the Contractor works on that day.

The Engineer will give the Contractor written notice of the Physical Completion Date for all Work the Contract requires. That date shall constitute the Physical Completion Date of the Contract, but shall not imply the City's acceptance of the Work or the Contract.

The Engineer will give the Contractor written notice of the Completion Date of the Contract after all the Contractor's obligations under the Contract have been performed by the Contractor. The following events must occur before the Completion Date can be established:

- 1. The physical Work on the project must be complete; and
- 2. The Contractor shall furnish all documentation required by the Contract and required by law, to allow the City to process final acceptance of the Contract. The following documents must be received by the Engineer prior to establishing a Completion Date:
  - a. Certified payrolls.
  - b. Material Acceptance Certification Documents.
  - c. Annual Report of Amounts Paid as MBE/WBE Participants.
  - d. Final Contractor Voucher Certification.
  - e. Copies of the approved "Affidavit of Prevailing Wages Paid" for the Contractor and all Subcontractors.
  - f. A copy of the Notice of Termination sent to the Washington State Department of Ecology (Ecology); the elapse of 30 calendar days from the date of receipt of the Notice of Termination by Ecology; and no rejection of the Notice of Termination by Ecology. This requirement will not apply if the Construction Stormwater General Permit is transferred back to the City in accordance with Section 8-01.3(16)

# 1-08.5(2) Substantial Completion (\*\*\*\*\*\*)

When the Contractor considers the Work to be Substantially Complete and ready for its intended use, it shall give Notice to the City's Representative. The Notice shall include an itemized list of remaining incomplete Work. If the City's Representative determines the Work is not substantially complete, it will so notify the Contractor in writing, identifying the reasons for such a determination. If the City's Representative finds the Work substantially complete, it will meet with the Contractor to (1) prepare a Punch List of incomplete items of Work; (2) define the division of responsibility between City and Contractor with respect to security, operation, maintenance, heat, utilities, insurance, and warranties; and (3) describe other issues related to acceptance of the substantially completed Work.

If the City's Representative is not an employee of the City, the City's Representative will write to the City upon reaching agreement with the Contractor, certifying that the Work is substantially complete, listing the items of incomplete Work, stating the date for completion of incomplete work, defining the division of responsibilities, and setting forth any other terms related to acceptance. In such event, the City will review the City's Representative's certification that the Work is substantially complete. If the City concurs, the City will notify the Contractor in writing that the Work is accepted as substantially complete. Except for any portion(s) of Work specified for early completion or required by the City for early possession, Substantial Completion will not occur for Work until the entire Project is ready for possession and use. The acceptance Notice will include a Punch List of incomplete Work items and corrective Works, set the date for their completion and repair, describes the division of responsibility between the City and Contractor, and describe other terms of acceptance. The Contractor will acknowledge receipt of the acceptance Notice in writing, indicating acceptance of all of its terms and provisions.

Subsequent to the Substantial Completion date, the City may exclude the Contractor from the Work during such periods when construction activities might interfere with the intended operation of the Project. The City, however, shall allow the Contractor reasonable access for completion or correction of incomplete Punch List items.

# 1-08.5(3) Acceptance of Work (\*\*\*\*\*\*)

Upon completion of the Project, including, but not limited to, record drawings, as-builts, required reports and operations and maintenance manuals, the Contractor shall so notify the City's Representative in writing. Upon receipt of the notification, the City's Representative will promptly, by personal inspection, determine the actual status of the Work in accordance with the terms of the Contract. If the City's Representative finds materials, Equipment, or workmanship that do not meet the terms of the Contract, it will prepare a Punch List of such items and submit it to the Contractor. Following completion of the corrective work by the Contractor, the City's Representative will notify the City that the Work has been completed in accordance with the Contract. The City shall make the final determination of acceptability and completion. For portions of the Project not previously accepted as substantially complete, the conditions of guarantee shall commence on the date that the City determines the Project is complete.

# 1-08.6 Suspension of Work

Delete 1-08.6 and substitute the following:

The Engineer may order suspension of all or any part of the Work if:

- Unsuitable weather prevents satisfactory and timely performance of the Work; or
- 2. The Contractor does not comply with the Contract; or
- 3. It is in the public interest.

When ordered by the Engineer to suspend or resume Work, the Contractor shall do so immediately.

If the Work is suspended for reason (1) above, the period of Work stoppage will be counted as unworkable days. But if the Engineer believes the Contractor should have completed the suspended Work before the suspension, all or part of the suspension period may be counted as working days. The Engineer will set the number of unworkable days (or parts of days) by deciding how long the suspension delayed the entire project.

If the Work is suspended for reason (2) above, the period of Work stoppage will be counted as working days. The lost Work time, however, shall not relieve the Contractor from the Contract responsibility.

If the performance of all or any part of the Work is suspended, delayed, or interrupted for an unreasonable period of time by an act of the City in the administration of the Contract, or by failure to act within the time specified in the Contract (or if no time is specified, within a reasonable time), the Engineer will make an adjustment for increases in the cost or time for the performance of the Contract (excluding profit) necessarily caused by the suspension, delay, or interruption. However, no adjustment will be made for suspensions, delays, or interruptions if (1) the performance would have been suspended, delayed, or interrupted by other causes, including the fault or negligence of the Contractor, or (2) an equitable adjustment is provided for or excluded under another provision of the Contract.

If the Contractor believes that the performance of the Work is suspended, delayed, or interrupted for an unreasonable period of time and such suspension, delay, or interruption is the responsibility of the City, the Contractor shall immediately submit a written Notice to the Engineer within 14 calendar days of the start of the suspension delay or interruption requesting an equitable adjustment. No adjustment shall be allowed for costs incurred more than 14 calendar days before the date the Engineer receives the Contractor's written Notice. The Engineer will issue a Written Determination to the Contractor and adjust payment and time in accordance with this section, if warranted. If the Contractor does not agree with the Written Determination, then the Contractor may pursue remedies in accordance with Section 1-04.5 and Section 1-09.11. The Contractor shall keep full and complete records of the costs and additional time of such suspension, delay, or interruption and shall permit the Engineer to have access to those records and any other records as may be deemed necessary by the Engineer to assist in evaluating the Notice.

The Engineer will determine if an equitable adjustment in cost or time is due as provided in this section. The equitable adjustment for increase in costs, if due, shall be subject to the limitations provided in Section 1-09.4, provided that no profit of any kind will be allowed on increases in costs caused by the suspension, delay, or interruption.

Request for extensions of time will be evaluated in accordance with Section 1-08.8.

The Engineer's determination as to whether an adjustment should be made will be final. By failing to follow procedures of Section 1-04.5 and Section 1-9.11, the Contractor completely waives claims for protested Work.

# 1-08.6(1) Suspension Procedures (\*\*\*\*\*\*)

The City may, at its convenience and at any time and without cause, suspend all or any part of the Work by notice in writing to the Contractor. The Contractor will be allowed an increase in the Contract Sum or an extension of Contract Time, or both, directly attributable to any suspension in accordance with the Change Order procedures in these Special Provisions; provided, (1) the Contractor shall not be entitled to any increase to the extent caused by the Contractor and (2) Contract Sum increases and Contract Time extensions for suspension caused by Third Parties or Force Majeure Events are limited as set forth in 1-09.11A(3)D THIRD PARTY CAUSED DELAYS AND FORCE MAJEURE. The Contractor shall resume the Work within five (5) calendar days after receiving written notice from the City to do so.

# 1-08.7 Maintenance During Suspension

Delete all of 1-08.7 and substitute the following:

Before and during any suspension (as described in Section 1-08.6) the Contractor shall protect the Work from damage or deterioration. Suspension shall not relieve the Contractor from anything the Contract requires unless this Section states otherwise.

At no expense to the City, the Contractor shall provide through the construction area a safe, smooth, and unobstructed roadway, sidewalk, and path for public use during suspension, as required in 1-07.23 PUBLIC CONVENIENCE AND SAFETY. This may require a temporary road or detour.

If the Engineer determines that the Contractor failed to pursue the Work diligently before the suspension, or failed to comply with the Contract or orders, then the Contractor shall maintain the temporary roadway, sidewalk, and path in use during suspension. In this case, the Contractor shall bear the maintenance costs. If the Contractor fails to maintain the temporary roadway, sidewalk, and path the City will do the Work and deduct all resulting costs from payments due to the Contractor.

If the Engineer determines that the Contractor has pursued the Work diligently before the suspension, then the City will maintain the temporary roadway, sidewalk, and path (and bear its cost). This City-provided maintenance work will include only routine maintenance of:

- 1. The Traveled Way, Auxiliary Lanes, Shoulders, detour surface, sidewalks, and paths,
- 2. Roadway drainage along and under the traveled Roadway, sidewalk, path or detour, and
- 3. All barricades, signs, and lights needed for directing traffic through the temporary Roadway, sidewalk, path or detour in the construction area.

The Contractor shall protect and maintain all other Work in areas not used by traffic. All costs associated with protecting and maintaining such Work shall be the responsibility of the Contractor except those costs associated with implementing the TESC Plan according to Section 8-01.

After suspension during which the City has done the routine maintenance, the Contractor shall accept the traveled Roadway, sidewalk, path or detour as is when Work resumes. The Contractor shall make no claim against the City for the condition of the Roadway or detour.

After any suspension, the Contractor shall resume all responsibilities the Contract assigns for the Work.

#### 1-08.8 Extensions of Time

Delete the second paragraph of 1-08.8 and replace with:

In evaluating requests for time extension, the Engineer will consider how well the Contractor used the time from Contract execution up to the point of the delay and the effect the delay had on any completion times included in the Special Provisions. The Engineer will evaluate and issue a Written Determination.

Delete the final two sentences of 1-08.8 and replace with:

If the Contractor does not agree with the Engineer's Written Determination, the Contractor shall provide Notice in accordance with Section 1-04.5. By failing to follow the procedures of Section 1-04.5 and Section 1-9.11, the Contractor completely waives claims for protested Work.

Supplement 1-08.8 by adding the following:

Any requests for extensions in Contract Time, whether resulting from Extra Work directed by the City or not, shall be accompanied by an analysis of schedules using the critical path method. This analysis shall include an updated schedule, an as-planned schedule, an as-

built schedule, a but-for schedule, and narrative explaining the alleged causes, schedule impacts and all costs related to or arising out of the proposed extension. Any requests for extensions of Contract Time by the Contractor shall be submitted in accordance with these Contract Documents. If a request combined with previous extension requests, equals 20 percent or more of the original Contract Time then the Contractor's letter of request must bear consent of Surety if so required by the City. Extensions of Contract Time will be granted only as provided in the Contract Documents and to the extent that affected critical activities exceed the Total Float time along the affected paths of the reviewed Preliminary Schedule at the time the change was authorized in writing by the City. Contractor has the burden of clearly and convincingly demonstrating entitlement to any adjustment of Contract Time.

If the City is solely responsible for any Delay to Substantial Completion, Physical Completion, Completion Date, or Final Acceptance, the Contractor shall only be entitled to compensation or other damages as described in 1-09.11A REMEDIES, provided that Contractor timely gave Notice pursuant to 1-04.5 NOTICE BY CONTRACTOR, timely submitted a Contract Claim pursuant to 1-09.11(2) CONTRACT CLAIMS and fulfilled the requirements of 1-08.3 PROGRESS SCHEDULE.

# 1-08.9 Liquidated Damages

Revise the second and third paragraphs of 1-08.9 to read as follows:

Accordingly, the Contractor agrees:

- To pay (according to the following formula) liquidated damages for each working day beyond the number of working days established for Physical Completion, and
- 2. To authorize the Engineer to deduct these liquidated damages from any money due or coming due to the Contractor.

# **Liquidated Damages Formula**

LD=0.15C/T

Where:

LD = liquidated damages per working day (rounded to the nearest dollar)

C = original Contract amount

T = original time for Physical Completion

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

Contractor shall furnish a written schedule for completing the physical Work on the Contract.

## 1-08.10 Termination of Contract

# 1-08.10(1) Termination for Default

Delete all of 1-08.10(1) and substitute the following:

The City may terminate the Contract upon written notice to Contractor and its Surety whenever the Contractor is deemed to be in default or fails to fulfill, in a timely and proper manner, one or more Contract obligations, or is in violation of any provisions or covenants of the Contract. Termination shall be effective upon Contractor's and Surety's receipt of such notice

For purposes of this section, the Contractor shall be deemed to be in default upon the occurrence of one or more of the following events:

- 1. If Contractor is bankrupt or insolvent.
- 2. If Contractor makes a general assignment for the benefit of creditors.
- 3. If a trustee or receiver is appointed for Contractor, or for any of Contractor's property.
- 4. If Contractor files a petition to take advantage of any debtor's law, or to reorganize under any bankruptcy chapter or law.
- 5. If Contractor repeatedly fails to make prompt payments to subcontractors or others for labor, materials, or Equipment.
- 6. If Contractor disregards laws, ordinances, rules, regulations, or orders of public bodies having jurisdiction.
- 7. If Contractor disregards the authority of the City or City's Representative.
- 8. If Contractor substantially violates the provisions of the Contract Documents or fails, neglects, or refuses to proceed in compliance with the provisions of the Contract Documents.
- 9. If the Contractor made material misrepresentations to the City with respect to: (a) its qualifications or those of its subcontractors; (b) its or its subcontractors' ability to perform the Work in a timely, workmanlike manner; (c) the materials installed or to be installed; or (d) progress pay estimates.
- 10. If Contractor fails to supply sufficient skilled workers or suitable materials or equipment.
- 11. If Contractor refuses or fails to prosecute the Work with such diligence as will ensure its Physical Completion within the original Physical Completion time and any extensions of time which may have been granted to the Contractor by change order or otherwise.
- 12. If Contractor disregards laws, ordinances, rules, codes, regulations, orders or similar requirements of any public entity having jurisdiction.
- 13. If Contractor performs Work which deviates from the Contract.
- 14. If Contractor otherwise violates in any material way any provisions or requirements of the Contract.

After termination of the Contractor for default, the City may transfer performance of the Work to the Contractor's Surety or elect to prosecute to completion by contract or otherwise.

If the City chooses to provide such sufficiency of labor or materials as required to complete the Work, the City may exclude the Contractor from the site and take

possession of the Work and all of the Contractor's tools, appliances, owned or rented construction equipment, and machinery at the site and use the same to the full extent they could be used by the Contractor. The City may incorporate in the Work all materials and Equipment stored at the site or for which the City has paid the Contractor, but which are not yet on site. In such case, the Contractor will not be entitled to receive any further payment until the Work is finished. At the City's sole option, Contractor shall assign and transfer any contractual rights to material and Equipment to be installed, incorporated, or used in the performance of the Work. City shall credit Contractor for the reasonable fair market rental value of any and all Contractor owned equipment for so long as retained and used by the City. City shall credit Contractor for all materials and supplies on site or on order, but not yet paid for by City, provided that ownership is transferred and assigned to the City and the materials and supplies conform to the requirements of the Contract Documents.

If the unpaid balance of the Contract Sum exceeds the direct and indirect cost of the completed Work, including construction management services, such excess shall be paid to the Contractor. If such costs exceed such unpaid balance, the Contractor shall pay the difference to the City. Such costs incurred by the City will be verified by the City's Representative and incorporated into a Change Order, but in finishing the Work, the City may negotiate for materials, Equipment and services to complete the Work and will not be required to obtain the lowest figure for Work performed.

Where the Contractor services have been so terminated by the City, the termination shall not affect rights of the City against the Contractor then existing or which may thereafter accrue. Any retention or payment of monies due the Contractor by the City will not release the Contractor from liability.

In exercising the City's right to prosecute the Physical Completion of the Work, the City shall have the right to exercise its sole discretion as to the manner, method, and reasonableness of the costs of completing the Work. In the event that the City takes Bids for remedial Work or Physical Completion of the project, the Contractor shall not be eligible for the Award of such Contracts.

If the City terminates this agreement for default, and it is thereafter determined that the Contractor had not so failed to perform its obligations or defaulted in any way, the termination shall then be deemed to have been made for the convenience of the City pursuant to 1-08.10(2) TERMINATION FOR PUBLIC CONVENIENCE. In that event, any adjustment of Contract Sum shall be in accordance with the Contract Documents.

The Contractor covenants and agrees that in the event suit is instituted by the City for any default on the part of the Contractor and the Contractor is adjudged by court of competent jurisdiction to be in default, the Contractor shall pay to the City all costs, expenses expended or incurred by the City in connection therewith.

## 1-08.10(2) Termination for Public Convenience

Delete all of 1-08.10(2) and substitute the following:

Without prejudice to any other remedy it may have under law or the provisions of the Contract, or both, the City may terminate this Contract for convenience, with or without cause, in whole or in part, at any time by giving written Notice to the Contractor. Termination will be effective upon receipt of such Notice by the Contractor. The Contractor shall immediately discontinue work and take all

reasonable steps with its suppliers and subcontractors to minimize cancellation charges and other costs.

In the event of termination for convenience, the Contractor shall be compensated as provided in 1-09.5 DELETED OR TERMINATED WORK. The Contractor will be entitled to no further payments whatsoever for the Work.

In the event of a breach or default by the Contractor, City may, at its sole option, terminate this Contract in whole or in part for convenience as provided herein. The City may pursue any and all contractual, legal and equitable remedies for such breach or default. Absent an express written agreement to the contrary, a termination for the City's convenience shall not be deemed a waiver or release of any rights by the City nor shall the City be estopped from any legal or equitable remedies that may be appropriate.

Supplement 1-08.10 by adding the following:

# 1-08.10(6) Termination by Contractor after Suspension (\*\*\*\*\*\*)

If the Work has been wholly suspended pursuant to 1-08.6 SUSPENSION OF WORK for more than 90 calendar days as measured from the date of the Notice to suspend, then the Contractor may terminate this Contract by providing City with 14 calendar days' Notice that the Contractor shall deem the Contract to be terminated if the City does not provide Contractor with notice to resume Work within those 14 calendar days. Such termination shall be treated as a termination for the City's convenience pursuant to 1-08.10(2) TERMINATION FOR PUBLIC CONVENIENCE.

# 1-08.10(7) Contractor Obligations upon Termination (\*\*\*\*\*\*)

On receipt of notice of termination, the Contractor shall immediately discontinue the Work but shall do such Extra Work as may be ordered by the City's Representative or City to safeguard the Work then completed and the materials and Equipment then delivered to the site of the Work and to leave the Work in a safe and useful condition. Payment for this Extra Work will be made in accordance with 1-09.4 EQUITABLE ADJUSTMENT.

# 1-08.10(8) Ownership of Materials upon Termination (\*\*\*\*\*\*)

As of the termination date, whether effected by the City or Contractor as provided herein, all the Contractor's right, title, and interest in and to materials ordered by the Contractor prior to termination, whether or not they have been delivered to the site of Work, shall be vested in the City, and the Contractor shall, upon demand of the City, execute and deliver to the City all requisite bills of sale, assignments, and other documents of transfer that may be necessary to give effect to the intention of the termination procedures set forth above.

# 1-08.10(9) Opportunity to Cure (\*\*\*\*\*\*)

If the Contractor has not already had an opportunity to cure the default or breach the City shall specify the default or breach and may provide a reasonable period of time to allow the Contractor to cure the default or breach. The notice of termination will state the time period, if any, in which cure is permitted and other conditions as the City, in its sole judgment, shall deem appropriate. If (1) a time period is so provided and if Contractor fails to remedy the breach or default or any of the terms, covenants, or conditions of this Contract to the City's satisfaction within the time period specified or (2) no time period is provided, then the City shall have the right to terminate the Contract

without any further obligation to the Contractor. Any such termination for default shall not in any way operate to preclude the City from also pursuing all available remedies against Contractor and its sureties for said breach or default.

# 1-08.10(10) Waiver of Remedies for Any Breach (\*\*\*\*\*)

In the event that the City elects to waive its remedies for any breach by Contractor or any covenant, term or condition of this Contract, such waiver by the City shall not limit the City's remedies for any succeeding breach of that or of any other term covenant, or condition of this Contract.

# 1-08.10(11) Possession and Use of Completed Portions of the Work (\*\*\*\*\*)

The City shall have the right to take possession of and use completed or partially completed portions of the Work even though the time for completing the Work for such portions may not have expired. Operations and maintenance costs of use of such work will be borne by the City. Such possession and use shall not be deemed as acceptance of the Work. If such prior possession or use increases the cost of the Work, the Contractor may be entitled to request extra compensation by giving Notice and following the procedures of 1-04.5 NOTICE BY THE CONTRACTOR and 1-09.11 DISPUTES AND CLAIMS within five calendar days of each occurrence. The Contractor shall not submit a Contract Claim for possession by the City of portions of the Work specifically required in the Contract Documents to be placed into use or operation or both before completion of the entirety of the Work.

# 1-08.10(12) Possession of Incomplete Portions of the Project (\*\*\*\*\*)

Should the Contractor fail to meet any date specified for Substantial Completion or Physical Completion of Work or any portion of Work requiring early possession and use by the City, the City may, after a 14 calendar day Notice to the Contractor, take over such portion or any Work that is behind schedule. In such case, the City's Representative will prepare a list of incomplete Work taken over by the City. The cost of City's work will be charged to and deducted from amounts due to the Contractor. The Substantial Completion date of the entire or a portion of the Project will be established as the date when the City actually begins using the Project or portion of the Project for its intended Division of responsibilities between City and Contractor, beginning of warranties, and any other issues relating to Substantial Completion shall be as specified in 1-08.5(2) SUBSTANTIAL COMPLETION.

Supplement Section 1-08 by adding the following:

# 1-08.11 Record Drawings (\*\*\*\*\*)

# 1-08.11(1) **Description**

This section specifies the requirements for preparing record drawings. The Contractor, with the cooperation and assistance of the City Inspector, is responsible for marking up record drawings during the course of construction and documented in Autodesk BUILD using the "markup" tool. The Contractor shall keep the record drawings up to date at all times during the course of construction.

The Inspector will verify the record drawings are accurate and complete before accepting the Contractors monthly pay request. If the record drawings are not current or accurate, the pay request will not be processed.

As the Contract approaches Final Acceptance, prepare, with the assistance of the Inspector, a complete and accurate set of record drawings. The Inspector must approve

the record drawings prior to Final Acceptance. Final Acceptance will not be issued until the City accepts the record drawings.

# 1-08.11(2) Recording Changes

As a minimum, record the following items on the record drawings:

- a. Actual dimensions, arrangement and materials used when different than shown on the Plans.
- b. Changes made by Change Order or Field Order.
- c. Changes made by the Contractor.
- d. Horizontal and vertical locations of underground utilities and appurtenances, shall be referenced to monumentation. The monumentation shall be based on NAD 83-91 for Horizontal Datum and NAVD 88 for Vertical Datum.
- e. Any changes in centerline profile and curb & gutter (top of curb), offsets and elevations.
- f. Details, Equipment or materials used that were not shown on the original Plans.
- g. The actual arrangement and routing of conduit, embedded conduit, raceways and piping relative to its location and proportioned to other work. The location needs to be dimensioned on the record drawings.
- h. Contractor prepared piping schematics and diagram drawings representing the Equipment orientation.
- i. Final location of all surface and subsurface improvements.
- j. Record on the drawings the location of all field run materials.
- k. All shoring systems left in place at the end of construction.

Contractor shall accurately show existing underground items including, but not limited to, piping, manholes, pull boxes, conduit, direct buried wire, foundations, equipment and obstructions found during construction on the record drawings. Note on the record drawings the actual size of all utilities and structures and types of material used. Locate all record drawing items by survey coordinates or dimensioned off NAD 83-91 for Horizontal Datum and NAVD 88 for Vertical Datum. Minimum requirements for accuracy are specified in the following chart.

Description	Horizontal	Elevation	Notes
	Location		
Gravity sewer and	Coordinates,	I.E. 0.01 ft.	Recalculate actual slopes.
drain lines	stations, and		All inverts in manholes.
	offsets 0.1 ft.		All angle changes.
Forcemains,	Coordinates	I.E. 0.1 ft.	Record all angle points and
watermains and	and stations 0.1		finished ground elev. Above
transmission lines	ft.		the invert elev.
All other items, incl.	0.1 ft.	0.1 ft.	Show dimensions on record
Electrical and			drawings.
Structural			-

Use red pen within Autodesk BUILD markup tool to make changes on the record drawings. Notations are to be neat, legible, clear and concise.

Record information concurrently with the progress of construction. Conceal no work until the required information is verified and recorded.

# 1-08.11(3) Payment

No separate payment shall be made for the preparation of record drawings. All costs associated with the preparation of record drawings shall be included in the unit contract prices of other items in the Contract.

## 1-09 MEASUREMENT AND PAYMENT

## 1-09.1 Measurement of Quantities

Supplement 1-09.1 by adding the following:

**Measurement by the Ton**: Where items are specified to be paid for by the ton it will be the Contractor's responsibility to see that a certified weight ticket is given to the City's Inspector on the Project at the time of delivery of materials for each truckload delivered. Pay quantities will be prepared on the basis of certified weight tickets delivered to the City's Inspector at time of delivery of materials. Tickets not received by the City's Inspector on day of delivery will not be honored for payment.

# 1-09.3 Scope of Payment

Supplement 1-09.3 by adding the following:

# 1-09.3(1) Schedule of Values (\*\*\*\*\*\*)

The Contractor shall submit a Schedule of Values via Autodesk BUILD Correspondence tool in accordance with 1-08.0(1) PRE-CONSTRUCTION CONFERENCE. If the Project contains Unit Price Work, in whole or in part, then the Schedule of Values for that portion of the Work shall also be based on unit prices. If the Proposal Form calls for a lump sum price, in whole or in part, then the Schedule of Values shall: reasonably allocate the Contract Sum among the various portions of the Work; be complete; be organized to include detailed breakdown of each major unit of the Work; be organized to correspond to Contractor's schedule; break down the Contract Sum showing the value assigned to each part of the Work; include an allowance for profit and Overhead; include Unit Price Work, if and to the extent indicated on the Proposal Form; be so organized as to facilitate assessment of Work and payment of Subcontractors; and be balanced. To the greatest extent possible, the breakdown shall use the same tasks or units as the Contractor's schedule. Contractor shall provide documentation substantiating the cost allocation if asked by the City's Representative. Upon acceptance of the Schedule of Values by the City's Representative, it shall be used as a basis for all requests for payment.

# 1-09.4 Equitable Adjustment

Supplement 1-09.4 by adding the following:

Other means to establish the reasonable cost of the Work not defined by unit prices include, and is not limited to, 1-09.6 FORCE ACCOUNT, the Schedule of Values, or estimating manuals.

# 1-09.4(1) General (\*\*\*\*\*\*)

The following shall apply in determining the amount of an equitable adjustment of Contract Sum:

 Except as otherwise expressly provided, Contractor will only be paid for costs it clearly and convincingly proves it actually and directly incurred, and shall not include consequential or indirect damages not otherwise expressly permitted by the Contract Documents. Costs and damages for which the City shall not be liable under any circumstances include, but are not limited to: (a) borrowing or interest costs, charges, or expenses of Contractor; (b)

- alleged lost profit or overhead on any other project; and (c) Contractor's failure or inability to obtain other work.
- 2. No Contract Claim for adjustment of Contract Sum or additional compensation for extra, affected, impacted or inefficient work will be allowed where the Contractor does not keep and maintain contemporaneous, complete and accurate time records for labor and equipment and contemporaneous, complete and accurate records for materials and where such records do not contemporaneously segregate and allocate by time, location and Work the time and costs for each item or element of such Work. Contractor's failure to keep and maintain such records constitutes a waiver of any Contract Claim or request by the Contractor for adjustment of Contract Sum for such costs or event.
- 3. To the extent the Contractor is entitled to an adjustment of Contract Sum due to any Delay or extension of Contract Time, Contractor shall be compensated as provided in 1-09.11A REMEDIES. Such compensation shall be full, adequate and complete compensation for all direct, indirect, cumulative, inefficiency, impact and ripple costs causing, arising out of, or relating to such Delays or extension.
- 4. Contractor and City agree that compensation to the Contractor for a Contract Claim shall not exceed the Contractor's costs based upon Force Account as described in 1-09.6 FORCE ACCOUNT. Contractor waives, releases, and agrees not to submit any request for adjustment of Contract Sum or Contract Claim based upon a "total cost" or "modified total cost" calculation, in whole or in part, but instead agrees that any and all requests for compensation shall be based upon accurate, complete and contemporaneous cost records that segregate and allocate costs (a) between base Contract work and the Work for which additional compensation is sought and (b) between each item of Work for which additional compensation is sought. Claims for inefficiency shall only be based and calculated by a comparison of productivity of similar Work performed in an unaffected or least affected area of the Project.
- 5. No claim for consequential damages of any kind will be allowed.

#### **Unabsorbed and Extended Overhead** 1-09.4(2) (\*\*\*\*\*)

Any Extended or Unabsorbed Overhead to which the Contractor may be entitled shall be calculated using the Eichleay formula by:

- 1. Determining the pro-rata amount of Overhead allocable to the subject project. This is accomplished by multiplying Overhead costs by the ratio of the subject project's billings to the Contractor's overall billings during the overall period of the subject Project's performance. The result is "Allocable Overhead." Any additional and unresolved direct cost claims presented by the Contractor concurrently with any request for Extended and/or Unabsorbed Overhead shall not be included in determining the ratio of the subject Project billings to overall Contractor billings for the period of project performance.
- 2. Determining the daily amount of Allocable Overhead for the subject Project. This is accomplished by dividing the Allocable Overhead for the subject Project by the number of days, (as contractually defined) of Contract performance. The result is the Daily Rate of Allocable Overhead.
- 3. Determining the gross amount of potential additional compensation for Home Office Overhead due to the project extension. This is accomplished by multiplying the Daily Rate of Allocable Overhead by the number of days of

- project extension caused solely by the City. This results in the Gross Amount of Additional Home Office Overhead Compensation.
- 4. Adjusting the Gross Amount of Additional Home Office Overhead Compensation for any additional contribution for Overhead received by the Contractor on any Change Orders that are being presented and resolved concurrently with the subject calculation for Unabsorbed and/or Extended Home Office Overhead. The necessary adjustment would be to reduce the Gross Amount of Additional Home Office Overhead Compensation by any additional compensation for Overhead included in any direct cost claims being resolved concurrently with any claim for Extended and/or Unabsorbed Home Office Overhead.

Contractor shall not receive compensation for cost of use of equity capital.

#### 1-09.5 Deleted or Terminated Work

Delete the first paragraph, beginning with "The Engineer may delete", and the second paragraph, beginning with "Payment for completed items", and substitute the following:

The City's Representative may delete Work as provided in 1-04.4 CHANGES or may terminate the Contract in whole or part as provided in 1-08.10(2) TERMINATION FOR PUBLIC CONVENIENCE. When the Contract is partially terminated for the City's convenience, the partial termination shall be treated as a deductive Change Order for payment purposes under this section.

Payment for completed items will be at contract unit prices or pursuant to the Schedule of Values.

Delete the fourth paragraph, beginning with "Contract time shall be", and the fifth paragraph, beginning with "Acceptable materials ordered by", and substitute the following:

Acceptable materials ordered by the Contractor prior to the date the Work was terminated or deleted will either be purchased from the Contractor by the City at the actual cost and shall become the property of the City, or the City will reimburse the Contractor for the actual costs of returning these materials to the suppliers.

If Contractor disagrees with the adjustment of Contract Sum determined by the City's Representative, Contractor may submit a Contract Claim for the difference between the amount determined by the City's Representative and the amount sought by the Contractor.

Contractor shall not be entitled to any anticipated profits on deleted, terminated, or uncompleted Work.

### 1-09.6 Force Account

Supplement 1-09.6 by adding the following:

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

# 1-09.7 Mobilization

Supplement 1-09.7 by adding the following:

1. Construction Identification Signs: Upon commencement of Work, the Contractor shall furnish and erect two Project/Construction Identification Signs in accordance

with COE Standard Drawing No. 714, one at each end of each work area at Engineer approved locations.

- a. Contractor shall provide sign painting, lettering and detailing by a professional sign maker with Engineer approval prior to placement on job site.
- b. Contractor shall provide a Project Information Sign for each of the two Project/Construction Identification Signs. Attach Project Information Sign to the surface of the sign face in accordance with COE Standard Plan No. 714. The Construction Identification Sign shall contain the following three lines of information that the Engineer will provide:

PROJECT NAME: PROJECT FUNDING: PROJECT COST:

- c. Contractor shall maintain signs and sign frames in a clearly legible condition throughout the progress of the Work and shall completely remove signs upon project completion. Deliver signs to the City's storage area for future City use.
- d. No separate payment for Project/Construction Identification Signs will be made. All costs associated with this item shall be merged with the unit contract price for "Mobilization."
- 2. NOT USED

# 1-09.9 Payments

Delete 1-09.9 and substitute the following:

#### 1-09.9 Payments to Contractors (\*\*\*\*\*)

#### 1-09.9(1) **Progress Payments**

Contractor shall submit progress payment estimate via Autodesk BUILD Correspondence tool for completed Work and material on hand based upon acceptable Work performed during the previous month, or since the last partial payment estimate was submitted. Submit progress payment estimate to City's Representative by the tenth day of each month, or by schedule mutually agreed upon in writing by the Contractor and City's Representative at the Pre-Construction Conference. Contractor shall make initial progress estimate not later than 30 days after the Work begins. Make successive progress estimates every month thereafter until the Completion Date.

Progress estimates made during progress of the Work are tentative, and made only for the purpose of determining progress payment. The progress estimates are subject to change at any time prior to the calculation of the Final Payment.

The value of the progress estimate will be the sum of the following:

- 1. Unit Price Items in the Proposal Form the approximate quantity of acceptable units of work completed multiplied by the unit price.
- 2. Lump Sum Items in the Proposal Form the estimated percentage complete multiplied by the Proposal Forms amount for each Lump Sum Item, or per the schedule of values for that item.
- 3. Materials on Hand 100 percent of invoiced cost of material delivered to Job site or other storage area approved by the Engineer.
- 4. Change Orders entitlement for approved extra cost or completed extra work as determined by the Engineer.

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

- 1. Retainage in accordance with 1-09.9(6) RETAINAGE,
- 2. The amount of Progress Payments previously made, and
- 3. Funds withheld by the City 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 City that any Work has been satisfactorily completed.

Payments will be made by warrants, issued by the City's fiscal officer, against the appropriate fund source for the Project. Payments received on account of Work performed by a Subcontractor are subject to the provisions of RCW 39.04.250.

Contractor's submission of a progress pay estimate constitutes the Contractor's material representation that Contractor performed all of the Work described in the progress pay estimate during the relevant time period in a conformance with these Plans and Specifications and that the materials or Equipment for which payment is requested reasonably conform to the Specifications and are either on the job site or have been installed. If requested by the City's Representative, provide additional data as may be reasonably required to support the payment estimate. Additional data may include, but not be limited to, satisfactory evidence of payment for Equipment, materials and labor, including payments to Subcontractors and suppliers. Certified invoices by the suppliers shall accompany a request for payment for delivered Equipment and material. Such Equipment and material shall be suitably and safely stored at the site of the Work. Payment requests shall summarize accepted operating and maintenance material with request for Equipment payment.

A progress payment is preliminary only. By making a progress payment, the City does not waive or release its right, nor is it estopped from asserting, that previous progress payments were not earned or were in error, whether in whole or in part.

# 1.09.9(2) Review Procedures

The City's Representative will review the estimate and either indicate in writing to the City his or her concurrence with the estimate and his or her recommendation that payment be made, or indicate in writing to the Contractor his or her reasons for not concurring with the estimate. If the City's Representative recommends payment and the City concurs, the City will pay the Contractor a progress payment on the basis of the approved partial payment estimate, less retainage and any amounts the City may withhold pursuant to Contract or law. The recommendation of the City's Representative is not conclusive, final or binding upon the City.

In the event the City's Representative does not concur with the estimate, the Contractor may make the changes necessary to obtain the City's Representative's concurrence and resubmit the partial payment estimate, or submit the original progress payment estimate directly to the City, indicating in writing its reasons for refusing to make the changes necessary to obtain concurrence.

#### 1-09.9(3) Withholding Payment

The City's Representative may refuse to recommend the whole or any part of any payment if in the City's Representative's opinion it would be incorrect to make such recommendation to the City. The City's Representative may also refuse to recommend any such payment, or because of subsequently discovered evidence or the result of tests, may nullify any such payment previously recommended to such extent as may be necessary in the City's Representative's opinion to protect the City from loss as a result of:

1. Defective or damaged Work.

- 2. A deductive Change Order.
- 3. Persistent failure of the Contractor to perform the Work in accordance with the Contract Documents, including failure to maintain the progress of the Work in accordance with the construction schedule. Persistent failure to maintain the progress of the Work shall mean that for a period of two consecutive months following a written notice from the City's Representative or City, the Contractor fails to correct a behind-schedule condition at a rate that would reasonably indicate that it will finish the Project on schedule.
- 4. Disregard of authority of the City or City's Representative or the laws of any public body having jurisdiction.
- 5. Liquidated damages.
- 6. Misrepresentation of the quality of materials or Equipment installed or amount of Work performed.
- 7. Discovery that a previous pay estimate erred with respect to the amount of Work performed or Equipment or materials installed, irrespective of the City's Representative's recommendation at the time of the progress pay estimate.

The City may refuse to make payment of the full amount recommended by the City's Representative because of Contract Claims made against the City on account of Contractor's performance or furnishing the Work or because of liens filed in connection with the Work or other set offs entitling City to reduce the amount recommended. In such case, the City shall give Contractor prompt written notice with copy to the City's Representative stating the reasons for each action.

# 1-09.9(4) Final Payment Procedure

Upon receipt of Contractor's written Notice that the Work is ready for final inspection and acceptance and upon receipt of a Final Contract Voucher Certification, the City's Representative will inspect the Work. If the City's Representative finds the Work acceptable under the Contract Documents and the Contract fully performed and if the Contractor has signed a Final Contract Voucher Certification, the City's Representative will issue a final Certificate for Payment. The Certificate for Payment will state that to the best of the City's Representative's knowledge, information and belief, the Work appears to have been completed in accordance with terms and conditions of the Contract Documents and that the entire balance found to be due the Contractor and noted in the final Certificate is due and payable.

Final payment shall not become due until the Contractor submits to the City's Representative the following:

- an affidavit that payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the City or the City's property might be responsible or encumbered, less amounts withheld by City, have been paid or otherwise satisfied,
- a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least 30 calendar days' prior written Notice has been given to the City,
- 3. a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents.
- 4. consent of Surety, if any, to final payment,
- 5. request to Sublet Work Agreements for all Subcontractors,

- 6. certified payrolls from the Contractor and all Subcontractors,
- 7. "Statement of Intent to Pay Prevailing Wages and Affidavit of Wages Paid" from Contractor and each Subcontractor filed with the City and the Department of Labor and Industries,
- 8. Certification of Use or Deferred Sales Tax Paid or both, and
- 9. if required by the City, other data establishing payment or satisfaction of obligations, including, but not limited to, receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the City. If a Subcontractor refuses to furnish a release or waiver required by the City, the Contractor may furnish a bond satisfactory to the City to indemnify the City against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the City all money that the City may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

Prior estimates and payments, including those relating to Extra Work or Work omitted, will be subject to correction by the final payment.

If, after Physical Completion of the Work, Final Acceptance thereof is materially delayed through no fault of the Contractor or by issuance of Change Orders affecting Final Acceptance, and the City's Representative so confirms, the City may, upon application by the Contractor and certification by the City's Representative, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or corrected is less than retainage stipulated in the Contract Documents, and if bonds have been furnished, the written consent of Surety to payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the City's Representative prior to certification of such payment. Such payment shall be made under terms and conditions governing final payment, except that it shall not constitute a waiver of claims.

Acceptance of final payment by the Contractor, a Subcontractor or material or Equipment supplier shall constitute a waiver of Contract Claims by that payee, except those Contract Claims previously timely and completely submitted that remain pending at the time of final payment, provided that Contractor specifically so notifies the City in writing prior to the City making such final payment. Payment by the City shall not release the Contractor or its Surety from any obligation under the Contract or under the payment and performance bond.

Upon completion of all Work and after final inspection, the amount due the Contractor under the Contract will be paid based upon the final estimate made by the Engineer and presentation of a Final Contract Voucher Certification signed by the Contractor. Such voucher shall be deemed a release of all claims of the Contractor unless a claim is filed in accordance with the requirements of 1-09.11 DISPUTES AND CLAIMS and is expressly excepted from the Contractor's Certification on the Final Contract Voucher Certification.

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required for completion and final acceptance of the Contract, the City reserves the right to establish a Completion Date (for the purpose of meeting the requirements of RCW 60.28) and unilaterally accept the Contract. Unilateral final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the City, to voluntarily

submit such documents. If voluntary compliance is not achieved, formal notification of the impending establishment of a Completion Date and unilateral final acceptance will be provided by certified mail or by email with delivery confirmation from the City to the Contractor, which will provide 30 calendar days for the Contractor to submit the necessary documents. The 30 calendar day period will begin on the date the certified mail or email with delivery confirmation is received by the Contractor. If Contractor compliance is not achieved by the end of such 30-day period, the City will unilaterally sign the Final Contract Voucher Certification. The date the City Council accepts the Work shall constitute the Completion Date and the final acceptance date. The reservation by the City to unilaterally accept the Contract will apply to Contracts that are Physically Completed in accordance with Section 1-08.5, or for Contracts that are terminated in accordance with Section 1-08.10. Unilateral final acceptance of the Contract by the City does not in any way relieve the Contractor of its responsibility to comply with all Federal, State, tribal, or local laws, ordinances, and regulations that affect the Work under the Contract.

# 1-09.9(5) Back Charges to Contractor

The Contractor shall pay the City on demand everything charged to it under the terms of this Contract. Such charges may be deducted by the City from money due or to become due to the Contractor under the Contract. The City may recover such charges from the Contractor or from its Surety.

Contractor agrees to pay the costs of overtime or excessive inspection and observation costs incurred by the City. Overtime inspection shall include inspection required during Saturdays, Sundays, City holidays and weekdays in excess of 40 hours per week or outside of normal working hours and inspections or observations that result in an inspector or observer working more than 40 hours in a week. Costs of such overtime or excessive inspection or observation include architecture, engineering, construction management services, inspection, general supervision and overhead expenses that are directly chargeable to the overtime or excessive work. Contractor agrees that City will deduct such charges from payments due the Contractor. In the event the City issues a Change Order requiring the Contractor to work in excess of the established schedule of working hours, the City will not charge the Contractor for associated inspection costs.

The Contractor shall be compensate the City for the actual costs of engineering, inspection, general supervision, right-of-way costs, permit fees, overhead expenses, and any other ascertainable direct costs to the City that are directly chargeable to the Work and that accrue during the period of such extension. The actual costs do not include charges for final inspection and preparation of the final payment by the City.

#### 1-09.9(6) Retainage

Pursuant to RCW Chap. 60.28, a sum of five percent of the monies earned by the Contractor will be retained from progress estimates. In addition to protecting the interests of those identified in RCW Chap. 60.28, such retainage will be used as a trust fund for the protection of the City.

At the option of the Contractor, monies retained under the provisions of RCW 60.28 will be:

- 1. Retained in a fund by the City, or
- 2. Deposited by the City in an interest-bearing escrow account in a bank, mutual saving bank, or savings and loan association. Interest on monies so retained shall be paid to the Contractor in accordance with requirements of this section. Deposits are to be in the name of the City and may not be withdrawn

without the City's written authorization. The City will issue a check representing the sum of the monies reserved, payable to the bank or trust company. Such check shall be converted into bonds and securities chosen by the Contractor as the interest accrues

The Contractor shall designate the option desired at the time the Contract is executed. If the Contractor in chooses option 2, deposit in escrow account, Contractor agrees to assume full responsibility to pay all costs that may accrue from escrow services, brokerage charges or both, and further agrees to assume all risks in connection with the investment of the retained percentages in securities. The City may also, at its option, accept a bond in lieu of retainage.

Retainage will be released when all of the following conditions are satisfied:

- Sixty days have elapsed following the completion of all Work specified in the Contract; and
- 2. The Contractor fulfilled all of all obligations of the Contractor under the Contract, including, but not limited to, the Contractor's furnishing all documentation required by Contract and law; and
- 3. A release has been obtained from the Washington State Department of Revenue; and
- 4. Affidavits of Wages Paid for the Contractor and all Subcontractors are on file with the City (RCW 39.12.040); and
- A release has been obtained from the Washington State Department of Labor & Industries and the Washington State Employment Security Department; and
- 6. All claims, as provided by law, filed against the retainage have been resolved. In the event claims are filed and provided the conditions one through five are met, the Contractor will be paid the retained percentage less an amount sufficient to pay any such claims together with a sum determined by the City sufficient to pay the cost of claims and attorney's fees.
- 7. All other conditions required by law are satisfied.

### 1-09.11 Disputes and Claims

Delete all of 1-09.11 and substitute the following:

# 1-09.11(1) Disputes (\*\*\*\*\*\*)

When a Dispute occurs during the Contract, the Contractor shall pursue resolution through the City's Representative. The Contractor shall follow the procedure outlined in section 1-09.11(2) CONTRACT CLAIMS herein and 1-08.3 PROGRESS SCHEDULE and 1-08.8 EXTENSIONS OF TIME for issues regarding the schedule and Contract Time. Timely and adequate Notice is a condition precedent to a Contract Claim. Timely and complete submission of a Contract Claim is a condition precedent to any entitlement by the Contractor to an adjustment of Contract Sum or Contract Time. Unless waived in writing by the City, mediation is a condition precedent to the filing of any lawsuit, action or proceeding that seeks to recover on a Contract Claim, whether in whole or in part. The costs of any such mediation will be borne equally by the parties. Unless otherwise agreed by the parties, the mediation shall take place in Everett, Washington.

# 1-09.11(2) Contract Claims (\*\*\*\*\*\*)

### 1-09.11(2)A General

If the Contractor requests or believes for any reason that it is entitled to adjustment of Contract Sum or Contract Time, or if the Contractor has a Dispute with the City and wants the City to take some action, or refrain from taking action, the Contractor shall file a Contract Claim as provided in this section. A timely and complete Contract Claim is a condition precedent to any entitlement by the Contractor to an adjustment of Contract Sum or Contract Time. No Contract Claim shall be allowed unless the Contractor has given Notice as required under the Contract Documents. The Contractor waives any Contract Claim if: (a) Notice was not timely given; (b) the City's Representative is not afforded reasonable access by the Contractor to complete records, including, but not limited to, correspondence, job diaries, and actual cost and additional time incurred; (c) a Contract Claim is not timely filed as required by the Contract Documents; or (d) adequate, accurate, contemporaneous and segregated supporting time and expense records are not kept and maintained. The fact that the Contractor provided proper and timely Notice, provided a properly filed Contract Claim, or provided the City's Representative access to records of actual cost, shall not in any way be construed as proving or substantiating the validity of the Contract Claim. If the City determines the Contract Claim has merit in whole or in part, the City's Representative will make an adjustment of Contract Sum or Contract Time required for the Work, or both. If the City's Representative finds the Contract Claim to be without merit, no adjustment will be made.

The Contractor shall keep full, complete, accurate and contemporaneous records of the costs and additional time incurred for any Contract Claim. The Contractor shall permit the City's Representative to have access to those records and any other records as may be required by the City's Representative to determine the facts or contentions involved in the Contract Claim. City is not obligated to respond to a Contract Claim unless the Contractor is in full compliance with all the provisions of the Contract Documents and the formal Contract Claim document has been submitted

Full compliance by the Contractor with the provisions of this section is a contractual condition precedent to the Contractor's right to sue or seek any recovery against the City in any legal proceeding.

### 1-09.11(2)B Contents

All Contract Claims filed by the Contractor shall be in writing, verified under penalty of perjury by an officer or principal of the Contractor, and in sufficient detail to enable the City's Representative to ascertain the basis and amount of the Contract Claim. All Contract Claims shall be submitted to the City's Representative. At a minimum, each Contract Claim shall include:

- 1. A detailed factual statement of the Contract Claim for an adjustment to the Contract Sum or Contract Time, if any, providing all necessary dates, locations, and items of Work affected by the Contract Claim.
- 2. The dates of all facts related to the Contract Claim.
- 3. The name of each City's individual, official, or employee involved in or knowledgeable about the Contract Claim.
- 4. The specific provisions of the Contract that support the Contract Claim and a statement of the reasons why such provisions support the Contract Claim.

- 5. If the Contract Claim relates to a decision of the City's Representative that the Contract leaves to the City's Representative's discretion or as to which the Contract provides that the City Representative's decision is final, the Contractor shall set out in detail all facts supporting its position relating to the decision of the City's Representative.
- 6. Identification of any documents and the substance of any oral communications that support the Contract Claim.
- 7. Copies of any identified documents that support the Contract Claim, other than City documents and documents previously furnished to the City by the Contractor. Standard industry manuals may be incorporated by reference.
- 8. If Contractor seeks an extension of Contract Time:
  - a. The specific amount of time, including days and dates, sought.
  - The specific reasons the Contractor believes an extension of Contract Time should be granted, including, but not limited to, compliance with the requirements of 1-08.3 PROGRESS SCHEDULE and 1-08.8 EXTENSIONS OF TIME; and
  - c. The specific provisions of the Contract Documents under which it is sought.
- 9. If Contractor seeks an increase in the Contract Sum, the exact amount sought and a breakdown of that amount into the following categories:
  - a. Labor
  - b. Materials
  - c. Direct Equipment. The actual cost for each piece of equipment for which a Contract Claim is made or in the absence of actual cost, the rates established by the AGC/WSDOT Equipment Rental Agreement that was in effect when the Work was performed. In no case shall the amounts sought or paid for each piece of equipment exceed the rates established by the Equipment Rental Agreement even if the actual cost for such equipment is higher. The City may audit the Contractor's cost records to determine actual equipment cost. The following information shall be provided for each piece of equipment:
    - Detailed description (e.g., Motor Grader Diesel Powered Caterpillar 12 "G", Tractor Crawler ROPS & Dozer Included Diesel, etc.)
    - ii. The hours of use or standby; and
    - iii. The specific day and dates of use or standby;
    - iv. Job overhead.
    - v. Overhead (general and administrative).
    - vi. Subcontractor's Contract Claims (in the same level of detail as specified herein is required for any subcontractor's Contract Claims); and
    - vii. Other categories as specified by the Contractor or the City.
- 10. A notarized statement shall be submitted to the City's Representative containing the following language:

Under the penalty of law for perjury or falsification, the undersigned,

(name)		(title)
of		
(0	company)	
Contract Sum and this Contract is a t the Contract Claim	nat the Contract Claim for /or Contract Time, if any, ranger rule and complete statements and all actual costs incurred and supported under the	made herein for Work or ent of the factual basis o red and time sought, and
Date	/s/	
Subscribed and sv	vorn before me this	day of
Notary Public		
My Commission E	xpires:	

# 1-09.11(2)C False Or Omitted Information

The Contractor waives each Contract Claim for which it presents material information that it knows, or in the exercise of reasonable care should know, is false, or omits or fails to disclose material information relating to such Contract Claim. In such case, Contractor shall reimburse the City for any and all fees and expenses incurred in investigating any such Contract Claim.

# 1-09.11(3) Time Limitation and Jurisdiction (\*\*\*\*\*\*)

The parties intend that all claims and Disputes be dealt with promptly and expeditiously when they arise. The parties intend that all claims and Disputes be resolved quickly and expeditiously and desire to avoid claims and Disputes that relate back to events or Work occurring months before. The parties desire to avoid litigation and the costs and expense of claims and Disputes at the end of the Project.

Any Contract Claim for adjustment of Contract Sum or Contract Time, or any Dispute or Contract Claim of any kind whatsoever, shall be submitted, if at all, to the City or City's Representative no later than 30 calendar days after Notice was first required to be given by the Contractor as provided in 1-04.5 NOTICE BY THE CONTRACTOR. Failure to submit a Contract Claim within the 30 calendar days of the date Notice was required pursuant to 1-04.5 NOTICE BY THE CONTRACTOR constitutes a complete waiver of and bar to the Contract Claim, and Contractor is estopped from later asserting a Contract Claim or seeking any relief or remedy relating to the Dispute for which it failed to submit a Claim.

Contractor may not sue, cross-claim, claim, or bring any action of any kind whatsoever against the City on any Contract Claim or Dispute after the expiration of 180 calendar days from Physical Completion.

Supplement Section 1-09 by adding the following:

# 1-09.11A Remedies (\*\*\*\*\*\*)

# 1-09.11A(1) General

If a Contract Claim has merit in whole or in part, then Contractor's sole remedies shall be those provided in this subsection. Contractor shall timely and strictly comply with the requirements of 1-04.5 NOTICE BY THE CONTRACTOR and 1-09.11(2) CONTRACT CLAIMS and all other Contract Documents relating to the Contract Claim. Adjustments to Contract Time shall be determined pursuant to 1-08.3 PROGRESS SCHEDULE and 1-08.8 EXTENSIONS OF TIME. Failure to comply strictly and timely shall be deemed a waiver of the Contract Claim.

# 1-09.11A(2) Extra Work

# 1-09.11A(2)A Adjustment of Contract Sum

If the Contractor is entitled to an adjustment of Contract Sum because of Extra Work, the adjustment shall be calculated and paid as provided in 1-09.4 EQUITABLE ADJUSTMENT. This amount includes jobsite and home office Overheads for such Work, including any schedule delays relating to such Work. Therefore, no compensation in addition to that provided in 1-09.6 FORCE ACCOUNT shall be paid for such things as Extended Overhead or other costs or damages.

# 1-09.11A(2)B Extension of Contract Time

Extensions of Contract Time caused by Extra Work shall be determined as provided in 1-08.3 PROGRESS SCHEDULE and 1-08.8 EXTENSIONS OF TIME.

# 1-09.11A(3) Delays

# 1-09.11A(3)A City Caused Delay Unrelated to Extra Work

#### 1-09.11A(3)A1 Adjustment of Contract Sum

If the Contractor is entitled to an adjustment of Contract Sum because of a Delay solely caused by the City that does not relate to Extra Work, Contractor shall only be compensated for the items below, less all funds paid pursuant to any change in the Contract Sum that contributed to the Delay:

- 1. Documented, incurred cost of nonproductive field supervision or labor extended because of the Delay;
- 2. Documented, incurred cost of home office supervision to attend jobsite meetings;
- 3. Documented, incurred cost of temporary facilities or equipment rental extended because of the Delay;
- 4. Documented, incurred cost of insurance extended because of the Delay;
- 5. General and administrative overhead in an amount to be agreed upon, but not to exceed three percent of original Contract Sum divided by the Contract Time for each day of the Delay.

City shall not owe Contractor compensation for Extended Overhead or other delay costs to the extent Contractor or anyone other than the City contributed to or is concurrently responsible for the Delay.

### 1-09.11A(3)A2 Adjustment of Contract Time

If the Contractor is entitled to an adjustment of Contract Time because of a Delay solely caused by the City that does not relate to Extra Work, Contractor shall be entitled to an adjustment of Contract Time to the extent the Delay

increases the duration of the Project, as measured by the critical path and as demonstrated pursuant to the requirements of 1-08.8 EXTENSIONS OF TIME.

# 1-09.11A(3)B Contractor Caused Delay

If the Contractor is solely responsible for any Delay to any interim milestone, Substantial Completion, Physical Completion, or the Completion Date, the City shall be entitled to liquidated or other damages as provided elsewhere in the Contract Documents. The Contractor accepts the risk of any Delays caused by strikes, work slowdowns, job actions and labor unrest of any kind. Contractor shall not be entitled to any increase in Contract Sum or Contract Time due to a Delay it caused.

# 1-09.11A(3)C Delays Concurrently Caused by Contractor and City

If the City and the Contractor cause a Delay concurrently, neither the City nor the Contractor shall be liable to the other except as provided herein.

#### 1-09.11A(3)C1 **Adjustment of Contract Sum**

The Contractor shall not be entitled to any adjustment in Contract Sum for Delays concurrently caused by the City and the Contractor.

#### 1-09.11A(3)C2 **Adjustment of Contract Time**

The Contractor shall be entitled to an extension of Contract Time for the City caused portion of any Delay concurrently caused by the City and Contractor to the extent the City caused the Delay to extend longer than if the Contractor had solely caused the Delay.

# 1-09.11A(3)D Third Party Caused Delays and Force Majeure

For the purposes of this section 1-09.11A(3)D, a "Force Majeure Event" is defined as earthquake, flood, pandemic (and governmental laws, regulations, requirements, and orders resulting therefrom), natural disasters, acts of war or acts of terrorism. Pandemic in the preceding sentence includes without limitation...

For the purposes of this section 1-09.11A(3)D, a "Third Party" is defined as a third party for whom neither the Contractor nor the City is responsible.

#### 1-09.11A(3)D1 **Adjustment of Contract Sum**

The City and the Contractor shall not be responsible to compensate each other financially for any Delay to the extent caused by a Third Party or a Force Majeure Event. A Delay caused by a utility's failure to provide service or relocate its lines (despite a timely request for such service or relocation) is an example of this kind of Delay for which neither the Contractor nor the City is financially responsible to the other. Mislocated utility lines or utility lines not located are another example of a Delay for which neither the Contractor nor the City is responsible to the other. However, the Contractor's failure to request a utility locate or relocation in a timely way is not, and any resulting Delay would be the responsibility of the Contractor. Because the Contractor is responsible for ordering materials and Equipment, Contractor shall not be entitled to an adjustment of Contract Time or Contract Sum due to Delays caused by the lack of materials or Equipment. A strike, job action, slowdown, work to rule, or other job action or labor dispute or problem is not a Delay caused by a Third Party.

#### 1-09.11A(3)D1 **Adjustment of Contract Time**

The Contractor shall be entitled to an extension of Contract Time for Delays to the extent caused by a Third Party or a Force Majeure Event.

Extension of Contract Time shall be determined pursuant to 1-08.8 EXTENSIONS OF TIME.

# 1-09.11A(4) Extended or Unabsorbed Overhead 1-09.11A(4)A General

To present a request for additional compensation for Extended or Unabsorbed Overhead, the Contractor has the burden of keeping and maintaining accurate documentation to support any such claim. If the Contractor fails to provide or keep adequate financial data for an accurate and fair Eichleay calculation, Contractor waives and releases any claim for Unabsorbed or Extended Overhead. In presenting any claim under this section of the Contract, the Contractor agrees to provide to the City any and all financial data needed by the City, or its representative, to review, substantiate and evaluate any claim for Extended or Unabsorbed Home Office Overhead, or both. Failure to provide the requested information shall constitute waiver by the Contractor.

If Contractor is entitled to an adjustment of Contract Sum for Unabsorbed or Extended Overhead, it shall be calculated as provided in these Special Provisions.

# 1-09.11A(4)A1 Elements

Contractor shall only be entitled to an adjustment of Contract Sum for Unabsorbed or Extended Overhead if it clearly and convincingly demonstrates all of the following:

- The City solely caused a Delay to the Completion Date as measured by analysis of the project duration by the critical path method pursuant to 1-08.3 PROGRESS SCHEDULE;
- 2. Because of the Delay described in subsection (1), the Contractor was forced to suspend or significantly interrupt its performance so that it was on standby or idled, and the City required the Contractor to be ready to resume performance on short notice. Extended time of performance of Work, such as extensions caused by changes, inefficiencies, or extra Work, does not constitute suspension or significant interruption of performance.
- 3. The Contractor could not and did not use resources, including, but not limited to, labor, equipment, materials and tools, standing by or idled on this or other project for any work during the period of Delay;
- 4. The Contractor's Overhead costs did not materially vary from its usual seasonal Overhead costs during the period of Delay; and
- 5. The Delay did not cause over absorbed Overhead in the period the delayed Work was completed.

# 1-09.11A(4)A1a Resources

To demonstrate the Contractor could not and did not use resources, including, but not limited to, labor, equipment, materials and tools from this Project for any other work on this or any other project during the period of Delay in accordance with item 3 of 1-09.11A(4)A1 of these Special Provisions, the Contractor shall:

- 1. Affirmatively represent and warrant that it did not perform substitute work;
- 2. Identify the specific resources that were idled; and
- 3. Show that those resources did not, and could not, work on other contracts or projects during the Delay.

# 1-09.11A(4)A1b No Material Variations

To demonstrate the Contractor's Overhead costs did not materially vary from its usual seasonal Overhead costs during the period of Delay in accordance with item 4 of 1-09.11A(4)A1 of these Special Provisions, the Contractor shall;

- Affirmatively represent and warrant that the completion of the subject Work was extended and that such extension prevented the performance of other work during both the period of Delay and the later period of time required to complete the extended Work,
- 2. Disclose the details of Contractor generated billings and Contractor Overhead Costs, as defined in these Special Provisions, throughout the actual Project performance. The details of such information should be no less than specific identification of the sources and amounts of revenue on no greater than a monthly basis and specific identification of the types and amounts of Contractor Overhead Costs on no greater than a monthly basis for the actual Project duration.

# 1-09.11A(4)A1c Overabsorbed Overhead

To demonstrate that Contractor did not incur Overabsorbed Overhead in the period following the Delay, in accordance with item 5 of 1-09.11A(4)A1. of these Special Provisions, the Contractor shall:

- 1. Affirmatively represent and warrant that completion of the delayed Work prevented the performance of other Work;
- 2. Identify the critical resource unavailable for other Work due to completion of the delayed Contract; and
- 3. Showing that unavailability of this critical resource precluded the performance of other Work.

# 1-09.11A(5) Inefficiencies

#### 1-09.11A(5)A Adjustment of Contract Sum

To the extent Contractor is entitled to an increase in Contract Sum because of inefficiencies or impaired productivity, then compensation due, if any, shall be calculated as provided in <u>1-09.4 EQUITABLE ADJUSTMENT</u>. There is no entitlement to increase in Contract Sum for inefficiencies to the extent caused by a Third Party or a Force Majeure Event.

#### 1-09.11A(5)B Adjustment of Contract Time

To the extent Contractor is entitled to an extension of Contract Time because of inefficiencies or impaired productivity, then the extension shall be determined as provided in <u>1-08.8 EXTENSIONS OF TIME</u>.

Delete all of 1-09.12 and substitute the following:

# 1-09.12 Audits (\*\*\*\*\*\*)

# 1-09.12(1) General

The Contractor's records relating to this Project, including, but not limited to, wage, payroll, and cost records, shall be open to inspection or audit by representatives of the City during the Project and for a period of not less than six years after the date of Final Acceptance of the Contract. The Contractor shall retain these records for that period. The Contractor shall also guarantee that Project records of Subcontractors, suppliers,

and lower tier subcontractors, including, but not limited to, the wage, payroll, and cost records, shall be retained and open to similar inspection or audit for the same period of time. The audit may be performed by employees or representatives of the City or by an auditor chosen by the City. The Contractor, Subcontractors, or lower tier subcontractors shall provide adequate facilities, reasonably acceptable to auditor, for the audit during normal business hours. The Contractor, Subcontractors, or lower tier subcontractors shall make a good faith effort to cooperate with the auditors. If an audit is to be commenced more than 60 calendar days after the Final Acceptance date of the Contract, the Contractor will be given 20 calendar days' notice of the time when the audit is to begin. If any litigation, claim, or audit arising out of, in connection with, or related to this Contract is initiated, the Project records shall be retained until the later of (a) completion of litigation, claim, or audit or (b) six years after the date of Final Acceptance.

# 1-09.12(2) Claims

All Contract Claims filed against the City shall be subject to audit at any time following the filing of the Contract Claim. Failure of the Contractor, Subcontractors, or lower tier subcontractors to maintain and retain sufficient records to allow the auditors to verify all or a portion of the Contract Claim or to permit the auditor access to the books and records of the Contractor, Subcontractors, or lower tier subcontractors shall constitute a waiver of a Contract Claim and shall bar recovery in connection with the Contract.

# 1-09.12(3) Required Documents for Audits

An audit may be performed by employees of the City or a representative of the City. The Contractor and its Subcontractors shall provide adequate facilities acceptable to the City for the audit during normal business hours. The Contractor and all Subcontractors shall cooperate with the City's auditors.

As a minimum, the auditors shall have available to them the following documents:

- 1. Daily time sheets and supervisor's daily reports.
- 2. Collective Bargaining Agreements.
- 3. Insurance, welfare, and benefit records.
- 4. Payroll registers.
- 5. Earnings records.
- 6. Payroll tax forms.
- 7. Material invoices and requisitions.
- 8. Material cost distribution worksheet.
- 9. Equipment records (list of company equipment, rates, etc.)
- Vendors', rental agencies', Subcontractors' and lower tier subcontractors' invoices.
- 11. Contracts between the Contractor and each of its Subcontractors, and all lower tier subcontractor contracts and supplier contracts.
- 12. Subcontractors' and lower tier subcontractors' payment certificates.
- 13. Canceled checks, including payroll and vendors.
- 14. Job cost reports, including monthly totals.
- 15. Job payroll ledger.
- 16. General ledger.
- 17. Cash disbursements journal.
- 18. Financial statements for all years reflecting the operations on this Contract. In addition, the City may require, if it deems appropriate, additional financial

- statements for three years preceding execution of the Contract and three years following Final Acceptance of the Contract.
- 19. Depreciation records on all company equipment whether these records are maintained by the company involved, its accountant, or others.
- 20. If a source other than depreciation records is used to develop costs for the Contractor's internal purposes in establishing the actual cost of owning and operating equipment, all such other source documents that support the amount of damages as to each Contract Claim.
- 21. Worksheets or software used to prepare the Contract Claim establishing the cost components for items of the Contract Claim including but not limited to labor, benefits and insurance, materials, equipment, Subcontractors, all documents that establish the time periods, individuals involved, the hours for the individuals, and the rates for the individuals.
- 22. Worksheets, software, and all other documents used by the Contractor to prepare its Bid. The employees or representatives of the City may audit these documents. The Contractor and its Subcontractors shall provide adequate facilities acceptable to the City for the audit during normal business hours. The Contractor and all Subcontractors shall cooperate with the City's auditors.
- 23. Correspondence, notes, and memoranda.
- 24. Job diaries.
- 25. All documents which relate to each and every claim together with all documents which support the amount of damages as to each claim.

#### 1-09.13 Claims Resolution

Delete all of 1-09.13 and substitute the following:

Prior to seeking claim resolution through litigation, the Contractor shall proceed under the procedures in Sections 1-04.5 and 1-09.11 and elsewhere in the Contract Documents for resolution of disputes. These must be complied with in full, as a condition precedent, to the Contractor's right to seek claim resolution through litigation.

Supplement Section 1-09 by adding the following:

# 1-09.14 Patents and Royalties (\*\*\*\*\*)

Should the Contractor, its agent, employee or any of them be enjoined from furnishing or using any invention, article, material or plans supplied or required to be supplied or used under this Contract, Contractor shall promptly pay such royalties and secure requisite licenses; or, subject to acceptance by City, substitute other articles, materials, or appliances in lieu thereof that are of equal efficiency, quality, finish, suitability and market value to those planned or required under the Contract. Descriptive information of these substitutions shall be submitted to the City's Representative for determination of general conformance to the design concept and the construction Contract. Should City elect to refuse the substitution, Contractor agrees to pay such royalties and secure such valid licenses as may be requisite for the City, its officers, agents and employees or any of them, to use such invention, article, material or appliance without being disturbed or in any way interfered with by any proceeding in law or equity on account thereof.

Costs involved in fees, royalties, or claims for any patented invention, article, process or method that may be used upon or in a manner connected with the Work under this Contract or with use of completed Work by the City shall be paid by the Contractor. The Contractor and its sureties shall protect and hold the City, and City's Representative, together with its

officers, agents, and employees, harmless from any and all loss, defense cost, and expenses and against any and all demands made for such fees or claims brought or made by the holder of any invention or patent. Before final payment is made on the account of this Contract, the Contractor shall, if requested by the City, furnish acceptable proof of a proper release from all such fees or claims.

## 1-10 TEMPORARY TRAFFIC CONTROL

### 1-10.1 General

# 1-10.1(2) Description

Supplement 1-10.1(2) as follows:

The Contractor shall provide a uniformed off-duty Police Officer to control traffic for work at signalized intersections and other critical situations as determined by the Engineer.

# 1-10.2 Traffic Control Management

#### 1-10.2(1) General

Delete the first sentence of the third paragraph of 1-10.2(1) and substitute the following:

The primary and alternate TCS shall be certified as worksite traffic control supervisors by one of the organizations listed below:

- Evergreen Safety Council (800) 521-0778
- Northwest Laborers Union (800) 240-9112
- American Traffic Safety Services Association (877) 642-4637

# 1-10.2(2) Traffic Control Plans

Delete the first paragraph of 1-10.2(2) and substitute the following:

Contractor may use City's Standard Traffic Control Plans included in COE Standard Drawings, Series 700. The City does not represent or warrant that the Standard Plans are sufficient, adequate or complete for the Contractor's means, methods or plan of Work. If a new or additional Traffic Control Plan is necessary, prepare detailed Traffic Control Plan complying with COE Standard Drawings, Series 700, the MUTCD, Part 6, and the most current edition of the PROWAG (Public Rights-of-Way Accessibility Guidelines). Plan preparation shall be at Contractor's sole cost and submitted to the City for approval at least 14 calendar days before starting Work. Work may not begin until Contractor is in receipt of City approved Traffic Control Plan.

# 1-10.3 Traffic Control Labor, Procedures and Devices

Delete 1-10.3 and substitute the following:

# 1-10.3 Flagging, Signs, and All Other Traffic Control Devices (\*\*\*\*\*\*)

### 1-10.3(1) General

The Contractor shall provide all flaggers, signs and other traffic control devices. The Contractor shall erect and maintain all construction signs, warning signs, detour signs, and other traffic control devices necessary to warn and protect the public at all times from injury or damage as a result of the Contractor's operations that may occur on highways, roads, or streets. No Work shall be done on or adjacent to the roadway until all necessary signs and traffic control devices are in place.

Flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, Montana, or Idaho. The flagging card shall be immediately available and shown upon request by the City.

#### 1-10.3(2) **Maintenance and Protection of Traffic Control**

When the Bid proposed includes an item for "Maintenance and Protection of Traffic Control", the Work required for this item shall be to:

- 1. Furnish and maintain signs, cones, barricades, flasher, and other channelization devices:
- 2. Provide supervisory personnel for all labor for traffic control;
- 3. Provide labor and necessary vehicle(s) for set-up and removal of construction signs and the traffic control devices that are placed daily;
- 4. Provide labor and vehicles for patrolling and maintaining in position all of the construction signs and the traffic control devices;
- 5. Provide labor, material, and equipment necessary for cleaning up, removing and replacing all construction signs and traffic control devices that are destroyed, damaged or lost during the life of the project;
- 6. Provide flagging or use of police officers for the convenience of the Contractor, such as facilitating movement of equipment on the site, laying out or relocating traffic control devices and signs.
- 7. Cost associated with preparation and distribution of public notices involving parking, street access or traffic issues.

Upon failure of the Contractor to immediately provide flaggers, erect, maintain, and remove signs; or provide, erect, maintain, and remove other traffic control devices when ordered to do so by the Engineer, the City may without further notice to the Contractor or the Surety, perform any of the above and deduct all or the costs from the Contractor's payments.

The Contractor shall be responsible for providing adequate flaggers, signs, and other traffic control devices for the protection of the worker and the public at all times regardless of whether or not the flaggers, signs, and other traffic control devices are ordered by the Engineer, or paid for by the City. The Contractor shall be liable for injuries and damages to persons and property suffered by reason of the Contractor's operations or negligence in connection therewith.

#### No Passing Zones 1-10.3(3)

The striping of no passing zones that are to be obliterated in excess of 150-feet by paving operations shall be replaced by "Do Not Pass" and "Pass With Care" signs. The signs shall be located not less than 2-feet outside the usable shoulder nor less than 7-feet above the edge of pavement. The number of necessary signs will be specified in the Special Provisions.

The Contractor shall provide and install the signs and sign posts. The signs shall be maintained by the Contractor until construction operations are complete. When the project includes striping by the Contractor, the signs and posts shall be removed by the Contractor when the no passing zones are re-established by striping.

When the Contractor is not responsible for striping, the signs and posts shall be removed by the Contractor when the "No Passing Zones" are re-established by striping. Payment to perform the Work required for this subsection will be under the item "Maintenance and Protection of Traffic Control."

#### **Traffic Control Labor** 1-10.3(4)

The Contractor shall furnish all personnel for flagging to control traffic during construction operations. Flaggers shall have a current certification (Flagging Card) from the State Department of Labor and Industries (WAC 296-155-305). Employees of the Contractor engaged in flagging or traffic control shall wear reflective vests and hard hats. During

hours of darkness, white coveralls or white or yellow rain gear shall also be worn. The vests and other apparel shall be in conformance with Section 1-07.8. The Contractor shall furnish the MUTCD standard Stop/Slow paddles, except the minimum width shall be 24-inches, for the flagging operations. During hours of darkness flagger stations shall be illuminated to insure that flaggers can be easily seen without causing glare to the traveling public. The Contractor shall develop and use a method to ensure that flaggers have adequate warning of objects approaching from behind the flagger.

All flaggers shall start a new job with an on-site orientation. This orientation must include, but not be limited to, the flagger's role and location on the job site, equipment, traffic patterns, communications and hazards specific to the work site.

If off-duty uniformed police officers are not available for traffic control for Work within signalized intersections, Contractor may provide four flaggers. Flaggers are not permitted within the intersection. Each flagger shall control only one approach and be stationed near the stop bar. Provide a minimum of a series of three warning signs in advance of each flagger. Narrow multi-lane approaches to a single lane approaching the flagger. Provide and require all flaggers use two-way radios to signal each other to prevent conflicts and hold traffic when construction activities require.

When the Bid proposed includes an item for "Traffic Control Labor," the Work covered by this item shall be for the labor actually used when authorized by the Engineer for:

- 1. The services of flaggers at both ends of a 2-way, single lane operation; or
- 2. The services of flaggers at signalized intersections if off-duty uniformed police officers are not available, or when otherwise specifically directed by the Engineer.

The hours eligible for "Traffic Control Labor" shall be for the hours actually worked, plus 1 hour of on-site orientation per flagger. "Show-up time" will not be counted. The labor to perform the Work described in the item "Maintenance and Protection of Traffic Control" is specifically excluded from this Work. No adjustment will be made to the unit price for "Traffic Control Labor" for overtime or holiday hours worked.

### 1-10.3(4)A Traffic Control - Off-Duty Police Officer

Contractor shall provide off-duty uniformed Police Officer for traffic control at all signalized intersections. Acceptable sources for off-duty uniformed Police Officers are as follows in order of preference:

- 1. City of Everett Police Department, contact either,
  - a. Officer Mike Bernardi, (425) 327-9119
  - b. Officer Mike Drake, (425) 244-0025
- 2. Puget Sound Executive Service, 625 B 5<sup>th</sup> Ave, Ste 4, Sequim, WA 98382
  - a. Contact Nick Janssen, (360) 681-7737

# 1-10.3(5) Construction Signs

All signs required by the approved traffic control plan(s) as well as any other appropriate signs prescribed by the Engineer will be furnished by the Contractor and be paid under the item "Maintenance and Protection of Traffic Control." The Contractor shall erect them on posts or supports and maintain them in a clean, neat, and presentable condition until the necessity for them has ceased. All non-applicable signs shall be removed or covered with either metal or plywood during periods when they are not needed. When the need for any of these signs has ceased, the Contractor, upon approval of the Engineer, shall take down these signs, posts, or supports. All signs, posts, and supports shall be removed from the project and shall remain the property of the Contractor.

There shall be no separate classification of signs. All construction signs, whether used throughout the construction, during a major phase of construction or removed daily shall be paid under the item "Maintenance and Protection of Traffic Control." Portable or temporary mountings may require added weight for stability. If it is necessary to add weight to the signs, only a bag of sand that will rupture on impact shall be used. The bag of sand shall have a maximum weight of 40 pounds and shall be suspended no more than 1-foot from the ground.

The Work to provide the construction signing shall be:

- 1. Furnishing all construction signs.
- 2. Furnishing, removing, and disposing of the posts or supports for the signs.
- 3. Initial installation and subsequent removal of all construction signs.
- 4. Furnishing labor and materials for maintaining the signs in a clean and presentable condition;
- 5. All other incidentals necessary for providing the construction signs according to the approved traffic control plan(s).

Signs, posts, or supports that are lost, stolen, destroyed, or which the Engineer deems to be unacceptable, while their use is required on the project, shall be replaced by the Contractor without additional compensation.

#### 1-10.4 Measurement

Delete 1-10.4 and substitute the following:

# 1-10.4 Measurement

# 1-10.4(1) General (\*\*\*\*\*\*)

When the Bid Proposal does not include an item for any necessary traffic control, all costs for traffic control shall be included, by the Contractor, in the unit contract price for the various other items of Work in the Bid Proposal. The Contractor shall estimate these costs based on the contemplated work procedures.

When traffic control items are included in the Bid Proposal, payment is limited to the following areas:

The entire project area under the Contract and for a distance to include the initial warning signs for the beginning of the Project and the end of construction. Warning signs for side roads on the approved traffic control plan are also included. If the project consists of two or more sections, the limits will apply to each section individually.

A detour provided in the Plans or approved by the Engineer for by-passing all or any portion of the construction, irrespective of whether or not the termini of the detour are within the limits of the Contract.

The provisions of Section 1-04.6 will not apply to traffic control or traffic control items. However, the item "Maintenance and Protection of Traffic Control" will be considered for an equitable adjustment only when the total Contract price increases or decreases by more than 25 percent.

The measurement and payment for the items included in the Bid Proposal for traffic control costs incurred within the limits of 1 and 2 above will be made to the Contractor by the City as described in these Special Provisions.

# 1-10.4(2) Measurement (\*\*\*\*\*\*)

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 1-10.5 Payment

Delete 1-10.5 and substitute the following:

# 1-10.5 Payment (\*\*\*\*\*\*)

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### **ADD NEW SECTION 1-11**

# 1-11 MISCELLANEOUS (\*\*\*\*\*\*)

### 1-11.1 Construction

Contractor acknowledges that it has read the Contract Documents, understands them and agrees to be bound by them.

# 1-11.2 Applicable Law and Choice of Forum

This Contract and the parties' obligations hereunder shall be governed, construed, and enforced in accordance with the laws of the State of Washington. The parties agree that Snohomish County Superior Court, in the State of Washington, shall be the exclusive forum for any action.

# 1-11.3 Severability

In the event that any provision of the Contract Documents is held invalid, void, illegal or unenforceable, the remainder of the Contract Documents shall not be impaired or affected thereby, and each term, provision, and part shall continue in full force and effect.

# 1-11.4 Headings for Convenience

The section and subsection headings used herein are for referral and convenience only, and shall not be used to construe or interpret the Contract Documents.

#### 1-11.5 Waiver

No waiver of one right or remedy shall act as a waiver of any other right or remedy or as a subsequent waiver of the same right or remedy. The waiver by either party of any term or condition of this Contract shall not be deemed to constitute a continuing waiver thereof nor of any further or additional right that such party may hold under this Contract.

# 1-11.6 City of Everett Business License

Contractor and Contractor's Subcontractors shall have a City of Everett business license prior to performing any Work pursuant to this Agreement.

### 1-11.7 Compliance with Federal, State and Local Laws

Contractor shall comply with and obey all federal, state and local laws, regulations, and ordinances applicable to the operation of its business and to its performance of Work hereunder. If, and to the extent, this Contract receives financial assistance from federal, state or private agencies, Contractor shall comply with all terms and conditions prescribed for third party contracts in the grant and all said terms and conditions shall be deemed incorporated

in the Contract Documents. Terms and conditions of any such grant take precedence over conflicting terms and conditions in the Contract Documents.

# 1-11.8 Complete Agreement

These Contract Documents contain the complete and integrated understanding and Agreement between the parties and supersedes any understanding, agreement or negotiation, whether oral or written, not set forth herein.

# 1-11.9 Successors Bound

The grants, covenants, provisions and claims, rights, powers, privileges and liabilities contained in the Contract Documents shall be read and held as made by and with, and granted to and imposed upon, the Contractor and the City and their respective heirs, executors, administrators, successors and assigns.

### 1-11.10 Effective Date

When duly executed by both the City and Contractor, this Contract shall be effective as of the date the Contract is signed by the Mayor of the City of Everett.

# 1-11.11 Contractor Registration

Contractor represents and warrants it is a contractor duly registered and in good standing with the Washington State Department of Labor and Industries.

# 1-11.12 Electronic Signature

Signatures on Change Orders or any other Contract Document or any other document referred to herein may be by ink signature, AdobeSign, DocuSign, or any other e-signature method or any pdf scan thereof, and any such signature will have full force and effect.

#### **DIVISION 2 – EARTHWORK**

# 2-01 CLEARING, GRUBBING AND ROADSIDE CLEANUP

# 2-01.2 Disposal of Usable Material and Debris

Supplement 2-01.2 by adding the following:

When requested by the property owner, trim trees of sufficient size for fire wood, cut into two-foot rounds and neatly stack on adjacent property. Remove and dispose of stumps, large roots, limbs and branches.

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

Delete the first paragraph and substitute the following.

Opening burning is not permitted within the city limits.

### 2-01.4 Measurement

Delete all paragraphs of 2-01.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 2-01.5 Payment

Delete all paragraphs in 2-01.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

If there is no bid item to cover clearing and grubbing, then clearing and grubbing shall be included with other work with no direct compensation made.

#### 2-02 REMOVAL OF STRUCTURES AND OBSTRUCTIONS

# 2-02.1 Description

Delete 2-02.1 and substitute the following:

The Work shall consist of the removal, disposal or abandoning in-place of various existing improvements including, but not limited to, pavements, structures, pipe, curbs, curb and gutter, gutter, valves, manholes, catch basins and other items necessary for the accomplishment of the improvement.

All Work with asbestos-cement pipe shall conform to the "Recommended Standard Asbestos-Cement Pipe Work Practice Procedure and Training Requirements," latest edition, as published by the American Water Works Association, Pacific Northwest Section. Remove and dispose of Asbestos-Cement pipe in accordance with the practices specified by the State of Washington Department of Ecology and the Snohomish County Solid Waste Division.

# 2-02.3 Construction Requirements

# 2-02.3(2) Removal of Bridges, Box Culverts and Other Drainage Structures

Supplement 2.02.3(2) by adding the following:

When removing structures such as manholes, inlets, or vaults that interfere with the construction, properly plug all pipe openings abandoned in-place watertight with Commercial Concrete, or with mortar and masonry, blocks or brick.

Backfill voids with suitable job excavated material where structures are removed. Compact suitable backfill material in accordance with 2-03.3(14)C.

If the Engineer determines the job-excavated material unsuitable for backfill then Contractor shall obtain Gravel Borrow or CDF as directed, to complete backfilling the voids. If a pay item for Gravel Borrow or CDF is not included in the Proposal, then providing Gravel Borrow or CDF for backfill shall be considered as Extra Work under 1-04.4.

#### 2-02.3(3) Removal of Pavement, Sidewalks, Curbs, and Gutters

Delete 2-02.3(3) and substitute the following:

# 2-02.3(3) Removal of Existing Street Improvements (\*\*\*\*\*\*)

# 2-02.3(3)A Description

The Work shall consist of the removal and disposal of various existing improvements including, but not limited to, pavements, curb, curb and gutter, gutter and other items necessary for the accomplishment of the improvement.

# 2-02.3(3)B Removal of Pavement

Remove full depth existing permanent type pavement and driveway pavement shown on the Plans or as directed by the Engineer.

Replace, at no expense to the City, existing pavement designated to remain that is damaged during the pavement or concrete base removal.

## 2-02.3(3)B1 Sawcutting

Make vertical full depth saw cut between existing asphalt concrete pavement, to remain and the portion to be removed.

Where asphalt concrete pavement overlays cement concrete pavement base, saw cut in accordance with 2-02.3(6) Sawing and Line Drilling.

# 2-02.3(3)C Removal of Curb, Curb and Gutter

Remove existing curbs where shown on the Plans or where encountered in the Work and designated by the Engineer.

Existing curb and gutter includes, but is not limited to, cement concrete, cement concrete curb with a brick gutter and a cement concrete back, or other combinations of rigid materials. Remove the entire curb and gutter section, regardless of material composition.

### 2-02.3(3)C1 Sawcutting

Make vertical full depth saw cut between existing curb or curb and gutter to remain and the portion to be removed.

#### 2-02.3(3)D Removal of Cement Concrete Sidewalks

Concrete slabs that average four-inches or less in thickness will be considered as sidewalk removal.

Protect existing concrete walk that is to remain in place, from equipment damage by using planking or cover with rock free eight-inch thick blanket of excavated soil.

Provide Engineer with proposed pavement breakers before use and do not begin breaking pavement without Engineer's approval of the pavement breakers.

#### 2-02.3(3)D1 Sawcutting

Make vertical full depth saw cut between existing cement concrete sidewalk to remain and the portion to be removed at the nearest scribe marks beyond the neat line limits, or to the nearest joint.

No diagonal cuts in sidewalk will be allowed unless otherwise indicated on the Plans or directed by the Engineer.

# 2-02.3(3)E Removal of Catch Basins, Manholes, Inlets or Sumps

Excavate and completely remove the structure including, but not limited to, casting and outlet trap, concrete encasement and bricks, as applicable to each removal item listed in the Proposal.

Plug existing connecting pipes that remain by filling with Commercial Concrete a minimum length of 24–inches into the pipe. Backfill shall be Gravel Borrow as specified in 9-03.14(1). Compact backfill to a minimum of 95 percent maximum density in accordance with 2-03.3(14)D.

# 2-02.3(4) Obliteration of Pavement Markings (\*\*\*\*\*\*)

Remove pavement markings where shown on the Plans or where designated by the Engineer. Obliterate pavement marking until blemishes caused by the pavement marking removal conform to the coloration of the adjacent pavement. If the pavement is materially damaged by pavement marking removal operation, Contractor shall repair the pavement damage, at the Contractor's expense, to a condition equal to existing pavement that had no markings obliterated. Remove sand or other material deposited on the pavement as a result of removing stripes and markings as the Work progresses to avoid hazardous conditions. Accumulation of sand or other material that might interfere with drainage will not be permitted.

# 2-02.3(5) Abandon Pipe In-place (\*\*\*\*\*\*)

Plug pipe ends of pipes designated on Plans being abandoned in-place using commercial concrete. If designated on Plans, fill abandoned in-place pipe with Controlled Density Fill as specified in 2-09.3(1)E.

# 2-02.3(6) Sawing and Line Drilling (\*\*\*\*\*\*)

Saw-cut to full depth mortared decorative or special pavement including, but not limited to, brick, cobblestone or paver block along a neat line with intent of salvaging as many units as possible.

When line drilling, drill holes at maximum center-to-center spacing of six-inches. Drill holes perpendicular to the surface and penetrate completely through the pavement.

When the Plans indicate, or the Engineer requires, saw-cutting pavement that is comprised of a rigid base and asphalt overlay, saw cut the rigid base to the minimum depth as follows:

- a. For concrete rigid base, saw cut to a depth of 2/3 the thickness of the rigid
- b. For rigid base constructed with mortared decorative or special pavement including, but not limited to, brick, cobblestone, or paver block, or a combination of such materials saw cut to full depth of the rigid base along a neat line with intent to salvage as many special pavement units as possible.

# 2-02.3(7) Salvage (\*\*\*\*\*)

Carefully salvage and deliver to the Owner in good condition, all materials of recoverable value taken from the discarded facilities, unless otherwise indicated. Materials and things deemed of no value by the Engineer shall become the Contractor's property to be removed and properly disposed.

Remove excess concrete, debris and dirt from castings and other materials the Engineer designates suitable for salvage and that are not to be re-used elsewhere on

the Project. Deliver salvage castings and materials to the location designated by the Engineer.

# 2-02.3(8) Waste Disposal (\*\*\*\*\*\*)

Provide waste site for disposal of materials not required for construction. Arrange waste disposal at no expense to the City. Waste disposal shall meet the requirements of 2-03.3(7)C of the Standard Specifications.

# 2-02.3(9) Abandon Existing Water Valves In-place (\*\*\*\*\*\*)

Prior to abandoning existing water valves in-place, coordinate with City to have City forces close valve. After City forces verify valve is closed, remove valve box and extension, if any, and backfill with Gravel Borrow as specified in 9-03.14(1). Compact backfill to a minimum of 95 percent maximum density in accordance with 2-03.3(14)D.

### 2-02.4 Vacant

Revise 2-02.4 as follows:

#### 2.02.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

For curb and gutter cement removal with concrete pavement, the curb and gutter will be considered as pavement removal and the measurement for payment will be to the back of the curb.

# 2-02.5 Payment

Delete all paragraphs in 2-02.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

If there is no bid item to cover pavement removals, then they shall be included with the construction of the respective Work including, but not limited to, combined sewer pipe, water main, water service line, manhole, side sewer pipe, storm drain pipe, catch basins, and underground utility vaults.

Include curb and gutter and sidewalk removal with construction of the respective Work including, but not limited to, combined sewer pipe, water main, water service line, manhole, side sewer pipe, storm drain pipe, catch basins, and underground utility vaults with no direct compensation made.

If there is no pay item for pipe abandonment, then it shall be included with the construction of the respective Work including, but not limited to, sewer or storm drain pipe, water main, manhole, catch basin or side sewer with no direct compensation made.

If there is no pay item for existing valve abandonment, then it shall be included with the construction of other items of Work with no direct compensation made.

#### 2-03 ROADWAY EXCAVATION AND EMBANKMENT

### 2-03.1 Description

Supplement 2-03.1 by adding the following:

This Work applies to street pavement patching and street reconstruction after completion of utility work. Grading for street reconstruction shall conform to COE

Standard Drawing No. 302, unless otherwise noted on the Plans. Grading for pavement patching shall conform to COE Standard Drawing No. 326, unless otherwise noted on the Plans.

#### 2-03.2 Vacant

Revise 2-03.2 as follows:

#### 2.03.2 Materials

Materials shall meet the requirements of the following:

Foundation Material Class A or B 9-03.17 Standard Specifications Gravel Borrow 9-03.14(1) Standard Specifications

# 2-03.3 Construction Requirements

Supplement 2-03.3 by adding the following:

Blasting is not allowed within the City limits of Everett.

Use suitable excavated material for roadway embankments. Dispose of surplus excavated material or unsuitable material in accordance with 2-03.3(7).

Engineer will not approve payment for unauthorized excavation or embankment, or both, beyond the limits indicated on the Plans. Return areas of unauthorized excavation or embankment, or both, to their original conditions or better at the Contractor's expense.

Fine grading in fill or backfill areas shall begin within the top six inches of subgrade. Final grading shall produce a uniform surface within established tolerances and without abrupt changes in grade.

Construction requirements for pavement patching authorized by Engineer outside of Project limits shall be in accordance with the Section 5-04 and City Standard Drawing No. 326 for existing asphalt concrete over prepared grade.

Provide temporary drainage to keep the subgrade free from standing water.

Ensure the top six inches of subgrade is free from rocks or cemented lumps larger than 2-1/2 inches in greatest dimension.

Excavate for curbs and gutters by accurately cutting to the cross-sections, grades, and elevations shown. Take care not to excavate below the specified grades. Maintain all excavations free from accumulation of detrimental quantities of leaves, brush, sticks, trash, and other debris.

### 2-03.3(2) Rock Cuts

Delete entire section."

### 2-03.3(3) Excavation Below Subgrade

Supplement 2-03.3(3) by adding the following:

Proof Rolling: Proof roll subgrade under the roadway with a fully loaded tandem truck following trench backfilling and grading to subgrade to identify soft or loose areas in the subgrade. In areas where the subgrade does not stand up to the proof roll, over excavate the subgrade and replace with imported Foundation Material Class A or B or Gravel Borrow, as determined by the Engineer, to bring the subgrade up to the proper compaction and grade. Compact backfill material in accordance with 2-03.3(3).

# 2-03.3(7) Disposal of Surplus Material

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

Delete the first paragraph of 2-03.3(7)C and substitute the following:

Make arrangements for disposal of surplus and other materials. All costs for disposal of surplus and other materials shall be included with the respective Bid items of the Contract with no direct compensation being made.

Dispose of Asbestos-cement pipe in accordance with the requirements of the State of Washington Department of Ecology and the Snohomish County Solid Waste Division.

# 2-03.4 Measurement

Delete all paragraphs under 2-03.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Items Descriptions and provided in Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 2-03.5 Payment

Delete all paragraphs under 2-03.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

There will be no direct compensation made for haul on material moved within or from the Project site and the Contractor shall include the cost of hauling in his various unit contract prices.

There will be no direct compensation made for "Proof Rolling" as required in this section for excavated portions of the roadway and the Contractor shall include costs in his various unit Contract prices.

Payment for over excavation below subgrade and disposal of over excavated materials as required in this section shall be included in the Bid item for Foundation Material.

Imported material required in this section shall be paid for by the unit Bid price for that material. Payment for placement and compaction of import material shall be included in the unit price per ton of import material.

#### 2-04 HAUL

# 2-04.1 Description

Delete the first paragraph of 2-04.1 and substitute the following:

This Work shall consist of transporting excavated material from its original site to its final place on the Project or to a Contractor arranged waste site.

#### 2-04.3 Vacant

Revise 2-04.3 to read as follows:

# 2-04.3 Construction Requirements

Off-highway earth-moving equipment shall not haul on or across streets, roadways, driveways, trails, sidewalks or parking lots not being improved in the Contract.

#### 2-04.4 Measurement

Revise 2-04.4 to read as follows:

Haul work will not be measured.

# 2-04.5 Payment

Revise 2-04.5 to read as follows:

All costs for the Work described in Section 2-04 shall be included with excavation work with no direct compensation made.

### 2-07 WATERING

# 2-07.3 Construction Requirements

Supplement 2-07.3 by adding the following:

Only Everett Public Works Department Water Division personnel and the Project Inspector may authorize the operation of City fire hydrants or making connections to City water mains. Upon obtaining City permission, the following shall apply:

- 1. Use only those agency designated hydrants in strict accordance with City's requirements for hydrant use. Obtain a temporary hydrant permit from the City's Public Works Department Water Division. Temporary hydrant permits are available for a \$1,200.00 deposit by contacting the City of Everett's Utility Billing at 425-257-8999 from 8:00 a.m. to 5:00 p.m. Monday through Friday. Deposit is refundable. Provide backflow prevention assembly approved by the City.
- Secure permission from and comply with all requirements of the City's water utility before obtaining water from the fire hydrants. Notify the Engineer of City's permission as soon as granted.
- 3. Use hydrant wrenches only to open hydrants. Make certain the hydrant valve is fully open because "cracking" the hydrant valve causes damage to the hydrant valve. Provide an approved auxiliary valve on the outlet line for control purposes. Close fire hydrant valves slowly to avoid a surge in the system that creates excess pressure on water lines. Carefully note the importance of following these directions.
- 4. If Contractor's employees use the wrong wrench to open a hydrant causing damage the hydrant valve stem or operating nut or both, the Contractor shall be responsible for costs associated with repairing the damaged hydrant valve stem or operating nut or both. Immediately notify the City's water utility so that the damage can be repaired as quickly as possible.
- 5. Notify City water utility immediately upon completing the use of the hydrants so the hydrants may be inspected for possible damage. City water utility will repair damage resulting from the use of the hydrants by the Contractor. Contractor shall be responsible for repair cost and cost, if necessary, shall be withheld from the final payment to the Contractor.
- 6. City water utility will fine Contractor for violation of these requirements. Contractor shall also be liable for damage suits resulting from malfunctioning of Contractor damaged fire hydrants not being operational in the event of fire.
- 7. There will be no charge for the volume of water used.

