

PUBLIC UTILITY DISTRICT NO. 1 OF CLALLAM COUNTY

CONTRACT DOCUMENTS

CARLSBORG/VAN-LAN WATER SYSTEM BLENDING PROJECT, PHASE 1

BID DUE BY: NOVEMBER 2, 2023 @ 2:30 p.m. PST

BID OPENING: NOVEMBER 2, 2023

@ 3:00 p.m. PST

Issued for Bid

October 11, 2023

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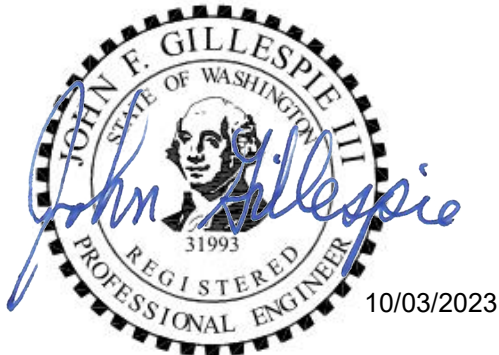
@ 3:00 p.m. PST

CERTIFICATE PAGE

Public Utility District No. 1 of Clallam County

Carlsborg/Van-Lan Water System Blending Project, Phase 1

The engineering material and data contained in the Plans and Specifications were prepared under the supervision and direction of the undersigned, whose seal as a registered professional engineer is affixed below.



John F. Gillespie, III, PE
BHC Consultants, LLC



Zachary Joseph Miles, PE
BHC Consultants, LLC

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(END OF SECTION)

PART A
LEGAL AND PROCEDURAL DOCUMENTS

SECTION A 1
INVITATION TO BID

**INVITATION TO BID
BID NUMBER 230805**

For Publication on October 11, 2023

BIDS FOR:

PUBLIC UTILITY DISTRICT NO. 1 OF CLALLAM COUNTY

General Contractors are invited to submit a single bid for Carlsborg/Van-Lan Water System Blending Project, Phase 1 project:

CARLSBORG/VAN-LAN WATER SYSTEM BLENDING PROJECT, PHASE 1

The CARLSBORG/VAN-LAN WATER SYSTEM BLENDING PROJECT, PHASE 1 in Carlsborg, WA involves constructing a water transmission main from the Van-Lan well site to a water connection on Carlsborg Road, at Childress Lane.

Principal items of Work included in the Carlsborg/Van-Lan Water System Blending Project, Phase 1 Project included:

- Van-Lan site – piping and valves for the Van-Lan development connection and future infrastructure under Phases 2 and 3. The Van-Lan development will connect to the Carlsborg Water System piping on the Van-Lan site under a separate project.
- Approximately 3,300 LF of 8-inch PVC C900 water main from the Van-Lan Well to a water connection location at the intersection of Carlsborg Road and Childers Lane, including approximately 110 LF of 8-inch DIP with an 18-inch HDPE casing pipe.
- Approximately 200 LF of 4-inch PVC Schedule 40 electrical conduit at the Van-Lan site for electrical cable under Phase 2.
- Installation of four (4) fire hydrant assemblies.
- Connection to existing Carlsborg Water System.

This project is being supported, in whole or in part, by federal award number SLFRP 2169, awarded to Clallam County by the U.S. Department of Treasury.

The Engineer's estimate for the work under this contract is \$1,511,106.00. The Contractor must be licensed, bonded, and insured in the State of Washington. All work performed on this project will be subject to state prevailing wage rates as outlined in Section B3, Supplementary Conditions, Paragraph 6. Public Utility District No. 1 of Clallam County is an Equal Opportunity and Affirmative Action Employer. Disadvantaged, Minority, and Women's Business Enterprises are encouraged to respond. The Public Utility District No. 1 of Clallam County does not discriminate on the grounds of race, color, religion, national origin, sex, sexual orientation, age, or handicap in consideration for a project award. The Contractor shall take affirmative steps to assure that disadvantaged minority and women's business enterprises are used when possible and must at least solicit the Washington State Office of Minority and Women's Business Enterprises. The Contractor shall breakdown work or delivery schedule, where applicable, to allow minority and women's business enterprises to participate.

Sealed bids will be received by the Public Utility District No. 1 of Clallam County at its Main office at 104 Hooker Road, Sequim, WA 98382 until 2:30 p.m. Pacific Standard Time (PST) on November 2, 2023. Bids may be submitted via USPS and sent to Public Utility District No. 1 of Clallam County, Attn: Contracts Coordinator, P.O. Box 1000, Carlsborg, Washington 98324. If submitting a sealed bid via express delivery (i.e. FedEx, UPS), please deliver the sealed bid to the Public Utility District No. 1 of Clallam County, Attn: Contracts Coordinator, 100 Hooker Road Sequim, WA 98382. If mailed, the bid must be in a sealed bid envelope with the name and address of the Bidder and bid number on the sealed envelope and then placed inside the delivery envelope to be mailed. Proposals must be filled out in ink or typewritten. No alterations or interlineations will be permitted, unless made before submission, initialed, and dated. At 3:00 p.m. PST, a public bid opening will take place in the Lake Crescent Boardroom at the District's Main office.

There will be a voluntary Pre-Bid Conference for this project. The Pre-bid Conference will be held on October 23, 2023, at 9:30 a.m. PST, at the PUD main office, 100 Hooker Road, Sequim, WA 98382 in the Lake Crescent Board Room. Site visit to follow if requested. For more information on the pre-bid meeting, please contact Bowen Kendrick, Water and Wastewater Systems Manager, by phone at 360-565-3449, or by email at bkendrick@clallampud.net.

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 www.bxwa.com and clicking on "Posted Projects", "Public Works", and "Clallam County PUD #1". 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. The content available through bxwa.com is our property or the property of our licensors and is protected by copyright and other intellectual property laws. Access to project documents is intended for use by bidders (general contractors/prime bidders, subcontractors and suppliers), agency personnel and agency's consultants, as well as for personal, noncommercial, use by the public. You may display or print the content available for these uses only. "Harvesting" (downloading, copying, and transmitting) of any project information and/or project documents for purposes of reselling and/or redistributing information by any other party is not allowed by BXWA.

Proposals shall be submitted on the forms provided and as described in the Instructions to Bidders. No bidder may withdraw a bid submitted for a period of 60 days after the day of bid opening. Each bid shall be accompanied by bid security in the form of deposit or bid bond in the amount of not less than five percent (5%) of the total bid amount. Performance and Payment Bonds in the amount of one hundred percent (100%) of the contract amount must be provided by the successful bidder prior to notice to proceed.

If you have any questions regarding this bid, please contact John Gillespie at BHC Consultants, Inc., 206-357- 9914 or email at john.gillespie@bhiconsultants.com. BHC Consultants is the is the Owner's Representative during the bid period. See Section B-1, Item 3 for last day to submit bid questions.

Intended dates of publication:

Seattle Daily Journal of Commerce October 11, 2023.

PUBLIC UTILITY DISTRICT NO. 1
OF CLALLAM COUNTY

Date: _____

John Purvis, Secretary

SECTION A 2

PROPOSAL

TO: PUBLIC UTILITY DISTRICT NO. 1 OF CLALLAM COUNTY
herein called Owner:

FROM: Proposal of _____
herein called Bidder:

1. GENERAL

The undersigned BIDDER, having investigated the site and locality where the Work is to be performed, the legal requirements (federal, state, and local laws; ordinances; rules and regulations) and the conditions affecting cost, progress or performance of the Work, and being familiar with the contract documents, hereby proposes and agrees, if this bid is accepted, to enter into an agreement with Owner in the form included in the contract documents to complete all Work as specified or indicated in the contract documents and within the contract time indicated in this bid and in accordance with the contract documents for an amount computed upon the basis of the quantity of Work actually performed at the following prices:

Note: Bid amounts shall be shown in both words and figures. In case of discrepancy, the amount shown in words shall govern.

SCHEDULE A – Carlsborg/Van-Lan Water System Blending Project, Phase 1

Item No.	Estimated Quantity	Description of Item	Unit Price	Amount
1.	Lump Sum	Mobilization \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____
2.	Lump Sum	Spill Prevention, Control, and Countermeasure (SPCC) Plan \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____
3.	Lump Sum	Storm Water Pollution Prevention Plan (SWPP) Plan \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____
4.	Lump Sum	Temporary Erosion & Sedimentation Control (TESC) Facilities \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____
5.	Lump Sum	Trench Safety Systems \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____

Item No.	Estimated Quantity	Description of Item	Unit Price	Amount
6.	Lump Sum	Project Temporary Traffic Control \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____
7.	Lump Sum	Construction Surveying and Staking \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____
8.	1	Force Account \$Fifty Thousand Dollars and no Cents (Price in Words) Per Force Account	\$ 50,000.00	\$ 50,000.00
9.	50	Removal and Replacement of Unsuitable Material \$ _____ (Price in Words) Per Cubic Yard	\$ _____	\$ _____
10.	5	Controlled Density Fill (As Required) \$ _____ (Price in Words) Per Cubic Yard	\$ _____	\$ _____
11.	2,340	Crushed Surfacing Top or Base Course \$ _____ (Price in Words) Per Ton	\$ _____	\$ _____
12.	50	Foundation Material Class A and B (As Required) \$ _____ (Price in Words) Per Ton	\$ _____	\$ _____
13.	125	Asphalt Concrete Trench Patch \$ _____ (Price in Words) Per Ton	\$ _____	\$ _____
14.	3,300	8-Inch PVC C900 Water Main \$ _____ (Price in Words) Per Lineal Foot	\$ _____	\$ _____
15.	110	8-Inch DI Pipe CL 52 \$ _____ (Price in Words) Per Lineal Foot	\$ _____	\$ _____
16.	100	18-Inch HDPE DR 17 Casing Pipe \$ _____ (Price in Words) Per Lineal Foot	\$ _____	\$ _____

Item No.	Estimated Quantity	Description of Item	Unit Price	Amount
17.	200	4-Inch Rigid Non-Metallic Conduit (PVC Sch. 40) \$ _____ (Price in Words) Per Lineal Foot	\$ _____	\$ _____
18.	1	Gate Valve, Resilient Wedge with Valve Box, 6--Inch \$ _____ (Price in Words) Per Each	\$ _____	\$ _____
19.	8	Gate Valve, Resilient Wedge with Valve Box, 8-Inch \$ _____ (Price in Words) Per Each	\$ _____	\$ _____
20.	1	Connection to Existing Water System \$ _____ (Price in Words) Per Each	\$ _____	\$ _____
21.	4	Fire Hydrant Assembly \$ _____ (Price in Words) Per Each	\$ _____	\$ _____
22.	1	Blow-Off Assembly \$ _____ (Price in Words) Per Each	\$ _____	\$ _____
23.	Lump Sum	Surface Restoration and Cleanup \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____
24.	Lum Sum/ Allowance	Minor Changes \$ <u>Seventy-Five Thousand Dollars and No Cents</u> (Price in Words) Per Lump Sum	\$ <u>75,000.00</u>	\$ <u>75,000.00</u>
25.	Lump Sum	Record Drawings \$ _____ (Price in Words) Per Lump Sum	\$ _____	\$ _____
SUBTOTAL:			\$ _____	
SALES TAX (8.6%):			\$ _____	
TOTAL:			\$ _____	

2. BID ITEM

The Bid items are stated only for the purpose of comparing Bids and fixing the amount of surety bonds. The parties hereto should refer to Articles 11.01, 11.02, and 11.03 of the General Conditions, Section B 2 of this Contract, relating to unit price work and possible price changes, in the event of increased or decreased quantities.

3. COMPLETION TIME

BIDDER proposes and agrees, if awarded the Contract, to complete all requirements of the Work within:

- Ninety (90) consecutive calendar days after the Notice to Proceed and as specified.

The successful Bidder will be notified by the Owner or Engineer on the date of Notice to Proceed within 30 days of the Notice of Award.

For purposes of this Contract, substantial completion will be defined as: all water mains and appurtenances installed, tested, and accepted; and all driving surface restoration complete.

BIDDER accepts the provisions of the agreement as to liquidated damages in the event of failure to complete the Work on time.

4. BIDDER'S ACCEPTANCE OF TERMS AND CONDITIONS

Bidder accepts all of the terms and conditions of the Instructions to Bidders, Section B 1 of the Contract, including without limitation those dealing with the disposition of bid security. This bid will remain open for 60 days after the day of bid opening. Bidder will sign the agreement and submit the Performance and Payment Bond, insurance, and other documents required by the contract documents within the time limits set in Owner's Notice of Award.

5. ADDENDA

Bidder has examined copies of all the contract documents and acknowledges receipt of the following addenda:

Addendum No.	Date of Receipt and Acknowledgment
1.	_____
2.	_____
3.	_____
4.	_____
5.	_____

6. ATTACHED BID SECURITY

The following documents are attached to and made a condition of the bid:

Required bid security in the form of _____

Name of Bidder: _____

Signature of Authorized Representative: _____

Name (Print): _____

Title: _____

Date: _____

Address of Bidder: _____

Telephone No.: _____

7. SUBCONTRACTORS LIST (IF REQUIRED BY RCW 39.30.060)

Subcontractor	Category of Work
_____	_____
_____	_____
_____	_____
_____	_____

8. INFORMATION ON BIDDER

Each Contractor bidding on Work included in these Contract Documents shall prepare and submit with the Bid Proposal the data requested in the following schedule of information including the Mandatory Bidder Responsibility Checklist and Subcontractor Responsibility Checklist located at the end of Part B, Section B-1 of the Specifications and referenced in Item 13, Paragraphs A and C of Section B-1. Also, the apparent low bidder and second lowest bidder shall be aware of the bid proposal requirement In Item 13, Paragraph B.

A. Name and License Number of Bidder: _____

B. Years in business under current firm name? _____

C. Contracts now in hand. Gross Amount \$ _____

D. General character of work performed by your company _____

E. List major equipment to be used on this Project and whether it is owned, rented or leased.

F. Bank References (Include Branch) _____

G. List all bonding companies used in the last three years.

H. Name of insurance company (Include Phone Number, Policy Number and Agent's Name)

I. Have you reviewed the insurance requirements as stated in Section B 2 and B 3? ____

J. Can you meet the insurance requirements as stated in Section B 2 and B 3? _____

K. What is your current insurance company's best rating? _____

L. List any claims or suits now pending for which you are either claimant or defendant.

M. A list of all Projects successfully completed by Bidder in last 3 years, which shall include a job description, the name, address, phone number, and contact person of the Owner and the Consultant, the approximate completion date, and the awarded and final contract amounts of each project.

N. The name(s) of the Contractor's proposed superintendent(s) who will be in direct charge of the Project for the full duration of the Contract.

9. NON-COLLUSION DECLARATION

The attached Non-Collusion Form included in these Contract Provisions must be returned with the bid proposal.

10. CONTRACTOR CERTIFIED STATEMENT

The attached Contractor Certified Statement in these Contract Provisions must be returned with the bid.

(END OF SECTION)

NON-COLLUSION AFFIDAVIT

STATE OF WASHINGTON _____)
) ss.
COUNTY OF _____)

_____, The undersigned, being duly sworn, on his oath says that the bid submitted is a genuine and not a sham or collusive bid, or made in the interest or on behalf of any person not therein named; and (s)he further says that the said bidder has not directly or indirectly induced or solicited any bidder on the above work or supplies to put in a sham bid, or any other person or corporation to refrain from bidding; and that said bidder has not in any manner sought by collusion to secure an advantage over any other bidder or bidders.

Firm Name

Authorized Signature

SUBSCRIBED and SWORN to before me this _____ day of _____, 20_____.

Printed Name of Notary Public

Signature of Notary Public

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

My commission expires: _____

CONTRACTOR CERTIFIED STATEMENT

Contract No. 230805 to be provided by client.

Contractor certifies to the best of its knowledge and belief that it and its principals:

Within the five (5) year period immediately preceding the bid solicitation date, November 2, 2023, is not a "willful" violator, as defined in RCW 49.48.082, of any provision of Chapters 49.46, 49.48, or 49.52 RCW, as 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.