### 2-07.4 Measurement

Revise 2-07.4 to read as follows:

Water will not be measured.

# 2-07.5 Payment

Revise 2-07.5 to read as follows:

All costs for the Work described in Section 2-07 shall be included with the Work with no direct compensation made.

### 2-09 STRUCTURE EXCAVATION

# 2-09.2 Materials

Supplement 2-09.2 by adding the following at end of the materials list:

Foundation Material Class A or B 9-03.17 Standard Specifications

# 2-09.3 Construction Requirements

# 2-09.3(1) General Requirements

# 2-09.3(1)C Removal of Unstable Base Material

Delete all paragraphs in 2-09.3(1)C and substitute the following:

When the material at the bottom of an excavation is not stable enough to support the Structure, the Contractor shall excavate below grade to the depth required by the Engineer and replace the unstable material with Foundation Material Class A or B.

Place Foundation Material Class A or B in layers not more than six inches thick and compact to minimum of 90-percent maximum density as determined by 2-03.3(14)D.

Dispose of unsuitable material removed to make room for foundation material by hauling to a waste site obtained and provided by the Contractor in accordance with 2-03.3(7)C.

# 2-09.3(1)D Disposal of Excavated Material

Delete the second paragraph in 2-09.3(1)D and substitute the following:

All costs for disposing of excavated material, whether within the Project limits or hauled to a disposal site, shall be incidental to the other Bid items in the Proposal. The City will not pay for hauling. Disposal of excavated material shall meet the requirements of 2-03.3(7)C.

# 2-09.3(1)E Backfilling

Delete the fourth paragraph in 2-09.3(1)E and substitute the following:

Provide CDF having minimum 28-day strength of 50 psi and maximum 28-day strength not to exceed 300-psi. Provide wet or flowable CDF with consistency having approximate slump between three to ten inches.

Controlled Density Fill used for excavation backfill may be placed dry or wet. Use wet, or flowable, CDF for filling abandoned pipes in-place.

Supplement 2-09.3(1)E by adding the following:

Where CDF is used in lieu of other materials such as foundation material, gravel borrow, washed sand or crushed surfacing top course, the respective limits for trench width or backfill dimensions shall be approved by the Inspector.

# 2-09.3(3)B Excavation Using Open Pits – Extra Excavation

Revise the sixth paragraph to read as follows:

**Submittals and Design Requirements –** The Contractor shall submit Type 3E Working Drawings with supporting calculations showing the geometry and construction sequencing of the proposed excavation slopes.

# 2-09.3(3)D Shoring and Cofferdams

Revise the fifth paragraph to read as follows:

**Submittals and Design Requirements –** The Contractor shall submit Type 3E Working Drawings with supporting calculations showing the proposed methods and construction details of structural shoring or cofferdams in accordance with Sections 1-05.3 and 6-02.3(16).

#### 2-09.4 Measurement

Delete all paragraphs in 2-09.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 2-09.5 Payment

Delete all paragraphs in 2-09.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

When there is no bid item for "Structure Excavation" in the Proposal, all Work in this section shall be included with the respective Bid Items of the Contract with no direct compensation made.

### 2-11 TRIMMING AND CLEANUP

# 2-11.3 Construction Requirements

Supplement 2-11.3 by adding the following after item 6:

7. Keep work areas and City streets clean and free from mud, dirt and other debris.

Further supplement 2-11.3 by adding the following:

Keep the Project site in a neat and orderly condition during the process of construction with as little disruption to the adjoining properties as practical under the conditions.

Promptly and as often as needed cleanup debris resulting from Contractor's operations from drainage facilities such as inlets, catch basins, culverts and open ditches.

Remove and dispose of all construction stakes.

Upon Project completion, clean Project area and neatly dress slopes to present a uniform appearance blending into the contour of adjacent properties. Remove trash of all kinds resulting from construction operations.

#### 2-11.4 Vacant

Revise 2-11.4 to read as follows:

#### 2-11.4 Measurement

Delete all paragraphs in 2-11.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### **2-11.5** *Payment*

Delete all paragraphs in 2-11.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

When there is no bid item for "Trimming and Cleanup" in the Proposal, all Work in this section shall be included with other Work with no direct compensation made.

#### **DIVISION 4 - BASES**

#### 4-04 BALLAST AND CRUSHED SURFACING

# 4-04.1 Description

Delete the third paragraph of 4-04.1 and substitute the following:

Work shall also consist of placing crushed surfacing stone as driveway maintenance material and in gravel driveway restoration as shown on the Plans or directed by the Engineer. The quantity shown in the Proposal is an estimate for the purpose of establishing a unit price only. Actual quantities will be measured as construction progresses. The Engineer may require that some or all of the crushed surfacing be removed because of contamination or to meet final grades. Removal shall be included with work for "Crushed Surfacing Top Course" or "Crushed Surfacing Base Course."

# 4-04.3 Construction Requirements

Supplement 4-04.3 by adding the following:

# 4-04.3(12) Gravel Driveway Restoration (\*\*\*\*\*\*)

Replace existing gravel driveways removed in order to allow construction of the new improvements as follows:

Restore gravel driveways by placing a minimum of 3-inches of "Crushed Surfacing Base Course" on subgrade compacted to 95 percent standard density in accordance with 2-03.3(14)D.

Preparation and compaction of the subgrade shall be included in "Crushed Surfacing Base Course" with no direct compensation made.

# 4-04.3(13) Gravel Driveway Maintenance (\*\*\*\*\*\*)

Maintain existing driveway access by providing and placing Crushed Surfacing Base Course as necessary and directed by Engineer to allow continued access until completion of final gravel drive restoration.

#### 4-04.4 Measurement

Delete the first paragraph of 2-02.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 4-04.5 Payment

Delete all paragraphs in 2-02.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

Supplement Division 4 with the following:

# 4-06 ASPHALT TREATED BASE (ATB)

### 4-06.1 Description

Asphalt treated base consists of a compacted course of base material which has been weatherproofed and stabilized by treatment with an asphalt binder.

The Work shall consist of one or more courses of asphalt treated base placed on the Subgrade in accordance with these Specifications and in conformity with the lines, grades, thicknesses, and typical cross-sections shown in the Plans or as staked.

Do NOT construct the asphalt treated base course until all underground utilities are completed and inspected and approved by the Engineer.

Asphalt treated base may be placed for providing temporary access to adjoining properties where directed by the Engineer.

#### 4-06.2 Materials

Materials shall meet the requirements of the following sections:

Asphalt 9-02.1 Anti-Stripping Additive 9-02.4 Aggregates 9-03.8

The grade of paving asphalt shall be as required in the Contract.

# 4-06.3 Construction Requirements

# 4-06.3(1) Asphalt Mixing Plant

Asphalt mixing plants for asphalt treated base shall meet the following requirements:

# Heating

The plant shall be capable of heating the aggregates to the required temperature.

# **Proportioning**

The mixing plant shall be capable of proportioning: the aggregates to meet the Specifications; and the asphalt at the rate specified by the Engineer. If the aggregates are supplied in two or more sizes, means shall be provided for proportioning or blending the different sizes of aggregates to produce material meeting the Specification requirements.

Recycled asphalt pavement (RAP) may be used in the production of ATB. If utilized, the amount of RAP shall not exceed 30 percent of the total weight of the ATB. The final gradation and asphalt binder content will conform to the approved Job Mix Formula (JMF). ATB will be evaluated under Commercial Evaluation as shown in section 9-03.8(7). Va limts under 9-03.8(7) are excluded from ATB evaluation criteria.

### Mixing

The mixer shall be capable of producing a uniform mixture of uniformly coated aggregates meeting the requirements of these Specifications.

#### 4-06.3(2) Preparation of Aggregates

Aggregates for asphalt treated base shall be stockpiled before use in accordance with the requirements of Section 3-02.

The aggregates shall be heated as required by the Engineer.

#### 4-06.3(2)A Mix Design

The mix design requirements for asphalt treated base shall be as described in Section 5-04.3(7)A.

### 4-06.3(3) Vacant

#### 4-06.3(4) Mixing

The asphalt treated base shall be mixed in accordance with the requirements of Section 5-04.3(8).

#### 4-06.3(5) Hauling Equipment

Hauling equipment for asphalt treated base shall conform to the requirements of Section 5-04.3(2).

# 4-06.3(6) Spreading and Finishing

Asphalt treated base shall be spread with a spreading machine equipped with a stationary, vibratory, or oscillating screed or cut-off device, subject to the approval of the Engineer. Approval of the equipment shall be based on a job demonstration that the finished product will meet all requirements of the Specifications. Automatic controls will not be required. Unless otherwise directed by the Engineer, the nominal compacted depth of any ATB layer shall not exceed 0.40 feet. On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

The internal temperature of the ATB mixture at the time compaction is achieved shall be a minimum of 185°F. Rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175°F.

# 4-06.3(6)A Subgrade Protection Course

Unless otherwise specified by the Engineer, the Contractor shall place the asphalt treated base as a protection for the prepared Subgrade on all sections of individual Roadways which are to receive asphalt treated base as soon as 10,000 square yards of Subgrade is completed. This requirement shall not be limited to contiguous areas on the project.

The surface of the Subgrade protection layer when constructed on a grading project shall conform to grade and smoothness requirements that apply to the Subgrade upon which it is placed.

# 4-06.3(6)B Finish Course

The final surface course of the asphalt treated base, excluding Shoulders, shall not deviate at any point more than 3/8 inch from the bottom of a 10-foot straightedge laid in any direction on the surface on either side of the Roadway crown. Failure to meet this requirement shall necessitate sufficient surface correction to achieve the required tolerance, as approved by the Engineer, at no expense to the City.

When portland cement concrete pavement is placed on an asphalt base, the surface tolerance of the asphalt base shall be such that no elevation lies more than 0.05 feet below nor 0.00 feet above the plan grade minus the specified plan depth of portland cement concrete pavement. Prior to placing the portland cement concrete pavement, any such irregularities shall be brought to the required tolerance by grinding or other means approved by the Engineer, at no expense to the City.

## 4-06.3(7) Density

The asphalt treated base shall be compacted to a density of not less than 80 percent of the maximum theoretical density established for the mix by WSDOT FOP for AASHTO T 209. The density of the base shall be determined by means of tests on cores taken from the Roadway or with the nuclear gauge in accordance with Section 5-04.3(10)B. The frequency of these tests shall be at the discretion of the Engineer, but in no case shall it be less than one control lot for each normal day's production. The use of equipment which results in damage to the materials or produces substandard workmanship will not be permitted.

## 4-06.3(8) Anti-Stripping Additive

An anti-stripping additive shall be added to the asphalt binder material in accordance with Section 9-02.4 in the amount designated in a WSDOT mix design/anti-strip evaluation report for a dense graded hot mix asphalt design from the same gravel source within the last 24 months or as evaluated separately by an accredited lab using current WSDOT test methods (AASHTO T324 – Hamburg or WSDOT TM T718 – Modified

Lottman). Alternately, the ATB may be evaluated for anti-strip additive using ASTM D3625 (Standard Practice for Effect of Water on Bituminous-Coated Aggregate Using Boiling Water) by an accredited lab. The anti-stripping additive required will be the minimum amount necessary to achieve a passing evaluation.

## 4-06.4 Measurement

Delete all paragraphs in 4-06.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 4-06.5 Payment

Delete all paragraphs in 4-06.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

## **DIVISION 5 – SURFACE TREATMENTS AND PAVEMENTS**

# 5-04 HOT MIX ASPHALT

Delete 5-04 and substitute the following:

# 5-04.1 Description

Work shall consist of providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

Provide HMA composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

## 5-04.2 Materials

Provide materials meeting the requirements of the following sections:

9-02.1(4)	Standard Specifications		
9-02.1(6)	Standard Specifications		
9-02.4	Standard Specifications		
9-02.5	Standard Specifications		
9-03.8	Standard Specifications		
9-03.8(3)B	Standard Specifications		
9-03.8(5)	Standard Specifications		
9-03.21	Standard Specifications		
9-01	Standard Specifications		
9-03.1(2)	Standard Specifications		
(As noted in 5-04.3(5)C for crack sealing)			
9-04.2	Standard Specifications		
9-04.2(3)A	Standard Specifications		
	9-02.1(6) 9-02.4 9-02.5 9-03.8(3)B 9-03.8(5) 9-03.21 9-01 9-03.1(2) sealing) 9-04.2		

The Contractor may use up to 20 percent RAP by total weight of HMA with no additional sampling or testing of the RAP. Sample and test the RAP at a frequency of one sample for every 1,000 tons produced and not less than two samples per project. Report the asphalt content and gradation test data to the City when submitting the mix design for approval on the QPL. Include the RAP as part of the mix design as defined in these Specifications.

Provide the grade of asphalt binder as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. Submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

For production of aggregates comply with the requirements of Section 3-01.

For preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles comply with the requirements of Section 3-02.

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

If the contractor wishes to submit a mix design for inclusion in the Qualified Products List (QPL), please follow the WSDOT process outlined in Standard Specification 5-04.2(1).

5-04.2(1)A Vacant

5-04.2(2) Mix Design – Obtaining Project Approval

Do NOT begin paving prior to the approval of the mix design by the Engineer.

**Nonstatistical** evaluation will be used for all HMA not designated as Commercial HMA in the Contract Documents.

**Commercial** evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, paths, trails, and pavement repair. Obtain approval from Project Engineer for other nonstructural applications of HMA accepted by commercial evaluation. Sampling and testing of HMA accepted by commercial evaluation will be at the option of the Project Engineer. The Proposal quantity of HMA that is accepted by commercial evaluation will be excluded from the quantities used in the determination of nonstatistical evaluation.

**Nonstatistical Mix Design**. Provide fifteen days prior to the first day of paving one of the following mix design verification certifications for City review;

- a. The WSDOT Mix Design Evaluation Report from the current WSDOT QPL, or one of the mix design verification certifications listed below.
- b. The proposed HMA mix design on WSDOT Form 350-042 with the seal and certification (stamp & signature) of a valid licensed Washington State Professional Engineer.
- c. The Mix Design Report for the proposed HMA mix design developed by a qualified City or County laboratory that is within one year of the approval date.\*\*

\*\*The mix design shall be performed by a lab accredited by a national authority such as Laboratory Accreditation Bureau, L-A-B for Construction Materials Testing, The Construction Materials Engineering Council (CMEC's) ISO 17025 or AASHTO Accreditation Program (AAP) and shall supply evidence of participation in the AASHTO: resource proficiency sample program.

Mix designs for HMA accepted by Nonstatistical evaluation shall;

- a. 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), except that Hamburg testing for ruts and stripping are at the discretion of the Engineer, and 9-03.8(6).
- b. Have anti-strip requirements, if any, for the proposed mix design determined in accordance with AASHTO T 283 or T 324, or based on historic anti-strip and aggregate source compatibility from previous WSDOT lab testing.

At the discretion of the Engineer, City may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design.

Commercial Evaluation: Approval of a mix design for "Commercial Evaluation" will be based on a review of the Contractor's submittal of WSDOT Form 350-042 (For commercial mixes, AASHTO T 324 evaluation is not required) or a Mix Design from the current WSDOT QPL or from one of the processes allowed by this section. Testing of the HMA by the City for mix design approval is not required.

For the Bid Item Commercial HMA, select a class of HMA and design level of Equivalent Single Axle Loads (ESAL's) appropriate for the required use.

#### 5-04.2(2)B **Using Warm Mix Asphalt Process**

The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. Additives is subject to the following:

- a. Do not use additives that reduce the mixing temperature more than allowed in Section 5-04.3(6) in the production of mixtures.
- b. Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

#### 5-04.3 **Construction Requirements**

#### **Weather Limitations** 5-04.3(1)

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified in Table 1, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Table 1 - Minimum Surface Temperature for Paving

Compacted (Feet)	Thickness	Wearing Course	Other Courses
Less than 0.10		55∘F	45∘F
0.10 to .20		45∘F	35∘F
More than 0.20		35∘F	35∘F

#### **Paving Under Traffic** 5-04.3(2)

Apply the requirements of this Section when the Roadway being paved is open to traffic.

Keep intersections open to traffic at all times, except; when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, place advance warning signs and signs marking the detour or alternate route.

During paving operations, maintain temporary pavement markings throughout the project. Install temporary pavement markings on the Roadway prior to opening to traffic. Provide temporary pavement markings in accordance with Section 8-23.

Include all costs in connection with performing the Work in accordance with these requirements, except the cost of temporary pavement markings, in the unit Contract prices for the various Bid items involved in the Contract.

# 5-04.3(3) **Equipment**

# 5-04.3(3)A Mixing Plant

Provide plants used for the preparation of HMA conforming to the following requirements:

- 1. Equipment for Preparation of Asphalt Binder Equip tanks for the storage of asphalt binder to heat and hold the material at the required temperatures. Accomplish the heating by steam coils, electricity, or other approved means so that no flame is in contact with the storage tank. Provide the circulating system for the asphalt binder designed to ensure proper and continuous circulation during the operating period. Provide a valve for the purpose of sampling the asphalt binder placed in either the storage tank or in the supply line to the mixer.
- 2. Thermometric Equipment Provide an armored thermometer, capable of detecting temperature ranges expected in the HMA mix, fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit and location convenient and safe for access by Inspectors. Provide plant equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. Provide device in full view of the plant operator.
- 3. Heating of Asphalt Binder Provide heating so the temperature of the asphalt binder does not exceed the maximum recommended by the asphalt binder manufacturer nor be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. Provide method to heat the asphalt binder in a manner that will avoid local variations in heating and provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25°F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.
- 4. **Sampling and Testing of Mineral Materials** Provide HMA plant equipped with a mechanical sampler for the sampling of the mineral materials meeting the requirements of Section 1-05.6 for the crushing and screening operation. Provide for the setup and operation of the field testing facilities of the City as provided for in Section 3-01.2(2).
- 5. **Sampling HMA** Provide for sampling HMA by one of the following methods:
  - a. A mechanical sampling device attached to the HMA plant.
  - b. Platforms or devices to enable sampling from the hauling vehicle without entering the hauling vehicle.

# 5-04.3(3)B Hauling Equipment

Provide trucks used for hauling HMA having tight, clean, smooth metal beds and a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Securely attach cover whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45°F or when time from loading to unloading exceeds 30 minutes to protect the HMA.

Provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Drain excess release agent prior to filling

hauling equipment with HMA. Do NOT use petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

# 5-04.3(3)C Pavers

Provide HMA pavers that are self-contained, power-propelled units, with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

Provide HMA paver in good condition and have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed in good condition and in working order. Provide equipment certification listing the make, model, and year of the paver and note retrofitting of any equipment.

Operate the screed in accordance with the manufacturer's recommendations and so it effectively produces a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. Provide a copy of the manufacturer's recommendations upon City's request. Extensions producing the same results, including ride, density, and surface texture as obtained by the primary screed will be allowed. Do NOT use extensions without augers and an internally heated vibratory screed in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Place lines on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. Control the grade and slope for intermediate lanes automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

Furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Section 1-08.6. Thoroughly remove any cleaning or solvent type liquids spilled on the pavement before paving proceeds.

### 5-04.3(3)D Material Transfer Device or Material Transfer Vehicle

Provide a Material Transfer Device/Vehicle (MTD/V) with the Engineer's approval, unless otherwise required by the Contract.

Where an MTD/V is required by the contract, the Engineer may approve paving without an MTD/V, at the Contractor's request. The Engineer will determine if an equitable adjustment in cost or time is due.

Mix the MTD/V when used with the HMA after delivery by the hauling equipment and prior to laydown by the paving machine. Sufficiently mix the HMA to obtain a

uniform temperature throughout the mixture. The length of the windrow for windrow elevator may be limited in urban areas or through intersections at the discretion of the Engineer.

To be approved for use, provide an MTV meeting the following:

- 1. Self-propelled vehicle, separate from the hauling vehicle or paver.
- 2. Not be connected to the hauling vehicle or paver.
- 3. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
- 4. Ability to mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
- 5. Ability to mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

To be approved for use, provide an MTD meeting the following:

- 1. Ability to be positively connected to the paver.
- 2. May accept HMA directly from the haul vehicle or pick up HMA from a windrow.
- 3. Ability to mix the HMA after delivery by the hauling equipment and prior to placement into the paving machine.
- 4. Ability to mix the HMA sufficiently to obtain a uniform temperature throughout the mixture.

## 5-04.3(3)E Rollers

Provide vibratory, oscillatory steel wheel rollers, or pneumatic tire type rollers, in good condition and capable of reversing without backlash. Operate roller in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. Provide sufficient number and weight of rollers to compact the mixture in compliance with the requirements of Section 5-04.3(10). The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results will not be permitted.

# 5-04.3(4) Preparation of Existing Paved Surfaces

Bring any irregular existing pavement surface or old base surface to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Accomplish preleveling of uneven or broken surfaces over which HMA is to be placed by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Provide compaction of preleveling HMA to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Provide Engineer approved compaction equipment used for the compaction of preleveling HMA.

Clean the entire surface of the pavement before construction of HMA on an existing paved surface. Entirely remove all fatty asphalt patches, grease drippings, and other objectionable matter from the existing pavement. Thoroughly clean all pavements or bituminous surfaces of dust, soil, pavement grindings, and other foreign matter. Fill all holes and small depressions with an appropriate class of HMA. Level and thoroughly compact the patched area surface. Obtain Engineer approval of the surface prior to the application of tack coat or paving.

Apply an asphalt tack coat to all paved surfaces that HMA is to be placed or abutted; except, that tack coat may be omitted from clean, newly paved surfaces at the Engineer's discretion. Uniformly apply tack coat to cover the existing pavement with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. Obtain application rate approval from Engineer. Apply a heavy application of tack coat to all joints. For Roadways open to traffic, limit the application of tack coat to surfaces that will be paved during the same working shift. Provide spreading equipment equipped with a thermometer to indicate the temperature of the tack coat material.

Do NOT allow equipment to operate on tacked surfaces until the tack has broken and cured. Repair tack coat if the Contractor's operation damages the tack coat prior to placement of the HMA.

Provide tack coat consisting of CSS-1 or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one part water to one part emulsified asphalt. Provide tack coat having sufficient temperature such that it may be applied uniformly at the specified rate of application and not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

# 5-04.3(4)A Crack Sealing 5-04.3(4)A1 General

When the Proposal includes a pay item for crack sealing, seal all cracks 1/4-inch in width and greater.

**Cleaning**: Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior to filling a crack with the sealant material. Do NOT overheat pavement. Do NOT use direct flame dryers. Routing cracks is not required.

**Sand Slurry**: For cracks that are to be filled with sand slurry, thoroughly mix the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Top off cracks that were not completely filled with additional sand slurry. Do NOT place the HMA overlay until the slurry has fully cured.

Provide sand slurry consisting of approximately 20 percent CSS-1 emulsified asphalt, approximately 2 percent portland cement, water (if required), and the remainder clean Class 1 or 2 fine aggregate per section 9-03.1(2). Thoroughly mix components and then pour into the cracks and joints until full. The following day, top off any cracks or joints that are not completely filled with additional sand slurry. After the sand slurry is placed, strike off filler flush with the existing pavement surface and allow to cure. Do NOT place the HMA overlay until the slurry has fully cured. The requirements of Section 1-06 will not apply to the portland cement and sand used in the sand slurry.

In areas where HMA will be placed, use sand slurry to fill the cracks.

In areas where HMA will not be placed, fill the cracks as follows:

- a. Cracks 1/4- inch to 1 inch in width fill with hot poured sealant.
- b. Cracks greater than 1 inch in width fill with sand slurry.

Hot Poured Sealant: For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot poured sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material.

5-04.3(4)A2 Crack Sealing Areas Prior to Paving

In areas where HMA will be placed, use sand slurry to fill the cracks.

5-04.3(4)A3 Crack Sealing Areas Not to be Paved

In areas where HMA will not be placed, fill the cracks as follows:

- a. Cracks 1/4 inch to 1 inch in width fill with hot poured sealant.
- b. Cracks greater than 1 inch in width fill with sand slurry.

5-04.3(4)B Vacant 5-04.3(4)C Vacant

# 5-04.3(6) Mixing

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer, mix the HMA until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

Ensure the temperature of the HMA when discharged does not exceed the optimum mixing temperature by more than 25°F as shown on the reference mix design report or as approved by the Engineer. Also, when a WMA additive is included in the manufacture of HMA, ensure the discharge temperature of the HMA does not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, reduce the moisture content in accordance with Engineer's directions.

Storing or holding of the HMA in approved storage facilities for less than 24 hours will be permitted with Engineer's approval. Engineer will reject HMA held for more than 24 hours after mixing. Dispose of rejected HMA at no expense to the City. Provide the storage facility having an accessible device, indicating the amount of material in storage, located at the top of the cone or about the third point. Engineer will NOT accept HMA from the storage facility when the HMA in storage is below the top of the cone of the storage facility; except, as the storage facility is being emptied at the end of the working shift.

Size recycled asphalt pavement (RAP) utilized in the production of HMA prior to entering the mixer to produce a uniform and thoroughly mixed HMA. If there is evidence of the recycled asphalt pavement not breaking down during the heating and mixing of the HMA, immediately suspend the use of the RAP until Engineer

approves changes necessary to provide adequate RAP breakdown and mixing. After introducing the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator into the mixer, mix the HMA until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

#### 5-04.3(7) Spreading and Finishing

Lay the mixture upon an approved surface, spread, and strike off to the established grade and elevation. Provide HMA pavers complying with Section 5-04.3(3) to distribute the mixture. Unless Engineer directs otherwise, provide the nominal compacted layer depth to NOT exceed the following:

HMA Class	Course	Maximum Compacted Layer Depth (FT)
1 inch	NA	0.35
3/4 & 1/2 inch	Wearing	0.30
3/4 & 1/2 inch	Other	0.35
3/8 inch	NA	0.15

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one JMF is being utilized to produce HMA, place the material produced for each JMF using separate spreading and compacting equipment. Do NOT intermingle HMA produced from more than one JMF. During a work shift place each strip of HMA to a single JMF established for the class of HMA specified, unless there is a need to make an adjustment in the JMF.

#### 5-04.3(8) Aggregate Acceptance Prior to Incorporation in HMA

For HMA accepted by nonstatistical evaluation the aggregate properties of sand equivalent, uncompacted void content and fracture will be evaluated in accordance with Section 3-04. Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the Engineer's option.

#### 5-04.3(9) **HMA Mixture Acceptance**

Engineer will use nonstatistical, or commercial evaluation for determining acceptance of HMA.

Engineer will use nonstatistical evaluation for the HMA acceptance, unless Contract specifies Commercial Evaluation.

Engineer will use Commercial evaluation for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, paths, trails, temporary pavement, and pavement repair. Engineer will need to approve other nonstructural applications of HMA accepted by commercial evaluation. Sampling and testing of HMA accepted by commercial evaluation will be at the Engineer's option.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the Engineer's approval and may be made in accordance with this section.

#### 5-04.3(9)A **HMA Tolerances and Adjustments**

1. Job Mix Formula Tolerances - Provide mixture at the time of acceptance within the following tolerances:

For Asphalt Binder and Air Voids (Va), the acceptance limits are determined by adding the tolerances below to the approved JMF values. These values will also be the Upper Specification Limit (USL) and Lower Specification Limit (LSL) required in Section 1-06.2(2)D2.

Property	Non-Statistical Evaluation	Commercial Evaluation
Asphalt Binder	+/- 0.5%	+/- 0.7%
Air Voids, Va	2.5% min. and 5.5% max	N/A

For Aggregates in the mixture:

a. First, determine preliminary upper and lower acceptance limits by applying the following tolerances to the approved JMF.

Aggregate Percer Passing	nt Non-Statistical Evaluation	Commercial Evaluation
1", ¾", ½", and 3/8" sieve	s +/- 6%	+/- 8%
No. 4 sieve	+/-6%	+/- 8%
No. 8 Sieve	+/- 6%	+/-8%
No. 200 sieve	+/- 2.0%	+/- 3.0%

- b. Second, adjust the preliminary upper and lower acceptance limits determined from step (a) the minimum amount necessary so that none of the aggregate properties are outside the control points in Section 9-03.8(6). The resulting values will be the upper and lower acceptance limits for aggregates, as well as the USL and LSL required in Section 1-06.2(2)D2.
  - 2. Job Mix Formula Adjustments An adjustment to the aggregate gradation or asphalt binder content of the JMF requires Engineer's approval. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.
    - a. **Aggregates** 2 percent for the aggregate passing the  $1\frac{1}{2}$ , 1, 3/4", 1/2", 3/8", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. Provide the adjusted JMF within the range of the control points in Section 9-03.8(6).
    - b. **Asphalt Binder Con**tent The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content is 0.3 percent.

5-04.3(9)A Vacant 5-04.3(9)B Vacant

5-04.3(9)C Mixture Acceptance – Nonstatistical Evaluation

The City will evaluate the HMA mixture accepted by Nonstatistical Evaluation by dividing the HMA tonnage into lots.

## 5-04.3(9)C1 Mixture Nonstatistical Evaluation – Lots and Sublots

A lot is represented by randomly selected samples of the same mix design being tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot will be equal to one day's production or 800 tons, whichever is less; except, the final sublot will be a minimum of 400 tons and may be increased to 1200 tons.

Collectively evaluate all test results obtained from the acceptance samples from a given lot. If the Contractor requests a change to the JMF that is approved, the material produced after the change will be evaluated on the basis of the new JMF for the remaining sublots in the current lot and for acceptance of subsequent lots. For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Perform sampling and testing for evaluation on the frequency of one sample per sublot.

# 5-04.3(9)C2 Mixture Nonstatistical Evaluation Sampling

Obtain samples for acceptance testing when ordered by the Engineer. Sample the HMA mixture in the presence of the Engineer and in accordance with AASH-TO T 168. Take a minimum of three samples for each class of HMA placed on a project. If used in a structural application, test at least one of the three samples taken.

Sampling and testing HMA in a Structural application where quantities are less than 400 tons is at the Engineer's discretion.

For HMA used in a structural application and with a total project quantity less than 800 tons but more than 400 tons, preform a minimum of one acceptance test. In all cases, obtain a minimum of three samples at the point of acceptance. Test a minimum of one of the three samples for conformance to the JMF:

a. If the test results are found to be within specification requirements, additional testing will be at the Engineer's discretion.

# 5-04.3(9)C3 Mixture Nonstatistical Evaluation – Acceptance Testing

Testing of HMA for compliance of Va will be the City's option. If tested, compliance of Va will use WSDOT SOP 731.

Testing for compliance of asphalt binder content will be by WSDOT FOP for AASHTO T 308.

Testing for compliance of gradation will be by FOP for WAQTC T 27/T 11.

# 5-04.3(10) HMA Compaction Acceptance

Compact HMA mixture accepted by nonstatistical evaluation being used in traffic lanes; including lanes for intersections, ramps, truck climbing, weaving,

and speed change, and having a specified compacted course thickness greater than 0.10-foot, to a specified level of relative density. The specified level of relative density shall be a Composite Pay Factor (CPF) of not less than 0.75 when evaluated in accordance with Section 1-06.2, using a LSL of 92.0 (minimum of 92 percent of the maximum density). Use WSDOT FOP for AASHTO T 729 to determine maximum density. The specified level of density attained will be determined by the evaluation of the density of the pavement. Use WSDOT FOP for WAQTC TM 8 to determine the density of the pavement; except, Engineer will have discretion regarding gauge correlation using the nuclear density gauge and WSDOT SOP 736 when using cores to determine density.

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

If the City uses a nuclear density gauge to determine density, the City will use the test procedures FOP for WAQTC TM 8 and WSDOT SOP T 729 on the day the mix is placed and prior to opening to traffic.

Roadway cores for density may be obtained by either the City or the Contractor in accordance with WSDOT SOP 734. Provide minimum 4-inch core diameter, unless Engineer approves otherwise. The City will test Roadway cores in accordance with WSDOT FOP for AASHTO T 166.

If the Contract includes the Bid item "Roadway Core", obtain the cores in the presence of the Engineer on the same day the mix is placed and at Engineer designated locations. If the Contract does not include the Bid item "Roadway Core", then the City will obtain the cores.

For a lot in progress with a CPF less than 0.75, a new lot will begin at the Contractor's request after the Engineer is satisfied that material conforming to the Specifications can be produced.

Compact HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above on the basis of a test point evaluation of the compaction train. Perform the test point evaluation in accordance with instructions from the Engineer. Use the number of passes with an approved compaction train required to attain the maximum test point density on all subsequent paving.

Thoroughly compact HMA for preleveling. Compact HMA used for preleveling wheel rutting with a pneumatic tire roller unless Engineer approves otherwise.

## 5-04.3(10)A Test Results

For a sublot that has been tested with a nuclear density gauge that did not meet the minimum of 92 percent of the reference maximum density in a compaction lot with a CPF below 1.00 and thus subject to a price reduction or rejection, the Contractor may request that a core be used for determination of the relative density of the sublot. The relative density of the core will replace the relative density determined by the nuclear density gauge for the sublot and will be used for calculation of the CPF and acceptance of HMA compaction lot.

When City takes cores at the Contractor's request, the City must receive request by noon of the next workday after the Contractor is provided with nuclear density test results for the sublot. City will obtain core(s) from locations outside of wheel paths and as the Engineer determines.

Provide traffic control in accordance with Engineer's direction. Failure by the Contractor to provide the requested traffic control will result in forfeiture of the request for cores. If the CPF for the lot based on the results of the HMA cores is less than 1.00, the City will deduct the cost for the coring from any monies due or that may become due the Contractor under the Contract at the rate of \$200 per core. In addition, the cost of the traffic control will also be the Contractor's responsibility.

# 5-04.3(10)B HMA Compaction – General Compaction Requirements

Compact mixture only when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Compact areas inaccessible to large compaction equipment by other mechanical means. Remove and replace HMA that becomes loose, broken, contaminated, shows excess or deficiency of asphalt, or is in any way defective, with new hot mix. Immediately compact to conform to the surrounding area.

Provide type of rollers and their relative position in the compaction sequence to attain the specified densities. Operate rollers shall only in the static mode when the internal temperature of the mix is less than 175°F unless Engineer approves otherwise. Do NOT operate a roller, regardless of mix temperature, in a mode that results in checking or cracking of the mat. Only operate rollers in static mode on bridge decks.

## 5-04.3(10)C HMA Compaction - Cyclic Density

Low cyclic density areas are defined as spots or streaks in the pavement that are less than 90 percent of the theoretical maximum density. At the Engineer's discretion, the Engineer may evaluate the HMA pavement for low cyclic density and when doing so will follow WSDOT SOP 733. A \$500 Cyclic Density Price Adjustment will be assessed for any 500-foot section with two or more density readings below 90 percent of the theoretical maximum density.

5-04.3(10)D Vacant 5-04.3(10)E HMA Nonstatistical Compaction

# 5-04.3(10)E1 HMA Nonstatistical Compaction – Lots and Sublots

City will perform acceptance testing on HMA compaction that is accepted by nonstatistical evaluation by dividing the project into compaction lots.

A lot is represented by randomly selected samples of the same mix design that will be tested for acceptance. A lot is defined as the total quantity of material or work produced for each Job Mix Formula placed. Only one lot per JMF is expected. A sublot is equal to one day's production or 400 tons, whichever is less, except; the final sublot will be a minimum of 200 tons and may be increased to 800 tons. Testing for compaction will be at the rate of 5 tests per sublot per WSDOT T 738.

Engineer will determine the sublot locations within each density lot. For a lot in progress with a CPF less than 0.75, Contractor may request a new lot begin after the Engineer is satisfied that material conforming to the Specifications can be produced.

Compact HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above on the basis of a test point evaluation of the compaction train. Perform the test point evaluation in accordance with instructions from the Engineer. Use the number of passes with an approved compaction train required to attain the maximum test point density on all subsequent paving.

Thoroughly compact HMA for preleveling. Compact HMA used to prelevel wheel ruts with a pneumatic tire roller unless Engineer approves.

#### 5-04.3(10)E2 **HMA Compaction Nonstatistical Evaluation – Acceptance Testing**

Engineer will randomly select the location of the HMA compaction acceptance tests from within each sublot, with one test per sublot.

#### 5-04.3(10)E3 **HMA Nonstatistical Compaction – Price Adjustments**

For each compaction lot with one or two sublots where all sublots attain a relative density that is 92 percent of the reference maximum density the HMA, City will accept at the unit Contract price with no further evaluation. If a sublot does not attain a relative density that is 92 percent of the reference maximum density, the City will evaluate the lot in accordance with Section 1-06.2 to determine the appropriate CPF, with the maximum CPF being 1.00. However, lots with a calculated CPF in excess of 1.00 will be used to offset lots with CPF values below 1.00 but greater than 0.90. Lots with CPF lower than 0.90 will be evaluated for compliance per 5-04.3(11). Additional testing by either a nuclear moisture-density gauge or cores will be completed as required to provide a minimum of three tests for evaluation.

For compaction below the required 92% a Non-Conforming Compaction Factor (NCCF) will be determined. The NCCF equals the algebraic difference of CPF minus 1.00 multiplied by 40 percent. The Compaction Price Adjustment will be calculated as the product of CPF, the quantity of HMA in the compaction control lot in tons, and the unit Contract price per ton of mix.

# 5-04.3(11) Reject Work

## 5-04.3(11)A Reject Work General

City will reject defective or non-conforming Work. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Engineer has sole discretion to determine acceptability of such alternative proposals. Submit corrective action proposal for Engineer approval for rejected HMA not conforming to the requirements in Section 1-06.2(2) and this specification.

# 5-04.3(11)B Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

## 5-04.3(11)C Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Do NOT incorporate material rejected before placement into the pavement. Remove any rejected section of Roadway.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests testing of the rejected material. If the Contractor elects to have the rejected material tested, obtain and test a minimum of three representative samples. Acceptance of rejected material will be based on conformance with the nonstatistical acceptance Specification. If the CPF for the rejected material is less than 0.75, no payment will be made for the rejected material and Contractor will bear the cost of sampling and testing. If the CPF is greater than or equal to 0.75, the City will bear the cost of sampling and testing. If the material is rejected before placement and the CPF is greater than or equal to 0.75. compensation for the rejected material will be at a CPF of 0.75. If rejection occurs after placement and the CPF is greater than or equal to 0.75, compensation for the rejected material will be at the calculated CPF with an addition of 25 percent of the unit Contract price added for the cost of removal and disposal.

# 5-04.3(11)D Rejection - A Partial Sublot

In addition to the random acceptance sampling and testing, the Engineer may also isolate from a normal sublot any material that is suspected of being defective in relative density, gradation or asphalt binder content. Such isolated material will not include an original sample location. Engineer will obtain a minimum of three random samples of the suspect material to test. The material will then be statistically evaluated as an independent lot in accordance with Section 1-06.2(2).

### 5-04.3(11)E Rejection - An Entire Sublot

Engineer may reject an entire sublot suspected of being defective. When a sublot is rejected, obtain a minimum of two additional random samples from this sublot. Evaluate these additional samples and the original sublot as an independent lot in accordance with Section 1-06.2(2).

# 5-04.3(11)F Rejection - A Lot in Progress

Shut down operations and do NOT resume HMA placement until such time as the Engineer is satisfied that material conforming to the Specifications can be produced:

- a. When the Composite Pay Factor (CPF) of a lot in progress drops below 1.00 and the Contractor is taking no corrective action, or
- b. When the Pay Factor (PF) for any constituent of a lot in progress drops below 0.95 and the Contractor is taking no corrective action, or
- c. When either the PFi for any constituent or the CPF of a lot in progress is less than 0.75.

# 5-04.3(11)G Rejection - An Entire Lot (Mixture or Compaction)

Engineer will reject an entire lot with a CPF of less than 0.75.

## 5-04.3(12) Joints

# 5-04.3(12)A HMA Joints

# 5-04.3(12)A1 Transverse Joints

Conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When resuming the Work, cut back the previously compacted mixture to produce a slightly beveled edge for the full thickness of the course.

Construct a 20H:1V temporary wedge of HMA where a transverse joint, as a result of paving or planing, is open to traffic. Separate the HMA in the temporary wedge from the permanent HMA by strips of heavy wrapping paper or other methods Engineer approves. Remove the wrapping paper and the joint. Trim to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

Remove and dispose of the cut away material and place new mix against the cut. Use rollers or tamping irons to seal the joint.

# 5-04.3(12)A2 Longitudinal Joints

Offset the longitudinal joint in any one course from the course immediately below by not more than 6 inches nor less than 2 inches. Locate all wearing course longitudinal joints at a lane line or an edge line of the Traveled Way. Construct a notched wedge joint along all longitudinal joints in the wearing surface of new HMA unless Engineer directs otherwise. Provide a notched wedge joint having a vertical edge of not less than the maximum aggregate size or more than 1/2 of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. Uniformly compact the sloped portion of the HMA notched wedge joint.

# 5-04.3(12)B Bridge Paving Joint Seals 5-04.3(12)B1 HMA Sawcut and Seal

Prior to placing HMA on the bridge deck, establish sawcut alignment points at both ends of the bridge paving joint seals to be placed at the bridge ends, and at interior joints within the bridge deck when and where shown in the Plans. Establish the sawcut alignment points in a manner that they remain functional for use in aligning the sawcut after placing the overlay.

Submit a Type 1 Working Drawing consisting of the sealant manufacturer's application procedure.

Construct the bridge paving joint seal as specified in the Plans and in accordance with the detail shown in the Standard Plans. Construct the sawcut in accordance with the detail shown in the Standard Plan. Construct the sawcut in accordance with Section 5-05.3(8)B and the manufacturer's application procedure.

## 5-04.3(12)B2 Paved Panel Joint Seal

Construct the paved panel joint seal in accordance with the requirements specified in section 5-04.3(12)B1 and the following requirement:

a. Clean and seal the existing joint between concrete panels in accordance with Section 5-01.3(8) and the details shown in the Standard Plans.

## 5-04.3(13) Surface Smoothness

Provide the completed surface of all courses having uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. Provide wearing course completed surface that does NOT vary more than 1/8 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to the centerline. Provide the transverse slope of the wearing course completed surface that does NOT vary more than 1/4 inch in 10 feet from the rate of transverse slope shown in the Plans.

When deviations in excess of the above tolerances are found that result from a high place in the HMA, correct the pavement surface using one of the following methods:

- a. Removal of material from high places by grinding with an approved grinding machine, or
- b. Removal and replacement of the wearing course of HMA, or
- c. By other method approved by the Engineer.

Carry out defect correction until there are no deviations anywhere greater than the allowable tolerances.

City will accept with a price adjustment deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results. The Engineer will deduct from monies due or that may become due to the Contractor the sum of \$500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

When utility appurtenances such as manhole covers and valve boxes are located in the traveled way, adjust the utility appurtenances to the finished grade prior to paving. If Contractor requests, Engineer may waive this requirement or when the adjustment details provided in the project plan or specifications call for utility appurtenance adjustments after the completion of paving.

Include utility appurtenance adjustment discussions in the Pre-Paving planning (5-04.3(14)B3). Submit a written request to waive this requirement to the Engineer prior to the start of paving.

## 5-04.3(14) Planing (Milling) Bituminous Pavement

Engineer must approve the planing plan. Hold, with Engineer, a pre-planing meeting prior to the start of any planing. See Section 5-04.3(14)B2 for information on planing submittals.

Refer to the Plans for locations of existing surfacing being planed.

Where planing an existing pavement is specified in the Contract Documents, remove existing surfacing material and reshape the surface to remove

irregularities. The finished product must be a prepared surface acceptable for receiving an HMA overlay.

Use the cold milling method for planing unless otherwise specified in the Contract. Do NOT use the planer on the final wearing course of new HMA.

Conduct planing operations in a manner that does not tear, break, burn, or otherwise damage the surface to remain. The finished planed surface must be slightly grooved or roughened and must be free from gouges, deep grooves, ridges, or other imperfections. Repair any damage to the surface planing equipment makes using an Engineer approved method.

Repair or replace any metal castings and other surface improvements damaged by planing as confirmed by the Engineer.

Plane a tapered wedge cut longitudinally along curb lines sufficient to provide a minimum of 4 inches of curb reveal after placement and compaction of the final wearing course. The dimensions of the wedge must be as shown on the planing plan or as specified by the Engineer.

Plane a tapered wedge cut at transitions to adjoining pavement surfaces (meet lines) where butt joints are shown on the Plans. Cut butt joints in a straight line with vertical faces two inches or more in height, producing a smooth transition to the existing adjoining pavement.

After planing is complete, sweep and clean planed surface, and if Contract requires, patch and pre-level.

The Engineer may direct additional depth planing. Before performing this additional depth planing. Conduct a hidden metal in pavement detection survey as specified in Section 5-04.3(14)A.

# 5-04.3(14)A Pre-Planing Metal Detection Check

Before starting pavement planing and before any additional depth planing required by the Engineer, conduct a physical survey of existing pavement being planed with equipment that can identify hidden metal objects.

Promptly notify Engineer should such metal be identified.

See Section 1-07.16(1) regarding the protection of survey monumentation that may be hidden in pavement.

The Contractor is solely responsible for any damage to equipment resulting from the Contractor's failure to conduct a pre-planing metal detection survey, or from the Contractor's failure to notify the Engineer of any hidden metal that is detected.

# 5-04.3(14)B Paving and Planing Under Traffic 5-04.3(14)B1 General

In addition the requirements of Section 1-07.23 and the traffic controls required in Section 1-10, and unless the Contract specifies otherwise or the Engineer approves, comply with the following:

- 1. Intersections:
  - a. Keep intersections open to traffic at all times, except when paving or planing operations through an intersection requires closure. Keep such closure to the minimum time required to place and compact the HMA mixture or plane as appropriate. For paving, schedule such closure to individual lanes or portions thereof that

accommodates the required the traffic volumes and schedule of traffic volumes noted in the approved traffic control plan. Schedule work so that adjacent intersections are not impacted at the same time and comply with the Traffic Engineer's traffic control restrictions. Address each individual intersection closure or partial closure in the traffic control plan that was submitted to and accepted by the Engineer in accordance with Section 1-10.2(2).

- b. When planing or paving and related construction must occur in an intersection, consider scheduling and sequencing such work into quarters of the intersection, or half or more of an intersection with side street detours. Be prepared to sequence the work to individual lanes or portions thereof.
- c. Should closure of the intersection in its entirety be necessary keep such closure to the minimum time required to place and compact the HMA mixture, plane, remove asphalt, tack coat, and as needed.
- d. Any work in an intersection requires advance warning in both signage and a number of Working Days advance notice as determined by the Engineer, to alert traffic and emergency services of the intersection closure or partial closure.
- e. Allow new compacted HMA asphalt to cool to ambient temperature before allowing any traffic on it. Traffic is not allowed on newly placed asphalt until obtaining Engineer approval.
- 2. Comply with Section 8-23 for temporary centerline marking, post-paving temporary marking, temporary stop bars, and maintaining temporary pavement marking.
- 3. Comply with Section 8-22 for permanent pavement marking.

# 5-04.3(14)B2 Submittals – Planing Plan and HMA Paving Plan

Submit a separate planing plan and a separate paving plan to the Engineer at least five Working Days in advance of each operation's activity start date. These plans must show the coordination of moving operation and traffic control as they will be discussed at the pre-planing briefing and pre-paving briefing. When requested by the Engineer, provide each operation's traffic control plan on  $24 \times 36$  inch or larger size Drawings at a scale of 1 inch equals 20 feet showing both the area of operation and sufficient detail of traffic beyond the area of operation that may require detouring traffic. The scale on the Shop Drawings may be changed if the Engineer agrees sufficient detail is shown.

The planing operation and the paving operation include, but are not limited to, metal detection, removal of asphalt and temporary asphalt of any kind, tack coat and drying, staging of supply trucks, paving trains, rolling, scheduling, and as may be discussed at the briefing.

When intersections will be partially or totally blocked, provide adequately sized and noticeable signage alerting traffic of closures to come a minimum two Working Days in advance. Show on the

traffic control plan the stationing of peace officers when signalization is or may be countermanded' Also show areas flaggers positioning. Include, at a minimum, on the planing and paving plan:

- A copy of the accepted traffic control plan, refer to Section 1-10.2(2), detailing each day's traffic control as it relates to the specific requirements of that day's planing and paving. Briefly describe the traffic control sequencing consistent with the proposed planing and paving sequence, and scheduling of placement of temporary pavement markings and channelizing devices after each day's planing, and paving.
- 2. A copy of each intersection's traffic control plan.
- 3. Haul routes from Supplier facilities and locations of temporary parking and staging areas, including return routes. Describe the complete round trip as it relates to the sequencing of paving operations.
- 4. Names and locations of HMA Supplier facilities to be used.
- 5. List of all equipment to be used for paving.
- 6. List of personnel and associated job classification assigned to each piece of paving equipment.
- 7. Description (geometric or narrative) of the planing and paving sequence schedule and intended area of planing and of paving for each day's work, the directions of proposed planing and paving, sequence of adjacent lane paving, sequence of skipped lane paving, intersection planing and paving scheduling and sequencing, and making of proposed timely notifications and coordination. Also show HMA joints relative to the final pavement marking lane lines.
- 8. Names, job titles, and contact information for field, office, and plant supervisory personnel.
- 9. A copy of the approved Mix Designs.
- 10. Tonnage of HMA to be placed each day.
- 11. Approximate times and days for starting and ending daily operations.

# 5-04.3(14)B3 Pre-Paving and Pre-Planing Briefing

At least two Working Days before the first paving operation and the first planing operation, or as scheduled by the Engineer for future paving and planing operations to ensure the Contractor has adequately prepared for notifying and coordinating as required in the Contract, the Contractor must be prepared to discuss that day's operations as they relate to other entities and to public safety and convenience, including driveway and business access, garbage truck operations, transit operations and working around energized overhead wires, school and nursing home and hospital and other accesses, other contractors who may be operating in the area, pedestrian and bicycle traffic, and emergency services. Contractor, and Subcontractors that may be part of that day's operations must meet with the Engineer and discuss the proposed operation as it relates to the submitted planing plan and paving plan, approved traffic control plan, and public convenience and safety. Such discussion includes, but is not limited to:

- 1. General for both Paving Plan and for Planing Plan:
  - a. The actual times of starting and ending daily operations.
  - b. In intersections, how to break up the intersection, and address traffic control and signalization for that operation, including use of peace officers.
  - c. The sequencing and scheduling of paving operations and of planing operations, as applicable, as it relates to traffic control, to public convenience and safety, and to other con-tractors who may operate in the Project Site.
  - d. Notifications required of Contractor activities, and coordinating with other entities and the public as necessary.
  - e. Description of the sequencing of installation and types of temporary pavement markings as it relates to planning and to paving.
  - f. Description of the sequencing of installation of, and the removal of, temporary pavement patch material around exposed castings and as may be needed
  - g. Description of procedures and equipment to identify hidden metal in the pavement, such as survey monumentation, monitoring wells, street car rail, and castings, before planning, refer to Section 5-04.3(14)B2.
  - h. Description of how flaggers will be coordinated with the planing, paving, and related operations.
  - i. Description of sequencing of traffic controls for the process of rigid pavement base repairs.
  - Other items the Engineer deems necessary to address.
- 5. Paving additional topics:
  - a. When to start applying tack and coordinating with paving.
  - b. Types of equipment and numbers of each type equipment to be used. If more pieces of equipment than personnel are proposed, describe the sequencing of the personnel operating the types of equipment. Discuss the continuance of operator personnel for each type equipment as it relates to meeting Specification requirements.
  - c. Number of JMFs to be placed, and if more than one JMF how the Contractor will ensure different JMFs are distinguished, how pavers and MTVs are distinguished if more than one JMF is being placed at the time, and how pavers and MTVs are cleaned so that one JMF does not adversely influence the other JMF.
  - d. Description of contingency plans for that day's operations such as equipment breakdown, rain out, and Supplier shutdown of operations.
  - e. Number of sublots to be placed, sequencing of density testing, and other sampling and testing.

# 5-04.3(15) Sealing Pavement Surfaces

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Section 5-02.3. Apply the fog seal prior to opening to traffic unless Engineer approves otherwise.

# 5-04.3(16) HMA Road Approaches

Construct HMA approaches at the locations shown in the Plans or where staked by the Engineer. Perform the Work in accordance with Section 5-04.

## 5-04.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 5-04.5 Payment

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

Supplement Division 5 of the Standard Specifications by adding the following:

# 5-06 PAVEMENT PATCHING (\*\*\*\*\*\*)

# 5-06.1 Description

This Work shall consist of the reconstruction and patching of trenches and other excavations in paved streets and other paved areas.

## 5-06.2 Materials

Provide materials conforming to the requirements specified for the materials in Sections 5-04 & 5-05 of the Standard Specifications except as modified by these Special Provisions.

For HMA pavement patching provide HMA CL 1/2", PG 64-22 as specified in Section 5-04 of the Standard Specifications.

Provide asphalt for temporary pavement patch as either: cold mix asphalt (MC 250) per Section 9-02 of the Standard Specifications or hot mix asphalt (HMA CL 1/2", PG 64-22). Mineral aggregate of MC 250 shall meet the same requirements as the aggregates used in HMA CL 1/2", PG 64-22.

For cement concrete base pavement patching provide high early strength cement concrete. Provide minimum 4000 psi mix having minimum 3000 psi compressive strength after curing time of three days.

Provide crushed surfacing top course used for pavement patching conforming to the requirements of 9-03.9(3) of the Standard Specifications.

## 5-06.3 Construction Requirements

### 5-06.3(1) General

Schedule pavement patching to accommodate the demands of traffic and perform as rapidly as possible to provide maximum safety and convenience to public traffic.

Placing and compact the trench backfill and the preparation and compaction of the subgrade in accordance with the various applicable sections of the Standard Specifications except as modified by these Special Provisions.

Before the pavement patch is to be constructed saw cut the pavement so that the marginal edges of the patch will form a rectangular shape with straight edges and vertical faces.

Provide signs, barricades, lights and other warning devices in accordance with the requirements of the "Manual on Uniform Traffic Control Devices" and they maintain 24hours a day until the patching work is completed and ready for traffic.

Complete subgrade compaction prior to the required patching. Compact subgrade to 95-percent as determined by the ASTM D2922 (nuclear method).

#### 5-06.3(2) **Cement Concrete Pavement Patch**

Place cement concrete pavement in accordance with 5-05.3 of the Standard Specifications and these Special Provisions after the Crushed Surfacing Top Course subgrade for the payement has been constructed and compacted to line and grade.

Perform all Work accordance with Section 5-05 of the Standard Specifications, except as modified by these Special Provisions and Standard Drawing No. 326.

Hand screeding and float finishing of cement concrete pavement patch is allowable.

Contractor will not be required to cut cores in accordance with 5-05.3(7) of the Standard Specifications.

Form transverse construction joints to match existing pavement transverse joints using a suitable power driven concrete saw.

Place cement concrete pavement directly against the bare sawcut vertical face of the adjacent concrete pavement.

Finish surface using broom in direction perpendicular to the centerline with a fiber brush.

Date stamping pavement will not be required.

Cure cement concrete pavement in accordance with 5-05.3(13) of the Standard Specifications.

Cement concrete pavement will be measured and paid for by the square yard of completed pavement patch.

### **Cement Concrete Pavement Resurfaced with HMA**

Patch streets having cement concrete pavements surfaced with HMA as shown on Standard Drawing No. 326.

The thickness shall be one inch thicker than the existing concrete base or six inch, whichever is greater. The top surface of the concrete patch shall match the top surface of the existing concrete base; in no case shall the top of the concrete be higher than the top of the existing concrete base. Brush finishing will not be required. Joints shall be placed to match existing or as directed by the Engineer.

HMA plant mix shall not be placed until three days after the cement concrete base has been placed or otherwise permitted by the Engineer. The HMA plant mix shall not be placed until the concrete base has received a tack coat of CRS-2 at a rate of 0.12 to 0.20-gallons per square yard. The edges of the existing asphalt and castings shall also be painted with the tack coat. The HMA pavement shall then be placed, leveled, and compacted to conform to the surface of the existing HMA. Immediately thereafter, all joints between the new and original asphalt pavement shall be painted with CSS-1 asphalt emulsion and covered with dry sand before the asphalt solidifies.

Asphalt shall be compacted to 92-percent of maximum density as determined by WSDOT Test Method 705.

#### 5-06.3(4) **HMA** on Granular Base

After the Crushed Surfacing Top Course subgrade has been leveled and compacted, HMA CL 1/2", PG 64-22 shall be placed to a thickness of one inch greater than the existing asphalt pavement depth or to a minimum of three inches, whichever is greater. Asphalt shall be compacted to 92-percent of maximum density as determined by WSDOT Test Method 705.

#### 5-06.3(5) **Untreated Roadway Surfaces**

Existing crushed rock, gravel, and oil mat streets shall be restored with Crushed Surfacing Top Course to a compacted depth of four inches within the neat lines of the trench. Crushed surfacing shall be mixed, placed, spread and shaped in accordance with the requirements of Section 4-04 of the Standard Specifications.

#### 5-06.3(6) **Temporary Pavement Patching**

The Contractor shall furnish, place and maintain temporary pavement patching as shown on the Plans and at locations as directed by the Engineer, until such time as a permanent patch of permanent paving can be made.

Provide a temporary patch as required to reopen roadway during construction as that withstands existing traffic loads and volumes. Options include, and are not limited to, cold mix asphalt (MC 250), hot mix asphalt (HMA CL 1/2", PG 64-22), or secured steel roadway plates.

Provide temporary asphalt patching where roadway or walk is needed for vehicular or pedestrian traffic, during the construction period, until permanent pavement and sidewalks can be constructed.

In the event that the temporary surface subsides after the initial placement, apply additional MC 250 or HMA (as approved by the Engineer) as necessary to maintain the surface.

Stockpile of plant mix and crushed surfacing for temporary patching shall be provided on the site by the Contractor.

Prior to final restoration of the pavement, the Contractor shall be responsible for removing and disposing of temporary pavement patching materials.

#### 5-06.3(7) **Incidental Pavement Patching**

Incidental pavement patching shall be done only at the direction of the Engineer for patching and restoring areas between the back of new sidewalks and adjacent asphalt driveways, paving ramps at the ends of sidewalks, and gutters that are adjusted to grade.

Asphalt for incidental pavement patching shall be HMA CL 1/2", PG 64-22.

#### 5-06.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 5-06.5 Payment

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# DIVISION 7 – DRAINAGE STRUCTURES, STORM SEWERS, SANITARY SEWERS, WATER MAINS, AND CONDUITS

### 7-02 NOT USED

## 7-04 STORM SEWERS

# 7-04.1 Description

Revise the first paragraph in 7-04.1 to read as follows:

This Work consists of constructing storm sewers to lines and grades as shown on the Plans and in accordance with COE Standard Drawings, the Standard Specifications and these Special Provisions.

Supplement 7-04.1 as follows:

7-04.1(1) Submittals (\*\*\*\*\*)

Provide Type 2 Working Drawings for all materials and Standard Plans.

# 7-04.2 Materials

Delete the first and second paragraphs in 7-04.2 and substitute the following:

Materials shall meet the requirements of the following sections:

Reinforced Concrete Storm Sewer	9-05.7(2)	Standard Specifications
Pipe		
Concrete Storm Sewer	9-05.7(3)	Standard Specifications
Pipe Joints		
Solid Wall PVC Storm Sewer Pipe	9-05.12(1)	Special Provisions
& Joints		
Profile Wall PVC Storm Sewer Pipe	9-05.12(2)	Standard Specifications
& Joints		
Corrugated Polyethylene Storm	9-05.20	Standard Specifications
Sewer Pipe & Joints		
Steel Rib Reinforced Polyethylene St	torm Sewer Pip	e 9-05.22
Standard Specifications		
High-Density Polyethylene (HDPE) P	Pipe 9-05.2	23 Standard
Specifications		
Polypropylene Storm Sewer Pipe	9-05.2	24 Standard
Specifications		

Revise the last paragraph in 7-04.2 to read as follows:

When schedule A or B storm sewer pipe is specified in the Plans, provide the specified schedule and diameter of either concrete, PVC, or PE/PP materials shown in the Storm Sewer Pipe Schedules Table.

Contact the Olympia Service Center Materials Laboratory to determine if joints have been approved for pipe diameters larger than those listed.

On the web at: http://www.wsdot.wa.gov/biz/mats/QPL/QPI.cfm

Or by mail at:

P.O. Box 167 Olympia, WA 98507-0167 (360) 709-5442

## 7-04.4 Measurement

Delete the first paragraph of 7-04.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### 7-04.5 **Payment**

Delete all paragraphs in 7-04.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 7-05 MANHOLES, INLETS, AND CATCH BASINS

#### 7-05.1 Description

Revise the first paragraph in 7-05.1 to read as follows:

This Work consists of constructing manholes, inlets, drywells, and catch basins and connecting to existing Structures of the types and sizes designated in accordance with the Plans, these Special Provisions, the Specifications, and the COE Standard Drawings, in conformity with the lines and grades staked.

Further supplement 7-05.1 as follows:

#### 7-05.1(1) **Submittals** (\*\*\*\*\*)

Provide Type 2 Working Drawings for all materials and Standard Plans.

#### 7-05.2 Materials

Supplement 7-05.2 by adding the following at the end of the material list:

Mortar, nonshrink	9-20.3(2)	Standard Specifications
Commercial Concrete	6-02.3(2)B	Standard Specifications
Watertight Connection Boots	9-05.30	Special Provisions
Flexible Couplings	9-05.40	Special Provisions
Polypropylene Manhole Steps	9-05.64	Special Provisions
& Hand Holds		
Polypropylene Manhole Ladder	9-05.66	Special Provisions

# 7-05.3 Construction Requirements

Supplement 7-05.3 by adding the following after the last sentence of the third paragraph:

Install PAMREX, East Jordan Iron Works, or equal, hinged manhole frame and cover in accordance with manufacturer recommendations and applicable City standards and details.

Coordinate manhole cover and frame hinge location with manhole steps and traffic lanes. Hinge orientation to be determined during the shop drawing review of precast manhole structures.

Delete the tenth paragraph in 7-05.3.

Revise the eleventh paragraph in 7-05.3 to read as follows:

Provide Kor-N-Seal, or equal, watertight flexible pipe to manhole connectors for pipes up to 48-inch diameter connecting to new sanitary sewer manholes. Place no pipe joint in PVC or HDPE pipe within 10-feet of the outside face of the manhole.

Revise the last sentence in the sixteenth paragraph in 7-05.3 to read as follows:

Provide manholes, inlets, and catch basins that upon final acceptance of the Work conforms to the following COE Standard Drawings requirements:

Manholes No. 605A, 605B and 605C as applicable.

2. Inlets No. 401

3. Catch Basins No. 402, 403 and 404 as applicable.

Revise the last paragraph to read:

See Sections 7-05.3(3) and 7-08 for pipe connection requirements.

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

Delete both paragraphs of 7-05.3(1) and substitute the following:

Adjust manholes, catch basins and other structures to final grade after completing pavement operations. Carefully re-establish the center of each structure from Contractor's previously established references.

Cut pavement in neat circle having a minimum diameter of 2-feet beyond the casting cover. Remove pavement and base material, maintaining the neat circle, to permit casting and frame removal. Adjust casting and frame to proper grade.

Place cast iron frame on concrete blocks or concrete adjusting rings and wedge up to the desired grade using plastic wedges. Wood or metal wedges are not allowed. The Backfill around finished casting frame to within 1-1/2 inches of finished pavement surface using commercial concrete.

After concrete has set a full 24-hours, paint the edges of the asphalt concrete pavement and the outer edge of the casting with hot asphalt cement. Place hot asphalt concrete to match finished pavement surface and compact with hand tampers and a patching roller. Asphalt concrete and cement concrete shall be considered incidental to the unit price of the structure being adjusted.

Match the new patch with existing paved surface for texture, density, and uniformity of grade. Carefully paint the joint between the patch and the existing pavement shall then be carefully painted with hot asphalt cement or asphalt emulsion and immediately cover with dry paving sand before the asphalt cement solidifies.

Thoroughly mortar and plaster the inside throat of the structure.

### 7-05.3(3) Connections to Existing Manholes

Delete all three paragraphs of 7-05.3(3) and substitute the following:

Verify existing manhole rim and invert elevations prior to construction. Provide verification documentation by means of a Submittal to the Engineer for approval. Submittal shall be in accordance with 1-05.3 of these Special Provisions. Immediately bring discrepancies in invert elevations to the attention of the Engineer.

Unless specified otherwise, match the new connection pipe crown elevation to the existing pipe or pipe crown elevation. Rechannel the existing manhole in accordance with COE Standard Drawing 605A to provide a flow transition free from rough, jagged or protruding edges that could catch debris.

Use safe and effective construction methods to prevent existing manhole from moving or tipping during excavation to make new connection.

Keep the manhole in operation at all times and take necessary precautions to prevent debris or other material from entering the sewer, including a tight pipeline bypass through the existing channel, if required.

Core drill for pipe connections less than 28-inch O.D. Line drill or wall saw an opening for pipe connection greater than 28-inch O.D.to accommodate the size of pipe to be inserted. Interconnect drilled holes where line drilling is the method used. Use a small core drill to accomplish line drilling. Jackhammer or rotary hammer shall not be used. For line drilling provide minimum 1-inch and maximum 2-inch clearance around the circumference of the pipe. Core drill opening to accept a watertight flexible pipe to manhole connection in accordance with manufacturer's recommendations. Place upstream pipes, except PVC and HDPE pipe, penetrating the manhole walls with the bell facing out and snug against the outside wall of the

structure as the angle of penetration allows. Provide a flexible joint within 1/2 of a pipe diameter or 12-inches, whichever is greater for pipe, except PVC and HDPE pipe, leaving or entering manholes.

Place pipes entering or leaving the manhole on firmly compacted bedding. Take particular care in compacting bedding within the area of the manhole excavation that is normally deeper than the sewer trench. Take special care to ensure the annual opening around each pipe entering the manhole is completely and firmly rammed full of non-shrink grout to ensure water tightness. Non-shrink grout shall conform to requirements of 9-03.20.3(2) of the Standard Specifications.

Provide a watertight flexible pipe to manhole connector for pipe diameters less than or equal to 24-inches for PVC or HDPE pipes connecting to manhole. Place no PVC or HDPE pipe joint within 10-feet of the outside face of the manhole.

#### **Drop Manhole Connections** 7-05.3(4)

Delete the first paragraph in 7-05.3(4) and substitute the following:

Construct outside drop connections where shown on Plans in accordance with these Special Provisions and 7-04, 7-05, and 7-17 of the Standard Specifications and COE Standard Drawing No. 608.

Construct inside drop connections where shown on the Plans, or as approved by Engineer, in 54-inch diameter manholes or larger in accordance with these Special Provisions and 7-04, 7-05, and 7-17 of the Standard Specifications and COE Standard Drawing No. 609.

Provide factory installed holes for drop connections for new manholes and core drill holes for existing manholes. Impact tools shall not be allowed for making holes in manhole walls.

Supplement 7-05.3 by adding the following:

#### Furnish and Install Solid Lid for Catch Basins 7-05.3(5) (\*\*\*\*\*)

Provide new solid lids on existing catch basins where shown on the Plans. Provide solid lids conforming to 9-05.15 of the Standard Specifications, 9-05.15(1) of these Special Provisions, and to COE Standard Drawing No. 406 and 410 for Type 1 and 1-L Catch Basins and COE Standard Drawing 611 for Type 2 Catch Basins.

#### 7-05.4 Measurement

Delete all paragraphs of 7-05.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### 7-05.5 Payment

Delete all paragraphs of 7-05.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

## 7-08 GENERAL PIPE INSTALLATION REQUIREMENTS

# 7-08.1 Description

Further supplement 7-08.1 as follows:

#### 7-08.1(1) **Submittals** (\*\*\*\*\*)

Provide Type 2 Working Drawings for all materials and Standard Plans.

Provide Type 3E Working Drawings for dewatering plans, if any.

#### 7-08.2 Materials

Delete material items listed in 7-08.2 and substitute the following:

Provide materials meeting the following requirements:

Foundation Material Class A or B	9-03.17	Standard Specifications
Gravel Borrow	9-03.14(1)	Standard Specifications
Controlled Density Fill	2-09.3(1)É	Special Provisions
Crushed Surfacing Base Course	9-03.9(3)	Standard Specifications

#### 7-08.3 **Construction Requirements**

#### **Excavation and Preparation of Trench** 7-08.3(1)

#### 7-08.3(1)A **Trenches**

Revise the second paragraph in 7-08.3(1)A and to read as follows:

Excavate trench in accordance with COE Standard Drawing No 614.

Delete the second sentence in the third paragraph in 7-08.3(1)A and substitute the following:

Contractor may excavate above the top of the pipe zone only as wide as necessary to meet OSHA requirements.

#### **Bedding the Pipe** 7-08.3(1)C

Delete the second and third paragraphs in 7-08.3(1)C and substitute the following:

Provide pipe zone bedding in accordance with COE Standard Drawing 614 and 615.

If the Engineer determines the material existing in the trench bottom is satisfactory for bedding the pipe, then the bedding material specified in the COE Standard Drawing 615 is not required, provided the existing material is loosened, regraded, and compacted to form a dense, unyielding base.

Supplement 7-08.3(1) by adding the following:

#### 7-08.3(1)D **Trench Dewatering** (\*\*\*\*\*)

This section specifies the definition, responsibilities and execution for dewatering associated with trench excavation for pipes, manholes, catch basins, cleanouts, side sewers and other buried utility work. Implement trench dewatering measures where necessary or directed by the Engineer. Implementation shall include, but not be limited to, the design, furnishing, installation, operation, maintenance, monitoring, reporting and removal of dewatering systems to achieve proper completion of Work performed under this Contract.

Prevent the flow of surface water runoff into the trench excavation. Control surface water and other erosion control measures associated the Work in accordance with 8-01 of the Standard Specifications and modified in these Special Provisions.

Maintain groundwater level at or below the bottom of the excavation in all Work areas during excavation, foundation preparation, pipe and structure installation and backfilling. Trench dewatering shall sufficiently control groundwater to prevent softening of the bottom of the excavations or formation of "quick" conditions or "boils" during excavation. Use gravel or non-moisture sensitive trench backfill in areas encountering groundwater. If foundation soils are disturbed or oversaturated with water, then over excavate and replace the affected areas with suitable fill at no additional cost to the Owner. Upon completion of dewatering operations, restore the normal water table to its natural level in such a manner as to not disturb the pipe. its foundation and structures. Contractor shall be solely responsible to control the rate and effect of the dewatering in a manner to avoid all objectionable settlement and subsidence.

Direct discharge flow from trench dewatering to a nearby sewer or storm drain system unless otherwise directed by the Engineer, Obtain, at no cost, a Discharge Authorization Permit from the City prior to discharging trench dewatering flows into the City sewer or storm drain system. Control groundwater by trench dewatering systems designed and operated to minimize turbidity of the discharged flow and to prevent removal of the natural soils or imported fill.

Soils data for use in planning the dewatering system is available from the Soil Boring Logs in Appendix A or the Contractor may perform its own soils investigation. Contractor shall be responsible for cost of additional investigative work Contractor requires for designing the dewatering system. Plan and implement trench dewatering systems using accepted and professional methods of design and engineering consistent with the best modern practice. Trench dewatering systems shall be comprised of gravel-lined sumps, dewatering pumps, piping and conveyance components necessary for complete and reliable function.

Before dewatering operations begin, the Contractor shall have available on the Work site sufficient pumping equipment, or other machinery, or both, to assure maintaining continuous operation of the trench dewatering system. Supply power service to dewatering pumps including, but not limited to, electrical, hydraulic, gas, or diesel, Maintain the dewatering system to allow for continuous operation without interruptions. If necessary, provide 24-hour supervision and follow-up by personnel skilled in the operation, maintenance, and replacement of dewatering system components. Damage to Work in place and the excavation, including damage to the trench bottom, due to "boiling", material removal, or discharge pumping from the excavated area, that may result from negligence, inadequate or improper installation, maintenance and operation of the dewatering system, or mechanical or electrical failure of the dewatering system shall be Contractor's responsibility to repair at no cost to the City.

Trench dewatering shall be included with the Work required for Sewer Pipe, Manholes, Side Sewer Connections, Storm Drain, Catch Basins, Utility Restoration or other excavation activity performed as part of this Contract with no direct compensation made.

#### 7-08.3(2) Laying Pipe

#### 7-08.3(2)A **Survey Line and Grade**

Delete both paragraphs of 7-08.3(2)A and substitute the following:

Provide surveys required to construct the sewer line including, but not limited to, alignment stakes, offset stakes, grade hubs, and intermediate staking. Use main survey control points shown on the Plans, unless Engineer directs otherwise. If a Bid item for "Surveying" is not listed in the Proposal, then this item shall be included with the Work with no direct compensation made.

Provide laser control equipment approved by the Engineer for setting pipe grades.

#### 7-08.3(2)H **Sewer Line Connections**

Supplement 7-08.3(2)H by adding the following:

Reconnect existing storm drain lines to new sanitary sewer line in accordance with the Plans, these Special Provisions and the Standard Specifications.

Provide a minimum 8-inch diameter pipe for new storm drain line. Provide manufactured couplers for joining dissimilar size and type of existing storm drain line pipe.

Engineer will not allow vertical connections of drain lines to sewer main between manholes without Engineer's prior approval.

Reconnecting drain lines shall be included with the Work with no direct compensation made.

#### 7-08.3(2)1 **Side Sewer Connections**

Supplement 7-08.3(2)I by adding the following:

Make typical side sewer connections in accordance with COE Standard Drawing No. 602.

#### 7-08.3(2) **Laying Pipe**

Supplement 7-08.3(2) by adding the following:

#### High Density Polyethylene Pipe (HDPE) for Combined Sewer 7-08.3(2)J (\*\*\*\*\*)

Provide leak-proof thermal HDPE butt joints, except at field closures and other joint connections specifically identified or approved by the Engineer. Butt weld HDPE joints in accordance with manufacturer's recommendation and ASTM D 2657. Use tools recommended by the pipe supplier and approved by the Engineer to fuse joints. Use pipe manufacturer trained and certified operators to operate the joint fusing equipment. Provide fusing machine having hydraulic pressure control for fusing two pipe ends together. Accurately trim ends of pipe to form perpendicular faces prior to fusing. Provide electrically heated and thermostatically controlled heating plate on the fusing machine with a temperature gauge for monitoring temperature. Subject the heating plate to periodic inspection, using a temperature stick, to assure even heating. Provide a HDPE flange adapter with a 316 stainless steel follower ring having Class 125 flange bolt pattern where flanged connections are required.

Provide joints between pipe sections free from sharp edges, ridges and depressions on the inside. Internal projection beads do not need be removed from each pipe joint, unless otherwise noted on the Plans. Provide true alignment at the butt-fused joint between the joined pipes with uniform roll back beads resulting from the use of proper temperature and pressure. Allow adequate cooling time before removing pressure from the butt joint. The fused joint shall be watertight and shall have tensile strength equal to the pipe. All joints shall be subject to inspection and acceptance by the City. Cut out and replace all defective joints at no cost to the City. City will not permit threaded or solvent – cement joints and connections.

City will not allow fabrication of fittings in the field. Sleeve couplings, repair bands, mechanical joints, flanges and other types of pipe connections are not permitted unless shown on the Plans or authorized in advance by the Engineer or Inspector.

Construct trench in accordance with 7-08.3(1)A. Place pipe in the trench in accordance with 7-08.3(2)B and this section. Backfill in accordance with 7-08.3(3) and these Special Provisions. When backfilling and compacting HDPE pipe, ensure pipe is at the same temperature as the surrounding soil. Fill pipe with water and anchor HDPE pipe to counteract buoyancy if flowable CDF is used for bedding or backfill. City will not permit blocking under the pipe.

Provide continuous HDPE pipe entering manholes. City will not allow short PVC closure segments, except where explicitly shown on the Plans or approved by the Engineer.

#### 7-08.3(3) **Backfilling**

Delete the first paragraph of 7-08.3(3) and substitute the following:

Perform trench backfilling only after inspection and approval of the installed pipe bedding zone backfill. Refer to COE Standard Drawing No. 614, 615, 620 and the Plans for typical trench section backfill and compaction requirements.

If the Engineer determines native material is not suitable for use as trench backfill, use "Gravel Borrow" conforming to 9-03.14(1) of the Standard Specifications.

If there is an excess of suitable backfill material obtained from trench excavation at one location on the project, use it at other locations on the project or dispose of at an approved disposal site. The cost of transporting the excess backfill material is considered incidental to the Contract with no direct compensation made.

Use Controlled Density Fill in lieu of select trench backfill for fill above pipe zone at street crossings and as directed by the Engineer in other areas where in order to prevent pavement patch settlement requires high density backfill placement or effective backfill compaction is not possible.

Delete the first sentence of the third paragraph.

Delete the third and fourth sentences of the fourth paragraph.

# 7-08.3(4) Plugging Existing Pipe

Delete the first paragraph of 7-08.3(4) and substitute the following:

Where shown on the plans to plug and seal existing water main, sanitary sewer and storm drainage pipe plug existing pipe a minimum distance of 2-feet from the inlet end with cement grout and abandon in place.

## 7-08.4 Measurement

Delete all paragraphs in 7-08.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 7-08.5 Payment

Delete all paragraphs in 7-08.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

## 7-09 WATER MAINS

# 7-09.1 Description

Revise the first paragraph in 7-09.1 to read as follows:

This Work consists of constructing water mains in accordance with the Plans, the Standard Specifications, these Special Provisions and the COE Standard Drawings, at the location shown on the Plans.

## 7-09.1(1) Definitions

## 7-09.1(1)D Pipe Zone Backfill

Revise the first paragraph in 7-09.1(1)D to read as follows:

Pipe zone backfill includes material placed a minimum of 6-inches below the bottom of pipe up to a minimum of 12-inches above the top of pipe as shown on COE Standard Drawing No. 615.

Supplement 7-09.1 as follows:

# 7-09.1(2) Submittals (\*\*\*\*\*)

## 7-09.3(7) Trench Excavation

Revise the second paragraph in 7-09.3(7) to read as follows:

Excavate bell holes to the extent necessary to permit accurate Work in making and inspecting the joints. Keep the banks of the trenches as nearly vertical as soil conditions will permit, and where required to control trench width or to protect adjacent Structures, sheet and brace the trench. Provide trench widths to 1 foot above the top of the pipe in accordance with COE Standard Drawing No. 614. Standard excavating equipment shall be adjusted so as to excavate the narrowest trench possible.

#### 7-09.3(7)A **Dewatering of Trench**

Supplement 7-09.3(7)A by adding the following:

Furnish, install, and operate necessary machinery, appliances, and equipment to keep excavations free from water during construction.

Trench dewatering shall be included with the Work with no direct compensation made.

#### 7-09.3(8) Removal and Replacement of Unsuitable Materials

Delete all three paragraphs of 7-09.3(8) and substitute the following:

Remove Engineer classified unsuitable material at the trench bottom and replace with "Foundation Material Class A or B", or other Engineer approved imported or native material.

Replace, at Contractor's expense, unauthorized over-excavation with Gravel Borrow. Compact Gravel Borrow to minimum 90-percent maximum density.

#### 7-09.3(9) **Bedding the Pipe**

Revise the first paragraph in 7-09.3(9) to read as follows:

Place sand backfill for pipe zone bedding to the depths shown in COE Standard Drawing No. 615. Compact sand backfill for pipe zone bedding around the pipe to 90-percent of maximum density by approved hand-held tools, so as to provide firm and uniform support for the full length of the pipe, valves, and fittings. Determine maximum in place density using nuclear method (ASTM 2922-17). Determine laboratory maximum dry density and optimum moisture content using the Modified Proctor Method in accordance with ASTM D-1557. Take care to prevent damage to the pipe and its protective coating.

## 7-09.3(10) Backfilling Trenches

Revise the last paragraph in 7-09.3(10) to read as follows:

Place a minimum 12-inch sand cushion between the water main and existing pipelines or other conduits when encountered during construction.

Supplement 7-09.3(10) by adding the following:

Backfill trenches in accordance with COE Standard Drawings No. 614, 615 and 620.

Unless Engineer directs otherwise, provide Controlled Density Fill for fill above the pipe zone for water main construction that is perpendicular to the travel lane in paved street sections.

The Engineer may authorize the use of Gravel Borrow or suitable native material in non-paved areas.

### **7-09.3(19)** Connections

#### 7-09.3(19)A **Connections to Existing Mains**

Delete the last paragraph in 7-09.3(19)A and substitute the following:

Only City Utilities Department personnel may make connections to existing water mains after successful pressure testing, disinfection and flushing. Schedule arrangements with the City Utilities Department a minimum of five

business days in advance of making connections to the existing water main. Assemble necessary materials, equipment, and labor necessary to properly complete the Work prior to beginning the connection.

Provide traffic control and expose the water main at the connection allowing sufficient room for COE forces to make connection, expose the water main at the connection, including properly shoring and sheeting the excavation in accordance with requirements of WISHA, RCW 49.17 including WAC 296-155. Should City personnel determine the excavation and shoring and sheeting do not meet the requirements of WISHA, RCW 49.17, including WAC 296-155, City personnel will notify Contractor to make necessary modifications to bring the excavation and shoring into compliance prior to City personnel entering the trench.

Repair damage to existing pipe caused by the Contractor's operations at Contractor's expense.

Proceed continuously once Work is started on a connection without interruption and as rapidly as possible until completed. City will not permit shutoff of mains overnight, over weekends, or on holidays.

Notify COE water customers affected by water shut off if the connection to the existing system involves turning off the water. Provide a minimum of 48-hours prior notice. The Engineer will advise which property owners to notify.

Depending upon the number of water customers affected by a shut-off, Contractor may need to perform the connection during times other than normal working hours. Do NOT operate valves on the existing system. Only City Utilities Department personnel may operate water system valves.

Refer to 7-12.3 of these Special Provisions for tapping assembly connections, if any.

## 7-09.3(21) Thrust Blocking

Revise the first sentence of the first paragraph to read as follows:

Place concrete thrust blocking, as noted on the Plans and described in these Special Provisions, at bends where new ductile iron pipe connects to existing cast iron pipe.

Supplement 7-09.3(21) by adding the following:

Provide mechanical joint restraining devices in place of concrete blocking on all fittings connecting ductile iron pipe to ductile iron pipe.

Where shown on the Plans or as allowed by the Engineer, provide concrete thrust blocking at bends, tees, plugs and crosses, including City installed fittings. Provide cast-in-place concrete thrust blocking having a minimum of 1/4-square foot bearing against the fitting and two square feet bearing against undisturbed soil and be clear of joints so as to permit taking up or dismantling joint. Provide a minimum measurement of 12-inches between the pipe and the undisturbed bank for all poured in place concrete thrust blocking. Form concrete blocking and pour using commercial concrete. Place blocking between solid ground and the fitting to be anchored with the area bearing on the pipe and on the ground in each instance being as Shown or directed by the Engineer. Place the blocking, unless otherwise shown or directed, so that the pipe and fitting joints, including nuts and bolts, can be accessible for repair.

# 7-09.3(22) NOT USED

### 7-09.3(23) Hydrostatic Pressure Test

Supplement 7-09.3(23) by adding the following:

Provide City approved double-check assembly for the purpose of testing and flushing. City will not charge for the water used in this operation.

Successfully complete hydrostatic pressure test prior to starting disinfecting new water mains.

### 7-09.3(23)A Testing Extensions from Existing Mains

Delete 7-09.3(23)A.

### 7-09.3(24) Disinfection of Water Mains

Delete 7-09.3(24), including subsections, and substitute the following:

# 7-09.3(24) Flushing and Disinfection of Water Mains (\*\*\*\*\*\*)

Flush, disinfect with a chlorine solution and obtain passing coliform bacteria test reports before placing new water mains or extensions to existing mains in service. Submit flushing and disinfection procedures in accordance with this section. Provide submittal containing, at a minimum:

- location of taps and other appurtenances used for chlorination and flushing purposes,
- location of the sample collection taps,
- disposal location and treatment procedure for chlorinated water discharged from the mains, and
- procedure for disinfection including application method, point of application, and target concentrations for the contact interval being used.

### 7-09.3(24)A Flushing

Flush sections of pipe being disinfected to remove solids that may have become lodged in the pipe. Provide a tap sufficient to provide a flush velocity inside the main of at least 2.5 fps if no hydrant is installed at the end of the main. Flush as long as material or color is visible in the discharge. Flush at a minimum one full pipe volume of water from the section of new main being tested.

Guidelines for Required Flow and Openings to Flush Pipelines (assumes 40 psi residual pressure in water main)

Pipe Dia. (in.)	Flow Required Size of Tap (in) to Produce 2.5 fps (approx)		,	Number of 2 ½" Hydrant outlets	
	Velocity in Main	1	1 1/2	2	
	(gpm)	(in)	(in)	(in)	
4	100	1			1
6	200		1		1
8	400		2	1	1
10	600		3	2	1
12	900			2	2
16	1,600			4	2

Guidelines for Water Main Volume

Inside Dia. (in)	Volume per 100 LF (gal)
4	65
	147
8	261
10	408
12	587
20	1,632

Provide taps and other appurtenances required for temporary release of air, chlorination, or flushing purposes as a part of the Work.

To protect aquatic life in receiving waters, neutralize the chlorine contained in the discharge water before disposing into a natural drainage channel or feature draining to a natural channel. Dispose of disinfecting solutions to the satisfaction of the City of Everett and the Washington Department of Ecology. Discharge water disposal may be directed to an available sanitary sewer, if approved by the Engineer and provided the rate of disposal will not overload the sewer.

# 7-09.3(24)B Disinfectant Concentration and Retention Period (Contact Interval)

Provide disinfection concentration necessary to obtain a free chlorine residual of not less than 10 mg/1 remaining in the disinfectant solution after a 24 hour contact time. Provide the initial free chlorine residual concentration of disinfectant solution not less than 25 mg/l. Contractor may reduce disinfectant chlorine solution contact time from 24 to 12 hours by using an initial disinfectant concentration of 50 mg/l. Maximum allowable disinfectant concentration shall be 50 mg/l. The ending concentration of an initial 50 mg/l solution following a 12 hour contact time shall be not less than 10 mg/l.

### 7-09.3(24)C Form of Applied Chlorine

Perform disinfection of water mains using the continuous feed method employing either liquid calcium hypochlorite or liquid sodium hypochlorite solutions. Dry calcium hypochlorite and gaseous or liquid chlorine is not allowed.

Follow the continuous feed methods specified in the most recent version of AWWA Standard C-651 and Section 5-15 of the latest edition of the City of Everett "Design and Construction Standards and Specifications for Development", except for the City's prohibition on the use of dry calcium hypochlorite or gaseous chlorine.

### 7-09.3(24)D Point of Application

Whenever possible, use the beginning of the pipeline extension, or a valved section of it, as the point of application for the disinfectant solution. Provide a tap to supply water for delivering the disinfectant solution on the pressure, or upstream, side of the valve controlling the flow into the pipeline extension, but downstream of the backflow preventer used to isolate the new main from the existing water distribution system. Obtain Engineer approval in writing to use alternate points of applications.

For a City allowed direct tie-in to an existing main via an in-line backflow preventer and with the approval of the Inspector, the point of application may be through a corporation stop inserted in the horizontal axis of the pipe. Locate tap within 10-feet of where the line is tied into the existing system. Swab the internal surfaces of the backflow preventer and adjacent downstream appurtenances, valves or couplings for example, with straight hypochlorite solution prior to their installation.

### 7-09.3(24)E Preventing Reverse Flow

Provide a State Department of Health approved backflow preventer installed in the connecting line before making a connection between the existing distribution system and water lines constructed under this Contract that have not been flushed, disinfected, and tested. Install backflow preventer upstream of temporary fill hoses and disinfectant injection equipment.

### 7-09.3(24)F Chlorinating Valves, Hydrants, and Appurtenances

Operate valves, hydrants, and other appurtenances during the disinfectant contact interval for newly-laid pipe while filling the pipeline with the disinfectant chlorine solution and the main is under normal operating pressure. Normal operating pressure is the pressure the existing distribution system provides through the temporary backflow protection device.

# 7-09.3(24)G Chlorinating Connections to Existing Water Mains and Water Service Connections

Chlorinate connections to existing water mains in accordance with the following sections of the most recent revision of AWWA Standard C651:

- Section 4.6 Final Connections to Existing Mains,
- Section 4.7 Disinfectant Procedures When Cutting Into or Repairing Existing Mains, and
- Section 4.8 Special Procedures for Caulked Tapping Tees

Swab the internal surfaces of closure fittings with a 5 to 6 percent chlorine solution that can be found in liquid household sodium hypochlorite bleach.

# 7-09.3(24)H Final Flushing and Testing

Notify the City Utilities Division, Environmental Monitoring and Compliance (EMC) staff at least five business days prior to requiring EMC staff to collect samples and measure the chlorine concentration of the disinfectant solution placed in the new main. EMC staff will collect and measure samples at the start and at the end of the disinfectant contact period.

Provide sample taps as noted in 7-09.3(24)I to allow EMC staff to collect at least one set of disinfectant concentration, coliform bacteria and free chlorine samples from both ends of new mains, at the end(s) of each cross or branch, and every 1200 feet along the main.

Notify EMC staff at least five business days prior to requiring having EMC staff collect final coliform bacteria and free chlorine residual samples.

The City of Everett EMC staff will collect bacteriological and disinfectant residual samples for submitting to Washington State Department of Health, Drinking Water Division certified laboratory for testing. EMC staff will immediately notify Contractor and Engineer upon receiving analysis results.

Upon receiving passing test results, flush disinfectant solution from the newly-laid mains until the replacement water throughout the length of the main tests having a level of free chlorine residual representative of the distribution system water supply.

# 7-09.3(24)I Sample Collection Taps

Provide water sample collection taps at each required sampling location in accordance with COE Standard Drawing No. 526 and as described in these Special Provisions.

Locate the end of each water sample collection tap above existing ground level. Plumb taps to provide downward water flow to allow effective filling of sample containers. City EMC staff shall have the authority to refuse to conduct sampling from taps they consider inadequate or not representative of water main quality.

On mains exceeding 1,200 feet, provide for sample collection at one of the water services shown on the Plans. If no water services are shown on the Plans, provide 3/4-inch sampling tap at appropriate locations along the main.

For mid-line service taps not providing future customer service, plumb into deadend meter setters and meter boxes at the street or sidewalk edge for use as future dedicated sampling locations in accordance with COE Standard Drawing No. 526.

Locate sample tap upstream of the flushing hose connection for bacterial and disinfectant residual sampling. Due to sanitary and representative sampling issues, use only installed sample taps for collection of free chlorine or bacteriological samples.

# 7-09.3(24)J Repetition of Flushing and Testing

Should the initial disinfection procedure result in an unsatisfactory bacteriological test, meaning total coliform bacteria is present, repeat the entire flushing and disinfection procedure until obtaining satisfactory test results. Unsatisfactory test results indicates Contractor's failure to keep the pipe, sample taps, and temporary filling attachments clean during construction, or to properly flush and disinfect the main.

Supplement 7-09.3 by adding the following:

# 7-09.3(25) Mechanical Joint Restraining Devices (\*\*\*\*\*\*)

Restrain joints at bends, tees, dead ends and connections to existing water mains as shown on the Plans using mechanical joint restraining devices.

Install joint restraint system in accordance with the manufacturer's recommendations.

### 7-09.4 Measurement

Delete all paragraphs of 7-09.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-09.5 Payment

Delete all paragraphs of 7-09.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-12 VALVES FOR WATER MAINS

### 7-12.1 Description

Supplement 7-12.1 as follows:

# 7-12.1(1) Submittals (\*\*\*\*\*\*)

Provide Type 2 Working Drawings for all materials and Standard Plans.

### 7-12.2 Materials

Delete the first paragraph in 7-12.2 and substitute the following

Provide materials meeting the requirements of the following:

Gate Valves (2-inches to 12-inches)	9-30.3(1)	Special Provisions
Butterfly Valves	9-30.3(3)	Special Provisions
Valve Boxes	9-30.3(4)	Special Provisions
Valve Stem Extensions	9-30.3(6)	Special Provisions
Combination Air Release/Vacuum Valve	9-30.3(7)	Special Provisions

Tapping Sleeve and Valve Assembly

9-30.3(8)

**Special Provisions** 

### 7-12.3 Construction Requirements

Supplement 7-12.3 by adding the following:

Install valve box centered on the operator nut.

Provide 3-inch thick x 2-feet x 2-feet HMA concrete pad around valve boxes located within gravel surface.

Provide one valve stem extension, minimum 12-inch length, in accordance with COE Standard Drawing No. 505 when the top of the valve operating nut is more than three feet below finished grade.

Provide equipment, labor, tools, materials and miscellaneous parts to perform pavement sawing, pavement removal, excavations, shoring, traffic control and other Work required to prepare the site for City Utility Department personnel to install the City supplied tapping sleeve and valve assembly.

Notify City Utility Department a minimum of five business days for each tap being made. The Utility Department will determine the date and time to make each tap.

Expose the water main being hot tapped, including properly shoring the excavation in accordance with requirements of WISHA, RCW 49.17 including WAC 296-155. Should City personnel determine the excavation and shoring do not meet the requirements of WISHA, RCW 49.17, including WAC 296-155, City personnel will notify Contractor to make necessary modifications to bring the excavation and shoring into compliance prior to City personnel entering the trench.

Once the conditions are deemed safe for City personnel to enter the trench, City will install the tapping sleeve and valve assembly and Utility Department personnel will perform the hot tapping of the existing main. . Upon City Utility Department personnel completing installing and testing the tapping sleeve and valve assembly. City Utility Department personnel will connect to Contractor's installed pipe upon Contractor's successful completion and testing of Contractor installed water main. Backfill, compact, and restore the area.

Where shown on the Plans, adjust existing valve boxes and covers to the grade as staked or otherwise designated by the Engineer. Using riser rings to adjust the valve box to grade is not allowed.

Conduct removal operations conducted to prevent damage to the valve boxes. Replace parts or materials damaged due to the Contractor's operations at his expense.

Conduct valve box adjustments so the final adjusted valve box allows full operation of the valve. Remove debris from the adjusted valve boxes to ensure full valve operation.

Delete the third sentence of the first paragraph in 7-12.3(1) and substitute the following:

Where shown on the Plans, provide valve marker post with the exposed portion having the letter "V" and the distance in feet to the valve stenciled in black paint on the post. Provide a two inch high stencil to produce the letters and numerals.

#### 7-12.4 Measurement

Delete all paragraphs of 7-12.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### 7-12.5 **Payment**

Delete all paragraphs of 7-12.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 7-14 HYDRANTS

### 7-14.1 Description

Supplement 7-14.1 as follows:

### 7-14.1(1) **Submittals** (\*\*\*\*\*)

Provide Type 2 Working Drawings for all materials and Standard Plans.