Have not been a party as a plaintiff or defendant in any lawsuits in Washington State Superior or District court in the Puget Sound region (defined as Clallam, King, Kitsap, Pierce, Snohomish, and Thurston Counties) or federal district court for Western Washington in the last five (5) years involving performance or payment issues relating to a public works contract which were resolved adversely to the Bidder through judgment or settlement.

Have not been convicted of a crime involving bidding on public works contract during the five (5) year period immediately preceding the bid solicitation date, November 2, 2023.

Have not been assessed liquidated damages related to the performance of a public works contract by a government agency during the five (5) year period immediately preceding the bid solicitation date, November 2, 2023.

Have not had any public works contract terminated for cause or default by a government agency during the five (5) year period immediately preceding the bid solicitation date, November 2, 2023.

I certify under penalty of perjury under the laws of the State of Washington that the foregoing is true and correct.

Business Name

Signature of Authorized Official*

Printed Name

Title

Date

City

State or country

Check One:

Sole Proprietorship ☐ Partnership ☐ Joint Venture ☐ Corporation ☐

TIN (Tax Identification Number):

State of Incorporation, or if not a corporation, State where business entity was formed:

WA UBI (Unified Business Identifier):

** If a corporation, proposal must be executed in the corporate name by the president or vice-president (or any other corporate officer accompanied by evidence of authority to sign). If a co-partnership, proposal must be executed by a partner.*

SECTION A 3

AGREEMENT

THIS AGREEMENT, made the ____ day of _____, 202_, by and between PUBLIC UTILITY DISTRICT NO. 1 OF CLALLAM COUNTY, hereinafter called Owner, and _____, hereinafter called Contractor.

WITNESSETH:

WHEREAS, the Owner has caused Specifications, Drawings and other contract documents to be prepared for certain Work as described therein, known as Carlsborg/Van-Lan Water System Blending Project, Phase 1, and

WHEREAS, the Contractor has offered to perform the proposed Work in accordance with the terms of the Contract.

NOW, THEREFORE, in consideration of the mutual covenants and agreements of the parties herein contained and to be performed, the Contractor hereby agrees to complete the Work at the price and on the terms and conditions herein contained, and the Owner agrees to pay the Contractor the contract price provided herein for the fulfillment of the Work and the performance of the covenants set forth herein.

The further terms, conditions and covenants of the Contract are set forth in the following documents, all of which are component parts of said Contract and as fully a part hereof as if herein set out in full, and if not attached, as if hereto attached:

Part A	Legal and Procedural Documents
Part B	Instructions, Conditions and Requirements
Part C	Technical Specifications
Part D	Drawings
Part E	Prevailing Wage Rate Table
Part F	Agency Permits
Part G	Addenda
Part H	Change Orders
Part I	Geotechnical Investigation Report

Owner and Contractor recognize that time is of the essence of this Agreement and that Owner will suffer financial loss if the Work is not substantially complete within the time specified in the Proposal, Section A 2 of this Contract, plus any extensions thereof allowed in accordance with Article 11 of Section B 2, General Conditions. They also recognize the delays, expense and difficulties involved in proving, in a legal proceeding, the actual loss suffered by Owner if the Work is not substantially complete on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as LIQUIDATED DAMAGES for delay (but not as a penalty) Contractor shall pay Owner one thousand dollars (\$1,000.00) for each calendar day that expires after the time specified in the Proposal for completion until the Work is substantially complete, and/or two hundred fifty dollars (\$250.00) for each calendar day until the Work is completed and ready for final acceptance by the Owner. If more than one contract, schedule or phase of Work exceeds the time limit, liquidated damages shall apply to each and shall be additive.

IN WITNESS WHEREOF, this Agreement has been executed in quintuplicate, on the day and year above written.

PUBLIC UTILITY DISTRICT NO. 1 OF CLALLAM COUNTY
OWNER

(SEAL)

By: _____

Its: _____

CONTRACTOR

(SEAL)

By: _____

Its: _____

Title: _____

(END OF SECTION)

SECTION A 4

PERFORMANCE BOND

KNOW ALL PEOPLE BY THESE PRESENTS:

That we, _____, the Contractor, herein referred to as PRINCIPAL, and _____, as SURETY, are held and firmly bound unto the State of Washington in the full sum _____ of (\$_____), Lawful money of the United States, for the payment of which, well and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITIONS of this obligation are such that, whereas, the Principal has entered into an agreement in writing with the Owner, dated _____, 202_ for the construction of CARLSBORG/VAN-LAN WATER SYSTEM BLENDING PROJECT, PHASE 1, according to the terms, conditions and covenants specified in the agreement including all of the contract documents therein referred to, which are hereby referred to and made a part hereof as fully and completely as though set forth in detail herein, and

WHEREAS, it is understood and made a part of the consideration for this obligation that the Owner shall have the right to sue on this bond in its own name to recover for any loss, injury, damage or liability whatsoever sustained or incurred by it by reason of any breach of the contract documents, or of any provision in this bond, in the same manner and to the same extent as though this obligation ran directly to the Owner.

NOW, THEREFORE, if the Principal shall well, truly and faithfully perform all of the provisions and fulfill all of the undertakings, covenants, terms, conditions and agreements of said Contract during the period of the original contract and any extensions thereof that may be granted by the Owner, with or without notice to the surety; and during the life of any guaranty required under the contract; and shall also well and truly perform and fulfill all of the undertakings, covenants, terms and conditions and agreements of any and all duly authorized modifications of said Contract that may hereinafter be made; notice of which modifications to the surety being hereby waived; and furthermore shall pay all laborers, mechanics, and subcontractors and material men, and all persons who shall supply such person or persons and such Principal or subcontractors with provisions and supplies for the carrying on of such Work, shall indemnify and save harmless Owner from all cost and damage by reason of the Principal's default or failure to do so, and shall pay the State of Washington sales and use taxes, and amounts due said State pursuant to Titles 50 and 51 of the Revised Code of Washington; and shall further indemnify the workmanship or materials entering into any part of the Work as defined in the agreement that shall develop or be discovered within one year after the final acceptance of such Work, then this obligation shall be null and void, otherwise to remain in full force and effect; provided, that the provisions of this bond shall not apply to any money loaned or advanced to the Principal or any subcontractor or other person in the performance of any such Work.

IT IS FURTHER DECLARED AND AGREED that nothing of any kind or nature whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law, rule of equity or usage relating to the liability of sureties to the contrary notwithstanding.

Sealed and dated this ____ day of _____, 202_.

Principal

(SEAL)

By: _____
Print

Signature: _____

Title: _____

Surety

(SEAL)

By: _____
Print

Signature: _____

Title: _____

Address: _____

(END OF SECTION)

PART B
INSTRUCTIONS, CONDITIONS AND REQUIREMENTS

SECTION B 1

INSTRUCTIONS TO BIDDERS

1. PUBLIC OPENING OF BIDS

Sealed bids shall be opened and read aloud at the time and place indicated in the Advertisement for Bids unless Owner has, for good cause, continued the date of opening bids to another day or has canceled the Advertisement to Bid. Bidders, their authorized agents, and other interested parties are invited to be present.

2. NON-COLLUSION AFFIDAVIT

The Contractor shall submit a properly executed non-collusion affidavit on the form located in the Proposal.

3. EXAMINATION OF CONTRACT DOCUMENTS AND SITE

Before submitting a Bid, each Bidder shall: (a) examine the Contract Documents thoroughly; (b) visit the site to familiarize the Bidder with local conditions that may in any manner affect cost, progress or performance of the Work; (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress or performance of the Work; and (d) study and carefully correlate Bidder's observations with the Contract Documents.

Should a Bidder find what is believed to be discrepancies in or omissions from the Drawings or Specifications, or should the Bidder be in doubt as to their meaning, Bidder may submit to John Gillespie at (206) 564-225-3997, john.gillespie@bhccconsultants.com, BHC Consultants, LLC (BHC), 1155 North State Street, Suite 700, Bellingham, WA 98225, 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, which shall be issued to all potential bidders on record as plan holders with the Builders Exchange of Washington. All requests for interpretations must be in writing and received by BHC no later than October 27, 2023 at 12:00 p.m.

4. BID SECURITY

Bid security shall be made payable to the Public Utility District No. 1 of Clallam County, in the form of a certified check, cashier's check, postal money order, or a Bid Bond issued by a Surety in the amount of 5 percent of the Bid.

5. CONTRACT TIME

The number of calendar days within which, or the date by which, the Work is to be completed (the Contract Time) is set forth in the Proposal and shall be included in the Contract.

6. LIQUIDATED DAMAGES

Provisions for liquidated damages, if any, are set forth in the Agreement, Section A 3 of the Contract.

7. SUBSTITUTE MATERIAL AND EQUIPMENT

The Contract, if awarded, shall be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or equal" items. Whenever the Drawings or Specifications indicate that a substitute or "or equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the "effective date of the Agreement". The procedure for submittal of any such application by Contractor and consideration by Engineer is set forth in Article 6.05 of the General Conditions, Section B 2, which may be supplemented in the Supplementary Conditions.

8. PROPOSAL

The Proposal is attached hereto; Proposals shall be completed in ink, handwritten or electronically filled in. The Bid price of each item on the form shall be stated in words and numerals; in case of a conflict, words shall take precedence.

9. SALES TAX

Contractor shall make sales tax payments to the state as provided by statute and any other taxes, as called for in Article 6-10 of the General Conditions, Section B 2.

10. SUBMISSION OF BIDS

Bids shall be submitted at the time and place indicated in the Advertisement for Bids and shall be included in an opaque sealed envelope, marked with the Project title and name and address of the Bidder and accompanied by the Bid Security and other required documents, as outlined below. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face thereof.

The following documents shall be included with the Contractor's bid proposal:

- Bid Security (Section A 2).
- Information on Bidder (Section A 2).
- Non-Collusion Form (Section A 2).
- Contractor Certified Statement (Section A 2).
- Mandatory Bidder Responsibility Checklist (Section B 1).
- Byrd Anti-Lobbying Amendment Certification (Section B 1).

The following documents shall be submitted to the Owner within 48 business hours (PUD closed on Fridays) of the bid submittal deadline by the apparent low bidder and the second low bidder:

- Supplemental Bidder Responsibility documentation (Section B 1).
- Subcontractor Responsibility Checklist (Section B 1).

11. MODIFICATION AND WITHDRAWAL OF BIDS

Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

12. BIDS TO REMAIN OPEN

All Bids shall remain open for 60 days after the day of the Bid opening, but Owner may, in Owner's sole discretion, release any Bid and return the Bid Security prior to that date.

13. AWARD OF CONTRACT

To be considered a responsive Bid, the Bid must include all Bid items in the Contract. The Contract, if awarded, will be awarded to the lowest responsive responsible Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Project.

Owner reserves the right to reject any and all Bids, to waive any and all informalities and to disregard all nonconforming, non-responsive or conditional Bids. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

In evaluating Bids, Owner shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements, and alternates and unit prices if requested in the Bid forms.

Owner may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of the material or equipment) proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided in the Proposal (Section A 2). Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by Owner.

Owner may conduct such investigations as Owner deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.

A. Mandatory Bidder Responsibility Criteria: Pursuant to RCW 57.08.050, it is the intent of the Owner to award a contract to the lowest responsive responsible bidder. Pursuant to RCW 39.04.350, before award, the Bidder must meet the following Bidder Responsibility Criteria to be considered a responsible Bidder. The Bidder shall be required by the Owner to submit documentation demonstrating compliance with the criteria. The Bidder must:

1. Have a current certificate of registration as a contractor in compliance with chapter 18.27 RCW, which must have been in effect at the time of bid submittal;
2. Have a current Washington Unified Business Identifier (UBI) number;

3. If applicable, have:
 - a. Industrial Insurance (workers' compensation) coverage for the bidder's employees working in Washington, as required in Title 51 RCW;
 - b. A Washington Employment Security Department number, as required in Title 50 RCW;
 - c. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
4. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3) and not to be listed on the government wide exclusions in the system for Award Management (SAM) in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 and 12689 (Debarment and Suspension)
5. Within the three-year period immediately preceding the date of the bid date, not have been determined by a final and binding citation and notice of assessment issued by the Washington Department of Labor and Industries or through a civil judgement 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 RCW 49.52.
6. Have at time of bid submittal, received training or have been deemed exempt by the Department of Labor and Industries on the requirements related to public works and prevailing wages under this Chapter and Chapter RCW 39.12

Documentation: Bidder shall complete the "Mandatory Bidder Responsibility Checklist" at the end of this section and submit the Checklist as part of Bidder's bid.

- B. Supplemental Bidder Responsibility Criteria: In addition to the mandatory Bidder Responsibility Criteria referenced above, the Bidder must also meet the following relevant supplemental Bidder Responsibility Criteria applicable to the Project and, as evidence that the Bidder meets the supplemental Bidder Responsibility Criteria, the apparent and second low bidders must submit the required documentation to the Owner within forty-eight (48) hours of the bid submittal deadline. The Owner reserves the right to waive this requirement if the low bidder is known to the Owner as qualified to perform the work and to request such documentation from other bidders:

1. Business Status:
 - a. Criterion: The apparent and second low bidders shall not be "inactive" or "not in good standing" with the Washington State Secretary of State's Office, the Department of Revenue or the Department of Labor & Industries.
 - b. Documentation: The apparent and second low bidders shall provide documented information from the Washington State Secretary of State's Office, the Department of Revenue or the Department of Labor & Industries providing the date of incorporation or formation, the state of standing in the State of Washington, State of Washington tax reporting number, and the name and address of the registered agent, general partner or managing member.

2. Completion of Similar Projects:

- a. Criterion: The Bidder shall have at least four (4) years minimum experience performing public works capital projects and shall have within the last five (5) years successfully completed at least three (3) water main projects of similar size and scope as required by the contract documents for this project. In evaluating whether the projects were “successfully completed,” the Owner may check owner references for the previous projects and may evaluate the Owner’s assessment of the Bidder performance, including but not limited to the following areas:
 - Quality control;
 - Safety record;
 - Timeliness of performance;
 - Use of skilled personnel;
 - Management of subcontractors;
 - Availability of and use of appropriate equipment;
 - Compliance with contract documents;
 - Management of submittals process, change orders, and close-out.
- b. Documentation: The apparent and second low bidders shall submit a list of water main projects of similar size and scope to this project as described in the invitation to Bid completed within the last five (5) years. For the purposes of meeting this criterion, the Owner has determined that “similar size and scope to this project” means projects that have the following characteristics:
 - Required the installation of at least 3,000 linear feet of 6 inch or larger diameter PVC C-900 water main within the public Right of Way;
 - Required the successful connection of new mains to existing mains of differing or similar pipe material;
 - Required the successful and timely completion of pressure and purity testing of mains;
 - Required asphalt trench patch in right-of-way of at least one street greater than 1,000 linear feet;
 - Required traffic control along an arterial at least 3,000 linear feet in length.

The information about each project shall include the following:

- Owner’s name and contact information for the Owner’s representative;
- Awarded contract amount;
- Final contract amount;

- A description of the scope of the project and how the project is similar to this project;
- The Bidder's assessment of its performance of each project, including but not limited to the following:
 - Quality control;
 - Safety record;
 - Timeliness of performance;
 - Use of skilled personnel;
 - Management of subcontractors;
 - Availability of and use of appropriate equipment;
 - Compliance with contract documents;
 - Management of submittals process and change orders.

3. Claims Against Retainage Bonds:

- a. Criterion: The Bidder shall not have a record of excessive claims filed against the retainage or payment bonds for public works projects during the previous five (5) years that demonstrate a lack of effective management by the Bidder of making timely and appropriate payments to its subcontractors, suppliers, and workers, unless there are extenuating circumstances acceptable to the Owner.
- b. Documentation: The apparent and second low bidders shall submit a list of the public works projects completed within the previous five (5) years and include for each project the following information:
 - The Owner and contact information for the Owner;
 - A list of claims filed against the retainage and/or payment bond for any of the projects listed;
 - A written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim.

The Owner may contact previous owners to validate the information provided by the Bidder.

4. Termination for Cause:

- a. Criterion: The Bidder shall not have had any public works contract terminated for cause by a government agency during the five-year period immediately preceding the bid submittal deadline for this project, unless there are extenuating circumstances acceptable to the Owner.
5. Documentation: The Bidder shall complete, sign, and submit the attached Supplemental Bidder Responsibility Checklist.

6. Liquidated Damages:

- a. Criterion: The Bidder shall not have been assessed liquidated damages related to the performance of a public works contract by a government agency during the five (5) year period immediately preceding the bid submittal deadline for this project, unless there are extenuating circumstances acceptable to the Owner.
- b. Documentation: The Bidder shall complete, sign, and submit the attached Supplemental Bidder Responsibility Checklist.

7. Litigation:

- a. Criterion: The Bidder shall not have been a party as a plaintiff or defendant in any lawsuits in Washington State superior or district court in the Puget Sound region (defined as Clallam, King, Kitsap, Pierce, Snohomish and Jefferson Counties) or federal district court for Western Washington in the last five (5) years involving performance or payment issues relating to a public works contract which were resolved adversely to the Bidder through judgment or settlement, unless there are extenuating circumstances acceptable to the Owner.
- b. Documentation: The Bidder shall complete, sign, and submit the attached Supplemental Bidder Responsibility Checklist.

8. Delinquent State Taxes:

- a. Criterion: The Bidder shall not owe delinquent taxes to the Washington State Department of Revenue without a payment plan approved by the Department of Revenue.
- b. Documentation: The Bidder shall not be listed on the Washington State Department of Revenue's "Delinquent Taxpayer List".

9. Public Bidding Crimes:

- a. Criterion: The Bidder shall not have been convicted of a crime involving bidding on a public works contract within five (5) years from the bid submittal deadline.
- b. Documentation: The Bidder shall complete, sign, and submit the attached Supplemental Bidder Responsibility Checklist.

10. Verification of Subcontractor Responsibility:

- a. Criterion: The Bidder's standard subcontract form shall include the subcontractor responsibility language required by RCW 39.06.020, and the Bidder shall have an established procedure which it utilizes to validate the responsibility of each of its subcontractors. The Bidder's subcontract form shall also include a requirement that each of its subcontractors shall have and document a similar procedure to determine whether the sub-tier subcontractors with whom it contracts are also "responsible" subcontractors as defined by RCW 39.06.020.
- b. Documentation: The Bidder shall submit a copy of its standard subcontract form for review by the Owner, and a written description of its procedure for validating the responsibility of subcontractors with which it contracts.

C. Subcontractor Responsibility:

1. The successful Bidder shall include the language of this section in each of its first-tier subcontracts and shall require each of its subcontractors to include the same language of this section in each of their subcontracts, adjusting only as necessary the terms used for the contracting parties. Upon request of the Owner, the successful Bidder shall promptly provide documentation to the Owner demonstrating that the subcontractor meets the subcontractor responsibility criteria below. The requirements of this section apply to all subcontractors regardless of tier.
2. At the time of subcontract execution, the successful Bidder shall verify that each of its first-tier subcontractors meets the following bidder responsibility criteria:
 - a. Have a current certificate of registration in compliance with chapter 18.27 RCW, which must have been in effect at the time of subcontract bid submittal;
 - b. Have a current Washington Unified Business Identifier (UBI) number;
 - c. If applicable, have:
 - i. Industrial Insurance (workers' compensation) coverage for the subcontractor's employees working in Washington, as required in Title 51 RCW;
 - ii. A Washington Employment Security Department number, as required in Title 50 RCW;
 - iii. A Washington Department of Revenue state excise tax registration number, as required in Title 82 RCW;
 - iv. An electrical contractor license, if required by Chapter 19.28 RCW;
 - d. Not be disqualified from bidding on any public works contract under RCW 39.06.010 or 39.12.065 (3);
3. Documentation: The Bidder shall have all proposed subcontractors complete the "Subcontractor Responsibility Checklist" at the end of this section and submit the Checklist as part of Bidder's bid.

D. References: The Owner may conduct reference checks for the apparent low and second low bidder whose bids are under consideration for award. In the event that information obtained from the reference checks:

- Reveals that the bidder does not meet the Supplemental Bidder Responsibility Criteria; or
- Indicates concerns about the bidder's performance on projects identified as meeting the Supplemental Bidder Responsibility Criteria, which may include, but not be limited to, the quality of construction, the bidder's management of subcontractors, timeliness of required submittals, and safety record on the project; or
- Indicates other concerns about the bidder's ability to successfully perform the work, The Owner shall have the right to determine that the bidder is not a responsible bidder. Prior to making such a determination that a bidder is not responsible based

on information received through reference checks, the Owner may discuss with the bidder the information obtained from the references and provide the bidder with the opportunity to offer explanations that may help inform whether the Owner declares the bidder not responsible.

In conducting reference checks, the Owner may include itself as a reference if the bidder has performed work for the Owner, even if the bidder did not identify the Owner as a reference.

If the Owner determines the bidder is not a responsible bidder, subject to following the requirements of the appeal process (see below), the Owner may award the contract to the next lowest bidder who meets the Supplemental Bidder Responsibility Criteria and whose reference checks validate the ability of the bidder to successfully perform the work.

- E. Failure to Submit Documentation: If a bidder fails to submit the documentation required by the bidding documents to demonstrate compliance with the Mandatory and Supplemental Bidder Responsibility Criteria within the same period specified in the bidding documents, the Owner may:
- Find the bidder not responsible, or
 - Find the bidder responsible based upon any available information that demonstrates that the bidder meets the Mandatory and Supplemental Bidder Responsibility Criteria.
- F. Procedure to Request Modification of Supplemental Bidder Responsibility Criteria: During the bidding period, but not later than five (5) business days before the bid submittal deadline, a potential bidder may request that the Owner modify the supplemental bidder responsibility criteria. The Owner shall evaluate any such requests, and if a decision is made by the Owner in its sole discretion to modify the criteria, such modification shall be communicated to all bidders and plan holders via the issuance of an addendum to the bidding documents. If the Owner determines not to modify the supplemental criteria, the Owner shall notify the requesting bidder of its decision in writing.
- G. Appeal of Determination that Bidder does not Meet Responsibility Criteria: If the Owner determines that a bidder does not meet the bidder responsibility criteria set forth in this section and is therefore not a responsible bidder, the Owner 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 24 hours of receipt of the Owner's determination by presenting additional information in writing to the Owner. The Owner will consider the additional information before issuing its final determination in writing. If the final determination affirms that the bidder is not responsible, the Owner will not execute contract with any other bidder until two (2) business days after the bidder determined to be not responsible has received written notice of the final determination. For the purposes of this subsection, the date of the Owner's transmission of the Owner's determination(s) by facsimile or electronic mail to the bidder at the facsimile number or e-mail address provided by the bidder in its bid shall constitute the date of receipt by the bidder of the written notices provided for herein.

Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.

If the Contract is to be awarded, it will be awarded to the lowest responsive responsible Bidder whose evaluation by Owner indicates to Owner that the award will be in the best interests of the Project.

If the Contract is to be awarded, Owner will deliver to the Successful Bidder a Notice of Award of the Contract within 30 days after the date of the Bid opening.

14. PERFORMANCE AND OTHER BONDS

Paragraph 5.01 of the General Conditions and in the Supplementary Conditions set forth Owner's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to Owner it shall be accompanied by the required Contract Security.

15. SIGNING OF AGREEMENT

When Owner gives a Notice of Award to the Successful Bidder, it shall be accompanied by two unsigned counterparts of the Agreement and all other Contract Documents. Within 10 days thereafter Contractor shall sign and deliver all counterparts of the Agreement to Owner with all other Contract Documents attached. Within 10 days thereafter Owner will deliver one fully signed counterpart to Contractor.

16. SPECIAL LEGAL REQUIREMENTS

The Contractor shall observe and comply with all federal and state laws and with the county, city and municipal resolutions, ordinances and regulations that will in any way affect the work; and the Contractor shall indemnify and save harmless the Owner against any claims arising from the violation of any such laws, ordinances and regulations that will in any way affect the work; and the Contractor shall indemnify and save harmless the Owner against any claims arising from the violation of any such laws, resolutions, ordinances or regulations.

State laws pertaining to this Project include, but are not limited to:

RCW 39.06	(Public Works - Registration, Licensing of Contractors)
RCW 60.28.011	(Retained Percentage)
RCW 39.08	(Contractor's Bond)
RCW 39.12	(Prevailing Wages on Public Works)
RCW 18.27	(Registration of Contractors)
RCW 49.28	(Hours of Labor)
RCW 49.60	(Discrimination - Human Rights Commission)
RCW 70.94	(Washington Clean Air Act)

WAC 173-400-075	(Emission Standards for Sources Emitting Hazardous Air Pollutants)
RCW 39.30.060	(Bids on Public Works - Subcontractors Must Be Identified - When)
TITLE 51.12	Industrial Insurance

17. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this contract, the Contractor agrees as follows:

- A. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

- B. The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.
- C. The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.
- D. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- E. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

- F. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.
- G. In the event of the Contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.
- H. The Contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: Provided, that if the applicant so participating is a state or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the

administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.”

18. COPELAND ANTI-KICKBACK ACT

Contractor. The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. Part 3 as may be applicable, which are incorporated by reference into this contract.

Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clause above , and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.

Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. § 5.12.

19. BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

The Contractor shall read and complete, with signature, the attached Byrd Anti-Lobbying Amendment Certification. The certification shall be submitted with the Contractor’s bid proposal.

MANDATORY BIDDER RESPONSIBILITY CHECKLIST

The following checklist may be used by Owners in documenting that a Bidder meets the mandatory bidder responsibility criteria. It is suggested that Owners print a copy of documentation from the appropriate website to include with this checklist in the contract file.

General Information	
Project Name:	Project Number:
Bidder's Business Name:	Bid Submittal Deadline:
Contractor Registration – https://lni.wa.gov	
License Number:	Status: Active: Yes <input type="checkbox"/> No <input type="checkbox"/>
Effective Date (must be effective on or before Bid Submittal Deadline):	Expiration Date:
Contractor and Plumber Infraction List – http://www.lni.wa.gov/licensing-permits/public-works-projects/strike-and-debar	
Is Bidder on Infraction List? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Current UBI Number – http://dor.wa.gov	
UBI Number:	Account Closed: Open <input type="checkbox"/> Closed <input type="checkbox"/>
Industrial Insurance Coverage –	
Account Number:	Account Current: Active: Yes <input type="checkbox"/> No <input type="checkbox"/>
Employment Security Department Number –	
Employment Security Department Number:	
• Has Bidder provided account number on the Bid Form?	Yes <input type="checkbox"/> No <input type="checkbox"/>
• And/or have you asked the Bidder for documentation from Employment Security Department on account number?	Yes <input type="checkbox"/> No <input type="checkbox"/>
State Excise Tax Registration Number – http://dor.wa.gov	
Tax Registration Number:	Account Closed: Open <input type="checkbox"/> Closed <input type="checkbox"/>
Not Disqualified from Bidding – http://lni.wa.gov/licensing-permits/public-works-projects/strike-and-debar/contractors-not-allowed-to-bid	
Is the Bidder listed on the "Contractors Not Allowed to Bid" list of the Department of Labor and Industries? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Checked by:	
Name of Employee:	Date:

SUPPLEMENTAL BIDDER RESPONSIBILITY CHECKLIST

The following checklist may be used by the Owner to document that a Bidder meets the supplemental bidder responsibility criteria. This checklist is to be submitted by the apparent low bidder and second low bidder to the Owner within forty-eight (48) hours of the bid submittal deadline.

Project Name: _____

Bidder's Business Name: _____

Bid Submittal Date and Time: _____

Criteria Description	Yes	No
Termination for Cause – The Bidder has not had any public works contract terminated for cause by a government agency during the five-year period immediately preceding the bid submittal deadline for this project.		
Liquidated Damages - The Bidder has not been assessed liquidated damages relating to performance of a public works by a government agency during the five-year period immediately preceding the bid submittal deadline for this project.		
Litigation – Has the Bidder been a plaintiff or defendant in any lawsuits in Washington State superior or district courts in the Puget Sound region (defined as Clallam, King, Pierce, Snohomish, and Jefferson Counties) or federal district court for Western Washington in the last 5 years involving performance or payment issues relating to a public works contract which were resolved adversely to the Bidder through judgement or settlement?		
Delinquent State Taxes – Is the Bidder on the State's Department of Revenue's Delinquent Taxpayer List?		
Public Bidding Crimes – The Bidder has not been convicted of a crime involving bidding on a public works contract.		

Bidder's Name (Print): _____

Bidder's Signature: _____

Bidder's Title: _____

SUBCONTRACTOR RESPONSIBILITY CHECKLIST

The following checklist may be used by Contractors and Subcontractors in documenting that a subcontractor of any tier meets the subcontractor responsibility criteria. It is suggested that Contractors and Subcontractors print a copy of documentation from the appropriate website to include with this checklist in their contract file.

General Information	
Project Name:	Project Number:
Subcontractor's Business Name:	Subcontract Execution Date:
Contractor Registration – https://lni.wa.gov	
License Number:	Status: Active: Yes <input type="checkbox"/> No <input type="checkbox"/>
Effective Date (must be effective on or before Bid Submittal Deadline):	Expiration Date:
Contractor and Plumber Infraction List – http://www.lni.wa.gov/licensing-permits/public-works-projects/strike-and-debar	
Is Subcontractor on Infraction List? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Current UBI Number – http://dor.wa.gov	
UBI Number:	Account Closed: Open <input type="checkbox"/> Closed <input type="checkbox"/>
Industrial Insurance Coverage –	
Account Number:	Account Current: Active: Yes <input type="checkbox"/> No <input type="checkbox"/>
Employment Security Department Number –	
Employment Security Department Number:	
<ul style="list-style-type: none"> • Has Subcontractor provided account number on the Bid Form? Yes <input type="checkbox"/> No <input type="checkbox"/> • And/or have you asked the Subcontractor for documentation from Employment Security Department on account number? Yes <input type="checkbox"/> No <input type="checkbox"/> 	
State Excise Tax Registration Number – http://dor.wa.gov	
Tax Registration Number:	Account Closed: Open <input type="checkbox"/> Closed <input type="checkbox"/>
Not Disqualified from Bidding – http://lni.wa.gov/licensing-permits/public-works-projects/strike-and-debar/contractors-not-allowed-to-bid	
Is the Subcontractor listed on the "Contractors Not Allowed to Bid" list of the Department of Labor and Industries? Yes <input type="checkbox"/> No <input type="checkbox"/>	
Contractor Licenses – https://fortress.wa.gov/lni/bbip/	
<u>Electrical:</u> If required by Chapter 19.28 RCW, does the Subcontractor have an Electrical Contractor's License? Yes <input type="checkbox"/> No <input type="checkbox"/>	<u>Elevator:</u> If required by Chapter 70.87 RCW, does the Subcontractor have an Elevator Contractor's License? Yes <input type="checkbox"/> No <input type="checkbox"/>
Checked by:	
Name of Employee:	Date:

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION

To be submitted with each bid or offer exceeding \$100,000.

The undersigned, [Company] _____ certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, [Company] _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 et seq., apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Name and Title of Contractor's Authorized Official

Date

(END OF SECTION)

SECTION B 2
GENERAL CONDITIONS

1. REFERENCE

General Conditions shall be the Standard General Conditions of the Construction Contract as prepared by the Engineers Joint Contract Documents Committee – Document EJCDC C-710, 2002 Edition, which begins on the following page.

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the Controlling Law.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

Prepared by

ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

and

Issued and Published Jointly By

American Society Of Civil Engineers

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This document has been approved and endorsed by

The Associated General CONTRACTORS of America

and the

Construction Specification Institute

EJDC C-710 Standard General Conditions of the Construction Contract

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These General Conditions have been prepared for use with the Suggested Forms of Agreement Between Owner and Contractor Funding Agency Edition No. C-521 (2002 Edition). Their provisions are interrelated and a change in one may necessitate a change in the other. Comments concerning their usage are contained in the EJCDC Construction Documents, General and Instructions (No. C-OOI, 2002 Edition).