#### 7-14.2 Materials

Delete the material list in 7-14.2 and substitute the following:

Provide materials meeting the requirements of the following:

9-30.5 **Special Provisions** Hydrants

# 7-14.3 Construction Requirements

#### **Setting Hydrants** 7-14.3(1)

Delete the first and second paragraphs in 7-14.3(1) and substitute the following:

Provide fire hydrant assemblies in accordance with City of Everett Standard Drawing No. 507 and 508.

Revise the first sentence of the fourth paragraph to read as follows:

Paint hydrants in accordance with Part L in COE Standard Drawing No. 507.

Supplement 7-14.3(1) as follows:

Consider a hydrant in service when it is installed in working order in accordance with the Plans and Specifications.

#### 7-14.3(2) **Hydrant Connections**

Delete the first paragraph in 7-14.3(2) and substitute the following:

Provide continuous 6-inch diameter ductile iron pipe from the auxiliary gate valve at the main to the hydrant in accordance with COE Standard Drawing 507.

Provide mechanical joint restraining glands conforming to 9-30.2(6) of these Special Provisions.

#### 7-14.3(2)A **Hydrant Restraints**

Revise the first paragraph in 7-14.3(2)A to read as follows:

Restrain thrust created in short hydrant laterals of one pipe length or less using mechanical retainer glands at the auxiliary valve and hydrant fittings as shown in the COE Standard Drawing No. 507. For longer hydrant leads requiring two or more pipe lengths, Contractor may use field lock gaskets in lieu of mechanical joint restraint system to restrain the number of pipe joints between the auxiliary valve and the hydrant.

### 7-14.3(2)B **Auxiliary Gate Valves and Valve Boxes**

Revise the first paragraph in 7-14.3(2)B to read as follows:

Provide auxiliary gate valves and valve boxes in accordance with Section 7-12 and COE Standard Drawing No. 507.

### 7-14.3(4) **Moving Existing Hydrants**

Delete third and fourth sentences in the first paragraph in 7-14.3(4) and substitute the following:

Provide safe excavation for City Utilities personnel to install new hydrant tee using tapping sleeve and valve assembly in accordance with 7-12.3 of these Special Provisions and the Standard Specifications. Excavate to cut off and plug the existing hydrant lateral, completely close the existing hydrant auxiliary gate valve, remove the valve box, backfill and compact.

### **Reconnecting Existing Hydrants** 7-14.3(5)

Revise the second paragraph in 7-14.3(5) to read as follows:

Use mechanical retainer glands to restrain new hydrant lateral connection to hydrant fitting.

#### 7-14.4 Measurement

Delete all paragraphs of 7-14.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-14.5 **Pavment**

Delete all paragraphs of 7-14.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-15 SERVICE CONNECTIONS

#### 7-15.1 Description

Delete the first paragraph of 7-15.1 and substitute the following:

This Work consists of installing residential and commercial service connections from the main to the private line for the premises served. Include the meter box and meter setter for existing non-metered services. Include replacing existing meter boxes and meter setters as noted on the Plans and as directed by the Engineer.

Work also includes abandoning existing service connection and service connection pipe in-place.

### 7-15.1 Description

Supplement 7-15.1 as follows:

# 7-15.1(1) **Submittals**

Provide Type 2 Working Drawings for all materials and Standard Plans.

#### 7-15.2 Materials

Delete first paragraph and material list of 7-15.2 and substitute the following:

Provide materials meeting the requirements of the following sections:

Saddles	9-30.6(1)	Special Provisions
Corporation Stops	9-30.6(2)	Special Provisions
Service Pipe	9-30.6(3)	Special Provisions
Service Fittings	9-30.6(4)	Special Provisions
Meter Setters	9-30.6(5)	Special Provisions
Meter Boxes	9-30.6(7)	Special Provisions
Brass Nipples and	9-30.6(8)	Special Provisions
Fittings		

# 7-15.3 Construction Requirements

Revise the first paragraph in 7-15.3 to read as follows:

Provide new service connections to new water mains using specified saddles of the size and type suitable for use with the service pipe being installed. Install new service connection piping from the main to the meter box as shown on the Plans and directed by the City Inspector. Install service connection piping perpendicular to the main, unless shown otherwise on the Plans or directed by the City Inspector.

Revise the second paragraph in 7-15.3 to read as follows:

Provide trench depth adequate to maintain a minimum of 30-inches of cover over the top of the connecting service pipe. Exercise particular care to ensure that the main is not damaged by the Work undertaken to install the service. Excavate and backfill for service connections as specified in Section 7-09; except, use approved boring methods to install the service pipeline under cement concrete pavement, curbs, and sidewalks.

Supplement 7-15.3 by adding the following:

Provide service connections to water mains in accordance with COE Standard Drawings No. 501 and 502 as applicable.

Field verify actual service connection location, size and material as existing service information and locations shown on the Plans may not be accurate since this information is taken from existing records. Match the service size of the existing service connection with the minimum service size being 3/4-inch. Should the planned location require moving after verifying actual service connection in field, City Inspector and the City Utility Department personnel will make final decision as to its relocation.

Replace existing services from the main to the property line, including the meter box and meter setting if noted on the Plans.

Bore service connection lines, regardless of size, under pavement section, curbs and sidewalks where soil conditions and other existing buried utilities allow. The City Inspector will allow open-cut trench installation across pavement section, curbs and sidewalks only where soil conditions prohibit boring. Open-cut lawn areas and other non-pavement areas for service installation unless City Inspector directs otherwise. The City Inspector may, at the Contractor's request, allow tunneling under curb and sidewalk as long as it appears no structural damage will be done to curb or sidewalk as a result of the tunneling operations. Regardless of the method used, the Contractor shall maintain a minimum of 30-inch cover over the service connection line. Where open cut trench installation is allowed, keep the trench width to 24-inches or less.

At existing metered services noted for removal or replacement on the Plans, salvage existing meter and stockpile on-site at location approved by City Inspector. Notify City Inspector 24-hours prior to removal to allow City Inspector to document the meter number and address of meter being removed. Remove and dispose of existing meter box, meter setter, fittings and service piping. Where existing metered services are not being replaced, backfill with native soil, compact and restore the surface to match existing condition.

Abandon in-place existing service connections noted on the Plans by exposing and closing the corporation stop at the main and plugging the service line near the public right of way or easement.

7-15.3(1) **NOT USED** (\*\*\*\*\*)

#### 7-15.4 Measurement

Delete first paragraph of 7-15.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-15.5 **Payment**

Delete all paragraphs of 7-15.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-17 SANITARY SEWERS

#### 7-17.1 Description

Revise the first paragraph in 7-17.1 to read as follows:

This Work consists of constructing gravity sanitary or combined sewer mains using conventional open trench construction methods, as staked, in accordance with the Plans, these Specifications, and the COE Standard Drawings.

### 7-17.1 Description

Supplement 7-12.1 as follows:

### 7-17.1(1) **Submittals** (\*\*\*\*\*)

Provide Type 2 Working Drawings for all materials and Standard Plans.

Provide Type 3E Working Drawings for construction of temporary by-passes.

#### 7-17.2 Materials

Delete list of pipe materials in the first paragraph in 7-17.2 and substitute the following:

Use the following pipe materials for gravity sanitary and combined sewers:

Rigid	Thermoplastic	
	ABS Composite	
Ductile Iron	PVC (Polyvinyl Chloride)	
	Polypropylene	

Delete the list of material requirements in 7-17.2 and substitute the following:

Provide materials meeting the following requirements.

Solid Wall PVC Sanitary Sewer Pipe	9-05.12(1)	Special Provisions
Profile Wall PVC Sanitary Sewer Pipe	9-05.12(2)	Special Provisions
Ductile Iron Sewer Pipe	9-05.13	Special Provisions
ABS Composite Sewer Pipe	9-05.14	Special Provisions
Polypropylene Dual and Triple Wall	9-05.21	Special Provisions
Sanitary Sewer Pipe		

## 7-17.3 Construction Requirements

#### 7-17.3(2) **Cleaning and Testing**

#### **Deflection Test for Thermoplastic Pipe** 7-17.3(2)G

Revise the first sentence of 7-17.3(2)G to read as follows:

After trench backfill and compaction are completed, perform deflection testing if CCTV testing reveals thermoplastic pipe being out of round.

#### 7-17.3(2)H **Television Inspection**

Delete all three paragraphs of 7-17.3(2)H and substitute the following:

After trench backfill and compaction are completed the City will use their CCTV camera to inspect the interior of mains and the interior of existing lines having Contractor installed new manholes or new side sewers or both. Provide the City with three business days notice for each CCTV request. Begin final roadway surfacing AFTER notice from City Inspector of City Sewer Department approval of the CCTV inspection.

Prior to arranging with City for CCTV inspection, perform the following:

Clean lines and structures of all debris.

Channel manholes inverts.

Seal pipes entering structures according to these Special Provisions.

Correct deficiencies noted by the City Inspector and the CCTV inspection results to the satisfaction of the Engineer.

City will bear initial inspection costs. Contractor shall be responsible for reinspection costs if CCTV equipment will not pass through the lines or structures on initial inspection. City will deduct cost for follow-up re-inspection after correction of deficiencies from Contractor's final payment on a direct cost basis.

#### 7-17.3(2) Cleaning and Testing

Supplement 7-17.3(2) by adding the following:

### **Final Acceptance** 7-17.3(2) (\*\*\*\*\*)

City will require successful completion of the following items prior to issuing final acceptance, including, but not limited to:

- Passing low pressure air testing.
- Backfill and compaction in accordance with COE Standard Drawings No. 610. 611 and 615.
- 3. Line and grade to the tolerance of 7-08.2(2)B.
- Manholes to the invert elevation, fully channelized, and cleaned.
- Manhole casting set to final grade.
- Manhole construction in accordance with 7-05.3.
- Lines free of debris and obstructions. 7.
- Bell and spigot joints properly seated as evidenced by successful completion of CCTV testing.
- HDPE bead removal, where required, is accomplished without leaving sharp and jagged edges.

#### 7-17.4 Measurement

Delete both paragraphs of 7-17.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### 7-17.5 **Payment**

Delete all paragraphs of 7-17.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 7-18 SIDE SEWERS

# 7-18.1 Description

Delete the first paragraph in 7-18.1 and substitute the following:

This Work consists of constructing side sewers within the right of way in accordance with the Plans, the Specifications, these Special Provisions and the COE Standard Drawings at locations staked.

In some cases, minor adjustments in side sewer location and length will be required to adapt to field conditions.

#### Materials 7-18.2

Supplement 7-18.2 by adding the following:

Provide materials meeting the following requirements.

Inserta-Tee 9-05.22 Special Provisions Gasketed PVC Saddle **Special Provisions** 9-05.12(3) Stainless Steel Clamp 9-05.23 **Special Provisions** 

### 7-18.3 **Construction Requirements**

#### 7-18.3(1) General

Supplement 7-18.3(1) by adding the following:

Where indicated on the Plans, CCTV inspect live existing side sewer from the point of connection upstream to within 5-feet of the point of connection to the house, apartment or structure(s) the side sewer serves. Provide a two-way cleanout in accordance with Detail \$\$XX\$\$ on Drawing \$\$XX\$\$ at the point of connection to the existing side sewer. Provide method of connection for replacement side sewers to HDPE pipe as noted on Detail \$\$1\$\$ on Drawing \$\$D1\$\$, which includes Inserta-Tee or gasketed saddle with stainless steel clamps. An additional method that may be approved upon acceptable Contractor Submittal information is saddle fusion method. Electrofusion, extrusion welded or hot gas/air welded saddle methods are not acceptable unless specifically authorized by the Engineer.

Further supplement 7-18.3 by adding the following:

### 7-18.3(6) **Contractor Submittals**

Submit all procedures or material descriptions requiring the Engineer's approval as Type 3 Working Drawings not less than 15 calendar days prior to mobilizing or commencing side sewer replacement activities at the Site Include Working Drawings for side sewer pipe, fittings, cleanouts, adapters, castings, couplings, method of connection to the replacement main, information on the CCTV and locating equipment, sample CCTV inspection report and sample public notice with Submittal.

Following side sewer connection and inspection work submit videotapes, inspection reports, and record drawing sketches of the side sewer replacement and inspection. Submit inspection information on a color, digital DVD with on-screen footage counter and site address of each side sewer together with a written CCTV inspection report. Reinspect the side sewer, at no expense to the Owner, if video quality is not acceptable as determined by the Engineer. Reset the on-screen footage counter to zero at the beginning of each side sewer inspection.

### 7-18.3(7) **CCTV** (\*\*\*\*\*)

For the CCTV inspection locate and identify all branch connections to the existing side sewer including drains, basement and foundation drains, and all other connections. Accomplish location of the side sewer pipe by using a suitable sonde transmitter attached to the camera. Provide temporary markers positioned on the ground surface and to measure accurately from to create a record drawing sketch and a photograph.

Provide CCTV equipment approved by the Engineer before inspection begins. Provide CCTV equipment with the following minimum criteria:

- Self-contained color television cameras with footage counter, color monitor, three-wire coaxial cable, power sources, and other equipment.
- Waterproof camera having a minimum 650 line resolution capable of inspecting side sewers 3-inches to 6-inches in diameter and up to 200 feet in length.
- Operate in 100% humidity. C.
- Camera lighting that minimizes relative glare. d.
- Picture quality providing a clear, in-focus color picture of the entire pipeline periphery for all work conditions.

- Equipped with a centering device to ensure view of full pipe diameter.
- Capable of traveling upstream or downstream at a steady uniform rate. stopping where necessary to ensure a proper assessment of pipe defects, blockages, direction changes, material changes, and branch connections.

If the camera fails to pass through the side sewer within City right-of-way, temporarily suspend inspection and notify the Engineer of the obstruction. The Engineer may direct the Contractor on further actions.

### 7-18.3(8) **Record Drawing Sketch** (\*\*\*\*\*)

Prepare record drawing sketch for each side sewer connection and inspection using a City-furnished aerial photograph as a base plan, indicating the location, extent, depth and materials associated with the side sewer connection and the alignment, connections and defects encountered during CCTV inspection of the existing side sewer. Where necessary for clarity, take photographs of ground surface of the site, prepare an 8-1/2 inch x 11-inch print of the photo and mark locations of pipe, bends, fittings and defects.

In addition, inspect and document field observations associated with each side sewer pipe including, but not limited to, existing pipe material, pipe diameter, joint type, joint integrity, extent of pipe deterioration, grade and alignment, bedding and backfill, root intrusion, and debris accumulation.

#### 7-18.4 Measurement

Delete first paragraph of 7-18.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-18.5 **Payment**

Delete all paragraphs of 7-18.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-19 SEWER CLEANOUTS

#### 7-19.1 Description

Revise the first paragraph in 7-19.1 to read as follows:

This Work consists of constructing sewer cleanouts within the right of way in accordance with the Plans, the Specifications, these Special Provisions and the COE Standard Drawings at locations staked.

#### 7-19.1 Description

Supplement 7-19.1 as follows:

7-19.1(1) **Submittals** 

Provide Type 2 Working Drawings for all materials and Standard Plans.

#### 7-19.2 Materials

Supplement 7-19.2 by adding the following:

Provide materials meeting the following requirements.

Metal Frame and Cover 9-05.15(4) **Special Provisions** 

### 7-19.3 Construction Requirements

Supplement 7-19.3 by adding the following:

Provide cleanout in accordance with COE Standard Drawing 604.

#### 7-19.4 Measurement

Delete first paragraph of 7-19.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### 7-19.5 **Payment**

Delete all paragraphs of 7-19.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

Supplement Division 7 by adding the following Section:

# 7-20 SANITARY SEWER FORCEMAINS (\*\*\*\*\*)

### 7-20.1 Description

This Work consists of constructing sanitary sewer forcemains to lines and grades in accordance with the Plans, the Standard Specifications, COE Standard Drawings and these Special Provisions.

### 7-20.1 Description

Supplement 7-20.1 as follows:

### 7-20.1(1) **Submittals** (\*\*\*\*\*)

Provide Type 2 Working Drawings for all materials and Standard Plans.

Provide Type 3E Working Drawings for temporary by-pass pumping.

#### 7-20.2 Materials

Provide materials meeting the requirements of the following:

Combination Air Release/Air Vacuum Valves **Special Provisions** 9-30.3(7)

Provide the following pipe for sanitary sewer forcemains:

Rigid **Thermoplastic** 

Ductile Iron HDPE (High Density Polyethylene)

PVC (Polyvinyl Chloride)

#### 7-20.3 Construction Requirements

#### 7-20.3(1) **Excavation and Preparation of Trench**

Prepare trench for sanitary sewer forcemain installation in accordance with 7-08.3(1), 7-09.3(4), 7-09.3(5), 7-09.3(6), 7-09.3(7) and 7-09.3(8) of the Standard Specifications and these Special Provisions.

#### 7-20.3(1)A **Trench Dewatering**

Dewater trench as necessary to install sanitary sewer forcemain in accordance with 7-08.3(1)D of these Special Provisions.

#### **Laying Pipe** 7-20.3(2)

#### 7-20.3(2)A Survey Line and Grade

Provide survey line and grade for sanitary sewer forcemain in accordance with 7-08.3(2)A of the Standard Specifications and these Special Provisions.

### 7-20.3(2)B Bedding the Pipe

Provide pipe bedding for sanitary sewer forcemain accordance with 7-09.3(9) of the Standard Specifications and these Special Provisions.

# 7-20.3(2)C Pipe Laying - General

Lay pipe in general for sanitary sewer forcemain in accordance with 7-08.3(2)B of the Standard Specifications and these Special Provisions.

# 7-20.3(2)D Pipe Laying – HDPE

Provide HDPE leak proof, thermal, butt joints, except at field closures and other joint connections specifically identified or approved by the Engineer, and butt weld in accordance with manufacturer's recommendation and ASTM D 2657. Use tools recommended by the pipe supplier and approved by the Engineer for joint fusing. Provide manufacturer trained and certified operators for the joint fusing equipment. Provide a fusing machine having hydraulic pressure control for fusing two pipe ends together. Accurately trim the ends of pipe to form perpendicular faces prior to fusing. Provide on the fusing machine an electrically heated and thermostatically controlled heating plate containing a temperature gauge for monitoring temperature. Periodically inspect the heating plate, using a temperature stick, to assure even heating. For connections requiring flanged connections, provide a HDPE flange adapter with a 316 stainless steel follower ring with Class 125 flange bolt pattern.

Provide joints between pipe sections being even with pipe interior. Internal projection beads do not need be removed from each pipe joint. Provide a butt-fused joint having true alignment between the joined pipes with uniform roll back beads resulting from the use of proper temperature and pressure. Allow the joint adequate cooling time before removing pressure. Provide watertight fused joint having tensile strength equal to that of the pipe. Provide City with opportunity to inspection and accept each joint. Cut-out and replace defective joints at no cost to the City.

City will not allow or permit the following:

- Threaded or solvent–cement joints and connections.
- Fabrication of fittings in the field.
- Sleeve couplings, repair bands, mechanical joints, flanges and other types
  of pipe connections are not permitted unless shown on the Plans or
  authorized in advance by the Engineer or Inspector.

Provide trench construction in accordance with 7-08.3(1)A. Place pipe in the trench in accordance with 7-08.3(2)B and this section. Backfill in accordance with 7-08.3(3) and these Special Provisions. Backfill and compact when HDPE pipe is at the same temperature as the surrounding soil. If using flowable CDF for bedding or backfill, fill the pipe with water and anchor pipe to counteract buoyancy. City will not allow blocking under the pipe.

Provide continuous HDPE pipe entering manholes. City will not allow short PVC closure segments, except where explicitly shown on the Plans or approved by the Engineer. Provide Kor-N-Seal Boots, or equal, to seal between the pipe and manhole wall.

### 7-20.3(2)E Rubber Gasket Joints

Lay sanitary sewer forcemain pipe having rubber gaskets in accordance with 7-08.3(2)E of the Standard Specifications and these Special Provisions.

### 7-20.3(2)F Plugs

Provide plugs for pipe branches, stubs or open pipe ends in accordance with 7-08.3(2)F of the Standard Specifications and these Special Provisions.**7-20.3(2)G**Jointing of Dissimilar Pipe

Join dissimilar pipes in accordance with 7-08.3(2)G of the Standard Specifications and these Special Provisions.

#### 7-20.3(3) Backfilling

Place backfill material in accordance with 7-08.3(3), 7-09.3(10) and 7-09.3(11) of the Standard Specifications and these Special Provisions.

#### 7-20.3(4) **Handling of Pipe**

Handle pipe in accordance with 7-09.3(13) of the Standard Specifications and these Special Provisions.

#### 7-20.3(5) **Cutting Pipe**

Cut pipe in accordance with 7-09.3(14) of the Standard Specifications and these Special Provisions.

#### 7-20.3(6) Laying of Pipe on Curves

Lay pipe on curves in accordance with 7-09.3(15) of the Standard Specifications and these Special Provisions.

### 7-20.3(7) **Detectable Marking Tape**

For nonmetallic pipe, provide detectable marking tape in accordance with 7-09.3(20) of the Standard Specifications and these Special Provisions.

### **Cleaning and Assembling Joint** 7-20.3(8)

Clean and assemble pipe ends, couplings, fittings and appurtenances in accordance with 7-09.3(16) of the Standard Specifications and these Special Provisions.

#### 7-20.3(9) **Concrete Thrust Blocking**

Provide concrete thrust blocking, if Shown, in accordance with 7-09.3(21) of the Standard Specifications and these Special Provisions.

# 7-20.3(10) Restrained Joints

Provide restrained joints as Shown and in accordance with 7-09.3(25) of these Special Provisions.

### 7-20.3(11) Air/Vacuum Release Assembly

Provide combination air and vacuum release assemblies at all high points and the locations shown on the Plans and in accordance with these Special Provisions.

### 7-20.3(12) Hydrostatic Pressure Test

Test sanitary sewer forcemains in accordance with 7-09.3(23) of the Standard Specifications and these Special Provisions.

#### 7-20.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### 7-20.5 **Payment**

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

Supplement Division 7 by adding the following Section:

# 7-21 TEMPORARY BYPASS PUMPING (\*\*\*\*\*\*)

### 7-21.1 Description

This Work consists of furnishing, installing, and maintaining temporary facilities and equipment required to maintain the continual wastewater flow and to prevent wastewater discharge to the environment throughout the duration of constructing new or rehabilitating existing sanitary sewer or combined sewer mains, or both, within the Project.

# 7-21.1(1) Separated Sewer (SS)

The separated sewer (SS) network is generally located in the south portion of the City. Contact the Engineer to determine if the subject pipes are in the SS area and if sewer lift stations discharge to the subject sewer pipes. SS systems convey only sanitary sewer flows and are generally not affected by wet weather. The Engineer will furnish estimated bypass diurnal flow values for minimum (night) and maximum (peaks).

### 7-21.1(2) Combined Sewer (CS)

The combined sewer (CS) network is generally located in the north portion of the City. Contact the Engineer to determine if the subject pipes are in the CS area and if sewer lift stations discharge to the subject sewer pipes. CS systems are pipes that convey stormwater runoff and wastewater in the same pipe. Drain inlets in streets and many existing roof drains, and yard drains are connected to the CS sewer system. Even minor precipitation can produce very sudden and large increases in sewer flow. The Engineer will furnish estimated bypass flow values for "dry weather" and "wet weather" conditions in each pipe segment of the Project.

### 7-21.2 Materials

Provide bypass system including, but not limited to, the following.

- 1. Bypass pump(s) and motor(s).
- 2. Suction piping and temporary connections.
- 3. Provide screen sized to remove solids greater than 3-inch diameter.
- 4. Discharge piping or hoses, or both,
- 5. Discharge throttling plug valve(s) and check valve(s).
- 6. Temporary suction and discharge pipe restraint systems.
- 7. Level or pressure sensing equipment, or both.
- 8. Automatic primary and redundant control systems and accessories.

Provide pumps, motors, engines, controls, sensors, valves, piping and other bypass system components suitable for continual and intermittent automatic operation.

# 7-21.2(1) Pumps

Provide fully automatic, electric or diesel powered, self-priming pumps that do not require the use of foot-valves or vacuum pumps in the priming system.

Provide non-clogging pumps capable of passing 3-inch diameter solids.

Provide an additional standby bypass pumping system with 100-percent redundant pumping capacity onsite.

Provide separate automatic control systems and level sensors for the primary and redundant bypass systems. If the primary bypass system is powered from electricity from the local power utility, provide a diesel engine powered standby system with a level sensor for automatic operation upon rising wastewater level resulting from inadequate capacity of the primary system or loss of electrical power. Provide diesel engine driven equipment with "critical rated" silencers in sound attenuating enclosures.

# 7-21.3 Construction Requirements

## 7-21.3(1) General

Ensure sequence of Work and bypass operations to maintain continual wastewater flow. Wastewater flow is continuous and cannot be stopped or reduced. Specifically schedule and control all Work to be performed in the manner and at the time that will not disrupt the continual flow of wastewater.

Cooperate with City Inspector on inspection of bypass system components prior to and during setup and leakage and pressure testing and in evaluating suitability to confirm bypass system components are in reasonably good condition.

Anticipate, and inform Subcontractors, that the requirement to provide wastewater flow can hinder or complicate the Work. The Contractor shall be solely responsible for all costs to clean up and otherwise remedy the impact or cost of wastewater releases to the environment or private property as a result of Contractor's or Subcontractor's failure to maintain required bypass operation, including fines and claims against the City.

Provide screen upstream of pump intake capable of removing solids larger than 3-inch in diameter. Clean screen as necessary to prevent clogging and surcharging the upstream pipe and dispose of debris in accordance with current local, State and Federal laws and regulations.

Continually monitor bypass pump operation and take prompt action to address problems including, but not limited to, clearing debris at intake, re-fueling, and sealing leaks.

Obtain approval in advance from Engineer for discharge locations for bypass flows.

Use temporary sewer flow bypassing with pumps only while onsite and actively monitoring the bypass pump equipment. At the end of each workday, and whenever Contractor is not present on the Site, discontinue bypass pumping and provide a temporary gravity flow connection capable of conveying the maximum diurnal or wet weather flow volume to tie the existing sewer pipe to the new pipe.

The Contractor may modify site and structures as required for construction and bypass but shall make no modifications, excavations or storage of material that prevents continual wastewater flow. If elements of the facilities are eliminated for the convenience or necessity of construction, then provide an equivalent temporary facility, pipeline or equipment capable of performing the same function without adversely affecting continual wastewater flow.

Restrain in position and protect portions of the temporary bypass located above ground from damage. Provide temporary below grade crossing or traffic ramps at street and driveway crossings.

Construct fuel and oil containment berms surrounding diesel engine driven equipment.

### 7-21.3(2)A Separated Sewer (SS)

Provide temporary bypass system that at minimum accommodates conveying minimum and maximum estimated diurnal flows meeting or exceeding those listed on the Plans. Field verify by observing actual sewer flows in the subject pipes.

Discharge to storm drain systems is prohibited.

### 7-21.3(2) Demobilization

Do NOT remove temporary bypass pumping equipment, unless directed by the Engineer, from a newly constructed sewer reach until successfully completing required testing and the City completes its CCTV inspection for acceptance. Operate and maintain the bypass pump equipment and system during the City's CCTV inspection. The City will perform its inspection for acceptance within 3-days after receiving notice of required testing being successfully completed.

Disinfect and flush to the public sewer system bypass piping and components prior to removal from the Site or relocation within the Project, unless pipe ends are capped to prevent the discharge of wastewater to the environment. Pressure wash manholes, including upstream manholes surcharged during bypass operations, following the final removal of the bypass system.

### 7-21.3(3) Submittals

Submit a Type 3E Working Drawing detailed wastewater bypass plan for review and approval two weeks prior to the starting construction. Do NOT begin bypass operations until receiving written approval from the City.

Provide a specific and complete bypass plan including, but not limited to, sequencing, schedules, backup plan, locations, elevations, capacities of equipment, system curve determination and total dynamic head calculation, materials and other incidental items necessary and required to ensure proper protection of the bypass equipment from damage, and compliance with the requirements specified in these Special Provisions and required permit conditions.

Provide bypass plan details including, but not be limited to, the following:

- Staging area for pumps.
- 2. Sewer plugging method and types of plugs.
- 3. Size, material, location and method of installation of suction and discharge piping.
- 4. Bypass pump sizes, capacity, number of each size, power requirements, and supporting calculations.
- 5. Calculations of friction losses and discharge pressures, including pump and system curves showing operating range.
- 6. Pump control system, logic and components, including float elevations and/or transducer equipment and settings.
- 7. Standby power generator size and location, if applicable.
- 8. Method of protecting discharge manholes or structures from erosion and damage.
- 9. Thrust restraint locations, including block sizes and bracing, if applicable.
- 10. Sections showing suction and discharge pipe depth, embedment, select fill and special backfill, if applicable
- 11. Method of noise control for each pump and generator.
- 12. Temporary pipe supports and anchoring.
- 13. Schedule for installation and maintenance of bypass pumps and lines.

### 7-21.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 7-21.5 Payment

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

Supplement Division 7 by adding the following Section:

# 7-22 PIPEBURSTING FOR MAINLINE COMBINED SEWER REPLACEMENT (\*\*\*\*\*)

#### 7-22.1 Description

This Work consists of the installation of high density polyethylene (HDPE) pipe using conventional pipe bursting methods for specific pipe reaches in accordance with the Plans and these Special Provisions.

The Contractor undertaking this Work must meet the qualifications established by these Special Provisions and Information for Bidders.

#### 7-22.2 Materials

Use following materials for pipe:

# **Thermoplastic**

HDPE (High Density Polyethylene) 9-05.21 **Special Provisions** DR 17

# 7-22.3 Construction Requirements

#### **Contractor Submittals** 7-22.3(1)

Submit Type 3E Working Drawings for all procedures or material descriptions requiring the Engineer's approval not less than 15 calendar days prior to mobilizing or commencing pipe bursting activities at the Site including, but not limited to, the following information:

- 1. Work plan outline and schedule describing each step of the pipe bursting work including; site mobilization, pre-insertion inspection, side-sewer location methods, flow bypassing, in-pipe gear, pipe assembly and testing, bursting and pull-in operation, side-sewer reinstatement, testing and cleanup.
- 2. An itemized schedule showing the sequence, duration and dates for each phase of the Work.
- A summary list of all equipment, vehicles and support machinery that will be used for the pipe bursting operations or that might be needed for contingency or emergency situations.
- Identify the noise levels and measures to mitigate noise for all equipment including, but not limited to, generators, hydraulic power units, pumps, and blowers, that will be operating continuously or during nighttime periods.
- A summary list of Contractor's personnel that will be on-site and on-call for all phases of the pipe bursting work.
- Submit qualifications information for the pipe bursting crew field superintendent including the following minimum qualifications:
  - Minimum of three years experience performing pipe bursting work with HDPE pipe for water and sewer main replacement.
  - Minimum of two recent pipe bursting projects using the same type of equipment, similar soil conditions, similar pipe size, material and length.
- Detailed plan for each staging area and access pit including, but not limited to. safety measures for vehicles and pedestrians, access routes, sawcut location, excavation dimensions, stockpile location, drainage control, excavation dewatering, shoring, security measures, utility protection measures, and utility relocations.
- Detailed site layout for the pull-in machine, chain or drill pipe staging, pipehandling equipment including materials storage and support systems.
- Detailed site layout for the HDPE pipe assembly and pull-in area including equipment for hauling, hoisting and moving the pipe.
- 10. Detailed plan for Traffic control including pedestrians and the Contractor's vehicle access as well as access limitations to the residents affected by the pipe bursting work.

- 11. Verification that all existing buried utility lines that are in close proximity to excavation and pipe bursting reaches have been positively identified and located. Describe measures to mitigate potential damage that might be caused by excavation activities, vibration or soil displacement.
- 12. Submit detailed traffic control plans to the City for review and approval in accordance with permit conditions, Specifications and Contract provisions. Road closures and detours will only be used when necessary and approved in advance, otherwise the implement traffic control measures in accordance with City of Everett Standard Drawings Series 700 and as stipulated by permit conditions.

### 7-22.3(2) Existing Conditions

The existing combined sewers, host conduits, are typically comprised of pipe materials without steel reinforcing that will readily fracture by pipe bursting methods. However some sections of existing pipe may be encountered that could be problematic for pipe bursting. The existing combined sewers may have various existing defects or faults for Contractor to consider in planning and executing the Work. Sewer faults and defects typically include minor joint misalignment, roots, debris, alignment and grade deviations, cracks, protruding laterals, sags (bellies), repair couplings, and mid-reach pipe material changes such as PVC repair sections.

All existing sewers are in service and actively conveying raw domestic wastewater and stormwater runoff. Be aware the quantity of flow can change significantly within a short time especially during heavy rainfall periods. Refer to Plans for estimated flow bypass rates and Section 7-21 of these Special Provisions for bypass pumping suggestions.

## 7-22.3(3) Flow Management

The Contractor shall be responsible for implementing adequate flow bypassing systems as described in Section 7-21 of these Special Provisions and shall at all times manage sewage and storm water flows in a manner that averts backups, overflows, spills or other incidents that may harm the environment, cause a public health hazard, or cause property damage. Where approved by the City Inspector, the Contractor may modify some drainage catch basins to reduce inflow of storm water runoff upstream of the Work but only to the extent that flooding or ponding at those drainage catch basins does not result.

# 7-22.3(4) Existing Facilities and Utilities

Contact the utility location and notification service and confirm that all known buried utilities are clearly marked and identified prior to commencing pavement sawcutting or excavations for pipe bursting access pits, or side sewer service disconnects. Where necessary and approved by Engineer in advance, the Contractor may temporarily remove and relocate existing facilities or utilities. Comply with the lawful requirements of the affected public agencies and owners of utilities or other facilities with regard to potential damage or interruption of services caused by the pipe bursting operations.

### 7-22.3(5) Pre-Insertion Inspection

Conduct sufficient CCTV inspections, subsurface location surveys, and investigation of the existing pipes to confirm the ability to successfully execute the pipe bursting work and side sewer replacements. CCTV inspections previously performed by the City are not available for the Contractor's use. Identify any pre-existing pipe sags (bellies) and report pertinent information to the Engineer for possible follow up spot excavations to correct them.

Prior to pipe bursting, clean the existing pipe of debris, roots, and accumulated solids and locate and identify methods for repairing pipe defects or obstructions that might impede pipe bursting operations. Spot-excavations may be necessary at some locations and shall be approved in advance by the Engineer. Should the Contractor determine

that pipe bursting is likely to be unsuccessful for the pipe replacement, notify the Engineer and the Contractor may be directed to replace the pipe reach by open cut methods.

Use extreme caution when cleaning existing pipes to prevent dislodgment of broken pipe fragments that may cause blockages or that would permit large amounts of soil to enter the main. Capture all debris generated by the cleaning operations in the nearest downstream manhole and remove from the sewer system. The Contractor shall be responsible for promptly correcting mainline or side sewer problems caused by pipe cleaning efforts at no additional cost to the City.

#### 7-22.3(6) **Access Pits**

The access pit locations and sizes for the pipe bursting work are shown on the Plans for planning and bidding purposes and are not intended to be binding on the Contractor. The Contractor may utilize alternative locations and sizes for access pits to the extent that the Work is accomplished without added complications or cost. To the extent possible minimize the number and size of access pits used for the pipe bursting work. Detour vehicle and pedestrian traffic safely around access pits in accordance with approved traffic control plans. Use concrete barriers, fences, steel plates or a combination of each as necessary for safety. Configure pipe pull-in pits in accordance with recommendations of ASTM F 585-94. Backfill access pits in accordance with the requirements defined for trench backfill, 7-08.3(3) of the Standard Specifications as modified by these Special Provisions.

### Pipe Bursting and Pull-In 7-22.3(7)

Provide conventional pipe bursting equipment that may include static, hydraulic or pneumatic bursting head tools, chain, cable or drill rods and winches or hydraulic units. Provide pipe bursting equipment that is appropriate for the given pipe size, pipe material, depth, backfill conditions, length and other factors. Size the outside diameter of the bursting head tool to effectively fracture and displace the host pipe and the void available for the replacement pipe not greater than the OD of the replacement pipe plus 1-inch. The Contractor shall be responsible for maintaining specified line and grade and for preventing settlement, heaving or other disturbances to the ground surface and adjacent structures and improvements.

If the pipe bursting effort is unable to advance due a concealed condition, for example an unusual host pipe material or concrete encased backfill condition, make a localized excavation to remedy the problem and complete the pipe burst effort. Compensation for remedy of concealed conditions will be paid as Force Account.

If the pipe bursting effort is unable to advance due to equipment problems and not a concealed condition, then all measures taken to remedy the problem and complete the pipe burst effort shall be accomplished at no additional cost to the City.

If the pipe bursting effort fails to successfully complete the pipe replacement due to equipment deficiencies, terminate the pipe bursting effort and perform the pipe replacement by open-cut methods, including street restoration, at no additional cost to the City.

Engineer will inspect the entire section of HDPE pipe in accordance with 7-08.3(J) of these Special Provisions prior to initiating pull-in. If fusion of one or more joints must be done during the pull-in, do not resume pull-in until the new joint is properly cooled and has achieved full strength.

Implement a sufficient number of rollers, cradles, cranes, cribbing and other pipe handling and support devices to assure smooth pull-in, positive control of bending and otherwise preventing damage to the pipe and joints. Pipe fusion assembly may be accomplished at locations not immediately adjacent to the pull-in locations and pipe section(s) may be dragged for a limited distance. Minimize the distance the pipe is

dragged, protect the pipe from excessive abrasion or damage and only drag the pipe in the presence of the City Inspector.

Provide a swivel to connect the lead end of the new pipe to minimize torsional stress and use a section of thick-pipe wall to connect to the bursting head. Mark the HDPE pipe on the outside surface with tick-marks at regular measured intervals not exceeding 10-feet each and with numerical length notations, distance from bursting head, at 50-foot intervals. Notify the Engineer of unusual changes of the rate of pull-in or excessive resistance during bursting and pull-in. Take appropriate action to address complications and to prevent damage to property or new materials. After pull-in and prior to connection to manholes, allow the HDPE pipe a minimum of 24 hours relaxation period to reach temperature equilibrium with the surrounding ground and to dissipate stresses. Make connection to manholes after the line is confirmed to be clean and is authorized by the City Inspector.

# 7-22.3(8) Post Insertion Inspection

Upon completion of each reach of pipe bursting and pull-in, perform and submit to the City Inspector a CCTV inspection of the replacement pipe to confirm acceptable finished alignment, grade, roundness and the absence of debris, sags or pipe damage.

### 7-22.3(9) Pre-Existing Pipe Sags (Bellies)

If pipe sags (bellies) are verified in the pre-insertion inspection and are subsequently evident in the finished replacement pipe, the Engineer may direct Contractor to spot excavate, expose the pipe and adjust the pipe to eliminate the sag. Compensation for correcting pre-existing sags will be paid as Force Account work.

# 7-22.3(10) Couplings and Fittings

Fabricated or molded HDPE fittings, including but not limited to tees, wyes, and elbows, are not anticipated to be necessary for this Project. Provide pipe couplings where shown on the Plans and details or as approved by the Engineer. Electro-fusion type HDPE couplings or fittings are not permitted unless specifically authorized by the Engineer.

### 7-22.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 7-22.5 Payment

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### **DIVISION 8 - MISCELLANEOUS CONSTRUCTION**

### 8-01 EROSION CONTROL

# 8-01.1 Description

Revise the first paragraph in 8-01.1 to read as follows:

This Work consists of furnishing, installing, maintaining, removing and disposing of high visibility fence, and water pollution and erosion control items in accordance with the Standard Specifications, these Special Provisions, as shown in the Plans, as shown on COE Standard Drawings, or as designated by the Engineer.

### 8-01.2 Materials

Supplement the list of materials in 8-01.2 as follows:

Biodegradable Erosion Control Blanket

9-14.5(2)

# 8-01.3 Construction Requirements

### 8-01.3(1) General

Supplement 8-01.3(1) as follows:

The Contractor shall be responsible for all Work required for compliance with the Construction Stormwater General Permit (CSWGP) including annual permit fees.

Delete the first through eighth paragraphs and substitute the following:

The Contractor shall install a high visibility fence along the site preservation lines when shown in the Plans or as instructed by the Engineer.

Throughout the life of the project, the Contractor shall preserve and protect the delineated area, acting immediately to repair or restore any fencing damaged or removed.

Controlling pollution, erosion, runoff, and related damage requires the Contractor to perform temporary Work items including but not limited to:

- Providing ditches, berms, culverts, and other measures to control surface water
- 2. Building dams, settling basins, energy dissipaters, and other measures, to control downstream flows.
- 3. Controlling underground water found during construction.
- 4. Covering or otherwise protecting slopes and stockpiles until permanent erosion-control measures are working.

To the degree possible, the Contractor shall coordinate this temporary Work with permanent drainage and erosion control Work the Contract requires.

All sediment control devices including, but not limited to, sediment ponds, perimeter silt fencing, or other sediment trapping BMPs shall be installed prior to any ground disturbing activity. Clearing, grubbing, excavation, borrow, or fill within the Right of Way shall never expose more erodible earth than as listed below:

Western Washington (West of the Cascade Mountain Crest)		
May 1 through September 30	17 Acres	
October 1 through April 30	5 Acres	

1		

#### 8-01.3(1)A **Submittals**

Revise 8-01.3(1)A to read as follows:

The Contractor shall prepare and submit a Temporary Erosion and Sediment Control (TESC) Plan consisting of a narrative section and plan sheets that meets Ecology's Stormwater Pollution Prevention Plan (SWPPP) requirement in the CSWGP. A draft SWPPP has been prepared for this project and is available upon request

The Contractor may adopt the TESC measures indicated in the Drawings in preparing the TESC Plan. The Contractor shall complete and modify the TESC Plan to meet the Contractor's schedule and method of construction. All TESC Plans shall meet the requirements of the current edition of the Department of Ecology's Stormwater Management Manual for Western Washington and be adapted as needed throughout construction based on site inspections and discharge samples to maintain compliance with the CSWGP. The Contractor shall develop a schedule for implementation of the TESC work and incorporate it into the Contractor's progress schedule.

TESC plan shall be continually updated as site conditions change and erosion control measures are adjusted. The Contractor shall provide an updated TESC plan for review when requested by the Engineer.

The Contractor's adoption of the TESC Plans as shown in the Plans shall be submitted as a Type 1 Working Drawing. Modified TESC Plans shall be submitted as Type 2 Working Drawings.

Failure to accept all or part of any such Plan will not make the Contracting Agency liable to the Contractor for any Work delays.

The Contractor shall prepare and submit a Temporary Erosion and Sediment Control (TESC) Plan consisting of a narrative section and plan sheets meeting the requirements of Chapter 2 of the DCSS.

The Contractor may adopt the TESC measures indicated in the Drawings in preparing the TESC Plan. The Contractor shall complete and modify the TESC Plan to meet the Contractor's schedule and method of construction, but the modified plan shall provide at least an equivalent level of erosion protection as the measures included in the Drawings. All TESC Plans shall be adapted as needed throughout construction based on site inspections. The Contractor shall develop a schedule for implementation of the TESC work and incorporate it into the Contractor's progress schedule.

At the request of the Engineer updated TESC Plans shall be prepared and provided to the City.

The Contractor's adoption of the TESC Plans as shown in the Plans shall be submitted as a Type 1 Working Drawing. Modified TESC Plans shall be submitted as Type 2 Working Drawings.

Failure to accept all or part of any such Plan will not make the Contracting Agency liable to the Contractor for any Work delays.

#### **Erosion and Sediment Control (ESC) Lead** 8-01.3(1)B

Revise the second and third paragraphs in 8-01.3(1)B to read as follows:

The ESC Lead shall implement the TESC Plan. Implementation shall include, but is not limited to:

- Installing and maintaining all temporary erosion and sediment control Best Management Practices (BMPs) included in the TESC Plan to assure continued performance of their intended function. Damaged or inadequate TESC BMP's shall be corrected immediately.
- 2. Updating the TESC Plan to reflect current field conditions.
- Discharge sampling and submitting Discharge Monitoring Reports (DMRs) to Ecology in accordance with the CSWGP.
- Develop and maintain the Site Log Book as defined in the CSWGP. As a part of the Site Log Book, the Contractor shall develop and maintain a BMP tracking table to show that identified TESC compliance issues are fully resolved within 10 calendar days. The table shall include the date an issue was identified, a description of how it was resolved, and the date the issue was fully resolved.

The ESC Lead shall also inspect all areas disturbed by construction activities, all on-site erosion and sediment control BMP's, and all stormwater discharge points at least once every calendar week and within 24-hours of runoff events in which stormwater discharges from the site. Inspections of temporarily stabilized, inactive sites may be reduced to once every calendar month. The Erosion and Sediment Control Inspection Form (WSDOT Form 220-030) shall be completed for each inspection and a copy shall be submitted to the Engineer no later than the end of the next working day following the inspection.

### Seeding, Fertilizing, and Mulching 8-01.3(2)

### 8-01.3(2)A **Preparation For Application**

#### 8-01.3(2)A1 Seeding

Revise the first paragraph in 8-01.3(2)A1 to read as follows:

Cultivate trench restoration in turf areas to 4-inch depth to provide firm yet friable seedbed. Provide topsoil if needed. Cultivate seeding restoration areas no sooner than one week prior to seeding.

Delete the third paragraph in its entirety.

Supplement 8-01.3(2)A1 by adding the following:

Provide a smooth, consistent, friable surface acceptable for all areas being seeded by raking or similar treatment acceptable for seeding as determined by the Engineer.

Provide all areas being seeded free of all visible clods, rocks and debris measuring one-inch or larger in any dimension.

#### Seeding and Fertilizing 8-01.3(2)B

Supplement 8-01.3(2)B by adding the following:

Use hydroseeding application method where feasible, uniformly apply a slurry of seed, fertilizer, mulch and water over all disturbed areas unless shown otherwise on the Plans.

Use Seed Mix #1, as specified in 9-14.2 of these Special Provisions in restoring areas not having established lawns. Use Seed Mix #2 or #3, as specified in 9-14.2 of these Special Provisions, for restoring areas with established lawns.

Apply permanent seed mixture #1 and #2 uniformly over the areas being restored at a rate of 4-pounds per 1,000 square feet.

Apply permanent seed mixture #3 uniformly over the areas being restored at a rate of 7-pounds per 1,000 square feet.

Apply temporary seed mixture uniformly over the areas being restored at a rate of 2-pounds per 1,000 square feet.

Apply starter fertilizer in accordance with Section 9-14.3 at a rate of 8 pounds per 1,000 square feet. For hydroseeding application, incorporate the fertilizer into the seed, mulch and water slurry and apply in accordance with these Special Provisions.

#### 8-01.3(2)D Mulching

Supplement 8-01.3(2)D by adding the following:

Apply wood cellulose fiber at the rate of 60 pounds per 1,000 square feet.

### Street Cleaning 8-01.3(8)

Delete 8-01.3(8) and substitute the following:

Provide self-propelled pickup sweepers equipped with water spray systems for dust control and designed and operated to meet air quality standards for pavement cleaning and debris removal as required. The use of supplementary water to suppress dust while performing cleaning Work shall be held to a minimum unless designated otherwise by the Engineer.

Plan construction operation to minimize the need for street cleaning.

Sweep streets and roadways as needed at least once per day. Sweep all roadway areas subject to construction traffic within the Project area and connecting streets, preferably during non-peak use hours of the Project site. More frequent cleaning may be required, as directed by the City's Inspector, as conditions warrant.

Clean up spills immediately. Failure to clean streets or spills as required will result in City procuring street cleaning services, or cleaning streets themselves at City overtime rates. Either way, Contractor shall be responsible for reimbursing the City for cost incurred. If Contractor fails to promptly reimburse City then City will deduct cost, plus interest on unpaid balance, from Contractor's final payment.

#### 8-01.3(9) Sediment Control Barriers

#### 8-01.3(9)A Silt Fence

Delete the fifth paragraph in 8-01.3(9)A and substitute the following:

Provide steel posts consisting of U, T, L or C shape posts with a minimum weight of 1.35 lbs/ft, or other steel posts having equivalent strength and bending resistance to the posts listed. Provide silt fence conforming to COE Standard Drawing 214.

#### 8-01.3(15) **Maintenance**

Delete the fifth paragraph of 8-01.3(15).

#### 8-01.3(16) Removal

Revise the first paragraph of 8-01.3(16) to read as follows:

The Contractor shall remove all temporary BMPs and all associated hardware from the project limits prior to Physical Completion unless otherwise approved by the Engineer. All permanent stabilization of disturbed areas shall be completed prior to removal of temporary BMPs

At the request of the Contractor and at the sole discretion of the Engineer the CSWGP may be transferred back to the City. Approval of the Transfer of Coverage request will require the following:

All other Work required for Contract Completion has been completed.

- 2. All Work required for compliance with the CSWGP has been completed to the maximum extent possible. This includes removal of BMPs that are no longer needed and the site has undergone all Stabilization identified for meeting the requirements of Final Stabilization in the CSWGP.
- 3. An Equitable Adjustment change order for the cost of Work that has not been completed by the Contractor.
- Submittal of the Washington State Department of Ecology Transfer of Coverage form (Ecology form ECY 020-87a) to the Engineer.

If the Engineer approves the Transfer of Coverage back to the City the requirement in 1-07.5(3) for the Contractor's submittal of the Notice of Termination form to Ecology will not apply.

#### 8-01.4 Measurement

Delete all paragraphs in 8-01.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B – Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

## 8-01.5 Payment

Delete all paragraphs in 8-01.5 and substitute the following:

Payment for bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions of these Special Provisions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-02 ROADSIDE RESTORATION

#### 8-02.1 Description

Supplement 8-02.1 by adding the following:

All plant materials required by the Contract Documents shall be Plant Selection Including Plant Establishment (PSIPE) per the Standard Specifications.

### 8-02.2 Materials

Supplement 8-02.2 by adding the following to the list of materials:

Soils 9-14.1(1) (Special Provisions)

Seed 9-14.2 (Special Provisions) Bark or Wood Chip Mulch 9-14.4(3) Special Provisions)

Compost 9-14.4(8)

#### 8-02.3 **Construction Requirements**

### **Responsibility During Construction**

Supplement 8-02.3(1) by adding the following:

No dumping or stockpiling of topsoil, compost or bark mulch on roadway surfaces will be allowed.

#### **Work Plans** 8-02.3(2)

#### **Roadside Work Plan** 8-02.3(2)A

Supplement 8-02.3(2)A by adding the following:

Submit to the City a Roadside Work Plan meeting the requirements of the Standard Specifications a minimum of 30 calendar days prior to commencing the installation of topsoil, compost, seeding, bark mulch or landscape materials.

#### 8-02.3(4) **Topsoil**

Revise the first paragraph of 8-02.3(4) to read as follows:

Spread topsoil evenly over the specified areas to the depth shown in the Plans or as otherwise ordered by the Engineer. Prior to spreading topsoil cultivate existing soil to a depth of six inches or as specified in the Special Provisions or Plans. After spreading topsoil rake up, remove and dispose of all large clods, hard lumps, and rocks 1 inch in diameter and larger.

Delete section 8-02.3(4)A in its entirety and substitute the following:

#### 8-02.3(4)A Topsoil Type A – Imported

Provide Topsoil Type A – Imported in accordance with the 9-14.1(2) of the Special Provisions.

Delete section 8-02.3(4)C in its entirety and substitute the following:

### **General Turf Area Soil** 8-02.3(4)C

Provide General Turf Area Topsoil in accordance with the 9-14.1(3) of the Special Provisions.

### 8-02.3(5) Roadside Seeding, Lawn and Planting Area Preparation

Supplement 8-02.3(5)C by adding the following:

When Post Construction Soil Quality and Depth is called for in the plans or Special Provisions all new and restored lawn and landscaping areas shall be prepared in accordance with City Standard Drawings 202 and 203. Select the preferred preparation option for each area. Different options may be selected for different parts of the project. Notify the Engineer in advance of the selected method for achieving Post-Construction Soil Quality and Depth prior to beginning clearing and grading. These requirements shall be in addition to the requirements in the remainder of Section 8-02.3. Where conflicts exist the more stringent requirement shall apply unless otherwise determined by the Engineer.

# 8-02.3(5) C Planting Area Preparation

Supplement 8-02.3(5)C by adding the following:

Amend soil in planting areas with four inches of Compost tilled six inches into the native soil. Lightly compact soil and establish a smooth and uniform finished grade that protects against obstruction to surface drainage.

#### 8-02.3(8) **Planting**

Supplement 8-02.3(8) by adding the following:

Install plants at the same depth grown in nursery; top of rootball should be level with ground line. Scarify sides of planting pit in order to allow for root penetration, and recompact the subgrade at the bottom of the planting pit to prevent settling. Pull bark mulch back from the base of plants.

#### 8-02.3(11) **Bark or Wood Chip Mulch**

Supplement 8-02.3(11) by adding the following:

Place bark mulch over all planting areas to the depth shown on the Plans. Thoroughly water and hose down plants with a fine spray to wash the leaves of the plants immediately after application.

### 8-02.3(13) Plant Establishment

Supplement 8-02.3(13) by adding the following:

Plant establishment consists of insuring resumption and continued growth of all planted material including seeding for a period of one year. This includes, but is not limited to, labor and materials necessary for removal and replacement of any rejected plant material planted under this Contract. The Contractor shall be responsible for watering all seeded areas and planting areas sufficiently to establish and maintain a thriving condition throughout the duration of the plant establishment period.

### 8-02.3(16) Lawn Installation

### 8-02.3(16)A Lawn Installation

Delete 8-02.3(16)A and substitute the following:

# 8-02.3(16)A Lawn Installation –Sod or Seed (\*\*\*\*\*\*)

Install sod in irrigated areas only after the irrigation system is fully operational.

Provide seed mix and in accordance with the Section 9-14.2. Apply at the rates specified in 8-01.3(2)B.

Unless the Engineer approves otherwise, install seed or sod between March 1 through May 15 and September 1 through October 1.

Contractor has option of sodding in lieu of seeding lawn installations at no additional expense. City will NOT allow seeding in lieu of sodding.

Place sod strips within 48-hours of being cut. Place strips without voids and stagger the end joints. Roll sod with a smooth roller following placement to ensure good contact with the soil.

During the establishment period, erect barriers, with warning signs where necessary, to preclude pedestrian traffic over the newly placed sod or seed.

Prepare areas for sod in accordance with standard horticultural practices as follows:

- 1. Rototill, or otherwise cultivate, to a minimum depth of 4-inches into the ground surface. Thoroughly incorporate a 10-2-10 fertilizer in the rototilling process at a rate of 4 pounds of available Nitrogen per 1000 square feet.
- 2. Rake the surface to even grade without low spots to trap water and round surface to match surroundings.
- 3. Add topsoil as required by the design.

**NOTE**: Topsoil will be paid for separately if required.

- 4. Lightly dampen and compact the finished grade.
- 5. Install sod taking care to butt each piece tightly against the adjacent one. Stagger butt joints. Lay sod on sloped areas with the long dimension parallel to the toe or top of slope. After placing, roll the sod and sprinkle heavily with water.
- 6. Provide tools specially designed for the work and satisfactory to the Engineer.
- 7. Water and fertilize the sod during the 90 days establishment period. Schedule watering to prevent joints from drying between sod strips. Apply 6-2-4 fertilizer at 6 week intervals at the rate of 1 to 1-1/2 pounds of available Nitrogen per 1,000 square feet per application.

Prepare areas for seeding in accordance with 8-01.3(2)A1. Seed areas in accordance with 8-01.3(2)B.

Where Shown that sod is to be replaced, the work shall consist of the removal and replacement of existing lawn turf by cutting the sod to be removed into convenient sized squares or strips to uniform thickness, piling and storing in a dampened condition, and finally replacing the sod in its original position. This work will be performed where the special provisions provide for such work.

The Contractor may at his option use sod brought in from an outside source in lieu of replacing existing sod. If the Contractor elects to use sod from an outside source, the Engineer shall approve the supply source.

The sod shall be removed to a uniform depth of approximately 2-inches with an approved type of sod cutter. This operation shall be performed in such a manner as to ensure uniform thickness of sod throughout the operation.

Where sod is to be replaced with new sod, provide new sod in accordance with 9-14.6(8) of these Special Provisions and the Standard Specifications.

Guarantee sod to survive in a healthy condition through the 90 day establishment period. The establishment period shall begin on the date the Engineer accepts the sod placement. Remove and replace, at Contractor's expense, sod that in the opinion of the Engineer is not in a healthy growing condition at the end of the establishment period. Provide replacement sod that is of the same mixture and grade as the surviving sod.

### 8-02.3(16)B Lawn Establishment

Revise the second paragraph to read as follows:

The lawn establishment period begins immediately after Engineer accepts the lawn planting and ends when greater than 90% of the restored area is covered with new turf growth at least 2-inches tall.

Supplement 8-02.3 by adding the following:

# 8-02.3(17) Landscape Restoration

Restore all disturbed areas to original condition or better. The Contractor is specifically reminded that unnecessary damage caused beyond the limits of clearing or construction shall be repaired in like or better condition at the Contractor's sole expense.

Restore grass areas with hydroseed where directed. Provide grass seed in accordance with these Special Provisions. Grass seed and hydroseeding will be incidental to the lump sum price for Landscape Restoration.

Provide Topsoil Type A – Import or General Turf Area Soil as the case may be in accordance with these Special Provisions incidental to the lump sum price for Landscape Restoration.

Provide Bark Mulch in accordance with these Special Provisions incidental to the lump sum price for Landscape Restoration.

# 8-02.4 Measurement

Delete all paragraphs in 8-02.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-02.5 Payment

Delete all paragraphs in 8-02.5 and substitute the following:

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 8-04 CURBS, GUTTERS AND SPILLWAYS

### 8-04.1 Description

Revise the first paragraph in 8-04.1 to read as follows:

This work shall consist of construction of cement concrete curbs, curbs and gutters, gutters, and HMA asphalt Curbs in accordance with 8-04 of the Standard Specifications and as modified in these Special Provisions conforming to the Plans and COE Standard Drawings.

# 8-04.2 Materials

Supplement 8-04.2 by adding the following:

Liquid Membrane-Forming Concrete 9-23.2 Special Provisions Curing Compounds

Chemical Admixtures for Concrete

9-23.6 Special Provisions

### 8-04.3 **Construction Requirements**

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

Supplement 8-04.3(1) by adding the following:

Provide steel forms on tangent sections and wooden forms for curved sections and radii.

Provide 1/2-inch premolded filler in lieu of 3/8-inch premolded filler for throughexpansion Provide through expansion joint at maximum 30-foot intervals.

Provide through expansion joint at each end of driveway.

Compact the subbase for curb and gutter sections to 95-percent maximum density at optimum moisture content before placing the curb and gutter.

The top surface of the finished concrete shall not deviate more than 1/8-inch as measured using a 10-foot straight edge.

The curb alignment shall not vary more than 1/4-inch as measured using a 10-foot straight edge.

Depress the cement concrete curb at locations shown on the Plans, or as directed by the Engineer, for concrete curb ramps and driveways, in accordance with COE Standard Drawings No., , 315, 316, 317, 318, 319, 320, 321 and 322.

Construct cement concrete curbs where shown on the Plans, or as directed by the Engineer, in accordance with COE Standard Drawing Nos. 307 308and 309.

Construct storm drainage frames and grates into cement concrete curb and gutter at locations shown on the Plans in accordance with COE Standard Drawings Nos. 407 and 412.

After finishing, spray cement concrete curb, gutters and spillways using transparent curing compound in accordance with 5-05.3(13)A of the Standard Specifications.

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

Supplement 8-04.3(1)A by adding the following:

Construct extruded cement concrete curb where shown on the Plans and in accordance with COE Standard Drawing No. 309.

#### **Extruded Asphalt Concrete Curbs, and Gutters** 8-04.3(2)

Supplement 8-04.3(2) by adding the following:

Construct extruded asphalt concrete curbs" where shown on the Plans, or as directed by the Engineer, in accordance with COE Standard Drawing No. 310.

#### 8-04.4 Measurement

Delete all paragraphs in 8-04.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### 8-04.5 **Payment**

Delete all paragraphs in 8-04.5 and substitute the following:

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT, of the Standard Specifications.

### 8-05 VACANT

Delete Section 8-05 and substitute the following:

# 8-05 PRIVATE IMPROVEMENTS (\*\*\*\*\*)

#### 8-05.1 Description

This Work shall consist of removal and restoration of certain existing private improvements to conform to the new requirements resulting from construction.

# **Existing Private Improvements Restoration**

Restore existing private improvements that require relocation to accommodate the new construction where shown on the Plans, or as directed by the Engineer, in a location acceptable to the property owner and the Engineer. Protect and preserve from damage or destruction all private property whether removal and relocation is required or not. Remove and replace in kind, at Contractor's expense, private property damaged or destroyed due to the Contractor's negligence.

#### 8-05.1(2) **Resetting Existing Private Driveway Pavers**

Restore existing private driveway with pavers salvaged prior to construction.

### **Replacing Exposed Aggregate Concrete Driveway Improvements** 8-05.1(3)

Replace existing private cement concrete driveway area in accordance with Section 8-06, matching exposed aggregate finish and joint location of existing concrete.

#### 8-05.2 Materials

Supplement 8-05.2 by adding the following:

Concrete Interlocking Pavers	9-12.3 Special Provisions
Bedding Sand for Interlocking Pavers	9-03.24 Special Provisions
Joint Sand for Interlocking Pavers	9-03.25 Special Provisions
Geotextile	9-33.2 Standard Specifications

#### 8-05.3 **Construction Requirements**

#### 8-05.3(1) **Concrete Interlocking Pavers**

Salvage existing precast interlocking concrete pavers for reinstallation following construction. If pavers are broken during construction, obtain replacements from same supplier as the original installation (coordinate with owner) to match.

Provide minimum two inch thick compacted and graded sand bed to install pavers on. Match existing grade of surrounding pavers. Fit pavers tight together and fill with joint sand as shown on the Plans.

#### 8-05.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

#### 8-04.5 **Payment**

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-06 CEMENT CONCRETE DRIVEWAY ENTRANCES

#### 8-06.1 Description

Supplement 8-06.1 by adding the following:

This Work also includes concrete driveway slabs behind back of sidewalks and thickened sidewalk driveway approaches.

### 8-06.2 Materials

Supplement 8-06.2 by adding the following:

Liquid Membrane-Forming Concrete Curing 9-23.2 Special Provisions

Compounds

Chemical Admixtures for Concrete 9-23.6 Special Provisions

# 8-06.3 Construction Requirements

Delete the first two paragraphs of 8-06.3 and substitute the following:

Provide Cement Concrete Driveway Type 1, 2 or 3 as the case may be in accordance with the Standard Specifications and Standard Plan No. 315, 316 and 317. Where driveways with depressed sidewalk are called for on the Plans, depress the sidewalk through the driveway area, providing a maximum 2 percent slope from back of sidewalk to the back of curb. Provide minimum six inch thick cement concrete driveways and sidewalk driveway approaches and construct using Commercial Concrete as specified in Section 6-02.3(2)B of the Standard Specifications. Provide concrete having a slump not exceeding 3-1/2-inches and having a minimum 28-day design strength of 4000 psi. Match concrete finishing for transitions to existing cement concrete driveways to the existing surface as closely as possible.

Sawcut existing cement concrete driveways and butt joint the new pavement to the existing driveway.

Prepare subgrade for driveways and having required compaction and providing a firm, unvielding subgrade acceptable to the Engineer.

Provide forms for the straight sections of the driveway having a minimum thickness of three inches and equal to the nominal depth of the concrete. Plywood or one inch lumber may be used on radii. Securely stake and block all forms to true line and grade.

Protect the driveway against damage or defacement until acceptance by Owner. Remove and replace by the Contractor at his expense driveways that are not acceptable, in the opinion of the Engineer, because of damage or defacement.

Before placing any concrete, have on the job site enough protective paper, or equivalent, to cover the pour of an entire day in the event of rain or other unsuitable weather conditions.

### 8-06.4 Measurement

Delete paragraphs in 8-06.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

# 8-06.5 Payment

Delete all paragraphs in 8-06.5 and substitute the following:

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-13 MONUMENTCASES

Delete Section 8-13 and substitute the following:

# 8-13 SURVEY MONUMENTS AND CASES (\*\*\*\*\*)

# 8-13.1 Description

This Work shall consist of furnishing and placing monument cases or survey monuments and monument cases with covers. This Work will also include adjusting existing survey monument cases to grade in accordance with COE Standard Drawing No. 323, 324, 325 and these Special Provisions.

### 8-13.2 Materials

Provide Class 30 cast iron monument case and riser section in accordance with ASTM – A48 with bituminous coating.

Provide cast iron cover with bituminous coating and integrally cast letters conforming to COE Standard Drawing No. 323 and 324.

Provide Commercial grade cement concrete.

### 8-13.3 Construction Requirements

# 8-13.3(1) Survey Monuments

Provide the survey monuments, including case and cover, as called for on the Plans and in these Special Provisions.

City has made reasonable effort to identify existing survey monuments on the Plans. Notify the Engineer immediately if survey monuments are unexpectedly encountered in the area of the Work.

Perform survey monument work using a professional land surveyor licensed in the State of Washington under the provisions of RCW 18.43.020and conforming to the requirements of RCW 58.09.120 and 58.09.130 and COE Standard Drawing No. 313.

Remove and replace GLO or Geodetic Control monuments in conformance with the requirements of WAC 332-120. Complete the requirements for referencing monuments to the NAD 83-91 horizontal datum by completing a control survey that references the City's NAD 83-91 survey control monuments. Obtain City Surveyor approval for this control survey procedure and reference monument selection prior to beginning this work. The Contractor's surveyor is required to fill out and submit necessary paperwork to Washington DNR prior to removing a survey monument. Record survey field notes for the control survey in a City supplied field book and return to the Engineer at the completion of the work. The surveyor shall stamp his surveyor's license number as required in RCW 58.09.120 on the brass cap of each monument set. The surveyor shall also stamp the City supplied monument number on each monument set. Coordinate monument survey work with and obtain Engineer approval before final City approves the final payment.

Carefully protect reference points to the monuments and take necessary precaution to avoid destruction of the points. Re-set lost or destroyed reference points at Contractor's expense.

### 8-13.3(2) Furnish and Place Monument Castings

Provide monument cases and covers where indicated on the Plans, or where designated by the Engineer, in accordance to COE Standard Drawing No. 323 and 324.

# 8-13.3(3) Adjust Existing Monument Castings to Grade

Adjust existing monument castings to grade in the same manner as for manholes in 7-05.3(1) of these Special Provisions.

# 8-13.4 Measurement

Delete all paragraphs in 8-13.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-13.5 Payment

Delete all paragraphs in 8-13.5 and substitute the following:

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-14 CEMENT CONCRETE SIDEWALKS

#### 8-14.2 Materials

Supplement 8-14.2 by adding the following:

Chemical Admixtures for Concrete 9-23.6 Special Provisions

#### 8-14.3 **Construction Requirements**

Supplement 8-14.3 by adding the following:

Provide concrete mix with slump not exceeding 3-1/2 inches.

Add coloring agent for matching the color of newly constructed cement concrete sidewalks to the color of adjacent existing cement concrete sidewalks. Add to the concrete during mixing in an amount not to exceed 1-1/2 pounds per cubic yard of concrete. Do NOT use coloring agent in curb ramps.

#### 8-14.3(1) **Excavation**

Supplement 8-14.3(1) by adding the following:

Obtain approval of the Engineer to provide, place and compact Gravel Borrow meeting the requirements of 9-03.14 of the Standard Specification if there is insufficient suitable native material on the Project to fill low areas for the sidewalk subgrade.

#### 8-14.3(2) **Forms**

Supplement 8-14.3(2) by adding the following:

Before setting the forms, grade the subgrade to two inches below established grade to accommodate two inches of crushed surfacing top course.

Install sidewalk drains prior to placing forms if the Plans calls for sidewalk drains or the Engineer directs installation of sidewalk drains.

#### 8-14.3(3) **Placing and Finishing Concrete**

Supplement 8-14.3(3) by adding the following:

Form joints by first cutting a groove in the concrete with a tee bar of a depth equal to, but not greater than the joint filler material, and then work the premolded joint filler into the groove. Position premolded joint filler for through and contraction joints in true alignment at right angles to the line of the sidewalk and be normal to and flush with the surface.

Edge joints using a 1/4 inch radius edger and tool the sidewalk edges using a 1/2inch radius edger.

Obtain Engineer's approval of placing and finishing tools. Perform the concrete sidewalk placing and finishing under the control of the Engineer. Provide finished appearance by using an edging tool lightly on the sidewalk edges after the brush finish.

Provide standard locations for concrete sidewalk through joints in accordance with these Special Provisions, in addition to the Plans, at the following:

- At street margins produced and at 30-foot intervals.
- To separate concrete driveways, stairways, curb ramps and their landings from sidewalks.
- Around the vertical barrel of fire hydrants, around utility poles and large diameter underground utility cover castings when located in the sidewalk area.
  - Provide 18-inch No. 4 rebar placed diagonally and at least 6-inchs off each corner of through joint noted in (c).
- d. Longitudinally between concrete walks, curbs, paved planting strips and solid masonry or concrete walls where they abut.

e. To match as nearly as possible the through joints in the adjacent pavement and curb when sidewalk abuts curb.

Construct transverse contraction joints with premolded material 3/8-inch by 1-1/2-inch wide and set at maximum 15-foot intervals, or as decided by the Engineer.

Provide 3/8-inch thick premolded non-extruding joint material, cut equal to the full depth of the concrete, plus 1/2-inch transverse and longitudinal through joints as shown on Standard Drawing No. 312. Install with top edge flush with the finished surface of the concrete, in a perpendicular plane to the surface and with the bottom edge embedded in the subgrade. Install joints in a straight alignment, except where placed in curved locations as required by the Plans.

Supplement 8-14.3(3) by adding the following:

# 8-14.3(3)A Curb Ramp (\*\*\*\*\*\*)

Install Curb Ramp Type A, B, C, or D as the case may be at locations shown on the Plans and Standard Drawing 313 and 322.

Construct monolithic depressed curb and sidewalk as indicated on COE Standard Drawing No. 318, 319, 320, and 321. Construct curb ramps separate from the sidewalk to produce a definite break line between the ramp and the sidewalk. Install a 3/8-inch non-extruded through joint material between the curb and the sidewalk with edging as specified in Section 8-14.3(3).

Brush-finish the triangular shaped sidewing areas with brushing direction being parallel to the curb face. Do NOT extend the adjacent sidewalk "V" groove scoring pattern into the curb ramp sidewing areas.

Provide concrete for curb ramps that is not colored, overlaid or topped. Consider the curb ramps as beginning at a point flush with the pavement and terminating at a point flush with the sidewalk landing. Include the sloping triangular shaped sidewings as part of the curb ramp.

### 8-14.3(4) Curing

Maintain sufficient protective covering on—site, such as waterproof paper or plastic membrane, to cover an entire day's pour in event of rain or other unsuitable weather.

Protect the concrete sidewalk against damage or defacement until Owner has been accepted the Work. Remove and replace sidewalk that is not acceptable to the Engineer because of damage or defacement at Contractor's expense.

After finishing, spray cement concrete sidewalk using transparent curing compound in accordance with 5-05.3(13)A of the Standard Specifications.

### 8-14.4 Measurement

Delete all paragraphs in 8-14.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-14.5 Payment

Delete all paragraphs in 8-14.5 and substitute the following:

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-21 PERMANENT SIGNING

# 8-21.1 Description

Supplement 8-21.1 by adding the following:

Work involving installing traffic regulatory signs shall be in accordance with COE Standard Drawing 716 and street name signs in accordance with COE Standard Drawing 715 and 718 and as indicated on the Plans.

### 8-21.3 Construction Requirements

### 8-21.3(4) Sign Removal

Delete 8-21.3(4) and substitute the following:

Remove the existing signs and, if so indicated, the sign structures where shown in the Plans or ordered by the Engineer. Where indicated, remove concrete pedestals to a minimum of 1 foot below finished grade and backfill the hole to the satisfaction of the Engineer. After removing an existing sign post within a sidewalk area, finish the area to make the sidewalk continuous. Remove and properly dispose of wood signs, wood sign posts, wood structures, metal sign posts, wind beams, and other metal structural members. Salvage aluminum signs and return to the City of Everett's Public Works Department.

### 8-21.4 Measurement

Delete all paragraphs in 8-21.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-21.5 Payment

Delete all paragraphs in 8-21.5 and substitute the following:

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-22 PAVEMENT MARKING

## 8-22.1 Description

Supplement 8-22.1 by adding the following:

Provide 24-inch wide stop line.

Provide 24-inch wide solid white lines for crosswalks in accordance with COE Standard Drawing No. 721.

### 8-22.4 Measurement

Delete all paragraphs in 8-22.4 and substitute the following:

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-22.5 Payment

Delete all paragraphs in 8-22.5 and substitute the following:

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

## 8-32 BORE-AND-JACK PIPE INSTALLATION (\*\*\*\*\*\*)

### 8-32.1 Description

This Work consists of dry auger boring and pipe jacking methods for the installation of steel casings under surface features that cannot be disturbed.

### 8-32.2 Materials

Provide materials meeting the following requirements:

Steel Casing	9-06.1	Special Provisions
Casing Spacers	9-05.60	Special Provisions
Synthetic Rubber Sleeves	9-05.62	Special Provisions

## 8-32.3 Construction Requirements

### 8-32.3(1) Contractor Submittals

Submit all procedures or material descriptions requiring the Engineer's approval prior to mobilizing or commencing boring-and-jack activities at the Site. Include the following information in the operations and design submittal:

### 8-32.3(1)A Shop Drawings

No excavation for boring and jacking operations shall be undertaken until receipt of the Engineer's written acceptance of Contractor's Boring and Jacking plan. The plan shall include the following components:

- a. Schedule showing the sequence and dates for each phase of the work.
- b. Detailed locations and dimensions of pits and excavations.
- c. Description of all equipment to be utilized including thrust and torque capacity.
- d. Calculations showing the axial capacity of the pipe/casing is sufficient.
- e. Shoring design and soil excavation removal.
- f. Dewatering methods and calculations.
- g. Testing plan.

Other submittal requirements include, but are not limited to the following:

- 1. Line and grade calculations, site layout and control system for casing installation.
- 2. Copies of field notes used to establish grade.
- 3. Material list.
- 4. Details on casing spacer and seal materials, dimensions and installation procedures and recommendations.
- 5. Method for preventing settlement during casing installation and related work.
- 6. Method for monitoring surface settlement, including railroad track monitoring.
- 7. Methods for removal of obstructions.
- 8. Permits
- 9. Identification of key personnel and their qualifications.
- 10. The casing outside diameter and wall thickness.

### 8-32.3(1)B Certifications

Furnish a certified affidavit of compliance of physical and chemical properties for the steel casing pipe specified in this section.

### 8-32.3(2) Existing Site Conditions

The City of Everett had limited soil borings performed near the location of the boring and jacking work. Soil boring log data performed for this Project, as well as soil information from other projects available to the Contractor are attached in Appendix G The Contractor may perform additional subsurface investigations at his own expense.

### 8-32.3(3) Existing Facilities and Utilities

Positively locate all utilities within five feet of the alignment. Contact the utility location service and confirm that all known buried utilities are clearly marked and identified prior to commencing excavations or boring and jacking operations in this Project area.

The Contractor is directed to the Plans that indicate the presence of a high pressure natural gas line owned and operated by PSE near the location of the bore pit. Carefully locate and work around this main. Coordinate all Work near the gas line with Eric Liaw of PSE. Mr. Clark can be contacted by email at eric.liaw@pse.com or by phone at 425.495.3297.

### 8-32.3(4) Welding Requirements

Prequalify all welding procedures used to fabricate steel casings under the provisions of ANSI/AWS D1.1. Perform welding procedures for, but not necessarily limited to, longitudinal and girth or special welds for pipe cylinders, casing joint welds, reinforcing plates and grout coupling connections. Accomplish all welding using skilled welding operators and tackers having had adequate experience in the type of materials being used. Qualify welders used on the Project under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to beginning the casing work.

Butt weld casing section joints in the field. Prepare each end of the casing for butt welding by providing 1/4-inch by 45-degree chamfer on the outside edges.

## 8-32.3(5) Installation of Steel Casing

### 8-32.3(5)A Jacking Head

Provide steel jacking head having following requirements:

- a. Fit to the lead section of the casing in such a manner that it extends around the entire outer surface of the steel casing and projects at least 18 inches beyond the driving end of the casing.
- b. The jacking head shall not protrude more than 1/2 inch outside of the outer casing surface.
- c. Securely anchor head to prevent wobble or alignment variation during the boring or jacking operations.
- d. Carry out excavation entirely within the jacking head and not in advance of the head so as to minimize creation of voids outside the casing.

### 8-32.3(5)B **Jacking Pit**

Provide heavy guide timber, structural steel, or concrete section of sufficient length to assure accurate control of the boring and jacking alignment. Provide adequate space within the excavation to permit insertion and welding of lengths of casing being bored and jacked.

Prepare the rear jacking pit having a vertical surface to allow for tight sheeting or shoring sufficient to transfer the repetitive application of thrust of the jacking machine directly to the bearing soil. Upon completion of boring and jacking operations, prepare the bottom of the jacking pit as a pipe foundation. Remove all loose and disturbed materials below pipe grade to undisturbed earth and recompact the material in accordance with Division 2.

### 8-32.3(5)C Control of Alignment and Grade

Employ appropriate equipment and methods to attain the specified alignment and grade and to prevent over-mining or excessive jacking friction. Allowable grade deviations in horizontal and vertical alignments will be no greater than 0.2 feet per 100 feet in the vertical or horizontal direction over the length of the jacking and boring to a maximum deviation of 0.5 feet. Upon completion of installation of the steel casing, allow the Engineer to inspect the alignment and grade. If Engineer

notes irregularities, then implement corrective measures to re-establish design grade and alignment of the carrier pipe.

## 8-32.3(6) Installation of Carrier Pipe

Install carrier pipe in the casing pipe using heavy duty casing spacers at spacing not less than that recommended by spacing manufacturer.

### 8-32.3(7) End Seals

Provide water and soil tight end seals using synthetic rubber sleeves. Attach one sleeve to the casing pipe at one end and another sleeve at the carrier pipe at the other end. Use stainless steel band clamps for attaching sleeves.

### 8-32.3(8) Subsurface Obstructions

In preparing the Bid and planning and executing the boring and jacking work, assume that subsurface obstructions other than those shown on the Plans may be encountered during the Work. Be prepared to remove or otherwise address such obstructions at no additional cost to the City. In the event the Contractor, through diligent effort, is unable to advance the boring and jacking due to significant or impassable obstructions, Contractor may abandon the cased hole and Engineer may direct Contractor to either relocate the alignment or to terminate the boring and jacking effort. Failure to advance the boring and casing jacking due to adverse soil or groundwater conditions, mechanical failures, undersized equipment or inept operator actions will not be considered an impassable obstruction.

### 8-32.3(9) Jacking and Receiving Pits

The access pit locations and sizes for the boring and jacking work are shown on the Plans for planning and bidding purposes and are not intended to be binding on the Contractor. The Contractor may utilize alternative locations and sizes for access pits to the extent the Work is accomplished without adding complications or cost.

Minimize, to the extent possible, the number and size of access pits used for boring and jacking work.

Detour vehicle traffic and pedestrians safely around access pits in accordance with approved traffic control plans. Use concrete barriers, fences, or steel plates as necessary for safety. Backfill access pits in accordance with the requirements defined for trench backfill.

### 8-32.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-32.5 Payment

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

## 8-40 SUBMERSIBLE PUMP & MOTOR (\*\*\*\*\*\*)

### 8-40.1 Description

This Work consists of providing a submersible pump and motor for pumping sewer purposes meeting the operating and service conditions in accordance with the Plans and these Special Provisions.

## 8-40.1(1) Operating Conditions

Design flow 150 gallons per minute Design head 103 to 123 ft TDH

Minimum pump efficiency 74% Maximum allowable speed 7.7 rpm

#### 8-40.2 Materials

Provide materials meeting the following requirements:

Structural Carbon Steel	9.06.1 Standard Specifications
Fittings	9.30.2 Standard Specifications
Submersible Pump	9-40.1 Special Provisions
Submersible Electric Motor	9-40.2 Special Provisions
Pump Motor Controls	9-40.3 Special Provisions
Column Pipe	9.40.4 Special Provisions
Measuring Conduit Pipe	9.40.5 Special Provisions

### 8-40.3 Construction Requirements

### 8-40.3(1) **Contractor Submittals**

Submit all procedures or material descriptions requiring the Engineer's approval prior to mobilizing or commencing Work activities at the Site. Include the following information in the submittal:

- 1. Pump performance curves, including pump efficiency.
- 2. Impeller.
- 3. Material list.
- Details on spacer materials, dimensions and installation procedures and 4. recommendations.
- 5. Submersible electric motor information showing conformance to specifications.
- 6. Steel column pipe and couplings, diameter, wall thickness and type of steel.
- Measuring conduit pipe. 7.
- Pump motor controls one line diagrams. 8.

9.

#### 8-40.3(2) **Existing Site Conditions**

Coordinate with property manager for construction entrance and staging area.

### 8-40.3(3) **Existing Facilities and Utilities**

Positively locate all utilities and irrigation piping within 50 foot radius of the existing well casing. Contact the utility location service and confirm that all known buried utilities are clearly marked and identified prior to commencing excavations.

#### 8-40.3(4) **Welding Requirements**

Prequalify all welding procedures used to fabricate steel flange to existing well column under the provisions of ANSI/AWS D1.1. Accomplish all welding using skilled welding operators and tackers having had adequate experience in the type of materials being used. Qualify welders used on the Project under the provisions of ANSI/AWS D1.1 by an independent local, approved testing agency not more than 6 months prior to beginning the Work.

### Installation of Submersible Pump and Well Column Pipe 8-40.3(5)

### **Attach Pump to Well Column Pipe**

Grip pump only by the flats on the top of the discharge chamber. Under no circumstances grip the body of the pump, cable guard or motor. When tightened down, the threaded end of the first section of the riser pipe or the nipple must not come in contact with the check valve retainer in the discharge chamber of the pump.

### 8-40.3(5)B **Before Lowering Pump**

Smooth out any rough spots or sharp edges on the top lip of the well casing with a hammer or metal file to prevent damage to the pump or power cables when lowering into well.

As additional sections of steel pipe are added, apply pipe compound only to the male threaded ends of each section and tighten to next section.

Bind the power cables and safety lifting cable to the column pipe, straight up from bottom to top. Do NOT spiral cable around the column pipe. Use nylon lock bands every 20 feet on column pipe. Keep cable as flat against the pipe as possible. Do not allow any excess cable between bands.

### 8-40.3(5)C Lowering Pump

Align pump carefully when beginning to lower it down the well casing. Do not let the pump, cables or pipe rub against the well casing. Take care that cable insulation is not dragged or scraped over the top lip of the well casing.

### 8-40.3(5)D Depth of Pump Setting

Lower pump into well slowly without forcing. Use foot clamp to hold column pipe while connecting the next length of pipe and attaching the power cables. Lower pump to at least 10 feet below the maximum draw down of the water level, if possible, and never closer than 5 feet from the bottom of the well.

### 8-40.3(5)E Control of Alignment

Employ appropriate equipment and methods to attain the specified alignment of the pump column. Provide appropriate type and number of spider spacers to accomplish installing pump column parallel to the existing casing. If Engineer notes irregularities, then implement corrective measures to re-establish alignment of the column pipe.

### 8-40.3(6) Pump Control Panel

Install pump control panel inside of irrigation control building.

### 8-40.4 Measurement

Bid items of Work completed pursuant to the Contract Documents will be measured as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

### 8-40.5 Payment

Payment for Bid items of Work completed pursuant to the Contract Documents will be as described in Division B - Bid Item Descriptions and Section 1-09 MEASUREMENT AND PAYMENT of the Standard Specifications.

## 8-42 WET WELL AND BAR SCREEN VAULT (\*\*\*\*\*\*)

### 8-42.1 Description

This Work consists of providing a precast bar screen concrete vault and precast concrete vault to house the submersible pumps and valves in accordance with the Plans and these Special Provisions.

### 8-42.2 Materials

Provide materials meeting the following requirements:

Precast Concrete Vault 9-40.6 Special Provisions

### 8-42.3 Construction Requirements

### 8-42.3(1) Contractor Submittals

Submit all material descriptions and dimensions requiring the Engineer's approval prior to mobilizing or commencing Work activities at the Site. Include the following information in the submittal:

1. Product sheet showing all dimensions.

2.	Certification loading.	precast	concrete	vault	and	metal	cover	are	designed	to I	H-20

### **DIVISION 9 - MATERIALS**

### 9-03 AGGREGATES

### 9-03.6 Vacant

Delete 9-03.6 and substitute the following:

### Aggregates for Asphalt Treated Base (ATB)

### **General Requirements** 9-03.6(1)

Aggregates for asphalt treated base shall be manufactured from ledge rock, talus, or gravel, in accordance with the provisions of Section 3-01 that meet the following test requirements:

Los Angeles Wear, 500 Rev. 30% max. Degradation Factor 15 min.

### 9-03.6(2) Grading

Aggregates for asphalt treated base shall meet the following requirements for grading:

Sieve Size	Percent Passing
2"	100
1/2"	56-100
No. 4	32-72
No. 10	22-57
No. 40	8-32
No. 200	2.0-9.0

All percentages are by weight.

### 9-03.6(3) **Test Requirements**

When the aggregates are combined within the limits set forth in Section 9-03.6(2) and mixed in the laboratory with the designated grade of asphalt, the mixture shall be capable of meeting the following test values:

% of Theoretical Maximum Specific Gravity (GMM) (approximate) 93@

100 gyrations

AASHTO T324, WSDOT TM T718 or ASTM D3625

**Pass** 

(Acceptable anti-strip evaluation tests)

The sand equivalent value of the mineral aggregate for asphalt treated base (ATB) shall not be less than 35.

Supplement Section 9-03 by adding the following:

## 9-03.22 Sand Backfill for Pipe Zone

For pipe zone bedding and backfill of ductile iron and steel pipe only, provide a clean sand mixture free from organic matter and conforming to the following gradation:

U.S. Standard Sieve Size	Percent Passing By Weight
1/2"	100
#4	65-100
#50	5-30
#200	0-7

All percentages are by weight.

## 9-03.24 Bedding Sand for Interlocking Pavers

Conform to the grading requirements of ASTM C-33 with modifications shown in Table 1.

Table 1 U.S. Standard Percent Passing Sieve Size By Weight 3/8" 100 #4 95-100 #8 85-100 #16 50-85 #30 25-60 #50 10-30 2-10 #100 #200 0-1

All percentages are by weight.

## 9-03.25 Joint Sand for Interlocking Pavers (\*\*\*\*\*)

Conform to the grading requirements of ASTM C-144 as shown in Table 1. Provide joint sand free of shale, stone dust, screening or lightweight aggregates.

	Table 1	
U.S. Standard Sieve Size	Natural Sand Percent Passing By Weight	Manufactured Sand Percent Passing By Weight
#4	100	100
#8	95-100	95-100
#16	70-100	70-100
#30	40-75	40-100
#50	10-35	20-40
#100	2-15	10-25
#200	0-1	0-10

All percentages are by weight.

### 9-04 JOINTS AND CRACK SEALING MATERIALS

Supplement Section 9-04 by adding the following:

## 9-04.12 Watertight Pipe to Manhole Connection Boot

Provide Kor N Seal®, A●Lok, or equal watertight pipe to manhole connection boot.

## 9-04.13 Flexible Coupling (\*\*\*\*\*)

Provide Fernco or equal flexible coupling for gravity side sewer connections.

Provide model DFW (non-shear) as manufactured by NDS Inc., Strong Back RC series as manufactured by Fernco, or equal for pressure sewer connections.

### 9-05 DRAINAGE STRUCTURES, CULVERTS, AND CONDUITS

### 9-05.4 (2) Mitered Ends

Delete all paragraphs in 9-05.4(2) and substiture the following:

Unless otherwise indicated in the plans or Special Provisions the ends of steel culvert pipe or pipe arch shall be beveled. If beveled ends are specified, the ends of culvert pipe over 30 inches in diameter shall be mitered to conform to the slope of the embankment in which the culvert is to be placed whether the culvert is constructed normal to or at an angle with the centerline of the roadway.

Beveled steel pipe end sections 12 inches through 30 inches in diameter shall be of the same material and thickness and have the same protective coating as the pipe to which they are attached. Beveled pipe ends of these dimensions shall be constructed in conformance with the City Standard Plan 435.

### 9-05.12 Polyvinyl Chloride (PVC) Pipe

## 9-05.12(1) Solid Wall PVC Culvert Pipe, Solid Wall PVC Storm Sewer Pipe, and Solid Wall PVC Sanitary Sewer Pipe

Revise the third paragraph in 9-05.12(1) to read as follows:

For pipe sizes 18 to 30-inch diameter, provide solid wall PVC pipe meeting ASTM F 679, using minimum pipe stiffness of PS46, unless otherwise noted on the Plans.

Revise the fifth paragraph in 9-05.12(1) to read as follows:

Provide Trench Tough™ SDR 35 gasketed injection molded fittings for solid wall PVC pipe as manufactured by MULTI FITTINGS, or equal.

### 9-05.13 Ductile Iron Sewer Pipe

Delete all paragraphs in 9-05.13 and substitute the following:

Provide centrifugally cast ductile iron sewer pipe meeting the requirements of AWWA C151. Provide cement-mortar lining meeting the requirements of AWWA C104 and coated with a seal coat per AWWA C104. Provide ductile iron pipe Special Thickness Class 52.

Provide rubber gasket push-on type, or mechanical type non-restrained joints meeting the requirements of AWWA C111.

### 9-05.15 Metal Castings

### 9-05.15(1) Manhole Ring and Cover

Delete all paragraphs in 9-05.15(1) and substitute the following:

For hinged frames and covers, provide heavy duty ductile iron frames and covers as manufactured by PAMREX, 24-inch, Model CDPA60EH, East Jordan Iron Works Ergo 00104042L01, or equal, with badging for sanitary or storm sewer as the case may be.

For non-hinged frames and covers, provide watertight, heavy duty cast iron frames and ductile iron covers as manufactured by Olympic Foundry, Inc., East Jordan Iron Works, Inc., or equal with badging for sanitary or storm sewer as the case may be.

Supplement 9-05.15 by adding the following:

## 9-05.15(4) Metal Frame and Cover for Sewer Cleanouts (\*\*\*\*\*\*)

Provide East Jordan Ironworks heavy duty gray iron frame number 3661ZPT and cover number 3660CPT or equal.

### 9-05.23 High Density Polyethylene (HDPE) Pipe

Revise 9-05.23 to read as follows:

Provide polyethylene pipe and fittings manufactured from resins meeting the requirements of ASTM D3350 with a cell classification 345464C for black or 345464E for color and stripes and a Plastic Pipe Institute (PPI) designation of PE 3608. Provide materials listed in the name of the pipe and fitting manufacturer in PPI (Plastics Pipe Institute) TR-4 with a standard grade HDB rating of 1600 psi at 73°F. Provide manufacturer certification that the materials used to manufacture pipe and fittings meet these requirements. The fitting material may be gray or black.

Additives that can be conclusively proven not to be detrimental to the pipe may also be used, provided the pipe produced meets the requirements of ASTM D2837. Provide pipe containing no recycled compound except that generated in the manufacturer's own plant from resin of the same specifications from the same raw material supplier.

Provide pipe with the following information continuously marked on the pipe or spaced at intervals not exceeding 5-feet.

- 1. Name or trademark of the pipe manufacturer.
- 2. Nominal pipe size.
- 3. Standard Dimensional Ratio (SDR).
- 4. PE 3608Manufacturing Standard Reference ASTM F 714.
- A production code from which the date and place of manufacture can be determined.
- 7. Nominal pressure.
- 8. Raw material.

Provide polyethylene pipe homogeneous throughout and free of visible cracks, holes, foreign inclusions, or their injurious defects. Nicks, scrapes, or gouges on the pipe deeper than 5-percent of the nominal wall thickness will be cause for rejecting the pipe. Provide pipe uniform in color, opacity, density, and other physical properties. Express the pipe diameter as nominal outside diameter.

Replace at the Contractor's expense pipe that has been damaged or does not meet these specifications. Internal and external surfaces of the pipe shall be smooth, clean and free of grooving and other defects. Pipe shall not be accepted if ovality exceeds 1 percent of the external diameter of the pipe. Provide manufacturer's certificates for all materials stating conformance to this specification.

For storm sewer pipe and sanitary sewer pipe bursting, provide HDPE pipe having a minimum SDR as identified on the Plans and having iron pipe size dimensions (IPS).

For water main, provide HDPE meeting requirements of 9-30.1(6).

Provide HDPE butt-fused joints and Class 125 bolt pattern flange joints fittings, including but not limited to, tees, bends, and flange adapters of the same material as the pipe manufacturer.

## 9-05.24 Polypropylene Sewer Pipe

Supplement 9-05.24 by adding the following:

Approved product is Sanitite HP as manufactured by ADS/Hancor or equal.

Supplement Section 9-05 by adding the following:

## 9-05.32 Insertion Tee

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

Provide INSERTA TEE® SDR 35 gasketed bell end gravity application as manufactured by Inserta Fittings Co, or equal.

## 9-05.60 Casing Spacers

Provide bolted side flange stainless steel split-case design casing spacers having minimum of two runners at the bottom and two runners at the top. Provide runners made of high strength polymer plastic. Spacers shall be a minimum of 12" wide. manufacturers are Calpico Inc., PSI, Advanced Products and Systems Inc., or equal.

## 9-05.62 Synthetic Rubber Sleeve Seal

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

Provide either pull-on conical model or a split wrap-around model with stainless steel band clamps. Acceptable manufacturers are Calpico Inc., PSI, Advanced Products and Systems Inc., or equal.

## 9-05.64 Polypropylene Manhole and Hand Hold Steps

Provide polypropylene manhole and hand hold steps as manufactured by Lane International Corporation, or equal.

## 9-05.66 Polypropylene Manhole Ladder (\*\*\*\*\*)

Provide polypropylene manhole ladder as manufactured by Lane International Corporation, or equal.

### 9-06 STRUCTURAL STEEL AND RELATED MATERIALS

#### 9.06-1 Structural Carbon Steel

Supplement 9-06.1 by adding the following:

Steel casing pipe for bored or jacked crossings shall be in accordance with AWWA C200 and have minimum yield strength of 35,000 psi.

### 9-12 MASONARY UNITS

Supplement 9-12 by adding the following:

### 9-12.3 Concrete Interlocking Pavers

Provide replacement interlocking pavers for existing damaged ones from same supplier as the original installation.

Provide

### 9-14 EROSION CONTROL AND ROADSIDE PLANTING

Delete section 9-14.1 in its entirety and substitute the following:

### 9-14.1 Soils

 Provide following soils and soil mixes specified on Drawings or by the Engineer. according to project needs, and subject to the General Testing and Submittal Specifications of Section 9-14.1(1) of these Special Provisions, Topsoil Type A -Imported. Provide a general purpose mix of sandy loam and compost as needed to comply with the minimum organic matter content requirements.