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GENERAL CONDITIONS

ARTICLE 1. DEFINITIONS AND TERMINOLOGY

1.01 Defined Terms:

- A. Wherever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to both the singular and plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. Adaptive Management - An approach that incorporates monitoring and research to allow projects and activities, including projects designed to produce environmental benefits, to proceed in the face of some uncertainty regarding consequences. Adaptive management has three basic elements: (1) an initial operational decision or project design made in the face of uncertainty about impacts of an action; (2) monitoring and research to determine impacts of the actions; and (3) changes to the operations, construction, project design, or mitigation measures in response to new information.
 2. Addenda - Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
 3. Agreement - The written instrument which is evidence of the agreement between Owner and Contractor covering the Work.
 4. Aquatic Habitat Best Management Practices (Best Management Practices) - Practices designed to avoid or reduce impacts to aquatic habitat related activities required for the replacement of water and sewer facilities and the construction of new water and sewer facilities.
 5. Asbestos - Any material that contains more than one percent asbestos and is friable or is releasing asbestos fibers into the air above current action levels established by the United States Occupational Safety and Health Administration.
 6. Bid - The offer or proposal of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
 7. Bidder - The individual or entity who submits a Bid directly to Owner.
 8. Bidding Documents - The Bidding Requirements and the proposed Contract Documents (including all Addenda).
 9. Bidding Requirements - The Advertisement or Invitation to Bid, Instructions to Bidders, bid security of acceptable form, if any, and the Bid Form with any supplements.
 10. Change Order - A document recommended by Engineer which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the

Work or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement.

11. Claim - A demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.
12. Compliance Director - Individual designated and directly employed by the Owner who has the authority to direct actions by the Contractor's and Engineer's Compliance Officers to ensure Work occurs in a manner consistent with the Aquatic Habitat Best Management Practices developed for the Work and described in the Contract Documents. The Owner's Compliance Officer shall report to Compliance Director on any actions that may affect the Contract Time or Contract Price.
13. Compliance Officer - Individuals designated by the Engineer and/or Contractor responsible for endeavoring to ensure performance of the Work occurs in a manner consistent with the Aquatic Habitat Best Management Practices developed for the Work and described in the Contract Documents. Compliance Officers must have successfully completed the Washington State Department of Transportation's (WSDOT) Construction Site Erosion and Sediment Control Certification Course, or comparable Aquatic Habitat BMP training program approved by the Owner.
14. Contract - The entire and integrated written agreement between the Owner and Contractor concerning the Work. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.
15. Contract Documents - Those items so designated in the Agreement. Only printed or hard copies of the items listed in the Agreement are Contract Documents. Approved Shop Drawings, other Contractor's submittals, and the reports and drawings of subsurface and physical conditions are not Contract Documents.
16. Contract Price - The moneys payable by Owner to Contractor for completion of the Work in accordance with the Contract Documents as stated in the Agreement (subject to the provisions of Article 11.03 in the case of Unit Price Work).
17. Contract Times - The number of days or the dates stated in the Agreement to: (i) achieve Milestones, if any, (ii) achieve Substantial Completion; and (iii) complete the Work so that it is ready for final payment as evidenced by Engineer's written recommendation of final payment.
18. Contractor - The individual or entity with whom Owner has entered into the Agreement.
19. Cost of the Work - See Article 11, Paragraph 11.01.A for definition.
20. Drawings - That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Work to be performed by Contractor. Shop Drawings and other Contractor submittals are not Drawings as so defined.

21. Effective Date of the Agreement - The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.
22. Engineer - The individual or entity named as such in the Agreement.
23. Field Order - A written order issued by Engineer which requires minor changes in the Work, but which does not involve a change in the Contract Price or the Contract Times.
24. General Requirements - The section of the Contract Documents denominated "General Requirements." The General Requirements pertain to all sections of the Specifications.
25. Hazardous Environmental Condition - The presence at the Site of Asbestos, PCBs, Petroleum, Hazardous Waste, or Radioactive Material in such quantities or circumstances that may present a substantial danger to persons or property exposed thereto in connection with the Work.
26. Hazardous Waste - The term Hazardous Waste shall have the meaning provided in Section 1004 of the Solid Waste Disposal Act (42 USC Section 6903) as amended from time to time.
27. Instructions to Bidders - That part of the Contract Documents which describes the requirements and conditions for a Bid which will comply with the request for proposals, and that amends or supplements these General Conditions.
28. Laws and Regulations; Laws or Regulations - Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
29. Liens - Charges, security interests, or encumbrances upon Project funds, real property, or personal property.
30. Liquidated Damages - The amount described in the Agreement to be paid to Owner, or to be deducted from any payments due or to become due to Contractor, for each day's delay in completion or substantial completion of the Work beyond the time allowed in the Contract Documents and Notice to Proceed, plus any extensions thereof.
31. Milestone - A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to Substantial Completion of all the Work.
32. Monitor - To watch, observe, or check for a special purpose; or to keep track of the Contractor's work for purposes of providing notification to facilitate the regulation or control of the operation of the Contractor without controlling the means or methods of the Contractor.
33. Notice of Award - The written notice by Owner to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the condition's precedent listed therein, Owner will sign and deliver the Agreement.

- 34. Notice to Proceed - A written notice given by Owner or Engineer to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work under the Contract Documents.
- 35. Owner - The individual or entity with whom Contractor has entered into the Agreement and for whom the Work is to be performed.
- 36. PCBs - Polychlorinated biphenyls.
- 37. Petroleum - Petroleum, including crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute), such as oil, petroleum, fuel oil, oil sludge, oil refuse, gasoline, kerosene, and oil mixed with other non-Hazardous Waste and crude oils.
- 38. Progress Schedule - A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising the Contractor's plan to accomplish the Work within the Contract Times.
- 39. Project - The total construction of which the Work to be performed under the Contract Documents may be the whole, or a part.
- 40. Project Manual - The bound documentary information prepared for bidding and constructing the Work. A listing of the contents of the Project Manual, which may be bound in one or more volumes, is contained in the table(s) of contents.
- 41. Radioactive Material - Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 (42 USC Section 2011 et seq.) as amended from time to time.
- 42. Related Entity - An officer, director, partner, employee, agent, consultant, or Subcontractor.
- 43. Resident Project Representative - The authorized representative of Engineer who may be assigned to the Site or any part thereof.
- 44. Samples - Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work, and which establish the standards by which such portion of the Work will be judged.
- 45. Schedule of Submittals - A schedule, prepared and maintained by Contractor, of required submittals and the time requirements to support scheduled performance of related construction activities.
- 46. Schedule of Values - A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
- 47. Shop Drawings - All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work.

48. Site - Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements for access thereto, and such other lands furnished by Owner which are designated for the use of Contractor.
49. Specifications - That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable thereto.
50. Subcontractor - An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work at the Site.
51. Substantial Completion - The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion thereof.
52. Successful Bidder - The Bidder submitting a responsive Bid to whom Owner makes an award.
53. Supplementary Conditions - That part of the Contract Documents which amends or supplements these General Conditions.
54. Supplier - A manufacturer, fabricator, supplier, distributor, materialman, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or any Subcontractor.
55. Underground Facilities - All underground pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or attachments, and any encasements containing such facilities, including those that convey electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, water, wastewater, storm water, other liquids or chemicals, or traffic or other control systems.
56. Unit Price Work - The price per unit quoted in the Proposal for Unit Price Work used for Bid comparison and for estimated and final payments for actual quantities installed.
57. Work - The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

58. Work Change Directive - A written statement to Contractor issued on or after the Effective Date of the Agreement and signed by Owner upon recommendation of Engineer ordering an addition, deletion, or revision in the Work, or responding to differing or unforeseen subsurface or physical conditions under which the Work is to be performed or to emergencies. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

1.02 Terminology:

A. The following words or terms are not defined but, when used in the Bidding Requirements or Contract Documents, have the following meaning.

B. Intent of Certain Terms or Adjectives:

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered", "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action or determination will be solely to evaluate, in general, the Work for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09 or any other provision of the Contract Documents.

C. As shown, As indicated, As detailed, As noted, or Similar Words:

1. References to notes or details in the Contract Documents.

D. Day:

1. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

E. Defective:

1. The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:
 - a. does not conform to the Contract Documents, or
 - b. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents, or

- c. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 14.03 or 14.04).

F. Furnish, Install, Perform, Provide:

1. The word "furnish," when used in connection with services, materials, or equipment, shall mean to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
2. The word "install," when used in connection with services, materials, or equipment, shall mean to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
3. The words "perform" or "provide," when used in connection with services, materials, or equipment, shall mean to furnish and install said services, materials, or equipment complete and ready for intended use.
4. When "furnish," "install," "perform," or "provide" is not used in connection with services, materials, or equipment in a context clearly requiring an obligation of Contractor, "provide" is implied.

- G. Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2. PRELIMINARY MATTERS

2.01 Delivery of Bonds and Evidence of Insurance:

- A. When Contractor delivers the executed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner such bonds as Contractor may be required to furnish.
- B. Evidence of Insurance: Before any Work at the Site is started, Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance which either of them Owner or any additional insured may reasonably request) which Contractor is required to purchase and maintain in accordance with Article 5.

2.02 Copies of Documents:

- A. Owner shall furnish to Contractor an electronic file or copy of the Drawings and Project Specifications.

2.03 Commencement of Contract Times; Notice to Proceed:

- A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement.

2.04 Starting the Work:

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work shall be done at the Site prior to the date on which the Contract Times commence to run.

2.05 Before Starting Construction:

- A. Preliminary Schedules: Within ten (10) days after the Effective Date of the Agreement (unless otherwise specified in the General Requirements), Contractor shall submit to Engineer for timely review:
 - 1. a preliminary Progress Schedule;
 - 2. a preliminary Schedule of Submittals; and
 - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.06 Preconstruction Conference:

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work and to discuss the schedules referred to in Paragraph 2.05.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

2.07 Initial Acceptance of Schedules:

- A. At least ten (10) days prior to the cut-off date for the first progress payment, Contractor shall submit to Engineer a final progress schedule, a final schedule of Shop Drawing submission, and, where applicable, a final schedule of values of the Work.
 - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times as described elsewhere in the Contract Documents. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work nor interfere with or relieve Contractor from Contractor's full responsibility there for. The Progress Schedule shall be updated periodically.
 - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
 - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to component parts of the Work.

ARTICLE 3. CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE

3.01 Intent:

- A. The Contract Documents are complementary; what is required by one is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided whether or not specifically called for at no additional cost to Owner. The Contract Documents are intended to specify and control the completed Work, not to control the method of performing the Work.
- C. Clarifications and interpretations of the Contract Documents shall be issued by Engineer as provided in Article 9. Contractor shall be responsible for the methods of performing and installing the Work, and any suggestions included in the Contract Documents or given by Owner or Engineer shall be considered to be advisory only.

3.02 Reference Standards:

- A. Standards, Specifications, Codes, Laws, and Regulations:
 - 1. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
 - 2. No provision of any such standard, specification, manual or code, or any instruction of a Supplier shall be effective to change the duties or responsibilities of Owner, Contractor, or Engineer, or any of their Subcontractors, consultants, agents, or employees from those set forth in the Contract Documents. No such provision or instruction shall be effective to assign to Owner, or Engineer, or any of their Related Entities, any duty or authority to supervise or direct the performance of the Work or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

3.03 Reporting and Resolving Discrepancies:

- A. Reporting Discrepancies:
 - 1. Contractor's Review of Contract Documents Before Starting Work: Before undertaking each part of the Work, Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Contractor may discover and shall obtain a written interpretation or clarification from Engineer before proceeding with any Work affected thereby.

2. Contractor's Review of Contract Documents During Performance of Work: If, during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Work or of any standard, specification, manual or code, or of any instruction of any Supplier, Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 6.16.A) until an amendment or supplement to the Contract Documents has been issued by one of the methods indicated in Paragraph 3.04.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor knew or reasonably should have known thereof.

B. Resolving Discrepancies:

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:
 - a. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or
 - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 Amending and Supplementing Contract Documents:

- A. The Contract Documents may be amended to provide for additions, deletions, and revisions in the Work or to modify the terms and conditions thereof by either a Change Order or a Work Change Directive.
- B. The requirements of the Contract Documents may be supplemented, and minor variations and deviations in the Work may be authorized, by one or more of the following ways:
 1. A Field Order;
 2. Engineer's approval of a Shop Drawing or Sample; (Subject to the provisions of Paragraph 6.17.D.3) or
 3. Engineer's written interpretation or clarification.

3.05 Reuse of Documents:

- A. Contractor and any Subcontractor or Supplier shall not:
 1. Have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or

bearing the seal of Engineer or Engineer's consultants, including electronic media editions; or

2. Reuse any of such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer.
- B. The prohibition of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein shall preclude Contractor from retaining copies of the Contract Documents for record purposes.

3.06 Electronic Data:

- A. Copies of data furnished by Owner or Engineer to Contractor or Contractor to Owner or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.
- B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. Any errors detected within the 60-day acceptance period will be corrected by the transferring party.
- C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

ARTICLE 4. AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS; REFERENCE POINTS

4.01 Availability of Lands:

- A. Owner shall furnish the Site. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work. Owner will obtain in a timely manner and pay for easements for permanent structures or permanent changes in existing facilities. If Contractor and Owner are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, as a result of any delay in Owner's furnishing the Site or a part thereof, Contractor may make a Claim there for as provided in Paragraph 10.05.
- B. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment. Contractor shall obtain signed, written consent of any property owner for such additional lands for access, storage, construction facilities or construction activity as Contractor may require. Copies of all such written consent shall be given to Owner prior to the use of such property. Contractor shall save Owner harmless from all suits

and actions of every kind and description that might result from Contractor's use of private property.

4.02 Subsurface and Physical Conditions:

A. Reports and Drawings: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents; and
2. Those drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site (except Underground Facilities) that Engineer has used in preparing the Contract Documents.

B. These investigations were carried out for design purposes only and are not considered adequate for construction. Owner does not warrant the correctness of the investigations, or of any interpretation, deduction or conclusion given in the report(s) relative to subsurface conditions. Contractor shall make its own independent examination, deductions and conclusions as to the nature of the materials to be excavated, the difficulty of making and maintaining the required excavations, the difficulties that may arise from subsurface conditions, and of doing any other Work affected by the subsurface and shall accept full responsibility there for. Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:

1. The completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
2. Other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
3. Any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions, or information.

4.03 Differing Subsurface or Physical Conditions:

A. Notice: If, notwithstanding the representations made in Paragraph 4.02.B, Contractor believes that any subsurface or physical condition at or contiguous to the Site that is uncovered or revealed either:

1. Is of such a nature as to establish that any "technical data" on which Contractor is entitled to rely as provided in Paragraph 4.02 is materially inaccurate; or
2. Is of such a nature as to require a change in the Contract Documents; or
3. Differs materially from that shown or indicated in the Contract Documents; or
4. Is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents; then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an

emergency as required by Paragraph 6.16.A), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except as aforesaid) until receipt of written order to do so.

B. Engineer's Review: After receipt of written notice as required by Paragraph 4.03.A, Engineer will promptly review the pertinent condition, determine the necessity of Owner's obtaining additional exploration or tests with respect thereto, and advise Owner in writing (with a copy to Contractor) of Engineer's findings and conclusions.