2. General Turf Area Soil. Provide an imported soil mix for passive-recreation turf areas.

### 9-14.1(1) **General Testing and Submittal Requirements**

Submit to the Engineer at least 10 working days prior to any soil placement specified in this Section the following as specified in Section 1-05.3 – SUBMITTALS. Provide test results from samples collected and tested within 90 days of submittal.

- 1. Aggregate and Loam Analysis. Provide grain size analysis results of the Mineral Aggregate or sandy loam portion of each soil mix and performed by an accredited laboratory per ASTM C 136.
- 2. Compost Analysis. Provide quality analysis results for the compost portion of each soil mix performed per STA standards as specified in Section 9-14.4(8).
- 3. Mix Analysis. As a minimum, provide test results from an accredited soil laboratory for the following content values:
  - a. Total Nitrogen and Soluble Nitrogen (NO3 + NH3)
  - b. Phosphorous
  - c. Potassium
  - d. pH
  - e. Organic Matter percent (Loss on Ignition method)
  - f. Cation Exchange Capacity
  - g. Calcium
  - h. Sulfur
  - Magnesium
  - Sodium
  - k. Iron
  - Boron
  - m. Weed Seed (for general turf area mixes)
- Provide fertilizer and amendment and soil application depth recommendations from accredited soils laboratory, soil scientist or agronomist for the specified plant type.
- 5. Mix samples. Provide two 1-quart samples of each soil mix.
- Manufacturer. Provide manufacturer's certificate of compliance as specified in Section 1-06.3 – MANUFACTURER'S CERTIFICATE OF COMPLIANCE from the soil mix Supplier and compost Supplier if different from soil mix Supplier. Include names and address on certificate.
- 7. Laboratory information. Include the following:
  - a. Name of laboratory including contact person,
  - b. Address.
  - c. Phone number of contact.
  - d. Email address of contact,
  - e. Laboratory and personnel qualifications including current certification date by STA, ASTM, ASSHTO, or approved equal.
- 8. Acceptance of Soils Prior to Placement. Placement of any soils or soil mixes specified in this Section will NOT be allowed until Engineer has reviewed and confirmed the following:
  - a. Soil mix delivery tickets. Provide delivery tickets showing full delivered soil amount matches product type, volume and Manufacturer named in the submittals.
  - b. Visual inspection. Engineer will compare delivered product to product submitted to very it matches the submitted sample.

Engineer may inspect any loads of soil on delivery and stop placement if it is determined the delivered sol doesn't appear to match the submittals and require

sampling and testing of delivered soil before authorizing soil placement at sole cost to Contractor.

### 9-14.1(2) Topsoil Type A – Imported

Cedar Grove "3-Way Topsoil", Cedar Grove "Winter Mix" or approved equal.

Provide Topsoil Type A free from materials toxic to plant growth, visible seeds, rhizomes, roots, any Snohomish County listed noxious weeds or invasive root propagating plants, including and not limited to, horsetail, ivy, clematis, and knotweed. Contractor shall remove and replace soil found to contain these prohibited plant materials.

### 9-14.1(3) **General Turf Area Soil**

Provide General Turf Area Soil for general use and passive recreation lawn areas where year-round maintenance and positive drainage are important.

Provide soil consisting of 60 percent sand complying with the particle distribution table in this Section, and 40 percent compost by volume. The resulting mix must contain approximately 4 to 6 percent organic matter by weight tested by the loss on ignitions method and the following:

Nutrient	Test	Unit	Range
Phosphorous	Bray	mg/kg	>20
Potassium	NH4OAc	mg/kg	>175
Boron	DTPA	mg/kg	>0.5
Zinc	DTPA	mg/kg	>5
Manganese	DTPA	mg/kg	>20
Iron	DTPA	mg/kg	>20
Calcium	NH4OAc	mg/kg	>6
Magnesium	NH4OAc	mg/kg	>2
Sodium	NH4OAc	mg/kg	<2
Cation Exchange	CEC	meq/100g	>6
pН			6.5 - 7.5
Nitrogen		lbs/ac	>200

Sand used must meet the following particle distribution.

Sieve Size	Percent Passing
3/8"	100
No. 4	95-100
No. 8	80-95
No. 16	60-90
No. 30	40-70
No. 50	5-25
No. 100	0-10
No 200	0-5

Provide Compost in accordance with Section 9-14.4(8) and certified in compliance with the US Composting Council STA program.

Provide testing and submittals in accordance with Section 9-14.1(1) of these Special Provisions.

Provide General Turf Area Soil free from materials toxic to plant growth, visible seeds, rhizomes, roots, any Snohomish County listed noxious weeds or invasive root

propagating plants, including and not limited to, horsetail, ivy, clematis, and knotweed. Contractor shall remove and replace soil found to contain these prohibited plant materials.

### 9-14.2 Seed

Supplement 9-14.2 by adding the following:

Provide seed mixtures indicated in following table that are free of noxious weeds, no less than 98-percent pure, and have minimum germination rate of 90-percent.

Seed Mix #1 (Highway Mix) Kind and Variety of Seed in Mixture	Percent by Weight	Seed Mix #2 (Lawn Mix) Kind and Variety of Seed in Mixture	Percent by Weight
Colonial Bentgrass			
(Highlands or Astoria) Red Fescue (Illahee,	10	Red Creeping Fescue	45
Rainier or Pennlawn)	40	Chewings Fescue	30
Perennial Rye	40	Kentucky Bluegrass	15
White Dutch Clover	10	Highland Colonial Bentgrass	10
Seed Mix #3 (City Mix) Kind and Variety of Seed in Mixture	Percent by Weight		
Perennial Rye (Derby Extreme) Red Fescue (Cindy	20		
Lou Creeping) Perennial Rye	30		
(Frontier)	50		

### 9-14.3 Fertilizer

Supplement this section by adding the following:

Provide 12-25-10 starter fertilizer.

### 9-14.4 Mulch and Amendments

### 9-14.4(8) Compost

Supplement 9-14.1(8) by adding the following:

Procure compost manufactured by facilities that have an active solid waste handling permit from the local jurisdictional Health Department as per WAC 173-350-220 or WAC 173-308.

### 9-14.4(8)B Compost Acceptance

Supplement 9-14.4(8)A by adding the following:

Provide one gallon sample size.

### 9-14.6 Plant Materials

### 9-14.6(8) Sod

Supplement 9-14.6(8) by adding the following:

Furnish sod in accordance with state and federal laws, including quarantines, with respect to inspection, plant diseases and insect infestation. Furnish sod having a certificate of origin or certification of approved treatment, or both, when shipment

originates in known infected areas. Provide a "State of Washington Nursery Inspection" sticker issued by the Washington State Department of Agriculture, Division of Plant Industries for sod shipments.

Furnish sod possessing the following characteristics:

- 1. Dense root system with adequate strength for handling.
- 2. Uniform color.
- 3. A minimum amount of thatch.

### 9-23 CONCRETE CURING MATERIALS AND ADMIXTURES

## 9-23.2 Liquid Membrane-Forming Concrete Curing Compounds

Supplement 9-23.2 by adding the following:

Provide transparent curing compound. Sealtight 1100, as manufactured by W.R. Meadows, Benicia-CA, or City approved equal.

### 9-23.6 Chemical Admixtures for Concrete

Supplement 9-23.6 by adding the following:

## 9-23.6(10) Integral Coloring Agent

Provide integral coloring agent "Silver Smoke" as manufactured by Davis Colors, "Dover Grey" as manufactured by Solomon Colors, or City approved equal.

### 9-29 ILLUMINATION, SIGNAL, ELECTRICAL

### 9-29.2 Junction Boxes, Cable Vaults, and Pull Boxes

### 9-29.2(1) Standard Duty and Heavy-Duty Junction Boxes

### 9-29.2(1)A **Standard Duty Junction Boxes**

Supplement 9-29.2(1)A by adding the following:

Treat both the slip-resistant lid and slip-resistant frame with Mebac#1 as manufactured by IKG industries, or SlipNOT Grade 3-coarse as manufactured by W.S. Molnar Co. The slip-resistant treatment may be omitted on that portion of the frame where the exposed portion of the frame is 1/2 inch wide Identify the slip-resistant lid with permanent marking on the underside indicating the type of surface treatment ("M1" for Mebac#1; or "S3" for SlipNOT Grade 3-coarse) and the year manufactured. permanent marking using a line consisting of a 1/8 inch thick stainless steel welded bead.

### 9-29.3 Fiber Optic Cable, Electrical Conductors, and Cable

### 9-29.3(2) **Electrical Conductors and Cable**

Revise 9-29.3(2)F to read as follows:

### 9-29.3(2)F **Detector Loop Wire**

Provide 14 AWG stranded copper conductors conforming to IMSA Specification 61-7 with cross-linked polyethylene (XLPE) insulation encased in a polyethylene outer jacket (PE tube).

Supplement 9-29.3(2) by adding the following:

### 9-29.3(2)J **Video Detection Cable**

Coaxial cable or combination (composite/Siamese) cable for video detection shall be RG59/U with a manufacturer's rating of 600 Volts (Non UL - manufacturer's voltage rating of the insulation is acceptable). Combination cable shall be in accordance with the video detection system manufacturer's recommendations for the length of cable required.

### 9-29.18 Vehicle Detector

Supplement 9-29.18 by adding the following:

All components needed to provide a complete video detection system shall be supplied and installed per manufacturer's recommendation.

The video detection equipment shall include, but not be limited to, Cameras, Camera Housings, Camera Lens, Camera Mounting Hardware, Video Image Processors, Input File Adapters, lens Adjustment Modules, Keypad and Monitor.

The video detection system shall be capable of supplying video detection to the signal controller phases as indicated in the plans and Appendix H of these Special Provisions.

The video detection system shall be the following:

1.	Traficon	VIP3.2
	Traficon	NV
	Bissegemsestraat	45
	B-8501	Heule
	Belgium, Europe	

### 9-30 WATER DISTRIBUTION MATERIALS

### 9-30.1 Pipe

### 9-30.1(1) **Ductile Iron Pipe**

Revise 9-30.1 to read as follows:

- Provide ductile iron pipe Special Class 52 meeting the requirements of AWWA C151 with a cement mortar interior lining and a 1-mil thick exterior seal coat meeting the requirements of AWWA C104.
- Provide rubber gasket type, push on type, or mechanical type non-restrained ioints meeting the requirements of AWWA C111.
- 3. Provide flanged joints meeting the requirements of AWWA C115.
- 4. Restrained joints shall be as specified in Section 9-30.2(6).

### Polyethylene (PE) Pressure Pipe (4-inches and over) 9-30.1(6)

Revise 9-30.1(6) to read as follows:

### **Polyethylene Encasement** 9-30.1(2)

### For Non-Earthquake Resistant Pipe 9-30.1(2)A

Provide natural or black color polyethylene encasement in tube-form high-density cross-laminated polyethylene film or linear low-density polyethylene film meeting the requirements of ANSI/AWWA C105.

#### 9-30.2(2)B For Earthquake Resistant Pipe

Provide natural or black color polyethylene encasement in tube-form three layer co-extruded linear low-density polyethylene fused into a single minimum thickness of eight mils, and meeting the requirements of ANSI/AWWA C105. Infuse the inside polyethylene surface that will be in contact with the ductile iron pipe with a blend of anti-microbial compounds to mitigate microbiologically influenced corrosion and a volatile corrosion inhibitor to control galvanic corrosion.

Revise 9-30.1(3) Vacant to read as follows:

### 9-30.1(3) **Earthquake Resistant Ductile Iron Pipe System**

- Meet all requirements of 9-30.1(1).
- Meet all applicable requirements of AWWA C150 (design), AWWA C151 (manufacture). AWWA C104 (lining), C111 (joints), AWWA C153 (fittings), AWWA C105 (polyethylene encasement), and AWWAC600 (installation).
- Size the ductile iron pipe in inches.
- Meet defined classifications detailed below as shown in ISO 16134 Earthquake Resistant Ductile Iron Pipe and Subsidence-Resistant Design. Verify the seismic design by an independent seismic lab such as Cornell University or an Owner-approved alternative.
  - All ductile iron pipe and fittings joints shall meet or exceed 3dKN pull out strength or category A.
  - Designated Earthquake System piping shall meet or exceed a minimum deflection of 7.5 degrees or category M2 for sizes 6" – 12".
  - Designated ductile iron Earthquake System piping will have a minimum strain relief of plus or minus 1% or category S1.
- 5. Provide designated earthquake system piping meeting the minimum requirements of A-M2-S1 in accordance with ISO 16134 for diameters up to and including 12 inches.
- Provide expansion spigot in the assembly having a minimum of two assembly stripes, one indicating fully contracted position and one indicating the midpoint of extension.
- Coat the exterior of the pipe the network of ductile iron pipe connected to the Earthquake Joint System coated with a minimum mass of 200 g/m2 of pipe surface area layer of arc-sprayed zinc.
  - Provide the coating system conforming in every respect to ISO 8179-1. "Ductile Iron Pipes – External Zinc-Based Coating – Part 1: Metallic Zinc with Finishing Layer," second edition 2004-06-01, with a top coat of approved materials.
- Provide "American Field Flex-Ring® Joint Pipe", or City approved equal.

## 9-30.2 Fittings

### 9-30.2(1) **Ductile Iron Pipe**

Supplement 9-30.2(1) by adding the following:

For Earthquake Resistant Ductile Iron Pipe provide push-on, boltless fittings meeting the requirements of AWWA C110 or C153. Provide "American Flex-Ring® Fittings", or City approved equal.

Delete 9-30.2(2) Vacant and substitute the following:

## 9-30.2(2) **Earthquake Joint System Ductile Iron Pipe**

Provide pre-assembled, machined ductile iron casting designed to allow for minimum of 2.4 inches of expansion and contraction in either direction, providing a minimum of 4.8 inches total movement along with up to eight degrees deflection. "American Earthquake Joint System", or City approved equal.

#### 9-30.2(6) **Restrained Joints**

Supplement 9-30.2(6) by adding the following:

For non-earthquake resistant ductile iron pipe provide "MegaLug® Series 1100" mechanical restrained joints as manufactured by EBAA Iron, or City approved equal.

For earthquake resistant ductile iron pipe provide "American Ductile Iron Flex-Ring® Joint Pipes and Flex-Ring fittings with Field Flex-Ring", or City approved equal.

### 9-30.2(7) Bolted, Sleeve-Type Couplings for Plain End Pipe

Supplement 9-30.2(7) by adding the following:

For up to 12-inch diameter pipe, provide "Romac ALPHA-13.30 Coupling", or City approved equal.

### 9-30.3 Valves

Revise 9-30.3 to read as follows:

Provide valves with hand wheels or operating nuts as designated. In general, valves buried on the distribution system shall be nonrising stem type, open counterclockwise, and be equipped with two O rings in the stuffing box with a two inch operating nut. Valves within vaults shall be rising stem type, open counterclockwise, and be equipped with two O rings stuffing box with a hand wheel for operation.

### 9-30.3(1) Gate Valves (3-inches to 16-inches)

Delete 9-30.3(1) and substitute the following:

### 9-30.3(1) Gate Valves (2-inches to 12-inches)

Provide Waterous Series 2500, or City approved equal, resilient wedge gate valves meeting the requirements of AWWA C509 or AWWA C515.

Provide an affidavit of compliance stating the valve furnished fully complies with AWWA C509 or AWWA C515.

### 9-30.3(3) Butterfly Valves

Revise the first sentence of the second paragraph of 9-30.3(3) to read as follows:

Valve operators shall be of the travelling nut, self-locking type, sealed, gasketed and permanently lubricated for underground service.

### 9-30.3(4) Valve Boxes

Supplement 9-30.3(4) by adding the following:

Provide East Jordan 8555 Series, two piece slip type box with 6800 two and one-half inch skirt drop lid or City approved equal.

Plastic valve boxes with a cast iron lid having dimensions conforming to a number 940 valve box, as manufactured by Handley Industries, or City approved equal, are acceptable for valve boxes located in grass, non-paved or paved non-vehicular traffic areas.

### 9-30.3(5) Valve Marker Posts

Delete first and second paragraphs of 9-30.3(5) and substitute the following:

Post shall be 4-inch diameter, 42-inch tall, fluorescent orange, low density polypropylene portable traffic delineator post with two reflectorized strips.

### 9-30.3(6) Valve Stem Extension

Revise the first paragraph of 9-30.3(6) to read as follows:

Provide valve stem extension in accordance with COE Standard Drawing No. 504.

### 9-30.3(7) Combination Air Release/Air Vacuum Valves

Supplement this section by adding the following.

Provide combination air release/air vacuum valve in accordance with COE Standard Drawing 512.

### 9-30.3(8) Tapping Sleeve and Valve Assembly

Revise the last sentence of 9-30.3(8) to read as follows:

Provide all stainless steel tapping sleeves, Romac SST, Romac SSTIII, or City approved equal.

### 9-30.5 Hydrants

Delete first paragraph of 9-30.5 and substitute the following:

Provide fire hydrants with ANSI 125 flanged connection conforming to AWWA C502. Provide Mueller "Super Centurion No. 250", American Flow Control "Waterous Pacer No. WB67", or City approved equal.

### 9-30.5(2) Hydrant Dimensions

Delete last sentence of first paragraph of 9-30.5(2) and substitute the following:

Provide hydrants having two 2-1/2 inch hose nozzles and one 4-1/2 inch pumper nozzle. The 4-1/2 inch pumper nozzle shall be National Thread and fitted with a 5-inch STORZ fitting.

Delete last sentence of second paragraph of 9-30.5(2) and substitute the following:

Paint hydrants with two coats of high gloss Caterpillar yellow, Luxite 6100-516, Rost-Oleum 7448, or City approved equal. Paint the port caps with two coats of high gloss black enamel paint.

### 9-30.5(4) Hydrant Restraints

Revise the first paragraph of 9-30.5(4) to read as follows:

Provide either mechanical joint restraint system in accordance with 9-30.5(6) of these Special Provisions, or field lock gaskets for hydrant restraint.

### 9-30.6 Water Service Connections (2-inches and Smaller)

### 9-30.6(1) Saddles

Revise 9-30.6(1) to read as follows:

Provide Romac, Ford, Mueller, or City approved equal single strap ductile iron, bronze, brass, or stainless steel service saddle with C.C. (AWWA tapered) thread for 3/4-inch and 1-inch services.

Provide Romac, Ford, Mueller, or City approved equal double strap ductile iron, bronze, brass, or stainless steel service saddle with I.P. thread for 2-inch services.

All materials shall meet the requirements of AWWA C800-05.

### 9-30.6(2) Corporation Stops

Revise 9-30.6(2) to read as follows:

Provide Ford FB600 Series, or City approved equal, corporation stops for 3/4-inch and 1-inch services.

All materials shall meet the requirements of AWWA C800-05.

### 9-30.6(3) Service Pipes

Delete 9-30.6(3) C PEX-a Tubing in its entirety.

### 9-30.6(4) Service Fittings

Revise third paragraph to read as follows:

Provide either compression fittings, or stab type fittings using internal grip and O ring seal, for polyethylene pipe.

Delete the last paragraph in its entirety.

Supplement 9-30.6(4) with the following:

Provide corporation bends with swivel nut on inlet.

### 9-30.6(5) Meter Setters

Delete the second, third and fourth paragraphs of 9-30.6(5) and substitute the following:

Provide A.Y. McDonald 62-212WWDD33-15, or City approved equal, meter setter for 3/4-inch and 1-inch metered service. Provide Ford 70 Series copper setter VBH77-12B-11-77 with horizontal inlet and outlet, or City approved equal, meter setter for 2-inch metered service.

### 9-30.6(6) Bonze Nipples and Fittings

Delete 9-30.6(6) and substitute the following:

### 9-30.6(6) Brass Nipples and Fittings

Provide brass threaded fittings made with ASA class 125 lb Red Brass meeting the requirements of ANSI/AWWA C800-05 and also meeting requirements of ANSI/NSF-61.

Provide Schedule 40 Red Brass Nipples meeting requirements of ASTM B43.

### 9-30.6(7) Meter Boxes

Delete the first and second paragraphs of 9-30.6(7) and substitute the following:

Provide Raven Products RMB 11-18-12 meter box body, mouseholes cut, with ductile iron flush solid water meter H-20 rated cover, or City approved equal, for 3/4-inch services.

Provide Raven Products RMB 15-27-12 meter box body, mouseholes cut, with ductile iron flush solid water meter H-20 rated cover, or City approved equal, for 1-inch services.

Provide Raven Products RMB 17-30-12 meter box body, mouseholes cut, with ductile iron flush solid water meter H-20 rated cover, or City approved equal, for 2-inch services.

Supplement 9-30.6 by adding the following:

## 9-30.6(8) Curb Stops (\*\*\*\*\*)

Provide Ford B11-333W-NL 3/4-inch or Ford B11-444-NL 1-inch curb stop, or City approved equal as noted in the Plans.

All materials shall meet the requirements of AWWA C800.

Add the following section to Division 9:

### 9-40 SUBMERSIBLE IRRIGATION WELL

### 9-40.1 Submersible Pump

### 9-40.1(1) Bowl Assembly and Shaft

Provide stainless steel intermediate bowls, shafts and discharge adapter free from sand holes, blow holes or other faults and accurately machined and fitted to close tolerances.

### 9-40.1(2) Impellers

Provide stainless steel impellers free from defects and accurately cast, machined, balanced and filed for optimum performance and minimum vibration. Provide standard product of the pump manufacturer. Impellers shall not contain special workmanship to temporarily increase efficiency.

### 9-40.1(3) Inlet Motor Adapter

Provide stainless steel inlet motor adapter with extra long bearing. Provide inlet area with net open area of at least four times the impeller eye and protect inlet area with 304 stainless steel screen.

### 9-40.1(4) Wear Rings

Provide wear rings having minimum practical clearance to the impeller's mating cylinder surface to provide adequate sealing independent of vertical positioning of the impellers.

### 9-40.1(5) Motor Coupling

Provide stainless steel motor coupling conforming to NEMA specifications and capable of transmitting the total bowl assembly torque and thrust in either direction of rotation.

### 9-40.2 Submersible Electric Motor

Provide electric motor capable of continuous operation under water at the specified conditions noted in 8-40.1(1) meeting the following conditions:

Service factor 1.15
Voltage 480
Phase Three
Cycle 60

Incorporate suitable thrust bearing in lower end of the motor adequate to receive the entire hydraulic thrust load of the pump unit plus the weight of the rotating parts regardless of the direction of rotation.

Protect motor leads against the pump end with a 304 stainless steel cable guard held in place with stainless steel banding. Properly protect the motor lead exit from the top of the cable guard to prevent damaging or cutting the lead by the cable guard material.

### 9-40.3 Pump Motor Controls

## 9-40.3(1) Motor Control Unit

Provide heavy duty three-phase panel in UL approved heavy-duty NEMA 3R enclosure with following features:

- 1) Class R fusible disconnect
- 2) Service entrance rated
- 3) Lightning arrestor
- 4) H-O-A switch
- 5) Manual push to start switch
- 6) Pilot device and alarm terminal block
- 7) Provide room for PLC furnished by City

### 9-40.3(2) Wiring

Provide pump wiring sized to limit voltage drop to no more than five percent. Provide three separate conductors plus a ground within a single continuous water and oil resistant jacket assembly suitable for continuous immersion.

### 9-40.4 Pump Well Column Pipe

Provide grade A steel pipe in 20 feet lengths with ends machined with eight threads per inch and 3/4-inch taper.

Provide threaded sleeve type steel couplings to connect pipes.

### 9-40.5 Measuring Conduit Pipe

Provide threaded PVC Schedule 80 pipe.

### 9-40.6 Wellhead Vault

Provide precast concrete vault with dual locking steel covers designed to H-20 loading as manufactured by Utility Vault Co., or equal.

## **APPENDIX "A"**

**A1** 

# GEOTECHNICAL ENGINEERING INVESTIGATION AND BORING LOGS



December 27, 2023 HWA Project No. 2016-044-21

City of Everett Public Works 3200 Cedar St Everett, Washington 98201

Attention: Laura Claywell

Subject: Draft Final Geotechnical Report

**Beverly Lake Sewer Improvements – Trenchless Feasibility** 

**Everett, Washington** 

Dear Ms. Claywell:

As requested, HWA GeoSciences Inc. (HWA) completed geotechnical site investigations and related geotechnical engineering evaluations for the proposed Beverly Lake Sewer Improvements Project in Everett, Washington. The attached draft final geotechnical engineering report summarizes the results of our work and our recommendations.

We appreciate the opportunity to provide geotechnical engineering services on this project. If you have any questions regarding this report or require additional information or services, please contact us at your convenience.

Sincerely,

HWA GEOSCIENCES INC.

Sean Schlitt, P.E. Geotechnical Engineer Sandy R. Brodahl, P.E. Geotechnical Engineer, Principal

Enclosure: Draft Final Geotechnical Engineering Report

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# DRAFT FINAL GEOTECHNICAL REPORT BEVERLY LAKE SEWER IMPROVEMENTS PROJECT - TRENCHLESS FEASIBILITY EVERETT, WASHINGTON

### 1. INTRODUCTION

### 1.1 GENERAL

This report presents the results of a geotechnical study performed by HWA GeoSciences Inc. (HWA) in support of the proposed Beverly Lake Sewer Improvements Project for the City of Everett. The purpose of this study was to evaluate the soil and groundwater conditions at and near the proposed sewer conveyance system improvements and to provide geotechnical recommendations for the proposed improvements.

Our work for this project included performing a site reconnaissance, preparing and conducting site investigation programs, performing geotechnical engineering analyses, and providing recommendations for geotechnical engineering aspects of design. The soil exploration program consisted of drilling five (5) new machine-drilled borings and installing two (2) new groundwater monitoring wells in two of the borings. Laboratory tests were conducted on selected soil samples to evaluate relevant physical properties of the site subsurface soils.

In this report, we present a summary of the subsurface and groundwater conditions observed, as well as the design and construction recommendations for the proposed sewer replacement and associated improvements.

### 1.2 PROJECT DESCRIPTION

The City of Everett proposes to reconstruct portions of the sewer lines serving Lakeside Apartments (located at 747 75<sup>th</sup> Street SE) and the Beverly Village Apartments (located at 801 75<sup>th</sup> St SE #314), which abut the southeast shore of Beverly Lake. The existing sewer system consists of a series of gravity lines and associated manholes. The City of Everett has proposed a trenchless sewer excavation, with project plans to install the new sewer line running along the east driveway of the Lakeside Apartments from the proposed lift station near Beverly Lake up to the existing sewer system on 75<sup>th</sup> Street SE.

The proposed improvements would include horizontal trenchless drilling of a new sewer conveyance system, inserting the new piping through the drilled excavation, and tying the excavation into a proposed lift station. Additionally, the new sewer conveyance system will tie into the existing sewer main along 75<sup>th</sup> Street SE. The existing system will be backfilled and abandoned in place. The approximate location of the project is shown on the Site and Vicinity Map, Figure 1.

### 2. FIELD EXPLORATIONS AND LABORATORY TESTING

### 2.1 GEOTECHNICAL FIELD INVESTIGATION

Our geotechnical exploration program included surface reconnaissance of the site and drilling five (5) machine-drilled borings, designated BH-16/16A through BH-20W, with the installation of two (2) new groundwater monitoring wells at the location of borings BH-17W, and BH-20W, and the installation of groundwater-monitoring transducers in new and pre-existing wells installed at borings BH-5 and BH-7. Borings BH-16 through BH-20W were drilled along or near the proposed sewer line to depths ranging from 6 to 30.9 feet below ground surface (bgs), which corresponds to approximate bottom elevations of 465.6 feet to 439.7 feet, respectively. Well screening of standpipe piezometers installed in borings BH-17W and BH-20W are included on the well logs in Appendix A.

Explorations BH-18 through BH-20W were performed on October 23, 2023 by Holocene Drilling Inc. of Puyallup, Washington, under subcontract to HWA. Explorations BH-16/16A and BH-17W were performed on October 26, 2023 by Geologic Drilling Inc. of Fall City, Washington, under subcontract to HWA. Borings drilled by Holocene were completed using a Diedrich D50 tracked rig equipped with 4.25-inch ID hollow stem augers and a hydraulic autohammer. Borings drilled by Geologic were completed using a limited access Mini Bobcat tracked rig equipped with 3.25-inch ID hollow stem augers and rope and cathead hammer.

The approximate borehole and monitoring well locations are shown on the Site and Exploration Plan, Figure 2. Logs for borings BH-16 through BH-20W are presented in Appendix A of this report.

Standard Penetration Test (SPT) sampling was performed in each borehole using a 2-inch-outside-diameter split-spoon sampler. A 140-pound hydraulic auto-hammer or 140-pound safety hammer with manual rope and cathead were used to drive the samples. During the SPT, samples were obtained by driving the sampler 18 inches into the soil with the hammer free falling 30 inches. The number of blows required for each 6 inches of penetration was recorded. The Standard Penetration Resistance ("N-value") of the soil is calculated as the number of blows required for the final 12 inches of penetration for an SPT sampler. However, if 50 blow counts were counted in one 6-inch interval or less, the blow counts were reported as 50 blow per number of inches driven (e.g. 50/5"). Blow counts like this are known as refusal blow counts and driving of the split spoon is terminated at that point. This resistance, or N-value, provides an indication of the relative density of granular soils and the relative consistency of cohesive soils, both indicators of soil strength. For data presentation, the boring logs indicate the sample type (SPT) and the measured field penetration resistance for each 6-inch interval. Where SPT samples were taken, the SPT N-value in blows per foot is plotted.

Each exploration was completed under the full-time observation of an HWA geologist. HWA personnel recorded pertinent information as the explorations were advanced, including soil sample depths, stratigraphy, soil engineering characteristics, and groundwater occurrence. Soils were classified in general accordance with ASTM 2488 Standard Practice for Description and Identification of Soils (Visual-Manual Procedures) as referenced by the WSDOT *Geotechnical Design Manual (GDM*;WSDOT, 2022). The soil classification system is described on Appendix A, Figure A-1, which also provides a key to the exploration log symbols. Summary boring logs are presented in Appendix A, Figures A-2 through A-6. 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. The stratigraphic contacts shown on the individual boring logs represent the approximate boundaries between soil types. The actual transitions may be more gradual.

### 2.2 GEOTECHNICAL LABORATORY TESTING

Geotechnical laboratory tests were conducted on selected samples retrieved from the explorations to evaluate relevant physical properties of the site subsurface soils . The tests included visual classification, natural moisture content determination, grain-size distribution, Atterberg limits (plasticity characteristics), and organic content. The tests were conducted in general accordance with appropriate ASTM International standards, which are described in further detail in Appendix B. The test results are presented in Appendix B, and/or indicated on the exploration logs in Appendix A, as appropriate.

### 2.3 PREVIOUS GEOTECHNICAL STUDY

HWA conducted a previous geotechnical study in support of the proposed sewer improvements and produced the "Draft Geotechnical Report, Beverly Lake Sewer Improvements, Everett, Washington" dated April 11, 2019. This study included recommendations associated with the lift station design and the installation of the sewer conveyance system using open-cut excavations. A number of design elements have changed from this previous report; therefore, recommendations provided in the previous report are superseded by those provided herein. Logs associated with the previous explorations, including borings BH-1 through BH-15, are presented in Appendix C of this report.

### 3. SITE CONDITIONS

### 3.1 SURFACE CONDITIONS

The site slopes gently downslope towards Beverly Lake, from approximately elevation 509 to 467 feet along the driveway on the east side of 747 75<sup>th</sup> Street SE. The driveway consists of one

lane of travel. Our explorations indicate that the driveway is paved with 1.5 to 3.5 inches of Hot Mix Asphalt (HMA). The driveway surface appears to be in generally good condition.

### 3.2 GENERAL GEOLOGIC CONDITIONS

The project alignment is located within the Puget Lowland. The Puget Lowland has repeatedly been occupied by a portion of the continental glaciers that developed during the ice ages of the Quaternary period. During at least four periods, portions of the ice sheet advanced south from British Columbia into the lowlands of Western Washington. The southern extent of these glacial advances was near Olympia, Washington. Each major advance included numerous local advances and retreats, and each advance and retreat resulted in its own sequence of erosion and deposition of glacial lacustrine, outwash, till, and drift deposits. Between and following these glacial advances, sediments from the Olympic and Cascade Mountains accumulated in the Puget Lowland. As the most recent glacier retreated, it uncovered a sculpted landscape of elongated, north-south trending hills and valleys between the Cascade and Olympic Mountain ranges, composed of a complex sequence of glacial and interglacial deposits.

Specific geologic information for the project area was obtained from the *Geologic map of the Everett 7.5-minute quadrangle, Snohomish County* by Minard, J.P. (1986). Near-surface deposits mapped at the project site consist of Vashon Glacial Till, which is an unsorted unbedded mixture of clay, silt, sand, gravel, cobbles and boulders deposited by the prograding ice sheet. Although not shown on the geologic map, lake deposits and alluvial soils are present in the low areas near Beverly Lake.

### 3.3 SUBSURFACE CONDITIONS

The interpretations of subsurface conditions are based on a review of available geologic and geotechnical information for the project site, as well as the field explorations performed for this project. The results of the explorations and reviews indicate that the project site is underlain by sequences of fill, lake deposits, alluvial soils, and ice-contact stratified drift deposits (ICSD). It should be noted that the stratigraphy depicted in the logs should be considered approximate. The contacts between units are interpretive in nature and may vary laterally or vertically over relatively short distances.

The interpretation of the geologic conditions along the alignment of the sewer conveyance system extending from 75<sup>th</sup> Street NE to the lift station are shown on Figure 3A, Geologic Cross Section A-A'. The interpretation of the geologic conditions for the slope on the eastern portion of the alignment near 7404 Evergreen Way and the entire sewer alignment along Beverly Lake are shown on Figure 3B, Geologic Cross Section B-B'.

Brief descriptions of the major soil units observed in our explorations are presented below in order of deposition, beginning with the most recently deposited.

<u>Fill</u> – Undocumented fill soils were encountered in all borings, to depths of approximately 3 to 7.5 feet bgs. The undocumented fill consists of loose to medium dense, silty sand with varying amounts of gravel, and trace charcoal or rootlets. The thickest layer of fill was encountered at the bottom of the slope behind Lakeside Apartments. We expect that the undocumented fill was placed across the site to facilitate development around Beverly Lake. The undocumented fill is expected to be highly variable and of poor quality where encountered.

<u>Alluvium</u> – Alluvial deposits consisted of very loose, silty sand with trace gravel and wood chips. This material extended to a depth of approximately 12.5 feet bgs, with a thickness of approximately 5 feet. These deposits are likely associated with nearby Beverly Lake and fluvial channels leading to the lake.

<u>Lake Deposits</u> – Highly organic, medium soft, highly compressible, organic silt or peat was encountered beneath the fill at BH-17W to a depth of about 7.5 feet bgs and graded into very loose, dark olive brown, very silty, sand with organics below the peat to a depth of approximately 10 feet bgs.

The deposits at approximately 10 feet bgs appeared at a gradation from the lake deposits above to the ice contact stratified drift below, which higher blow counts likely overstated from gravel, and trace rootlets. We expect these soils were deposited within the original limits of Beverly Lake and were subsequently overlain by fill associated with modern development. Dense soil conditions observed within the lake deposits are interpreted to be the result gravel obstructing the sampler and not representative of the soil density of this layer.

<u>Ice-Contact Stratified Drift (ICSD)</u> – ICSD soils were encountered in all borings and extended to the maximum depths explored. The ICSD soils generally consisted of medium dense to very dense, silty to very silty sand with variable gravel, and few layers of silt, slightly silty sand, clay, and gravel. Soils were generally denser with depth. In general, ICSD deposits appear to be relatively impermeable based on field observations. However, ICSD materials typically contain sandy or gravelly zones which are pervious and may contain water. Where permeable coarse-grained deposits overlay this unit, water is often perched on top of the deposits.

### 3.4 GROUNDWATER CONDITIONS

Free water was observed in all borings except BH-16 (which terminated near surface due to refusal) at depths ranging from approximately 5 to 7.5 feet bgs, at the time of drilling. However, actual water conditions encountered at the site during construction may be different than

observed in the borings at the time of drilling or in the monitoring wells. Given the proximity of the borings to Beverly Lake, we anticipate that free groundwater will likely reflect the elevation of the lake at the time of construction.

To evaluate changes in groundwater levels, groundwater monitoring wells were installed within BH-17W and BH-20W and transducers were installed in previously drilled wells BH-5 and BH-7. The wells installed in BH-17W and BH-20W were installed with screens in the near surface materials. The wells installed in BH-5 and BH-7 were installed with screens extending into the glacially-consolidated ICSD soils. Groundwater elevation data are presented on Figures 4A and 4B.

Based on the water conditions encountered in the borings at the time of our field exploration and our experience with similar subsurface and groundwater conditions, we anticipate that water will be encountered along the alignment from one or more of the following sources:

<u>Perched Water</u> - The water level observed above the ICSD deposits likely represents a perched water table resting atop any relatively impermeable soil layers. We expect that the perched groundwater will vary seasonally with rainfall with the highest levels in the wet winter months and the lowest levels in the dry summer months. When in close proximity to the lake, the elevation of the perched groundwater table will likely reflect the elevation of the adjacent lake, as seen in BH-17W.

An overflow inlet pipe is installed on the lake limiting the groundwater conditions during seasonal or storm surge events to maintain a stable groundwater elevation and prevent flooding. It is our understanding that this inlet pipe is set to an approximate elevation of 459 feet. However, groundwater levels in BH-17W reflect a historic rainfall event on December 5<sup>th</sup>, 2023, indicating that the overflow inlet pipe may have become blocked or did not have sufficient capacity to accommodate the significant flood event. Assuming the elevation of the lake returns to the overflow inlet elevation, prospective contractors should anticipate that groundwater levels within the near surface fill, alluvium, and lake deposits will be similar to the elevation of the lake and should be prepared to collect, divert, and remove intercepted perched water to suitable discharge locations.

Water from Existing Utility Trenches - Numerous subsurface utilities may extend along and across the proposed utility alignment. Each of the existing utilities is likely backfilled with trench backfill that is more permeable than the native soils. These zones of existing trench backfill will act as conduits for flow of near surface perched water. Prospective contractors should anticipate encountering free water from existing utilities and trench backfill intercepted by the proposed trench excavation. The contractor should be prepared to collect, divert, and remove intercepted water to suitable discharge locations.

<u>Seepage within ICSD Deposits</u> – Water encountered in ICSD soils such as borings BH-1, BH-5, BH-6, BH-8, BH-19, and BH-20W was likely contained within sandy and/or gravelly zones which are pervious and may have been released at the time of excavation. Groundwater levels in BH-5 and BH-7 were substantially lower than the lake elevation. This is likely due to the placement of the screen of the groundwater monitoring well within the relatively impermeable ICSD soils. Groundwater levels in these wells are likely the result of the seepage from the ICSD and should not be assumed as static groundwater levels.

Water may be present as seeps, isolated zones of perched water, or more continuous and extensive water sources. Prospective contractors should be prepared to collect, divert, and remove seepage or groundwater emitting from sandy and gravelly layers within the ICSD deposits.

<u>Seepage due to Peat Deposits</u> — Water encountered in the lake deposits such as borings BH-3, BH-4, BH-14, and BH-17W will likely saturate the entire unit as a result of capillary rise. This occurs as the level of water rises above a zero-pressure condition due to the new upward force produced by the attraction of water to a solid surface. In this condition, the high organic content produces this upward force and will produce a near saturated condition throughout the soil unit. As a result, if peat is present, the groundwater table should be assumed to be as shallow as the depth at which the unit is encountered.

### 4. CONCLUSIONS AND RECOMMENDATIONS

### 4.1 GENERAL

Subsurface conditions encountered in the borings along the proposed sewer alignment generally consist of approximately 2 to 12.5 feet of undocumented fill and 3 to 9.5 feet of alluvial and/or lake deposit soils overlaying over-consolidated ICSD deposits to the maximum depth explored, approximately 41.5 feet bgs.

A new sewer conveyance system will be installed in place of the existing system. The existing system will be backfilled and abandoned in place. The new system will consist of a series of manhole structures tied into a lift station. This lift station will then tie into the existing sewer main system along 75<sup>th</sup> Street NE. The glacially-consolidated ICSD deposits are suitable to support the proposed lift station and manhole structures. Manholes proposed to be founded at elevations above the ICSD deposits should be overexcavated to encounter the ICSD deposits or to a depth of 2 feet and replaced with properly compacted structural fill, whichever is less.

Where increases in grade are anticipated in areas with soft/loose fill, alluvium, and lake deposit soils, consolidation settlements should be evaluated. Increases in load associated to fill placement could result in a degree of consolidation settlement. Therefore, considerations associated with this settlement will need to be considered in design.

Limited portions of the proposed sewer conveyance system will be completed utilizing conventional open cut trenches. The near surface ICSD material encountered near this proposed segment will be suitable to support conventional open cut trenches.

The majority of the alignment will encounter very soft to loose near-surface fill, lake deposits and alluvium with shallow groundwater conditions. It is our understanding that the preferred method of installation of the sewer alignment is trenchless horizontal direction drilling to connect each of the proposed structures. Due to the shallow groundwater conditions, we anticipate the utilization of a jack and bore method such as microtunnelling will be utilized. Based on our subsurface explorations, we anticipate that the proposed trenchless alignment to the east of the lift station, extending from approximately stations 43+50 to 47+80, will encounter near-surface lake deposits that will not provide suitable overburden pressure to resist pressure blowout in response to the horizontal drilling. Additionally, from about stations 45+50 to 47+80 the shallow pipe elevation could be affected by anticipated surficial slope failure. Slope conditions may deteriorate as a result of surface runoff and weathering leading to slope instability under static loading. Therefore, failures may occur during the design life of the proposed improvements.

Based on conversations with the City, we have presented two options to address this issue. The first option includes deepening of the manhole at the east end of the alignment (SMH-5) and the pipe invert elevations by approximately 5 feet below the current depth to place them within the glacially-consolidated ICSD soils. The second option includes relocating the proposed manhole at station 45+80 approximately 50 feet to the south, so the manhole and associated sewer pipes in that area is outside of the anticipated extent of the lake deposits. The trenchless designer should review the anticipated soil and groundwater conditions presented in this report to evaluate the feasibility of each of the proposed methods.

### 4.2 SEISMIC CONSIDERATIONS

## 4.2.1 Seismic Design Parameters

The *International Building Code (IBC)* requires above-grade structures be designed for the inertial forces induced by a "Maximum Considered Earthquake" (MCE), which corresponds to an earthquake with a 2% probability of exceedance (PE) in 50 years (approximately 2,475-year return period). Whereas above-grade structures are generally unsupported above their foundations, underground structures are constrained by the surrounding medium (soil or rock). They are affected by the deformation of the surrounding ground and not by the inertial forces

acting on the structure. As a result, seismic design for inertial forces need not be considered for buried structures with span lengths/diameters of 20 feet or less. However, we do recommend that the walls of buried structures be designed to resist the lateral earth pressures associated with the design seismic event.

Earthquake loading for the project site was developed in accordance with the General Procedure provided in Section 3.4 of the AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2nd Edition, 2011, and the Washington State Department of Transportation (WSDOT) amendments to the AASHTO Guide Specifications provided in the Bridge Design Manual (LRFD; WSDOT, 2023). For seismic analysis, the Site Class is required to be established and is determined based on the average soil properties in the upper 100 feet below the ground surface.

Based on our characterization of the subsurface conditions, the site class designation has been determined based on the principle that the consistency of the soils below the maximum depth of the borings are consistent or denser than the soil within the 41.5 feet of depth explored. The project alignment would classify as Site Class F due to the presence of liquefiable soils. This would require a site-specific seismic analysis to be performed to determine the seismic coefficients; however, guidance provided in Chapter 6 of the WSDOT *GDM* indicates that specification-based site coefficients can be used for structures with fundamental periods less than 1.0 second. We understand the roadway improvements being analyzed have fundamental periods below 1.0 second; therefore, the specification-based site coefficients for Site Class D can be used and a site-specific seismic analysis is not required.

The mapped seismic design parameters for this site were obtained using the Applied Technology Council Seismic Hazard webtool, which incorporates the probabilistic seismic hazard maps developed by the U.S. Geological Survey (USGS). The design parameters for the design level event (equal to a return period of 975 years) were obtained from the USGS Uniform Hazard Tool website using the U.S. 2014 Dynamic Conterminous edition (v4.2.0), which provides the probabilistic seismic hazard parameters from the 2014 Updates to the National Hazard Maps (Petersen, et al., 2014). Site coefficients were developed following the WSDOT BDM that adopts the site coefficients provided in ASCE 7-16. The recommended seismic coefficients for the design event are provided in Table 1. The spectral acceleration coefficient at 1-second period (S<sub>D1</sub>) is greater than 0.2; therefore, Seismic Design Category D, as given by AASHTO Table 3.5-1 (AASHTO, 2011), should be used for both.

Table 1. Ground Motion Values, Site Class D\*

Site	Peak Horizontal Bedrock	Spectral Bedrock Acceleration at 0.2 sec S <sub>s</sub> , (g)	Spectral Bedrock Acceleration at 1.0 sec S <sub>1</sub> , (g)	Site Coefficients			Peak Horizontal Acceleration
Class	Acceleration PBA, (g)			F <sub>pga</sub>	Fa	$\mathbf{F_v}$	PGA (A <sub>s</sub> ), (g)
D	0.409	0.942	0.254	1.191	1.123	2.092	0.487

Notes: \*5% Probability of Exceedance in 50 years for Latitude 47.931522° and Longitude -122.222994°

PGA = Peak ground acceleration

 $F_{PGA} = PGA$  site coefficient

PGA<sub>M</sub> = Maximum considered earthquake geometric mean peak ground acceleration adjusted for Site Class effects

 $S_S$  = Short period (0.2 second) Mapped Spectral Acceleration

 $S_1 = 1.0$  second period Mapped Spectral Acceleration

 $S_{MS}$  = Spectral Response adjusted for site class effects for short period =  $F_a \cdot S_S$ 

 $S_{M1}$  = Spectral Response adjusted for site class effects for 1-second period =  $F_V \cdot S_1$ 

 $S_{DS}$  = Design Spectral Response Acceleration for short period = 2/3 •  $S_{MS}$ 

 $S_{D1}$  = Design Spectral Response Acceleration for 1-second period =2/3 •  $S_{M1}$ 

F<sub>a</sub> = Short Period Site Coefficients

F<sub>v</sub> = Long Period Site Coefficients

 $T_0 = 0.2 \cdot S_{D1} / S_{DS}$ 

 $T_S \equiv S_{\rm D1}/S_{\rm DS}$ 

T<sub>L</sub> = Long Period Transition period

## 4.2.2 Near Fault Effects

The proposed improvements are located approximately 2.5 miles northeast of the South Whidbey Island Fault Zone. The main seismic consideration for the site is the large amplitude of the ground motions associated with its close proximity to the fault, which is accounted for in the design seismic coefficients. As no long-period structures are being constructed (e.g. water reservoirs/tanks, earthen embankments, multi-span bridges), it is not necessary to consider other near fault effects, such as forward directivity, for the proposed improvements.

# 4.2.3 Liquefaction

Liquefaction is a temporary loss of soil shear strength due to earthquake shaking. Loose, saturated cohesionless soils are the most susceptible to earthquake-induced liquefaction; however, research has shown that certain silts and low-plasticity clays are also susceptible. Primary factors controlling the development of liquefaction include the intensity and duration of

strong ground motions, the characteristics of subsurface soils, in-situ stress conditions and the depth to ground water. Based on the WSDOT *GDM*, the liquefaction susceptibility of the soils along the project alignment was determined utilizing the simplified procedure originally developed by Seed and Idriss (1971) and updated by Youd et al (2001) and Idriss and Boulanger (2004, 2006).

The simplified procedure is a semi-empirical approach that compares the cyclic resistance ratio (CRR) required to initiate liquefaction of the material to the cyclic shear stress ratio (CSR) induced by the design earthquake. The factor of safety relative to liquefaction is the ratio of the CRR to the CSR; where this ratio is computed to be less than one, the analysis would indicate that liquefaction is likely to occur during the design earthquake. The CRR is primarily dependent on soil density, with the current practice being to base it on the SPT N-value, corrected for energy consideration, fines content and earthquake magnitude. CSR is generally determined by the formulation developed by Seed and Idriss (1971) and relates equivalent shear stress caused in the soil at any depth to the effective stress at that depth and the peak ground acceleration at the surface.

Our analysis suggests that the saturated fill, lake deposits, alluvium, and medium dense ice-contact stratified drift soils along the sewer alignment are potentially liquefiable during the maximum considered earthquake. Upon the initiation of liquefaction, we expect that liquefiable soils will lose shear strength, undergo liquefaction induced settlement, and potentially liquefaction-induced lateral movement towards Beverly Lake. Details associated with each are provided below.

# 4.2.4 Liquefaction Settlement Analysis

For saturated alluvial, lake deposits, and ICSD deposits, excess pore water pressure builds up during the earthquake excitation, leading to loss of strength or liquefaction. After the shaking stops, excess pore water pressures dissipate toward a zone where water pressure is relatively lower, usually the ground surface. The dissipation is accompanied by a reconsolidation of the loose sand (Ishihara and Yoshimine, 1992 & Tokimatsu and Seed, 1987). The reconsolidation is manifested at the ground surface as vertical settlement, usually termed as liquefaction-induced settlement or seismic settlement.

The potential for liquefaction-induced settlement was evaluated along the sewer alignment. The methodologies used were developed by Idriss and Boulanger (2008) and are generally based on the relationship between cyclic stress ratio, corrected SPT blow counts, and volumetric strain. Using these methods, liquefaction-induced settlement along the sewer alignment was estimated to be between 3 and 6 inches at the ground surface. Actual liquefaction induced settlement occurring below structures or the sewer alignment will be dependent on the actual amount of liquefiable soils that remain below the improvements after installation. The onset of liquefaction

induced settlement is expected to result in some settlement of the proposed sewer alignment. This settlement could be differential in nature and could result in damage to the proposed improvements.

To mitigate the effects that liquefaction induced settlement has on the proposed conveyance system, we recommend that all utility lines be constructed with flexible piping. We recommend that all gravity lines be designed with the maximum slope possible. We recommend that potentially liquefiable soils below the proposed lift station be removed, if encountered, and replaced with compacted structural fill. Flexible connections, capable of tolerating up to 6-inches of differential settlement should be installed at locations where piping enter and exits the proposed lift station and any manhole structures.

# 4.2.5 Post Liquefaction Residual Shear Strength

Upon initiation of liquefaction and the completion of earthquake shaking, the shear strength of the liquefiable soils may reduce to a residual shear strength. Residual shear strengths for the liquefiable soils encountered within the project alignment were determined using a weighted average of the results of the Tokimatsu and Seed (1987), Seed and Harder (1990), Olson and Stark (2002), Idriss and Boulanger (2007) and Kramer (2007) relationships. The residual shear strengths assigned are a function of the equivalent clean sand SPT value,  $(N_1)_{60cs}$ , the potential for void redistribution, and the initial effective overburden stress. Post liquefaction residual shear strengths were used to evaluate liquefaction-induced stability of the slopes adjacent to Beverly Lake.

# 4.2.6 Liquefaction-Induced Slope Failures

Liquefaction-induced slope failures can either occur as lateral spreading or as a flow failure. Liquefaction-induced lateral spreading occurs as the shear strength of liquefiable soils decrease during seismic shaking but do not decrease to the point that a complete flow failure would occur. Lateral spreading occurs cyclically when the horizontal ground accelerations combine with gravity to create driving forces that temporarily exceed the available strength of the soil mass; this is a type of failure known as cyclic mobility. The result of a lateral spreading failure is horizontal movement of the liquefied soils and any overlying crust of non-liquefied soils. Displacements associated with lateral spreading are generally quantifiable and on the order of a few meters. In contrast, liquefaction-induced flow failures result when the residual strength of the liquefied mass is not sufficient to withstand the static stresses that existed before the earthquake. Upon initiation of liquefaction-induced flow failure, the liquefied soil behaves like a debris flow, characterized by very large displacements. Flow failures involve horizontal and vertical movements of the liquefied soils and any overlying crust of non-liquefied soils. The chaotic nature of flow failures is such that estimation of the magnitude of displacement is not reasonable.

Based on our subsurface explorations along the sewer alignment and the available topography, we expect that liquefaction-induced instability of the subsurface soils near Beverly Lake is likely to occur. Without additional geotechnical explorations and detailed bathymetry of Beverly Lake, we cannot definitively determine the extent of this instability. However, we would expect flow sliding to occur in close proximity to the shoreline and lateral spreading to extend further away from the shoreline.

Although we cannot accurately determine anticipated displacements along the proposed sewer alignment, we expect that the level of displacement will be on the order of several feet and are likely to damage the proposed improvements. Therefore, without mitigation, repair of the system will likely be required after the design earthquake. We expect that implementing mitigation measures associated with liquefaction-induced instability along the entire sewer alignment would be cost prohibitive. Therefore, we recommend that mitigation measures be limited to those recommended to address liquefaction-induced settlement and that repair of the system be assumed after the design earthquake.

#### 4.3 STABILITY OF STEEP SLOPE

Global slope stability analysis was completed for the steep slope on the eastern portion of the alignment along Cross-Section B-B'. The location and orientation of the cross-section can be seen on Figure 2, the Site and Exploration Plan. Global slope stability was analyzed under three loading scenarios: static loading, pseudo-static earthquake loading, and post-liquefaction loading. Soil strength parameters and ground water conditions for this analysis were assumed based on field exploration observations and laboratory test results.

Limit equilibrium analyses were performed using the computer program SLIDE2 9.029 (Rocscience, 2023). Global factors of safety with respect to potential deep-seated failure surfaces were determined. The factor of safety computed is the ratio of the summation of the driving forces to the summation of the resisting forces. Where the factor of safety is less than 1.0, instability is predicted. For global slope stability design, minimum acceptable factors of safety under static loading conditions are commonly taken as 1.5 for slopes supporting structures or walls. For slopes adjacent to structures or minor walls where slope instability would have a lesser effect in terms of safety considerations, the factor of safety may be taken as 1.3. Minimum acceptable factors of safety for the pseudo-static and post-liquefaction static cases are 1.1.

# 4.3.1 Static Condition

The results of the slope stability analysis assuming static loading conditions can be seen in Appendix D as Figure D-1. The factor of safety for the eastern slope under static loading conditions was calculated to be approximately 1.18. This analysis indicates that while global slope instability is not likely to occur under static loading conditions, the static factors of safety for the slope is not greater than the minimum required static factor of safety of 1.3.

#### 4.3.2 Pseudo-Static Condition

The results of the slope stability analysis assuming pseudo-static loading conditions can be seen in Appendix D as Figure D-2. Pseudo-static slope stability analyses model the anticipated earthquake loading as a constant horizontal force applied to the soil mass. For our analyses, we used a horizontal seismic coefficient of 0.2045 g, which is half of the peak ground acceleration (PGA). The results of these analyses indicate a pseudo-static factor of safety of approximately 1.206for the slope. The pseudo-static factor of safety is greater than the minimum required pseudo-static factor of safety of 1.1. This analysis indicates that global slope instability of the existing side slope, is unlikely to occur during the design seismic event.

# 4.3.3 Post Liquefaction Condition

The results of the slope stability analysis assuming post-liquefaction loading conditions can be seen in Appendix D as Figure D-3. The results of our post-liquefaction slope stability analysis for slope indicated a post-liquefaction factor of safety of approximately 1.802. This indicates that liquefaction-induced slope instability is not expected along the existing slope under the existing condition. Additionally, given a factor of safety greater than 1.5, we do not anticipate flow slide failures to occur under the existing conditions.

# 4.3.4 Impacts of Slope Instability on the Proposed Improvements

Proposed improvements within the vicinity of the eastern slope include the two manhole structures, located at the top of the slope and bottom of the slope, and the connecting trenchless sewer conveyance pipe. Based on the slope failures shown on Figures D-1, any structures or pipes that are founded within these failures may need to account for the potential for static slope instability. While the current slope conditions suggest that the slope is stable, a factor of safety less than 1.3 suggests that the slope conditions may deteriorate as a result of surface runoff and weathering leading to slope instability under static loading. Therefore, failures may occur during the design life of the proposed improvements.

If stabilization of this slope is required to meet static factor of safety requirements, HWA should be notified to provide recommendations.

## 4.4 SETTLEMENTS

It is our understanding that the construction of the lift station will require the placement of up to 4 feet of fill. The loose sand alluvial deposits and the organic rich, soft, fine-grained potions of the lake deposit soil underlying the project alignment are normally consolidated and may undergo elastic and consolidation settlement upon the application of increased loading associated with increasing the grade of the site.

Consolidation settlement results from the application of static loading on compressible soil deposits that are saturated and have not previously experienced similar loading conditions. Consolidation settlement occurs as both primary consolidation (short term consolidation) and secondary compression (long term consolidation). Both of these mechanisms are described below.

**Elastic settlement:** Elastic settlement is the vertical component of soil compression under static loading. These settlements occur relatively rapidly upon the application of load and are dependent on the elastic properties of the soils and/or rock underlying the proposed foundation. Loose to medium dense soils generally undergo larger elastic settlements than harder materials such as rock.

**Primary consolidation:** Primary consolidation occurs upon the application of load and is a result of pore water being expelled from the void space within the soil unit. As load is applied, the pore water pressure increases within the soil unit and slowly decreases as the pore water is expelled from the soil. As this process continues the void space between the soil particles is reduced and the volume of the soil deposit decreases. This decrease in the volume results in a reduction in the thickness of the soil unit which manifests as settlement at the ground surface. The magnitude of primary consolidation is dependent on the geometry of the compressible soil unit, with respect to the applied load, and the compressibility properties of the subject soil.

**Secondary compression:** Secondary compression is associated with structural deformation within the soil as the result of applied load. In mineral soils, the secondary compression is relatively small in comparison to the primary consolidation. However, secondary compression in organic soils is much larger than in mineral soils, due to the potential for cellular deformation within the organic material. Secondary compression continues for many years after application of load.

Construction of the proposed lift station will include raising the grade directly adjacent to the structures by up to 4 feet. We do not know the extension of the increases in grade. Areas directly within the footprint of the proposed structures would not be affected, as the excavation needed to build the structures will offset the loads associated with the increases in grade. Areas outside of the footprint of the structure could be affected. Soil deposits in the area are very variable. Based on the near explorations (BH-18 and BH-5), we anticipate the lake deposits and alluvium deposits predominantly consist of sands, which are less susceptible to settlements. Therefore, we anticipate these load increases are expected to result in elastic settlements around the structure on the order of 0.5 inches. However, while not encountered in our borings at the location of the lift station, layers of peat and/or soft silt may be encountered within the lake deposits that will result in additional settlements. The magnitude of the consolidation settlements of the silt/peat soils would depend on how thick the compressible soil deposit is. Once the area of increases in grade is defined, HWA should be contacted to evaluate the proposed final conditions. Given the

deposition nature of the alluvium and lake deposits, some differential settlements may be encountered as the unit changes in thickness.

Due to anticipated costs, we do not recommend implementing settlement mitigation measures associated with the modest increases in loads.

## 4.5 LIFT STATION AND MANHOLE STRUCTURE DESIGN

## 4.5.1 General

We understand that a lift station is to be constructed as part of this project. Structures associated with the lift station will consist of a cast-in-place or precast wet and dry well structure. Based on plan sets provided by the City of Everett, the lift station will extend approximately 14 feet bgs, or to elevation 453 feet. We understand that five (5) manholes will be installed along the sewer alignment and tied into the proposed lift station. The proposed locations and orientation of these structures and the proposed alignment of the sewer conveyance system are shown in our Site and Exploration Plan, Figure 2.

## 4.5.2 Lift Station and Manhole Temporary Shoring

We recommend that the proposed lift station and manhole structures be constructed inside a temporary sheet-pile shoring system with internal stabilizing features or a watertight cofferdam. Recommended design pressures for temporary braced shoring system are shown on Figure 5. Temporary shoring systems should be designed to resist the earth pressures provided, including any surcharge pressures from equipment, trench spoils, or adjacent structures located within a 1:1 slope extending upward from the toe of the trench.

The shoring system should be designed by a qualified and licensed engineer experienced with shoring design for deep excavations within similar soil conditions. The embedment depth of the sheet piles below the base of the excavation should be designed by the Contractor to adequately cutoff underground water seepage for stability of the subgrade soils at the base of the excavation. The design, installation, maintenance, and removal of temporary shoring should be the responsibility of the contractor. The Contractor should be required to present a submittal of the design details for review by the Engineer prior to construction. HWA should be allowed to review shop drawings and calculations for proposed shoring systems to check for consistency with the recommendations included in this report. Once the sheet piles are installed, soils inside the shoring can be excavated to the desired depth.

While not encountered in our geotechnical borings, we anticipate the presence of woody debris in the vicinity of the excavations. Additionally, the underlying glacially consolidated soils may encounter obstructions such as cobbles and boulders during installation of the temporary shoring. Pre-drilling or digging to facilitate driving of sheet piles may be necessary. The contract should

contain provisions for dealing with obstructions encountered during sheet pile driving. The excavation can be accomplished with conventional excavating equipment such as backhoes and excavators.

Installation of temporary shoring for the proposed manhole and lift station structures is anticipated to occur **after** completion of the trenchless horizontal directional drilling. Therefore, we anticipate that the excavation will occur above the installed pipe segments and will require cuts into the pipes to properly tie the system into the structures. Considerations associated with minimizing damage to the pipes during excavation and installation of temporary shoring should be made by contractors. Precautions should be taken during removal of the shoring to minimize disturbance of the pipe, and native subgrade soils.

## 4.5.3 Lift Station and Manhole Foundation Recommendations

It is our understanding that the base of the proposed lift station and associated manholes will be founded within the glacially consolidated ICSD soils or medium dense alluvium soils. If soft compressible soils are encountered below the proposed structure at the time of excavation, these soils should be over excavated down to the ICSD bearing soils or up to 24 inches. Over-excavation should extend on either side of the structure a distance equal to the depth of the over-excavation beneath the base of the structure elevation. Overexcavated areas should be backfilled with crushed surfacing base course (CSBC) that complies with the 2023 City of Everett *Design and Construction Standards and Specifications* (COE, 2023).

We recommend that the lift station structure be constructed on a minimum 12-inch-thick leveling pad of consisting of CSBC. All CSBC should be compacted to 95 percent of Modified Proctor prior to placement of structures and the subgrade below the CSBC should be compacted to a firm state, as determined by the geotechnical engineer.

An allowable foundation bearing capacity of 3,000 pounds per square foot (psf) may be used to design below grade structures founded on ICSD or medium dense alluvium deposits or CSBC brought up from ICSD deposits.

# 4.5.4 Lift Station and Manhole Permanent Earth Pressures

Permanent buried structures associated with the lift station and manholes should be designed to resist and support the lateral earth pressures shown on Figure 6. The recommended design pressures presented are based on the assumption that the structures are backfilled with compacted structural fill meeting the requirements outlined in Section 4.9.1 and 4.9.2. For design purposes, the lift station and manholes are assumed to be at an at-rest condition while under static loading and a yielding condition during seismic loading.

As indicated on Figure 6, the maximum design ground water elevation for static earth pressure should be assumed at the ground surface. The maximum design ground water elevation for seismic earth pressure should be assumed to be approximately 5 feet bgs or an elevation equivalent to the elevation of the overflow inlet pipe, whichever is shallower.

# 4.5.5 Lift Station and Manhole Buoyancy Considerations

We expect that the proposed lift station wet and dry wells and the proposed manhole structures will extend below the groundwater level. Therefore, these structures will be subject to buoyancy forces. On Figure 6, HWA has provided equations for calculating anticipated buoyancy forces and resistance forces with and without the inclusion of an extended base around the structure. The inclusion of an extended base would increase the resistance to buoyant uplift conditions. The equations provided on Figure 6 assume that below-grade structures will be circular structures. If the design of the structures differs from those provided to us, HWA should be allowed to review the proposed design of the structures to check for consistency with the recommendations included in this report. As indicated on the figure, the maximum design ground water elevation for buoyancy calculations should be assumed at the ground surface to account for the extreme event when the backfill material may become temporarily saturated.

## 4.5.6 Flexible Connections

As indicated in Section 4.2.4, differential settlement is expected to occur, as a result of the design seismic event, between the proposed sewer conveyance lines and the lift station structure. This differential settlement is expected to occur because the lift station structure will be founded on non-liquefiable soils and the conveyance lines may be founded within liquefiable soils. Our analysis indicates that this differential settlement could be as large as 6 inches as a result of the design earthquake.

To prevent damage at the connection points to the lift station and manholes, we recommend the installation of flexible connections at all utility connection points to any of the structures. We recommend that these flexible connections be designed to tolerate a minimum of 6 inches of differential settlement.

If the proposed conveyance system is installed at depths below the alluvial and lake deposits, this differential settlement is likely to be negligible and flexible connectors are likely to not be required. Additional information associated with this recommendation is provided in Section 4.7.9.

#### 4.6 SEWER CONVEYANCE DESIGN

## 4.6.1 General

Based on plan sets provided by the City of Everett, the proposed sewer conveyance system ranges in depths from approximately 3.5 to 13.5 feet bgs. Soils encountered vary across the site; a geologic interpretation of the project site along the pipe alignment is presented in Cross Section B-B', Figure 3B.

## 4.6.2 Temporary Shoring Considerations

Based on provided plan sets, we expect that temporary shoring will consist of conventional trench shields (trench boxes) for a portion of the alignment (from stations 40+10 to 41+00) and horizontal trenchless drilling for the remainder. Additionally, installation of the manhole structures will require conventional trenching methods. Recommendations associated with trenchless drilling are provided in Section 4.7.

It should be noted that trench boxes are designed to protect the life and safety of the workers within the excavation but may not effectively apply sufficient active pressure against the excavation walls necessary to mitigate cave-ins and undermining of adjacent pavements, utilities, or other structures.

Based on anticipated structure elevations for the two westernmost manholes (designated SMH-1 and SMH-2), we anticipate a maximum trench excavation of approximately 7 feet bgs. Based on logs in the vicinity of this section, we anticipate groundwater to be at depths of approximately 7.5 feet. Therefore, groundwater seepage into the trench excavation is not expected and any perched water encountered can be addressed through the use of sumps and pumps.

The proposed open-cut trench excavation near manhole SMH-2 extends below the water level of Beverly Lake. At this location, groundwater seepage into the trench excavation may be encountered. If encountered, this level of seepage could be significant and require alternate temporary shoring methods to control seepage and sidewall caving. If substantial seepage is observed during excavation of this trench, the contractor could use the recommendations presented in Section 4.5.2 for temporary braced shoring system if needed.

# 4.6.3 Sewer Line Trenching Obstructions and Caving

The sewer line alignment is expected to extend through over-consolidated glacial deposits that may contain scattered cobbles and boulders and alluvial and lake deposit soils that may contain woody debris. HWA anticipates that large obstructions could be encountered during trenching.

The project specifications and cost estimate should account for the potential for encountering and removing obstructions during utility installation.

Very loose/soft and wet fill, alluvial, and lake deposit soils are present in the upper 15 feet of the soil profile along the alignment. These materials are generally unstable and will readily slough into the trench and may undermine adjacent pavements, utilities, and other structures without proper shoring.

# 4.6.4 Trench Dewatering for Open Cut Trenches

As discussed in Section 3.4 of this report, free water is expected to be encountered during trench excavation from multiple sources including: 1) perched water in the upper lake deposits and alluvial soils, 2) free water from intercepted utility trenches and pipe bedding, 3) water from sand seams hydraulically connected to Beverly Lake, and 4) seepage from saturated peat deposits. We anticipate that water levels encountered at the time of excavation may be different than shown on the boring logs and will fluctuate with time of year, local rainfall, and other factors.

We anticipate dewatering of the open cut trenching may be accomplished using localized sumps and pumps. The dewatering system should be designed by a qualified engineer or contractor experienced with the local dewatering characteristics and types of proposed construction for this project. Surface water should be diverted away from trench excavations. Water should be diverted, collected and discharged at a suitable location following Section 5-8.1 of the 2023 City of Everett *Design and Construction Standards and Specifications for Development*. We recommend that excavations be performed during the dry summer months to minimize ground water seepage in excavations.

# **4.6.5** Pipe Bedding Recommendations

We anticipate that the soils encountered within this portion of the sewer conveyance system will provide suitable support for the new utility pipes, if they are properly prepared in accordance with the recommendations in this report.

If unsuitable soils, such as peat, soft silt, organic soils, or deleterious material (e.g. logs, stumps, etc.) are encountered at the pipe invert elevation, the excavation should be over-excavated, the subgrade should be compacted to a firm state as determined by the geotechnical engineer, and backfilled with structural fill. Over-excavation should extend on either side of the pipe a distance equal to the depth of the over-excavation beneath the invert elevation or full width of the trench, whichever is greater. Over-excavation to remove unsuitable soils from below the pipeline should be limited to a depth of 2 feet. In locations where unsuitable soils are found to extend deeper than 2 feet below pipe invert, the geotechnical engineer should observe and review the ground conditions and provide site-specific recommendations. In general, we anticipate that

replacement of the overexcavated soils with compacted structural fill, per Section 4.9.1 and 4.9.2, will provide a suitable subgrade to support the proposed improvements.

Trench bottoms should be free of debris and standing water. To minimize trench subgrade disturbance during excavation, the excavator should use a smooth-edged bucket rather than a toothed bucket.

Pipe bedding beneath the sewer pipe should consist of foundation gravel as specified in Section 6-8.4 of the 2023 City of Everett *Design and Construction Standards and Specifications for Development*. Based on the results of the laboratory testing program for this study and the high variability of the soils, the onsite soils encountered at the site generally do not meet the requirements for pipe bedding.

Pipe bedding should provide a firm uniform cradle for support of the pipes. A minimum 6-inch thickness of bedding material beneath the pipe should be provided. Prior to installation of the pipe, the pipe bedding should be shaped to fit the lower part of the pipe exterior with reasonable closeness to provide uniform support along the pipe. Pipe bedding material should be used as pipe zone backfill and placed in layers and tamped around the pipes to obtain complete contact. To protect the pipe, bedding material should extend at least 12 inches above the top of the pipe.

## 4.6.6 Trench Backfill Recommendations

Native soils encountered in the explorations generally contain organic material and moderate to high fines contents and are expected to be highly moisture sensitive and difficult to place and compact without significant moisture conditioning (drying). Considering the limited space to moisture condition the excavated soil along the alignment, limited time, and generally wet climate conditions, we do not recommend that the native soil be reused as trench backfill for this project. Imported backfill should consist of gravel borrow material meeting the requirements of Section 3-20.5 of the City of Everett *Design and Construction Standards and Specifications*.

Trench backfill should be free of organics and other debris. Construction should occur during the dry summer season to minimize potential impacts on constructability due to wet soils and ground water seepage. The project specifications and cost estimate should account for imported trench backfill.

## 4.6.7 Trench Backfill Placement and Compaction

Proper preparation, placement, and compaction of the trench backfill is extremely important to limit future settlement of the ground surface around structures and along trenches. Given the depth of the proposed trench, failure to achieve proper compaction could result in significant settlement on the order of several inches, resulting in distress to pavements, utilities, and other structures along the trench.

Trench backfill should be uniformly moisture conditioned to within about 3 percent of optimum moisture content prior to placement in the trench. In accordance with Section 3-9.4 of the City of Everett *Design and Construction Standards and Specifications*, properly prepared backfill should be placed in successive layers with the first layer not to exceed 2 feet above the pipe, and the following layers not exceeding 12 inches in loose thickness. Each layer shall be compacted in a systematic manner using appropriately sized compaction equipment to achieve at least 90 percent of the maximum dry density as determined using ASTM D-1557 within 3 feet of the subgrade and achieve at least 95 percent for the remaining 3 feet to subgrade elevation. Smaller loose lifts may be necessary to achieve compaction where hand-held compaction equipment such as jumping jacks, hoe-packs, or plate compactors are used. The contractor should develop compaction methods that consistently produce adequate compaction levels.

The trench backfill shall be tested frequently with at least one test per lift for each 200-foot length of trench for trench widths less than 4 feet and two tests per lift for each 200-foot length of trench for trench widths up to 8 feet. A sufficient number of in-place density tests should be performed as the fill is placed to determine that the required compaction is being achieved. Suitable safe access shall be provided by the contractor to accommodate the testing requirements.

Full-time observation and testing of trench backfill by a representative of the geotechnical engineer is recommended to help the contractor achieve proper backfill preparation and uniform moisture conditioning, loose lift thickness control, and application of appropriate compactive effort.

During placement of the initial lifts, the trench backfill material should not be bulldozed into the trench or dropped directly on the pipe. Heavy vibratory equipment should not be permitted to operate directly over the pipe until a minimum of 2 feet of backfill has been placed over the pipe bedding to an in-place density of at least 90 percent of the maximum dry density as determined using ASTM D-1557.

## 4.6.8 Trench Backfill Settlement

Trench backfill settlement is expected to occur after construction, even when backfill testing indicates that backfill materials have been properly compacted. Based on our experience, estimated trench backfill settlement may be estimated at 1% of the trench backfill depth when backfill is compacted to the minimum requirements of compaction stated in this report. Trench backfill settlement will directly impact surface pavements, creating depressions, ponding, and distress cracks that will negatively impact pavement design life and induce further trench backfill settlement.

A significant cause of trench settlement results from inadequate shoring practices and poor compaction during shoring removal and backfilling. Special care must be taken to obtain good compaction up to the edges of the excavation as the shoring is removed. Moreover, attention must be paid to ensuring proper compaction around manholes using appropriately sized

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compaction equipment. The amount of trench settlement may also be reduced by moisture conditioning backfill materials to wet-of-optimum, utilizing a crushed aggregate (chip) type backfill, or even further reduced by utilizing CDF materials. We recommend that trench backfill be monitored and tested full-time by a representative of the geotechnical engineer during construction to aid the contractor in achieving proper compaction and to reduce the potential for trench backfill settlement.

## 4.7 TRENCHLESS SEWER CONVEYANCE SYSTEM

It is our understanding that the City proposes to install the new sewer conveyance system via trenchless methods: one along Cross Section A-A' and another along portions of Cross Section B-B', as shown on Figure 2. The trenchless designer should review the anticipated soil and groundwater conditions presented in this report to evaluate the feasibility of the method.

# 4.7.1 Anticipated Ground Conditions

Ground conditions along the proposed trenchless alignments for Section A-A' (Figure 3A) are anticipated to consist of loose to loose, near-surface fill and relatively loose/soft lake deposits and alluvial soil deposits at the northern end of the alignment, closest to the lake. The alluvium and lake deposits taper as the alignment moves uphill; the fill is underlain by very dense ICSD deposits.

Ground conditions along the proposed trenchless alignments for Section B-B' (Figure 3B) are anticipated to consist of very loose to loose, near-surface fill and relatively loose/soft lake deposits and alluvial soil deposits. These units are thickest at the eastern end and reduce in thickness to the west. The units are underlain by very dense ICSD deposits. The anticipated ground conditions along the trenchless crossing are depicted in the Geologic Profiles, Figures 3A and 3B. Water level data collected from installed transducers within groundwater monitoring wells are presented in Figures 4A and 4B.

The fill, alluvium, and lake deposits are expected to vary significantly in composition along the alignment. Any fine-grained lenses of silt or clay encountered in the geotechnical borings should not be assumed to be connected or uniform from location to location. Although not encountered in our borings, the fill, alluvium, and lake deposit soils could contain large woody debris, deleterious material, or other objects that could result in obstructions to various construction activities.

# 4.7.2 Potential Trenchless Methods

Several methods of trenchless construction are available to install the proposed sewer conveyance system. Based on conversations with the City, HWA understand that jack and bore methods will be applied utilizing horizontal microtunnelling procedures. If different trenchless

methods are utilized, HWA should be notified to verify the validity of recommendations provided in this report.

# 4.7.3 Trenchless Technology Selection

The proposed sewer conveyance system between the lift station and manholes are expected to be completed with trenchless construction methods. These methods will require the construction of jacking and receiving pits at the western and eastern most extents of the alignment. Additionally, jacking and receiving pits will be located at the location of the lift station and near 75<sup>th</sup> Street NE to accommodate the connection to the sewer main. We expect that these pits will extend up to a depth of 14 feet below the ground surface.

Bidding contractors should be allowed to select the means and methods for trenchless construction, including the diameter of the casing pipe. They are likely to require the casing pipe be backfilled after installation of the carrier pipes.

Trenchless construction by bore and jack methods should proceed up-slope so that water entering the bore will drain to the jacking pit for removal. We expect the Contractor's jacking pit to be a steel sheet pile enclosure about 20 feet wide and 30 feet long. A concrete floor would be cast in the bottom of the jacking pit to provide a firm base for the jacking equipment, as well as reduce dewatering requirements. The receiving pit would typically be somewhat smaller but constructed in a similar way.

# 4.7.4 Recommended Preconstruction Survey

In the vicinity of settlement-sensitive structures, such as the apartment complex and other existing structures, HWA recommends that a pre-construction survey be conducted to monitor the effects of construction. A pre-construction survey serves to record and document any pre-existing conditions of distress that may be apparent on nearby structures in order to determine if the proposed construction has had an immediate impact or has worsened these distress conditions. This pre-construction survey should be conducted prior to the excavation, dewatering and implementation of the jacking and receiving pits in order to monitor the settlement-sensitive structures in the area. This settlement monitoring should extend the entire duration of the proposed construction.

# 4.7.5 Temporary Shoring for Trenchless Technology

Recommended lateral earth pressures for design of temporary braced sheet pile walls at the jacking and receiving pits are presented on Figure 5. Shoring should be designed and constructed to support lateral loads exerted by the soil mass. In addition, any surcharge from construction equipment, construction materials, excavated soils, or vehicular traffic on adjacent roadways should be included in the shoring design.

For excavation and construction of the receiving and jacking pits we recommend temporary shoring consisting of internally braced sheet piles to provide a relatively watertight shoring enclosure. The shoring system should be designed by a qualified and licensed engineer experienced with shoring design for deep excavations within similar soil conditions. The embedment depth of the sheet piles below the base of the excavation should be designed by the contractor to adequately cutoff underground water seepage for stability of the subgrade soils at the base of the excavation. The design, installation, maintenance, and removal of temporary shoring should be the responsibility of the contractor.

The Contractor should be required to present a submittal of the design details for review by the Engineer prior to construction. HWA should be allowed to review shop drawings and calculations for proposed shoring systems to check for consistency with the recommendations included in this report. Once the sheet piles are installed, soils inside the shoring can be excavated to the desired depth.

While not encountered in our geotechnical borings, we anticipate the presence of woody debris in the vicinity of the jacking and receiving pits. Additionally, the underlying glacially consolidated soils may encounter obstructions such as cobbles and boulders during installation of the temporary shoring. Pre-drilling or digging to facilitate driving of sheet piles may be necessary. The contract should contain provisions for dealing with obstructions encountered during sheet pile driving. The excavation can be accomplished with conventional excavating equipment such as backhoes and excavators.

Precautions should be taken during removal of the shoring to minimize disturbance of the pipe, underlying bedding materials, and native subgrade soils.

## 4.7.6 Trenchless Design Considerations and Relocation Options

Based on provided plan sets, it is our understanding that the proposed manhole structure at the eastern end of the alignment (designated SMH-5) will be founded at a depth of approximately 7 feet bgs. Based on our subsurface excavations in this area, we anticipate alluvial and lake deposits extend to depths of 11 feet bgs. Therefore, the proposed invert elevation will extend through these very soft/loose soils.

In our experience, advancement of trenchless horizontal drilling methods through soft soils with minimal depth (less than 10 feet) often result in surficial blow out of material that can result in additional costs and damage to existing structures.

Based on site geometry, we anticipate two options can be utilized to address these issues: 1) deepening of the manhole base and invert elevations of associated pipes, or 2) relocation of the manhole outside of the extents of the lake deposits and into the alluvial material.

**Increasing the depth of the manhole:** Glacially-consolidated ICSD soils were encountered beneath the alluvial and lake deposits at a depth of 11 feet bgs. If the pipe invert elevation is extended to this depth, the likelihood of blowout during horizontal drilling will be greatly minimized. However, based on conversations with the City and design team, deepening of this structure may not be feasible due to slope restrictions of the system.

**Migration of the manhole to the south:** If deepening is considered infeasible, the proposed manhole structure and its associated connecting pipes can be moved approximately 50 feet to the south of the current proposed location. Due to the depositional nature of the lake deposits, the thickness of these deposits tapers with distance from the lake.

While the likelihood of blow out will not be reduced to the same degree as deepening the system into the ICSD, blow out will likely be reduced from the current proposed condition. The trenchless designer should review the anticipated soil and groundwater conditions presented in this report to evaluate the feasibility of the method.

#### 4.8 **DEWATERING**

Based on the provided plan sets, we expect that an approximately 14-foot-deep excavation will be required for installation of the permanent below-grade lift station structure. Plans indicate that the lift station excavation must extend to an approximate elevation of 453 feet. The depth of the proposed manhole structures varies from approximately 3.5 feet bgs to up to 13.5 feet bgs. Soils encountered in nearby borings consisted of fill underlain by lake deposits, alluvium, and ICSD. A geologic interpretation of the project site along the proposed sewer alignment adjacent to Beverly Lake is presented in Cross Section B-B', Figure 3B. In addition, the required excavation for the jacking and receiving pits for the trenchless alignment are anticipated to range from 3 feet to 13 feet bgs.

The proposed excavations for the proposed lift station, manhole structures, and jacking and receiving pits will extend below the groundwater table. We expect that groundwater is approximately at the elevation of the water level within Beverly Lake. Groundwater monitoring in the vicinity suggests that the water level is at an approximate depth of 5 feet bgs. Given the presence of relatively compressible near-surface soils in and across the site, conventional dewatering could result in consolidation settlement of the surrounding soils. Therefore, the contractor shall monitor dewatering activities, as these settlements could cause damage to surrounding structures such as the neighboring apartment complexes. The magnitude of these settlements will be dependent on the orientation and duration of the dewatering system.

To control groundwater during construction, we recommend that the contractor construct a concrete mud seal at the base of the proposed excavation. This would allow the proposed excavation to be completed in wet conditions and dewatered with sump pumps once the concrete mud seal is in place. The concrete mud seal would need to be designed to offset the buoyancy

forces associated with the water level inside the shoring system being depressed to the base of the mud seal. If all of the soil cannot be removed and a poor seal is developed, the frictional resistance at the mud seal/shoring system interface should be neglected in the design of the mud seal. Therefore, buoyancy forces acting on the concrete mud seal will need to be resisted only by the weight of the concrete seal itself. The actual thickness of the required mud seal should be designed by the contractor; for estimating purposes, it is expected to be approximately 5 feet thick.

As an alternative to constructing a concrete mud seal, dewatering wells could be installed inside the sheet pile enclosure and used to lower the ground water level to near the tips of the sheet piles. This scenario would require approximately 4 feet of over excavation and replacement, with compacted CSBC, to remove the loose/soft soils and provide a good working surface for construction. This would allow excavation in the dry. It should also be understood that dewatering will result in surface settlements around the enclosure. The magnitude of these settlements will be dependent on the orientation and duration of the dewatering system. We expect that dewatering-induced settlement could result in pavement distress and settlement of possible adjacent utilities and structures.

Given the shallow nature of SMH-1, conventional excavation and dewatering methods can be utilized, as discussed in Section 4.5.4.

Given the relatively impermeable nature of the ICSD deposits, we recommend that the temporary shoring embedment depths extend to a sufficient depth to minimize groundwater migration around the base of the shoring system. The design of the dewatering system should be the responsibility of the contractor.

## 4.9 RETAINING STRUCTURES

It is our understanding that the construction of the below-grade lift station will require the placement of up to 4 feet of fill. This fill will be supported by an ecology block wall with retained heights less than 4 feet which excludes the wall from needing to be engineered. However, if wall plans change such that retained heights are greater than 4 feet, HWA should be notified to provide suitable recommendations associated with the design and construction of a retaining structure.

# 4.10 GENERAL CONSTRUCTION CONSIDERATIONS

## 4.10.1 Structural Fill

The onsite fill soils are highly variable in composition and moisture sensitive. We do not recommend reusing the onsite soils as structural fill for this project. Structural fill should consist of imported clean, free-draining, granular soils free from organic matter or other deleterious

materials. Such materials should be less than 4 inches in maximum particle dimension, with less than 7 percent fines (portion passing the U.S. Standard No. 200 sieve), as specified for Gravel Borrow in Section 9-03.14(1) of the 2024 WSDOT *Standard Specifications*. The fine-grained portion of structural fill soils should be non-plastic.

# 4.10.2 Backfill and Compaction

Structural fill soils should be moisture conditioned and compacted to the requirements specified in Section 2-03.3(14), Method C, of the 2024 WSDOT *Standard Specifications*, except that maximum dry densities should be obtained using ASTM D 1557 (Modified Proctor). Achievement of proper density of a compacted fill depends on the size and type of compaction equipment, the number of passes, thickness of the layer being compacted, and soil moisture-density properties. In areas where limited space restricts the use of heavy equipment, smaller equipment can be used, but the soil must be placed in thin enough layers to achieve the required relative compaction.

All fills not called out in other sections of this report should be placed in lifts and each lift should be compacted to at least 95 percent of its maximum dry density, as determined using test method ASTM D 1557 (Modified Proctor). In general, the thickness of loose lifts should not exceed 8 inches for heavy weight compactors and 4 inches for hand operated equipment (such as jumping jacks and small plate compactors). The procedure to achieve proper density of compacted fill depends on the size and type of compaction equipment, the number of passes, thickness of the layer being compacted, and soil moisture-density properties.

# 4.10.3 Temporary Excavations

We expect that excavations can be accomplished with conventional excavating equipment such as trackhoes. Maintenance of safe working conditions, including temporary excavation stability, is the responsibility of the contractor. Temporary excavations should be performed in accordance with the current requirements of federal, state and/or local agencies. Exposure of personnel beneath temporary cut slopes, particularly within confined excavations, should be kept to a minimum. Construction should proceed as rapidly as feasible, to limit the time temporary excavations are open. During wet weather, runoff water should be prevented from entering excavations, and should be collected and disposed of outside the construction limits. Heavy construction equipment, building materials, and surcharge loads such as excavated soil should not be allowed within a horizontal distance equal to 1/2 the slope height from the top of any excavation.

In accordance with Part N of Washington Administrative Code (WAC) 296-155, latest revisions, all temporary cuts in excess of 4 feet in height must be either sloped or shored prior to entry by personnel. Fill, alluvial, and lake deposit soils generally classify as Type C Soils per WAC 296-155. Where temporary shoring is not used, excavations in Type C Soil should be sloped no

steeper than 1.5H:1V (horizontal:vertical). Flatter slopes will be required where ground water seepage exists, or very loose/soft material are exposed.

Very dense ICSD soils generally classify as Type B Soils per WAC 296-155. Where no temporary shoring is used, excavations in Type A Soil should be sloped no steeper than 1H:1V (horizontal:vertical). Flatter slopes will be required where ground water seepage exists.

The contractor should be responsible for control of ground and surface water and should employ sloping, slope protection, ditching, sumps, dewatering, and other measures as necessary to prevent sloughing of soils. The contractor has control over factors during construction that are critical to the stability of the excavation slopes. Such factors include surface water control, the amount of slope opened at one time, the length of time the slope is left open, and when the slope is left open in terms of weather conditions. Thus, maintaining safe and stable temporary excavations should be the responsibility of the contractor.

## 4.10.4 Wet Weather Earthwork

General recommendations relative to earthwork performed in wet weather or in wet conditions are presented below. These recommendations should be incorporated into the contract specifications.

- Earthwork should be performed in small areas to minimize exposure to wet weather. Excavation of unsuitable and/or softened soil should be followed promptly by placement and compaction of clean structural fill. The size and type of construction equipment used may need to be limited to prevent soil disturbance. Under some circumstances, it may be necessary to excavate soils with a backhoe to minimize subgrade disturbance caused by equipment traffic.
- Material used as excavation backfill in wet weather should consist of clean granular soil with less than 5 percent passing the U.S. No. 200 sieve, based on wet sieving the fraction passing the ¾-inch sieve. The fines should be non-plastic. It should be noted this is an additional restriction on the structural fill materials specified.
- The ground surface within the construction area should be graded to promote surface water run-off and to prevent ponding.
- Within the construction area, the ground surface should be sealed on completion of each shift by a smooth drum vibratory roller, or equivalent, and under no circumstances should soil be left uncompacted and exposed to moisture infiltration.
- Excavation and placement of backfill materials should be monitored by a geotechnical engineer experienced in wet weather earthwork to determine that the work is being

accomplished in accordance with the project specifications and the recommendations contained herein.

## 5. CONDITIONS AND LIMITATIONS

We have prepared this report for the City of Everett for use in design for this project. This report should be provided in its entirety to prospective contractors for bidding and estimating purposes; however, the conclusions and interpretations presented in this report should not be construed as our warranty of the subsurface conditions. Experience has shown that soil and groundwater conditions can vary significantly over small distances and with time. Inconsistent conditions can occur between explorations that may not be detected by a geotechnical study of this scope and nature. If, during future site operations, subsurface conditions are encountered which vary appreciably from those described herein, HWA should be notified for review of the recommendations of this report, and revision of such if necessary. If there is a substantial lapse of time between submission of this report and the start of construction, or if conditions change due to construction operations, it is recommended that this report be reviewed to determine the applicability of the conclusions and recommendations considering the changed conditions and time lapse.

We recommend HWA be retained to review the plans and specifications to verify that our recommendations have been interpreted and implemented as intended. Sufficient geotechnical monitoring, testing, and consultation should be provided during construction to confirm the conditions encountered are consistent with those indicated by the explorations, to provide recommendations for design changes should conditions revealed during construction differ from those anticipated, and to verify that the geotechnical aspects of construction comply with the contract plans and specifications.

Within the limitations of scope, schedule and budget, HWA attempted to execute these services in accordance with generally accepted professional principles and practices in the fields of geotechnical engineering and engineering geology in the area at the time the report was prepared. No warranty, express or implied, is made. The scope of our work did not include environmental assessments or evaluations regarding the presence or absence of wetlands or hazardous substances in the soil, surface water, or groundwater at this site.

HWA does not practice or consult in the field of safety engineering. We do not direct the contractor's operations and cannot be responsible for the safety of personnel other than our own on the site. As such, the safety of others is the responsibility of the contractor. However, the contractor should notify the owner if any of the recommended actions presented herein are considered unsafe.



December 27, 2023 HWA Project No. 2016-044-21

We appreciate the opportunity to provide geotechnical services on this project. Should you have any questions or comments, or if we may be of further service, please do not hesitate to call.

Sincerely,

HWA GEOSCIENCES INC.