C. Possible Price and Times Adjustments:

1. In each such case, an increase or decrease in the Contract Price or an extension or shortening of the Contract Time, or any combination thereof, will be allowable to the extent that they are attributable to physical conditions uncovered or revealed at the Site differing materially from what was indicated, reflected, or referred to in the Contract Documents. If Owner and Contractor are unable to agree as to the amount or length thereof claim may be made there for as provided in Articles 11 or 12. Failure to make such claim shall constitute a waiver thereof by Contractor.
2. Under no circumstances shall Contractor be entitled to any adjustment in the Contract Price or Contract Times if:
 - a. Contractor knew of the existence of such conditions at the time Contractor made a final commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract; or
 - b. The existence of such condition could reasonably have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such final commitment; or
 - c. Contractor failed to give the written notice as required by Paragraph 4.03.A.
3. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times, or both, a Claim may be made there for as provided in Paragraph 10.05. However, Owner and Engineer, and any of their Related Entities shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

4.04 Underground Facilities:

A. Shown or Indicated: The information and data shown or indicated in the Contract Documents with respect to existing Underground Facilities at or contiguous to the Site is based on information and data furnished to Owner or Engineer by the owners of such Underground Facilities, including Owner, or by others. Unless it is otherwise expressly provided in the Supplementary Conditions:

1. Owner and Engineer shall not be responsible for the accuracy or completeness of any such information or data; and
2. The cost of all of the following will be included in the Contract Price, and Contractor shall have full responsibility for:
 - a. Reviewing and checking all such information and data,
 - b. Locating all Underground Facilities shown or indicated in the Contract Documents,
 - c. Coordination of the Work with the owners of such Underground Facilities, including Owner, during construction, and
 - d. The safety and protection of all such Underground Facilities and repairing any damage thereto resulting from the Work.

B. Not Shown or Indicated:

1. If an Underground Facility is uncovered or revealed at or contiguous to the Site which was not shown or indicated, or not shown or indicated with reasonable accuracy in the Contract Documents, Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 6.16.A), identify the Owner of such Underground Facility and give written notice to that Owner and to Owner and Engineer. Engineer will promptly review the Underground Facility and determine the extent, if any, to which a change is required in the Contract Documents to reflect and document the consequences of the existence or location of the Underground Facility. During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
2. If Engineer concludes that a change in the Contract Documents is required, a Work Change Directive or a Change Order will be issued to reflect and document such consequences. An equitable adjustment shall be made in the Contract Price or Contract Times, or both, to the extent that they are attributable to the existence or location of any Underground Facility that was not shown or indicated or not shown or indicated with reasonable accuracy in the Contract Documents and that Contractor did not know of and could not reasonably have been expected to be aware of or to have anticipated. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment in Contract Price or Contract Times, Owner or Contractor may make a Claim therefor as provided in Paragraph 10.05.

4.05 Reference Points:

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes

in grades or locations and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel. Contractor shall notify Engineer in writing at least 5 working days prior to the day Work will commence in an area requiring engineering surveys for construction.

4.06 Hazardous Environmental Condition at Site:

- A. Reports and Drawings: Reference is made to the Supplementary Conditions for the identification of those reports and drawings relating to a Hazardous Environmental Condition identified at the Site, if any, that have been utilized by the Engineer in the preparation of the Contract Documents.
- B. Limited Reliance by Contractor on Technical Data Authorized: Contractor may rely upon the general accuracy of the "technical data" contained in such reports and drawings, but such reports and drawings are not Contract Documents. Such "technical data" is identified in the Supplementary Conditions. Except for such reliance on such "technical data," Contractor may not rely upon or make any claim against Owner or Engineer, or any of their Related Entities with respect to:
 - 1. The completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures of construction to be employed by Contractor and safety precautions and programs incident thereto; or
 - 2. Other data, interpretations, opinions and information contained in such reports or shown or indicated in such drawings; or
 - 3. Any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for any Hazardous Environmental Condition uncovered or revealed at the Site which was not shown or indicated in Drawings or Specifications or identified in the Contract Documents to be within the scope of the Work. Contractor shall be responsible for a Hazardous Environmental Condition created with any materials brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible.
- D. If Contractor encounters a Hazardous Environmental Condition or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, Contractor shall immediately: (i) secure or otherwise isolate such condition; (ii) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 6.16.A); and (iii) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any.
- E. Contractor shall not be required to resume Work in connection with such condition or in any affected area until after Owner has obtained any required permits related thereto and delivered to Contractor written notice: (i) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work; or (ii) specifying any special conditions under which such Work may be resumed safely. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent,

if any, of any adjustment in Contract Price or Contract Times, or both, as a result of such Work stoppage or such special conditions under which Work is agreed to be resumed by Contractor, either party may make a Claim there for as provided in Paragraph 10.05.

- F. If after receipt of such written notice Contractor does not agree to resume such Work based on a reasonable belief it is unsafe or does not agree to resume such Work under such special conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of an adjustment in Contract Price or Contract Times as a result of deleting such portion of the Work, then either party may make a Claim there for as provided in Paragraph 10.05. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 7.
- G. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, partners, employees, agents, consultants, and Subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition: (i) was not shown or indicated in the Drawings or Specifications or identified in the Contract Documents to be included within the scope of the Work, and (ii) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.G shall obligate Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- H. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants, and Subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 4.06.H shall obligate Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- I. The provisions of Paragraphs 4.02, 4.03, and 4.04 do not apply to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 5. BONDS AND INSURANCE

5.01 Performance, Payment, and Other Bonds:

- A. Contractor shall furnish performance and payment bonds, each in an amount at least equal to the Contract Price as security for the faithful performance and payment of all of Contractor's obligations under the Contract Documents. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 13.07, whichever is later,

except as provided otherwise by Laws or Regulations or by the Contract Documents. Contractor shall also furnish such other bonds as are required by the Contract Documents.

- B. All bonds shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. All bonds signed by an agent must be accompanied by a certified copy of the agent's authority to act.
- C. If the surety on any bond furnished by Contractor is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 5.01.B, Contractor shall promptly notify Owner and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 5.01.B and 5.02.

5.02 Licensed Sureties and Insurers:

- A. All bonds and insurance required by the Contract Documents to be purchased and maintained by the Contractor shall be obtained from surety or insurance companies that are duly licensed or authorized in the State of Washington to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided in the Supplementary Conditions.

5.03 Certificates of Insurance:

- A. Contractor shall deliver to Owner, with copies to each additional insured identified in the Supplementary Conditions, certificates of insurance (and other evidence of insurance requested by Owner or any other additional insured) which Contractor is required to purchase and maintain.

5.04 Contractor's Liability Insurance:

- A. Contractor shall purchase and maintain such liability and other insurance as is appropriate for the Work being performed and as will provide protection from claims set forth below which may arise out of or result from Contractor's performance of the Work and Contractor's other obligations under the Contract Documents, whether it is to be performed by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable:
 - 1. Claims under workers' compensation, disability benefits, and other similar employee benefit acts;
 - 2. Claims for damages because of bodily injury, occupational sickness or disease, or death of Contractor's employees;
 - 3. Claims for damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees;

4. Claims for damages insured by reasonably available personal injury liability coverage which are sustained:
 - a. By any person as a result of an offense directly or indirectly related to the employment of such person by Contractor, or
 - b. By any other person for any other reason;
5. Claims for damages, other than to the Work itself, because of injury to or destruction of tangible property wherever located, including loss of use resulting there from; and
6. Claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.
7. The minimum policy types and limits of such insurance shall be:

COMMERCIAL GENERAL LIABILITY

Each Occurrence Bodily Injury and Property Damage	\$1,000,000
Products and Completed Operations Aggregate	\$1,000,000
Personal and Advertising Liability	\$1,000,000
General Aggregate	\$2,000,000
Fire Damage (any one fire)	\$50,000
Medical Expense (any one person)	\$5,000

Regardless of the edition of the policy forms used, the Commercial General Liability shall include the following coverages:

Premises and Operations
 Products and Completed Operations
 Medical Payments
 Broad Form Property Damage
 Inclusion of Explosion, Collapse, and Underground (XCU) Blanket
 Contractual
 Owners and Contractors Protective
 Washington Stop Gap
 Employees as Additional Insureds
 Personal and Advertising Injury
 Fire Legal Liability
 Extended Bodily Injury
 Occurrence Form

AUTOMOBILE LIABILITY

Combined Single Limit	\$1,000,000
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Including:

Any Automobile (Symbol #1)
 Hired Automobiles
 Non-Owned Automobiles

UMBRELLA OR EXCESS LIABILITY

Per Occurrence	\$2,000,000
Aggregate	\$2,000,000

WORKERS COMPENSATION

Washington State Fund

8. The additional insured clause must contain the following wording:

"It is hereby understood and agreed that PUD No. 1 of Clallam County, its Commissioners, officers, and employees; Engineer, its officers and employees; and the appointed and elected officials and employees of any jurisdiction(s) in which the Work takes place, while acting within the scope of their duties as such, are named as additional insureds."

- B. The policies of insurance required by this Paragraph 5.04 shall:

1. Include at least the specific coverages and be written for not less than the limits of liability provided in the Supplementary Conditions or required by Laws or Regulations, whichever is greater;
2. Include contractual liability insurance covering Contractor's indemnity obligations under Paragraphs 6.11 and 6.20;
3. Contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Owner and Contractor and to each other additional insured identified in the Supplementary Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by the Contractor pursuant to Paragraph 5.03 will so provide); and
4. Remain in effect at least until final payment and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work in accordance with Paragraph 13.07.

- C. Contractor shall furnish one copy each of Certificates of Insurance herein required for each copy of the Agreement that shall specifically set forth evidence of all coverage required in Paragraph 5.04.A.7. Contractor shall furnish to Owner copies of any endorsements that are subsequently issued amending coverage or limits.

5.05 Owner's Liability Insurance:

- A. In addition to the insurance required to be provided by Contractor under Paragraph 5.04, Owner, at Owner's option, may purchase and maintain at Owner's expense Owner's own liability insurance as will protect Owner against claims which may arise from operations under the Contract Documents.

5.06 Receipt and Application of Insurance Proceeds:

- A. Contractor as fiduciary shall have power to adjust and settle any loss with the insurers unless one of the parties in interest shall object in writing within 15 days after the occurrence of loss to Contractor's exercise of this power. If such objection be made, Contractor as fiduciary shall make settlement with the insurers in

accordance with such agreement as the parties in interest may reach. If no such agreement among the parties in interest is reached, Contractor as fiduciary shall adjust and settle the loss with the insurers and, if required in writing by any party in interest, Contractor as fiduciary shall give bond for the proper performance of such duties.

ARTICLE 6. CONTRACTOR'S RESPONSIBILITIES

6.01 Supervision and Superintendence:

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction, including those utilized by Subcontractors and Suppliers. Contractor shall not be responsible for the negligence of Owner and/or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure of construction which is shown or indicated in and expressly required by the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who shall not be replaced without written notice to Owner and Engineer except under extraordinary circumstances. The superintendent will be Contractor's representative at the Site and shall have authority to act on behalf of Contractor. All communications given to or received from the superintendent shall be binding on Contractor.

6.02 Labor; Working Hours:

- A. Contractor shall provide competent, suitably qualified personnel to survey and layout the Work and perform construction as required by the Contract Documents. Contractor shall at all times maintain good discipline and order at the Site.
- B. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site shall be performed during regular working hours. Contractor will not permit the performance of Work on a Saturday, Sunday, or any legal holiday without Owner's written consent (which will not be unreasonably withheld) given after prior written notice to Engineer. All expenses of Owner or Engineer in observation or otherwise evaluating overtime Work or the performance of Work on Saturday, Sunday or any legal holiday will be paid for by Contractor and deducted from Contractor's scheduled payment, unless otherwise agreed to by the parties.

6.03 Services, Materials, and Equipment:

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start-up, and completion of the Work.

- B. All materials and equipment incorporated into the Work shall be as specified or, if not specified, shall be of good quality and new, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications shall expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment shall be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents. No provision of any such instructions will be effective to assign to Engineer or Owner, or any of Engineer's or Owner's consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraph 9.09.

6.04 Progress Schedule:

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.07 as it may be adjusted from time to time as provided below.
 - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.07) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.
 - a. Contractor shall update the Progress Schedule at minimum monthly intervals to show actual progress and submit the updated schedule to Engineer at the cut-off date for pay estimate. Progress payments will not be processed until receipt of the revised Progress Schedule.
 - b. In the event Contractor intends to perform the Work at a different time than is indicated on Contractor's latest submitted Progress Schedule, Contractor shall notify Engineer at least two working days (48 hours) in advance of the intended change. If Contractor fails to give sufficient notice, Owner reserves the right to withhold payment for the applicable portions of the Work until the Work can be verified to be in conformance with the Contract Documents.
 - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 12. Adjustments in Contract Times may only be made by a Change Order.

6.05 Substitutes and "Or-Equals":

- A. Whenever an item of material or equipment is specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item or no substitution is permitted, other items of material or equipment or material or equipment of other Suppliers may be submitted to Engineer for review under the circumstances described below.

1. "Or-Equal" Items: If in Engineer's sole discretion an item of material or equipment proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, it may be considered by Engineer as an "or-equal" item, in which case review and approval of the proposed item may, in Engineer's sole discretion, be accomplished without compliance with some or all of the requirements for approval of proposed substitute items. For the purposes of this Paragraph 6.05.A.1, a proposed item of material or equipment will be considered functionally equal to an item so named if:
 - a. In the exercise of reasonable judgment Engineer determines that:
 - 1) It is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;
 - 2) It will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
 - 3) It has a proven record of performance and availability of responsive service; and
 - b. Contractor certifies that, if approved and incorporated into the Work:
 - 1) There will be no increase in cost to the Owner or increase in Contract Times, and
 - 2) It will conform substantially to the detailed requirements of the item named in the Contract Documents.
2. Substitute Items:
 - a. If in Engineer's sole discretion an item of material or equipment proposed by Contractor does not qualify as an "or-equal" item under Paragraph 6.05.A.1, it will be considered a proposed substitute item.
 - b. Contractor shall submit sufficient information as provided below to allow Engineer to determine that the item of material or equipment proposed is essentially equivalent to that named and an acceptable substitute there for. Requests for review of proposed substitute items of material or equipment will not be accepted by Engineer from anyone other than Contractor.
 - c. The procedure requirements for review by Engineer will be as set forth in Paragraph 6.05.A.2.d, as supplemented in the General Requirements and as Engineer may decide is appropriate under the circumstances.
 - d. Contractor shall make written application to Engineer for review of a proposed substitute item of material or equipment that Contractor seeks to furnish or use. The application:
 - 1) Shall certify that the proposed substitute item will:
 - a) perform adequately the functions and achieve the results called for by the general design,

- b) be similar in substance to that specified, and
- c) be suited to the same use as that specified;

2) Will state:

- a) the extent, if any, to which the use of the proposed substitute item will prejudice Contractor's achievement of Substantial Completion on time;
- b) whether or not use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
- c) whether or not incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty;

3) Will identify:

- a) all variations of the proposed substitute item from that specified, and
 - b) available engineering, sales, maintenance, repair, and replacement services;
- 4) And shall contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including costs of redesign and claims of other contractors affected by any resulting change.

B. Substitute Construction Methods or Procedures: If a specific means, method, technique, sequence, or procedure of construction, including Aquatic Habitat Best Management Practices, is indicated in or required by the Contract Documents, Contractor may furnish or utilize a substitute means, method, technique, sequence, or procedure of construction approved by Engineer; or by Engineer's Compliance Officer if such substitute is related to Aquatic Habitat Best Management Practices. Contractor shall submit sufficient information to allow Engineer or Engineer's Compliance Officer, in Engineer's or Engineer's Compliance Officer's sole discretion, to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents. The requirements for review by Engineer or Engineer's Compliance Officer will be similar to those provided in Paragraph 6.05.A.2.

C. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraphs 6.05.A and 6.05.B. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No "or equal" or substitute will be ordered, installed or utilized until Engineer's review is complete, which will be evidenced by either a Change Order for a substitute or an approved Shop Drawing for an "or equal." Engineer will advise Contractor in writing of any negative determination.

- D. Compliance Officer's Evaluation: Engineer's Compliance Officer will be allowed a reasonable time within which to evaluate each proposed substitute to Aquatic Habitat Best Management Practices made pursuant to Paragraph 6.05.B. Engineer's Compliance Officer may, at its discretion, consult with Owner, unless delay in selecting and implementing a substitute creates undue and imminent risk to property, public safety, or aquatic habitat in proximity to the Site. Unless otherwise advised by Owner, Engineer's Compliance Officer will be the sole judge of a substitute Aquatic Habitat Best Management Practice measure's acceptability, and no substitute will be ordered, installed, or utilized without Engineer's Compliance Officer's prior written acceptance, which will be evidenced by either a change order or an approved Aquatic Habitat Best Management Practice revision. Engineer's Compliance Officer will advise Contractor in writing of any negative determination.
- E. Special Guarantee: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- F. Engineer's Cost Reimbursement: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor pursuant to Paragraphs 6.05.A.2 and 6.05.B. Whether or not Engineer approves a substitute item so proposed or submitted by Contractor, Contractor shall reimburse Owner for the charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.
- G. Contractor's Expense: Contractor shall provide all data in support of any proposed substitute or "or- equal" at Contractor's expense.

6.06 Concerning Subcontractors, Suppliers, and Others:

- A. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of the Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work just as Contractor is responsible for Contractor's own acts and omissions. Nothing in the Contract Documents:
 - 1. shall create for the benefit of any such Subcontractor, Supplier, or other individual or entity any contractual relationship between Owner or Engineer and any such Subcontractor, Supplier or other individual or entity, nor
 - 2. shall anything in the Contract Documents create any obligation on the part of Owner or Engineer to pay or to see to the payment of any moneys due any such Subcontractor, Supplier, or other individual or entity except as may otherwise be required by Laws and Regulations.
- B. Contractor shall be solely responsible for scheduling and coordinating the Work of Subcontractors, Suppliers, and other individuals or entities performing or furnishing any of the Work under a direct or indirect contract with Contractor.
- C. Contractor shall require all Subcontractors, Suppliers, and such other individuals or entities performing or furnishing any of the Work to communicate with Engineer through Contractor.

- D. The divisions and sections of the Specifications and the identifications of any Drawings shall not control Contractor in dividing the Work among Subcontractors or Suppliers or delineating the Work to be performed by any specific trade.
- E. All Work performed for Contractor by a Subcontractor or Supplier will be pursuant to an appropriate agreement between Contractor and the Subcontractor or Supplier which specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract Documents for the benefit of Owner and Engineer. Any expenses, losses or damages incurred by Owner due to the failure of Contractor to bind a Subcontractor to the terms and conditions of the Contract Documents shall be immediately reimbursed to Owner or deducted from any payment due Contractor. Such failure by Contractor to bind Subcontractor to the terms of the Contract Documents shall also be grounds for termination of Contractor in accordance with Article 15 hereof.

6.07 Patent Fees and Royalties:

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if to the actual knowledge of Owner or Engineer its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights shall be disclosed by Owner in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

6.08 Permits:

- A. The Contractor shall obtain and pay for all construction permits and franchises for rights-of-way adjacent to the Work, except for the County right-of-way permit. The owner has secured the County right-of-way permit.. Contractor shall obtain and pay for all necessary licenses. Contractor shall obtain and pay for all permits and franchises for construction methods, or for rights-of-way to be utilized by Contractor but not within the scope of permits and franchises obtained by the Contractor. Contractor shall pay all charges of utility service companies for connections to the Work, except that Owner shall pay for capital improvements related thereto if previously approved by Owner as necessary for the proper operation and/or maintenance of the facilities of Owner after completion of the Work.

6.09 Laws and Regulations:

- A. Contractor shall give all notices required by and shall comply with all Laws, Regulations, Ordinances, and Owner Resolutions applicable to the performance of the Work. Except where otherwise expressly required by applicable Laws, Regulations, Ordinances, and Owner Resolutions, neither Owner nor Engineer, nor Engineer's Compliance Officer shall be responsible for monitoring Contractor's compliance with any Laws, Regulations, Ordinances, and Owner Resolutions.
- B. If Contractor observes that the Specifications or Drawings are at variance with any Laws, Regulations, Ordinances, or Owner Resolutions, Contractor shall give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in Paragraph 3.04. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws, Regulations, Ordinances, and Owner Resolutions, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- C. If Contractor observes that Aquatic Habitat Best Management Practices are at variance with any Laws, Regulations, Ordinances, or Owner Resolutions, Contractor shall give Engineer prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in Paragraph 3.04. If Contractor performs any Work knowing or having reason to know that it is contrary to Laws, Regulations, Ordinances, and Owner Resolutions, Contractor shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work. However, it shall not be Contractor's primary responsibility to make certain that Aquatic Habitat Best Management Practices are in accordance with Laws and Regulations, but this shall not relieve Contractor of Contractor's obligations under Paragraph 3.03.
- D. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance of the Work shall be the subject of an adjustment in Contract Price or Contract Times. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made there for as provided in Paragraph 10.05.

6.10 Taxes:

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.
- B. In addition to the Standard General Conditions for taxes, the following shall apply:

The Washington State Department of Revenue has issued special rules on the State sales tax. The following paragraphs are meant to clarify those rules. The Contractor

should contact the Washington State Department of Revenue for answers to questions in this area. The Contracting Agency will not adjust its payment if the Contractor bases a bid on a misunderstood tax liability.

The Contractor shall include all Contractor-paid taxes in the unit bid prices or other contract amounts. In some cases, however, state retail sales tax will not be included. Rule 170 below describes this exception.

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

State Sales Tax — Rule 171.

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

State Sales Tax — Rule 170.

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

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

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

6.11 Use of Site and Other Areas:

A. Limitation on Use of Site and Other Areas:

1. Contractor shall confine construction equipment, the storage of materials and equipment, and the operations of workers to the Site and other areas permitted by Laws and Regulations and shall not unreasonably encumber the Site and other areas with construction equipment or other materials or equipment. Contractor shall only store equipment and materials at the Van-Lan Well site (Lot 8). Contractor shall assume full responsibility for any damage to any such land or area, or to the Owner or occupant thereof, or of any adjacent land or areas resulting from the performance of the Work.
2. Should any claim be made by any such Owner or occupant because of the performance of the Work, Contractor shall promptly settle with such other party by negotiation or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law. Owner may withhold one and one-half times the amount of any such claim from payments due to the Contractor until the claim is resolved and/or an appropriate release and waiver of claims against Owner F is obtained from the claimant by Contractor.
3. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such Owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused by or based upon Contractor's performance of the Work.

B. Removal of Debris During Performance of the Work: During the progress of the Work Contractor shall keep the Site and other areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris shall conform to applicable Laws and Regulations.

C. Cleaning: Prior to Substantial Completion of the Work, Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site all tools, appliances, construction equipment and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. Loading Structures: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.12 Record Documents:

- A. Contractor shall maintain in a safe place at the Site one record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, and written interpretations and clarifications in good order and annotated to show

changes made during construction. These record documents together with all approved Samples and a counterpart of all approved Shop Drawings will be available to Engineer for reference. Upon completion of the Work, these record documents, Samples, and Shop Drawings will be delivered to Engineer for Owner.

6.13 Safety and Protection:

- A. Contractor shall be solely responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:
 - 1. all persons on the Site or who may be affected by the Work;
 - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
 - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction; and
 - 4. aquatic habitat at the Site, down gradient, or adjacent thereto, including, but not limited to wetlands, bogs, creeks, streams, lakes and marshlands.
- B. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. Contractor shall notify owners of adjacent property and of Underground Facilities and other utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property.
- C. All damage, injury, or loss to any property referred to in Paragraph 6.13.A.2 or 6.13.A.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or, or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- D. Contractor's duties and responsibilities for safety and for protection of the Work shall continue until such time as all the Work is completed and Engineer has issued a notice to Owner and Contractor in accordance with Paragraph 14.06.B that the Work is acceptable (except as otherwise expressly provided in connection with Substantial Completion).

6.14 Safety Representative:

- A. Contractor shall designate a qualified and experienced safety representative at the Site whose duties and responsibilities shall be the prevention of accidents and the maintaining and supervising of safety precautions and programs.

6.15 Hazard Communication Programs:

- A. Contractor shall be responsible for coordinating any exchange of material safety data sheets or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

6.16 Emergencies:

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent threatened damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby or are required as a result thereof. If Engineer determines that a change in the Contract Documents is required because of the action taken by Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued.
 - 1. Contractor shall be responsible for making any emergency repair to any public or private improvements damaged or destroyed directly or indirectly by Contractor's activities in performing the Work. Owner will attempt to contact Contractor if the need for such repair is reported when Contractor is not present. Should Owner be unable to make timely notification to Contractor, Owner may perform or authorize whatever emergency repairs Owner may deem necessary, and all cost of such repair shall be deducted from funds due or to become due Contractor.
 - 2. In emergencies affecting the safety or protection of aquatic habitat at the site or adjacent thereto, Contractor, without special instruction or authorization from Engineer, Engineer's Compliance Officer, or Owner, is obliged to act to prevent threatened damage, injury or loss. Contractor shall give Engineer's Compliance Officer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused thereby. If Engineer or Engineer's Compliance Officer determines that a change in the Contract Documents is required because of the action taken in response to an emergency, a Work Directive Change or Change Order will be issued to document the consequences of the changes or variations.

6.17 Shop Drawings and Samples:

- A. Contractor shall submit Shop Drawings and Samples to Engineer for review and approval in accordance with the acceptable Schedule of Submittals (as required by Paragraph 2.07). Each submittal will be identified as Engineer may require.
 - 1. Shop Drawings:
 - a. Submit number of copies specified in the General Requirements.

- b. Data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide and to enable Engineer to review the information for the limited purposes required by Paragraph 6.17.D.
- 2. Samples:
 - a. Submit number of Samples specified in the Specifications.
 - b. Clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the submittal for the limited purposes required by Paragraph 6.17.D.
- B. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review of the pertinent submittal will be at the sole expense and responsibility of Contractor.
- C. Submittal Procedures:
 - 1. Before submitting each Shop Drawing or Sample, Contractor shall have determined and verified:
 - a. all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto;
 - b. the suitability of all materials with respect to intended use, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work;
 - c. all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto; and
 - d. shall also have reviewed and coordinated each Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents.
 - 2. Each submittal shall bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review and approval of that submittal.
 - 3. With each submittal, Contractor shall give Engineer specific written notice of any variations, that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both a written communication separate from the Shop Drawings or Sample submittal; and, in addition, by a specific notation made on each Shop Drawing or Sample submitted to Engineer for review of each such variation.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the Schedule of Submittals acceptable to Engineer. Engineer's review will be only to determine if the items covered by the submittals will, after installation or incorporation in the Work, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review will not extend to means, methods, techniques, sequences, or procedures of construction (except where a particular means, method, technique, sequence, or procedure of construction is specifically and expressly called for by the Contract Documents) or to safety precautions or programs incident thereto. The review of a separate item as such will not indicate a review of the assembly in which the item functions.
3. Engineer's review shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 6.17.C.3 and Engineer has given written acknowledgement of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer's review or acknowledgement shall not relieve Contractor from responsibility for complying with the requirements of Paragraph 6.17.C.1.
4. Review by Engineer or Owner of any drawing, method of Work or any information regarding materials and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for any errors therein, and shall not be regarded as an assumption of risks or liability by Engineer or Owner, or any officer or employee thereof, and Contractor shall have no claim under the contract on account of the failure or partial failure or inefficiency or insufficiency of any plan or method of Work or material and equipment so reviewed. Action other than rejection shall be considered to mean merely that Owner has no objection to Contractor using, upon its own full responsibility, the plan or method of Work proposed, or furnishing the materials and equipment proposed. Markings or comments shall not relieve Contractor from compliance with the Drawings and Specifications, nor any requirements of the Contract Documents.
5. Corrections or comments made on the project data submittals and shop drawings during this review do not relieve the Contractor from his/her obligation to perform fully all contract requirements. Contractor is not entitled to rely upon the corrections or comments made on the project data submittals and shop drawings during this review. The review by the Engineer of project data and shop drawings is only for conformance with the general design concept of the project, and does not extend to consideration of specific dimensions, structural integrity, safety, detailed installation and construction requirements, or any other obligation of the Contractor. The review by the Engineer is for the benefit of the Owner only. Any action shown is subject to the requirements of the Contract Documents. Neither the review of the Contractor's submittal nor the corrections or comments provided herein, shall create any duty owed to or a cause of action in favor of the Contractor or any Subcontractor.

E. Resubmittal Procedures:

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous submittals.

6.18 Continuing the Work:

- A. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraph 15.04 or as Owner and Contractor may otherwise agree in writing.

6.19 Contractor's General Warranty and Guarantee:

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer and its Related Entities shall be entitled to rely on representation of Contractor's warranty and guarantee.
- B. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
 1. abuse, modification, or improper maintenance or operation by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
 2. normal wear and tear under normal usage.
- C. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents or a release of Contractor's obligation to perform the Work in accordance with the Contract Documents:
 1. observations by Engineer;
 2. recommendation by Engineer or payment by Owner of any progress or final payment;
 3. the issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
 4. use or occupancy of the Work or any part thereof by Owner;
 5. any review and approval of a Shop Drawing or Sample submittal or the issuance of a notice of acceptability by Engineer;
 6. any inspection, test, or approval by others; or
 7. any correction of defective Work by Owner.

6.20 Indemnification:

- A. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, partners, employees, agents, consultants and Subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of the Work, provided that any such claim, cost, loss, or damage is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself), including the loss of use resulting there from but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work or anyone for whose acts any of them may be liable. This agreement to indemnify will not apply to losses or damages resulting solely from the negligence of the Owner or Engineer, and in the event of concurrent negligence of the Contractor and either the Owner or Engineer, Contractor's duty to indemnify extends only to the extent of the Contractor's negligence. Contractor further waives any indemnitor's immunity under industrial insurance, Title 51 RCW, and agrees that such waiver was mutually negotiated in conjunction with Contractor's Bid on this Contract.
- B. In any and all claims against Owner or Engineer or any of their respective consultants, agents, officers, directors, partners, or employees by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 6.20.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.
- C. The indemnification obligations of Contractor under Paragraph 6.20.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, consultants and Subcontractors arising out of:
 - 1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
 - 2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

6.21 Delegation of Professional Design Services:

- A. Contractor will not be required to provide professional design services unless such services are specifically required by the Contract Documents for a portion of the Work or unless such services are required to carry out Contractor's responsibilities for construction means, methods, techniques, sequences and procedures. Contractor shall not be required to provide professional services in violation of applicable law.

- B. If professional design services or certifications by a design professional related to systems, materials or equipment are specifically required of Contractor by the Contract Documents, Owner and Engineer will specify all performance and design criteria that such services must satisfy. Contractor shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Work designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.
- C. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Owner and Engineer have specified to Contractor all performance and design criteria that such services must satisfy.
- D. Pursuant to this Paragraph 6.21.D, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 6.17.D.1.
- E. Contractor shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

6.22 Environmental Protection/Compliance Officer:

- A. Contractor shall, subject to Paragraph 8.12.B, designate and keep on the Work during its progress, a qualified Compliance Officer, who shall not be replaced without written notice to Owner and Engineer, and in such circumstance, said replacement shall have equivalent qualifications. The Compliance Officer shall be Contractor's representative at the Work site responsible for the proper installation, performance, and maintenance of the Aquatic Habitat Best Management Practices, as described in the Contract Document, by the Contractor, including Contractor's Subcontractors and Suppliers. Contractor's Compliance Officer shall consult and cooperate with Engineer's Compliance Officer regarding the proper installation, performance, and maintenance of Aquatic Habitat Best Management Practices, and the application of corrective actions.
 - 1. Contractor's Compliance Officer shall be responsible for attending all Pre-Construction Meetings, and all other meetings involving Engineer, Engineer's Compliance Officer, Contractor, and Owner, that pertain to performance of the Work as it relates to the implementation, performance, and maintenance of the Aquatic Habitat Best Management Practices described in the Contract Document.