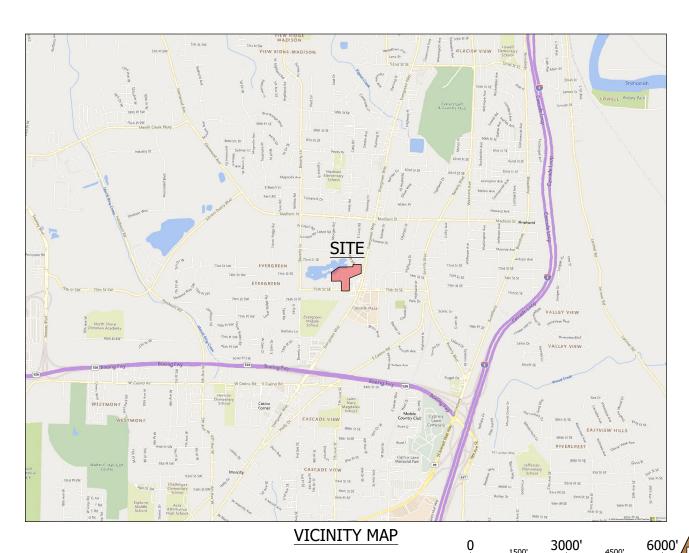
Sean Schlitt, P.E. Geotechnical Engineer Sandy R. Brodahl, P.E. Geotechnical Engineer, Principal

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SITE AND VICINITY MAP

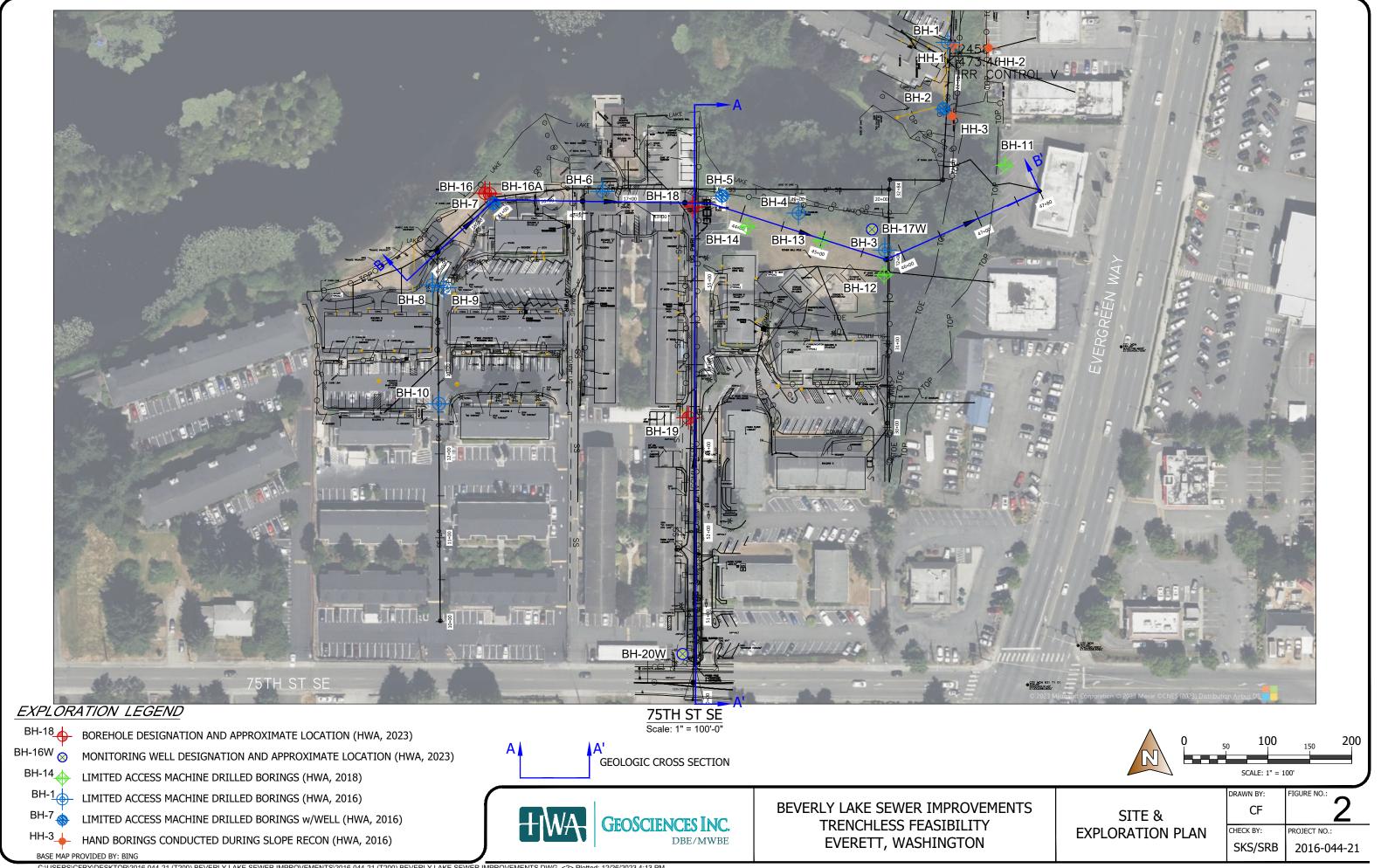
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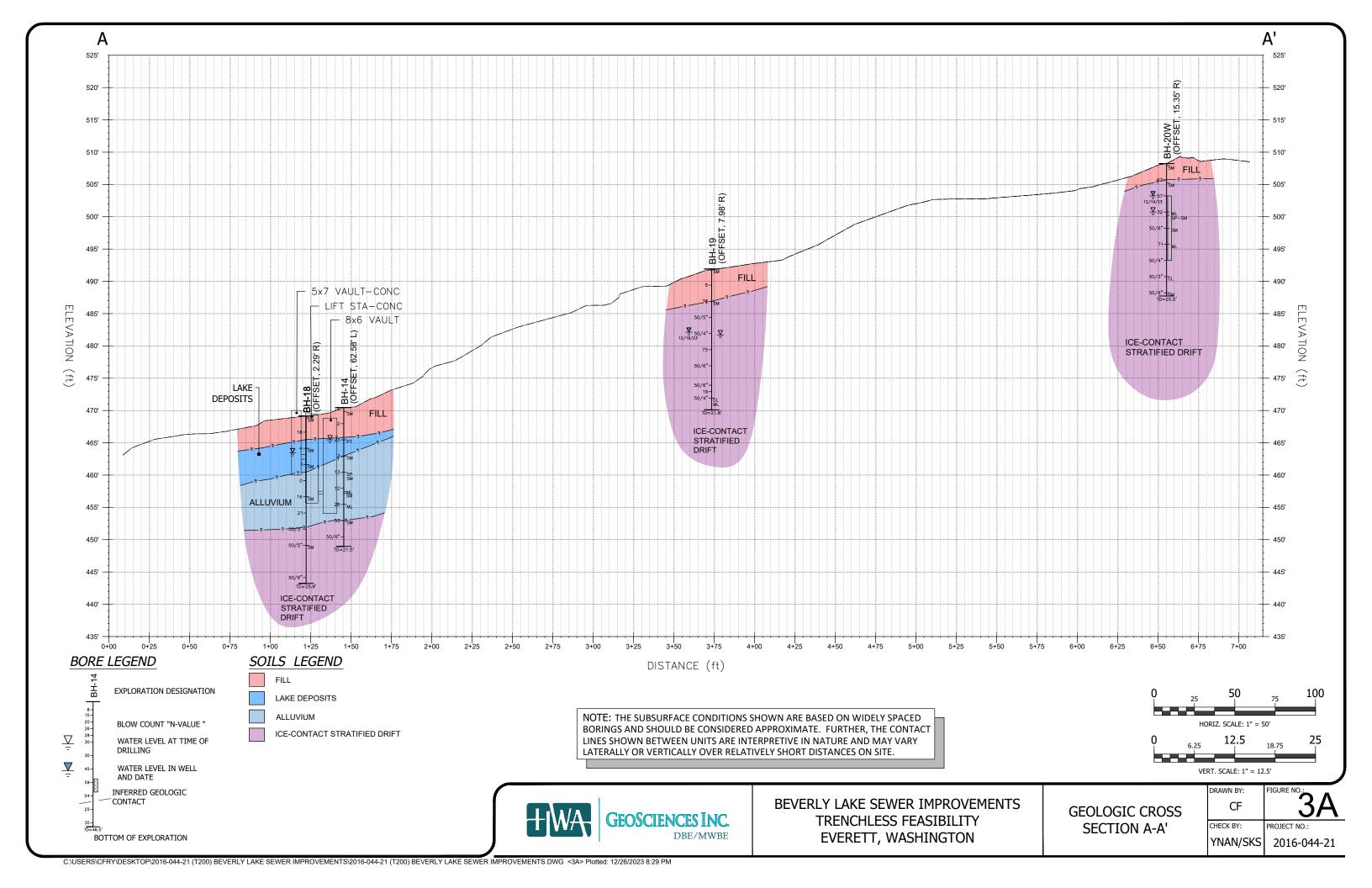
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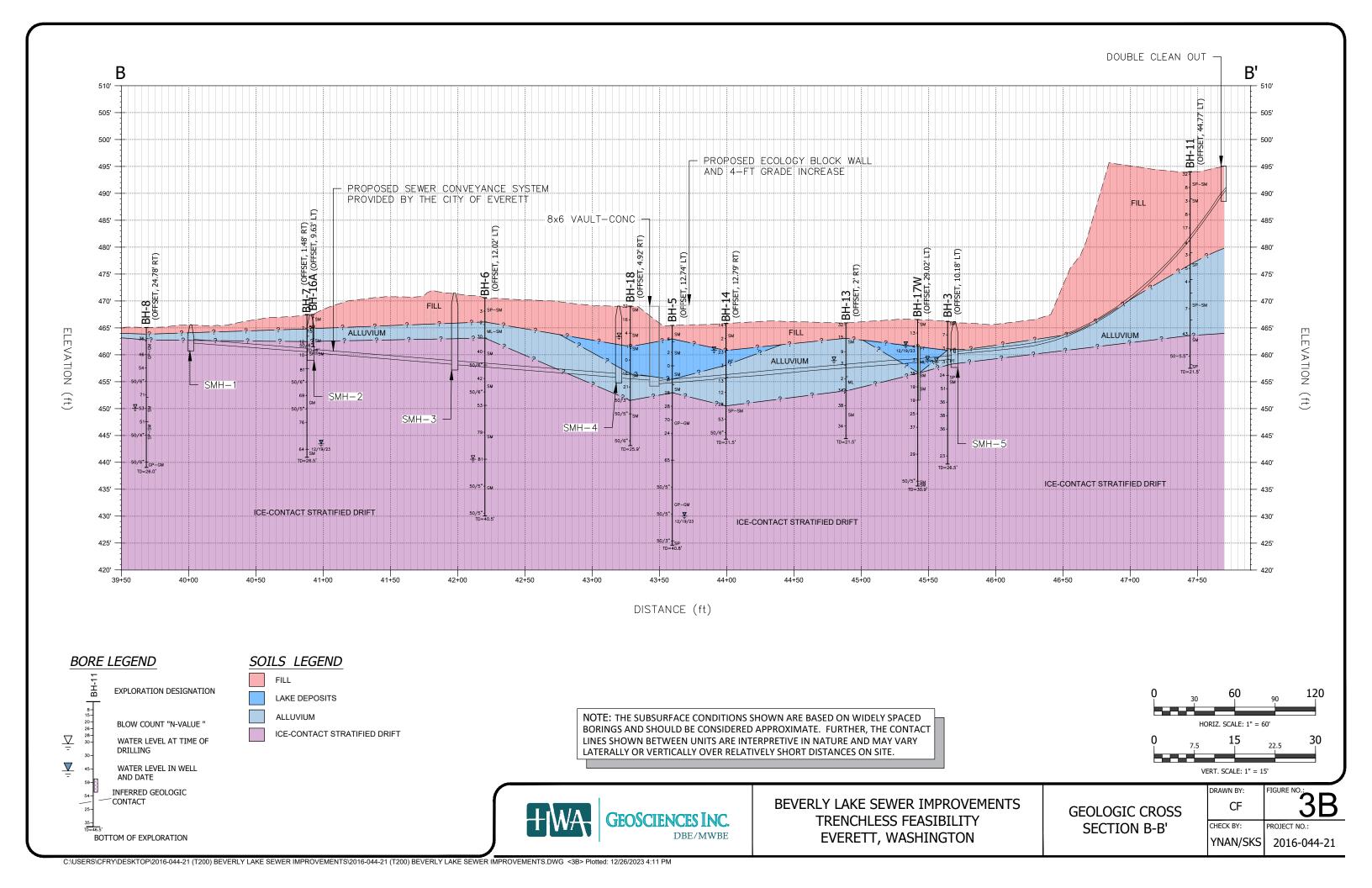
PROJECT #

2016-044-21

SCALE: 1" = 3000'







	Boring	Ground Elevation (ft)*	Min. Water Elevation (ft)	Max. Water Elevation (ft)	First Reading	Last Reading	Datum		Collector	
	BH-5	464.6	428.5	429.4	10/23/2023	12/19/2023	NAD83 (NF)		R. Andersor	า
	BH-7	467.7	443.3	444.0	10/23/2023	12/19/2023	NAD83 (NF)		R. Andersor	า
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445										
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440										
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435										
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425	10,	705	70,	Ż	· · · · · · · ·	3	23	Ž,	Ž,	Ž,
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						ATER ELEVATIO				FIGURE NO. 44
+	WA	GEOSCIE	NCES INC.		В	EVERLY LAKE SEWER TRENCHLESS F		TS		PROJECT NO. 2016-044-2

EVERETT, WASHINGTON

DBE/MWBE

	Boring	Ground Elevation (ft)*	Min. Water Elevation (ft)	Max. Water Elevation (ft)	First Reading	Last Reading	Datum	Collector
	BH-17W	473.4	459.6	469.3	10/23/2023	12/19/2023	NAD83 (NF)	R. Anderson
	BH-20W	511.7	503.2	506.7	10/23/2023	12/19/2023	NAD83 (NF)	R. Anderson
510								
500		-						
490								
480								
470								

**Date and Time** 



460

450

CROHNDWATER	FI EVATION DATA	REVERIVIAKE
GRUUNIJWAIER		DEVENITIANE

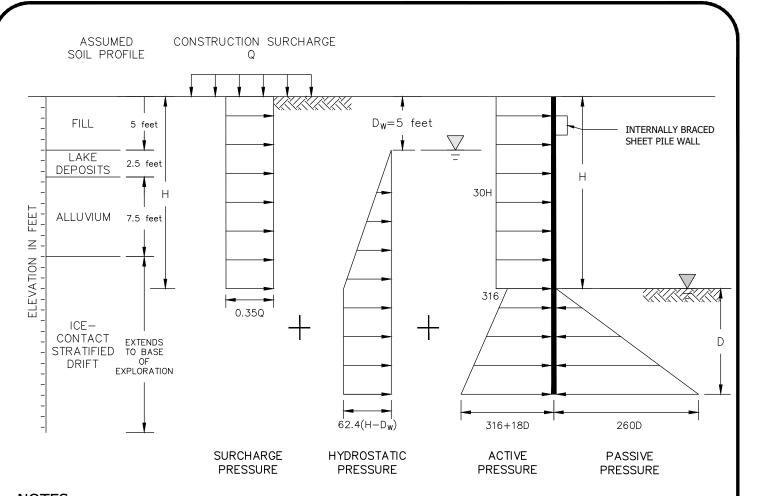
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BEVERLY LAKE SEWER IMPROVEMENTS TRENCHLESS FEASIBILITY EVERETT, WASHINGTON FIGURE NO.

**4B** 

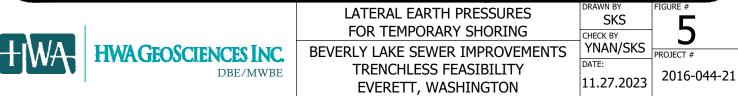
PROJECT NO.

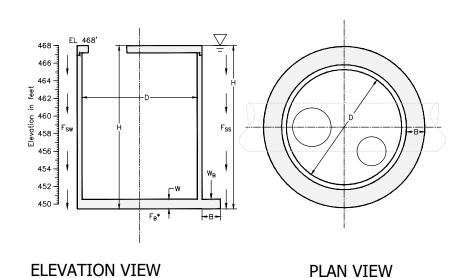
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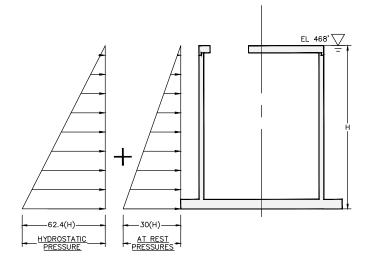
# **NOTES:**

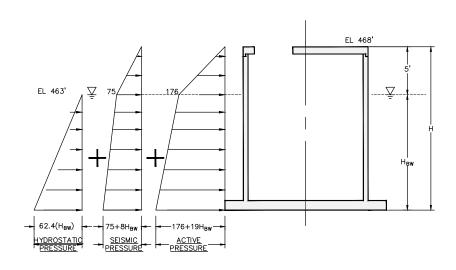
- 1. Ground water outside shoring assumed to be at depth = 5 feet.
- 2. Design pressures are in units of psf; distances units of feet.
- 3. Surcharge load should be adjusted based on the anticipated traffic surcharge. Additional surcharge loads including construction equipment should be included, where appropriate.
- 4. Embedment (D) should be determined by summation of moments below base of the excavation and to cut off underground seepage to provide a stable bottom.
- 5. If encountered, existing alluvial or lake deposit soils should be removed within the trench excavation down to firm, bearing soils (ICSD) and replaced with recompacted structural fill.
- 6. A factor of safety has not been applied to the recommended passive earth pressure values.
- 7. If sheet piles are to be used, predrilling may be required to advance the sheets into dense ICSD deposits.
- 8. If cofferdams are utilized, ignore active and passive pressures below the bottom of the excavation.





**BUOYANT FORCES** 





**ELEVATION VIEW** 

STATIC EARTH PRESSURES

# SEISMIC EARTH PRESSURES

## **SYMBOLS**

= Height of structure

= Inside diameter of structure

= Width of extended base in feet

= Structure weight in kips

= Effective soil weight above extruded base in kips  $= 0.228[HB^2+HBD]$ 

= Buoyant force in kips = Unit weight of water x volume of structure below design groundwater level

= Perimeter around extended base in feet

= perimeter around base of wall in feet

 $F_{SS}$  = Shearing resistance of soil/soil =  $0.011H^2$  (in kips per foot of wall)

 $F_{SW}$  = Shearing resistance of soil/wall contact =  $0.0066H^2$  (in kips per foot of soil)

\* = Buoyant force could result in high bending moments in slab

# <u>ASSUMPTIONS</u>

= 135 pcfSoil units Weight Buoyant Soil Ŭnit Weight  $= 72.6 \, pcf$ Soil Friction Angle = 36° Wall/Soil Friction Angle = 24° At-rest Pressure Coefficient = 0.41

NOTE

Factor of Safety  $= W + F_{SW}L$ 

(Without extended base As indicated on left side, use minimum factor of safety = 2.0)

Factor of Safety  $= W+W_B+F_{SS}L_B$ 

(With extended base around perimeter of structure, as indicated on the right side of this figure, use minimum factor of safety = 1.5)

#### Static Earth Pressures

- 1. All pressures shown are in units of pounds per square foot (psf). Excavation depths H are in units of feet.
- 2. For the static condition and buoyancy calculations the groundwater level should be assumed to be at the ground surface.

## Seismic Earth Pressures

- 1. All pressures shown are in units of pounds per square foot (psf). Excavation depths H are in units of feet.
- 2. For seismic design the groundwater level should be assumed to be at elevation 463 feet, approximately 5 feet bgs.

Refer to text for additional clarification regarding calculating uplift resistance.



**BEVERLY LAKE SEWER IMPROVEMENTS** TRENCHLESS FEASIBILITY **EVERETT, WASHINGTON** 

PERMANENT EARTH PRESSURES AND BUOYANT FORCE PARAMETERS FOR LIFT STATION AND MANHOLES

SKS 6 CHECK BY YNAN/SKS PROJECT # DATE: 2016-044-21 11.27.23

DRAWINGS NOT TO SCALE

# APPENDIX A FIELD EXPLORATION

#### RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE

	COHESIONLESS SO	OILS		COHESIVE SOILS	S
Density	N (blows/ft)	Approximate Relative Density(%)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	0 - 15	Very Soft	0 to 2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	35 - 65	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	over 30	>4000

#### USCS SOIL CLASSIFICATION SYSTEM

	MAJOR DIVISIONS		GROUP DESCRIPTIONS		
Coarse	Gravel and Gravelly Soils	Clean Gravel		GW	Well-graded GRAVEL
Grained Soils	,	(little or no fines)	600	GP	Poorly-graded GRAVEL
	More than 50% of Coarse	Gravel with Fines (appreciable	000	GM	Silty GRAVEL
	Fraction Retained on No. 4 Sieve	amount of fines)		GC	Clayey GRAVEL
	Sand and	Clean Sand	****	sw	Well-graded SAND
More than 50% Retained	Sandy Soils	(little or no fines)		SP	Poorly-graded SAND
on No.	50% or More of Coarse Fraction Passing No. 4 Sieve	Sand with Fines (appreciable amount of fines)		SM	Silty SAND
Size				sc	Clayey SAND
Fine	Silt			ML	SILT
Grained Soils	and Clay	Liquid Limit Less than 50%		CL	Lean CLAY
Colla	Jiay			OL	Organic SILT/Organic CLAY
50% or More Passing	Silt			МН	Elastic SILT
	and Clay	Liquid Limit 50% or More		СН	Fat CLAY
No. 200 Sieve Size	Jiay			ОН	Organic SILT/Organic CLAY
	Highly Organic Soils	<u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	PT	PEAT	

#### TEST SYMBOLS

	TEST STWIDGES
%F	Percent Fines
AL	Atterberg Limits: PL = Plastic Limit, LL = Liquid Limit
CBR	California Bearing Ratio
CN	Consolidation
DD	Dry Density (pcf)
DS	Direct Shear
GS	Grain Size Distribution
K	Permeability
MD	Moisture/Density Relationship (Proctor)
MR	Resilient Modulus
	AL CBR CN DD DS GS K

Organic Content pH of Soils pН PID Photoionization Device Reading

PP Pocket Penetrometer (Approx. Comp. Strength, tsf) Res. Resistivity

SG Specific Gravity

OC

CD Consolidated Drained Triaxial CU Consolidated Undrained Triaxial UU Unconsolidated Undrained Triaxial TV Torvane (Approx. Shear Strength, tsf) UC **Unconfined Compression** 

## SAMPLE TYPE SYMBOLS

2.0" OD Split Spoon (SPT) (140 lb. hammer with 30 in. drop) Shelby Tube

Non-standard Penetration Test (3.0" OD Split Spoon with Brass Rings)

Large Bag (Bulk) Sample

Small Bag Sample

Core Run 3-1/4" OD Split Spoon

## **GROUNDWATER SYMBOLS**

Groundwater Level (measured at time of drilling)

Groundwater Level (measured in well or open hole after water level stabilized)

#### COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5 mm) to No. 200 (0.074 mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

# COMPONENT PROPORTIONS

PROPORTION RANGE	DESCRIPTIVE TERMS			
< 5%	Clean			
5 - 12%	Slightly (Clayey, Silty, Sandy)			
12 - 30%	Clayey, Silty, Sandy, Gravelly			
30 - 50%	Very (Clayey, Silty, Sandy, Gravelly)			
Components are arranged in order of increasing quantities.				

NOTES: Soil classifications presented on exploration logs are based on visual and laboratory observation. Soil descriptions are presented in the following general order:

Density/consistency, color, modifier (if any) GROUP NAME, additions to group name (if any), moisture content. Proportion, gradation, and angularity of constituents, additional comments. (GEOLOGIC INTERPRETATION)

Please refer to the discussion in the report text as well as the exploration logs for a more complete description of subsurface conditions.

## MOISTURE CONTENT

DRY	Absence of moisture, dusty,
	dry to the touch.
MOIST	Damp but no visible water.
WET	Visible free water, usually
	soil is below water table.



Beverly Lake Sewer Improvements Trenchless Feasibility Everett, Washington

LEGEND OF TERMS AND SYMBOLS USED ON EXPLORATION LOGS

2016-044-21 PROJECT NO.: A-1

DRILLING COMPANY: Geologic Drill Partners DATE STARTED: 10/26/2023 DRILLING METHOD: HSA w/ 3.25" ID, Mini Bobcat Tracked Rig DATE COMPLETED: 10/26/2023 SAMPLING METHOD: SPT w/ Rope and Cathead LOGGED BY: A. Heinze Fry LOCATION: See Figure 2 SURFACE ELEVATION: 470.6 **±** feet PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test GROUNDWATER OTHER TESTS (140 lb. weight, 30" drop) ELEVATION (feet) ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 10 30 Dark brown, gravelly, very silty SAND, moist. SM (TOPSOIL) Medium dense, yellow-brown, slightly gravelly, very silty, fine SAND, moist. Trace charcoal. (FILL) 8-7-8 Very dense, olive gray, slightly gravelly, very silty, fine SAND, 24-50/6" 465 (ICE CONTACT STRATIFIED DRIFT) Drilling becomes gravelly and harder at about 4.5 feet. Slow griding, with gravelly action in first hole. Refusal at 6 feet. Offset 5 feet SE. Auger refusal at 6 feet with slow Borehole terminated at about 6 feet below ground surface 10 (bgs) due to refusal. 460 Groundwater was not encountered during the exploration. Borehole abandoned with 3/8" bentonite chips. 15 455 20 450 25 445 30 60 100 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

BORING: BH-16

PAGE: 1 of 1

PROJECT NO.: 2016-044-21 FIGURE: A-2

DRILLING COMPANY: Geologic Drill Partners SURFACE ELEVATION: 473.40 ± feet DATE STARTED: 10/26/2023 DRILLING METHOD: HSA w/ 3.25" ID, Mini Bobcat Tracked Rig CASING ELEVATION DATE COMPLETED: 10/26/2023 SAMPLING METHOD: SPT w/ Rope and Cathead LOGGED BY: A. Heinze Fry LOCATION: See Figure 2 PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test OTHER TESTS PIEZOMETER SCHEMATIC (140 lb. weight, 30" drop) ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 10 30 40 Dark brown, very silty SAND, moist. SM (TOPSOIL) Medium dense, yellowish olive brown, gravelly, silty, fine SAND, moist. Fine, subrounded gravel. (FILL) 6-9-4 Little gravelly drilling. OC Medium stiff, dark brown, PEAT with wood chips and rootlets, 3-2-2 moist. Increasing moisure with depth. 7/ / (LAKE DEPOSITS) 11, MLVery loose, dark olive brown, very sandy SILT, wet. Fine to 2-1-2 medium sand component. Scattered organics. 10 10 SM Dense, olive brown, silty, gravelly, fine to medium SAND, 9-17-21 moist. Trace rootlets. Broken gravel in spoon. Blow counts likely overstated. Low recovery. Medium dense, olive gray, slightly gravelly, silty, fine to medium SAND. wet (ICE CONTACT STRATIFIED DRIFT) 15 15 12-10-9 Trace gravel. Sample moist, but wet on outside. Drilling becomes harder. 10-8-17 Becomes slightly gravelly. Sample moist, but wet on outside. 2" layer slightly silty, medium sand, wet. 20 -20 S-8 21-16-21 Less silty and medium sand dominant in the top 4 inches. Moist. Drilling becomes more gravelly. 25 25 Becomes gravelly. Few coarse, subgrounded gravel. 15-20-9 Increased moisture in the bottom 4 inches. Gravelly drilling at 25 feet. 30 20 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

BORING: BH-17W

PAGE: 1 of 2

PROJECT NO.: 2016-044-21

FIGURE:

A-3

DRILLING COMPANY: Geologic Drill Partners SURFACE ELEVATION: 473.40 ± feet DATE STARTED: 10/26/2023 DRILLING METHOD: HSA w/ 3.25" ID, Mini Bobcat Tracked Rig CASING ELEVATION DATE COMPLETED: 10/26/2023 SAMPLING METHOD: SPT w/ Rope and Cathead LOGGED BY: A. Heinze Fry LOCATION: See Figure 2 PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test SAMPLE TYPE OTHER TESTS PIEZOMETER SCHEMATIC (140 lb. weight, 30" drop) ▲ Blows per foot DEPTH (feet) DESCRIPTION 10 20 30 40 50 30 S-10a 30-50/5" S-10b SM Very dense, dark gray, slightly silty to silty, medium SAND, wet. Trace fine gravel. Red-brown stain at lower contact. Very dense, olive brown, gravelly, silty, fine to coarse SAND, moist. Borehole terminated at about 30.9 feet below ground surface (bgs). Groundwater was encoutnered at about 7.5 feet bgs during 35 35 drilling. 2 inch PVC standpipe piezometer installed in 15 foot well. DOE unique well tag #BNZ 135. 40 40 45 45 50 50 55 55 60 60 0 20 60 100 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

BORING: BH-17W

PAGE: 2 of 2

DRILLING COMPANY: Holocene Drilling DATE STARTED: 10/23/2023 DRILLING METHOD: HSA w/ 4.25" ID, Diedrich D50 DATE COMPLETED: 10/23/2023 SAMPLING METHOD: SPT w/ Autohammer LOGGED BY: A. Heinze Fry SURFACE ELEVATION: 465.6 ± feet LOCATION: See Figure 2 PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test GROUNDWATER OTHER TESTS (140 lb. weight, 30" drop) ELEVATION (feet) ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 30 3.5 inches Hot Mix Asphalt (HMA). SM 465 (ASPHALT) Medium dense, brown, gravelly, silty, fine to medium SAND, (FILL) 5-7-9 Low recovery. SM GS Loose, brown, slightly gravelly, very silty, fine SAND, moist. 2-2-2  $\nabla$ 460 Scattered rootlets and charcoal. Fine gravel component. Wet on outside of sampler. SM 0-0-1 OC Very loose, olive brown, very silty, fine to medium SAND with organics, moist. Trace wood chips at top. Trace fine, subrounded to subangular gravel. (LAKE DEPOSITS) 10 Becomes more gray towards bottom of sample. Wet on 0-0-0 455 outside of sample, moist inside. SM Medium dense, gray, slightly gravelly, very silty, fine to GS medium SAND, moist with few wet pockets. Fine, subrounded to subangular gravel. Few orange stained pockets. 15 Increased moisture content. 3-inch red-brown weathered 5-8-13 450 gravel and sand at about 16 feet. Gravelly and harder drilling begins at about 16.5 feet. No recovery. Drive 3" sampler - No recovery. Likely cobbles. 50/3" (ICE CONTACT STRATIFIED DRIFT) 20 38-50/5" Very dense, olive gray, slightly gravelly, slightly silty to silty, 445 fine to coarse SAND, wet. More gravelly and cobbly drilling. 25 GS 50/6" Driller reports 6-8" of heave at top of sampler. Begin adding 440 20-50/5" Trace fine gravel. Low recovery. Drive 3" sampler (20-50/5") Borehole terminated at about 25.9 feet below ground surface Groundwater was encountered at about 5.7 feet bgs during the exploration. 30 Borehole abandoned with 3/8" bentonite chips 60 100 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

BORING: BH-18

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DRILLING COMPANY: Holocene Drilling DATE STARTED: 10/23/2023 DRILLING METHOD: HSA w/ 4.25" ID, Diedrich D50 DATE COMPLETED: 10/23/2023 SAMPLING METHOD: SPT w/ Autohammer LOGGED BY: A. Heinze Fry SURFACE ELEVATION: 496.2 ± feet LOCATION: See Figure 2 PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test GROUNDWATER OTHER TESTS (140 lb. weight, 30" drop) ELEVATION ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 30 10 1.5 inch Hot Mix Asphalt (HMA). SM (ASPHALT) 495 Loose, olive brown, silty, fine to medium SAND, moist. Trace gravel. 6"x8" cobble near surface. (FILL) 2-1-4 5 S-2 13-27-46 Very dense, olive brown, gravelly, silty, fine to medium SAND, moist. Fine to coarse, subrounded to subangular and crushed 490 gravel. Two 1 to 2 inch slightly silty sand layers. (ICE CONTACT STRATIFIED DRIFT) S-3 21-50/5" Becomes slightly gravelly. Coarse gravel and slightly silty layers were not observed. 10 S-4 22-47-50/4" GS Becomes wet in medium sand, lower silt content layers.  $\nabla$ Coarse gravel observed. Little red-brown staining at about 485 10.2 feet. Sand generally coarsens. Layers of increased and decreased 22-38-37 silt content. Layers with more silt content contain silt laminations. Wet where less silt. 15 S-6 11-28-50/6' Driller begins adding water. General increase in silt content. Few fine clay laminations. 480 S-7 22-36-50/6' Increased proportion of silt and clay content and laminations. 5-5-14 Drillers enounter about 12 inches of heave, sample high. 9 inches observed in sampler. Blow counts not representative. CI Very stiff, olive brown, sandy SILTY CLAY, moist to very silty, ML S-9 14-45-50/4" %F fine SAND, wet in laminations. Re-drove second SPT due to 475 presence of heave above. Hard, olive gray, slightly sandy, laminated sandy, SILTY CLAY, moist. 1-inch layer slightly silty sand at about 21.3 feet. Borehole terminated at about 21.8 feet below ground surface 25 Groundwater was encountered at about 9.8 feet bgs during the exploration. 470 Borehole abandoned with 3/8" bentonite chips. 30 60 100 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

BORING: BH-19

PAGE: 1 of 1

DRILLING COMPANY: Holocene Drilling SURFACE ELEVATION: 511.70 ± feet DATE STARTED: 10/23/2023 DRILLING METHOD: HSA w/ 4.25" ID, Diedrich D50 CASING ELEVATION DATE COMPLETED: 10/23/2023 SAMPLING METHOD: SPT w/ Autohammer LOGGED BY: A. Heinze Fry LOCATION: See Figure 2 PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test SAMPLE TYPE OTHER TESTS PIEZOMETER SCHEMATIC (140 lb. weight, 30" drop) ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 10 20 30 40 3.5 inches Hot Mix Asphalt (HMA) SM (ASPHALT) Medium dense, yellow-brown with little orange staining, silty, fine SAND, moist, Trace rootlets S-1a S-1b 6-21-32 Very dense, light olive to yellow brown, silty, gravelly, fine to medium SAND, moist. Fine to coarse, subrounded to subangular gravel. 5 (ICE CONTACT STRATIFIED DRIFT) 4-26-31 S-2 Decreased silt content. 3 inches of gravel fractured into disks. S-3a 12-16-16 S-3b ML Hard, olive gray, sandy SILT, wet to moist. Outside of sample SP SM Dense, olive brown, slightly silty, gravelly, fine to medium, poorly graded SAND, wet. Fine, subrounded to subangular 10 10 SM gravel. 16-50/6' GS Very dense, olive brown, slightly gravelly, very silty, fine to medium SAND, wet. 6-inch layer hard, olive gray, fine sandy SILT, dry at about 10.5 feet (S-4b). Moderate plasticity. S-5a 27-40-31 ||\|S-5b Hard, light olive to yellow-gray, sandy SILT, moist, with few clay laminations. Slightly plastic. 4" and 2" layers at 12.8 and 13.7 feet, of very dense, olive 15 15 brown, silty, gravelly, fine to medium SAND, wet. 31-50/4" Becomes olive gray, very sandy. Slight increase in plasticity. Includes laminations of silt and sand, no major layers. Hard, gray to dark gray with white laminations, sandy, lean 6-48-50/3" ΑL CLAY, moist. Trace fine gravel. Transition from olive brown at the top. Becomes gravelly in the tip. 20 20 S-8 50/6 Very dense, light olive brown, silty, very sandy, fine GRAVEL, wet. Some fractured coarse gravel. Borehole terminated at about 20.5 feet below ground surface (bgs). Groundwater seepage was encoutnered beginning at about 7.5 feet bgs during drilling. 2 inch PVC standpipe piezometer installed in 15 foot well. 25 25 DOE unique well tag #BPQ 642. 30 30 0 20 60 100 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

BORING: BH-20W

PAGE: 1 of 1

# APPENDIX B LABORATORY PROGRAM

## APPENDIX B

## LABORATORY PROGRAM

Representative soil samples obtained from our explorations were placed in plastic bags to prevent loss of moisture and transported to our Bothell, Washington, laboratory for further examination and testing. Laboratory tests were conducted on selected soil samples to characterize relevant engineering and index properties of the site soils. A Summary of Material Properties is provided on Figures B-1 and B-2. Laboratory testing was conducted as described below:

MOISTURE CONTENT, ASH, AND ORGANIC MATTER: Selected samples were tested in general accordance with method ASTM D 2974, using moisture content method 'A' (oven dried at 105° C) and ash content method 'C' (burned at 440° C). The test results are presented on the attached Summary of Material Properties, Figures B-1 and B-2. The results are percent by weight of dry soil.

PARTICLE SIZE ANALYSIS OF SOILS: Selected samples were tested to determine the particle (grain) size distribution of material in general accordance with ASTM D 422. The results are summarized in the attached Particle Size Analysis of Soils report, Figures B-3 through B-5, which also provide information regarding the classification of the sample, and the moisture content at the time of testing.

LIQUID LIMIT, PLASTIC LIMIT, AND PLASTICITY INDEX OF SOILS (ATTERBERG LIMITS): Selected samples were tested using method ASTM D 4318, multi-point method. The results are reported on the attached Liquid Limit, Plastic Limit, and Plasticity Index report, Figure B-6.

7-		E			ΥΠΥ		ATTERBE LIMITS (					NO	
EXPLORATION DESIGNATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRAVITY	LL	PL	PI	% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION
BH-16,S-1	2.5	4.0	15.3									SM	Brown, silty SAND with gravel
BH-16,S-2	5.0	6.0	5.6						5.8	64.2	30.0	SM	Light gray, silty SAND
BH-17W,S-1	2.5	4.0	8.1									SM	Yellowish-brown, silty SAND with gravel
BH-17W,S-2	5.0	6.5	316.3	56.4								PT	Very dark brown, PEAT
BH-17W,S-3	7.5	9.0	28.0									ML	Dark brown, sandy SILT
BH-17W,S-4	10.0	11.5	13.8									SM	Very dark brown, silty SAND with gravel
BH-17W,S-5	12.5	14.0	11.6									SM	Gray, silty SAND
BH-17W,S-6	15.0	16.5	15.1									SM	Gray, silty SAND
BH-17W,S-7	17.5	19.0	11.1									SM	Gray, silty SAND
BH-17W,S-8	20.0	21.5	10.8									SM	Gray, silty SAND
BH-17W,S-9	25.0	26.5	10.5						18.1	51.6	30.3	SM	Gray, silty SAND with gravel
BH-17W,S-10a	30.0	30.5	14.5									SM	Olive, silty SAND
BH-17W,S-10b	30.5	30.9	7.3									SM	Dark brown, silty SAND with gravel
BH-18,S-2	5.0	6.5	21.1						10.4	58.7	30.9	SM	Very dark brown, silty SAND
BH-18,S-3	7.5	9.0	36.0	4.6								SM	Brown, silty SAND with organics
BH-18,S-4	10.0	11.5	23.0									SM	Dark grayish-brown, silty SAND
BH-18,S-5	12.5	14.0	13.1						5.7	59.1	35.3	SM	Gray, silty SAND
BH-18,S-6	15.0	16.5	13.4									SM	Dark gray, silty SAND
BH-18,S-8	20.0	20.9	16.3									SM	Dark gray, silty SAND
BH-18,S-9	25.0	25.5	14.2						2.0	85.8	12.2	SM	Olive-gray, silty SAND

Notes:

- 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
- 2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.



Beverly Lake Sewer Improvements Trenchless Feasibility Everett, Washington

## SUMMARY OF MATERIAL PROPERTIES

PAGE: 1 of 2

7-		Ŧ						GRAVITY		ATTERBE LIMITS (					N O	
EXPLORATION	TOP DEPTH (feet)	BOTTOM DEPTH (feet)	MOISTURE CONTENT (%)	ORGANIC CONTENT (%)	SPECIFIC GRA	LL	PL	PI	% GRAVEL	% SAND	% FINES	ASTM SOIL CLASSIFICATION	SAMPLE DESCRIPTION			
BH-19,S-1	2.5	4.0	9.7									SM	Olive-brown, silty SAND			
BH-19,S-2	5.0	6.5	10.2									SM	Grayish-brown, silty SAND with gravel			
BH-19,S-3	7.5	8.3	9.4									SM	Gray, silty SAND			
BH-19,S-4	10.0	11.3	11.8						10.8	63.8	25.4	SM	Gray, silty SAND			
BH-19,S-5	12.5	14.0	13.6									SM	Gray, silty SAND			
BH-19,S-6	15.0	16.5	14.6									SM	Gray, silty SAND			
BH-19,S-7	17.5	19.0	13.9									SM	Gray, silty SAND			
BH-19,S-8	19.0	20.5	19.2									CL-ML	Gray, SILTY CLAY with sand			
BH-19,S-9	20.5	21.8	22.6			20	15	5			78.9	CL-ML	Gray, SILTY CLAY with sand			
BH-20W,S-1a	2.5	3.0	10.3									SM	Light olive-brown, silty SAND			
BH-20W,S-1b	3.0	4.0	8.1									SM	Grayish-brown, silty SAND with gravel			
BH-20W,S-2	5.0	6.5	5.0									SM	Grayish-brown, silty SAND with gravel			
BH-20W,S-3a	7.5	8.0	16.4									ML	Dark grayish-brown, SILT with sand			
BH-20W,S-3b	8.0	9.0	11.3									SP-SM	Very dark grayish-brown, poorly graded SAND with silt and gravel			
BH-20W,S-4a	10.0	11.0	14.0						6.0	51.6	42.4	SM	Dark grayish-brown, silty SAND			
BH-20W,S-4b	10.7	10.7	14.5									ML	Gray, SILT with sand			
BH-20W,S-5a	12.5	14.0	21.1									ML	Gray, SILT with sand			
BH-20W,S-6	15.0	16.3	16.8									ML	Gray, SILT with sand			
BH-20W,S-7	17.5	18.8	22.1			35	24	11			81.7	CL	Gray, lean CLAY with sand			
BH-20W,S-8	20.0	20.5	7.9									GM	Gray, silty GRAVEL with sand			

Notes:

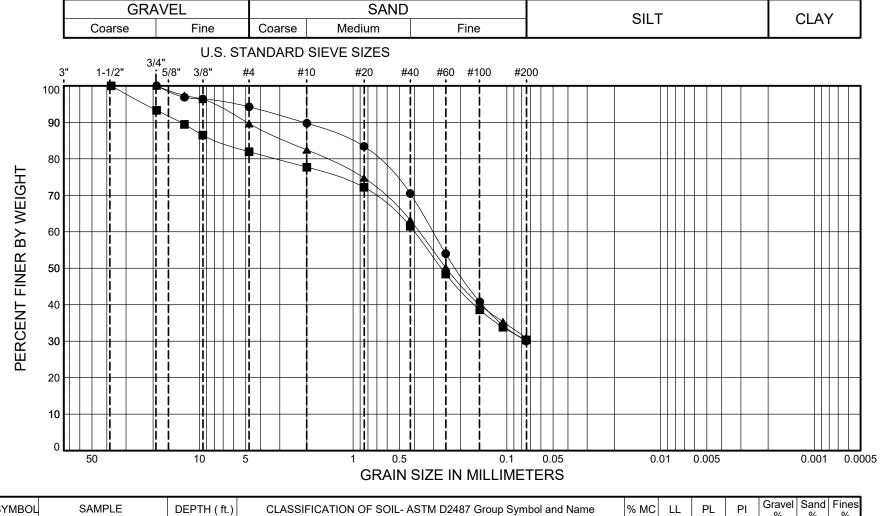
- 1. This table summarizes information presented elsewhere in the report and should be used in conjunction with the report test, other graphs and tables, and the exploration logs.
- 2. The soil classifications in this table are based on ASTM D2487 and D2488 as applicable.



Beverly Lake Sewer Improvements Trenchless Feasibility Everett, Washington

## SUMMARY OF MATERIAL PROPERTIES

PAGE: 2 of 2

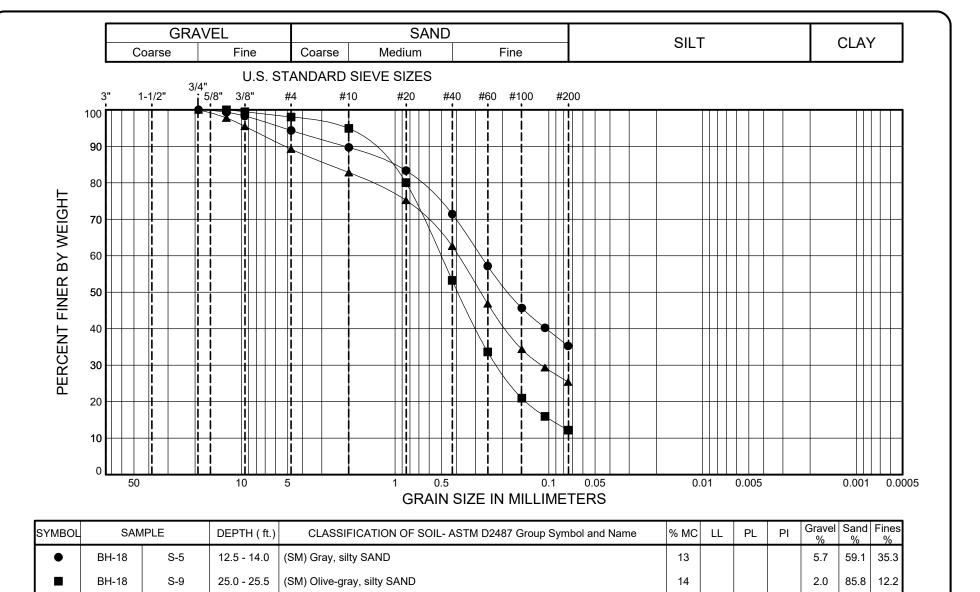


SYMBOL	SAM	SAMPLE DE		CLASSIFICATION OF SOIL- ASTM D2487 Group Symbol and Name	% MC	LL	PL	PI	Gravel %	Sand %	Fines %
•	BH-16	S-2	5.0 - 6.0	(SM) Light gray, silty SAND	6				5.8	64.2	30.0
	BH-17W	S-9	25.0 - 26.5	(SM) Gray, silty SAND with gravel	10				18.1	51.6	30.3
<b>A</b>	BH-18	S-2	5.0 - 6.5	(SM) Very dark brown, silty SAND	21				10.4	58.7	30.9



Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

PARTICLE-SIZE ANALYSIS OF SOILS METHOD ASTM D6913





BH-19

S-4

10.0 - 11.3

(SM) Gray, silty SAND

Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

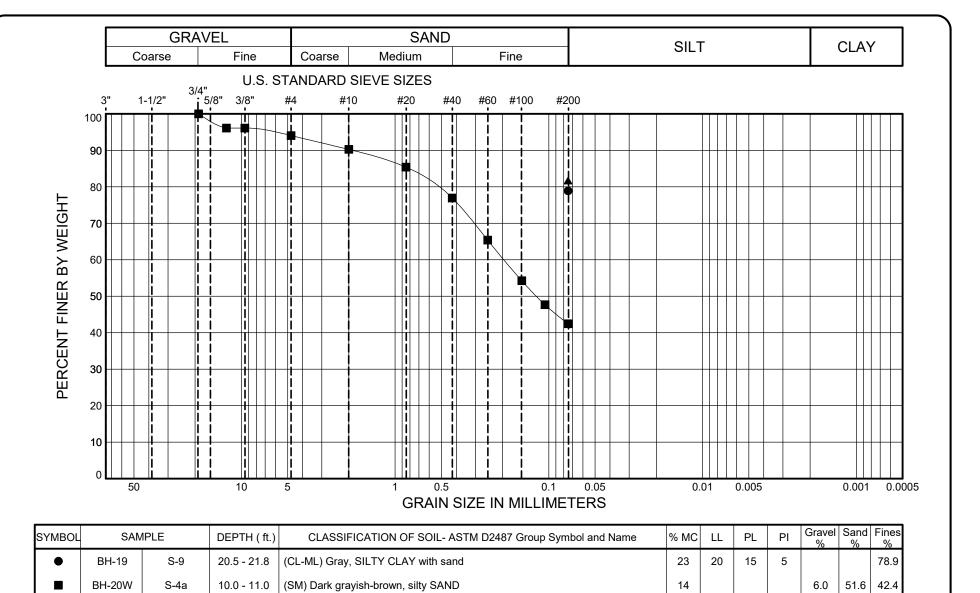
PARTICLE-SIZE ANALYSIS OF SOILS METHOD ASTM D6913

10.8

63.8

25.4

12





BH-20W

S-7

17.5 - 18.8

Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

(CL) Gray, lean CLAY with sand

PARTICLE-SIZE ANALYSIS OF SOILS METHOD ASTM D6913

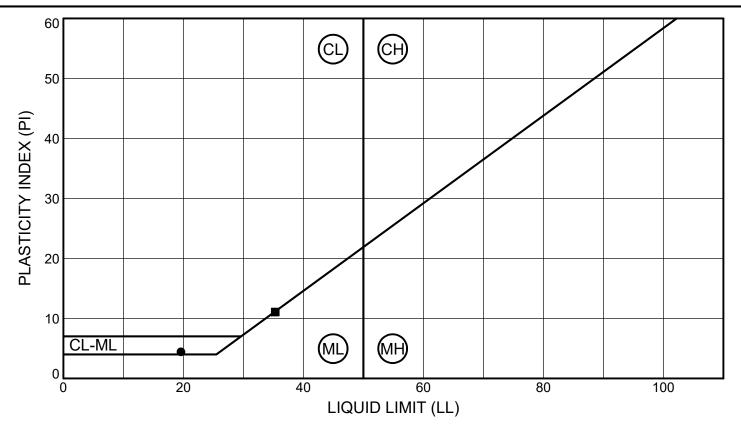
81.7

22

35

24

11



SYMBOL	SAMPLE		DEPTH (ft)	% MC	LL	PL	PI	% Fines	
•	BH-19	S-9	20.5 - 21.8	(CL-ML) Gray, SILTY CLAY with sand	23	20	15	5	78.9
-	BH-20W	S-7	17.5 - 18.8	(CL) Gray, lean CLAY with sand	22	35	24	11	81.7



Beverly Lake Sewer Improvements
Trenchless Feasibility
Everett, Washington

LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX OF SOILS METHOD ASTM D4318

# APPENDIX C EXPLORATIONS BY OTHERS

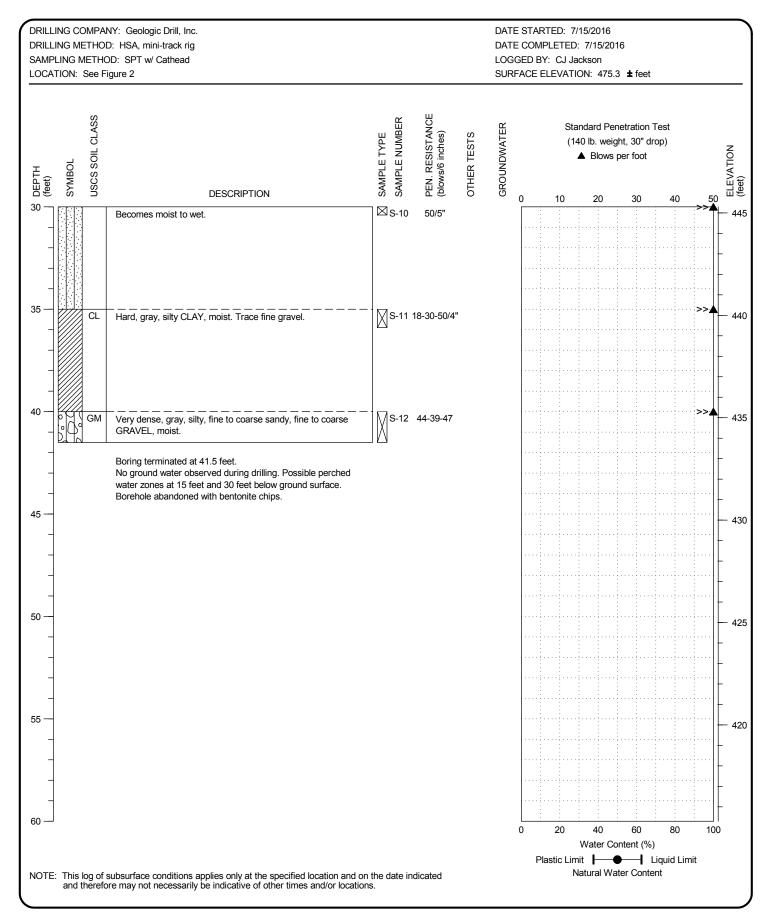
DRILLING COMPANY: Geologic Drill, Inc. DATE STARTED: 7/15/2016 DRILLING METHOD: HSA, mini-track rig DATE COMPLETED: 7/15/2016 SAMPLING METHOD: SPT w/ Cathead LOGGED BY: CJ Jackson LOCATION: See Figure 2 SURFACE ELEVATION: 475.3 ± feet PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test GROUNDWATER OTHER TESTS (140 lb. weight, 30" drop) ELEVATION (feet) ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 30 Loose, dark brown, silty, fine gravelly, fine to medium SAND, (FILL) Becomes brownish gray. 5-3-4 Scattered A.C. pieces at 2.5 feet. 5 2-2-2 470 Loose, dark gray, silty, fine gravelly, fine to medium SAND, moist, trace organics. (ALLUVIUM) 10 465 Becomes medium dense 5-5-6 Becomes loose. 15 460 Becomes moist to wet. 1-2-2 Very dense, gray (some rust mottling), silty, fine gravelly, fine to medium SAND, moist. Till-like. (ICE-CONTACT STRATIFIED DRIFT) 20 ⊠ S-8 50/5' 455 SP Very dense, gray, slightly silty, fine to medium SAND, moist. SM 25 ⊠ S-9 50/6" 450 Very dense, gray, silty, fine to medium SAND, moist. 100 60 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements Everett, Washington BORING: BH- 1

PROJECT NO.: 2016-044-21 FIGURE:

A-2





BORING: BH- 1

PAGE: 2 of 2

DRILLING COMPANY: Geologic Drill, Inc. SURFACE ELEVATION: 470.30 ± feet DATE STARTED: 7/15/2016 DRILLING METHOD: HSA, mini-track rig CASING ELEVATION DATE COMPLETED: 7/15/2016 SAMPLING METHOD: SPT w/ Cathead LOGGED BY: CJ Jackson LOCATION: See Figure 2 PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test OTHER TESTS SAMPLE TYPE PIEZOMETER SCHEMATIC (140 lb. weight, 30" drop) ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 10 20 30 40 50 SP Loose, olive brown, slightly silty, fine to coarse gravelly, fine to SM medium SAND, moist. (FILL) 4-3-4 - 5 5 2-2-2 Becomes clean to slightly silty, slightly fine gravelly. Scattered rootlets. SM 2-2-2 Loose, dark brown, silty, fine gravelly, fine to medium SAND, Scattered rootlets and small wood chunks. (ALLUVIUM) 10 10 2-3-5 PT Soft, dark brown, fibrous PEAT, moist. (LAKE DEPOSITS) 15 15 CL Soft, gray, CLAY, moist. 2-1-3 AL GS Medium dense, gray, slightly gravelly, slightly silty, clayey, fine to medium SAND, wet. (ALLUVIUM) 20 -20 5-6-6 25 25 Very dense, gray, silty, clayey, fine gravelly, fine to medium S-9 18-25-32 SAND, moist to wet. (ICE-CONTACT STRATIFIED DRIFT) Boring terminated at 26.5 feet. Ground water observed at 17.5 feet below ground surface during drilling; no heave encountered during drilling. 1-inch well installed (DOE# BIK 354). Ground water level at 15.07' on 7/21/16. 30 30 0 20 60 100 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

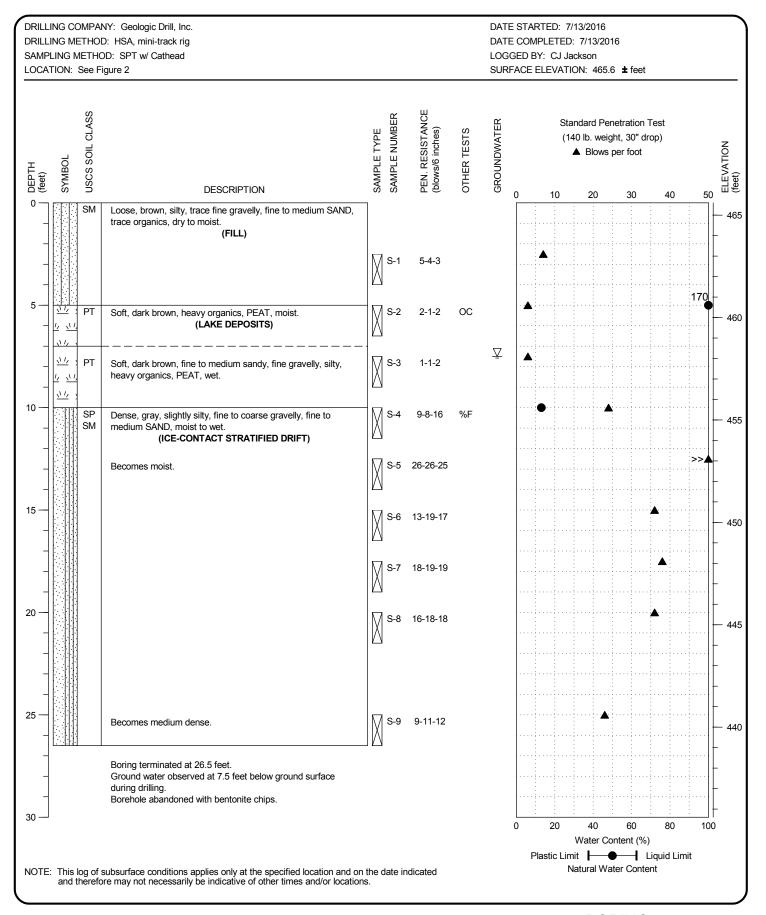


Beverly Lake Sewer Improvements
Everett, Washington

BORING: BH- 2 PAGE: 1 of 1

PROJECT NO.: 2016-044-21

FIGURE: A-3



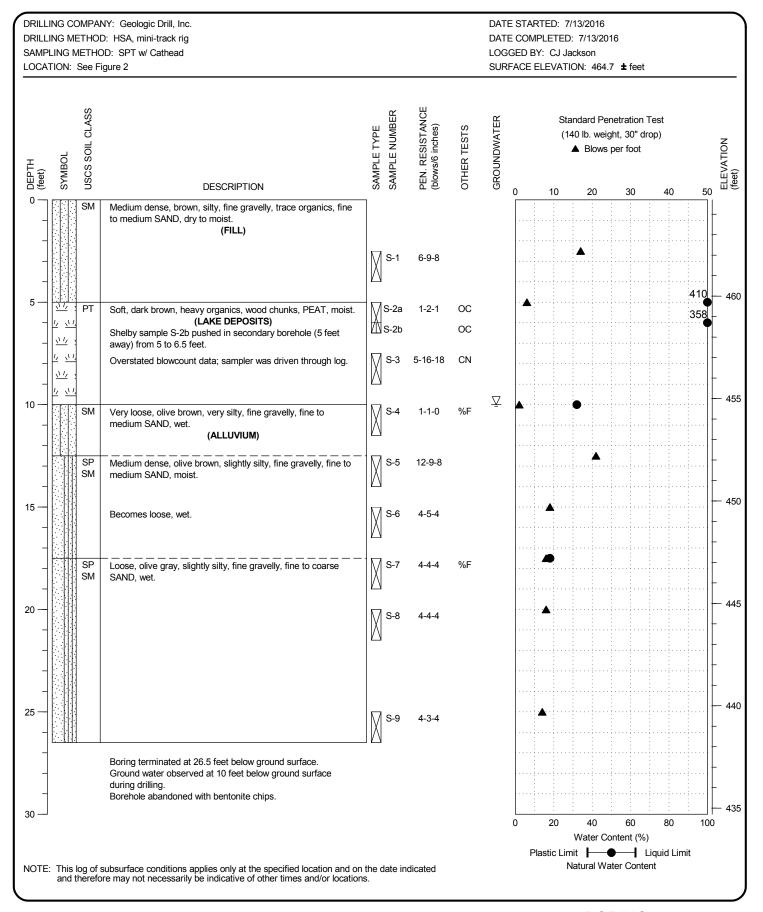


BORING: BH- 3

PROJECT NO.: 2016-044-21

FIGURE:

A-4





BORING: BH- 4

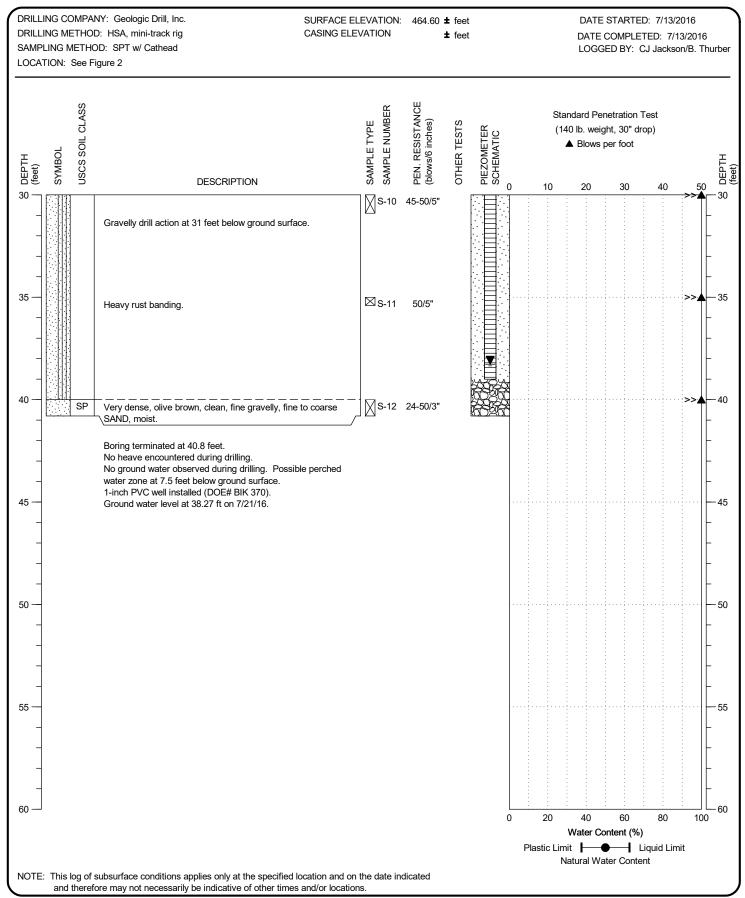
PAGE: 1 of 1

DRILLING COMPANY: Geologic Drill, Inc. SURFACE ELEVATION: 464.60 ± feet DATE STARTED: 7/13/2016 DRILLING METHOD: HSA, mini-track rig CASING ELEVATION **±** feet DATE COMPLETED: 7/13/2016 SAMPLING METHOD: SPT w/ Cathead LOGGED BY: CJ Jackson/B. Thurber LOCATION: See Figure 2 PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test SAMPLE TYPE OTHER TESTS PIEZOMETER SCHEMATIC (140 lb. weight, 30" drop) ▲ Blows per foot DEPTH (feet) DESCRIPTION 10 20 30 40 50 Loose, brown, silty, fine gravelly, fine to medium SAND, (FILL) 2-3-3 SM Loose, dark olive brown, fine to coarse gravelly, silty, fine to medium SAND, chunks of wood and charcoal, moist. 2-inch-thick peat lens at 4 feet below ground surface. - 5 5 (ALLUVIUM) 2-1-1 Becomes very loose, brown, silty, trace fine gravel. 2-inch-thick peat lens at 6.5 feet. Very loose, olive gray, very silty, fine gravelly, fine to medium 1-0-0 %F SAND, decomposed roots, wet. 10 10 2-2-6 Loose, gray, silty, fine to coarse gravelly, fine to coarse SAND, wet. GP Medium dense, brown, clean to slightly silty, fine to coarse 9-13-15 GM sandy, fine to coarse GRAVEL, moist. (ICE-CONTACT STRATIFIED DRIFT) 15 15 15-12-16 Rust mottling. Blowcounts overstated due to sampler driving on rock. 20 20 11-11-13 SP 25 25 Very dense, olive gray, slightly silty, fine to coarse gravelly, 18-25-40 fine to coarse SAND, moist. 30 100 20 40 60 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements Everett, Washington BORING: BH- 5

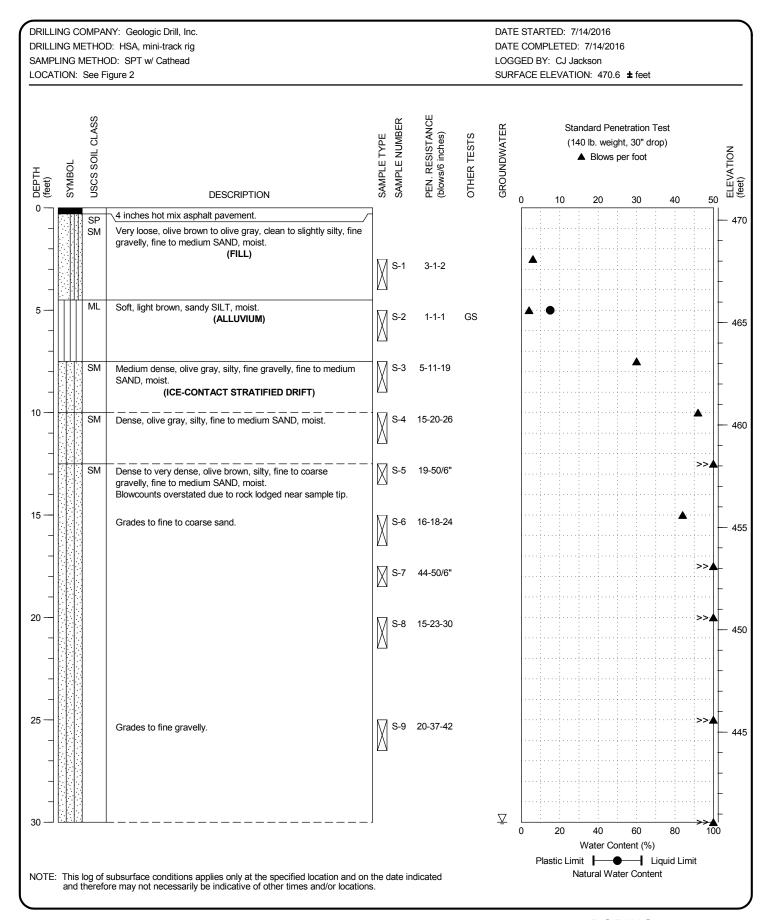
PAGE: 1 of 2





BORING: BH- 5

PAGE: 2 of 2





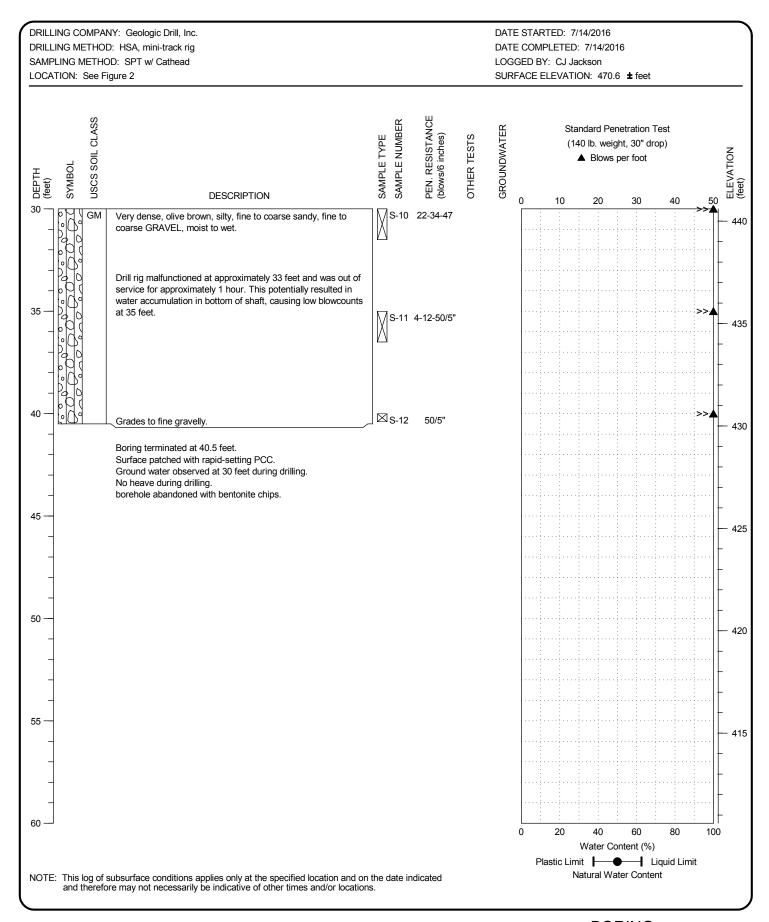
**BORING: BH-6** PAGE: 1 of 2

FIGURE:

2016-044-21

PROJECT NO.:

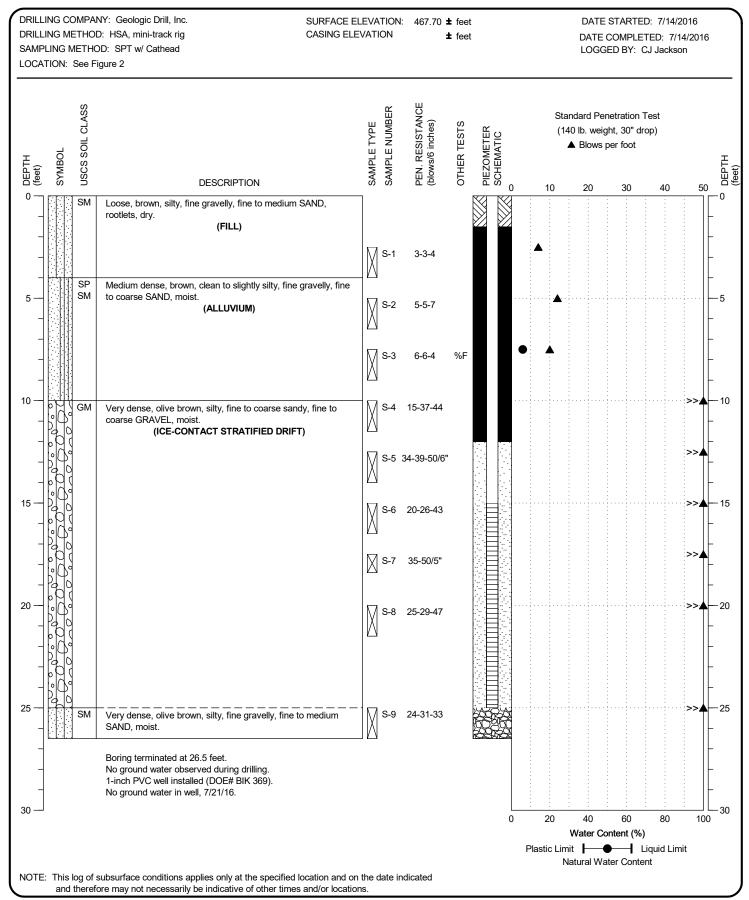
A-7





BORING: BH- 6

PAGE: 2 of 2



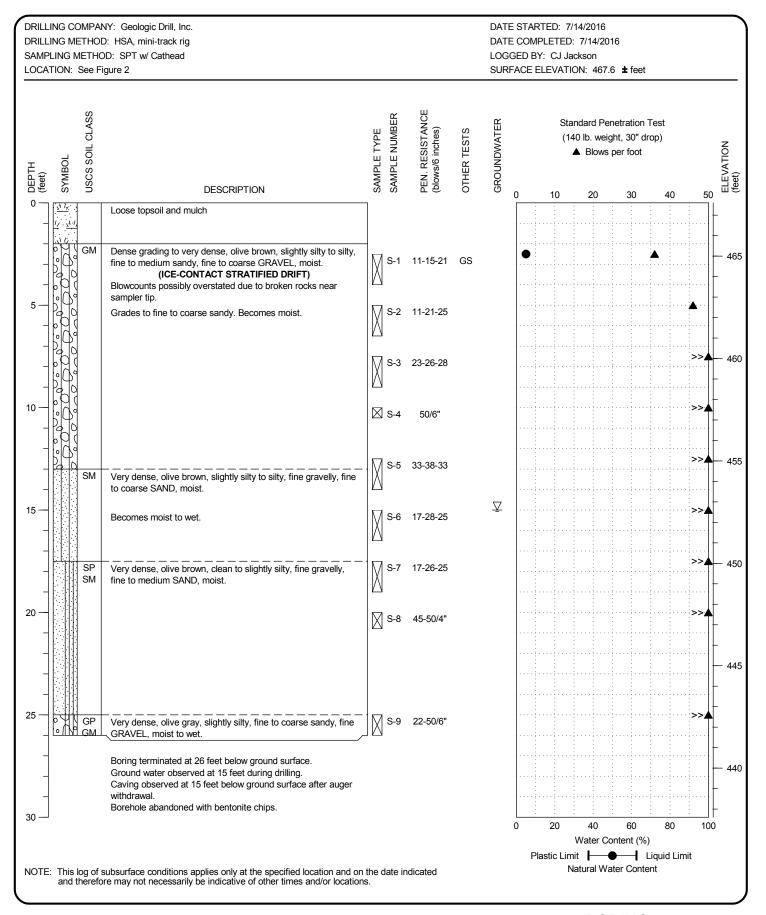


BORING: BH- 7

PAGE: 1 of 1

PROJECT NO.: 2016-044-21

FIGURE: A-8



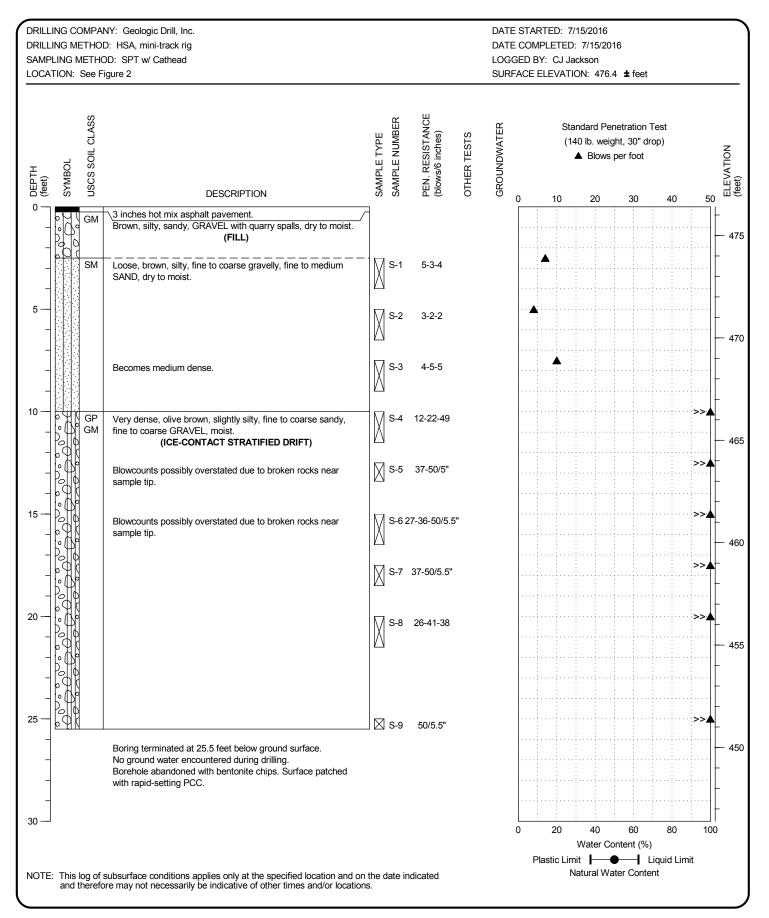


BORING: BH- 8

PROJECT NO.: 2016-044-21 FIG.

FIGURE:

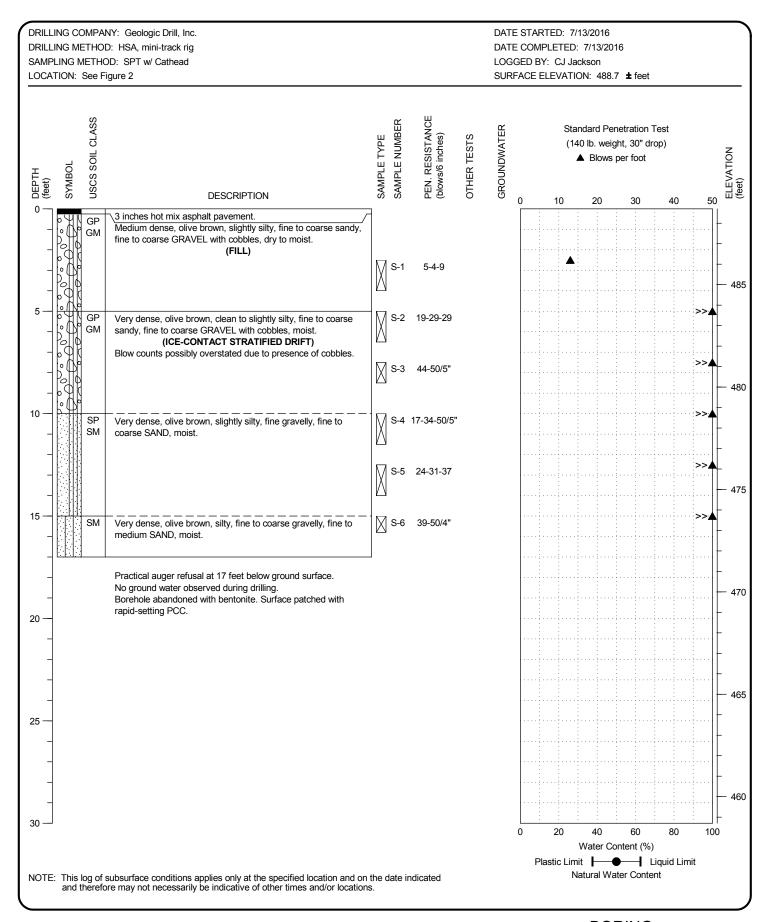
A-9





BORING: BH- 9

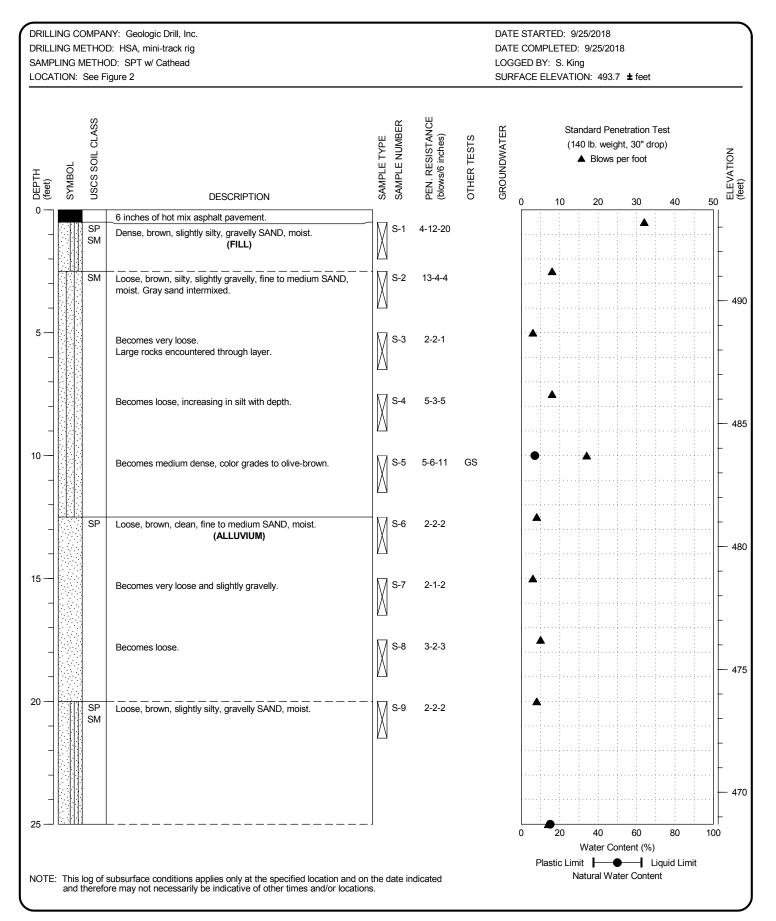
PAGE: 1 of 1





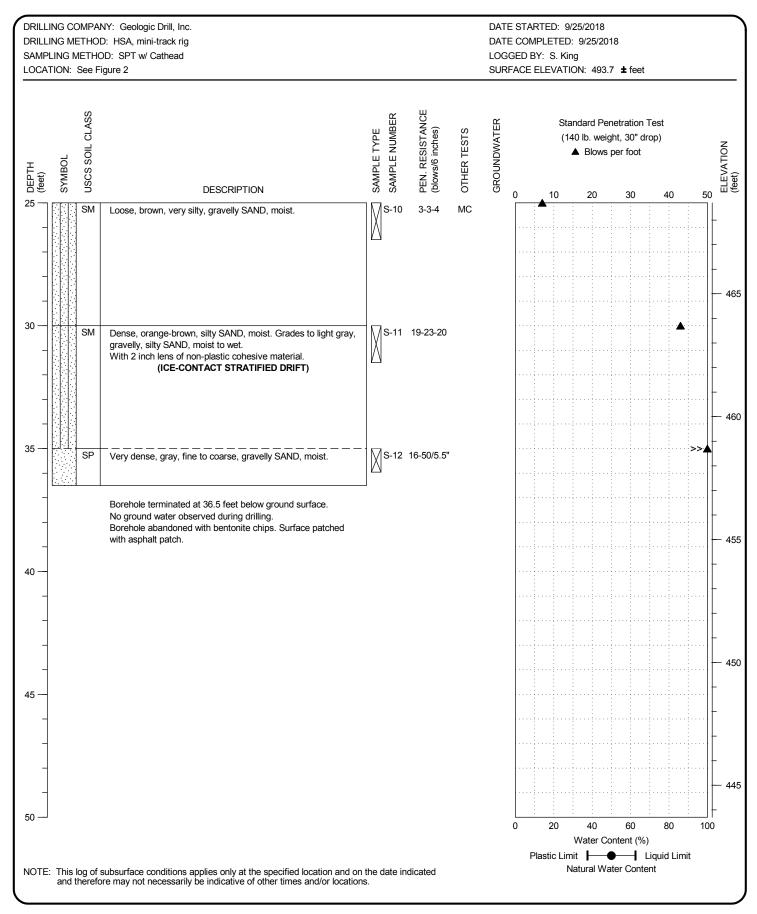
BORING: BH-10

PAGE: 1 of 1





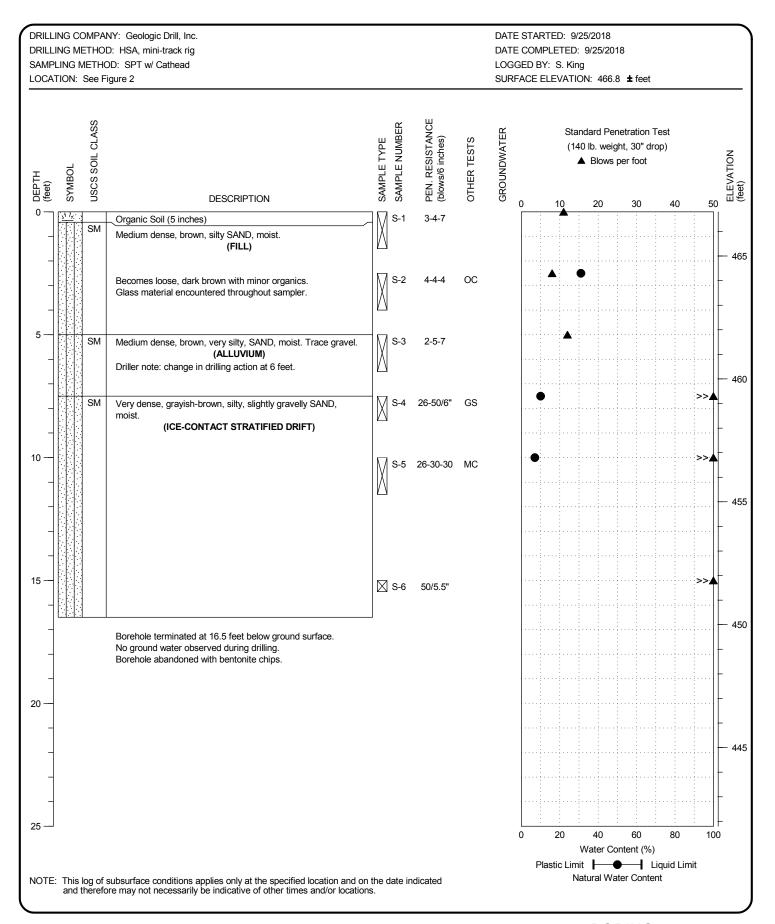
BORING: BH-11 PAGE: 1 of 2





BORING: BH-11

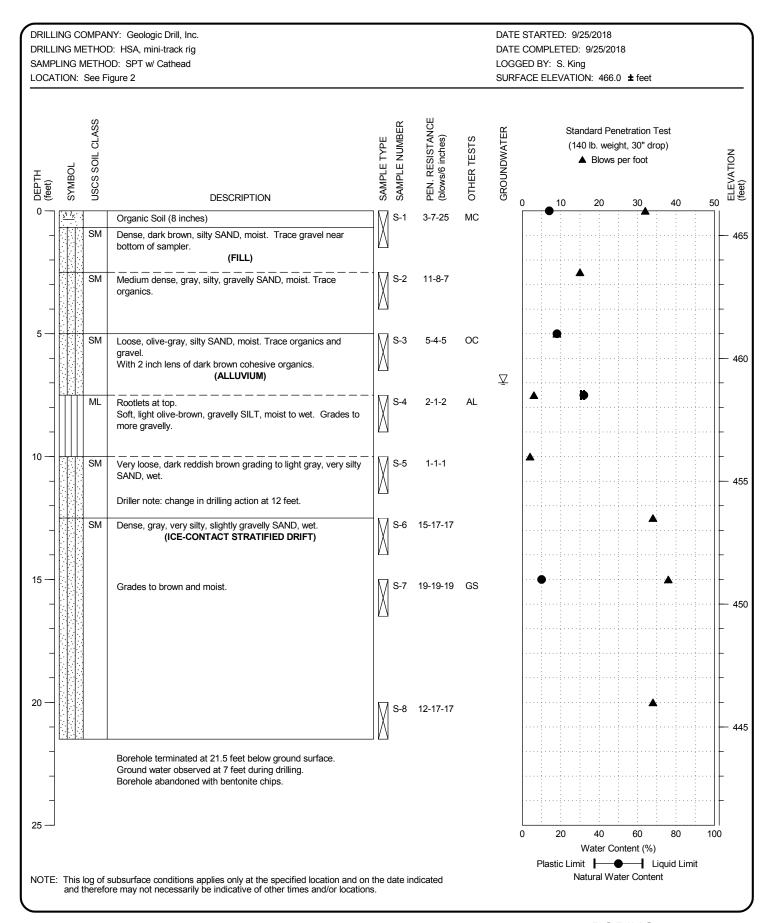
PAGE: 2 of 2





**BORING: BH-12** PAGE: 1 of 1

2016-044-21 PROJECT NO.: FIGURE:





BORING: BH-13

DRILLING COMPANY: Geologic Drill, Inc. **DATE STARTED: 9/25/2018** DRILLING METHOD: HSA, mini-track rig DATE COMPLETED: 9/25/2018 SAMPLING METHOD: SPT w/ Cathead LOGGED BY: S. King LOCATION: See Figure 2 SURFACE ELEVATION: 466.5 ± feet PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Standard Penetration Test GROUNDWATER SAMPLE TYPE OTHER TESTS (140 lb. weight, 30" drop) ELEVATION (feet) ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 30 40 10 20 71 1/. Organic Soil and Rootlets (8 inches) 3-5-9 SM Medium dense, brown, silty SAND, moist. Increase in gravel at bottom 3 inches of sampler 465 (FILL) Very loose, dark brown, very silty SAND, moist to wet. Some 3-1-1 OC. organic rootlets and woody material. Some gray sand intermixed  $\nabla$ PT Black PEAT, wet. 13-17-6 Blowcounts overstated due to sampler driving on roots. (LAKE DEPOSITS) 460 11, SM Very loose, dark brown, silty SAND, wet. Trace organics at 1-1-2 top. (ALLUVIUM) 10 Medium dense, dark yellowish red-brown, slightly silty, fine to SM medium SAND, wet. Trace gravel. 455 Grades to olive brown. S-6a S-6b S-6c 3-6-6 GS ML Medium stiff, gray SILT, wet. (3 inch layer) SM Medium dense, gray, silty SAND, wet. Driller note: change in drilling action at 14 feet. 15 ML Medium dense, dark grayish-brown, sandy SILT, wet. 9-12-16 MC Trace rust mottling. (ICE-CONTACT STRATIFIED DRIFT) 450 SM S-8 24-28-25 Very dense, gray with rust mottling, very silty, gravelly SAND, 20 21-50/6" Becomes wet. 445 Borehole terminated at 21.5 feet below ground surface. Ground water observed at 5 feet during drilling. Borehole abandoned with bentonite chips. 25 20 60 100 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements Everett, Washington BORING: BH-14 PAGE: 1 of 1

DRILLING COMPANY: HWA GeoSciences Inc. DATE STARTED: 7/21/2016 DRILLING METHOD: Hand Auger DATE COMPLETED: 7/21/2016 SAMPLING METHOD: Hand Auger & DCP LOGGED BY: B. Thurber/A. Sirjani LOCATION: See Figure 2 SURFACE ELEVATION: 474.8 ± feet PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Dropweight Cone Penetrometer Converted to GROUNDWATER SAMPLE TYPE OTHER TESTS Standard Penetration Resistance ELEVATION (feet) ▲ Blows per foot DEPTH (feet) DESCRIPTION 10 20 30 SP ( ) S-1 Loose, brown, slightly silty, fine gravelly, fine to coarse SAND, SM (FILL) O S-2 SP Medium dense, brown, slightly silty, fine gravelly, fine to SM coarse SAND, dry. O S-3 O S-4 Dense, olive-gray, gravelly, silty to very silty, fine to medium SAND, moist. Handhole terminated at 4.2 ft bgs due to practical refusal. DCP terminated at 6.5 ft bgs. 5 No ground water seepage was observed during the exploration. 465 10 -460 15 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



Beverly Lake Sewer Improvements Everett, Washington BORING: HH-1 PAGE: 1 of 1

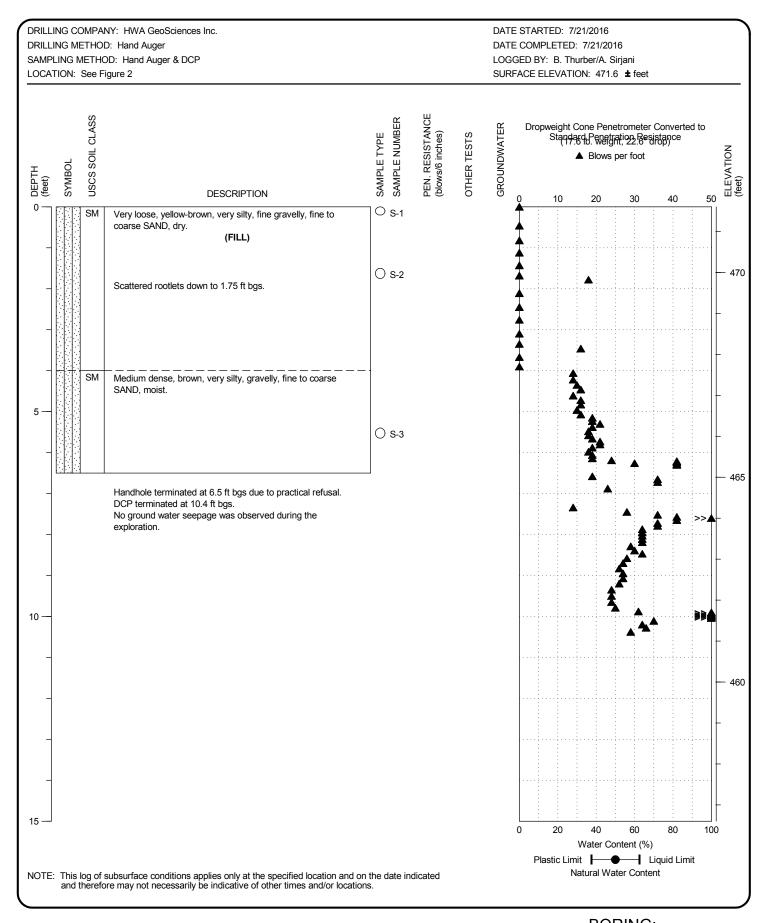
PROJECT NO.: 2016-044-21 FIG.

FIGURE: A-16

DRILLING COMPANY: HWA GeoSciences Inc. DATE STARTED: 7/21/2016 DRILLING METHOD: Hand Auger DATE COMPLETED: 7/21/2016 SAMPLING METHOD: Hand Auger & DCP LOGGED BY: B. Thurber/A. Sirjani LOCATION: See Figure 2 SURFACE ELEVATION: 491.5 ± feet PEN. RESISTANCE (blows/6 inches) USCS SOIL CLASS SAMPLE NUMBER Dropweight Cone Penetrometer Converted to GROUNDWATER SAMPLE TYPE OTHER TESTS Standard Penetration Resistance ELEVATION (feet) ▲ Blows per foot SYMBOL DEPTH (feet) DESCRIPTION 10 20 30 SP Very loose, brown, slightly silty, fine gravelly, fine to coarse SM SAND, dry. O S-1 (FILL) 490 Scattered rootlets down to 1.5 ft bgs. ( ) S-2 Medium dense, brown, slightly silty, fine gravelly, fine to SM coarse SAND, dry. O S-3 5 O S-4 SM Dense, olive-gray, gravelly, silty to very silty, fine to medium SAND, moist. Handhole terminated at 7.8 ft bgs due to practical refusal. DCP terminated at 12.1 ft bgs. No ground water seepage was observed during the exploration. 10 -480 15 Water Content (%) Plastic Limit Liquid Limit Natural Water Content NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.