ARTICLE 7. OTHER WORK AT THE SITE

7.01 Related Work at Site:

- A. Owner may perform other work related to the Project at the Site with Owner's employees, or via other direct contracts there for, or have other work performed by utility owners. If such other work is not noted in the Contract Documents, then:
 - 1. written notice thereof will be given to Contractor prior to starting any such other work; and
 - 2. if Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in the Contract Price or Contract Times that should be allowed as a result of such other work, a Claim may be made there for as provided in Paragraph 10.05. Failure to make such claim shall constitute waiver of any such claims by Contractor.
- B. Contractor shall afford each other Contractor who is a party to such a direct contract, each utility Owner and Owner, if Owner is performing other work with Owner's employees, proper and safe access to the Site, a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work, and shall properly coordinate the Work with theirs. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering their work and will only cut or alter their work with the written consent of Engineer and the others whose work will be affected. The duties and responsibilities of Contractor under this Paragraph are for the benefit of such utility owners and other contractors to the extent that there are comparable provisions for the benefit of Contractor in said direct contracts between Owner and such utility owners and other contractors.
- C. If the proper execution or results of any part of Contractor's Work depends upon work performed by others under this Article 7, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

7.02 Coordination:

- A. If Owner intends to contract with others for the performance of other work on the Project at the Site, the following will be set forth in Supplementary Conditions:
 - 1. the individual or entity who will have authority and responsibility for coordination of the activities among the various contractors will be identified;
 - 2. the specific matters to be covered by such authority and responsibility will be itemized; and
 - 3. the extent of such authority and responsibilities will be provided.

- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

7.03 Legal Relationships:

- A. Paragraphs 7.01.A and 7.02 are not applicable for utilities not under the control of Owner.
- B. Each other direct contract of Owner under Paragraph 7.01.A shall provide that the other Contractor is liable to Owner and Contractor for the reasonable direct delay and disruption costs incurred by Contractor as a result of the other Contractor's actions or inactions.
- C. Contractor shall be liable to Owner and any other Contractor for the reasonable direct delay and disruption costs incurred by such other Contractor as a result of Contractor's action or inactions.

ARTICLE 8. OWNER'S RESPONSIBILITIES

8.01 Communications to Contractor:

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor directly and/or through Engineer. In the event of emergency, Owner may issue directions directly to Contractor; in such event, Engineer shall be advised by Owner as soon as possible as to such directions.

8.02 Replacement of Engineer:

- A. In case of termination of the employment of Engineer, Owner shall appoint an engineer whose status under the Contract Documents shall be that of the former Engineer. Written notice of appointment of a new Engineer shall be provided to Contractor.

8.03 Furnish Data:

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

8.04 Pay When Due:

- A. Owner shall make payments to Contractor when they are due as provided in Paragraphs 14.01.C and 14.06.C.

8.05 Lands and Easements; Reports and Tests:

- A. Owner's duties in respect of providing lands and easements and providing engineering surveys to establish reference points are set forth in Paragraphs 4.01 and 4.05. Paragraph 4.02 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of subsurface conditions and drawings of physical conditions in or relating to existing surface or subsurface structures at or contiguous to the Site that have been utilized by Engineer in preparing the Contract Documents.

8.06 Insurance:

- A. Owner's responsibilities, if any, in respect to purchasing and maintaining liability and property insurance are set forth in Article 5.

8.07 Change Orders:

- A. Owner is obligated to execute Change Orders as indicated in Paragraph 10.03.

8.08 Inspections, Tests, and Approvals:

- A. Owner's responsibility in respect to certain inspections, tests, and approvals is set forth in Paragraph 13.03.B.

8.09 Limitations on Owner's Responsibilities:

- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

8.10 Undisclosed Hazardous Environmental Condition:

- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 4.06.

8.11 Compliance Director:

- A. Not Applicable.

ARTICLE 9. ENGINEER'S STATUS DURING CONSTRUCTION

9.01 Owner's Representative:

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract Documents and will not be changed without written consent of Owner and Engineer.
 - 1. Engineer shall, subject to Paragraph 8.11.B of this Agreement, designate a qualified Compliance Officer, who shall not be replaced without written notice to Owner, and if such action occurs, said replacement shall have equivalent qualifications.

9.02 Visits to Site:

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe as an experienced and qualified design professional the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract

Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 9.09. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

9.03 Project Representative:

- A. Not Applicable.

9.04 Authorized Variations in Work:

- A. Engineer may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. These may be accomplished by a Field Order and will be binding on Owner and also on Contractor, who shall perform the Work involved promptly. If Owner or Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, or both, a Claim may be made there for as provided in Paragraph 10.05.

9.05 Rejecting Defective Work:

- A. Engineer will have authority to reject Work which Engineer believes to be defective, or that Engineer believes will not produce a completed Project that conforms to the Contract Documents or that will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Engineer will also have authority to require special inspection or testing of the Work as provided in Paragraph 13.04, whether or not the Work is fabricated, installed, or completed.

9.06 Shop Drawings, Change Orders and Payments:

- A. In connection with Engineer's authority, and limitations thereof, as to Shop Drawings and Samples, see Paragraph 6.17.
- B. In connection with Engineer's authority, and limitations thereof, as to design calculations and design drawings submitted in response to a delegation of professional design services, if any, see Paragraph 6.21.
- C. In connection with Engineer's authority as to Change Orders, see Articles 10, 11, and 12.

- D. In connection with Engineer's authority as to Applications for Payment, see Article 14.

9.07 Determinations for Unit Price Work:

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Contractor, subject to the provisions of Paragraph 10.05.

9.08 Decisions on Requirements of Contract Documents and Acceptability of Work:

- A. Engineer will be the initial interpreter of the requirements of the Contract Documents and judge of the acceptability of the Work there under. All matters in question and other matters between Owner and Contractor arising prior to the date final payment is due relating to the acceptability of the Work, and the interpretation of the requirements of the Contract Documents pertaining to the performance of the Work, will be referred initially to Engineer.
- B. Engineer will, with reasonable promptness, render a written decision on the issue referred. If Owner or Contractor believes that any such decision entitles them to an adjustment in the Contract Price or Contract Times or both, a Claim may be made under Paragraph 10.05. The date of Engineer's decision shall be the date of the event giving rise to the issues referenced for the purposes of Paragraph 10.05.A.
- C. Engineer's written decision on the issue referred will be final and binding on Contractor, subject to the provisions of Paragraph 10.05. Should Contractor fail to invoke the procedure set forth in Paragraph 10.05, Engineer's determination hereunder shall be final and Contractor shall have waived any claim in relation thereto.
- D. When functioning as interpreter and judge under this Paragraph 9.08, Engineer will not show partiality to Owner or Contractor and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity.

9.09 Limitations on Engineer's Authority and Responsibilities:

- A. Neither Engineer's nor Engineer's Compliance Officer's authority or responsibility under this Article 9 or under any other provision of the Contract Documents nor any decision made by Engineer or Engineer's Compliance Officer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer or Engineer's Compliance Officer shall create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the

performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Paragraph 14.06.A will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 9.09 shall also apply to the Resident Project Representative, if any, and assistants, if any.

9.10 Engineer's Compliance Officer's Responsibilities:

- A. Not Applicable.

ARTICLE 10. CHANGES IN THE WORK; CLAIMS

10.01 Authorized Changes in the Work:

- A. Without invalidating the Contract and without notice to any surety, Owner may at any time or from time to time, order additions, deletions, or revisions in the Work by a Change Order, or a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents (except as otherwise specifically provided).
- B. If Owner and Contractor are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made there for as provided in Paragraph 10.05. Failure of Contractor to make claim for additional time or compensation shall constitute a waiver of any claims for additional time or compensation for any such Written Amendment, Change Order or Work Directive change.

10.02 Unauthorized Changes in the Work:

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents as amended, modified, or supplemented as provided in Paragraph 3.04, except in the case of an emergency as provided in Paragraph 6.16 or in the case of uncovering Work as provided in Paragraph 13.04.B.

10.03 Execution of Change Orders:

- A. Owner and Contractor shall execute appropriate Change Orders recommended by Engineer covering:

1. changes in the Work which are: (i) ordered by Owner pursuant to Paragraph 10.01.A, (ii) required because of acceptance of defective Work under Paragraph 13.08.A or Owner's correction of defective Work under Paragraph 13.09, or (iii) agreed to by the parties;
2. changes in the Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive; and
3. changes in the Contract Price or Contract Times agreed to or determined in the dispute resolution procedure, mediation, or litigation described in Article 16 hereof.

10.04 Notification to Surety:

- A. If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times) is required by the provisions of any bond to be given to a surety, the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

10.05 Claims:

- A. Contractor shall give written notice to Owner and Engineer of any claim within 20 days of the commencement of the event giving rise to it. (Unless a different time limit is specified for specific types of claims elsewhere in these Contract Documents). Failure to properly give such notice shall constitute waiver of the claim. Contractor shall not be entitled to any change in the Contract Price or the Contract Time, nor any other compensation, for any events or costs that occurred more than 20 days before the written notice is given. (Or more than the number of days within which a claim must be made as specified elsewhere in these Contract Documents). Once written notice of a claim has been given, resolution thereof shall be in accordance with the Dispute Resolution procedures described in Article 16.
- B. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 10.05.

ARTICLE 11. COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

11.01 Cost of the Work:

- A. Costs Included: The term Cost of the Work means the sum of all costs, except those excluded in Paragraph 11.01.B, necessarily incurred and paid by Contractor in the proper performance of the Work. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, the costs to be reimbursed to Contractor will be only those additional or incremental costs required because of the change in the Work or because of the event giving rise to the Claim. Except as otherwise may be agreed to in writing by Owner, such costs shall be in amounts no higher than those prevailing in the locality of the Project, shall include only the following items, and shall not include any of the costs itemized in Paragraph 11.01.B.

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor. Such employees shall include, without limitation, superintendents, foremen, and other personnel employed full time at the Site. Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work. Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits, which shall include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, shall be included in the above to the extent authorized by Owner.
2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts shall accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts shall accrue to Owner. All trade discounts, rebates and refunds and returns from sale of surplus materials and equipment shall accrue to Owner, and Contractor shall make provisions so that they may be obtained.
3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from Subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, who will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee shall be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 11.01.
4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, and surveyors) employed for services specifically related to the Work.
5. Supplemental costs including the following:
 - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
 - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
 - c. Rentals of all construction equipment and machinery, and the parts thereof whether rented from Contractor or others in accordance with rental agreements approved by Owner with the advice of Engineer, and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs shall be in accordance with the terms of said rental

agreements. The rental of any such equipment, machinery, or parts shall cease when the use thereof is no longer necessary for the Work.

- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work, provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses shall be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as telegrams, long distance telephone calls, telephone service at the Site, expressages, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance are required because of changes in the Work.

B. Costs Excluded: The term Cost of the Work shall not include any of the following items:

- 1. Payroll costs and other compensation of Contractor's officers, executives, principals (of partnerships and sole proprietorships), general managers, safety managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 11.01.A.1 or specifically covered by Paragraph 11.01.A.4, all of which are to be considered administrative costs covered by the Contractor's fee.
- 2. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
- 3. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
- 4. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of

materials or equipment wrongly supplied, and making good any damage to property.

5. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraphs 11.01.A and 11.01.B.
- C. Contractor's Fee: When all the Work is performed on the basis of cost-plus, Contractor's fee shall be determined as set forth in the Agreement. When the value of any Work covered by a Change Order or when a Claim for an adjustment in Contract Price is determined on the basis of Cost of the Work, Contractor's fee shall be determined as set forth in Paragraph 12.01.C.
- D. Documentation: Whenever the Cost of the Work for any purpose is to be determined pursuant to Paragraphs 11.01.A and 11.01.B, Contractor will establish and maintain records thereof in accordance with generally accepted accounting practices and submit in a form acceptable to Engineer an itemized cost breakdown together with supporting data.

11.02 Allowances:

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. Cash Allowances:
 1. Contractor agrees that:
 - a. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
 - b. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment on account of any of the foregoing will be valid.
- C. Contingency Allowance:
 1. Contractor agrees that a contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor on account of Work covered by allowances, and the Contract Price shall be correspondingly adjusted.

11.03 Unit Price Work:

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Determinations of the actual quantities and classifications of Unit Price Work performed by Contractor will be made by Engineer subject to the provisions of Paragraph 9.07.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Payment to Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantities of Work vary from the original Bid quantities, payment will be at the unit Contract prices for accepted Work unless the total quantity of any Contract item, using the original Bid quantity, increases or decreases by more than 25 percent. In that case that part of the increase or decrease exceeding the 25 percent variation will be adjusted as follows:
 - 1. Contract Price Adjustments Due to Increased Quantities: Owner will be entitled to an equitable adjustment for that portion of the actual quantity in excess of 125 percent of the original Bid quantity except as limited in Paragraph 11.03.D.
 - 2. Contract Price Adjustments Due to Decreased Quantities: Contractor will be entitled to an equitable adjustment for that portion of the actual quantity that is less than 75 percent of the original Bid quantity except as limited in Paragraph 11.03.D.
 - 3. Adjustment Limits: The equitable adjustment for increased or decreased quantities will be determined by Engineer, with the following limitations:
 - a. No payment for loss of anticipated profits will be allowed because of any decrease from the estimated quantities shown in the Proposal form, Contract provisions, and Contract Drawings.
 - b. No payment will be made for extended or unabsorbed home office overhead and field office overhead expenses to the extent that there is an unbalanced allocation of such expenses among the Contract Bid items.
 - c. No payment for consequential damages will be allowed because of any variance of any quantities from those originally shown in the Proposal form, Contract provisions, and Contract Drawings.
 - d. No adjustment in the Contract Price will be made for any item unless the Quantity Subject to Adjustment times the Original Unit Price Bid for the item results in a change of \$10,000 or more. Any adjustment will only apply to the portion of said product that is in excess of \$10,000.
 - e. The Contract Price Adjustment for Decreased or Increased Quantities will be determined by multiplying the Quantity Subject to Adjustment times the Original Unit Price Bid, subtracting the \$10,000 minimum limit for adjustment, and then multiplying by the Overhead Adjustment Factor. The Overhead Adjustment Factor shall be set at 10 percent.

4. Contract Price Adjustment Computations:

Definition of Variables:

Q o: Original Bid Quantity
 Q u: Actual Quantity Used
 Q a: Quantity Subject to Adjustment
 P o: Original Unit Price Bid
 O a: Overhead Adjustment Factor = 10 Percent
 P d: Price Adjustment Due to Decreased Quantities
 P i: Price Adjustment Due to Increased Quantities

Contract Price Adjustments Due to Decreased Quantities	Contract Price Adjustments Due to Increased Quantities
Step 1 Is $Q_u < 0.75 * Q_o$? If no, then no adjustment If yes, then go to Step 2	Step 1 Is $Q_u > 1.25 * Q_o$? If no, then no adjustment If yes, then go to Step 2
Step 2 Let $Q_a = 0.75 * Q_o - Q_u$ Is $Q_a * P_o > \$10,000$? If no, then no adjustment If yes, then go to Step 3	Step 2 Let $Q_a = Q_u - 1.25 * Q_o$ Is $Q_a * P_o > \$10,000$? If no, then no adjustment If yes, then go to Step 3
Step 3 Determine Contract Price Adjustment Due to Decreased Quantities $P_d = (Q_a * P_o - 10,000) * O_a$	Step 3 Determine Contract Price Adjustment Due to Increased Quantities $P_i = (Q_a * P_o - 10,000) * O_a$
Step 4 Repeat Steps 1 through 3 for each Bid item and then sum P_d for each Bid item to determine total adjustment credit due Contractor	Step 4 Repeat Steps 1 through 3 for each Bid item and then sum P_i for each Bid item to determine total adjustment credit due Owner

Subtract summed P_i from summed P_d to determine the Net Price Adjustment to the Contract. If the value is positive, then the Contractor is due the Net Price Adjustment. If the value is negative then the Owner is due the Net Price Adjustment.

A variation in quantities adjusted in accordance herewith shall not be considered a "Changed Condition," and shall not be subject to additional claim by either Contractor or Owner.

When ordered by Engineer, the Contractor shall proceed with the Work pending determination of the cost adjustments for the change.