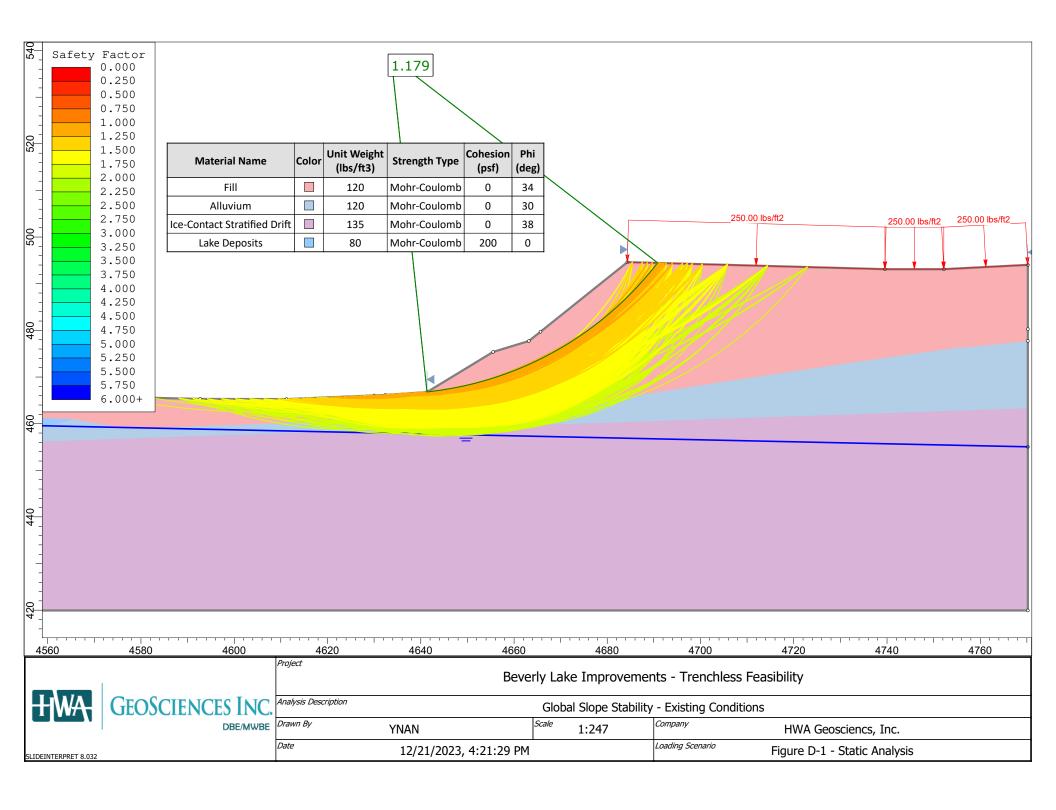
Beverly Lake Sewer Improvements Everett, Washington BORING: HH-2 PAGE: 1 of 1

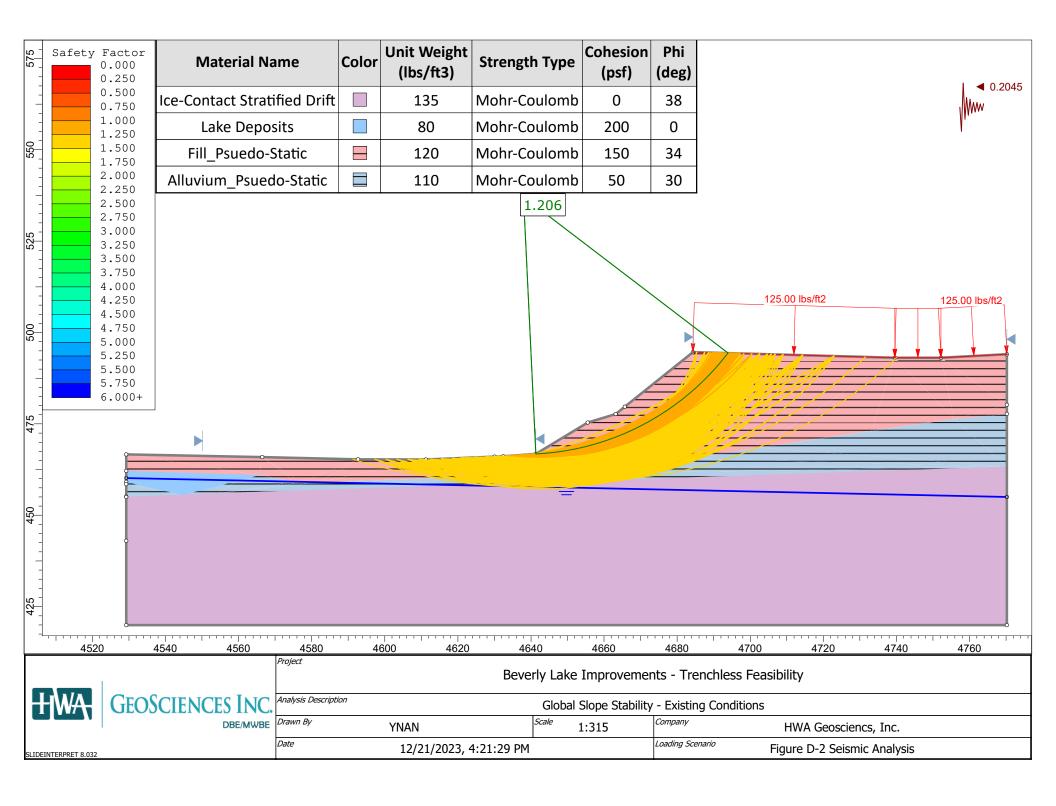


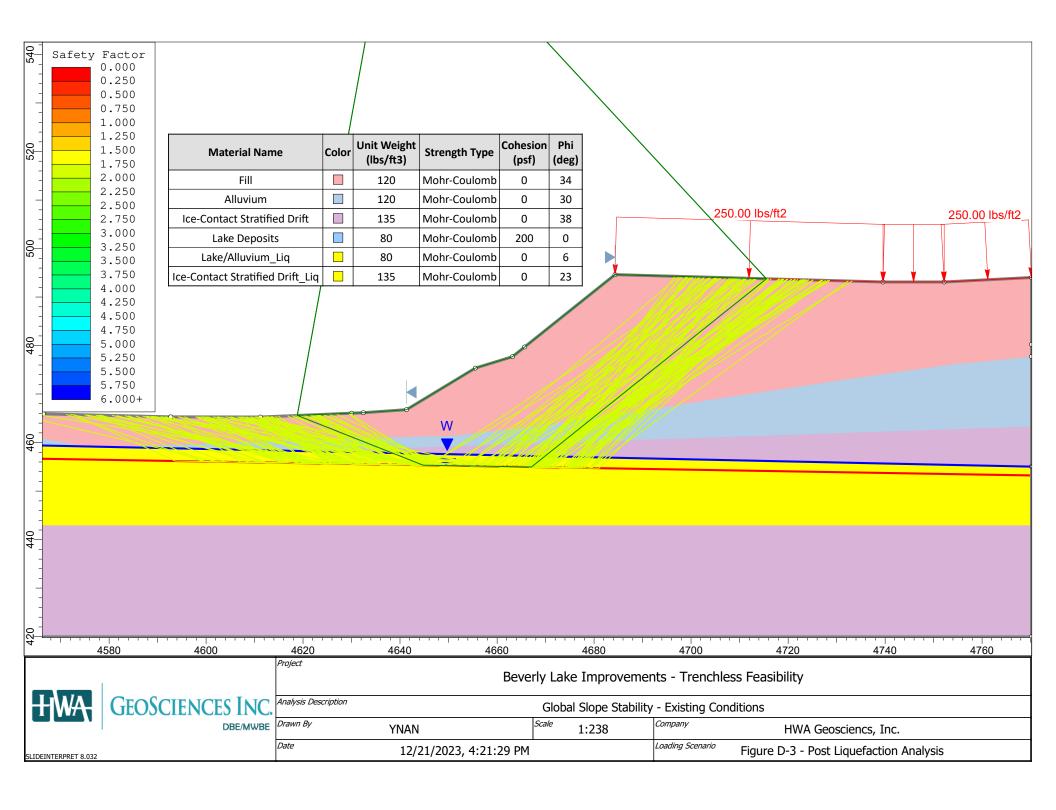


BORING: HH-3

# APPENDIX D GLOBAL SLOPE STABILITY EVALUATION







#### **CITY OF EVERETT SPECIAL PROVISIONS**

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#### **CITY OF EVERETT SPECIAL PROVISIONS**

### **APPENDIX "B"**

**B1** 

# CITY OF EVERETT STANDARD DRAWINGS

LINK TO STANDARD DRAWINGS

### **CITY OF EVERETT SPECIAL PROVISIONS**

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# **APPENDIX "C"**

**C1** 

# **CHANGE ORDER FORMS**



Change Order No.
Change Order Effective Date:

# CITY OF EVERETT Unilateral Change Order

Project Title	
Department	
Work Order No.	
Contractor:	
Contract Award Date:	
City Staff Contact:	
Change Order No.	
Change Order Effective Date	

## **CONTRACT SUM**

	Original Contract Sum	Total of Previous Change Orders	This Change Order	Contract Sum After this Change Order
Amount	\$	\$	\$	\$
+ WSST	\$	\$	\$	\$
Total	\$	\$	\$	\$

# **CONTRACT TIME**

Original Contract Time	Working Days 🔲 / Calendar Days 🔲
Date of Notice to Proceed	
Cumulative adjustment to time by <i>prior</i> Cl	nange Orders
Adjustment to time by this Change Order	
New Contract Time (including this Chang	e Order)

Change Order No	
Change Order Effective Date:	

As allowed by the contract, the City directs the Contractor as follows:

- 1. The Scope of Work shall be changed to the extent described in Exhibit A.
- 2. The Contract Sum shall be adjusted as described in this Change Order.
- 3. The duration of the Contract, and contractually scheduled completion date, shall be adjusted to the extent described in this Change Order.
- 4. Unless the Contractor timely and properly follows the procedures in the Contract Documents for seeking further equitable adjustment of time and compensation, including, but not limited to, delays, impacts, inefficiencies, overhead, and direct and indirect costs, and except as otherwise expressly provided herein, the Contractor will be barred from (a) asserting any claim for further adjustment of time and compensation arising out of, or relating to, the charges described in this Change Order or work described in Exhibit A and (b) asserting an equitable adjustment of time or price arising earlier than the date of this Change Order. This provision does not apply to requests for equitable adjustment of time or price for which the Contractor timely and properly provided notice of a differing site condition, protest, dispute, claim or Contract Claim as required by the Contract Documents. If the Contract Documents establish a time period for notice of a differing site condition, protest, dispute, claim, or Contract Claim that ends after the date of this Change Order, but relates to work performed prior to the date of this Change Order, then this provision does not apply if the Contractor timely and properly submits such notice.
- 5. This Change Order only changes the contract between Contractor and City to the extent explicitly provided herein.

Change Order No	
Change Order Effective Date:	

CITY				
		Attest:		Standard Document Approved as to Form fice of the City Attorney
Mayor Date:		City Clerk Date:	(5.13.22)	
Recommended By:				
Construction Manager (if applicable)	Project applica	t Manager (if able)	Engineering Manager (if applicable)	Department Director
Date:	Date:		Date:	Date:

Change Order No
Change Order Effective Date:

# Exhibit A—Description of Changed Work

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### **APPENDIX "D"**

**D1** 

# PUGET SOUND CLEAN AIR AGENCY – EXCERPTS OF AIR QUALITY RULES

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# PUGET SOUND CLEAN AIR AGENCY – EXCERPTS OF AIR QUALITY RULES

### **ARTICLE 9: EMISSION STANDARDS**

#### SECTION 9.03 EMISSION OF AIR CONTAMINANT: VISUAL STANDARD

Adopted 03/13/68 (12) Revised 07/08/70 (126), 04/11/73 (186), 06/09/88 (621) 05/11/89 (643), 09/08/94 (798), 04/09/98 (865), 03/11/99 (881), 03/25/04 (1024)

- (a) It shall be unlawful for any person to cause or allow the emission of any air contaminant for a period or periods aggregating more than 3 minutes in any 1 hour, which is:
  - (1) Darker in shade than that designated as No. 1 (20% density) on the Ringelmann Chart, as published by the United States Bureau of Mines; or
  - (2) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in Section 9.03(a)(1).
- (b) The density or opacity of an air contaminant shall be measured at the point of its emission, except when the point of emission cannot be readily observed, it may be measured at an observable point of the plume nearest the point of emission.
- (c) This section shall not apply when the presence of uncombined water is the only reason for the failure of the emission to meet the requirements of this section.
- (d) This section shall not apply to solid fuel burning devices, permitted fire training facilities, permitted obscurant usage during military training operations, outdoor fires, motor vehicles when operated on public roads, aircraft, or equipment subject to Section 9.04 of this regulation.
- (e) This section shall not apply to equipment with an alternate opacity standard issued under Section 3.03 or Article 6 of this regulation that is based upon a correlation with the particulate concentration and that accurately indicates a violation of the applicable particulate emission standards in Section 9.09 of this regulation.

# SECTION 9.04 OPACITY STANDARDS FOR EQUIPMENT WITH CONTINUOUS OPACITY MONITORING SYSTEMS Adopted 04/09/98 (865)

Revised 03/25/04 (1024)

- (a) Applicability. This section shall apply to all equipment required to be equipped with a continuous emission monitoring system for opacity.
- (b) It shall be unlawful for any person to cause or allow the operation of any of the following equipment unless equipped with a continuous emission monitoring system for opacity:
  - (1) Cement kilns;
  - (2) Clinker coolers;
  - (3) Glass furnaces, rated at greater than 1 ton per hour, that burn fuel;
  - (4) Fuel burning equipment, rated at 100 million Btu per hour or greater, that burns wood, coal, or residual oil; and
  - (5) Refuse burning equipment rated at greater than 12 tons per day.
- (c) It shall be unlawful for any person to cause or allow the emission of any air contaminant from

any equipment subject to this section during any hour that:

- (1) Averages greater than 5% opacity; or
- (2) Contains any consecutive 6-minute period averaging greater than 20% opacity.
- (d) Section 9.04(c)(1) shall not apply to:
  - (1) Glass furnaces that are tested annually for compliance with the applicable particulate emission standard in Section 9.09 of this regulation; or
  - (2) Equipment with an alternate opacity standard issued under Section 3.03 or Article 6 of this regulation that is based upon a correlation with the particulate concentration and that accurately indicates a violation of the applicable particulate emission standards in Section 9.09 of this regulation.
- (e) This section shall not apply to sources controlled by a venturi scrubber, provided that:
  - (1) The source is tested annually for compliance with the applicable particulate emission standard in Section 9.09 of this regulation;
  - (2) The pressure drop across the scrubber is continuously monitored and recorded; and
  - (3) The scrubbing liquid flow rate and temperature are continuously monitored and recorded.
- (f) This section shall not apply to fuel burning equipment that burns residual oil less than 31 days per year, provided that the source implements an alternate opacity monitoring plan issued under Section 3.03 or Article 6 of this regulation.

### SECTION 9.05 REFUSE BURNING Adopted 03/13/68 (12)

Revised 06/09/88 (621), 12/09/93 (769)

- (a) It shall be unlawful for any person to cause or allow the burning of combustible refuse except in a multiple chamber incinerator provided with control equipment.
- (b) It shall be unlawful for any person to cause or allow the operation of refuse burning equipment any time other than daylight hours.

# **SECTION 9.07 SULFUR DIOXIDE EMISSION STANDARD** Adopted 03/13/68 (12) Revised 07/08/70 (126), 02/21/74 (230), 02/13/86 (597), 06/09/88 (621), 04/14/94 (784)

It shall be unlawful for any person to cause or allow the emission of sulfur dioxide from any source in excess of 1,000 parts per million by volume on a dry basis, 1-hour average (corrected to 7% oxygen for fuel burning equipment and refuse burning equipment).

## SECTION 9.08 FUEL OIL STANDARDS Adopted 06/13/85 (579)

Revised 02/13/86 (597), 04/14/94 (784), 03/25/04 (1024)

(a) It shall be unlawful for any person to cause or allow the combustion of oil in fuel burning equipment or refuse burning equipment that exceeds any of the following limits unless that person has obtained an Order of Approval from the Agency in accordance with Article 6 of this regulation:

Ash	 0.1%	(maximum)	)	
Sulfur	 1.0%	(maximum	for used	oil)

Sulfur	. 2.00% (maximum for fuel oil)
Lead	. 100 ppm (maximum)
Arsenic	. 5 ppm (maximum)
Cadmium	. 2 ppm (maximum)
Chromium	. 10 ppm (maximum)
Total Halogens	. 1,000 ppm (maximum)
Polychlor i nated Biphenyls (PCBs)	. 2 ppm (maximum)
Flash Point	. 100°F (minimum)

- (b) It shall be unlawful for any person to sell or make available for sale any oil in excess of the limits of this section to any person who has not obtained an Order of Approval from the Agency in accordance with Article 6 of this regulation. Any person who sells or makes available for sale such oil shall submit a report to the Agency within 15 days of the end of the month that includes the name and address of the recipient, the amount of oil delivered, and the concentration of contaminants therein.
- (c) The provisions of this section shall not apply to:
  - (1) Ocean-going vessels;
  - (2) Used oil burned in space heaters that have a maximum heat output of not greater than 0.5 million Btu per hour; and
  - (3) Persons in the business of collecting used oil from residences when under commission, authorization by a city, county, or the utilities and transportation.

#### SECTION 9.09 PARTICULATE MATTER EMISSION STANDARDS

Adopted 03/13/68 (12) Revised 07/08/70 (126), 11/10/71 (135), 10/10/73 (214), 02/13/86 (597), 06/09/88 (621), 05/11/89 (643), 02/10/94 (777), 04/09/98 (865)

It shall be unlawful for any person to cause or allow the emission of particulate matter in excess of the following concentrations:

#### **Refuse Burning Equipment:**

- 3. Rated at 12 tons per day or less with heat recovery .... 0.02 gr/dscf @ 7% O<sub>2</sub>
- 4. Rated at greater than 12 tons per day ......0.01 gr/dscf @ 7% O2

#### **Fuel Burning Equipment:**

- 4. Burning wood and installed after March 1, 1986 ....... 0.02 gr/dscf @ 7% O<sub>2</sub>

- 7. Equipment Used in a Manufacturing Process: 0.05 gr/dscf

#### SECTION 9.10 EMISSION OF HYDROCHLORIC ACID Adopted 06/09/88 (621)

- (a) It shall be unlawful for any person to cause or allow the emission of hydrochloric acid from any equipment in excess of 100 ppm on a dry basis, 1-hour average corrected to 7% oxygen for combustion sources.
- (b) It shall be unlawful for any person to cause or allow the emission of hydrochloric acid from any refuse burning equipment rated at greater than 12 tons per day in excess of 30 ppm on a dry basis, 1-hour average corrected to 7% oxygen.

# SECTION 9.11 EMISSION OF AIR CONTAMINANT: DETRIMENT TO PERSON OR PROPERTY Adopted 03/13/68 (12) Revised 06/09/83 (536), 03/11/99 (882)

- (a) It shall be unlawful for any person to cause or allow the emission of any air contaminant in sufficient quantities and of such characteristics and duration as is, or is likely to be, injurious to human health, plant or animal life, or property, or which unreasonably interferes with enjoyment of life and property.
- (b) With respect to odor, the Agency may take enforcement action under this section if the Control Officer or a duly authorized representative has documented all of the following:
  - (1) The detection by the Control Officer or a duly authorized representative of an odor at a level 2 or greater, according to the following odor scale:
    - level 0 no odor detected;
    - level 1 odor barely detected;
    - level 2 odor is distinct and definite, any unpleasant characteristics recognizable;
    - level 3 odor is objectionable enough or strong enough to cause attempts at avoidance; and
    - level 4 odor is so strong that a person does not want to remain present;
  - (2) An affidavit from a person making a complaint that demonstrates that they have experienced air contaminant emissions in sufficient quantities and of such characteristics and duration so as to unreasonably interfere with their enjoyment of life and property; and
  - (3) The source of the odor.
- (c) Nothing in this Regulation shall be construed to impair any cause of action or legal remedy of any person, or the public for injury or damages arising from the emission of any air contaminant in such place, manner or concentration as to constitute air pollution or a common law nuisance.

# SECTION 9.13 EMISSION OF AIR CONTAMINANT: CONCEALMENT AND MASKING RESTRICTED Adopted 03/13/68 (12) Revised 06/09/88 (621)

(a) It shall be unlawful for any person to cause or allow the installation or use of any device or use of any means which, without resulting in a reduction in the total amount of air contaminant emitted, conceals an emission of air contaminant which would otherwise violate this article.

(b) It shall be unlawful for any person to cause or allow the installation or use of any device or use of any means designed to mask the emission of an air contaminant which causes detriment to health, safety or welfare of any person.

#### SECTION 9.15 FUGITIVE DUST CONTROL MEASURES

Adopted 03/13/68 (12) Revised 06/09/83 (536), 06/09/88 (621), 08/10/89 (644), 03/11/99 (882)

- (a) It shall be unlawful for any person to cause or allow visible emissions of fugitive dust unless reasonable precautions are employed to minimize the emissions. Reasonable precautions include, but are not limited to, the following:
  - (1) The use of control equipment, enclosures, and wet (or chemical) suppression techniques, as practical, and curtailment during high winds;
  - (2) Surfacing roadways and parking areas with asphalt, concrete, or gravel;
  - (3) Treating temporary, low-traffic areas (e.g., construction sites) with water or chemical stabilizers, reducing vehicle speeds, constructing pavement or rip rap exit aprons, and cleaning vehicle undercarriages before they exit to prevent the track-out of mud or dirt onto paved public roadways;
  - (4) Covering or wetting truck loads or allowing adequate freeboard to prevent the escape of dust-bearing materials.
- (b) Compliance with the provisions of this section shall not relieve any person from the responsibility to comply with Section 9.11 of this regulation.

## SECTION 9.16 SPRAY-COATING OPERATIONS Adopted 06/13/91 (700)

Revised 07/08/99 (886), 07/12/01 (944), 02/22/07 (1089), 10/28/10 (1200)

- (a) Applicability. This section applies to indoor and outdoor spray-coating operations when a coating that protects or beautifies a surface is applied with spray-coating equipment, except as exempted in Section 9.16(b) of this regulation. Mobile spray-coating operations for motor vehicles or motor vehicle components are subject to Section 9.16(e) of this regulation.
- (b) Exemptions. The following activities are exempt from the provisions of Sections 9.16(c), (d), and (e) of this regulation. Persons claiming any of the following exemptions shall have the burden of demonstrating compliance with the claimed exemption.
  - (1) Application of architectural or maintenance coatings to stationary structures (e.g., bridges, water towers, buildings, stationary machinery, or similar structures);
  - (2) Aerospace coating operations subject to 40 CFR Part 63, Subpart GG. This includes all activities and materials listed in 40 CFR 63.741(f); 12/10 9-7 Regulation I
  - (3) Use of high-volume, low-pressure (HVLP) spray guns when:
    - a) spray-coating operations do not involve motor vehicles or motor vehicle components;
    - b) the gun cup capacity is 8 fluid ounces or less;
    - c) the spray gun is used to spray-coat less than 9 square feet per day per facility;
    - d) coatings are purchased in containers of 1 quart or less; and
    - e) spray-coating is allowed by fire department, fire marshal, or other government agency requirements.
  - (4) Use of air-brush spray equipment with 0.5 to 2.0 CFM airflow and a maximum cup capacity of 2 fluid ounces, provided that persons claiming exemption from Section 9.16(e) of this regulation register with the Agency in accordance with Article 5 of this regulation and provide

- a copy of the current Agency registration document to each new customer before starting work at a site;
- (5) Use of hand-held aerosol spray cans with a capacity of 1 quart or less; or
- (6) Indoor application of automotive undercoating materials using organic solvents having a flash point in excess of 100°F.
- (c) General Requirements for Indoor Spray-Coating Operations. It shall be unlawful for any person subject to the provisions of this section to cause or allow spray-coating inside a structure, or spray-coating of any motor vehicles or motor vehicle components, unless all of the following requirements are met:
  - (1) Spray-coating is conducted inside an enclosed spray area;
  - (2) The enclosed spray area employs either properly seated paint arresters, or water-wash curtains with a continuous water curtain to control the overspray; and
  - (3) All emissions from the spray-coating operation are vented to the atmosphere through an unobstructed vertical exhaust vent.
- (d) General Requirements for Outdoor Spray-Coating Operations. It shall be unlawful for any person subject to the provisions of this section to cause or allow spray-coating outside an enclosed structure unless reasonable precautions are employed to minimize the overspray. Reasonable precautions include, but are not limited to the use of:
  - (1) Enclosures and curtailment during high winds; and
  - (2) High-volume low-pressure (HVLP), low-volume low-pressure (LVLP), electrostatic, or air-assisted airless spray equipment. Airless spray equipment may be used where low viscosity and high solid coatings preclude the use of higher-transfer efficiency spray equipment.
- (e) General Requirements for Mobile Spray-Coating Operations. It shall be unlawful for any person to cause or allow the spray-coating of any motor vehicle or motor vehicle component outside of a structure required by Section 9.16(c) of this regulation, unless all the following requirements are met:
  - (1) Conduct all spray-coating in a portable frame-and-fabric shelter consisting of a fabric roof and three fabric sides or similar portable shelter consisting of a roof and three sides.
    - (A) Disassemble and remove the portable shelter from the site at the end of each day.
    - (B) Do not conduct mobile spray-coating operations for more than 5 consecutive calendar days at any site and not more than 14 days during any calendar month at the same site
  - (2) Do not apply more than 8 ounces of coating to any single vehicle.
  - (3) Do not apply coating to more than 9 square feet of any single vehicle.
  - (4) Do not prepare a surface area for spray-coating greater than 9 square feet per any single vehicle. The measured surface area prepared for spray-coating shall include, but is not limited to all areas that are filled, ground, sanded, or inside masking.
  - (5) Use only HVLP spray guns or spray equipment with equivalent transfer efficiency (greater than or equal to 65%) and with a paint cup capacity less than or equal to 3.0 fluid ounces.
  - (6) Minimize evaporative emissions by collecting all organic solvents used for cleanup of equipment in a closed-loop or contained system; keeping all containers of paints and organic solvents closed except when materials are being added, mixed, or removed; and storing solvent rags in closed containers.
  - (7) Post a sign that is visible to the public and shows the name of the company and current

telephone contact information for complaints. Record information regarding complaints received and investigate complaints regarding odor, overspray, or nuisance as soon as possible, but no later than 1 hour after receipt of a complaint. As part of the investigation, determine the wind direction during the time of the complaint. If the cause of a valid complaint cannot be corrected within 2 hours of the time the complaint was received, shut down the operation until corrective action is completed.

- (8) Complete the following records for each vehicle when finished with that vehicle:
  - (A) Customer identification, address where work was performed, date, time, and the name of the person completing the record;
  - (B) Identification of each vehicle and vehicle component repaired; and
  - (C) Quantity (in ounces) of each VOC-containing material used on each vehicle.

All records must be kept current, retained for at least 2 years, and made available to Agency representatives upon request.

- (9) Provide a copy of the current Agency registration document to each customer prior to starting work at a site.
- (f) Compliance with Other Regulations. Compliance with this regulation does not exempt any person from compliance with Regulation I, Section 9.11 and all other applicable regulations including those of other agencies.

#### SECTION 9.18 CRUSHING OPERATIONS Adopted 01/26/12 (1232)

- (a) This section shall apply to all equipment processing nonmetallic minerals located at a source crushing nonmetallic minerals as defined in 40 CFR 60.671.
- (b) General Requirements. It shall be unlawful for any person subject to the provisions of this section to cause or allow the emission of any air contaminant in excess of the following emission limits:
  - (1) The visible emission limits in (A), (B), and (C) are applicable for any period or periods aggregating more than 3 minutes in any one hour.
    - (A) Each grinding mill, screening operation, bucket elevator, transfer points on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station with operating control equipment shall not exhibit greater than 7 percent opacity.
      - (1) Each crusher with operating control equipment shall not exhibit greater than 12 percent opacity.
      - (2) Each crusher, grinding mill, screening operation, bucket elevator, transfer points on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station exhausting particulate through a stack equipped with an operating fabric filter or operating wet scrubber exhaust shall not exhibit greater than 7 percent opacity.
  - (2) Each crusher, grinding mill, screening operation, bucket elevator, transfer points on belt conveyors, bagging operation, storage bin, enclosed truck or railcar loading station exhausting particulate through a stack shall meet a particulate matter limit of 0.01 grains per dry standard cubic foot of exhaust as measured by EPA Method 5.
  - (3) Each crusher, grinding mill, screening operation, bucket elevator, transfer point on a conveyor belt, bagging operation, storage bin, enclosed truck or railcar loading station without operating control equipment shall not exhibit visible emissions.
  - (4) For the purpose of this section, "Control Equipment" shall mean either fabric filter, wet scrubber, water sprays, or other dust suppression techniques which effectively reduce visible emissions from the emission units observed.

- (c) Testing conducted to verify compliance with the requirements of this section shall be performed in accordance with the Puget Sound Clean Air Agency Regulation I, Section 3.07.
- (d) Compliance with Other Regulations. Compliance with this regulation does not exempt any person from compliance with Regulation I, Sections 9.03, 9.11, 9.15 and all other applicable regulations including those of other agencies.

### SECTION 9.20 MAINTENANCE OF EQUIPMENT Adopted 12/09/82 (531)

Revised 06/09/88 (621)

- (a) It shall be unlawful for any person to cause or allow the operation of any features, machines or devices constituting parts of or called for by plans, specifications, or other information submitted pursuant to Article 6 of Regulation I unless such features, machines or devices are maintained in good working order.
- (b) It shall be unlawful for any person to cause or allow the operation of any equipment as defined in Section 1.07 or control equipment not subject to Section 9.20(a) unless the equipment or control equipment is maintained in good working order.

# APPENDIX "E" E1

## **NOISE ORDINANCE**

### Link to form

Request for Temporary Construction Noise Variance

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# Chapter 20.08 NOISE CONTROL

#### Sections:

20.08.005	Purpose—Liability.
20.08.010	Declaration of policy—Findings of special conditions.
20.08.020	Definitions.
20.08.030	Environmental sound—Unlawful sounds designated.
20.08.040	Environmental sound—Maximum permissible levels.
20.08.050	Environmental sound—Modifications to maximum permissible noise levels.
20.08.060	Motor vehicle noise—Maximum permissible levels.
<u>20.08.070</u>	Motor vehicle noise—Maximum levels for new vehicles.
<u>20.08.080</u>	Motor vehicle noise—Specific prohibitions.
20.08.090	Public nuisance and disturbance noises.
<u>20.08.100</u>	Noises exempt—At all times.
<u>20.08.110</u>	Noises exempt during daytime hours.
<u>20.08.120</u>	Repealed.
<u>20.08.130</u>	Administrator established—Qualifications, powers and duties.
<u>20.08.140</u>	Measurement of sound.
<u>20.08.150</u>	Variances.
<u>20.08.160</u>	Repealed.
<u>20.08.170</u>	Repealed.
<u>20.08.180</u>	Repealed.
<u>20.08.190</u>	Repealed.
<u>20.08.200</u>	Repealed.
<u>20.08.210</u>	Provisions not exclusive.
<u>20.08.220</u>	Enforcement—Violation—Penalty.

#### 20.08.005 Purpose—Liability.

- A. It is expressly the purpose of this chapter to provide for and promote the health, safety and welfare of the general public, and not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of this chapter.
- B. Nothing contained in this chapter is intended to be nor shall be construed to create or form the basis for any liability on the part of the city, its officers, employees or agents, for any injury or damage resulting from the failure of anyone to comply with the provisions of this chapter, or by reason or in consequence of any inspection, notice, order, certificate, permission or approval authorized or issued or done in connection with the implementation or enforcement pursuant to this chapter, or by

reason of any action or inaction on the part of the city related in any manner to the enforcement of this chapter by its officers, employees or agents. (Ord. 1556-89 § 3, 1989)

20.08.010 Declaration of policy—Findings of special conditions.

- A. Declaration of Policy. It is hereby declared to be the policy of the city to minimize the exposure of citizens to the harmful physiological and psychological effects of excessive noise. It is the express intent of the city council to control the level of noise and to promote and preserve the public health, safety, and welfare while affording protection to free speech activity as required by applicable constitutional law. It is the express intent of the city council to control the level of noise in a manner which promotes commerce; the use, value, and enjoyment of property; sleep and repose; the quality of the environment; and which enables all residents of the city to peacefully coexist in a manner which is mutually respectful of the interests and rights of others.
- B. Findings of Special Conditions. The problem of noise in the city has been studied since 1972 by the city. On the basis of this experience and knowledge of conditions within the city, the city council finds that special conditions exist within the city which makes necessary any and all differences between this chapter and the regulations adopted by the Department of Ecology. (Ord. 3509-16§1, 2016: Ord. 534-78§1, 1978)

#### 20.08.020 Definitions.

All technical terminology used in this chapter not defined herein shall be interpreted in conformance with American National Standards Institute Specifications Section 1.4-2014 as it currently exists or is later amended. For purposes of this chapter, the words and phrases used herein shall have the meaning indicated below:

- A. "Administrator" means the noise control administrator as established in Section <u>20.08.130</u>, or designee.
- B. "dB(A)" means a sound level, measured in decibels, using the A frequency-weighting network of a sound level meter.
- C. "District" means the land use zones to which the provisions of this chapter are applied. For the purposes of this chapter the following noise control districts shall be established which include land use zones designated in the Everett zoning code as follows:

Noise

Control

District Land Use Zones

1. District All residentially zoned

I districts including but not

limited to R.S., R-1, R-1A, R-2, R-2A, R-3, R-3L, R-4 and R-5.

2. District All business and
II commercially zoned
districts including but not
limited to B-1, B-2, B-3,
BMU, E1, E-1MUO, C-1,
C-1R, C-2 and C-2ES.

3. District All agricultural and manufacturing zoned districts including but not limited to A, M-M, M-1, M-S, W-C and all other nonresidential, nonbusiness and noncommercially zoned districts.

For any land use zone not listed in this subsection C, the administrator may determine that the zone is substantially similar to a zone listed in this subsection C and may classify it similarly for purposes of this chapter.

- D. "Emergency work" means work made necessary to restore property to a safe condition following a public calamity, work required to protect persons or property from imminent exposure to danger, or work by private or public utilities for providing or restoring immediately necessary utility service.
- E. "Gross vehicle weight rating" means the value specified by the manufacturer as the recommended maximum loaded weight of a single vehicle.
- F. "Motorcycle" means any motor vehicle having a saddle for the use of the rider and designed to travel on not more than three wheels in contact with the ground, except farm tractors and such vehicles powered by engines of less than five horsepower.
- G. "Motor vehicle" means any vehicle which is self-propelled, used primarily for transporting persons or property upon public highways, and required to be licensed under RCW 46.16A.030. (Aircraft, watercraft, and vehicles used on rails or tracks are not motor vehicles as that term is used herein.)
- H. "New motor vehicle" means a motor vehicle manufactured after December 31, 1976, the

equitable or legal title of which has never been transferred to a person who, in good faith, purchases the new motor vehicle for purposes other than resale.

- I. "Noise" means the intensity, duration and character of sounds from any and all sources.
- J. "Off-highway vehicle" means any self-propelled motor driven vehicle not used primarily for transporting persons or property upon public highways nor required to be licensed under RCW 46.16A.030.
- K. "Person" means any individual, firm, association, partnership, corporation or any other entity, public or private.
- L. "Property boundary" means the survey line at ground surface which separates the real property owned, rented or leased by one or more other persons and its vertical extension.
- M. "Public highway" means the entire width between the boundary lines of every way publicly maintained by the department of highways or any county or city when any part thereof is generally open to the use of the public for purposes of vehicular travel as a matter of right.
- N. "Public nuisance noise" means any sound which annoys, injures, interferes with or endangers the comfort, repose, health or safety of others and affects the rights of a community or neighborhood although the extent of the damage may be unequal.
- O. "Receiving property" means real property within which sound originating from sources outside the property boundary is received.
- P. "Sound level" means a weighted sound pressure level obtained by the use of a sound level meter and weighted as specified in American National Standards Institute Specifications, Section 1.4-2014.
- Q. "Sound level measurement procedures" means standardized procedures for the measurement of sound levels of sources regulated by this chapter and performed in accordance with the Washington State Department of Ecology rules, Chapter 173-58 WAC.
- R. "Sound level meter" means a sound level measuring device, either Type I or Type II, as defined by American National Standards Institute Specifications, Section 1.4-2014.
- S. "Temporary construction site" means any location where site clearing, construction of plat improvements, or construction or remodeling of a structure, facility, improvement or other feature attached to the land occurs. This includes roadway, bikeway, trail, sidewalk or other similar construction, repair or improvement.
- T. "WAC" means the Washington Administrative Code as currently enacted or hereafter amended.

- U. "Watercraft" means any contrivance, excluding aircraft, used or capable of being used as a means of transportation or recreation on water.
- V. "Weekend" means Saturday and Sunday or any legal holiday observed by the state of Washington. (Ord. 3509-16 § 2, 2016: Ord. 3440-15 § 3, 2015: Ord. 1556-89 § 1, 1989; Ord. 690-80 § 2, 1980; Ord. 534-78 § 2, 1987)

20.08.030 Environmental sound—Unlawful sounds designated.

It is unlawful for any person to cause or permit noise to intrude into the real property of another person which noise exceeds the maximum permissible sound pressure levels set forth in this chapter. (Ord. 3509-16 § 3, 2016: Ord. 534-78 § 3(a), 1987)

20.08.40 Environmental sound—Maximum permissible levels.

For sound sources located within the city of Everett, the maximum permissible noise levels are as follows:

District	District of Receiving		
Sound	Property within the City of		
Source	Everett		
	I	II	Ш
I	55 dB(A) 5	7	60
	•	dB(A)	dB(A)
II	57 dB(A) 6	0	65
	•	dB(A)	dB(A)
Ш	60 dB(A) 6	5	70
	•	dB(A)	dB(A)

Where a receiving property lies within more than one district, the most restrictive maximum permissible noise level shall apply to the receiving property. (Ord. 3509-16§4, 2016: Ord. 534-78§ 3(b), 1978)

20.08.050 Environmental sound—Modifications to maximum permissible noise levels.

The maximum permissible sound levels established by this chapter shall be modified, reduced or increased as follows:

- A. Between the hours of ten p.m. and seven a.m. during weekdays, and between the hours of ten p.m. and nine a.m. on weekends, the levels established in Section 20.08.040 are reduced by ten dB(A) where the receiving property lies within District I of the city of Everett.
- B. At any hour of the day or night, for any source of sound which is of short duration, the levels

established by this chapter are increased by:

- 1. Five dB(A) for a total of fifteen minutes in any one-hour period; or
- 2. Ten dB(A) for a total of five minutes in any one-hour period; or
- 3. Fifteen dB(A) for a total of one and one-half minutes in any one-hour period. (Ord. 3509-16 § 5, 2016: Ord. 534-78 § 3(c), 1978)

20.08.060 Motor vehicle noise—Maximum permissible levels.

It is unlawful for any person to operate any motor vehicle upon any public highway or any combination of such vehicles under any conditions of grade, load, acceleration, or deceleration in such a manner as to exceed the maximum permissible sound levels for the category of vehicle, as measured at a distance of fifty feet from the center of the lane of travel within the speed limits specified, under procedures set forth in Chapter 173-62 WAC, Motor Vehicle Noise Performance Standards, including:

Vehicle Category	45 MPH	Over 45
Туре	or Less	MPH
Motor vehicles	86	90
over 10,000	dB(A)	dB(A)
pounds GVWR		
Motorcycles	78	82
	dB(A)	dB(A)
All other motor	72	78
vehicles	dB(A)	dB(A)

(Ord. 3509-16 § 6, 2016: Ord. 534-78 § 4(a), 1978)

20.08.070 Motor vehicle noise—Maximum levels for new vehicles.

It is unlawful for any person to sell or offer for sale a new motor vehicle, except an off-highway vehicle, which produces a maximum noise exceeding the following noise levels at a distance of fifty feet under acceleration test procedures set forth in Chapter 173-62 WAC.

Vehicle Category	Date of Manufacture	Maximum Sound
Any motor vehicle over 10,000 pounds GVWR excluding buses	BeforeJanuary 1, 1978	86 dBA
Any motor vehicle over 10,000 pounds GVWR excluding buses	After January 1, 1978	83 dBA
Any motor vehicle over 10,000	After January 1, 1982	80 dBA

pounds GVWR excluding buses		
All buses over 10,000 pounds GVWR	After January 1, 1980	85 dBA
All buses over 10,000 pounds GVWR	After January 1, 1983	83 dBA
All buses over 10,000 pounds GVWR	After January 1, 1986	80 dBA
Any motor vehicle 10,000 pounds GVWR or less	After January 1, 1976	80 dBA
Motorcycles	After January 1. 1976	83 dBA
Motorcycles	After January 1, 1986	80 dBA

(Ord. 3509-16 § 7, 2016: Ord. 534-78 § 4(b), 1978)

20.08.080 Motor vehicle noise—Specific prohibitions.

- A. Mufflers and Exhaust Systems. Every motor vehicle operated upon the public highways shall at all times be equipped with an exhaust system and a muffler in good working order and constant operation to prevent excessive or unusual noise.
- B. Tire Noise. It is unlawful for any person to operate a motor vehicle in such a manner as to cause or allow to be emitted squealing, screeching or other such noise from the tires in contact with the ground because of rapid acceleration or excessive speed around corners or other such reason, except that noise resulting from emergency braking to avoid imminent danger shall be exempt from this section.
- C. Alteration of Motor Vehicles. It is unlawful for any person to change or modify any part of a motor vehicle or install any device thereon in any manner that permits sound to be emitted by the motor vehicle in excess of the limits prescribed in Sections 20.08.060 and 20.08.070.
- D. Violation of this section is a misdemeanor. (Ord. 3509-16 § 8, 2016: Ord. 534-78 § 4(c), 1978)

20.08.090 Public nuisance and disturbance noises.

- A. Public Nuisance Noises. The administrator may determine that a sound constitutes a public nuisance noise as defined herein. It is unlawful for any person to cause or allow to be emitted a noise which has been determined a public nuisance noise.
- B. Public Disturbance Noises Originating from Real or Personal Property. Unless specifically exempted, public disturbance noises emanating from real or personal property possessed or

controlled by the person causing or permitting the public disturbance noise are prohibited at all times. These include but are not limited to the following sounds if the sound is plainly audible across a real property line or fifty feet from the source, whichever is less.

- The frequent, repetitive and/or continuous sounding of any horn, siren or alarm attached to a
  motor vehicle, except when used as a warning of danger or as specifically permitted or required by
  law.
- 2. The frequent, repetitive and/or continuous sounds in connection with the starting, operation, repair and/or testing of any motor vehicle, motorcycle, off-highway vehicle or internal combustion engine.
- 3. The creation of frequent, repetitive and/or continuous sounds which emanate from real property possessed or controlled by the person causing or permitting the sound, such as sounds from audio equipment, television, video equipment, musical instruments, band sessions and/or social gatherings.
- 4. Violation of this section is a misdemeanor.
- C. Public Disturbance Noises Originating from Public Property. Unless specifically exempted, public disturbance noises originating from a person or personal property while on public property or a public right-of-way are prohibited at all times. In addition to public disturbance noises defined in subsection B of this section, the following are public disturbance noises:
- 1. A person or performer creating a sound, whether amplified or unamplified, between the hours of ten p.m. and seven a.m. so as to be plainly audible across a real property boundary which is not the source of sound;
- 2. A person or performer creating a sound, whether amplified or unamplified, between the hours of seven a.m. and ten p.m. so as to be plainly audible one hundred feet or more from the source of the sound;
- 3. The use of a sound amplifier or other device capable of producing or reproducing amplified sound upon public streets for the purpose of commercial advertising or sales or for attracting the attention of the public to any vehicle, structure or property or the contents therein, except that vendors whose sole method of selling is from a moving vehicle shall be exempt from this subsection;
- 4. Sound from the frequent, repetitive and/or continuous operating or playing of motor vehicle audio equipment, whether portable or stationary or mounted on or within a motor vehicle.
- 5. Violation of this section is a misdemeanor.
- D. It is unlawful to intentionally fail to cease a public disturbance noise when directed to do so by a law enforcement officer. The content of the sound will not be considered in determining any violation

of this section. Violation of this section is a misdemeanor. (Ord. 3509-16 § 9, 2016: Ord. 2394-99 § 11, 1999: Ord. 1971-93 § 1, 1993; Ord. 690-80 § 2, 1980; Ord. 534-78 § 5, 1978)

20.08.100 Noises exempt—At all times.

- A. The following noises are exempt at all times from this chapter:
- 1. Noise originating from aircraft in flight, and sounds which originate at airports and are directly related to flight operations;
- 2. Noise created by the operation of equipment or facilities of surface carriers engaged in commerce by railroad;
- 3. Noises created on property of federal military facilities;
- 4. Noise created by watercraft and float planes in operation;
- 5. Noise created by safety and protective devices, such as relief valves where noise suppression would defeat the safety release intent of the device;
- 6. Noise created by fire alarms being used for their intended purpose;
- 7. Noise created by emergency equipment, including, but not limited to, emergency standby or backup equipment, and emergency work necessary in the interests of law enforcement or of the health, safety or welfare of the community; and including, but not limited to, any emergency work necessary to replace or repair essential utility services;
- 8. Noise created by auxiliary equipment on motor vehicles used for highway maintenance;
- 9. Noise originating from officially sanctioned parades, sporting events and other public events;
- 10. Noise created by motor vehicles when regulated by Sections 20.08.060 through 20.08.080;
- 11. Noise caused by natural phenomena;
- 12. Noise originating from motor vehicle racing events at existing authorized facilities;
- 13. Noise created by existing stationary equipment used in the conveyance of water by a utility and noise created by existing electrical substations;
- 14. Noises in compliance with a lawfully issued conditional use permit or SEPA determination. (Ord. 3509-16 § 10, 2016: Ord. 1971-93 § 2, 1993; Ord. 1556-89 § 2, 1989; Ord. 564-78 §§ 1—3, 1978; Ord. 534-78 § 6(a), (b), 1978)

20.08.110 Noises exempt during daytime hours.

The following noises shall be exempt from the provisions of this chapter between the hours of seven a.m. and ten p.m. on weekdays and nine a.m. and ten p.m. on weekends and holidays:

- A. Noise created by powered equipment used in temporary or periodic maintenance or repair of residential property.
- B. Noise created by aircraft engine testing and maintenance not related to flight operations.
- C. Noise created by the discharge of firearms on authorized shooting ranges.
- D. Noise created by the installation or repair of essential utility services.
- E. Noise created by blasting.
- F. Noise created by bells, chimes or carillons not operating for more than five minutes in any one hour.
- G. Noise originating from forest harvesting and silvicultural activity.
- H. Noise originating from temporary construction sites, excepting that noise from a temporary construction site that is received in a District I property is exempt between seven a.m. and ten p.m. on weekdays and between eight a.m. and six p.m. onweekends and holidays.
- I. Noise emanating from marine-oriented construction sites except between the hours of ten p.m. and seven a.m. on weekdays and weekends if the receiving property is located in District I of the city. (Ord.  $3509-16 \ 11, 2016$ : Ord.  $534-78 \ 6(c), 1978$ )

20.08.120 Noises exempt from nighttime reduction.

Repealed by Ord. 3509-16. (Ord. 564-78 § 4, 1978; Ord. 534-78 § 6(d), 1978)

20.08.130 Administrator established—Qualifications, powers and duties.

- A. Establishment. The position of administrator is hereby established. The administrator or her designee is authorized to administer and enforce the provisions of this chapter.
- B. Qualifications of Administrator. The administrator shall be qualified to perform and interpret sound level measurements consistent with guidance provided by the State Department of Ecology or other recognized institution to operate Type I and Type II sound level meters, and make all computations and calculations necessary to enforce this chapter.
- C. Authority of Administrator. The authority of the administrator shall include but is not limited to:
- 1. Promulgate rules and regulations consistent with the terms of this chapter and reasonably necessary to implement the provisions of this chapter;

- 2. Obtaining assistance from other appropriate city departments and officials to effectively administer this noise chapter;
- 3. Training police officers and staff in noise ordinance enforcement;
- 4. Purchasing and maintaining sound measuring equipment and training city staff in their calibration and use:
- 5. Investigating citizens' noise complaints;
- Granting or denying variances according to procedures set forth in this chapter;
- Assisting city departments in evaluating and reducing the noise impact of their activities;
- 8. Providing public education and information regarding noise, this noise chapter and city of Everett noise control districts. (Ord. 3509-16 § 12, 2016: Ord. 534-78 § 7, 1978)

#### 20.08.140 Measurement of sound.

- A. If the measurements of sound are made with a sound level meter, it shall be an instrument in good operating condition meeting the requirements for a Type I or Type II instrument, as delineated in American National Standards Institute Specifications (ANSI) Section 1.4-2014.
- B. Sound measurements shall be taken using the guidance of Chapter 173-58 WAC, Sound Level Measurement Procedures, and using any additional methods recognized as best practice by the noise industry.
- C. Any sound measurements performed by a third party may be considered by the noise administrator, provided they are in accordance with this section and performed by an individual trained to operate Type I and Type II sound level meters. (Ord. 3509-16 § 13, 2016: Ord. 534-78 § 8, 1978)

#### 20.08.150 Variances.

- A. A person may request a variance from compliance with this chapter by making an application with the administrator at least thirty days before the time period for the variance is to take effect. The application shall be in writing and shall be accompanied by a fee in the amount of one hundred dollars. The variance may not be used for private activities (weddings, parties, etc.). The applicant shall explain the:
- 1. Nature of the noise.
- 2. Source of the noise.
- 3. Duration for which the noise will be created.

- 4. Time period for which the variance will be necessary.
- 5. Reason why the noise violation cannot be avoided, and
- 6. Mitigating conditions the applicant will implement to minimize the noise level violations.
- 7. The applicant shall list all property owners who adjoin the subject property per county assessor records, except that (a) the administrator may waive this property owner list requirement if the administrator determines that the granting of the variance would have no significant effect on adjoining property owners, and (b) the administrator may increase the required property owner list to include all property owners within five hundred feet of the subject property per county assessor records if the administrator determines that the granting of the variance would have a significant impact on such property owners.
- B. The administrator, after informing the affected city departments, and after considering the relative interests of the applicant, of the other owners or possessors of property likely to be affected by the noise, and of the general public, may grant a variance if the administrator determines that the noise level violations:
- 1. Cannot be avoided,
- 2. Will exist for a specific period of time,
- 3. Will not endanger public health, safety or welfare, and
- 4. Have been mitigated to the greatest extent reasonably possible.
- C. Variances granted pursuant to this chapter shall be in writing and must include the time period the variance will be in effect and the location of the variance.
- D. The administrator may deny a variance application if:
- 1. The administrator determines that the applicant does not meet the criteria listed in subsection B of this section; or
- 2. The variance was obtained with false or misleading information.
- E. The administrator may revoke a variance if:
- 1. At any time during the variance the administrator determines that the variance holder no longer meets the criteria listed in subsection B of this section;
- 2. The variance holder causes or permits noise that fails to comply with the variance or other

provisions of this chapter not affected by the variance and the issuance of a violation citation or stop work order has been or would be ineffective to secure compliance; or

- 3. The variance was obtained with false or misleading information.
- F. The variance holder must post the variance in a viewable area at the location of the variance or keep it on their person during the effective period of the variance.
- G. If the administrator grants a variance, notice shall be mailed by first class mail to those property owners appearing on the list provided by the applicant per the application requirement herein. The applicant shall be responsible for paying all mailing costs, which shall be in addition to the variance application fee.
- H. Any variance granted by the administrator shall be restricted in duration and an implementation schedule for achieving compliance with this chapter shall be incorporated therein. No variance shall exceed thirty days. Variances may be renewed, but no renewal shall be granted unless application is made at least sixty days prior to expiration of the issued variance and the applicant complies with all other requirements of this section.
- l. Any person aggrieved by a variance decision may file an appeal in writing with the land use hearing examiner within ten days of issuance of the administrator's decision. The appeal shall be a proceeding pursuant to Title 15, Review Process IIIA. The appellant must prove by clear and convincing evidence that the administrator abused his or her discretion in a decision made pursuant to this section. Any appeal of a variance decision by the administrator may be affirmed, reversed, or modified by the hearing examiner. The decision of the hearing examiner shall be final. The applicable provisions of Title 15 shall govern procedure and process of any appeal of an administrator's decision, except that public notice requirements established in Section 15.24.110 do not apply to this appeal process. Further, where a provision of Title 15 conflicts with a provision of this section, this section controls. (Ord. 3509-16 § 14, 2016: Ord. 534-78 § 9, 1978)

20.08.160 Right to appeal.

Repealed by Ord. 3509-16. (Ord. 2975-07 § 19, 2007: Ord. 534-78 § 10(a), 1978)

20.08.170 Appeal procedure.

Repealed by Ord. 3509-16. (Ord. 2975-07 § 20, 2007: Ord. 534-78 § 10(b), 1978)

20.08.180 Variance procedure.

Repealed by Ord. 3509-16. (Ord. 2975-07 § 21, 2007: Ord. 534-78 § 10(c), (d), 1978)

20.08.190 Hearing officer.

Repealed by Ord. 3509-16. (Ord. 534-78 § 10(e), 1978)

20.08.200 Enforcement—Complaints.

Repealed by Ord. 3509-16. (Ord. 534-78 § 11, 1978)

20.08.210 Provisions not exclusive.

The provisions of this chapter shall be cumulative and nonexclusive, and shall not affect any other claim, cause of action or remedy; nor, unless specifically provided, shall this chapter be deemed to repeal, amend or modify any law, ordinance or regulation relating to noise, but shall be deemed additional to existing legislation and common law on noise. (Ord. 534-78 § 13(a), 1978)

20.08.220 Enforcement—Violation—Penalty.

- A. It shall be unlawful to violate or be in conflict with this chapter. Each day, defined as the twenty-four-hour period beginning at 12:01 a.m., in which violation of this chapter occurs, shall constitute a separate violation.
- B. Any person, firm, corporation, or association or any agent thereof who violates any of the provisions of this chapter shall be subject to the provisions of Chapter 1.20. In the event an appeal of an order issued pursuant to Chapter 1.20 is not subject to Chapter 36.70C RCW (the Land Use Petition Act), appeal shall be by writ of certiorari.
- C. A violation of Section 20.08.080 or of Section 20.08.090(B), (C), or (D) is a criminal misdemeanor punishable in accordance with Section 10.04.080.
- D. Evidence in Criminal Proceedings. In any criminal prosecution under Section  $\underline{20.08.090}$  or of Section  $\underline{20.08.090}$ (B), (C), or (D), evidence of sound level through the use of a sound level meter reading shall not be necessary to establish the commission of the offense. (Ord. 3509-16 § 15, 2016: Ord. 690-80 § 3, 1980; Ord. 534-78 § 12, 1978)

#### **APPENDIX "F"**

F1

## SNOHOMISH PUBLIC UTILITIES CONTRACT PREQUALIFIED AND STANDARD PLANS

APPENDIX "F"

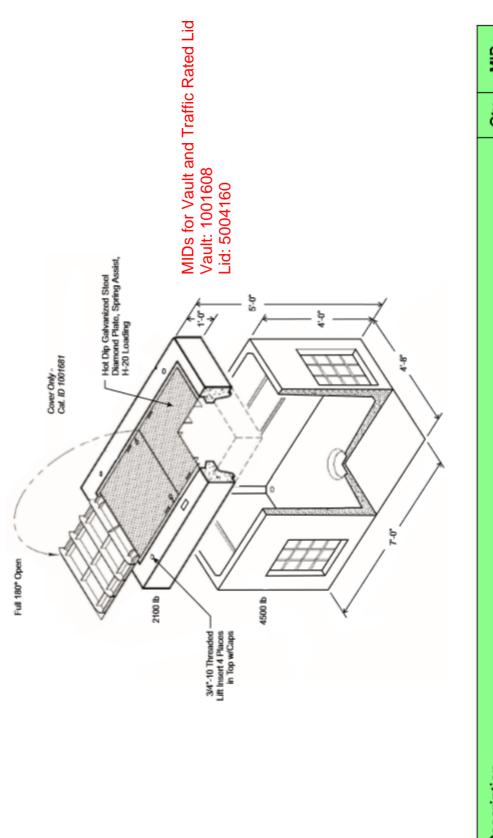
#### 2024 Prequalified/Small Works Roster Contractors Address List

B-6; Underground Line Construction, (Directional/Conventional Boring Work)

Advanced Boring Specialists, Inc. ATTN: Brandy Miller 13023 NE Hwy 99, #7 PMB 210 Vancouver, WA 98686	Cannon Construction LLC Jaimie Hinckle 406 Porter Way Milton, WA 98354	Cannon Constructors, Inc. Attn: Robert Gunter 406 Porter Way Milton, WA 98354	Cascade Cable Constructors, Inc Attn: Cliff Tvedten PO Box 638 Spokane, WA 99210
PHONE 360-253-4320 FAX 360-253-8973 brandy.m@advancedboring.com	PHONE 360-673-4433 FAX 360-673-4466 jhinckle@teamcannon.com	PHONE 425-922-2787 FAX 253-922-3245 RGunter@cannonconstructioninc.com	PHONE 509-244-2501 FAX 509-244-3064 ctvedten@cascadecable.com
DJ's Electrical, Inc. Attn: Pete Danforth PO Box 289 Brush Prairie, WA 98606	Henkels & McCoy West, Inc. Attn: Ashley Byrns PO Box 20009 5000 NE 148th Avenue Portland, OR 97230	International Line Builders, Inc. ATTN: Steve Spon PO Box 23729 Portland, OR 97281	Pacific Cable Construction, Inc. Attn: Tim Jones PO Box 37 Woodinville, WA 98072
PHONE 360/666-8070 FAX 360/666-0135 peted@djselectrical.com;	PHONE 503/255-5125 FAX 503/255-5129 abyrns@henkelswest.com;	PHONE 503/692-0193 FAX 503/692-1993 ilb.bids@ilbinc.com	PHONE 425/348-7735 FAX 425/348-7966 tim@paccab.com
bids@djselectrical.com Potelco, Inc. Attn: Jeff Lampman 14103 Stewart Road Sumner, WA 98390	Hmnorthwestbids@henkels.com Trenchless Construction Services, LLC Attn: Brandon Simonds PO Box 3372 Arlington, WA 98223		
PHONE 253-405-2644 FAX 866-418-1477 potelcobids@potelco.net	PHONE 360-474-0123 FAX 360-474-0195 bs@trenchlessconstruction.com	_	

Note: Acceptable precast concrete products are locally available from three companies:

Oldcastle Precast, Inc. Auburn, WA Phone - 800-892-1538 CUZ Concrete Products Arlington, WA Phone - 800-659-1941 Granite Precasting and Concrete, Inc. Bellingham, WA Phone - 800-808-2251



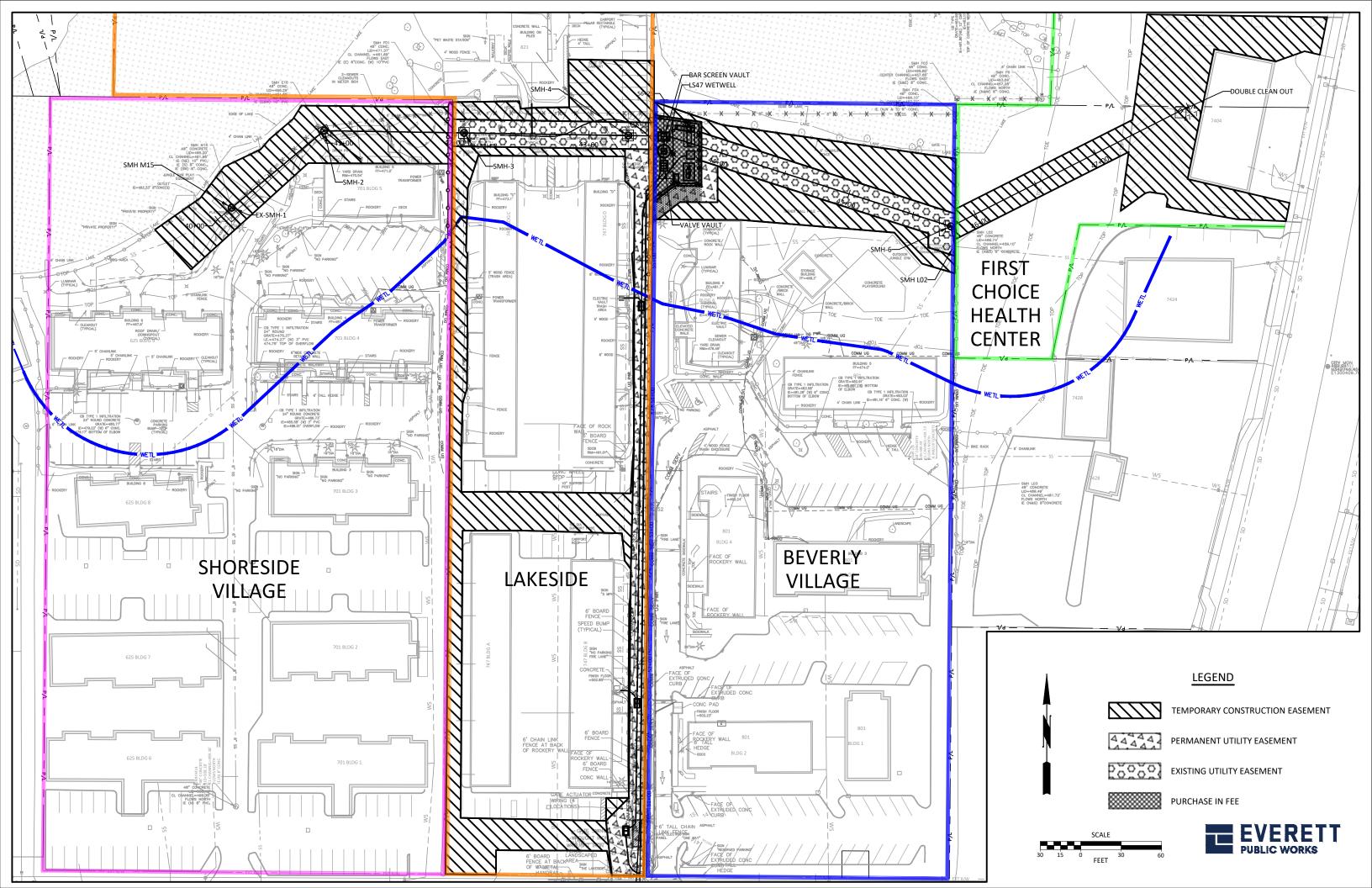
;	Description	Š		
70207	Vault, Concrete 4'8"W x 7'L x 4'H & Cover, Vault 4'8"W x 7'L x 12"H w/ (2) 3'W x 3'L Diamond Plates	_	766446	

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# APPENDIX "G" G1

## TEMPORARY CONSTRUCTON EASEMENT EXHIBIT

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# APPENDIX "H" H1

## PREVAILING WAGE RATES AND BENEFIT CODE KEY

3/5/25, 10:43 AM Journey Level Wages

# 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: 4/1/2025

### **Snohomish County**

Trade^	Job Classification	Wage	Holiday	Overtime	Note	Risk Class
Asbestos Abatement Workers	Journey Level	\$63.87	5D	1H		View
Building Service Employees	Janitor	\$16.66		1		View
Building Service Employees	Shampooer	\$16.66		1		View
Building Service Employees	Waxer	\$16.66		1		View

Building Service Employees	Window Cleaner	\$16.66		1		View
<u>Carpenters</u>	Acoustical Worker	\$78.96	15J	11U		View
<u>Carpenters</u>	Bridge Dock and Wharf Carpenter	\$80.50	15J	<b>11U</b>	9L	View
<u>Carpenters</u>	Floor Layer & Floor Finisher	\$78.96	15J	11U		View
<u>Carpenters</u>	General Carpenter	\$78.96	15J	11U		View
<u>Carpenters</u>	Scaffold Erector	\$78.96	15J	11U		View
Cement Masons	Application of all Composition Mastic	\$77.30	15J	<b>4</b> U		View
Cement Masons	Application of all Epoxy Material	\$76.78	15J	<b>4</b> U		View
Cement Masons	Application of all Plastic Material	\$77.30	15J	<b>4</b> U		View
Cement Masons	Application of Sealing Compound	\$76.78	15J	<b>4</b> U		View
Cement Masons	Application of Underlayment	\$77.30	15J	<b>4</b> U		View
Cement Masons	Building General	\$76.78	15J	<b>4</b> U		View
Cement Masons	Composition or Kalman Floors	\$77.30	15J	<b>4</b> U		View

Cement Masons	Concrete Paving	\$76.78	15J	<b>4</b> U	View
Cement Masons	Curb & Gutter Machine	\$77.30	15J	<b>4</b> U	View
Cement Masons	Curb & Gutter, Sidewalks	\$76.78	15J	<b>4</b> U	View
Cement Masons	Curing Concrete	\$76.78	15J	<b>4</b> U	View
Cement Masons	Finish Colored Concrete	\$77.30	15J	<b>4</b> U	View
Cement Masons	Floor Grinding	\$77.30	15J	<b>4</b> U	View
Cement Masons	Floor Grinding/Polisher	\$76.78	15J	<b>4</b> U	View
Cement Masons	Green Concrete Saw, self-powered	\$77.30	15J	<b>4</b> U	View
Cement Masons	Grouting of all Plates	\$76.78	15J	<b>4</b> U	View
Cement Masons	Grouting of all Tilt-up Panels	\$76.78	15J	<b>4</b> U	View
Cement Masons	Gunite Nozzleman	\$77.30	15J	<b>4</b> U	View
Cement Masons	Hand Powered Grinder	\$77.30	15J	<b>4</b> U	View
Cement Masons	Journey Level	\$76.78	15J	<b>4</b> U	View

<u>Cement Masons</u>	Patching Concrete	\$76.78	15J	<b>4</b> U	View
Cement Masons	Pneumatic Power Tools	\$77.30	15J	<b>4</b> U	View
Cement Masons	Power Chipping & Brushing	\$77.30	15J	<b>4</b> U	View
Cement Masons	Sand Blasting Architectural Finish	\$77.30	15J	<b>4</b> U	View
Cement Masons	Screed & Rodding Machine	\$77.30	15J	<b>4</b> U	View
Cement Masons	Spackling or Skim Coat Concrete	\$76.78	<b>15</b> J	<b>4</b> U	View
Cement Masons	Troweling Machine Operator	\$77.30	15J	<b>4</b> U	View
Cement Masons	Troweling Machine Operator on Colored Slabs	\$77.30	<b>15</b> J	<b>4</b> U	View
Cement Masons	Tunnel Workers	\$77.30	15J	<b>4</b> U	View
Electrical Fixture Maintenance Workers	Journey Level	\$16.66		1	View
<u>Electricians - Inside</u>	Cable Splicer	\$95.85	7H	1E	View
<u>Electricians - Inside</u>	Construction Stock Person	\$46.03	7H	1D	View

<u>Electricians - Inside</u>	Journey Level	\$89.75	7H	1E		View
Electricians - Powerline Construction	Cable Splicer	\$102.42	5A	4D		View
Electricians - Powerline Construction	Certified Line Welder	\$93.99	5A	4D		View
Electricians - Powerline Construction	Groundperson	\$59.30	5A	4D		View
Electricians - Powerline Construction	Heavy Line Equipment Operator	\$93.99	5A	4D		View
Electricians - Powerline Construction	Journey Level Lineperson	\$93.99	5A	4D		View
Electricians - Powerline Construction	Line Equipment Operator	\$80.96	5A	4D		View
Electricians - Powerline Construction	Meter Installer	\$59.30	5A	4D	8 <b>W</b>	View
Electricians - Powerline Construction	Pole Sprayer	\$93.99	5A	4D		View
Electricians - Powerline Construction	Powderperson	\$69.84	5A	4D		View
Electronic Technicians	Electronic Technicians Journey Level	\$58.51	5B	1B		View
Fabricated Precast Concrete Products	Journey Level	\$16.66		1		View

Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	\$16.66		1		View
<u>Fence Erectors</u>	Fence Erector	\$54.65	15J	11P	8Y	View
<u>Fence Erectors</u>	Fence Laborer	\$54.65	15J	11P	8Y	View
<u>Flaggers</u>	Journey Level	\$54.65	15J	11P	8Y	View
Heat & Frost Insulators And Asbestos Workers	Journey Level	\$91.81	15H	11C		View
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator	\$51.27	15M	110		View
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Foamer Operator	\$51.27	15M	110		View
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	\$51.27	15M	110		View

Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	\$49.20	15M	110		View
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	\$42.99	15 <b>M</b>	110		View
Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	TV Truck Operator	\$46.10	15M	110		View
<u>Ironworkers</u>	Journeyman	\$90.82	15K	11N		View
<u>Laborers</u>	Air, Gas Or Electric Vibrating Screed	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Airtrac Drill Operator	\$65.75	15J	11P	8Y	View
<u>Laborers</u>	Ballast Regular Machine	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Batch Weighman	\$54.65	15J	11P	8Y	View
<u>Laborers</u>	Brick Pavers	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Brush Cutter	\$63.87	15J	11P	8Y	View

<u>Laborers</u>	Brush Hog Feeder	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Burner	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Caisson Worker	\$65.75	15J	11P	8Y	View
<u>Laborers</u>	Carpenter Tender	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Cement Dumper-paving	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Cement Finisher Tender	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Change House Or Dry Shack	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Chipping Gun (30 Lbs. And Over)	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Chipping Gun (Under 30 Lbs.)	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Choker Setter	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Chuck Tender	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Clary Power Spreader	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Clean-up Laborer	\$63.87	15J	11P	8Y	View

<u>Laborers</u>	Concrete Dumper/Chute Operator	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Concrete Form Stripper	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Concrete Placement Crew	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Concrete Saw Operator/Core Driller	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Crusher Feeder	\$54.65	15J	11P	8Y	View
<u>Laborers</u>	Curing Laborer	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Demolition: Wrecking & Moving (Incl. Charred Material)	\$63.87	15J	11P	8 <b>Y</b>	View
<u>Laborers</u>	Ditch Digger	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Diver	\$65.75	15J	11P	8Y	View
<u>Laborers</u>	Drill Operator (Hydraulic, Diamond)	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Dry Stack Walls	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Dump Person	\$63.87	15J	11P	8Y	View

<u>Laborers</u>	Epoxy Technician	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Erosion Control Worker	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Faller & Bucker Chain Saw	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Fine Graders	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Firewatch	\$54.65	15J	11P	8Y	View
<u>Laborers</u>	Form Setter	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Gabian Basket Builders	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	General Laborer	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Grade Checker & Transit Person	\$67.38	15J	11P	8Y	View
<u>Laborers</u>	Grinders	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Grout Machine Tender	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Groutmen (Pressure) Including Post Tension Beams	\$64.98	15J	11P	8Y	View

<u>Laborers</u>	Guardrail Erector	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Hazardous Waste Worker (Level A)	\$65.75	15J	11P	8Y	View
<u>Laborers</u>	Hazardous Waste Worker (Level B)	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Hazardous Waste Worker (Level C)	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	High Scaler	\$65.75	15J	11P	8Y	View
<u>Laborers</u>	Jackhammer	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Laserbeam Operator	\$64.98	15J	11P	8 <b>Y</b>	View
<u>Laborers</u>	Maintenance Person	\$63.87	15J	11P	8 <b>Y</b>	View
<u>Laborers</u>	Manhole Builder-Mudman	\$64.98	15J	11P	8 <b>Y</b>	View
<u>Laborers</u>	Material Yard Person	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Mold Abatement Worker	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Motorman-Dinky Locomotive	\$67.48	15J	11P	8Y	View
<u>Laborers</u>	nozzleman (concrete pump, green cutter when using combination of	\$67.38	15J	11P	8 Y	View

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high pressure air & water on concrete & rock, sandblast, gunite, shotcrete, water blaster, vacuum blaster)

<u>Laborers</u>	Pavement Breaker	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Pilot Car	\$54.65	15J	11P	8Y	View
<u>Laborers</u>	Pipe Layer (Lead)	\$67.38	15J	11P	8Y	View
<u>Laborers</u>	Pipe Layer/Tailor	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Pipe Pot Tender	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Pipe Reliner	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Pipe Wrapper	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Pot Tender	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Powderman	\$65.75	15J	11P	8Y	View
<u>Laborers</u>	Powderman's Helper	\$63.87	15J	11P	8Y	View

<u>Laborers</u>	Power Jacks	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Power Washer	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Railroad Spike Puller - Power	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Raker - Asphalt	\$67.38	15J	11P	8Y	View
<u>Laborers</u>	Re-timberman	\$65.75	15J	11P	8Y	View
<u>Laborers</u>	Remote Equipment Operator	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Rigger/Signal Person	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Rip Rap Person	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Rivet Buster	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Rodder	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Scaffold Erector	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Scale Person	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Sloper (Over 20")	\$64.98	15J	11P	8Y	View

<u>Laborers</u>	Sloper Sprayer	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Spreader (Concrete)	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Stake Hopper	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Stock Piler	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Swinging Stage/Boatswain Chair	\$54.65	15J	11P	8Y	View
<u>Laborers</u>	Tamper & Similar Electric, Air & Gas Operated Tools	\$64.98	15J	11P	8 <b>Y</b>	View
<u>Laborers</u>	Tamper (Multiple & Self-propelled)	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Timber Person - Sewer (Lagger, Shorer & Cribber)	\$64.98	15J	11P	8 <b>Y</b>	View
<u>Laborers</u>	Toolroom Person (at Jobsite)	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Topper	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Track Laborer	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Track Liner (Power)	\$64.98	15J	11P	8Y	View

<u>Laborers</u>	Traffic Control Laborer	\$58.20	15J	11P	9C	View
<u>Laborers</u>	Traffic Control Supervisor	\$61.47	15J	11P	9C	View
<u>Laborers</u>	Truck Spotter	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Tugger Operator	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Tunnel Work-Compressed Air Worker 0-30 psi	\$200.40	15J	11P	9B	View
<u>Laborers</u>	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	\$205.43	15J	11P	9B	View
<u>Laborers</u>	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	\$209.11	<b>15</b> J	11P	9B	View
<u>Laborers</u>	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	\$214.81	<b>15</b> J	11P	9B	View
<u>Laborers</u>	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	\$216.93	15J	11P	9B	View
<u>Laborers</u>	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	\$222.03	15J	11P	9B	View

<u>Laborers</u>	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	\$223.93	<b>15</b> J	11P	9B	View
<u>Laborers</u>	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	\$225.93	15J	11P	9B	View
<u>Laborers</u>	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	\$227.93	15J	11P	9B	View
<u>Laborers</u>	Tunnel Work-Guage and Lock Tender	\$67.48	15J	11P	8Y	View
<u>Laborers</u>	Tunnel Work-Miner	\$67.48	15J	11P	8Y	View
<u>Laborers</u>	Vibrator	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Vinyl Seamer	\$63.87	15J	11P	8Y	View
<u>Laborers</u>	Watchman	\$49.97	15J	11P	8Y	View
<u>Laborers</u>	Welder	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Well Point Laborer	\$64.98	15J	11P	8Y	View
<u>Laborers</u>	Window Washer/Cleaner	\$49.97	15J	11P	8Y	View

<u>Laborers - Underground Sewer &amp;</u> <u>Water</u>	General Laborer & Topman	\$63.87	15J	11P	8 <b>Y</b>	View
<u>Laborers - Underground Sewer &amp;</u> <u>Water</u>	Pipe Layer	\$64.98	15J	11P	8 <b>Y</b>	View
Landscape Construction	Landscape Construction/Landscaping Or Planting Laborers	\$49.97	15J	11P	8 <b>Y</b>	View
<u>Landscape Construction</u>	Landscape Operator	\$87.54	15J	11G	8X	View
<u>Landscape Maintenance</u>	Groundskeeper	\$16.66		1		View
Metal Fabrication (In Shop)	Journey Level	\$37.56	0	11D		View
<u>Painters</u>	Journey Level	\$54.71	6 <b>Z</b>	<b>11</b> J		View
<u>Plumbers &amp; Pipefitters</u>	Journey Level	\$90.87	5A	1 <b>G</b>		View
Power Equipment Operators	Asphalt Plant Operators	\$89.02	15J	11G	8X	View
Power Equipment Operators	Assistant Engineer	\$83.69	15J	11G	8X	View
Power Equipment Operators	Barrier Machine (zipper)	\$88.22	15J	11G	8X	View

Power Equipment Operators	Batch Plant Operator: concrete	\$88.22	15J	11G	8X	View
Power Equipment Operators	Boat Operator	\$87.82	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Bobcat	\$83.69	15J	11G	8X	View
Power Equipment Operators	Brokk - Remote Demolition Equipment	\$83.69	15J	11G	8 <b>X</b>	View
Power Equipment Operators	Brooms	\$83.69	15J	11G	8X	View
Power Equipment Operators	Bump Cutter	\$88.22	15J	11G	8X	View
Power Equipment Operators	Cableways	\$89.02	15J	11G	8X	View
Power Equipment Operators	Chipper	\$88.22	15J	11G	8X	View
Power Equipment Operators	Compressor	\$83.69	15J	11G	8X	View
Power Equipment Operators	Concrete Finish Machine - Laser Screed	\$83.69	15J	11G	8X	View
Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$87.54	15J	11 <b>G</b>	8X	View

Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$89.02	<b>15</b> J	11G	8X	View
Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$88.22	15J	11G	8X	View
Power Equipment Operators	Conveyors	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Cranes Friction: 200 tons and over	\$90.46	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Cranes, A-frame: 10 tons and under	\$82.59	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	\$88.67	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Cranes: 20 tons through 44 tons with attachments	\$87.03	7A	11H	8X	View
Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$89.60	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$90.46	7A	11H	8X	View

Power Equipment Operators	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	\$87.82	7A	11H	8X	View
Power Equipment Operators	Cranes: Friction cranes through 199 tons	\$89.60	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Cranes: through 19 tons with attachments, a-frame over 10 tons	\$86.36	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Crusher	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Deck Engineer/Deck Winches (power)	\$88.22	15J	11G	8X	View
Power Equipment Operators	Derricks, On Building Work	\$87.82	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Dozers D-9 & Under	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Drilling Machine	\$89.91	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Elevator and man-lift: permanent and shaft type	\$83.69	15J	11G	8X	View

Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$88.22	15J	11G	8X	View
Power Equipment Operators	Forklift: 3000 lbs and over with attachments	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Forklifts: under 3000 lbs. with attachments	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Gradechecker/Stakeman	\$83.69	15J	11G	8X	View
Power Equipment Operators	Guardrail Punch	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Hard Tail End Dump Articulating Off- road Equipment Under 45 Yards	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Horizontal/Directional Drill Locator	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Horizontal/Directional Drill Operator	\$88.22	15J	11G	8X	View
Power Equipment Operators	Hydralifts/Boom Trucks Over 10 Tons	\$86.36	7 <b>A</b>	11H	8X	View

Power Equipment Operators	Hydralifts/boom trucks: 10 tons and under	\$82.59	7A	11H	8X	View
Power Equipment Operators	Leverman	\$90.84	15J	11G	8X	View
Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$89.02	15J	11G	8X	View
Power Equipment Operators	Loaders, Overhead Under 6 Yards	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Loaders, Plant Feed	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Loaders: Elevating Type Belt	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Locomotives, All	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Material Transfer Device	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Mechanics: All (Leadmen - \$0.50 per hour over mechanic)	\$89.91	15J	11G	8X	View
Power Equipment Operators	Motor Patrol Graders	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$89.02	15J	11G	8X	View

Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$83.69	15J	11G	8X	View
Power Equipment Operators	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Overhead, bridge type Crane: 20 tons through 44 tons	\$87.03	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Overhead, bridge type: 100 tons and over	\$88.67	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Overhead, bridge type: 45 tons through 99 tons	\$87.82	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Pavement Breaker	\$83.69	15J	11G	8X	View
Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$88.22	15J	11G	8X	View
Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$87.54	15J	11G	8X	View
Power Equipment Operators	Posthole Digger, Mechanical	\$83.69	15J	11G	8X	View
Power Equipment Operators	Power Plant	\$83.69	15J	11G	8X	View
Power Equipment Operators	Pumps - Water	\$83.69	15J	11G	8X	View

Power Equipment Operators	Quad 9, Hd 41, D10 And Over	\$89.02	15J	11G	8X	View
Power Equipment Operators	Quick Tower: no cab, under 100 feet in height base to boom	\$88.22	15J	11G	8X	View
Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$89.02	15J	11G	8X	View
Power Equipment Operators	Rigger and Bellman	\$82.59	7A	11H	8X	View
Power Equipment Operators	Rigger/Signal Person, Bellman(Certified)	\$86.36	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Rollagon	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Roller, Other Than Plant Mix	\$83.69	15J	11G	8X	View
Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$87.54	15J	11G	8X	View
Power Equipment Operators	Roto-mill, Roto-grinder	\$88.22	15J	11G	8X	View
Power Equipment Operators	Saws - Concrete	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$88.22	15J	11G	8X	View

Power Equipment Operators	Scrapers - Concrete & Carry All	\$87.54	15J	11G	8X	View
Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$89.02	15J	11G	8X	View
Power Equipment Operators	Service Engineers: Equipment	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Shotcrete/Gunite Equipment	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	\$87.54	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$89.02	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$88.22	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$89.91	15J	11G	8X	View
Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$90.84	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Slipform Pavers	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Spreader, Topsider & Screedman	\$89.02	15J	11G	8X	View

Power Equipment Operators	Subgrader Trimmer	\$88.22	15J	11G	8X	View
Power Equipment Operators	Tower Bucket Elevators	\$87.54	15J	11G	8X	View
Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	\$89.60	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Tower crane: up to 175' in height base to boom	\$88.67	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	\$90.46	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Transporters, All Track Or Truck Type	\$89.02	15J	11G	8X	View
Power Equipment Operators	Trenching Machines	\$87.54	15J	11G	8X	View
Power Equipment Operators	Truck Crane Oiler/Driver: 100 tons and over	\$87.03	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Truck crane oiler/driver: under 100 tons	\$86.36	7 <b>A</b>	11H	8X	View
Power Equipment Operators	Truck Mount Portable Conveyor	\$88.22	15J	11G	8X	View
Power Equipment Operators	Vac Truck (Vactor Guzzler, Hydro Excavator)	\$88.22	<b>15</b> J	11G	8X	View

Power Equipment Operators	Welder	\$89.02	15J	11G	8X	View
Power Equipment Operators	Wheel Tractors, Farmall Type	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators	Yo Yo Pay Dozer	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Asphalt Plant Operators	\$89.02	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Assistant Engineer	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Barrier Machine (zipper)	\$88.22	<b>15</b> J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Batch Plant Operator, Concrete	\$88.22	<b>15</b> J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Boat Operator	\$87.82	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Bobcat	\$83.69	<b>15</b> J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Brokk - Remote Demolition Equipment	\$83.69	15J	11G	8X	View

Power Equipment Operators- Underground Sewer & Water	Brooms	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Bump Cutter	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Cableways	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Chipper	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Compressor	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Concrete Finish Machine - Laser Screed	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$88.22	15J	11 <b>G</b>	8X	View

Power Equipment Operators- Underground Sewer & Water	Conveyors	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Cranes Friction: 200 tons and over	\$90.46	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Cranes, A-frame: 10 tons and under	\$82.59	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	\$88.67	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Cranes: 20 tons through 44 tons with attachments	\$87.03	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$89.60	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$90.46	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	\$87.82	7A	11H	8X	View

Power Equipment Operators- Underground Sewer & Water	Cranes: Friction cranes through 199 tons	\$89.60	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Cranes: through 19 tons with attachments, a-frame over 10 tons	\$86.36	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Crusher	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Deck Engineer/Deck Winches (power)	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Derricks, On Building Work	\$87.82	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Dozers D-9 & Under	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Drilling Machine	\$89.91	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Elevator and man-lift: permanent and shaft type	\$83.69	15J	11G	8X	View

Power Equipment Operators- Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Forklift: 3000 lbs and over with attachments	\$87.54	<b>15</b> J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Forklifts: under 3000 lbs. with attachments	\$83.69	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$88.22	<b>15</b> J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Gradechecker/Stakeman	\$83.69	<b>15</b> J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Guardrail Punch	\$88.22	<b>15</b> J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$89.02	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Hard Tail End Dump Articulating Off- road Equipment Under 45 Yards	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Horizontal/Directional Drill Locator	\$87.54	15J	11G	8X	View

Power Equipment Operators- Underground Sewer & Water	Horizontal/Directional Drill Operator	\$88.22	15J	11G	8 <b>X</b>	View
Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom trucks: 10 tons and under	\$82.59	7A	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Hydralifts/boom trucks: over 10 tons	\$86.36	7A	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Leverman	\$90.84	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Loaders, Overhead Under 6 Yards	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Loaders, Plant Feed	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Loaders: Elevating Type Belt	\$87.54	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Locomotives, All	\$88.22	15J	11G	8X	View

Power Equipment Operators- Underground Sewer & Water	Material Transfer Device	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Mechanics: All (Leadmen - \$0.50 per hour over mechanic)	\$89.91	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Motor Patrol Graders	\$89.02	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$89.02	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$83.69	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type Crane: 20 tons through 44 tons	\$87.03	7A	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type: 100 tons and over	\$88.67	7A	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Overhead, bridge type: 45 tons through 99 tons	\$87.82	7 <b>A</b>	11H	8X	View

Power Equipment Operators- Underground Sewer & Water	Pavement Breaker	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Pile Driver (other Than Crane Mount)	\$88.22	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Posthole Digger, Mechanical	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Power Plant	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Pumps - Water	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Quick Tower: no cab, under 100 feet in height base to boom	\$88.22	<b>15</b> J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$89.02	15J	11G	8X	View

Power Equipment Operators- Underground Sewer & Water	Rigger and Bellman	\$82.59	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Rigger/Signal Person, Bellman(Certified)	\$86.36	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Rollagon	\$89.02	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Roller, Other Than Plant Mix	\$83.69	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Roto-mill, Roto-grinder	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Saws - Concrete	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Scrapers - Concrete & Carry All	\$87.54	15J	11G	8X	View

Power Equipment Operators- Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	\$89.02	15J	11G	8 <b>X</b>	View
Power Equipment Operators- Underground Sewer & Water	Shotcrete/Gunite Equipment	\$83.69	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$89.02	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$89.91	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$90.84	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Slipform Pavers	\$89.02	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Spreader, Topsider & Screedman	\$89.02	15J	11G	8X	View

Power Equipment Operators- Underground Sewer & Water	Subgrader Trimmer	\$88.22	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Tower Bucket Elevators	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Tower Crane: over 175' through 250' in height, base to boom	\$89.60	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Tower crane: up to 175' in height base to boom	\$88.67	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Tower Cranes: over 250' in height from base to boom	\$90.46	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Transporters, All Track Or Truck Type	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Trenching Machines	\$87.54	15J	11G	8X	View
Power Equipment Operators- Underground Sewer & Water	Truck Crane Oiler/Driver: 100 tons and over	\$87.03	7 <b>A</b>	11H	8X	View
Power Equipment Operators- Underground Sewer & Water	Truck crane oiler/driver: under 100 tons	\$86.36	7 <b>A</b>	11H	8X	View

Power Equipment Operators- Underground Sewer & Water	Truck Mount Portable Conveyor	\$88.22	15J	11 <b>G</b>	8 <b>X</b>	View
Power Equipment Operators- Underground Sewer & Water	Vac Truck (Vactor Guzzler, Hydro Excavator)	\$88.22	<b>15</b> J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Welder	\$89.02	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Wheel Tractors, Farmall Type	\$83.69	15J	11 <b>G</b>	8X	View
Power Equipment Operators- Underground Sewer & Water	Yo Yo Pay Dozer	\$88.22	15J	11 <b>G</b>	8X	View
<u>Roofers</u>	Journey Level	\$67.45	5A	ЗН		View
<u>Roofers</u>	Using Irritable Bituminous Materials	\$70.45	5A	ЗН		View
Sheet Metal Workers	Journey Level (Field or Shop)	\$102.92	7 <b>F</b>	1E		View
Sign Makers & Installers (Electrical)	Sign Installer	\$26.56		1		View
Sign Makers & Installers (Electrical)	Sign Maker	\$20.50		1		View
Sign Makers & Installers (Non- Electrical)	Sign Installer	\$22.56		1		View

Sign Makers & Installers (Non- Electrical)	Sign Maker	\$20.50		1		View
Street And Parking Lot Sweeper Workers	Journey Level	\$16.66		1		View
<u>Surveyors</u>	Assistant Construction Site Surveyor	\$86.36	7 <b>A</b>	11H	8X	View
Surveyors	Chainman	\$82.59	7 <b>A</b>	11H	8X	View
<u>Surveyors</u>	Construction Site Surveyor	\$87.82	7 <b>A</b>	11H	8X	View
<u>Surveyors</u>	Drone Operator (when used in conjunction with survey work only)	\$82.59	7 <b>A</b>	11H	8X	View
<u>Surveyors</u>	Ground Penetrating Radar Operator	\$82.59	7 <b>A</b>	11H	8X	View
Telecommunication Technicians	Telecom Technician Journey Level	\$58.51	5B	1B		View
Telephone Line Construction - Outside	Cable Splicer	\$41.35	5A	2B		View
<u>Telephone Line Construction -</u> <u>Outside</u>	Hole Digger/Ground Person	\$27.31	5A	2B		View
Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	\$34.53	5A	2B		View

<u>Telephone Line Construction -</u> <u>Outside</u>	Telephone Lineperson	\$39.07	5 <b>A</b>	2B	View
<u>Traffic Control Stripers</u>	All cleanup required in connection with traffic control stripers work (Group 1)	\$92.44	15L	1K	View
<u>Traffic Control Stripers</u>	Handling, painting and installing of all car stops, stop signs and any other type sign (Group 2)	\$62.69	15L	1K	View
<u>Traffic Control Stripers</u>	Installation of guard rail and posts and similar protective devices (Group 2)	\$62.69	15L	<b>1K</b>	View
<u>Traffic Control Stripers</u>	Installation of parking gates, ticket spitters and other mechanical and automatic control devices (Group 2)	\$62.69	15L	1K	View
<u>Traffic Control Stripers</u>	Installation of plastic metal or composition button, or lines used instead of paint (Group 1)	\$92.44	15L	1K	View
<u>Traffic Control Stripers</u>	Line removal; chemical sand and hydro-blast, paint and button (Group 1)	\$92.44	15L	<b>1K</b>	View

<u>Traffic Control Stripers</u>	Manufacturing and installation of all car stops and control devices and similar traffic regulators (Group 2)	\$62.69	15L	1K		View
<u>Traffic Control Stripers</u>	Manufacturing, painting, stenciling, servicing, repairing, placing and removal of traffic safety and control devices/barricades (Group 2)	\$62.69	15L	1K		View
<u>Traffic Control Stripers</u>	Painting and installing lines, arrows, bumpers, curbs, etc., on parking lots, air fields, highways, game courts (Group 1)	\$92.44	15L	1K		View
<u>Traffic Control Stripers</u>	Preparation and maintenance of all surfaces (Group 1)	\$92.44	15L	1K		View
<u>Traffic Control Stripers</u>	Seal coating, slurry coating and other surface protection (Group 2)	\$62.69	15L	1K		View
<u>Truck Drivers</u>	Asphalt Mix Over 16 Yards	\$79.40	15J	11M	8L	View
<u>Truck Drivers</u>	Asphalt Mix To 16 Yards	\$78.56	15J	11M	8L	View
<u>Truck Drivers</u>	Dump Truck	\$78.56	15J	11M	8L	View

3/5/25, 10:43 AM Journey Level Wages

<u>Truck Drivers</u>	Dump Truck & Trailer	\$79.40	15J	11M	8L	View
<u>Truck Drivers</u>	Other Trucks	\$79.40	15J	11M	8L	View
Truck Drivers - Ready Mix	Transit Mix	\$79.40	15J	11M	8L	View
Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	\$17.05		1		View
Well Drillers & Irrigation Pump Installers	Oiler	\$16.66		1		View
Well Drillers & Irrigation Pump Installers	Well Driller	\$19.01		1		View

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# **Overtime Codes**

**Overtime calculations** are based on the hourly rate actually paid to the worker. On public works projects, the hourly rate must be not less than the prevailing rate of wage minus the hourly rate of the cost of fringe benefits actually provided for the worker.

- 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.

## Benefit Code Key – Effective 3/5/2025 thru 8/30/2025

# **Overtime Codes Continued**

- 1. N. All hours worked on Saturdays (except makeup days) shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.
  - O. The first ten (10) hours worked on Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays, holidays and after twelve (12) hours, Monday through Friday and after ten (10) hours on Saturday shall be paid at double the hourly rate of wage.
  - P. All hours worked on Saturdays (except makeup days if circumstances warrant) and Sundays shall be paid at one and one-half times the hourly rate of wage. All hours worked on holidays shall be paid at double the hourly rate of wage.
  - Q. The first two (2) hours after eight (8) regular hours Monday through Friday and up to ten (10) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of ten (10) hours per day Monday through Saturday and all hours worked on Sundays and holidays (except Christmas day) shall be paid at double the hourly rate of wage. All hours worked on Christmas day shall be paid at two and one-half times the hourly rate of wage.
  - R. All hours worked on Sundays and holidays shall be paid at two times the hourly rate of wage.
  - 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.

- 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.
  - 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.
  - M. This code appears to be missing. All hours worked on Saturdays, Sundays and holidays shall be paid at double 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.
- 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.
  - 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.
  - J. All hours worked between the hours of 10:00 pm and 5:00 am, Monday through Friday, and all hours worked on Saturdays shall be paid at a 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.
  - K. 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 5 am to 6pm 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, and all hours worked in excess of twelve (12) hours in a single shift 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. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the eight (8) hours rest period.

- 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
  - 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.
  - 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:

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 four-day, ten hour work week, and Saturday shall be paid at one and one half (1½) 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.
- 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.
- I. The First eight (8) hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) per day on Saturdays shall be paid at double the hourly rate of wage. All hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

- 4. J. The first eight (8) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked in excess of eight (8) hours on a Saturday shall be paid at double the hourly rate of wage. All hours worked over twelve (12) in a day, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
  - K. All hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage, so long as Saturday is the sixth consecutive day worked. All hours worked over twelve (12) in a day Monday through Saturday, and all hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
  - L. The first twelve (12) hours worked on a Saturday shall be paid at one and one-half times the hourly rate of wage. All hours worked on a Saturday in excess of twelve (12) hours shall be paid at double the hourly rate of pay. All hours worked over twelve (12) in a day Monday through Friday, and all hours worked on Sundays shall be paid at double the hourly rate of wage. All hours worked on a holiday shall be paid at one and one-half times the hourly rate of wage, except that all hours worked on Labor Day shall be paid at double the hourly rate of pay.
  - S. On a four (4) day ten (10) hour workweek scheduled Monday through Thursday, or Tuesday through Friday, work performed in excess of (10) hours shall be paid at one and one half (1-1/2) times the hourly rate of pay. On Monday through Friday, work performed outside the normal work hours of 6:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations).

All hours worked on Saturdays shall be paid at one and one-half times the hourly rate of wage. All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. When an employee returns to work without at least eight (8) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

Multiple Shift Operations: When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. Special Shifts: The Special Shift Premium is the basic hourly rate of pay plus \$2.00 an hour. When due to conditions beyond the control of the employer or when an owner (not acting as the contractor), a government agency or the contract specifications require more than four (4) hours of a special shift can only be performed outside the normal 6am to 6pm shift then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid the special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday).

U. 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. (Except on makeup days if work is lost due to inclement weather, then the first eight (8) hours on Saturday may be paid the regular rate.) All hours worked over twelve (12) hours Monday through Saturday, and all hours worked on Sundays and holidays shall be paid at double the hourly rate of wage.

4. X. 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. Work performed outside the normal shift of 6 am to 6pm shall be paid at one and one-half the straight time rate, (except for special shifts or three shift operations). All work performed on Sundays and holidays shall be paid at double the hourly rate of wage. Shifts may be established when considered necessary by the Employer.

The Employer may establish shifts consisting of eight (8) or ten (10) hours of work (subject to WAC 296-127-022), that shall constitute a normal forty (40) hour work week. The Employer can change from a 5-eight to a 4-ten hour schedule or back to the other. All hours of work on these shifts shall be paid for at the straight time hourly rate. Work performed in excess of eight hours (or ten hours per day (subject to WAC 296-127-022) shall be paid at one and one-half the straight time rate.

When due to conditions beyond the control of the Employer, or when contract specifications require that work can only be performed outside the regular day shift, then by mutual agreement a special shift may be worked at the straight time rate, eight (8) hours work for eight (8) hours pay. The starting time shall be arranged to fit such conditions of work.

When an employee returns to work without at a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

# **Overtime Codes Continued**

- 11. 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 After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
  - 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. All non-overtime and non-holiday hours worked between 4:00 pm and 5:00 am, Monday through Friday, shall be paid at a premium rate of 15% over the hourly rate of wage.
  - D. All hours worked on Saturdays and holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked on Sundays shall be paid at double the hourly rate of wage.
    - After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.
  - E. The first two (2) hours after eight (8) regular hours Monday through Friday, the first ten (10) hours on Saturday, and the first ten (10) hours worked on Holidays shall be paid at one and one-half times the hourly rate of wage. All hours worked over ten (10) hours Monday through Saturday, and Sundays shall be paid at double the hourly rate of wage.

After an employee has worked eight (8) hours, all additional hours worked shall be paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours or more.

11. F. 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 four-day, ten hour work week, and Saturday shall be paid at one-half times the hourly rate of wage 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.

G. 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 5 am to 6pm 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, and all hours worked in excess of twelve (12) hours in a single shift 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 nine (9) hours or more. When an employee returns to work without at least nine (9) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the nine (9) hours rest period.

H. 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 5 am to 6pm 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, and all hours worked in excess of twelve (12) hours in a single shift 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 ten (10) hours or more. When an employee returns to work without at least ten (10) hours time off since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until he/she shall have the ten (10) hours rest period.

- J. All hours worked on holidays shall be paid at double the hourly rate of wage.
- K. On Monday through Friday hours worked outside 4:00 am and 5:00 pm, and the first two (2) hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked over 10 hours per day Monday through Friday, and all hours worked on Saturdays, Sundays, and Holidays worked shall be paid at double the hourly rate of wage.
- L. An employee working outside 5:00 am and 5:00 pm shall receive an additional two dollar (\$2.00) per hour for all hours worked that shift. All hours worked on holidays shall be paid at one and one-half 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.

11. M. 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.

Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of a multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 am to 6:00 pm, then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shift shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten shifts.

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. All work performed after 6:00 pm Saturday to 5:00 am Monday, all work performed over twelve (12) hours, and all work performed on holidays shall be paid at double the straight time rate of pay.

Shift Pay Premium: In an addition to any overtime already required, all hours worked between the hours of 6:00 pm and 5:00 am shall receive an additional two dollars (\$2.00) per hour.

N. All work performed over twelve hours in a shift and all work performed on Sundays and Holidays shall be paid at double the straight time rate.

Any time worked over eight (8) hours on Saturday shall be paid double the straight time rate, except employees assigned to work six 10-hour shifts per week shall be paid double the straight time rate for any time worked on Saturday over 10 hours.

O. All work performed on Saturdays, Sundays, and Holidays shall be paid at one and one half (1-1/2) times the straight time rate of pay.

11. P. Work performed in excess of ten (10) hours of straight time per day when four ten (10) hour shifts are established and all work on Saturdays, except for make-up days shall be paid at time and one-half (1 ½) the straight time rate.

Work performed outside the normal work hours of 5:00 a.m. and 6:00 p.m. shall be paid at one and one-half (1-1/2) times the straight time rate, (except for special shifts or multiple shift operations). When the first shift of multiple shift (a two or three shift) operation is started at the basic straight time rate or at a specific overtime rate, all shifts of that day's operation shall be completed at that rate. When due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift of 5:00 a.m. to 6:00 p.m., then a special shift may be worked at the straight time rate, plus the shift pay premium when applicable. The starting time of work will be arranged to fit such conditions of work. Such shifts shall consist of eight (8) hours work for eight (8) hours pay or ten (10) hours work for ten (10) hours pay for four ten-hour shifts.

In the event the job is down due to weather conditions, 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 work performed on Sundays and holidays and work in excess of twelve (12) hours per day shall be paid at double (2x) the straight time rate of pay.

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.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

- Q. 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 35% over the hourly rate of wage. Work performed on Sundays shall be paid at double time. All hours worked on holidays shall be paid at double the hourly rate of wage.
- R On Monday through Saturday hours worked outside 6:00 am and 7:00 pm, and all hours after eight (8) hours worked shall be paid at one and one-half times the hourly rate. All hours worked on Sundays and Holidays shall be paid at double the hourly rate of wage.
  - When a holiday falls on a Saturday, the Friday before shall be the observed holiday. When a holiday falls on a Sunday, the following Monday shall be the observed holiday.
- S. The first ten (10) 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, or other conditions beyond the control of the Employer, then Saturday may be worked at the straight time rate, for the first eight (8) hours, or the first ten (10) hours when a four day ten hour workweek has been established.

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.

When an employee returns to work without a break of eight (8) hours since their previous shift, all such time shall be a continuation of shift and paid at the applicable overtime rate until such time as the employee has had a break of eight (8) hours.

11. T. 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.

U. 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.

If, due to conditions beyond the control of the Employer or when contract specifications require that work can only be performed outside the regular day shift, then a Special Shift may be worked, Monday through Friday, at the straight-time rate. The starting time of work for the Special Shift will be arranged to fit such conditions of work. Such Special Shift shall consist of eight (8) hours of work for eight (8) hours of pay or ten (10) hours of work for ten(10) hours of pay on a four-ten workday schedule.

#### **Holiday Codes**

- 5. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, and Christmas Day (7).
  - B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, the day before Christmas, and Christmas Day (8).
  - C. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8).
  - D. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8).
  - H. Holidays: New Year's Day, Memorial Day, Independence Day, Thanksgiving Day, the Day after Thanksgiving Day, And Christmas (6).

# **Holiday Codes Continued**

- 5. I. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6).
  - 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).
  - 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).

- 6. G. Paid Holidays: New Year's Day, Martin Luther King Jr. Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, and Christmas Eve Day (11).
  - H. Paid Holidays: New Year's Day, New Year's Eve Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday After Thanksgiving Day, Christmas Day, The Day After Christmas, And A Floating Holiday (10).
  - T. Paid Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Last Working Day Before Christmas Day, And Christmas Day (9).
  - Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Friday after Thanksgiving Day, And Christmas Day (7). If a holiday falls on Saturday, the preceding Friday shall be considered as the holiday. If a holiday falls on Sunday, the following Monday shall be considered as the holiday.

## **Holiday Codes Continued**

- 7. A. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any Holiday Which Falls On A Sunday Shall Be Observed As A Holiday On The Following Monday. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
  - B. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
  - C. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
  - D. Paid Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (8). Unpaid Holidays: President's Day. Any paid holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any paid holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
  - E. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, And Christmas Day (7). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
  - 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.

- 7. G. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
  - H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
  - I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
  - J. Holidays: New Year's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day and Christmas Day (6). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.

- 7. 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.
  - 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.
  - 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.
  - V. Holidays: New Year's Day, President's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Day, the day before or after Christmas, and the day before or after New Year's Day. If any of the above listed holidays falls on a Sunday, the day observed by the Nation shall be considered a holiday and compensated accordingly.
  - W. Holidays: New Year's Day, Day After New Year's, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day, Christmas Day, the day after Christmas, the day before New Year's Day, and a Floating Holiday.
  - X. 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 the day before or after Christmas day. If a holiday falls on a Saturday or on a Friday that is the normal day off, then the holiday will be taken on the last normal workday. If the holiday falls on a Monday that is the normal day off or on a Sunday, then the holiday will be taken on the next normal workday.
  - Y. Holidays: New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, and Christmas Day. (8) If the holiday falls on a Sunday, then the day observed by the federal government shall be considered a holiday and compensated accordingly.
  - Z. Holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, Christmas Eve, and Christmas Day (9). Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday. Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

# Benefit Code Key - Effective 3/5/2025 thru 8/30/2025

- 15. G. New Year's Day, Washington's Birthday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, the last scheduled workday before Christmas, and Christmas Day (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.
  - H. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, the Last Working Day before Christmas Day and Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
  - I. Holidays: New Year's Day, President's Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, The Friday After Thanksgiving Day, The Day Before Christmas Day And Christmas Day (9). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday. Any holiday which falls on a Saturday shall be observed as a holiday on the preceding Friday.
  - J. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, and Christmas Day (9). 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.
  - 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, Independence Day, Labor Day, Veteran's 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. If any of the listed holidays falls on a Saturday, the preceding Friday shall be a regular work day.
  - M. Holidays: New Year's Day, Martin Luther King Jr. Day, Independence Day, Memorial Day, Labor Day, Thanksgiving Day, the Friday after Thanksgiving Day, Christmas Eve Day and Christmas Day (9). 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.
  - N. 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). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.
  - O. Holidays: New Year's Day, Martin Luther King Jr. Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, the Friday and Saturday after Thanksgiving Day, the day before Christmas day, and Christmas Day (10). Any holiday which falls on a Sunday shall be observed as a holiday on the following Monday.

# Benefit Code Key - Effective 3/5/2025 thru 8/30/2025

## **Note Codes**

- 8. D. Workers working with supplied air on hazmat projects receive an additional \$1.00 per hour.
  - L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$0.75, Level B: \$0.50, And Level C: \$0.25.
  - M. Workers on hazmat projects receive additional hourly premiums as follows: Levels A & B: \$1.00, Levels C & D: \$0.50.
  - N. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$1.00, Level B: \$0.75, Level C: \$0.50, And Level D: \$0.25.
  - 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.
  - 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.
- 8. 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'.

W. Meter Installers work on single phase 120/240V self-contained residential meters. The Lineman/Groundmen rates would apply to meters not fitting this description.

## Benefit Code Key – Effective 3/5/2025 thru 8/30/2025

## **Note Codes Continued**

X. 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. Special Shift Premium: Basic hourly rate plus \$2.00 per hour.

When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications requires that work can only be performed outside the normal 5 am to 6pm shift, then the special shift premium will be applied to the basic hourly rate. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in OT or Double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Y. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.

Swinging Stage/Boatswains Chair: Employees working on a swinging state or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.

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

Special Shift Premium: Basic hourly rate plus \$2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as a contractor), a government agency or the contract specifications require that more than (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they will be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

## **Note Codes Continued**

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

Special Shift Premium: Basic hourly rate plus \$2.00 per hour. When due to conditions beyond the control of the Employer or when an owner (not acting as the contractor), a government agency or the contract specifications require that more than four (4) hours of a special shift can only be performed outside the normal 6 am to 6pm shift, then the special shift premium will be applied to the basic straight time for the entire shift. When an employee works on a special shift, they shall be paid a special shift premium for each hour worked unless they are in overtime or double-time status. (For example, the special shift premium does not waive the overtime requirements for work performed on Saturday or Sunday.)

Certified Crane Operator Premium: Crane operators requiring certifications shall be paid \$0.50 per hour above their classification rate.

Boom Pay Premium: All cranes including tower shall be paid as follows based on boom length:

- (A) 130' to 199' \$0.50 per hour over their classification rate.
- (B) -200' to 299' -\$0.80 per hour over their classification rate.
- (C) 300' and over \$1.00 per hour over their classification rate.

# Benefit Code Key - Effective 3/5/2025 thru 8/30/2025

# **Note Codes Continued**

- 9. B. 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.
  - Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.
  - C. Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay. Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.
    - 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.
  - D. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, bridges, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.
  - E. Heavy Construction includes construction, repair, alteration or additions to the production, fabrication or manufacturing portions of industrial or manufacturing plants, hydroelectric or nuclear power plants and atomic reactor construction. 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.
  - F. Industrial Painter wages are required for painting within industrial facilities such as treatment plants, pipelines, towers, dams, power generation facilities and manufacturing facilities such as chemical plants, etc., or anywhere abrasive blasting is necessary to prepare surfaces, or hazardous materials encapsulation is required.
  - H. One (1) person crew shall consist of a Party Chief. (Total Station or similar one (1) person survey system). Two (2) person survey party shall consist of a least a Party Chief and a Chain Person. Three (3) person survey party shall consist of at least a Party Chief, an Instrument Person, and a Chain Person.

# Benefit Code Key - Effective 3/5/2025 thru 8/30/2025

9. 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'.

Employees may be required to perform any combination of work within the Diving team/crew, (with the exception of dive Supervisor) provided they are paid at the highest rate at which he/she has worked for the shift.

L. Workers on hazmat projects receive additional hourly premiums as follows -Level A: \$0.75, Level B: \$0.50, And Level C: \$0.25.

Tide Work: When employees are called out between the hours of 6:00 p.m. and 6:00 a.m. to work on tide work (work located in the tide plane) all time worked shall be at one and one-half times the hourly rate of pay.

Swinging Stage/Boatswains Chair: Employees working on a swinging stage or boatswains chair or under conditions that require them to be tied off to allow their hands to be free shall receive seventy-five cents (\$0.75) per hour above the classification rate.



# CITY OF EVERETT, WASHINGTON PUBLIC WORKS DEPARTMENT

#### **ADDENDUM #1**

Beverly Lake Sewer Replacement – LS#47 UP3529

03-21-2025

# **Notice to Plan Holders:**

This Addendum No. 1 contains the following revisions, additions, deletions, and/or clarifications, is hereby made a part of the plans and specifications (Contract Documents) for the above named project, and shall be taken into consideration by Bidders in submitting their bids.

This Addendum #1 contains six pages total.

Bidders shall acknowledge receipt of this Addendum No. 1 in the space provided on the Proposal. Failure to do so may subject the Bidder to disqualification of its bid.

This addendum includes the following changes:

## **PLANS**

# Item 1 - Drawing C1

Replace DWG C1 with the attached drawing which reflects the updated material designation from 8" PVC to 8" HDPE where indicated.

# Item 2 - Drawing C2

Replace DWG C2 with the attached drawing which reflects the updated material designation in the Directional Bore from 8" PVC to 8" HDPE where indicated.

#### Item 3 - Drawing C8

Replace DWG C8 with the attached drawing which reflects a modified Directional Bore Section to include a 1" PVC inside the 3" Spare.

## **SPECIFICATIONS**

Item 4 – Special Provisions City of Everett Schedule A Bid Schedule.

Change the wording in Bid Item #32 to WATER SERVICE, 1-INCH ENCASED IN 3" HDPE (HDD)

#### Item 5 - Quantity on bid item #5

Question Received: "The specs say the pre-bids are on 3/18 at 10:00 AM and 3/25 at 1:00 PM.

Are we required to attend both pre-bids or just one"

**Answer: Both Pre-Bid meetings are "Optional"** 

.Question Received: "Please provide the unit and quantity for #19 on the Bid Schedule"

Answer: The unity of measure is "LS" and the quantity is "1".

Question Received: "On sheet C1 the profile sheet calls for 8" PVC (2-runs of 92.47LF and 122.11 LF)"

Answer: Should be 8" HDPE.

Question Received: "Sheet C2 from SMH-6 to ex SMH L02 it asks for 8" PVC (app. 15LF). I don't see 8"

PVC on the proposal."

**Answer: Should be 8" HDPE** 

**Question Received:** ": The detail on Sheet C8 for the directional bore shows a 3" HDPE Spare pipe, running along side the water service that's encased, is being shown. Will there be a bid section for the 3" HDPE Spare? I feel we need to be able to provide pricing for this piece if it's being required to install, otherwise the cost and quantity won't be accurate for the HDPE pipe"

Answer: Water service is encased in a 3" HDPE. Detail for spare should be 3" HDPE with a 1" PVC, Bid Item 32 correctly captures the full quantity of 3" HDPE (1100-LF). Detail will be revised

**Question Received:** "Can you please confirm if the water service is supposed to be encased in 3" or 4" HDPE?."

**Answer: Casing for Water Service and SPARE should be 3" HDPE** 

**Question Received:** "After going through the spools for the lift station are there any special coatings or lining needed for the spools that are inside of the structures?"

**Answer: No coatings or linings are required** 

CONTRACT

None

**PROPOSAL** 

None

All other requirements of the plans and specifications remain in effect.

This addendum shall be attached to and made a part of the plans and specifications and shall be acknowledged on the bidder's proposal.

Sincerely,

Daniel Enrico, P.E. Project Manager

Attachments: Revised drawings C1, C2, C8 and page SP-3 from the bid form

### **GENERAL NOTES**

- 1 SEE SURVEY CONTROL PLAN DRAWING G3 FOR DEFINITION OF CONSTRUCTION BASELINE STATIONING AND VERTICAL CONTROL. 2 EXISTING UTILITY TO REMAIN OPERATIONAL UNTIL FINAL CONNECT
- TO COMPLETED NEW SYSTEM, PROTECT DURING CONSTRUCTION. 3 PROTECT EXISTING PRIVATE LANDSCAPING, PAVING, FENCES
- AND/OR STRUCTURE DURING CONSTRUCTION. 4 ALL WORK AND MATERIALS SHALL CONFROM TO THE CITY OF EVERETT STANDARDS AND WSDOT/WSDOT APWA STANDARD SPECIFICATIONS UNLESS SUPERCEDED BY SPECIAL PROVISIONS.
- 5 NO PART OF THE SANITARY SEWER SYSTEM SHALL BE COVERED, CONCEALED OR PUT INTO USE UNTIL IT HAS BEEN TESTED, INSPECTED AND APPROVED BT THE CITY INSPECTOR.
- 6 A MINIMUM OF THREE TRACE WIRES SHALL BE PROVIDED WITH ALL PIPE INSTALLATION.

#### TESC NOTES

- 1 MINIMIZE IMPACT TO LAKE (AND HYDROSEED ALL DISTURBED GRASS AREAS WITH LAWN MIX.
- 2 INSTALL INLET PROTECTION AS REQUIRED.
- 3 ACCESS TO MANHOLES NEAR OR IN THE LAKE BOUNDARY SHALL BE KEPT TO MINIMUM AND SHALL BE BY FOOT ONLY. NO DISTURBANCE TO VEGETATION SHALL BE PERMITTED.

# # NOTES

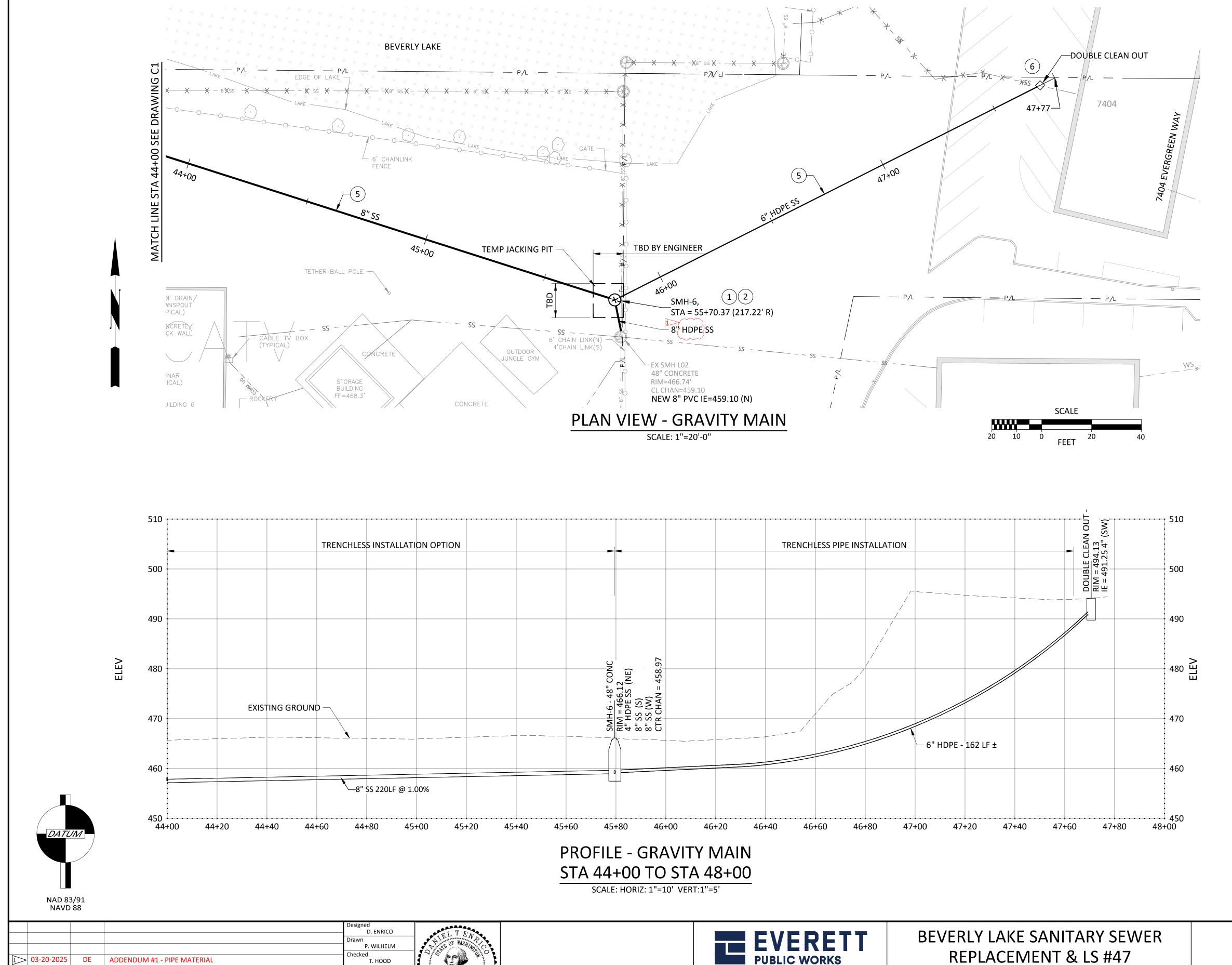
- INSTALL NEW MANHOLE PER STANDARD DRAWINGS 607, 608, AND 609 AS INDICATED ON THE PLAN. INSTALL MANHOLE FRAME AND COVER PER STANDARD DRAWING 611.
- CONNECT TO EXISTING PIPE USING KOR-N-SEAL BOOT. VERIFY INVERT ELEVATION PRIOR TO CONSTRUCTION.
- INSTALL REPLACEMENT SIDE SEWER CONNECTION PER STANDARD DRAWINGS 602 AND 604. CLEANOUT LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO INSTALLATION. SIDE SEWER SHALL BE INSTALLED TO AVOID CONFLICT WITH WATER AND OR STORM LINES.
- INSTALL NEW SANITARY SEWER PIPE IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND SPECIFICATIONS. EXCAVATE AND BACKFILL TRENCH PER STANDARD DRAWING 614.
- INSTALL NEW SANITARY SEWER PIPE IN ACCORDINACE WITH THE SPECIAL PROVISIONS AND SPECIFICATIONS. TRENCHLESS TECHNOLOGY SHALL BE USED.
- INSTALL TWO-WAY SEWER CLEANOUT PER STANDARD DRAWINGS 601, 603, AND 604. SIDE SEWER SHALL BE INSTALLED TO AVOID CONFLICT WITH WATER PIPES.
- BACKFILL TRENCH EXCAVATION PER STANDARD DRAWING 614. PROVIDE AND MAINTAIN TEMPORARY TRENCH PATCHING UNTIL FINAL RESTORATION CAN COMMENCE.

P. WILHELM ADDENDUM #1 - PIPE MATERIAL NO. DATE APRVD esign Review Level PLANS ISSUED FOR RECORD CONST ACTION DATE APRVD ACTION DATE APRVD ACTION DATE APRVD



**BEVERLY LAKE SANITARY SEWER** REPLACEMENT & LS #47 WORK ORDER 3529

UTILTY PLAN & PROFILE STA 40+00 TO STA 44+00



#### **GENERAL NOTES**

- 1 SEE SURVEY CONTROL PLAN DRAWING G3 FOR DEFINITION OF CONSTRUCTION BASELINE STATIONING AND VERTICAL CONTROL. 2 EXISTING UTILITY TO REMAIN OPERATIONAL UNTIL FINAL CONNECT
- TO COMPLETED NEW SYSTEM, PROTECT DURING CONSTRUCTION. 3 PROTECT EXISTING PRIVATE LANDSCAPING, PAVING, FENCES

AND/OR STRUCTURE DURING CONSTRUCTION.

- 4 ALL WORK AND MATERIALS SHALL CONFROM TO THE CITY OF EVERETT STANDARDS AND WSDOT/WSDOT APWA STANDARD SPECIFICATIONS UNLESS SUPERCEDED BY SPECIAL PROVISIONS.
- 5 NO PART OF THE SANITARY SEWER SYSTEM SHALL BE COVERED, CONCEALED OR PUT INTO USE UNTIL IT HAS BEEN TESTED, INSPECTED AND APPROVED BT THE CITY INSPECTOR.
- 6 A MINIMUM OF THREE TRACE WIRES SHALL BE PROVIDED WITH ALL PIPE INSTALLATION.

#### **TESC NOTES**

- 1 MINIMIZE IMPACT TO LAKE (AND HYDROSEED ALL DISTURBED GRASS AREAS WITH LAWN MIX.
- 2 INSTALL INLET PROTECTION AS REQUIRED.
- 3 ACCESS TO MANHOLES NEAR OR IN THE LAKE BOUNDARY SHALL BE KEPT TO MINIMUM AND SHALL BE BY FOOT ONLY. NO DISTURBANCE TO VEGETATION SHALL BE PERMITTED.

# (#) NOTES

- INSTALL NEW MANHOLE PER STANDARD DRAWINGS 607, 608, AND 609 AS INDICATED ON THE PLAN. INSTALL MANHOLE FRAME AND COVER PER STANDARD DRAWING 611.
- CONNECT TO EXISTING PIPE USING KOR-N-SEAL BOOT. VERIFY INVERT ELEVATION PRIOR TO CONSTRUCTION.
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- BACKFILL TRENCH EXCAVATION PER STANDARD DRAWING 614. PROVIDE AND MAINTAIN TEMPORARY TRENCH PATCHING UNTIL FINAL RESTORATION CAN COMMENCE.

UTILTY PLAN & PROFILE STA 44+00 TO STA 48+00 10

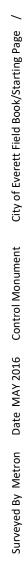
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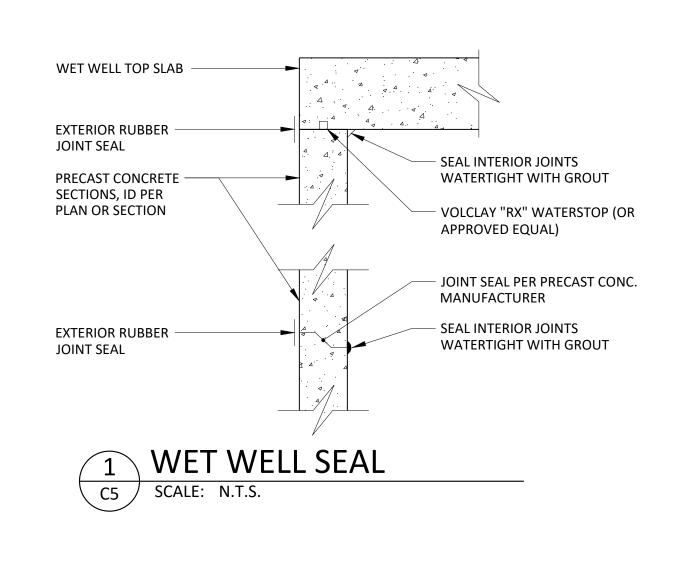
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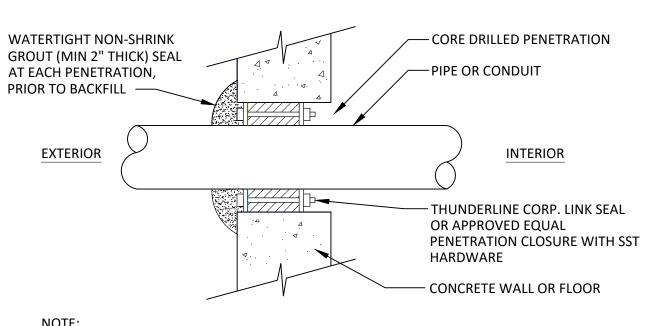


WORK ORDER 3529



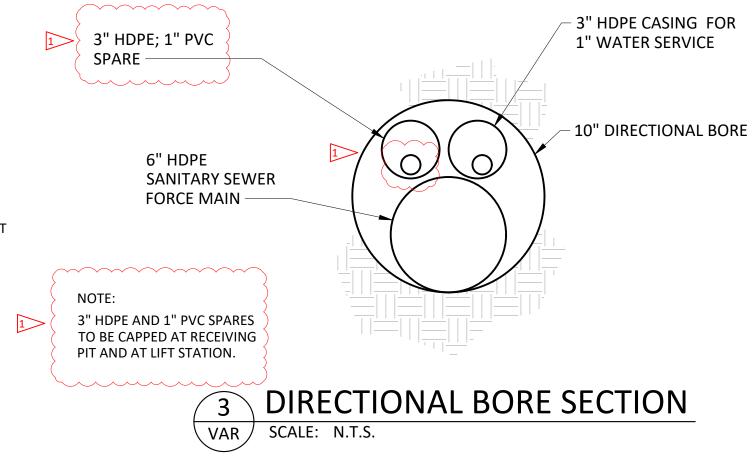


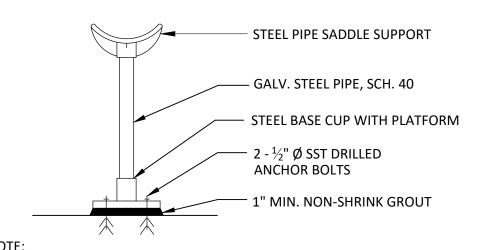




NOTE:
THIS DETAIL SHALL BE USED FOR PIPE PENETRATIONS ON ALL CONCRETE STRUCTURES,
INCLUDING ELECTRICAL CONDUIT, AIR DUCTS, WATER OR WASTEWATER PIPES, AND DRAIN
PIPES, UNLESS OTHERWISE NOTED.

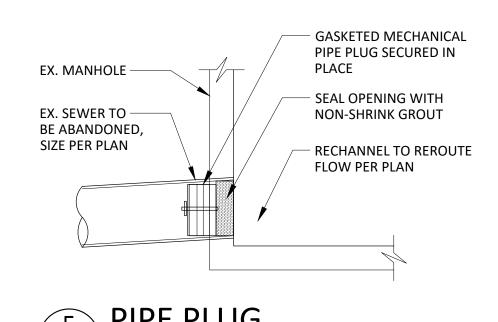


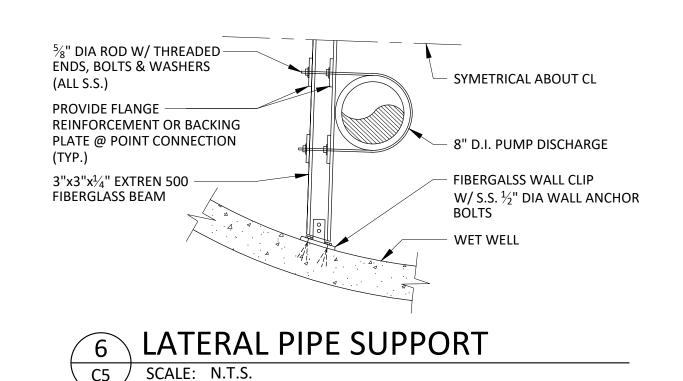


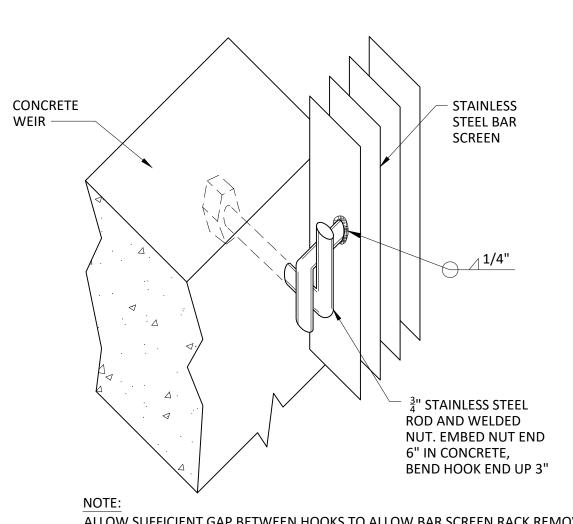


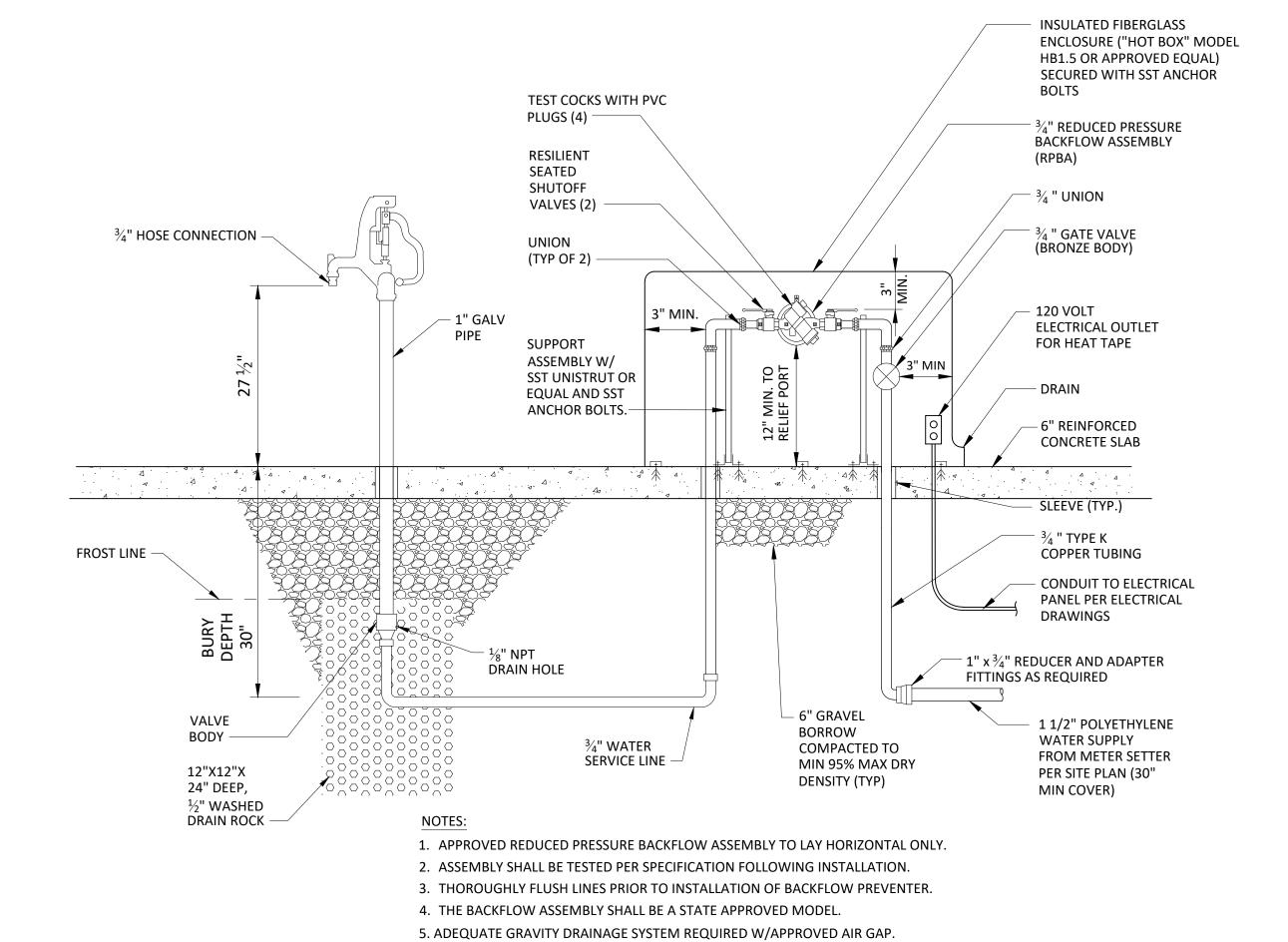
ALL SUPPORT MATERIALS SHALL BE HOT-DIPPED GALVANIZED OR CAST-IRON.
 FOR STEEL SURFACES, WELD STUDS TO STRUCTURE FOR MOUNTING. FOR CONCRETE STRUCTURES, MOUNT WITH 3/8" SST ANCHOR BOLTS.

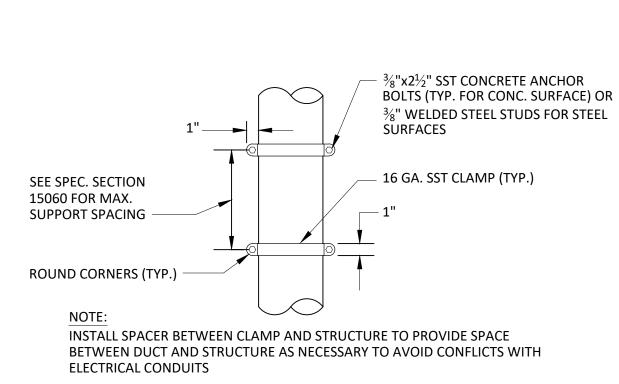


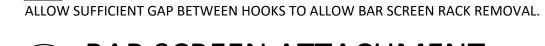








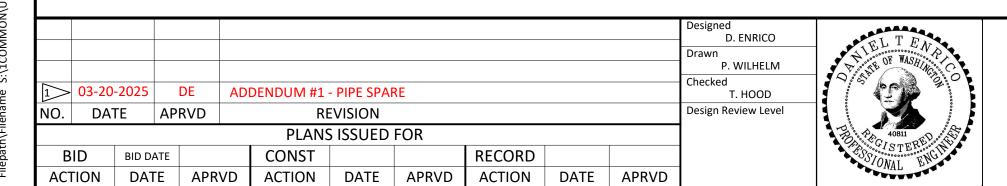














BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47 WORK ORDER 3529

LIFT STATION #47 LS 47 DETAILS

Drawing	
C8	
Sheet No.	/
16 /	•
	28
	Of Total

#### **CITY OF EVERETT SPECIAL PROVISIONS**

15	LIFT STATION ABOVE GRADE - ELECTRICAL	LS	1	N/A	\$ .
15	SHELTER, ELECTRICAL RACK, WATER SERVICE, CONCRETE ETC				·
16	SUBMERSIBLE PUMP ASSEMBLIES - PUMPS, FRAME, DISCHARGE ASSEMBLY, SENSORS, DI PIPE TO 6" FM ETC		2		\$
17	ELECTRICAL, VFD PANEL INSTALL	LS	1	N/A	\$
18	ELECTRICAL - CONTROLS AND INSTRUMENTATION, PULSAR LEVEL SENSOR, ETC	LS	1	N/A	\$
19	PLC CONTROL CABINET INSTALL AND TERMINATIONS	LS	1		
20	ELECTRICAL MISCELLANEOUS - SITE POWER, HOUSE POWER, LIGHTING, ELECTRICAL RACK AND SHELTER ETC	LS	1	N/A	\$
21	STANDBY GENERATOR - TRANSFER SWITCH, LOAD BANK, DOCKING STATION ETC	LS	1	N/A	\$
22	TRENCH EXCAVATION INCLUDING HAUL	CY	427	N/A	\$
23	TEMP ACCESS PATH AND REMOVAL	TN	150		\$
24	FORCE ACCOUNT	FA	1	N/A	\$ 95,500.00
25	HDPE SANITARY SEWER MAIN, 8-Inch Diam. (Horizontal Directional Drill [HDD] - and/or Trenched)	LF	590		\$
26	HDPE SANITARY SIDE SEWER AND FORCE MAIN, 6-Inch Diam. (HDD)	LF	645		\$
27	HDPE SANITARY SEWER MAIN (TRENCHED), 8-Inch Diam.	LF	50		\$
28	PVC SANITARY SIDE SEWER LATERAL, 6-Inch Diam.	LF	150		\$
29	MANHOLE TYPE 3, 48"	EA	6		\$
30	MANHOLE TYPE 3, 48" (MORE THAN 7' DEEP)	LF	24		\$
31	HDPE FORCE MAIN, 6-Inch Dia Trenched	LF	50		\$
32	WATER SERVICE, 1-INCH ENCASED IN 3" HDPE (HDD)	LF	1100		\$
33	WATER SERVICE CONNECTION, 1-INCH	EA	1		\$
34	UG POWER FROM LS TO JCT BOX .(2-2" Conduit HDD)	LF	475		\$

NOTE: Changes to Bid Items #19 and #32 are contained in Addendum #1



# CITY OF EVERETT, WASHINGTON PUBLIC WORKS DEPARTMENT

#### **ADDENDUM #2**

Beverly Lake Sewer Replacement – LS#47 UP3529 03-28-2025

#### **Notice to Plan Holders:**

This Addendum No. 2 contains the following revisions, additions, deletions, and/or clarifications, is hereby made a part of the plans and specifications (Contract Documents) for the above named project, and shall be taken into consideration by Bidders in submitting their bids.

This Addendum #2 contains two pages total.

Bidders shall acknowledge receipt of this Addendum No. 2 in the space provided on the Proposal. Failure to do so may subject the Bidder to disqualification of its bid.

This addendum includes the following changes:

	<u>PLANS</u>
None	
	<b>SPECIFICATIONS</b>
None	

Question Received: "Do you know when the job's expected start date is?"

Answer: Notice to Proceed date is not known currently. Hopefully in May 2025

.Question Received: Please confirm the size and quantity of conduits between the PUD Electrical Junction Vault and PUD XMFR. Bid item 34 calls for 2-2". Multiple places on the electrical plans indicate 1-4". Sheet C3 indicates 1-4" in plan view and 1-3" in profile view. Sheet C4 indicates 1-3" in plan and profile views. Sheets C5 & C6 indicate 1-4".

Answer: The number of conduits between the Junction Vault and the Lift Station Transformer is 2-4" with string only (no conductors).

**Question Received:** "the hatches for the Utility Vault, Lift Station and Bar Screen Vault. Do you have the size or any other information for the hatches that you can pass along to me"

Answer: Lift Station HATCHES are 48" x 48" (3-required) Junction Box HATCH is 36" x 60"

**Question Received:** "What is the design point (flow/head) for these pumps?"

Answer: Daily GPD 10,200; Peak 139.3 GPM; Pump Head 61.1-FT

**Question Received:** Any domestic only material requirements on this project?

Answer: This project is funded entirely with local funds and does not involve any federal financial assistance, therefore the Build America, Buy America (BABA) requirements, which apply to federally funded infrastructure projects, do not apply

**Question Received:** Bid Item #27 has a quantity of 50 LF sheet C1 EXSSMH1 – SSMH2 alone indicates 89 LF, what bid item will the excess be paid under??

Answer: Between Bid Item #27 and Bid Item #25 there is up to 640-LF of 8" HDPE installed by HDD or trenched. Any further unanticipated work can be paid through Bid Item #24.

Question Received: What to expect for dewatering? Can they discharge to sewer?

Answer: Per Bid Item Descriptions, dewatering is incidental to the work. The dewatering system should be designed by a qualified engineer or contractor experienced with the local dewatering characteristics and types of proposed construction for this project. Direct discharge flow from trench dewatering to a nearby sewer or storm drain system unless otherwise directed by the Engineer. Obtain, at no cost, a Discharge Authorization Permit from the City prior to discharging trench dewatering flows into the City sewer or storm drain system

Question Received: Clarify that the conduits should be being pulled separately

Answer: Yes they should be pulled separately.

**Question Received**: Regarding Builders Risk/Insurance, should bidders include owner provided equipment coverage in their insurance

Answer: Yes, Builders Risk insurance is required for Owner Furnished Equipment.

Owner Furnished Equipment - Builders Risk Inclusion by Contractor				
Item	Description		Value	
Load Bank Panel	Trystar 400a Model GDS-045W-LF-S	\$	2,750.00	
Standby Generator w/tank	C35D6, Diesel Genset, 60Hz, 35kW	\$1	06,359.00	
Variable Frequency Drives	Yaskawa P1000 VFD's Model# CIMRPU4A0	\$	5,940.00	
VFD Panel				
	Generac Guardian 800-Amp Outdoor			
	Automatic Transfer Switch (277/480V 3-			
Transfer Switch	Phase)	\$	6,532.90	
Antenna Cables, Lightning Arrestors	Various	\$	130.00	
Back-pan	NP3030C	\$	294.00	
Enclosure	N4123030123PTC	\$	1,414.00	
Heater 150-watt	028009-00	\$	1,100.00	
PLC Control Panel w HMI	Various	\$	4,000.00	
DB15 Transducer	DB15010100000-NP	\$	1,455.00	
Ultra4 Level Controller	17411100012XX-XXP	\$	1,290.00	
Antenna	994-OC69421-FNF-ND	\$	160.00	
GA800 20HP VFD	CIMR-PU4A0023FAA	\$	3,600.00	
Modbus card	SI-EM3	\$	532.00	
Cellmodem MP70, NA, LTE-A PRO	1104071	\$	1,100.00	
_	Total	\$1	36,656.90	

**Question Received**: Is there a location for construction worker parking?

Answer: Not on site. There is street parking on Beverly Lane or you could work out an arrangement with businesses on Evergreen Way.

#### **CONTRACT**

None

#### **PROPOSAL**

None

All other requirements of the plans and specifications remain in effect.

This addendum shall be attached to and made a part of the plans and specifications and shall be acknowledged on the bidder's proposal.

Sincerely,

Daniel Enrico, P.E.

Project Manager

# CITY OF EVERETT

# PUBLIC WORKS DEPARTMENT

# BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47

WORK ORDER: 3529

		SHEET INDEX				
Sheet Number	Drawing Number	Sheet Title				
GENERAL						
1	G1	COVER & INDEX				
2	G2	LEGEND & ABBREVIATIONS				
3	G3	SURVEY CONTROL & KEY MAP				
4	G4	GENERAL NOTES				
GEOTECHNICAL						
5	B1	BORING HOLE LOCATIONS				
SITE PREPARATI	ON					
6	D1	DEMOLITION PLAN NORTH				
7	D2	DEMOLITION PLAN SOUTH				
8	D3	DEMOLITION DETAILS				
UTILTY PLAN & P	ROFILE					
9	C1	STA 40+00 TO STA 44+00				
10	C2	STA 44+00 TO STA 48+00				
11	C3	STA 50+00 TO STA 53+50				
12	C4	STA 53+50 TO STA 56+25				
13	C5	CONNECTIONS AT 75TH STREET SE				
14	C6	LIFT STATION				
LIFT STATION #4	7					
15	C7	WETWELL PLAN & SECTION				
16	C8	LS 47 DETAILS				
SITE RESTORATI	ON					
17	L1	LANDSCAPE RESTORATION PLAN				
18	T1	PAVING AND CHANNELIZATION				
ELECTRICAL						
19	E1	POWER SITE PLAN				
20	E2	ENLARGED PLAN				
21	E3	WETWELL SECTION				
22	E4	EQUIPMENT RACK DETAILS				
23	E5	GENERATOR DETAILS				
24	E6	ONE LINE DIAGRAM AND SCHEDULES				
25	E7	DETAILS				
STRUCTURAL						
26	S1	EQUIPMENT RACK ELEVATION AND DETAILS				
27	S2	EQUIPMENT RACK PLAN AND ELEVATION				
28	S3	RETAINING WALL AND FENCE				

CASSIE FRANKLIN

MAYOR:

**CITY OFFICIALS:** 

# **COUNCIL MEMBERS:**

COUNCIL PRESIDENT DON SCHWAB

MARY FOSSE LIZ VOGELI
PAULA RHYNE BEN ZARLINGO
SCOTT BADER JUDY TUOHY

# RECOMMENDED FOR APPROVAL:

PROJECT ENGINEER
DANIEL T. ENRICO, P.E.

COREY HERT,

OPERATIONS SUPERINTENDENT

CONSTRUCTION MANAGE

# **APPROVED BY:**

CITY ENGINEER
THOMAS W. HOOD, P.E

PUBLIC WORKS DIRECTOR



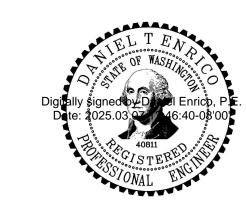


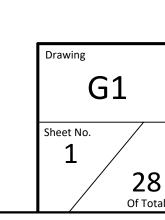
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												Drawn	P. WILHELM
?>												Checked	T. HOOD
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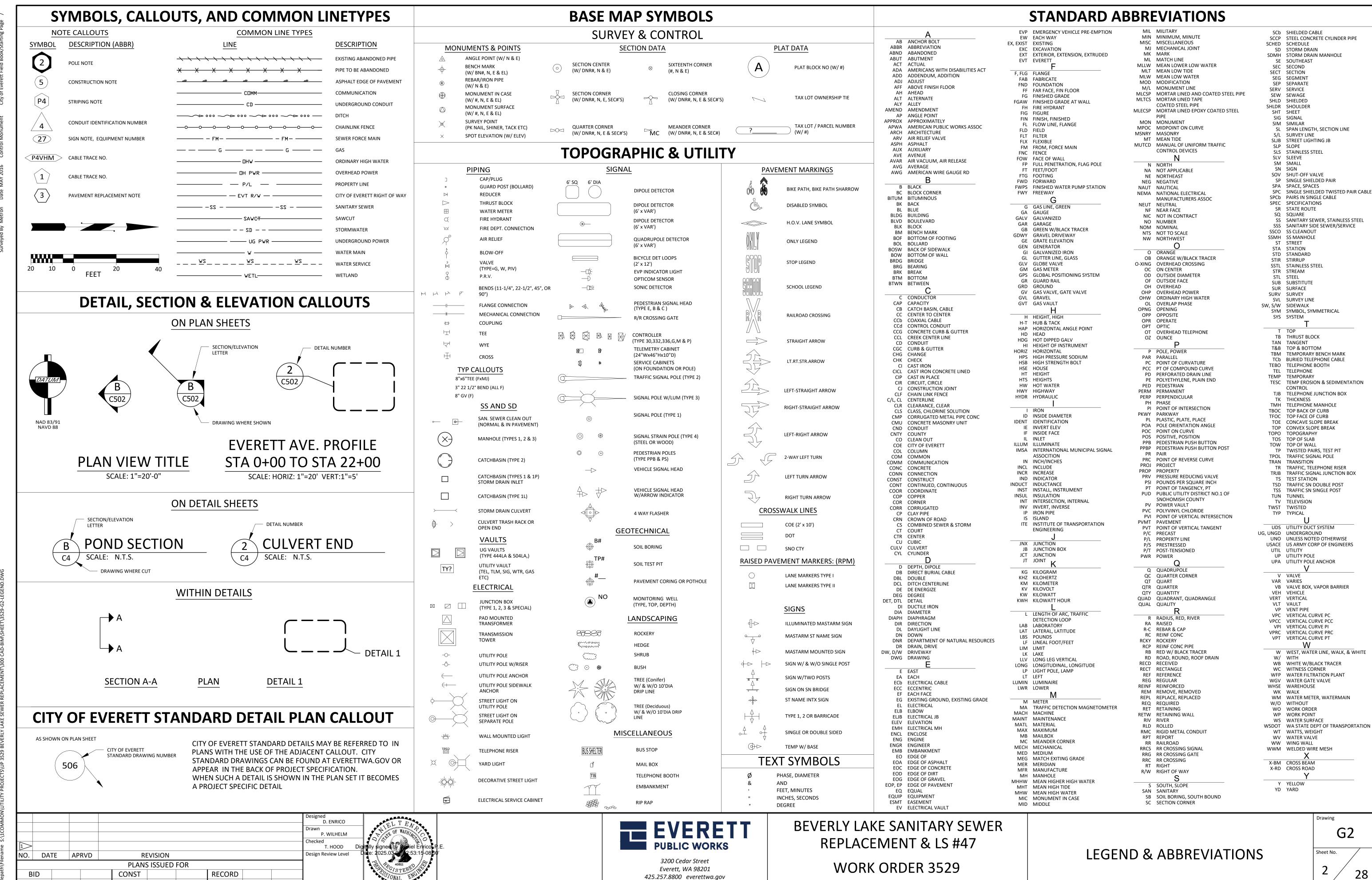
LIFE THREATENING EMERGENCIES: FIRST CALL 911								
	EMERGENCY CONTACTS							
CALL 24 HR PHONE FOR:								
SNO COUNTY PUD	425-783-4745	ELECTRICAL						
PSE (GAS)	1-888-225-5773	GAS LEAKS						
CITY OF EVERETT (DISPATCH)	425-257-8832	SS,SD,WATER, TRAFFIC & SIGNAL						











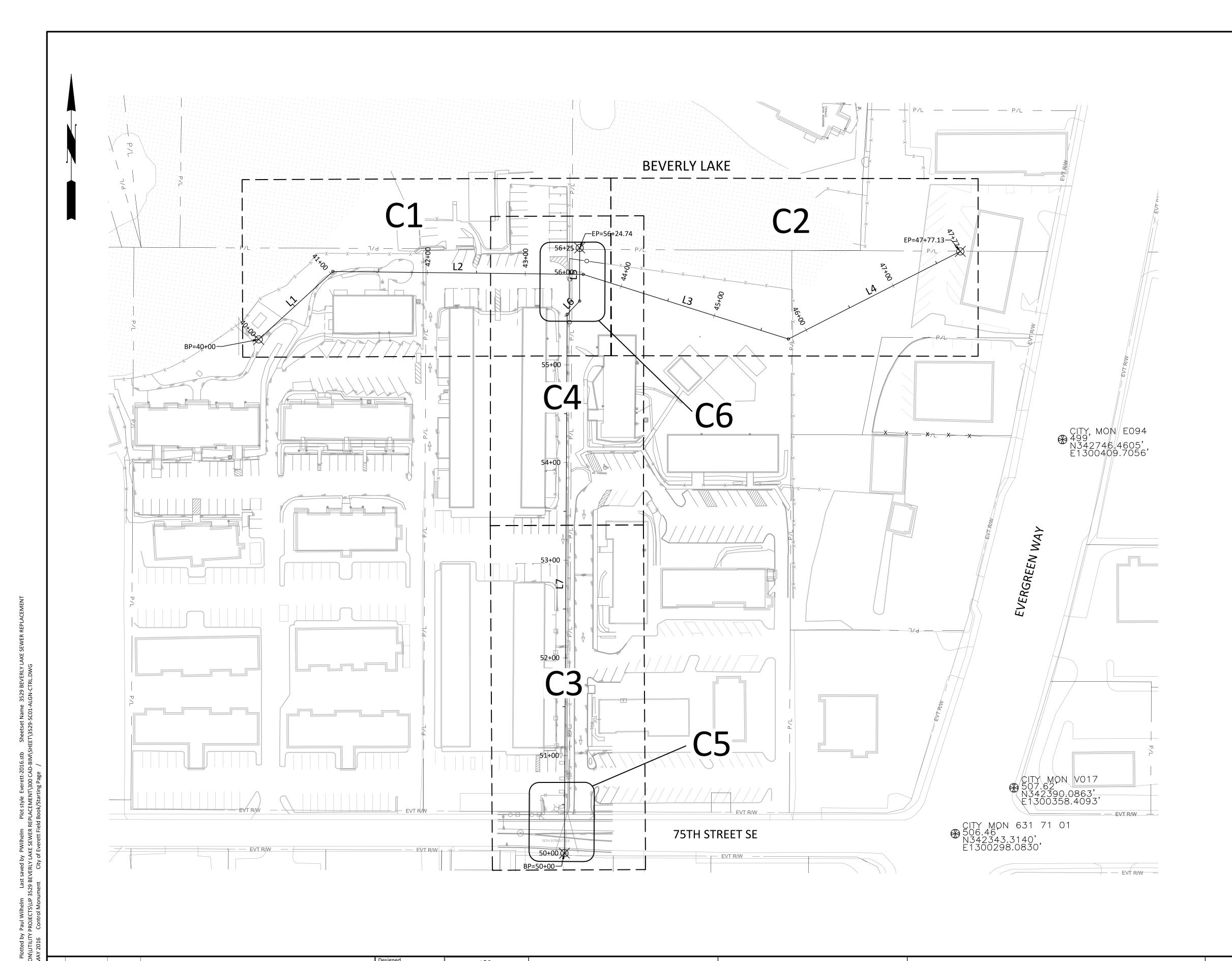
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ACTION DATE APRVD

ACTION DATE APRVD

ACTION DATE



# PROJECT DATA

CITY WORK ORDER #: WO#3529 SURVEY COMPANY: METRON DATE(S) OF SURVEY: 04/2015-5/2015 RECORDED SURVEY #: NO FIELD BOOK #(S)/PAGES: N/A DATUM (VERTICAL) NAVD88 DATUM (HORIZONTAL) NAD83 BASIS OF BEARING: GRID

## SURVEY CONTROL DATA

		ITEM	631-71-01	E094
	F	NORTHING (LY)	0	
	00	EASTING (LX)	0	
EM	ΙI	ELEVATION (LZ)	0	
SYSTI		NORTHING (SPY)	342343.314	342746.443
	ΙI	EASTING (SPX)	1300298.083	1300409.701
[A]	PLANE	ELEVATION (SPZ)	506.46'	499
COORDINATE		SCALE FACTOR	.999947602	.999947539
OR	삐	COMBINED	0000	97595
8	STATE	SCALE FACTOR	.999	
		CONVERSION ANGLE	-01°01'58.8"	-01°01'57.6"
		(LOCAL TO STA. PLANE)	-01 01 36.6	-01 01 37.0
	Ιİ	(CCLOCK=+,CLOCK=-)		

## SEWER ALIGNMENT TABLE

		GRAVITY M	AIN	
SEGMENT	LENGTH (FT)	NORTHING	EASTING	BEARING
L1	102.96	342852.51	1299587.21	N47° 43' 02.75"E
L2	256.23	342921.78	1299663.38	S89° 04' 59.89"E
L3	220.34	342917.68	1299919.58	S72° 15' 49.45"E
L4	197.60	342850.55	1300129.45	N63° 14' 49.91"E

FORCE MAIN								
SEGMENT	LENGTH (FT)	NORTHING	EASTING	BEARING				
L5	54.37	342890.36	1299915.92	N0° 18' 47.72"E				
L6	18.58	342876.93	1299903.08	N43° 41' 13.33"E				
L7	551.80	342325.15	1299897.87	N0° 32' 30.63"E				

# LEGEND

BP BEGIN POINT

EP END POINT

L## ALIGNMENT SEGMENT

ALIGNMENT BEGIN/END POINT

• ALIGNMENT GEOMETRY POINT

DWG NO.

DRAWING NUMBER

**EXISTING EASEMENT** 



HORT: NAD 83 VERT: NAVD 88 UNITS: US SURVEY FT

P. WILHELM NO. DATE APRVD REVISION PLANS ISSUED FOR CONST RECORD ACTION DATE APRVD ACTION DATE APRVD



BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47 WORK ORDER 3529

SURVEY CONTROL & KEY MAP

G3

28 Of Total

#### **GENERAL PROJECT NOTES**

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS, SPECIFICATIONS AND SPECIAL PROVISIONS. ALL WORK SHALL COMPLY WITH THE ORDER OF PRECEDENCE ESTABLISHED IN THE SPECIFICATIONS, SECTION 1-04.2 SCOPE OF WORK.
- 2. A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE CITY PRIOR TO THE START OF CONSTRUCTION.
- TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (TESC) SHALL BE IN PLACE AND OPERATING PRIOR TO DEMOLITION AND CONSTRUCTION ACTIVITIES. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE CITY DEPENDING ON SITE AND WEATHER CONDITIONS.
- 4. EXISTING AND PROPOSED CATCH BASINS DOWNSTREAM OF DISTURBED AREAS SHALL BE PROTECTED DURING CONSTRUCTION.
- 5. KEEP STREETS CLEAN AT ALL TIMES. FLUSHING STREETS WILL NOT BE PERMITTED. DEBRIS SHALL BE SWEPT FROM ALL STREETS.
- 6. THE CONTRACTOR SHALL PROTECT ALL AREAS OUTSIDE THE WORK ZONE AND OUTSIDE THE RIGHT-OF-WAY FROM DISTURBANCE. ALL DISTURBED AREAS SHALL BE FULLY RESTORED TO PROPOSED OR PRE-EXISTING CONDITIONS.
- 7. AN APPROVED SET OF CONSTRUCTION PLANS FOR ALL WORK SHALL BE KEPT ON THE CONSTRUCTION SITE AT ALL TIMES. IN ADDITION, A COPY OF THE CURRENT CITY OF EVERETT DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS SHALL ALSO BE AVAILABLE AT THE CONSTRUCTION SITE.
- 8. LOCAL AND EMERGENCY ACCESS SHALL BE MAINTAINED AT ALL TIMES.
- 9. TEMPORARY PAVEMENT PATCH SHALL BE ACCOMPLISHED BY USING COLD MIX, ATB OR STEEL PLATES.
- 10. NO MORE THAN 40' OF TRENCH, OR 160SF OF EXCAVATION SHALL BE OPEN AT A TIME.
- 11. BY THE CLOSE OF BUSINESS EACH DAY, OPEN TRENCHES SHALL BE COVERED BY STEEL PLATE AND TRAFFIC CONTROL DEVICES SHALL BE IN PLACE TO MAINTAIN DRIVE AISLE AND PARKING ACCESS.
- 12. ALL JACKING, DIRECTIONAL DRILLING OR BORING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH AN APPROVED PLAN AS INDICATED IN 2024 WSDOT STANDARD SPECIFICATIONS.
- 13. WHERE EXISTING PAVEMENT, CURBS, SIDEWALKS, DRIVEWAYS, OR LANDSCAPE FEATURES ARE NOT INDICATED TO BE REMOVED/REPLACED, THE CONTRACTOR SHALL IMPLEMENT MEASURES TO PROTECT AND MAINTAIN EXISTING CONDITIONS. IF DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPLACE OR RESTORE AT THE CONTRACTOR'S EXPENSE.
- 14. EXISTING WATER SERVICES AND SIDE SEWERS SHOWN ARE BASED ON SURVEY ND BEST AVAILABLE DATA. CONTRACTOR SHALL VERIFY LOCATION PRIOR TO CONSTRUCTION.
- 15. REFERENCED CITY STANDARD DRAWINGS ARE IN APPENDIX C OF THE CONTRACT DOCUMENTS.

#### **GENERAL STORM DRAINAGE NOTES**

- 1. NO PART OF THE DRAINAGE SYSTEM SHALL BE COVERED, CONCEALED, OR PUT INTO USE UNTIL IT HAS BEEN INSPECTED, TESTED, AND ACCEPTED BY THE CITY OF EVERETT.
- 2. ALL WORK AND MATERIAL SHALL CONFORM TO THE CITY OF EVERETT DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AND THE WSDOT/APWA STANDARD SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION (CURRENT
- 3. APPROXIMATE LOCATIONS OF EXISTING UTILITIES HAVE BEEN OBTAINED FROM AVAILABLE RECORDS AND ARE SHOWN FOR CONVENIENCE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF LOCATIONS AND TO AVOID DAMAGE TO ANY ADDITIONAL UTILITIES SHOWN. IF CONFLICTS WITH EXISTING UTILITIES ARISE DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE PUBLIC WORKS INSPECTOR AND ANY CHANGES REQUIRED SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO COMMENCEMENT OF RELATED CONSTRUCTION ON THE PROJECT.
- 4. ALL STORM SYSTEMS MUST BE STAKED BY SURVEY FOR LINE AND GRADE PRIOR TO STARTING CONSTRUCTION.
- 5. ALL CATCH BASIN GRATES IN PAVED AREAS MUST BE STENCILED OR STAMPED "DUMP NO WASTE, DRAINS TO LAKE"
- 6. ALL CATCH BASINS AND INLETS SHALL HAVE STANDARD DIRECTIONAL VANED GRATE PER COE STD DRAWING 411 UNLESS NOTED OTHERWISE. SOLID COVER SHALL BE PER COE STANDARD DRAWING 410.
- 7. ALL REQUESTS FOR INSPECTIONS AND FOR WITNESSING TESTS SHALL BE SCHEDULED IN ACCORDANCE TO THE SPECIFICATIONS. FAILURE TO GIVE ADEQUATE ADVANCE NOTICE MAY RESULT IN DELAYS TO THE CONTRACTOR FOR REQUIRED INSPECTIONS.
- 8. ALL MANHOLES AND TYPE 2 CATCH BASINS OVER 4 FEET IN HEIGHT SHALL BE PROVIDED WITH A LADDER OR STEPS PER CITY OF EVERETT STANDARD PLAN 608 OR 609.
- 9. SUBMIT SHOP DRAWINGS FOR ALL NEW STORM DRAIN STRUCTURES TO THE ENGINEER FOR APPROVAL. NO STRUCTURE SHALL BE MANUFACTURED PRIOR TO APPROVAL OF SHOP DRAWINGS.
- 10. ALL PIPES SHALL BE CLEARLY MARKED WITH DIAMETER, TYPE, CLASS AND THICKNESS, AS APPLICABLE. LETTERING SHALL BE LEGIBLE AND PERMANENT UNDER NORMAL CONDITIONS OF HANDLING AND STORAGE.
- 11. CLEAN AND FLUSH STORM DRAIN LINES WITH CLEAN WATER PRIOR TO TESTING.
- 12. PROTECT ALL EXISTING UTILITIES TO REMAIN.
- 13. PROTECT ALL INSTALLED PIPES AND STRUCTURES WITH BACKFILL, STEEL PLATES OR OTHER ADEQUATE PROTECTION FROM CONSTRUCTION AND TRAFFIC LOADS PRIOR TO FINAL GRADING.

#### **GENERAL SANITARY SEWER NOTES**

- 1. ALL WORK AND MATERIALS SHALL CONFORM TO THE CITY OF EVERETT STANDARDS AND WSDOT/APWA STANDARD SPECIFICATIONS.
- 2. NO PART OF THE SANITARY SEWER SYSTEM SHALL BE COVERED, CONCEALED OR PUT INTO USE UNTIL IT HAS BEEN TESTED, INSPECTED, AND APPROVED BY THE CITY INSPECTOR.

#### **GENERAL WATER NOTES**

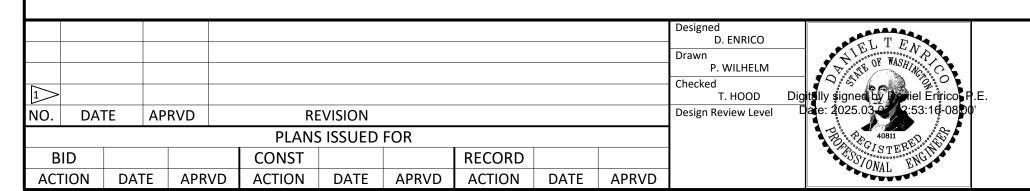
- 1. NO CONNECTION TO THE EXISTING MAINS WILL BE ALLOWED EXCEPT BY MEANS OF AN APPROVED BACKFLOW PREVENTION DEVICE PRIOR TO SATISFACTORY FLUSHING TESTING, DISINFECTION, AND RECEIPT OF SATISFACTORY BACTERIOLOGICAL TEST RESULTS.
- 2. CONNECTIONS TO AND TAPS ON EXISTING MAINS WILL BE MADE BY THE PUBLIC WORKS DEPARTMENT AT THE DEVELOPER'S EXPENSE. THE PUBLIC WORKS DEPARTMENT SHALL BE GIVEN NOTICE FOR EACH CONNECTION IN ACCORDANCE TO THE SPECIFICATIONS. THE PUBLIC WORKS DEPARTMENT SHALL THEREAFTER DETERMINE THE DATE AND TIME AT WHICH THE CONNECTION SHALL BE MADE.
- ALL WORK AND MATERIALS MUST CONFORM TO CITY OF EVERETT STANDARDS.
- 4. MAINTAIN A MINIMUM OF 10 FEET HORIZONTAL AND 18 INCHES VERTICAL SEPARATION BETWEEN POTABLE AND NON-POTABLE CONVEYANCE SYSTEMS.
- 5. ALL CITY OF EVERETT VALVES SHALL BE OPERATED BY PUBLIC WORKS DEPARTMENT PERSONNEL ONLY. ALL VALVES, NEW AND EXISTING, SHALL BE ACCESSIBLE AT ALL TIMES.
- 6. BOTH THRUST BLOCKING AND JOINT RESTRAINT MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER (SUCH AS AT FINAL CONNECTIONS, ETC.). ALL JOINTS FOR HYDRANT ASSEMBLIES (INCLUDING TEE) SHALL BE RESTRAINED.
- 7. ABANDON EXISTING WATER MAINS IN PLACE, EXCEPT WHERE EXISTING MAINS CONFLICT WITH NEW WORK.
- 8. INSTALL NEW WATER MAINS SO THAT 4 FEET MINIMUM OF FINAL COVER IS PROVIDED, EXCEPT IN THOSE LOCATIONS WHERE EXISTING UTILITIES TO REMAIN ARE ENCOUNTERED, WHERE NEW MAIN CONFLICTS WITH NEW SANITARY AND STORM PIPING, OR AT NEW TELEPHONE SYSTEM STRUCTURES. MAKE GRADE ADJUSTMENTS AS REQUIRED TO AVOID CONFLICTS WITH OTHER UTILITIES AS APPROVED BY THE ENGINEER.
- 9. NOTIFY FIRE DEPARTMENT 48 HOURS IN ADVANCE OF TAKING OUT OF SERVICE ANY FIRE HYDRANT, SPRINKLER SUPPLY, OR OTHER FIRE PROTECTION WATER EQUIPMENT.
- 10. ALL VALVES (NEW AND EXISTING) SHALL BE ACCESSIBLE AT ALL TIMES.

#### **CONSTRUCTION SEQUENCING**

- 1. CONTRACTOR SHALL SUBMIT CONSTRUCTION SEQUENCING PLAN AND CONSTRUCTION SCHEDULE FOR REVIEW AND APPROVAL BY THE ENGINEER ACCORDING TO THE SPECIFICATIONS.
- 2. CONTRACTOR'S LIAISON TO COORDINATE WORK ON PRIVATE PROPERTY OR WHERE ACCESS TO PRIVATE PROPERTY OR DRIVEWAYS WILL BE IMPACTED, WITH PROPERTY OWNER(S). CONTRACTOR SHALL GIVE PROPERTY OWNER(S) NOTICE PRIOR TO THE START OF WORK IMPACTING THE PRIVATE PROPERTY IN ACCORDANCE TO THE SPECIFICATIONS.

#### **EROSION & SEDIMENT CONTROL NOTES**

- 1. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES).
- 2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
- THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
- 4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM, ROADWAYS, OR VIOLATE APPLICABLE WATER QUALITY STANDARDS.
- 5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- 6. THE ESC FACILITIES SHALL BE INSPECTED ROUTINELY AND MAINTAINED BY THE APPLICANT/CONTRACTOR TO ENSURE THEIR CONTINUED FUNCTIONING, ESPECIALLY AFTER STORM EVENTS.
- 7. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
- 8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A TRAPPED CATCH BASIN. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT LADEN WATER INTO THE DOWNSTREAM SYSTEM.
- STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- 10. THE CONTRACTOR SHALL PROVIDE PERIODIC STREET CLEANING TO REMOVE DEBRIS AND SEDIMENT TRACKED OFF THE SITE.
- 11. APPROPRIATE MEASURES SHALL BE TAKEN TO STOP SEDIMENT FROM ENTERING SURFACE WATER BODIES IF THE PROPOSED BMPS FAIL.
- 12. BARE AND/OR DISTURBED SOILS SHALL REMAIN UNCOVERED AND/OR UNSTABILIZED FOR NO MORE THAN 2 DAYS FROM OCTOBER 1 THROUGH APRIL 30, AND FOR NO MORE THAN 7 DAYS FROM MAY 1 THROUGH SEPTEMBER 30.
- 13. THE CONTRACTOR SHALL INSTALL INLET PROTECTION FOR NEW DRAINAGE INLETS AS THE INLETS ARE INSTALLED.
- 14. THE CONTRACTOR SHALL PROVIDE SEDIMENT BASINS AS NECESSARY.





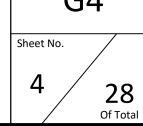
Everett, WA 98201

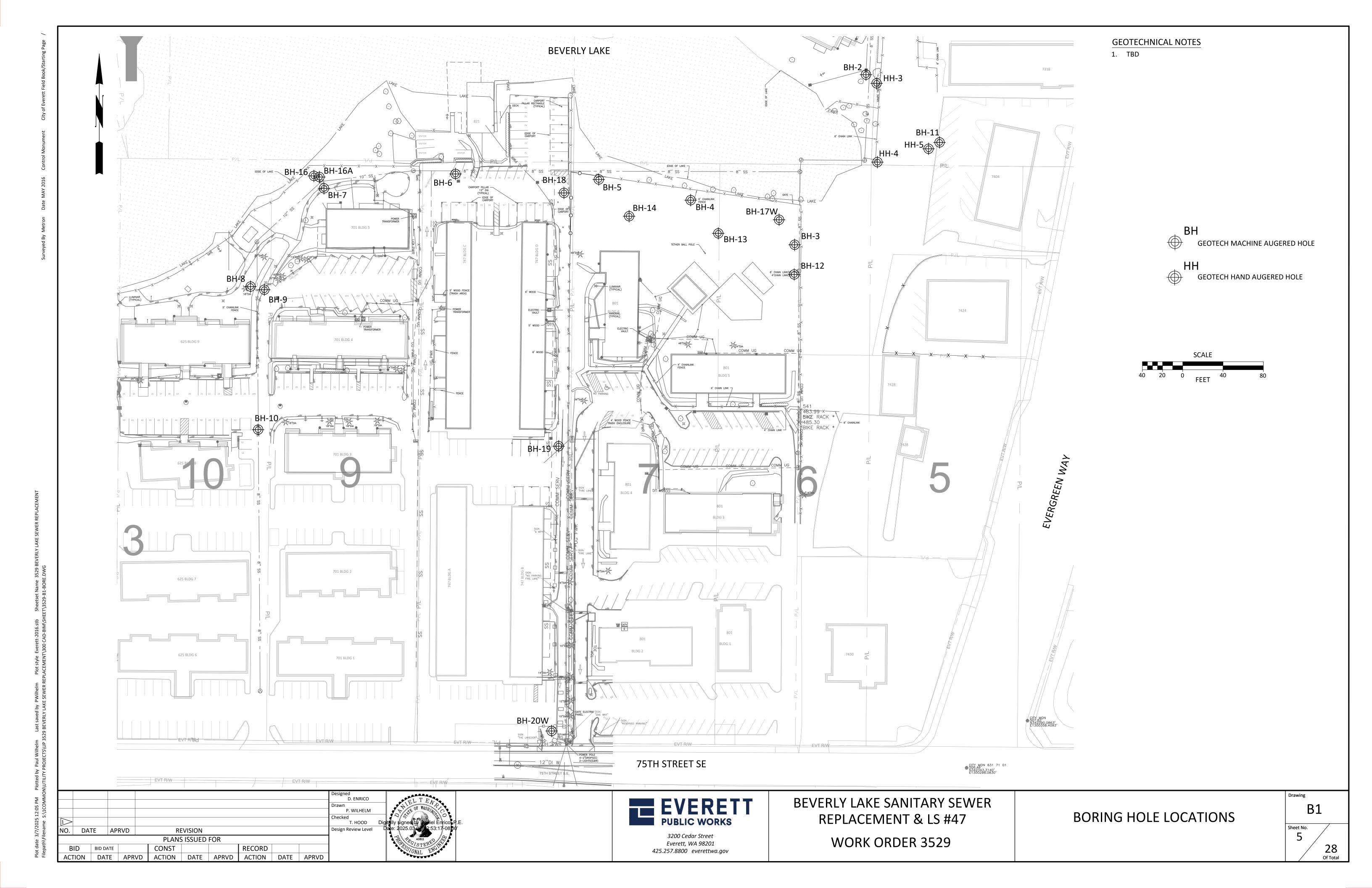
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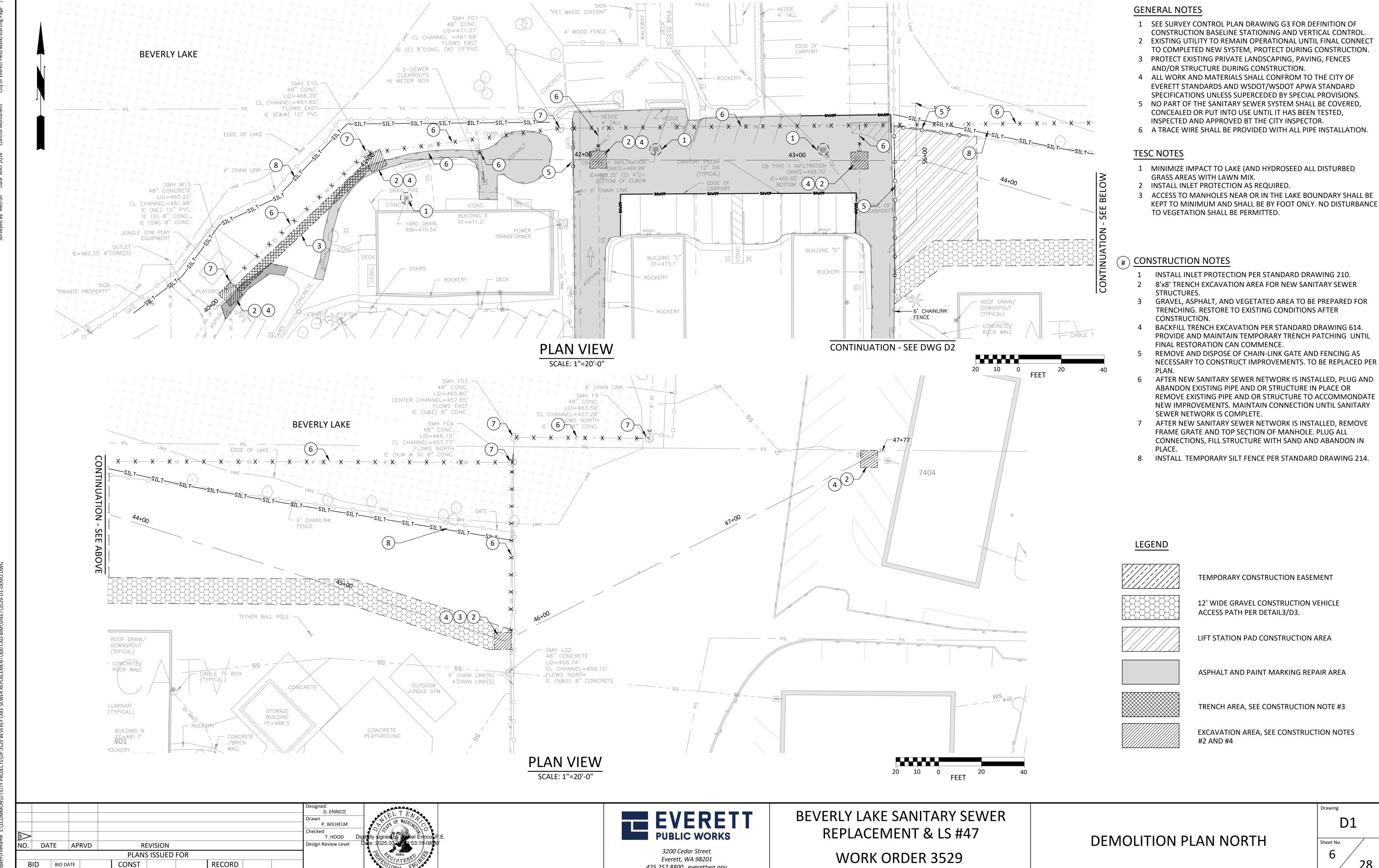


GENERAL NOTES









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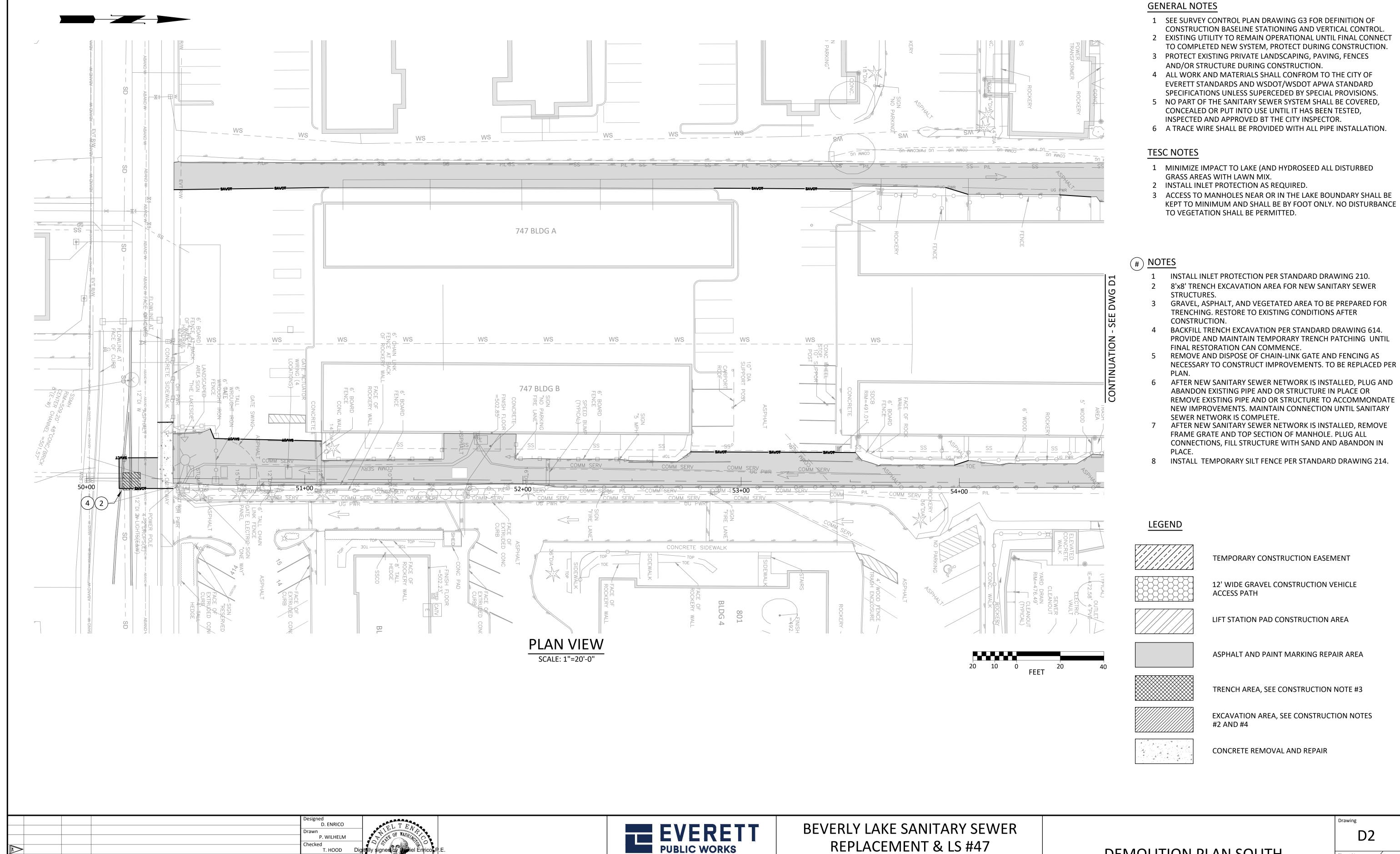
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BID DATE

ACTION DATE APRVD



3200 Cedar Street

Everett, WA 98201

425.257.8800 everettwa.gov

WORK ORDER 3529

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BID DATE

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**REVISION** 

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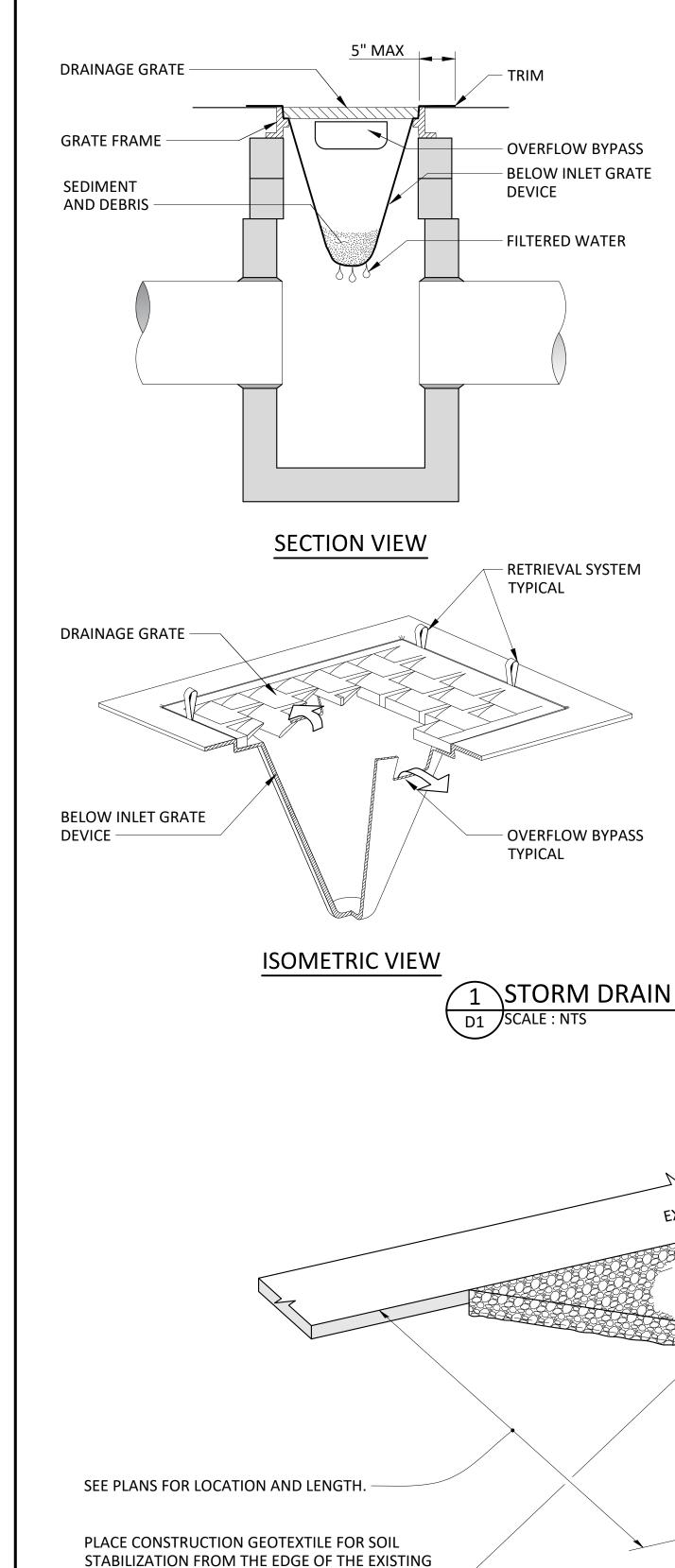
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ROADWAY TO THE CONSTRUCTION ENTRANCE,

OR AS DIRECTED BY THE ENGINEER

# **NOTES**

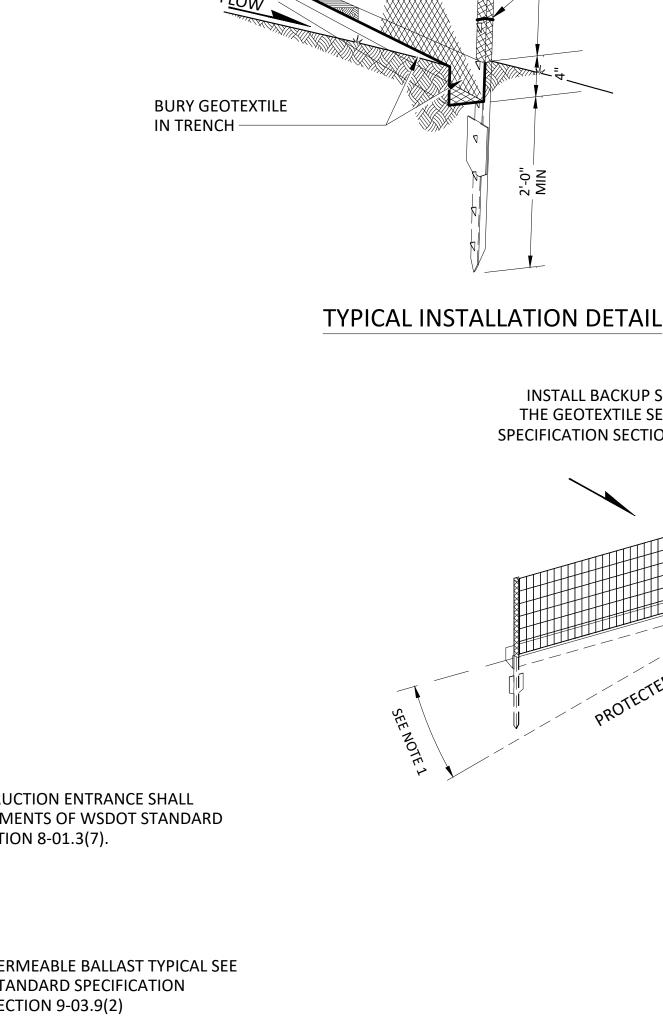
- CATCH BASIN INSERTS SHALL BE REMOVED AT THE END OF THE PROJECT.
- 2. CATCH BASIN INSERTS ARE ONLY TO BE INSTALLED IN DRAINAGE DEVICES PER THE MANUFACTURES'S RECOMMENDATIONS. CATCH BASIN INLET INSERTS SHALL BE INSTALLED IN CURB INLETS.
- 3. CATCH BASIN INSERTS SHALL BE INSTALLED PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
- 4. SEDIMENT SHALL BE REMOVED FROM THE UNIT WHEN IT BECOMES ONE THIRD FULL OR IN ACCORDANCE WITH THE MANUFACTURES' INSTRUCTIONS.
- 5. SEDIMENT REMOVAL SHALL BE ACCOMPLISHED BY REMOVING THE INLET INSERTS, EMPTYING, AND RE-INSTALLING IT INTO THE CATCH BASIN. DO NOT WASH SEDIMENT INTO STORM DRAINS WHILE CLEANING.
- 6. SIZE THE BELOW INLET GRATE DEVICE (BIGD) FOR THE STORM WATER STRUCTURE IT WILL SERVICE.
- 7. THE BIGD SHALL HAVE A BUILT-IN HIGH-FLOW RELIEF SYSTEM (OVERFLOW BYPASS).
- THE RETRIEVAL SYSTEM MUST ALLOW REMOVAL OF THE BIGD WITHOUT SPILLING THE COLLECTED MATERIAL.
- 9. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATION 8-01.3(15).

# 1 STORM DRAIN INLET PROTECTION

DEPTH **TYPICAL** 

**ISOMETRIC VIEW** 

**\CONSTRUCTION ENTRANCE** 



ATTACH IN A MANNER THAT

ASSURES FABRIC IS FIRMLY

HELD BY THE BACKUP

FOR FABRIC TEARING

**BACKUP SUPPORT** 

BACKFILLED &

COMPACTED

NATIVE SOIL

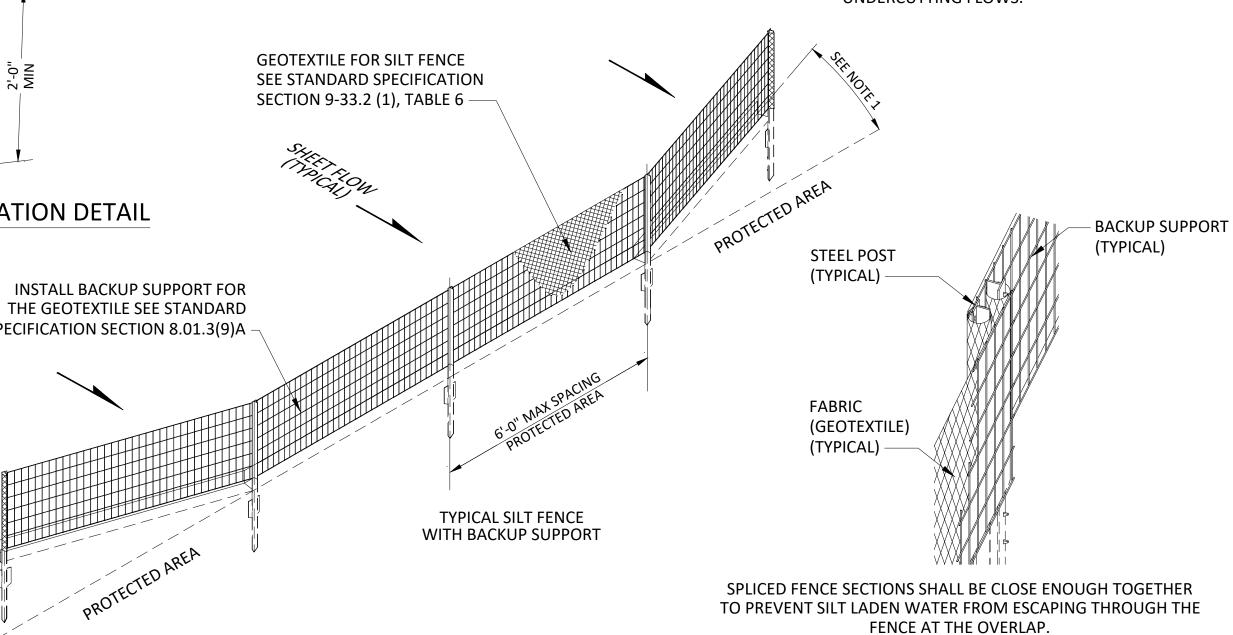
SUPPORT IN A WAY THAT

REDUCES THE POTENTIAL

GEOTEXTILE

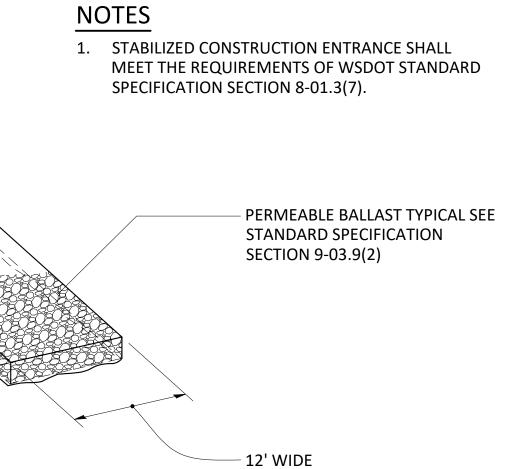
# **NOTES**

- 1. INSTALL THE ENDS OF THE SILT FENCE TO POINT SLIGHTLY UPSLOPE TO PREVENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.
- 2. PERFORM MAINTENANCE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS 8-01.3(9)A AND 8-01.3(15).
- 3. SPLICES SHALL NEVER BE PLACED IN LOW SPOTS OR SUMP LOCATIONS. IF SPLICES ARE LOCATED IN LOW OR SUMP AREAS, THE FENCE MAY NEED TO BE REINSTALLED UNLESS OTHERWISE APPROVED.
- 4. INSTALL SILT FENCING PARALLEL TO MAPPED CONTOUR LINES.
- 5. DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.



2 TEMPORARY SILT FENCE

**ISOMETRIC** 



P. WILHELM NO. DATE APRVD REVISION PLANS ISSUED FOR RECORD CONST BID BID DATE ACTION DATE APRVD ACTION DATE APRVD ACTION DATE APRVD



425.257.8800 everettwa.gov

BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47 WORK ORDER 3529

POST SEE WSDOT STANDARD

SPECIFICATIONS 8-01.3(9)A

FASTEN GEOTEXTILE TO

SELF-LOCKING TIE-NYLONE

120# MIN TENSILE STRENGTH,

6/6 (MIN GRADE)

**UV STABILIZED** 

INSTALL BACKUP SUPPORT FOR

SPECIFICATION SECTION 8.01.3(9)A

POST EVERY 6" IN O.C.

SITE PREPARATION

D3

**DEMOLITION DETAILS** 

SPLICE DETAIL

Of Total

#### **GENERAL NOTES**

- 1 SEE SURVEY CONTROL PLAN DRAWING G3 FOR DEFINITION OF CONSTRUCTION BASELINE STATIONING AND VERTICAL CONTROL. 2 EXISTING UTILITY TO REMAIN OPERATIONAL UNTIL FINAL CONNECT
- TO COMPLETED NEW SYSTEM, PROTECT DURING CONSTRUCTION. 3 PROTECT EXISTING PRIVATE LANDSCAPING, PAVING, FENCES

AND/OR STRUCTURE DURING CONSTRUCTION.

- 4 ALL WORK AND MATERIALS SHALL CONFROM TO THE CITY OF EVERETT STANDARDS AND WSDOT/WSDOT APWA STANDARD SPECIFICATIONS UNLESS SUPERCEDED BY SPECIAL PROVISIONS.
- 5 NO PART OF THE SANITARY SEWER SYSTEM SHALL BE COVERED, CONCEALED OR PUT INTO USE UNTIL IT HAS BEEN TESTED, INSPECTED AND APPROVED BT THE CITY INSPECTOR.
- 6 A TRACE WIRE SHALL BE PROVIDED WITH ALL PIPE INSTALLATION

#### **TESC NOTES**

- 1 MINIMIZE IMPACT TO LAKE (AND HYDROSEED ALL DISTURBED GRASS AREAS WITH LAWN MIX.
- 2 INSTALL INLET PROTECTION AS REQUIRED.
- 3 ACCESS TO MANHOLES NEAR OR IN THE LAKE BOUNDARY SHALL BE KEPT TO MINIMUM AND SHALL BE BY FOOT ONLY. NO DISTURBANCE TO VEGETATION SHALL BE PERMITTED.

# # NOTES

- INSTALL NEW MANHOLE TYPE 3 PER STANDARD DRAWINGS 607, 608, AND 609 AS INDICATED ON THE PLAN. INSTALL MANHOLE FRAME AND COVER PER STANDARD DRAWING 611.
- CONNECT TO EXISTING PIPE USING KOR-N-SEAL BOOT. VERIFY INVERT ELEVATION PRIOR TO CONSTRUCTION.
- INSTALL REPLACEMENT SIDE SEWER CONNECTION PER STANDARD DRAWINGS 602 AND 604. CLEANOUT LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY PRIOR TO INSTALLATION. SIDE SEWER SHALL BE INSTALLED TO AVOID CONFLICT WITH WATER AND OR STORM LINES.
- INSTALL NEW SANITARY SEWER PIPE IN ACCORDANCE WITH THE SPECIAL PROVISIONS AND SPECIFICATIONS. EXCAVATE AND BACKFILL TRENCH PER STANDARD DRAWING 614.
- INSTALL NEW SANITARY SEWER PIPE IN ACCORDINACE WITH THE SPECIAL PROVISIONS AND SPECIFICATIONS. TRENCHLESS TECHNOLOGY SHALL BE USED.
- INSTALL TWO-WAY SEWER CLEANOUT PER STANDARD DRAWINGS 601, 603, AND 604. SIDE SEWER SHALL BE INSTALLED TO AVOID CONFLICT WITH WATER PIPES.
- BACKFILL TRENCH EXCAVATION PER STANDARD DRAWING 614. PROVIDE AND MAINTAIN TEMPORARY TRENCH PATCHING UNTIL FINAL RESTORATION CAN COMMENCE.

**BEVERLY LAKE SANITARY SEWER** REPLACEMENT & LS #47 WORK ORDER 3529

UTILTY PLAN & PROFILE STA 40+00 TO STA 44+00

P. WILHELM NO. DATE APRVD REVISION PLANS ISSUED FOR RECORD CONST ACTION DATE APRVD ACTION DATE APRVD ACTION DATE APRVD

**EVERETT** 3200 Cedar Street Everett, WA 98201 425.257.8800 everettwa.gov

#### **GENERAL NOTES**

- SEE SURVEY CONTROL PLAN DRAWING G3 FOR DEFINITION OF CONSTRUCTION BASELINE STATIONING AND VERTICAL CONTROL.
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UTI STA

UTILTY PLAN & PROFILE STA 44+00 TO STA 48+00

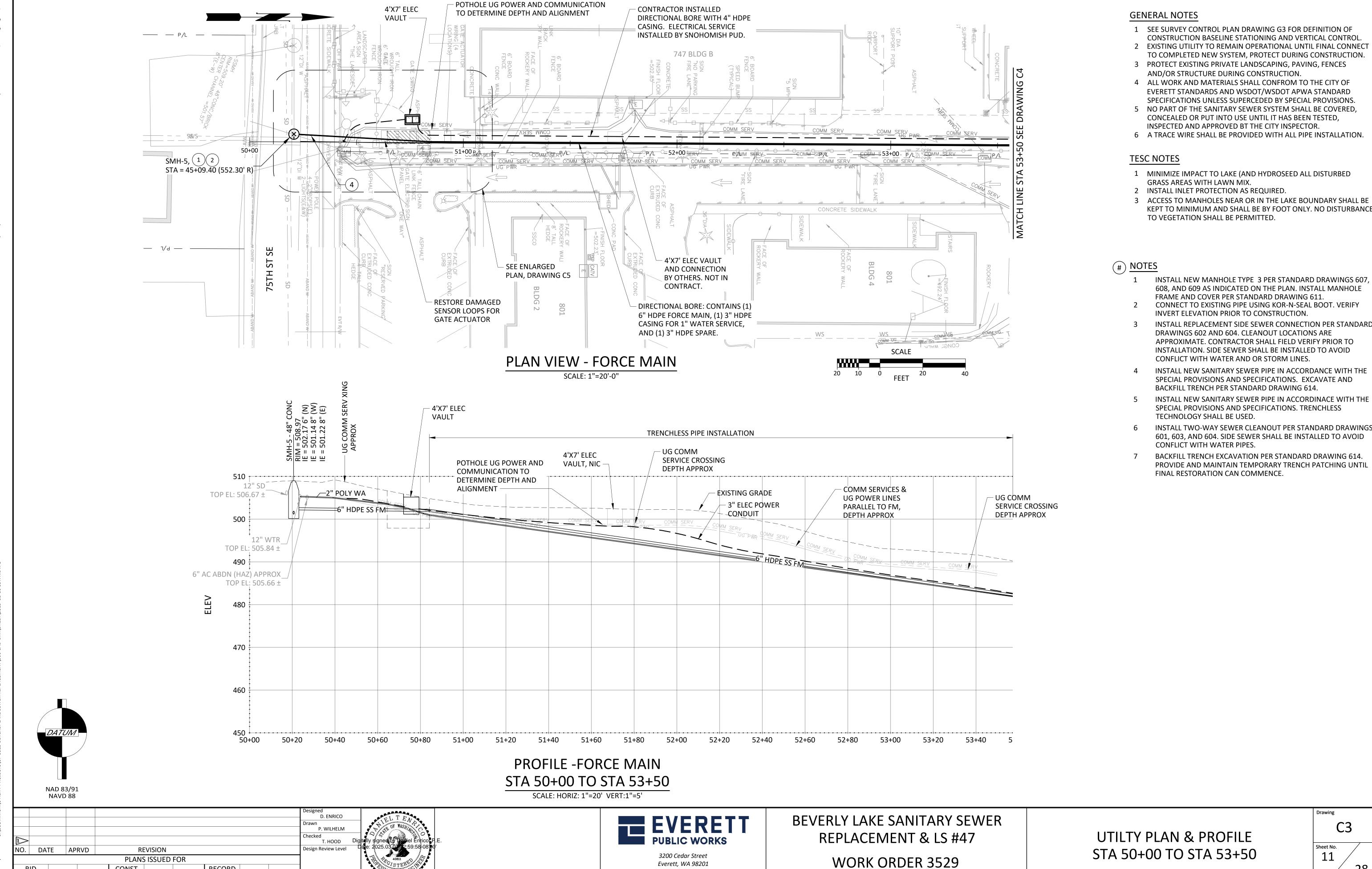
C2
Sheet No.

Designed D. ENRICO
Drawn
P. WILHELM
Checked
T. HOOD
Digitally signed by Digitally sign



BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47

WORK ORDER 3529



425.257.8800 everettwa.gov

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ACTION DATE APRVD

RECORD

ACTION DATE APRVD ACTION DATE APRVD

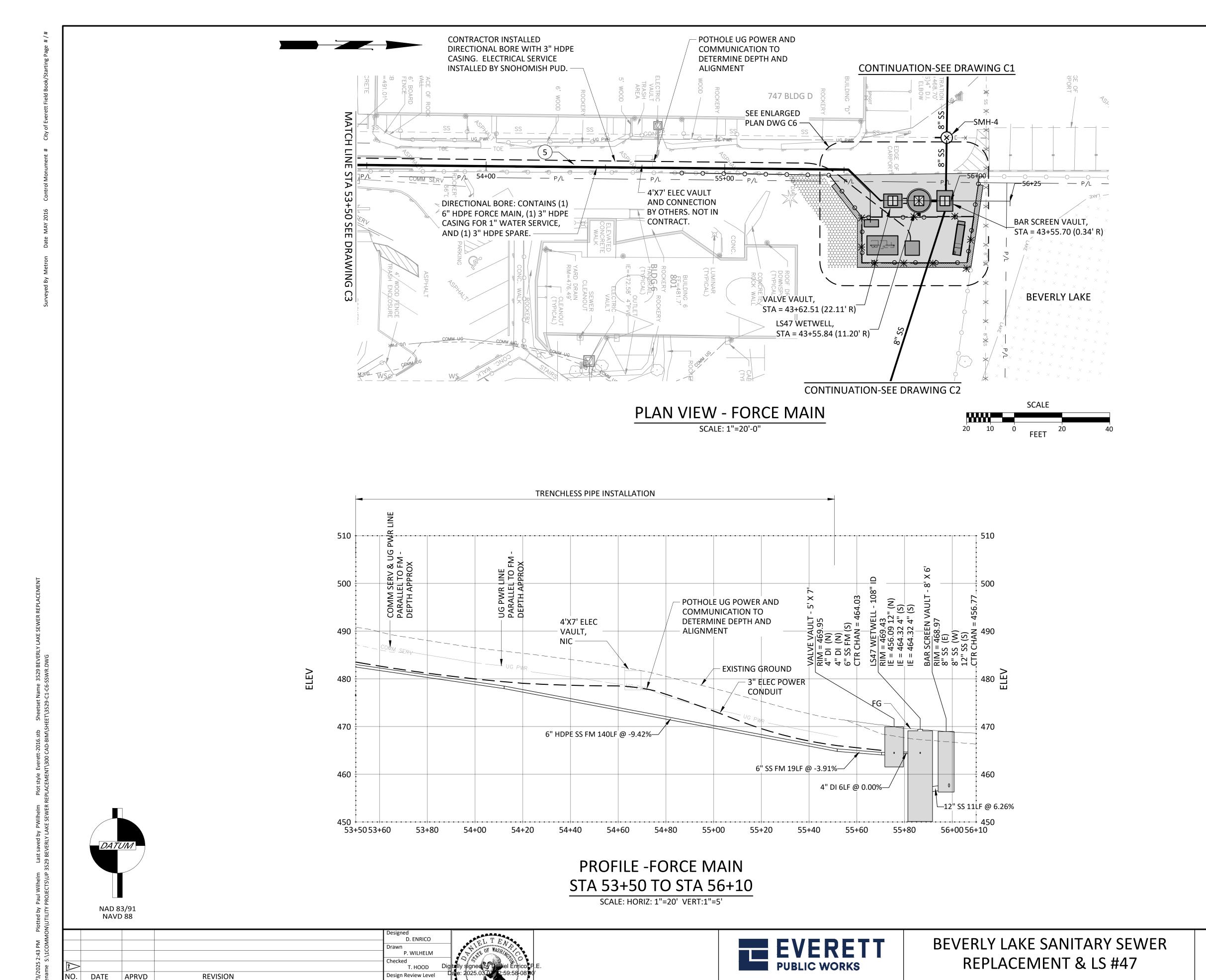
1 SEE SURVEY CONTROL PLAN DRAWING G3 FOR DEFINITION OF CONSTRUCTION BASELINE STATIONING AND VERTICAL CONTROL.

TO COMPLETED NEW SYSTEM, PROTECT DURING CONSTRUCTION.

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- 3 ACCESS TO MANHOLES NEAR OR IN THE LAKE BOUNDARY SHALL BE KEPT TO MINIMUM AND SHALL BE BY FOOT ONLY. NO DISTURBANCE
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PLANS ISSUED FOR

ACTION DATE APRVD

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ACTION DATE APRVD

RECORD

ACTION DATE APRVD

3200 Cedar Street

Everett, WA 98201

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WORK ORDER 3529

**GENERAL NOTES** 

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UTILTY PLAN & PROFILE

12

STA 53+50 TO STA 56+25

PLANS ISSUED FOR

RECORD

ACTION DATE APRVD ACTION DATE APRVD

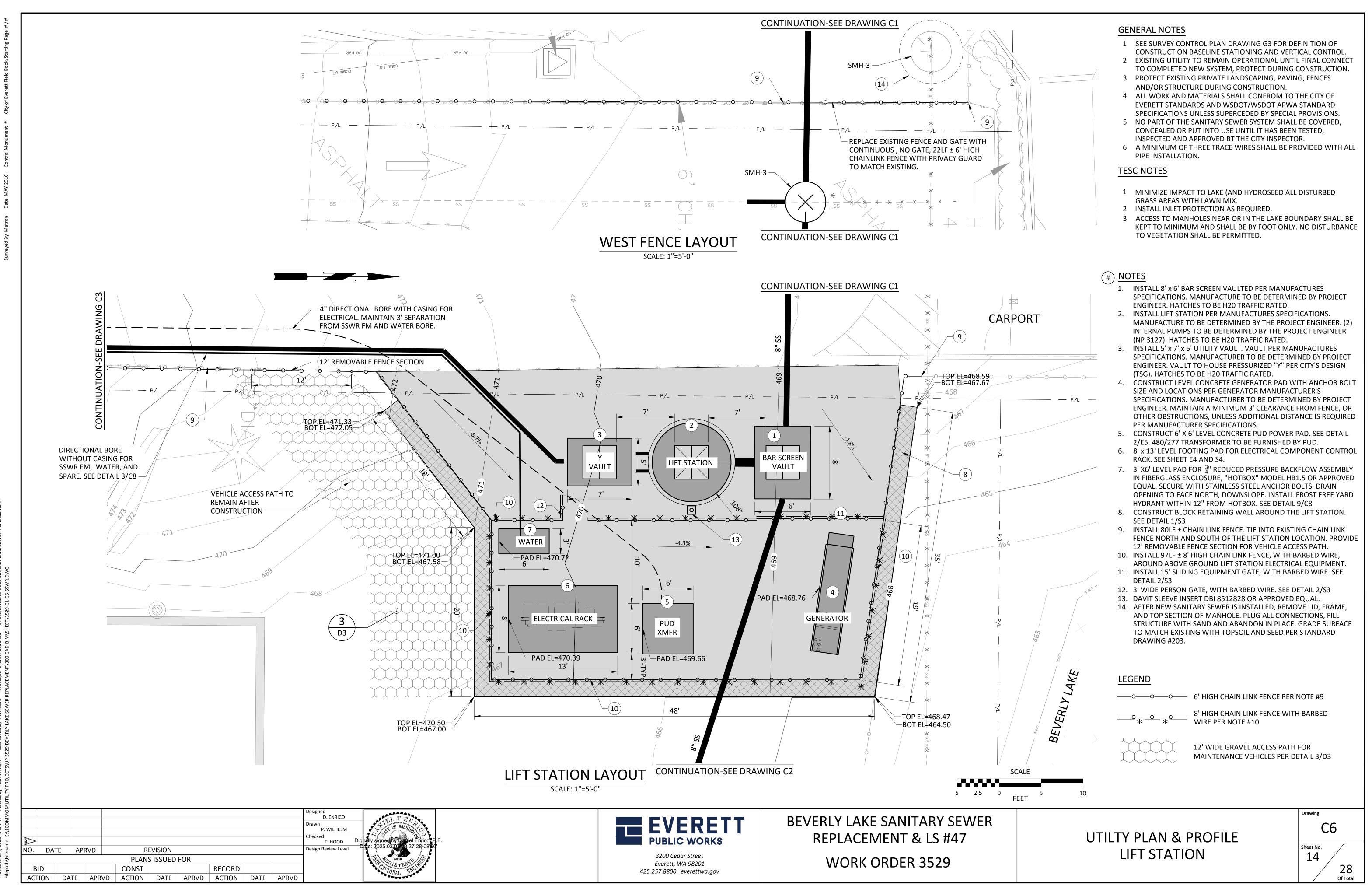
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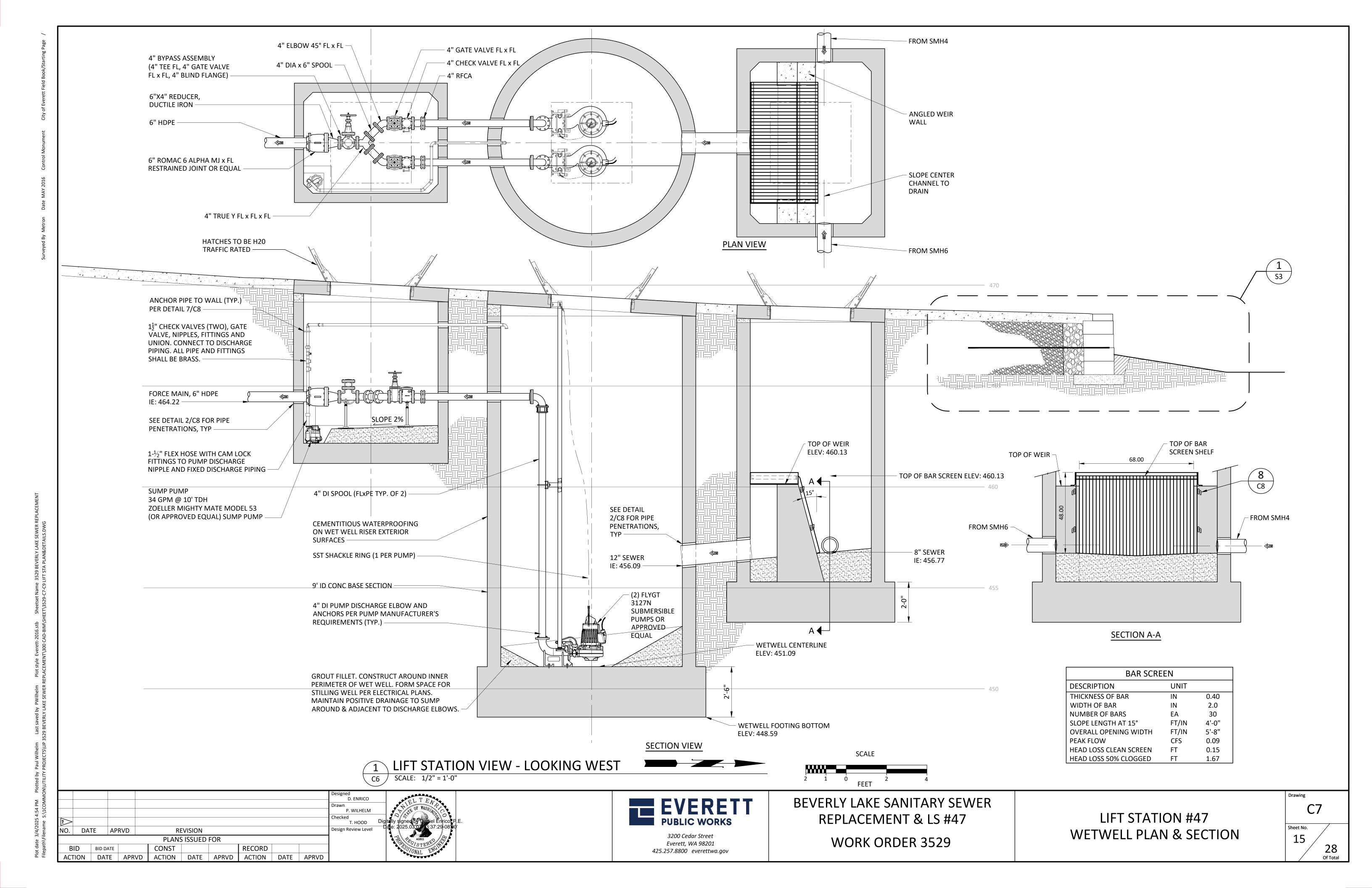
3200 Cedar Street Everett, WA 98201 425.257.8800 everettwa.gov WORK ORDER 3529

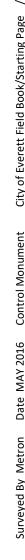
UTILTY PLAN & PROFILE CONNECTIONS AT 75TH STREET SE TO EXISTING SERVICE

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Plot date 3/4/2025 4:45 PM Plotted by Paul Wilhelm Last saved by PWilhelm Plot style Everett-2016 sth







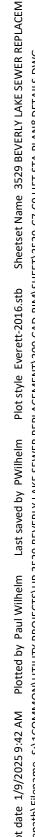
SEE SPEC. SECTION

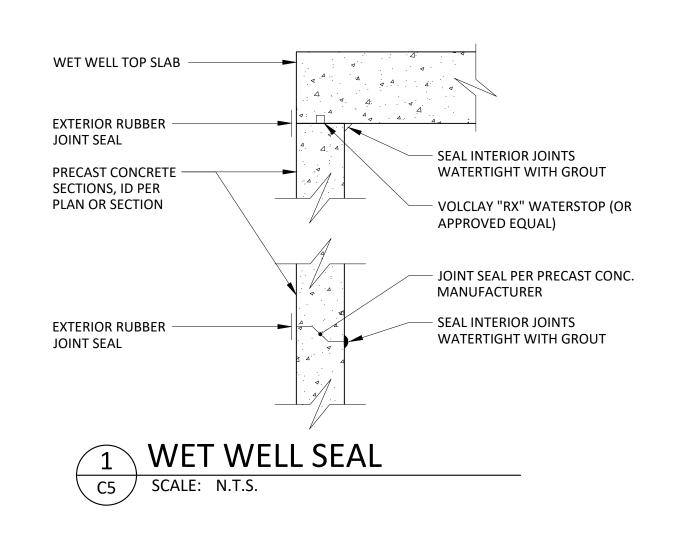
SUPPORT SPACING

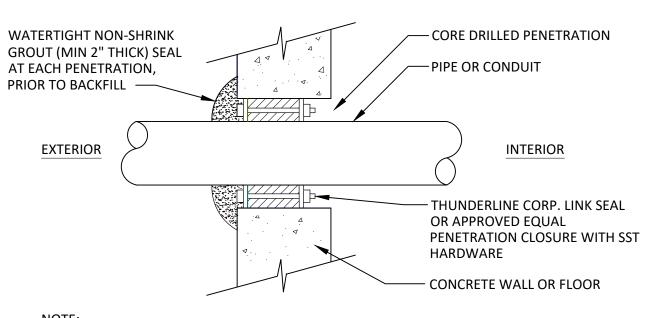
ROUND CORNERS (TYP.)

**ELECTRICAL CONDUITS** 

15060 FOR MAX.

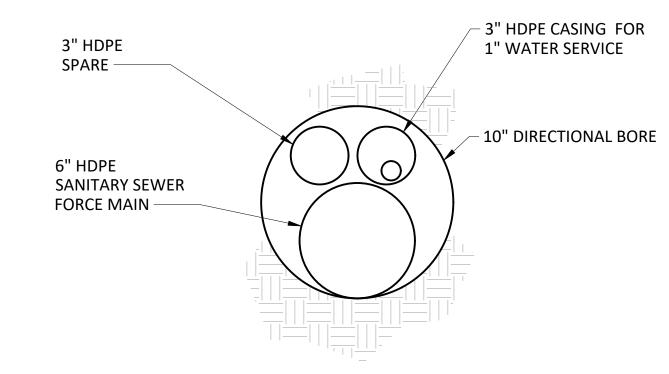




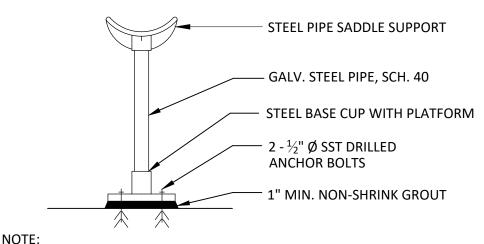


THIS DETAIL SHALL BE USED FOR PIPE PENETRATIONS ON ALL CONCRETE STRUCTURES, INCLUDING ELECTRICAL CONDUIT, AIR DUCTS, WATER OR WASTEWATER PIPES, AND DRAIN PIPES, UNLESS OTHERWISE NOTED.



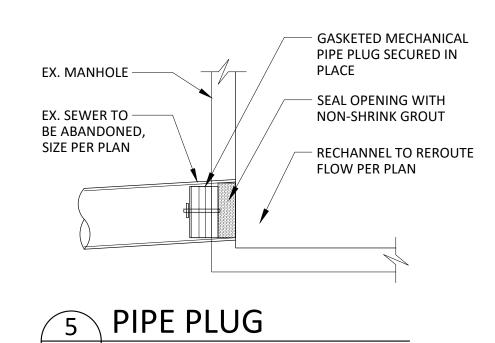


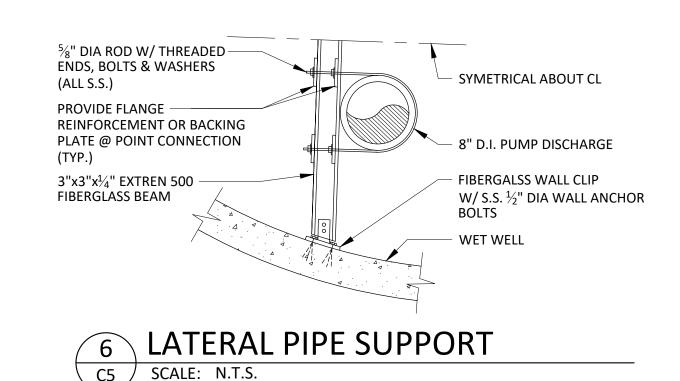


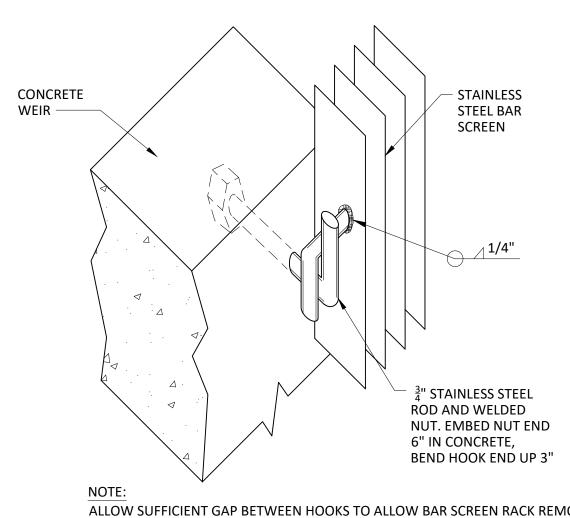


1. ALL SUPPORT MATERIALS SHALL BE HOT-DIPPED GALVANIZED OR CAST-IRON. 2. FOR STEEL SURFACES, WELD STUDS TO STRUCTURE FOR MOUNTING. FOR CONCRETE STRUCTURES, MOUNT WITH  $\frac{3}{8}$ " SST ANCHOR BOLTS.

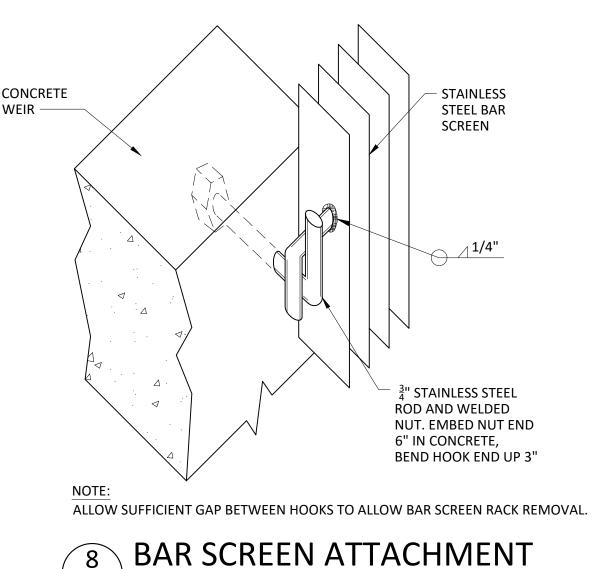


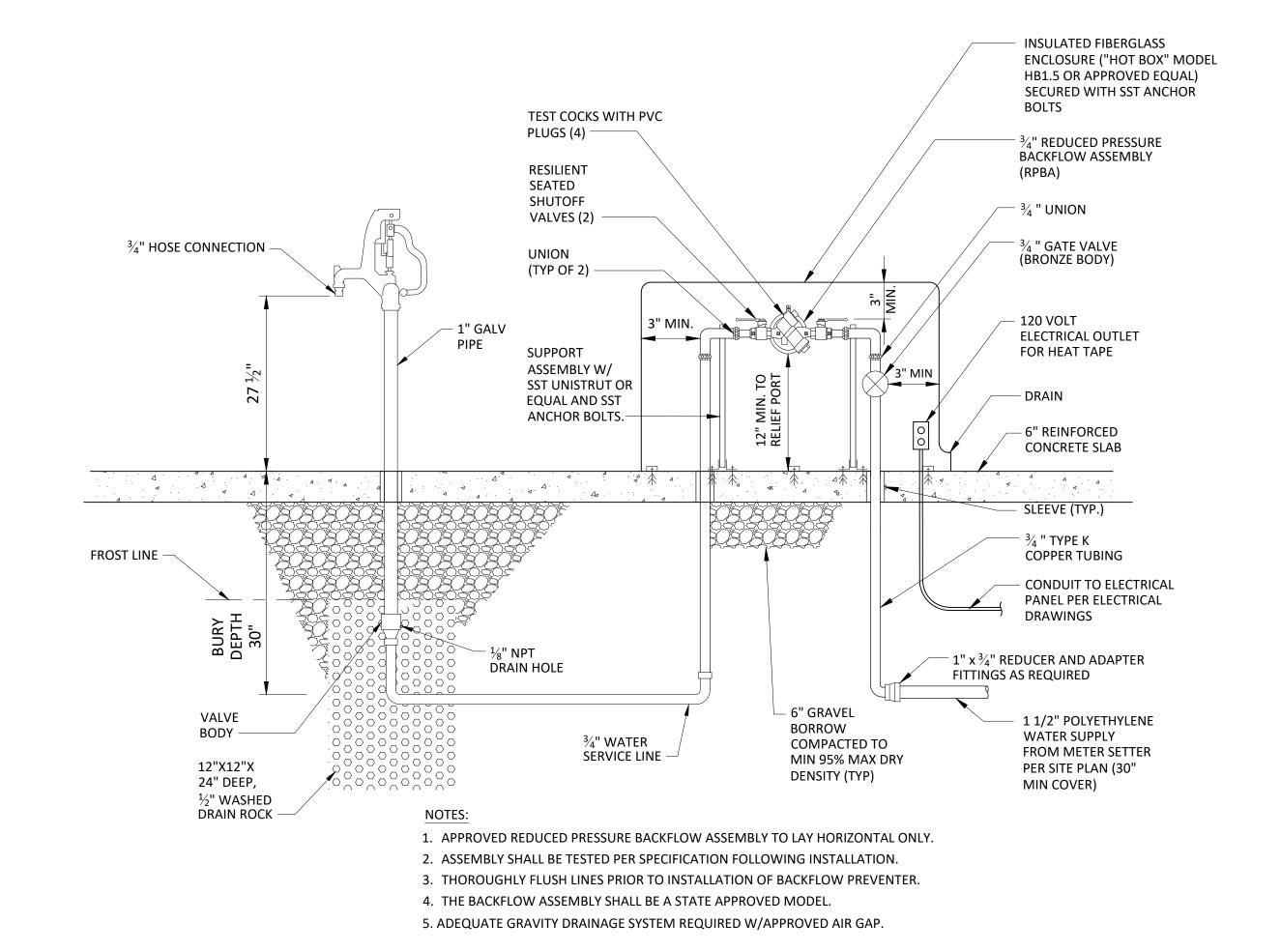




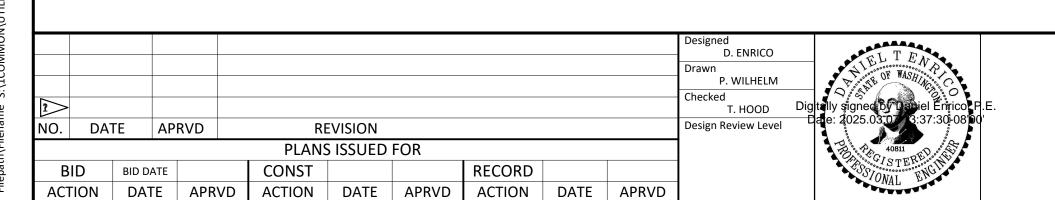


SCALE: N.T.S.









- 3/8"x2½" SST CONCRETE ANCHOR BOLTS (TYP. FOR CONC. SURFACE) OR

3/8" WELDED STEEL STUDS FOR STEEL

SURFACES

INSTALL SPACER BETWEEN CLAMP AND STRUCTURE TO PROVIDE SPACE BETWEEN DUCT AND STRUCTURE AS NECESSARY TO AVOID CONFLICTS WITH

PIPE / DUCT CLAMP

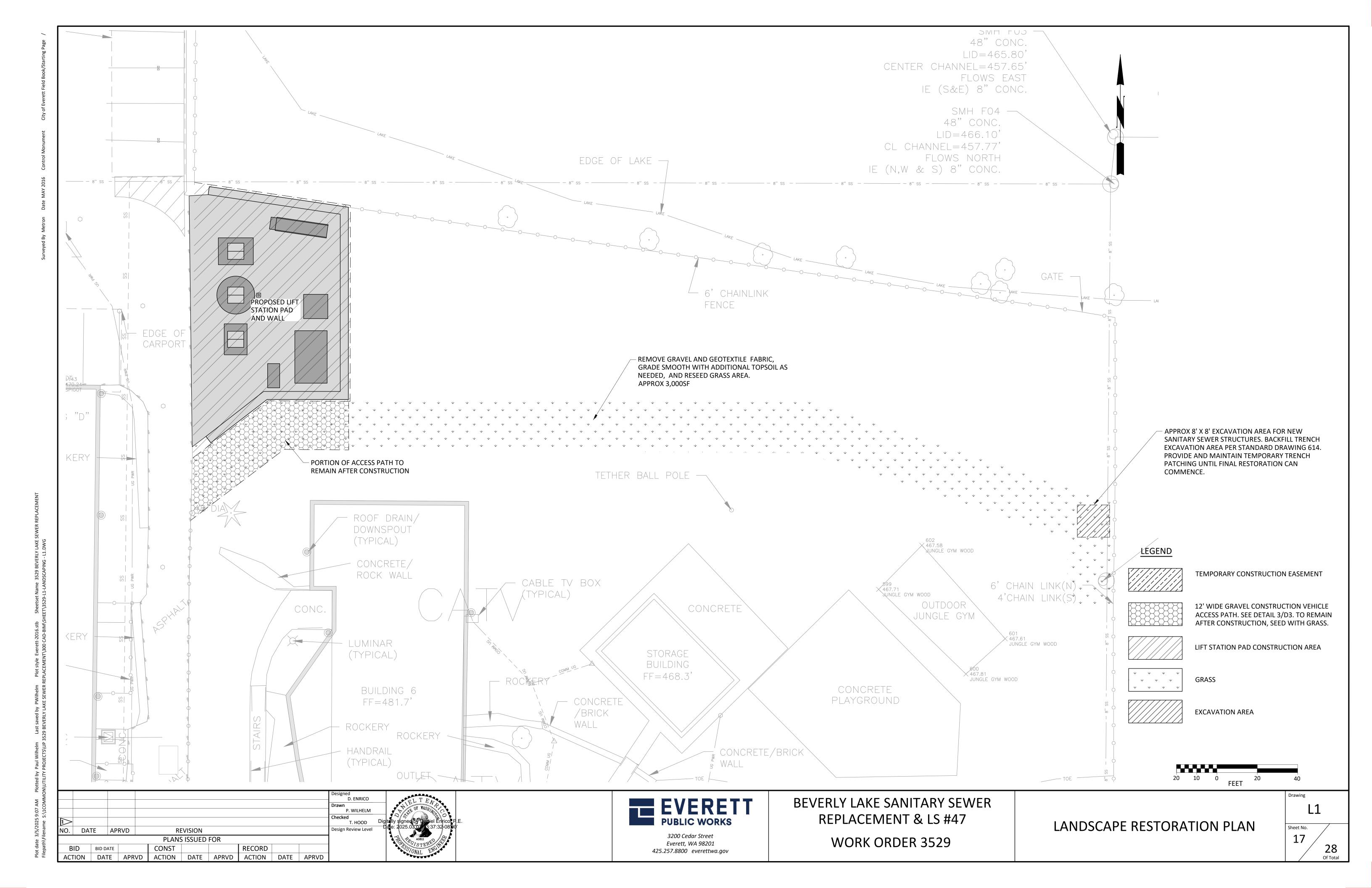
16 GA. SST CLAMP (TYP.)

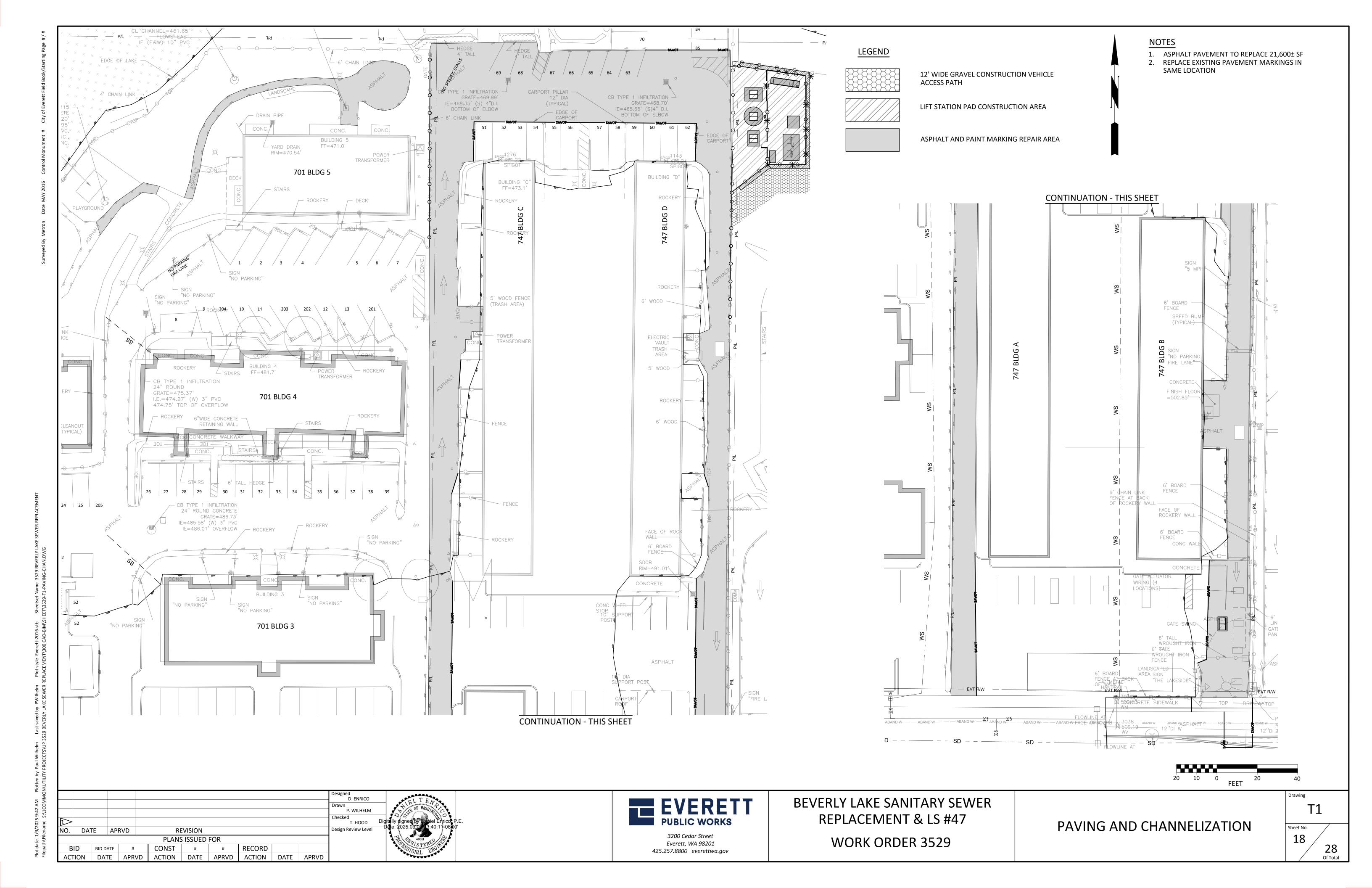


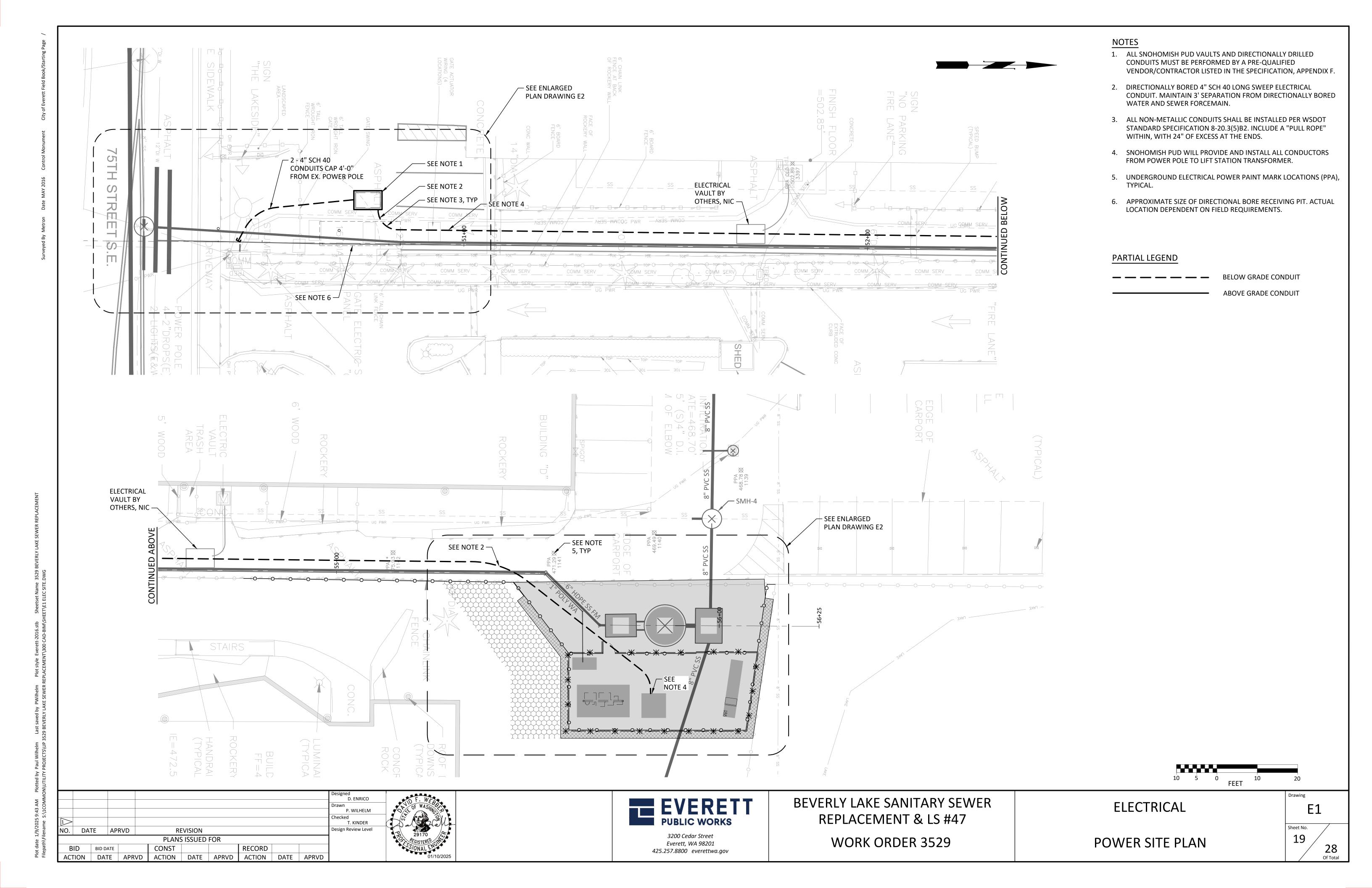
**BEVERLY LAKE SANITARY SEWER** REPLACEMENT & LS #47 WORK ORDER 3529

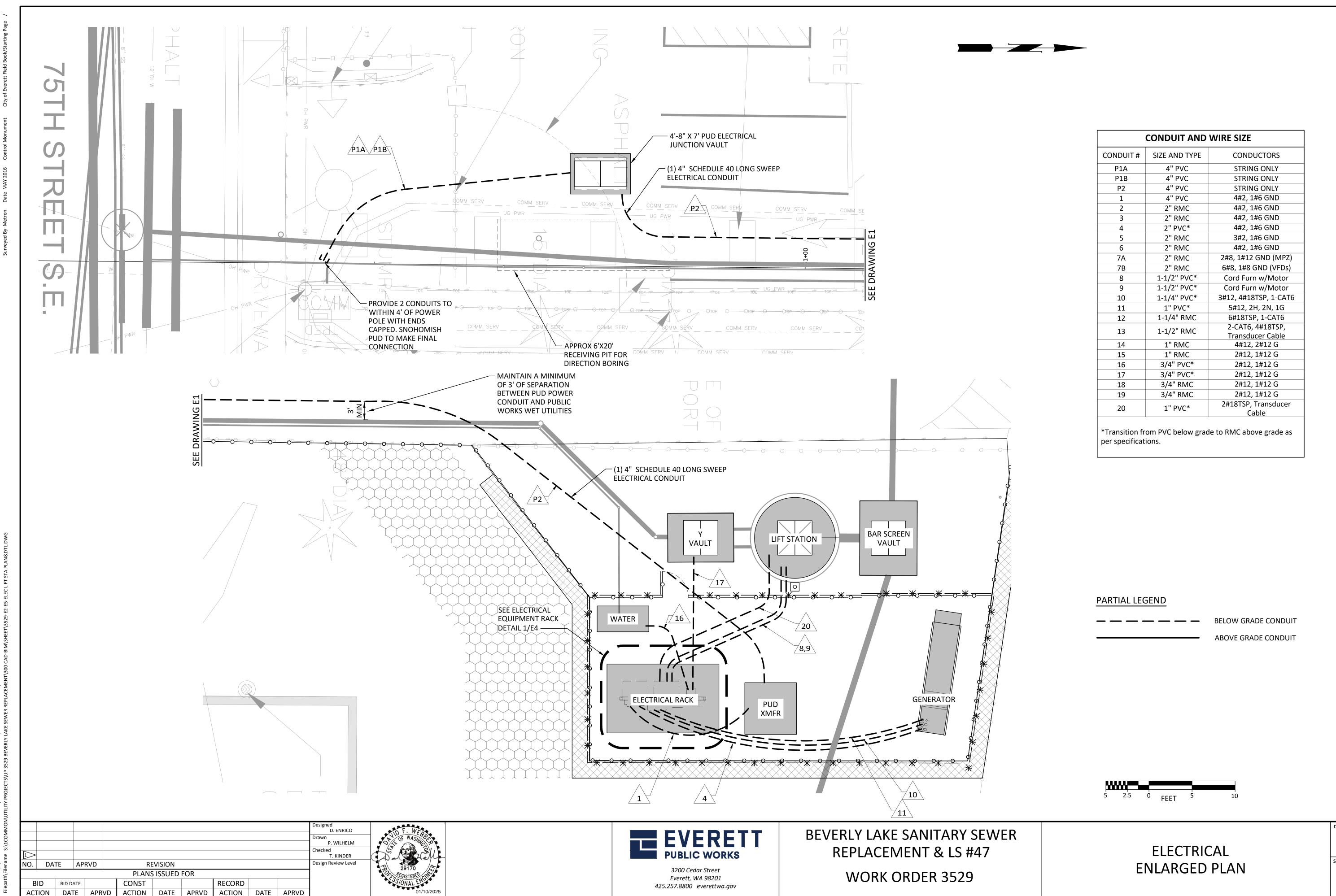
LIFT STATION #47 LS 47 DETAILS

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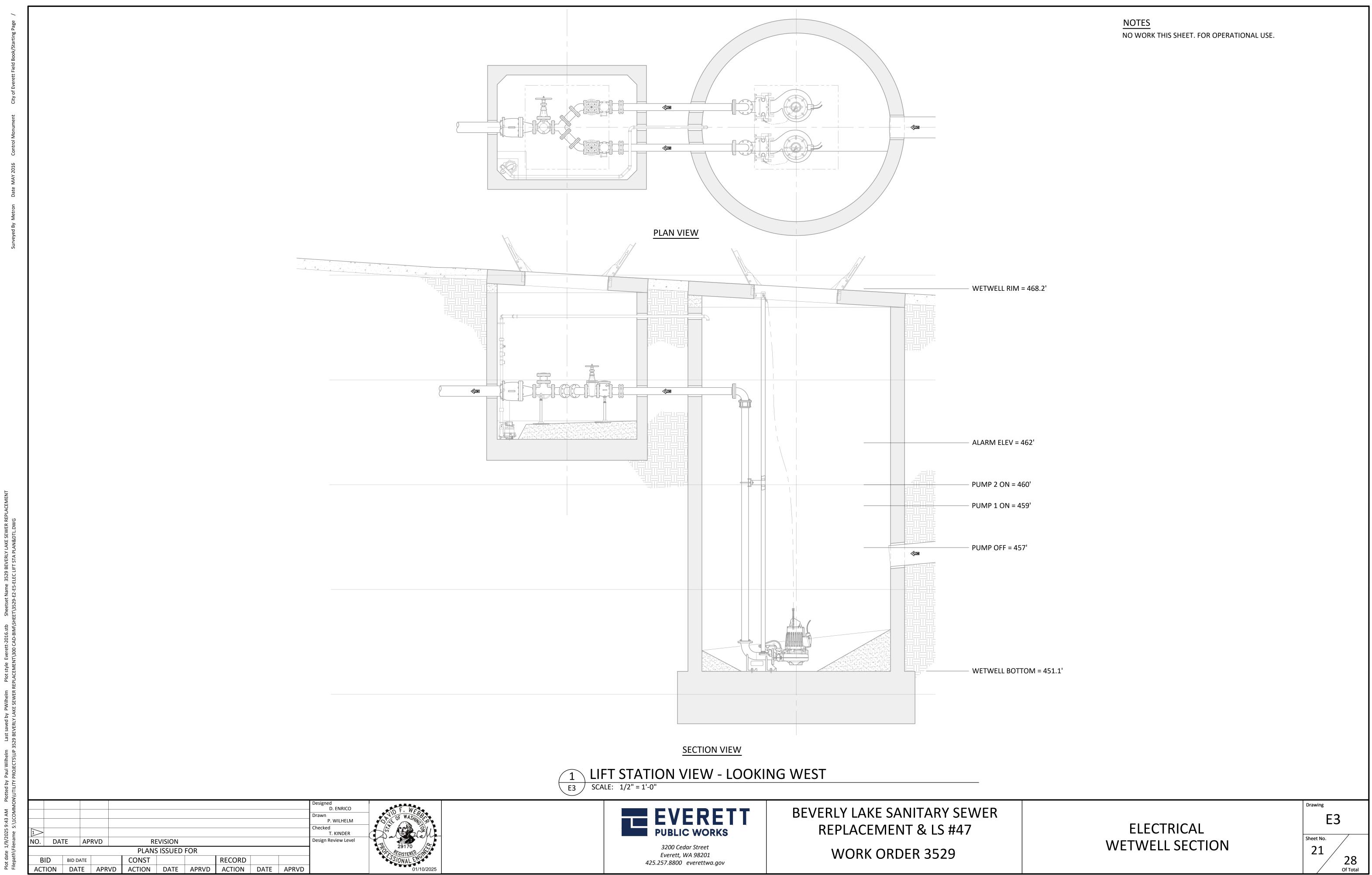




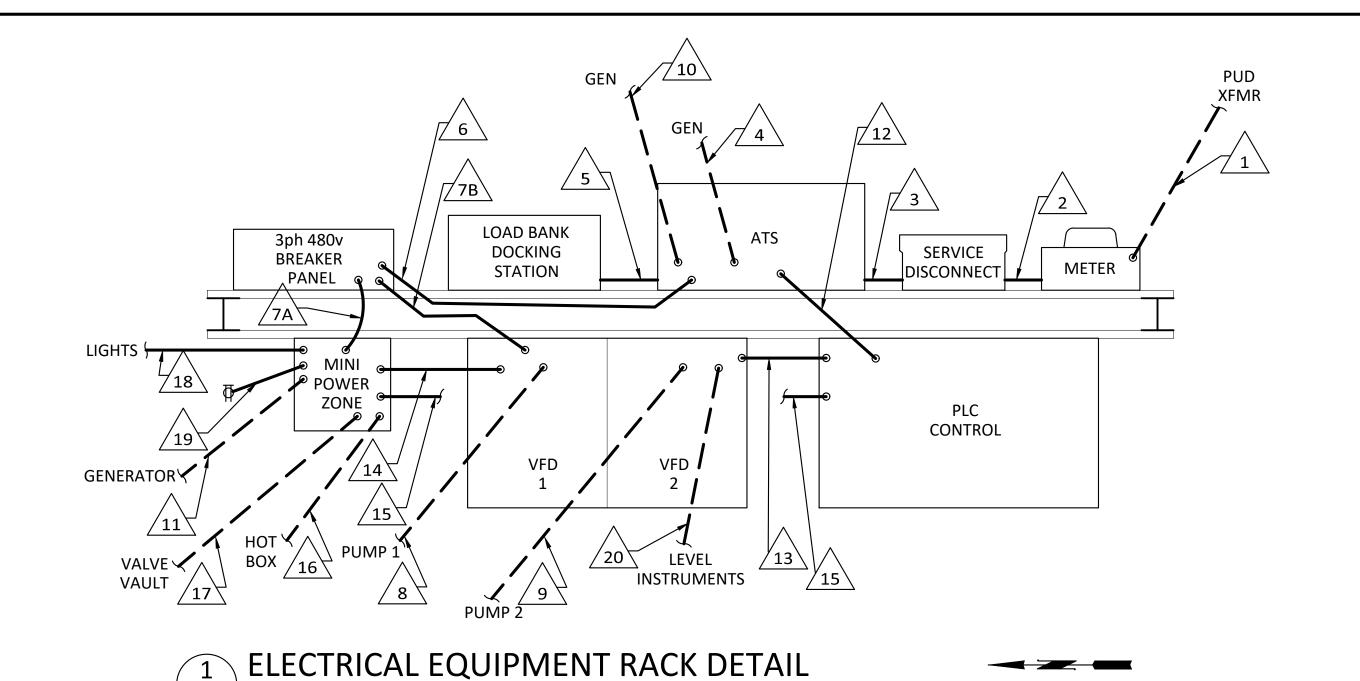
E2

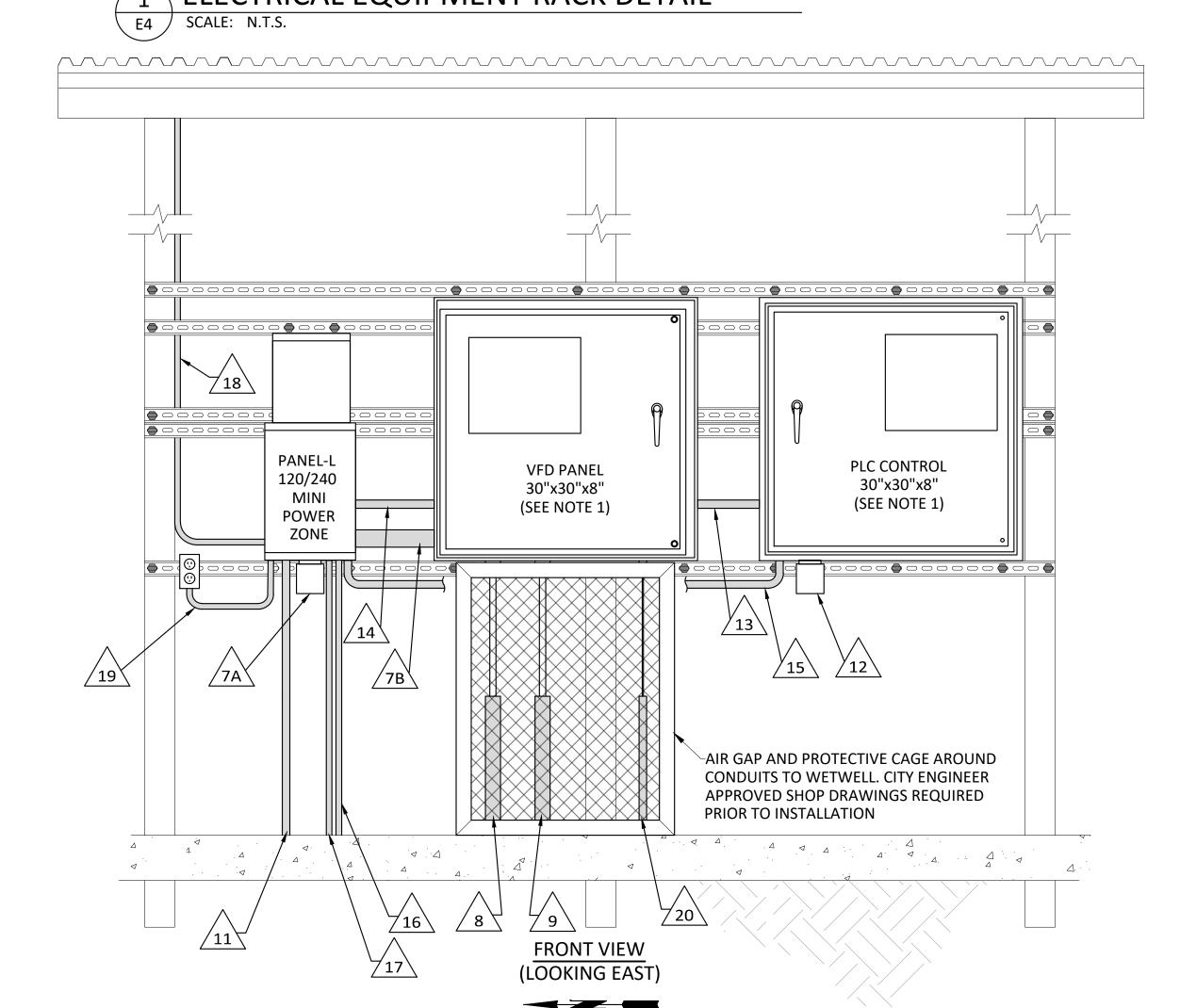
28 Of Total

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CONDUIT #	SIZE AND TYPE	CONDUCTORS
P1A	4" PVC	STRING ONLY
P1B	4" PVC	STRING ONLY
P2	4" PVC	STRING ONLY
1	4" PVC	4#2, 1#6 GND
2	2" RMC	4#2, 1#6 GND
3	2" RMC	4#2, 1#6 GND
4	2" PVC*	4#2, 1#6 GND
5	2" RMC	3#2, 1#6 GND
6	2" RMC	4#2, 1#6 GND
7A	2" RMC	2#8, 1#12 GND (MPZ)
7B	2" RMC	6#8, 1#8 GND (VFDs)
8	1-1/2" PVC*	Cord Furn w/Motor
9	1-1/2" PVC*	Cord Furn w/Motor
10	1-1/4" PVC*	3#12, 4#18TSP, 1-CAT6
11	1" PVC*	5#12, 2H, 2N, 1G
12	1-1/4" RMC	6#18TSP, 1-CAT6
13	1-1/2" RMC	2-CAT6, 4#18TSP, Transducer Cable
14	1" RMC	4#12, 2#12 G
15	1" RMC	2#12, 1#12 G
16	3/4" PVC*	2#12, 1#12 G
17	3/4" PVC*	2#12, 1#12 G
18	3/4" RMC	2#12, 1#12 G
19	3/4" RMC	2#12, 1#12 G
20	1" PVC*	2#18TSP, Transducer Cable

\*Transition from PVC below grade to RMC above grade as per specifications.

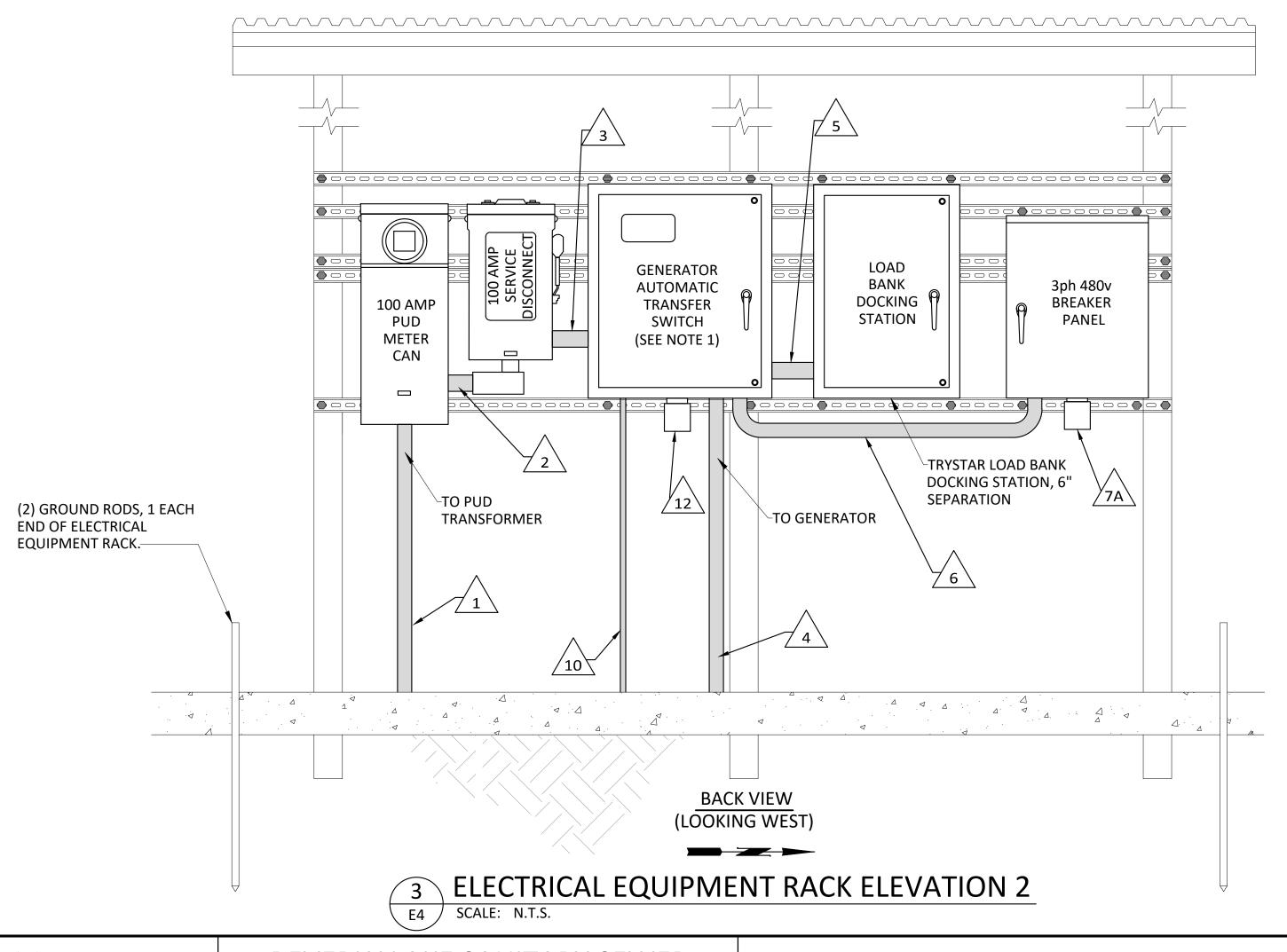
# NOTES

- CITY PROVIDED VFD PANEL AND PLC CONTROL CABINETS, CONTRACTOR INSTALLED, CITY CREW CONNECTED WIRING.
- 2. ABOVE GROUND CONDUIT SHALL BE METALLIC RIGID.
  - 3. BELOW GROUND CONDUIT SHALL BE PVC.

PARTIAL LEGEND

**— —** BELOW GRADE CONDUIT

ABOVE GRADE CONDUIT



Designed
D. ENRICO
Drawn

ELECTRICAL EQUIPMENT RACK ELEVATION 1

Drawn
P. WILHELM
Checked
T. KINDER

NO. DATE APRVD REVISION
PLANS ISSUED FOR

BID BID DATE CONST RECORD
ACTION DATE APRVD ACTION DATE APRVD ACTION DATE APRVD

O1/10/2025



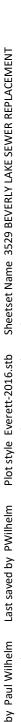
BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47

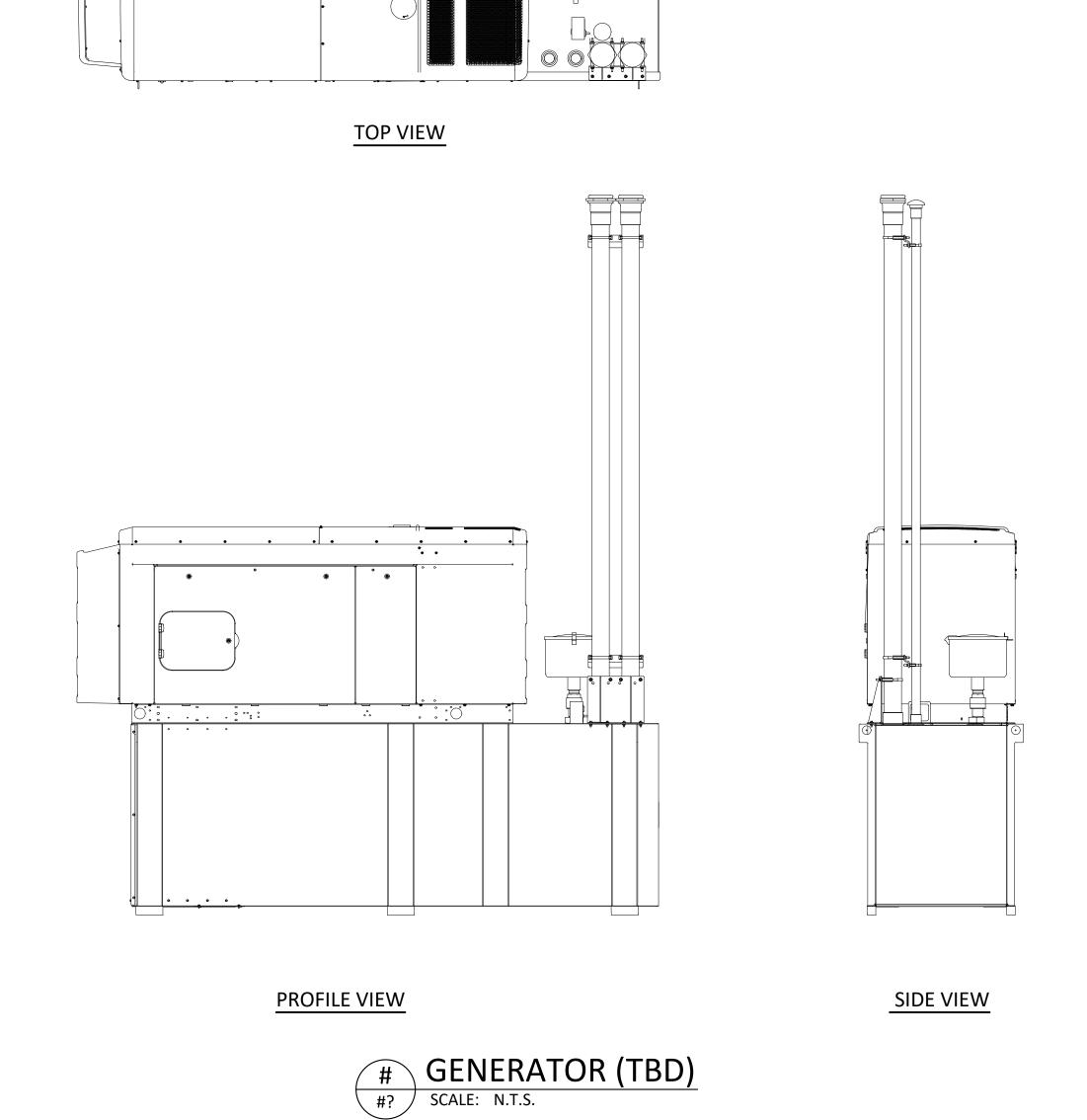
WORK ORDER 3529

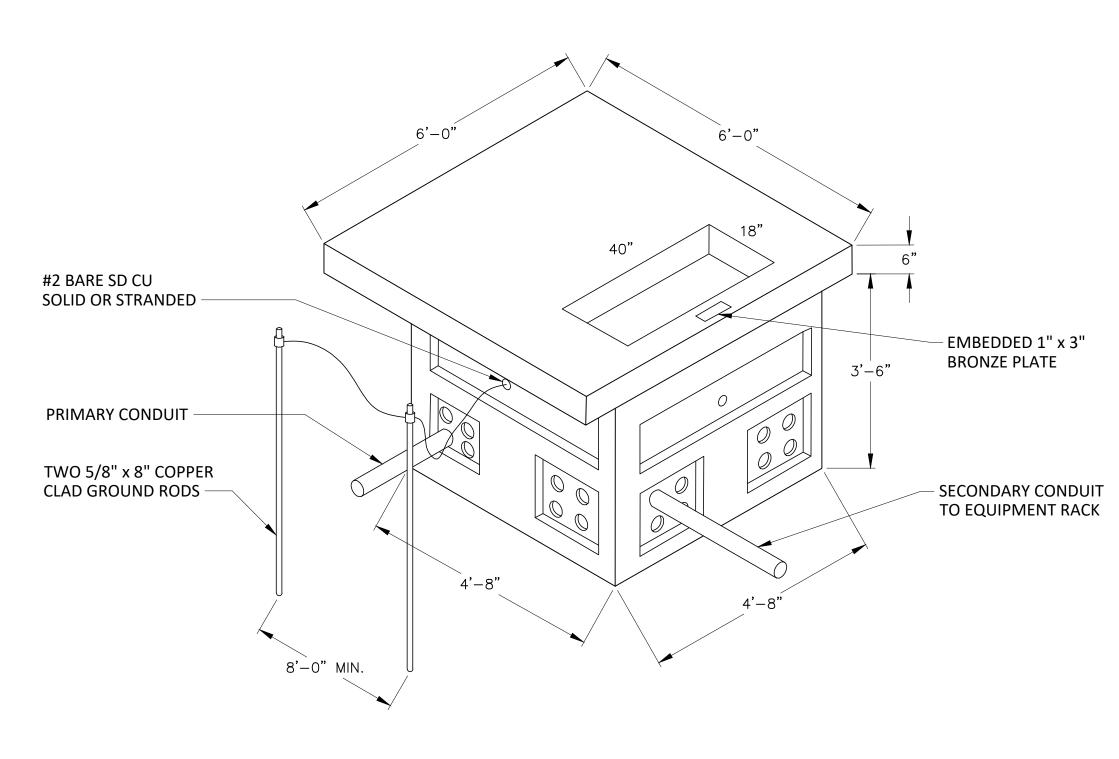
ELECTRICAL EQUIPMENT RACK DETAILS

Drawing E4

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# PUD TRANSFORMER PAD & VAULT

SCALE: N.T.S.

(PER PUD ELECTRICAL SERVICE REQUIREMENTS)

NO.	DATE	APF	RVD	RE	EVISION					Designed D. ENRICO  Drawn P. WILHELM  Checked T. KINDER  Design Review Level	F. WEBOOK OF WASHINGTON
				PLANS	SISSUED	FOR					PEGISTERED CHI
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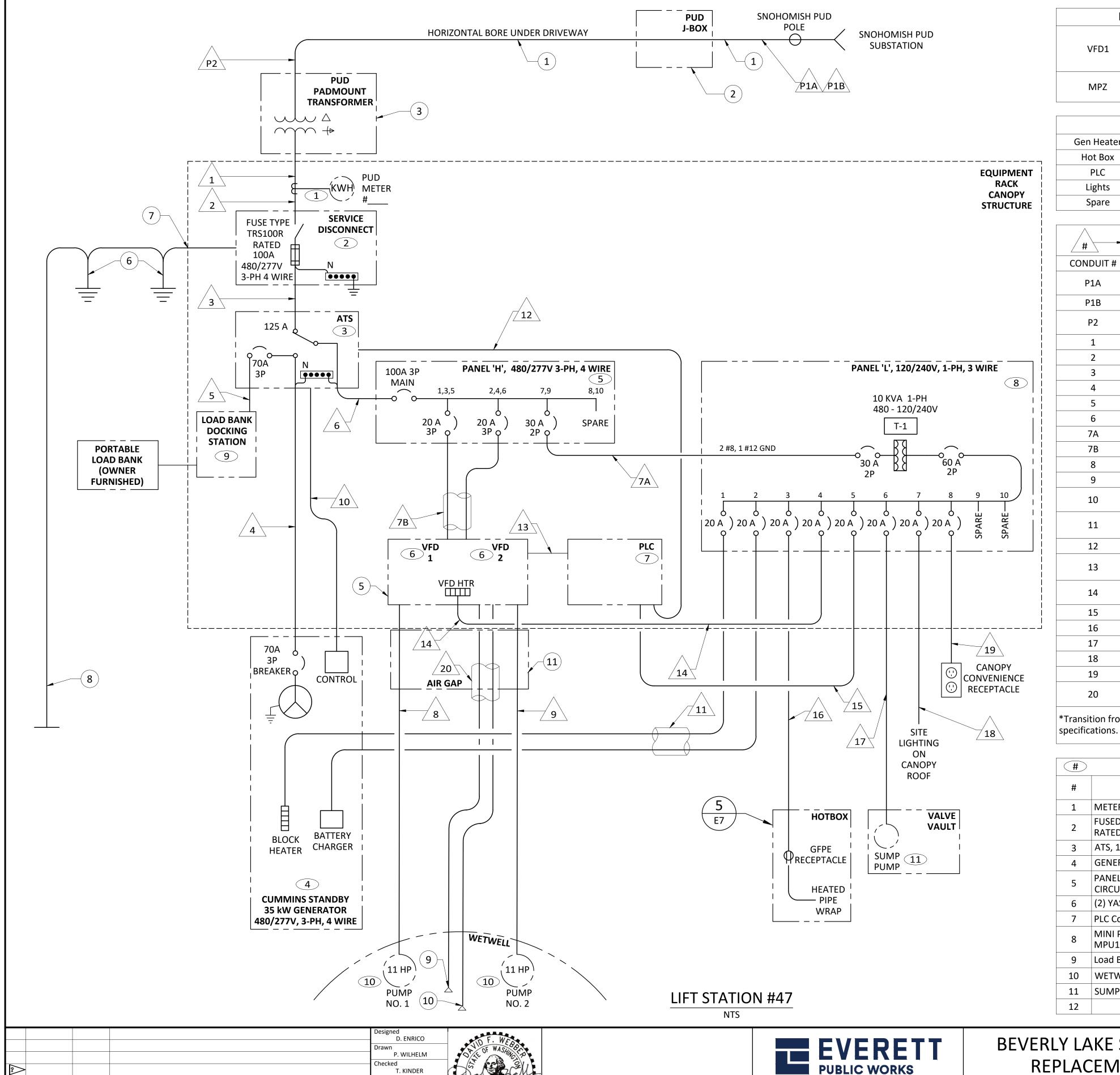


BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47

WORK ORDER 3529

ELECTRICAL GENERATOR DETAILS

Drawing
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Of Total



esign Review Level

NO. DATE APRVD

BID DATE

ACTION DATE APRVD

**REVISION** 

CONST

PLANS ISSUED FOR

ACTION DATE APRVD

RECORD

ACTION DATE APRVD

PANEL 'H' (480v, 3ph, 3W) VFD1 VFD2 5 **SPARE** MPZ

#### PANEL 'L' (120/240, 1ph) Gen Heater Gen Charger VFD Heater Hot Box

10

5

)2	
/_	

Sump Pump

Receptacle

Spare

# **CONSTRUCTION NOTES**

- PRIMARY VOLTAGE CONDUCTORS BY SNOHOMISH COUNTY PUD. CONDUIT PROVIDED TO WITHIN 4' OF PUD POWER POLE.
- 2. 4'-8" X 7' J-BOX BY SNOHOMISH PUD.
- 3. TRANSFORMER PAD AND VAULT.
- 4. FURNISHED BY OWNER, INSTALLED BY CONTRACTOR.
- 5. FURNISHED BY OWNER, YASKAWA 20HP VFD INSTALLED BY CONTRACTOR.
- 6. 5/8" X 8" COPPER CLAD STEEL GROUND ROD SPACED A MINIMUM OF 8' APART. SEE DETAIL 1/E4.
- GROUND EQUIPMENT RACK CANOPY STRUCTURE.
- 8. EXTEND GROUNDING CONDUCTOR TO GENERATOR SLAB
- UNDERGROUND.
- 9. SEE FLOAT SWITCH MOUNTING DETAIL.
- 10. SEE ULTRASONIC SENSOR MOUNTING DETAIL. 11. AIR GAP FOR CONDUITS 8, 9, AND 20.

#		LIFT STATION #47	CONDUIT AND WI	RE SCHEDULE	
CONDUIT#	SIZE AND TYPE	CONDUCTORS	FROM	ТО	COMMENTS
P1A	4" PVC	STRING ONLY	Utility Pole	PUD Vault	PUD TO PROVIDE CONDUCTORS
P1B	4" PVC	STRING ONLY	Utility Pole	PUD Vault	SPARE CONDUIT
P2	4" PVC	STRING ONLY	PUD Vault	PUD Xfmr	PUD TO PROVIDE CONDUCTORS
1	4" PVC	4#2, 1#6 GND	PUD Xfmr	PUD Meter	
2	2" RMC	4#2, 1#6 GND	PUD Meter	Service Disconnect	Fused 100A
3	2" RMC	4#2, 1#6 GND	Service Disconnect	ATS	To ATS 'Normal'
4	2" PVC*	4#2, 1#6 GND	Generator	ATS	To ATS 'Emergency'
5	2" RMC	3#12, 1 #6 GND	ATS	Load Bank Box	From ATS 'Emergency'
6	2" RMC	4#2, 1#6 GND	ATS	Panel H (480V)	From ATS 'Load'
7A	2" RMC	2#8, 1#12 GND (MPZ)	Panel H (480V)	Panel L (MPZ)	Mini Power Zone Primary
7B	2" RMC	6#8, 1#8 GND (VFDs)	Panel H (480V)	VFD Cabinet	VFD Power
8	1-1/2" PVC*	Cord Furn w/Motor	VFD Cabinet	Pump 1	Submersible Pump 1
9	1-1/2" PVC*	1-1/2" PVC* Cord Furn w/Motor		Pump 2	Submersible Pump 2
10	·		ATS	Generator	ATS DC Power, Gen Start, Gen Status
11	1" PVC*	5#12, 2H, 2N, 1G	Mini Power Zone	Generator	Gen Block Heater and Batt Charger
12	1-1/4" RMC	6#18TSP, 1-CAT6	ATS	PLC Cabinet	Gen and ATS Status
13	1-1/2" RMC	2-CAT6, 4#18TSP, Transducer Cable	VFD Cabinet	PLC Cabinet	VFD Comms and Intrusion, High Float, Level
14	1" RMC	4#12, 2#12 G	Panel L (MPZ)	VFD Cabinet	VFD Heater, VFD Control Powe
15	1" RMC	2#12, 1#12 G	Panel L (MPZ)	PLC Cabinet	PLC Power
16	3/4" PVC*	2#12, 1#12 G	Panel L (MPZ)	Water Service	Hot Box Receptacle
17	3/4" PVC*	2#12, 1#12 G	Panel L (MPZ)	Valve Vault	Sump Pump
18	3/4" RMC	2#12, 1#12 G	Panel L (MPZ)	Canopy	Canopy Lights (2)
19	3/4" RMC	2#12, 1#12 G	Panel L (MPZ)	Canopy	Canopy Convenience Recept
20	1" PVC*	2#18TSP, Transducer Cable	VFD Cabinet	Wet Well	High Float, Level Transducer

#	EQUIPMENT SCHEDULE	
#	DESCRIPTION	OWNER FURNISHED
1	METER SOCKET PER SNOHOMISH PUD REQUIREMENTS	
2	FUSED DISCONNECT SWITCH, 100A, 3 POLE, 480V, NEUTRAL KIT, NEMA 3R, SUSE RATED, SQUARE D H363NRB OR EQUAL	
3	ATS, 125A, 3 POLE, NEMA 3R	Х
4	GENERATOR IN SOUND ATTENUATED ENCLOSURE, 50 KW, 480V	Х
5	PANELBOARD, 480V/277V, 3 PHASE, 125A MAIN BREAKER, NEMA 3R, WITH CIRCUIT BREAKERS AS INDICATED	
6	(2) YASKAWA P1000 VARIABLE FREQUENCY DRIVES, NEMA 3R ENCLOSURE	Х
7	PLC Controls in NEMA 3R Enclosure	Х
8	MINI POWER ZONE, SINGLE PHASE, 10 KVA, 480-120/240V, SQUARE D MPU10S40F OR EQUAL	
9	Load Bank Docking Station, 400A, 480/277V by Trystar	Х
10	WETWELL PUMP PER SPECIFICATION	
11	SUMP PUMP	
12		

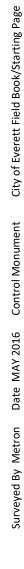
**PUBLIC WORKS** 3200 Cedar Street Everett, WA 98201 425.257.8800 everettwa.gov

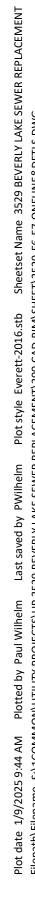
BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47 WORK ORDER 3529

**ELECTRICAL** 

ONE LINE DIAGRAM AND SCHEDULES

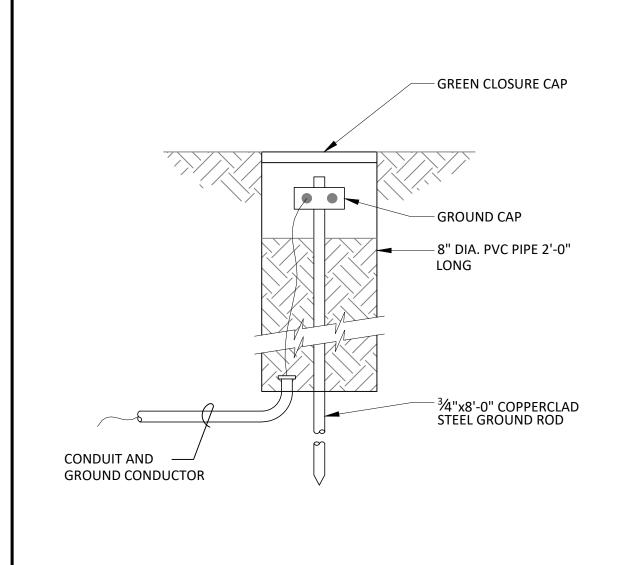
E6

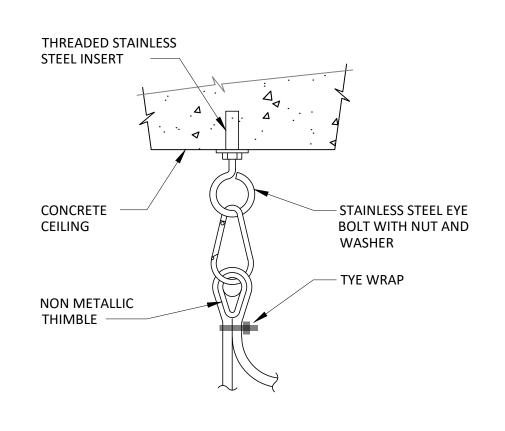


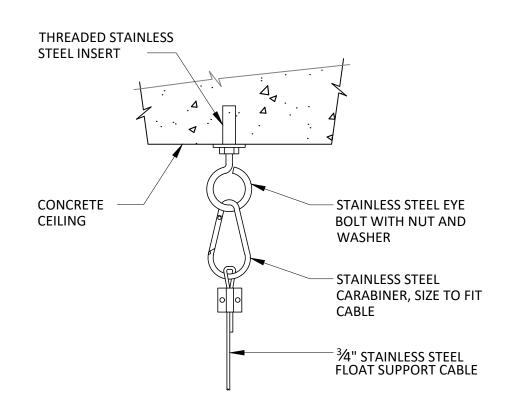


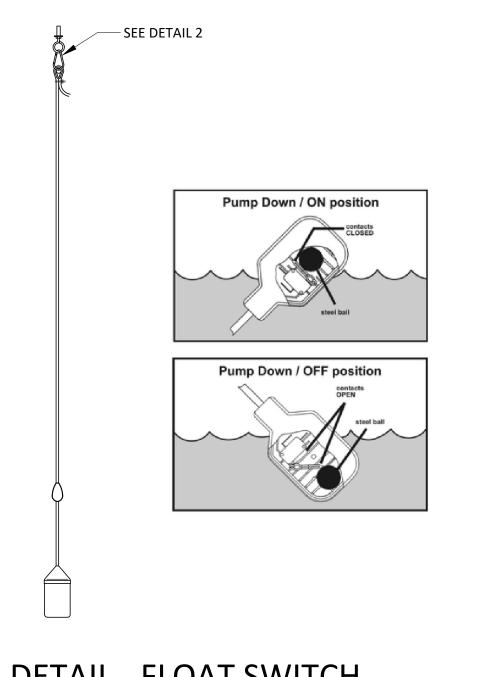
VAR

N.T.S.







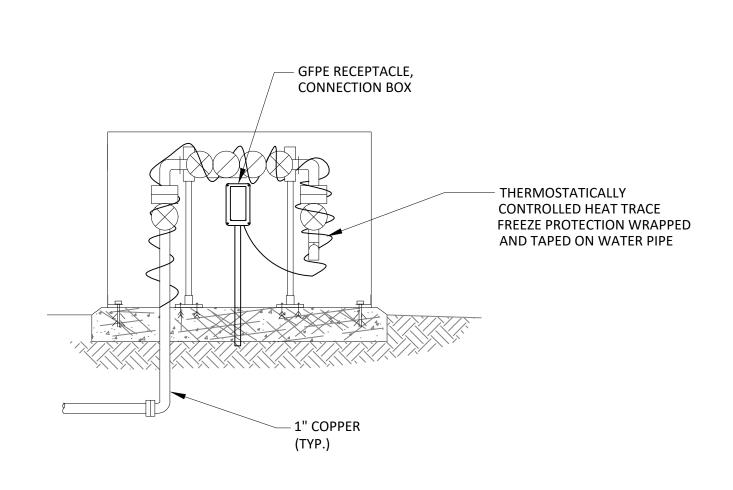


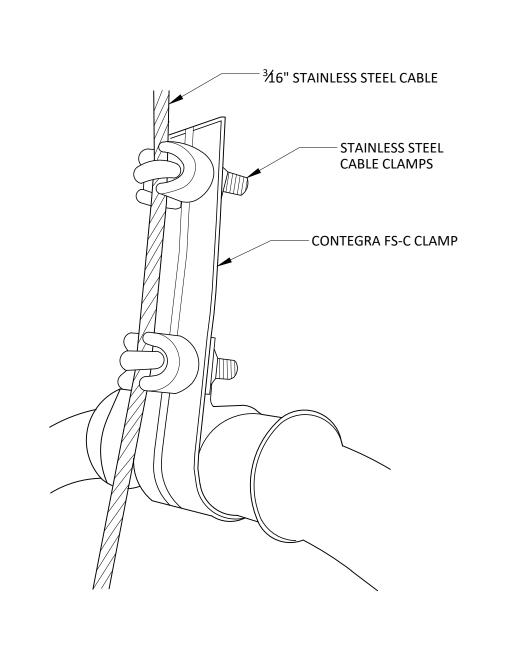


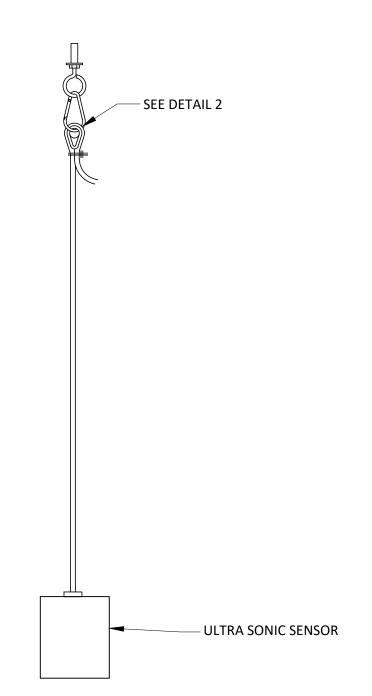


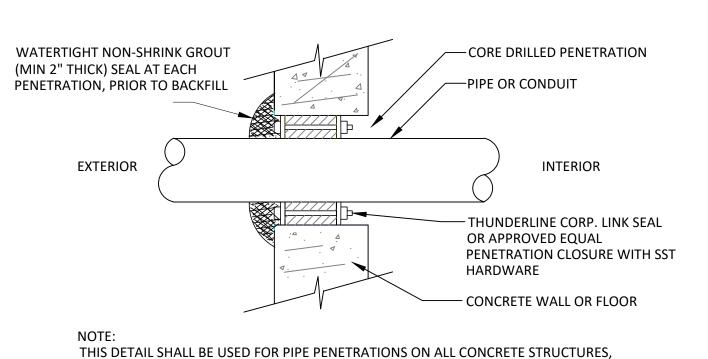












INCLUDING ELECTRICAL CONDUIT, AIR DUCTS, WATER OR WASTEWATER PIPES, AND DRAIN

5 DETAIL - REDUCED PRESSURE BACKFLOW ASSEM.

6	DETAIL - CABLE MOUNTING	
VAR /	N.T.S.	

ULTRA SONIC SENSOR SUSPENSION VAR

DETAIL - PENETRATION SEAL VAR

										Designed D. ENRICO  Drawn P. WILHELM Checked T. KINDER	F. WEB
NO.	DA	TE AF	PRVD	RE	EVISION					Design Review Level	
PLANS ISSUED FOR								1	29170		
ВІ	ID	BID DATE		CONST			RECORD				SSYONAL ENG
ACT	ION	DATE	APRVD	ACTION	DATE	APRVD	ACTION	DATE	APRVD		01/10/2025





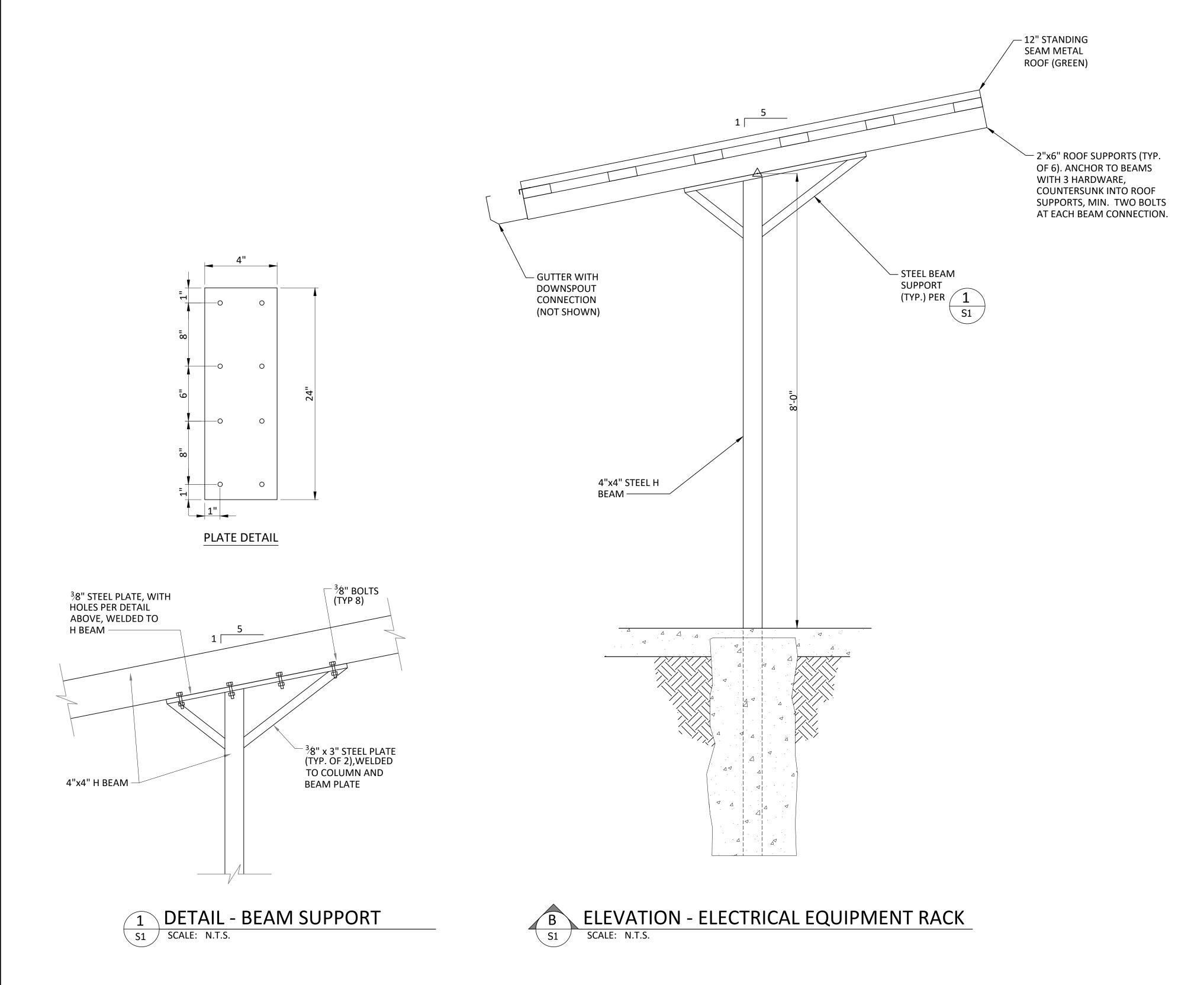
ELECTRICAL

**DETAILS** 

PIPES, UNLESS OTHERWISE NOTED.

Drawing
E7
Sheet No.
25 /
/ 28
Of Total





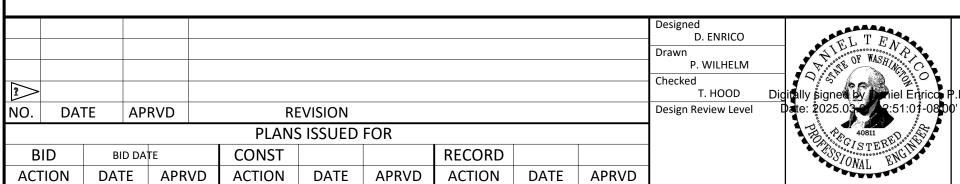
#### GENERAL STRUCTURAL NOTES

- 1. ALL WORK SHALL BE IN STRICT CONFORMANCE WITH THE 2018 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE STATE OF WASHINGTON. ALL BUILDING ELEMENTS AND COMPONENTS NOT SPCECIFICALLY DETAILED IN THESE STRUCTURAL CONSTRUCTION DOCUMENTS SHALL BE FABRICATED AND CONSTRUCTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CONTAINED IN THE IBC AS AMENDED BY THE STATE OF WASHINGTON.
- 2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS BEFORE CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCIES OR INCONSISTENCIES.
- 3. THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS SHALL INSURE COORDINATION OF CONTRACTOR SUPPLIED/DESIGNED ELEMENTS AND DEFERRED SUBMITTALS WITH ALL DESIGN DISCIPLINES WITHIN THE CONSTRUCTION SET. COORDINATION SHALL IDENTIFY AND RECONCILE CONFLICTS BETWEEN THE CONTRACTOR SUPPLIED/DESIGNED ELEMENTS AND THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION AND DELIVERY TO THE PROJECT SITE. THE PROJECT ENGINEER SHALL BE NOTIFIED IF CONFLICTS EXIST.
- 4. THE CONTRACT STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. METHODS, PROCEDURES, AND SEQUENCE OF CONSTRUCTION ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO MAINTAIN AND ENSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTION.
- 5. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LIVE LOAD FOR THE STRUCTURE. PROVIDE SHORING AND/OR BRACING WHERE LOADS EXCEED DESIGN CAPACITY AND WHERE STRUCTURES HAVE NOT ATTAINED DESIGN STRENGTH.

#### DESIGN LOADS: PER 2018 IBC

**ANALYSIS PROCEDURE** 

1603.1.1 - ROOF LOADS:		
DEAD LOAD .		15 PSF
LIVE LOAD .		SEE SNOW LOADS
1603.1.3 - SNOW LOADS:		
GROUND SNOW LO	DAD, Pg	25 PSF
	LOAD, Pf	
	ACTÓR, Ce	
	RTANCE FACTOR	
1603.1.4 - WIND DESIGN	CRITERIA:	
ULTIMATE DESIGN	WIND SPEED, V	105 MPH
		SIMPLIFIED METHOD PER IBC, 1609.6
1603.1.5 - EARTHQUAKE I	DESIGN CRITERIA:	
		III
	NCE FACTOR Ie	
	RATION, Ss	
	RATION, Si	
	ATEGORY	
SEISIVIIC DESIGN CA		





BEVERLY LAKE SANITARY SEWER REPLACEMENT & LS #47 WORK ORDER 3529

**STRUCTURAL** 

. GENERAL PROCEDURE, PER ASCE-7

**EQUIPMENT RACK ELEVATION AND DETAILS** 

**S1** 

28 Of Total