ARTICLE 12. CHANGE OF CONTRACT PRICE; CHANGE OF CONTRACT TIMES

12.01 Change of Contract Price:

- A. The Contract Price may only be changed by a Change Order. Any Claim for an adjustment in the Contract Price shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the contract in accordance with the provisions of Paragraph 10.05.
- B. The value of any Work covered by a Change Order or of any Claim for an adjustment in the Contract Price will be determined as follows:
 - 1. where the Work involved is covered by unit prices contained in the Contract Documents, by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 11.03); or
 - 2. where the Work involved is not covered by unit prices contained in the Contract Documents, by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 12.01.C.2); or
 - 3. where the Work involved is not covered by unit prices contained in the Contract Documents and agreement to a lump sum is not reached under Paragraph 12.01.B.2, on the basis of the Cost of the Work (determined as provided in Paragraph 11.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 12.01.C).
- C. Contractor's Fee: The Contractor's fee for overhead and profit shall be determined as follows:
 - 1. A mutually acceptable fixed fee; or
 - 2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
 - a. For costs incurred under Paragraphs 11.01.A.1 and 11.01.A.2, the Contractor's fee shall be 15 percent;
 - b. For costs incurred under Paragraph 11.01.A.3, the Contractor's fee shall be five percent;
 - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraph 12.01.C.2.a is that the Subcontractor who actually performs the Work, at whatever tier, will be paid a fee of 15 percent of the costs incurred by such Subcontractor under Paragraphs 11.01.A.1 and 11.01.A.2 and that any higher tier Subcontractor and Contractor will each be paid a fee of five percent of the amount paid to the next lower tier Subcontractor;
 - d. No fee shall be payable on the basis of costs itemized under Paragraphs 11.01.A.4, 11.01.A.5, and 11.01.B;
 - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in cost will be the amount of the actual net

decrease in cost plus a deduction in Contractor's fee by an amount equal to five ten percent of such net decrease; and

- f. When both additions and credits are involved in anyone change, the adjustment in Contractor's fee shall be computed on the basis of the net change in accordance with Paragraphs 12.01.C.2.a through 12.01.C.2.e, inclusive.

12.02 Change of Contract Times:

- A. The Contract Times may only be changed by a Change Order. Any Claim for an adjustment in the Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 10.05.
- B. Any adjustment of the Contract Times covered by a Change Order or any Claim for an adjustment in the Contract Times will be determined in accordance with the provisions of this Article 12.

12.03 Delays:

- A. Where Contractor is prevented from completing any part of the Work within the Contract Times due to delay beyond the control of Contractor, the Contract Times will be extended in an amount equal to the time lost due to such delay if a Claim is made there for as provided in Paragraph 12.02.A. Delays beyond the control of Contractor shall include, but not be limited to, acts or neglect by Owner, acts or neglect of utility owners or other contractors performing other work as contemplated by Article 7, fires, floods, epidemics, abnormal weather conditions, or acts of God.
- B. If Owner, Engineer, or other contractors or utility owners performing other work for Owner as contemplated by Article 7, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times, or both. Contractor's entitlement to an adjustment of the Contract Times is conditioned on such adjustment being essential to Contractor's ability to complete the Work within the Contract Times.
- C. If Contractor is delayed in the performance or progress of the Work by fire, flood, epidemic, abnormal weather conditions, acts of God, acts or failures to act of utility owners not under the control of Owner, or other causes not the fault of and beyond control of Owner and Contractor, then Contractor shall be entitled to an equitable adjustment in Contract Times, if such adjustment is essential to Contractor's ability to complete the Work within the Contract Times. Such an adjustment shall be Contractor's sole and exclusive remedy for the delays described in this Paragraph 12.03.C.
- D. Owner, Engineer and the Related Entities or each of them shall not be liable to Contractor for any claims, costs, losses, or damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Contractor on or in connection with any other project or anticipated project.

- E. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Contractor. Delays attributable to and within the control of a Subcontractor or Supplier shall be deemed to be delays within the control of Contractor.

ARTICLE 13. TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.01 Notice of Defects:

- A. Prompt notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor. All defective Work may be rejected, corrected, or accepted as provided in this Article 13.

13.02 Access to Work:

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and governmental agencies with jurisdictional interests will have access to the Site and the Work at reasonable times for their observation, inspecting, and testing. Contractor shall provide them with proper and safe conditions for such access and advise them of Contractor's Site safety procedures and programs so that they may comply therewith as applicable.

13.03 Tests and Inspections:

- A. Contractor shall give Engineer timely notice of readiness of the Work for all required inspections, tests, or approvals and shall cooperate with inspection and testing personnel to facilitate required inspections or tests.
- B. Owner shall employ and pay for the services of an independent testing laboratory to perform all inspections, tests, or approvals required by the Contract Documents except:
 - 1. for inspections, tests, or approvals covered by Paragraphs 13.03.C and 13.03.D below;
 - 2. that costs incurred in connection with tests or inspections conducted pursuant to Paragraph 13.04.B shall be paid as provided in said Paragraph 13.04.C; and
 - 3. as otherwise specifically provided in the Contract Documents.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval. Compaction testing is described elsewhere in the Contract Documents. Initial testing shall be paid by Owner, but the cost of any retesting required by failure to pass the initial compaction testing shall be paid by Contractor.
- D. Contractor shall be responsible for arranging and obtaining and shall pay all costs in connection with any inspections, tests, or approvals required for Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work; or acceptance of materials, mix designs, or equipment submitted for approval prior to

Contractor's purchase thereof for incorporation in the Work. Such inspections, tests, or approvals shall be performed by organizations acceptable to Owner and Engineer.

- E. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, it must, if requested by Engineer, be uncovered for observation.
- F. Uncovering Work as provided in Paragraph 13.03.E shall be at Contractor's expense unless Contractor has given Engineer timely notice of Contractor's intention to cover the same and Engineer has not acted with reasonable promptness in response to such notice.

13.04 Uncovering Work:

- A. If any Work is covered contrary to the written request of Engineer, it must, if requested by Engineer, be uncovered for Engineer's observation and replaced at Contractor's expense.
- B. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, furnishing all necessary labor, material, and equipment.
- C. If it is found that the uncovered Work is defective, Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and Owner shall be entitled to an appropriate decrease in the Contract Price. If Contractor disagrees with the decrease determined by Engineer, Contractor may make claim for a review thereof in accordance with the provisions of Paragraph 10.05. Failure to make such a claim shall constitute a waiver of any objection or claim related to Engineer's determination.
- D. If, the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, or both, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, Contractor may make a Claim there for as provided in Paragraph 10.05.

13.05 Owner May Stop the Work:

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work shall not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

13.06 Correction or Removal of Defective Work:

- A. Promptly after receipt of notice, Contractor shall correct all defective Work, whether or not fabricated, installed, or completed, or, if the Work has been rejected by Engineer or Engineer's Compliance Officer, remove it from the Project and replace it with Work that is not defective. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or removal (including but not limited to all costs of repair or replacement of work of others).
- B. Correction of Aquatic Habitat Best Management Practice(s) defectively designed, installed, or maintained by the Contractor shall occur promptly and without delay by Contractor once identified by Contractor, or Contractor's Compliance Officer, or identified and ordered by the Engineer's Compliance Officer, in accordance with Engineer's Compliance Officer's written instructions, either to correct such defective Work, or, if it has been rejected by Engineer's Compliance Officer and/or Owner, remove it from the site and replace it with non-defective Aquatic Habitat Best Management Practices. If Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of aquatic habitat damage, Owner may have the defective Aquatic Habitat Best Management Practice work removed and replaced. All direct, indirect, and consequential costs related to such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) will be paid by Contractor if the defect results from improper Contractor design, installation, or maintenance of an Aquatic Habitat Best Management Practice.
- C. When correcting defective Work under the terms of this Paragraph 13.06 or Paragraph 13.07, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

13.07 Correction Period:

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the terms of any applicable special guarantee required by the Contract Documents) or by any specific provision of the Contract Documents, any Work is found to be defective, or if the repair of any damages to the land or areas made available for Contractor's use by Owner or permitted by Laws and Regulations as contemplated in Paragraph 6.11.A is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
 - 1. repair such defective land or areas; or
 - 2. correct such defective Work; or
 - 3. if the defective Work has been rejected by Owner, remove it from the Project and replace it with Work that is not defective, and
 - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others or other land or areas resulting there from.

- B. If Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.
- C. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- D. Where defective Work (and damage to other Work resulting there from) has been corrected or removed and replaced under this Paragraph 13.07, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.
- E. Contractors' obligations under this Paragraph 13.07 are in addition to any other obligation or warranty. The provisions of Paragraph 13.07 shall not be construed as a substitute for or a waiver of the provisions of any applicable statute of limitation or repose.

13.08 Acceptance of Defective Work:

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner (and, prior to Engineer's recommendation of final payment, Engineer) prefers to accept it, Owner may do so. Contractor shall pay all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness) and the diminished value of the Work to the extent not otherwise paid by Contractor pursuant to this sentence. If any such acceptance occurs prior to Engineer's recommendation of final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work, and Owner shall be entitled to an appropriate decrease in the Contract Price, reflecting the diminished value of Work so accepted. If Contractor disagrees with the decrease determined by Owner, Contractor may make claim for a review thereof in accordance with the provisions of Paragraph 10.05. Failure to make such claim shall constitute a waiver of any objection or claim related to Owner's determination. If the acceptance occurs after such recommendation, an appropriate amount will be paid by Contractor to Owner.

13.09 Owner May Correct Defective Work:

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work or to remove and replace rejected Work as required by Engineer in accordance with Paragraph 13.06.A, or if Contractor fails to perform the

Work in accordance with the Contract Documents, or if Contractor fails to comply with any other provision of the Contract Documents, Owner may, after seven days written notice to Contractor, correct or remedy any such deficiency.

- B. In exercising the rights and remedies under this Paragraph 13.09, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, take possession of Contractor's tools, appliances, construction equipment and machinery at the Site, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this Paragraph.
- C. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 13.09 will be charged against Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work; and Owner shall be entitled to an appropriate decrease in the Contract Price determined by Engineer. If Contractor disagrees with such decrease determined by Engineer, Contractor may make claim for review thereof in accordance with, the provisions of Paragraph 10.05. Failure to make such claim shall constitute a waiver of any claim in relation to the decrease determined by Engineer. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 13.09.

ARTICLE 14. PAYMENTS TO CONTRACTOR AND COMPLETION

14.01 Progress Payments:

A. Applications for Payments:

1. Progress payments shall be made monthly by estimate of Work completed as of the cutoff date which will be the 23rd of each month. No payment shall be made for material delivered to the site but not yet installed. State sales tax shall be included in the pay estimate. The amount of retainage shall be 5% as set forth in RCW 60.28. Payment of the retained percentage will be made to Contractor within 30 days after final payment upon the condition that Contractor shall have furnished to Owner a certificate from the Department of Labor and Industries ("Affidavit of Wages Paid"), a certificate from the Department of Revenue of the State of Washington, and a certificate from the Employment Security Department of the State of Washington showing that all payments due such departments have been made. Contractor shall also have furnished to Owner a certificate from the Tax Commission of the State of Washington showing that all taxes due or to

become due with respect to the Contract have been paid. Contractor shall also have furnished to Owner the completed Affidavit at Part I - Payment of L & I Premiums together with such proof of appropriate payment as reasonably required by Owner. There shall also be no notice of lien filed against the Retainage as provided in RCW 60.28, nor any other claims to the knowledge of Owner.

B. Review of Applications:

1. Engineer will prepare and submit to Owner monthly estimates of Work performed for progress payment. Within 30 days following presentation of the pay estimate to Owner by Engineer, the amount recommended will be paid by Owner to Contractor."
2. Engineer's recommendation of periodic progress payment by submission to Owner of periodic pay estimate will constitute a representation by Engineer to Owner, based on Engineer's observations on the Site of the executed Work as an experienced and qualified design professional and on Engineer's review of the data and schedules, that to the best of Engineer's knowledge, information and belief that:
 - a. the Work has progressed to the point indicated;
 - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Contract Documents, to a final determination of quantities and classifications for Unit Price Work under Paragraph 9.07, and to any other qualifications stated in the recommendation); and
 - c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
 - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract Documents; or
 - b. that there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.
4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:
 - a. to supervise, direct, or control the Work, or

- b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or
 - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work, or
 - d. to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or
 - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 14.01.B.2. Engineer may also refuse to recommend any such payment or, because of subsequently discovered evidence or the results of subsequent inspections or tests, revise or revoke any such payment recommendation previously made, to such extent as may be necessary in Engineer's opinion to protect Owner from loss because:
- a. the Work is defective, or completed Work has been damaged, requiring correction or replacement;
 - b. the Contract Price has been reduced by Change Orders;
 - c. Owner has been required to correct defective Work or complete Work in accordance with Paragraph 13.09; or
 - d. Engineer has actual knowledge of the occurrence of any of the events enumerated in Paragraph 15.02.A.

C. Payment Becomes Due:

- 1. Thirty days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended will (subject to the provisions of Paragraph 14.01.D) become due, and when due will be paid by Owner to Contractor.

D. Reduction in Payment:

- 1. Owner may refuse to make payment of the full amount recommended by Engineer because:
 - a. claims have been made against Owner on account of Contractor's performance or furnishing of the Work;
 - b. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens;
 - c. there are other items entitling Owner to a set-off against the amount recommended; or

- d. Owner has actual knowledge of the occurrence of any of the events enumerated in Paragraphs 14.01.B.5.a through 14.01.B.5.c or Paragraph 15.02.A.
2. If Owner refuses to make payment of the full amount recommended by Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, when Contractor corrects to Owner's satisfaction the reasons for such action.
3. If it is subsequently determined that Owner's refusal of payment was not justified, the amount wrongfully withheld shall be treated as an amount due as determined by Paragraph 14.01.C.1.

14.02 Contractor's Warranty of Title:

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than the time of payment free and clear of all Liens.

14.03 Substantial Completion:

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete (except for items specifically listed by Contractor as incomplete) and request that Engineer issue a certificate of Substantial Completion.
- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make a prefinal inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons there for.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a tentative certificate of Substantial Completion which shall fix the date of Substantial Completion. There shall be attached to the certificate a tentative list of items to be completed or corrected before final payment. Owner shall have seven days after receipt of the tentative certificate during which to make written objection to Engineer as to any provisions of the certificate or attached list. If, after considering such objections, Engineer concludes that the Work is not substantially complete, Engineer will within 14 days after submission of the tentative certificate to Owner notify Contractor in writing, stating the reasons there for. If, after consideration of Owner's objections, Engineer considers the Work substantially complete, Engineer will within said 14 days execute and deliver to Owner and Contractor a definitive certificate of Substantial Completion (with a revised tentative list of items to be completed or corrected) reflecting such changes from the tentative certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of delivery of the tentative certificate of Substantial Completion, Engineer will deliver to Owner and Contractor a written recommendation as to division of responsibilities pending final payment between Owner and Contractor with respect to security, operation, safety, and protection of the Work, maintenance, heat, utilities,

insurance, and warranties and guarantees. Unless Owner and Contractor agree otherwise in writing and so inform Engineer in writing prior to Engineer's issuing the definitive certificate of Substantial Completion, Engineer's aforesaid recommendation will be binding on Owner and Contractor until final payment.

- E. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to complete or correct items on the tentative list.

14.04 Partial Utilization:

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions.
 - 1. Owner at any time may request Contractor in writing to permit Owner to use or occupy any such part of the Work which Owner believes to be ready for its intended use and substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor will certify to Owner and Engineer that such part of the Work is substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 2. Contractor at any time may notify Owner and Engineer in writing that Contractor considers any such part of the Work ready for its intended use and substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
 - 3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons there for. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 14.

14.05 Final Inspection:

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

14.06 Final Payment:

- A. Application for Payment:
 - 1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions,

schedules, guarantees, bonds, certificates or other evidence of insurance certificates of inspection, marked-up record documents (as provided in Paragraph 6.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment shall be accompanied (except as previously delivered) by:
 - a. all documentation called for in the Contract Documents,
 - b. consent of the surety, if any, to final payment;
 - c. a list of all Claims against Owner that Contractor believes are unsettled; and
 - d. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of or Liens filed in connection with the Work.
3. In lieu of the releases or waivers of Liens specified in Paragraph 14.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (i) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (ii) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner or Owner's property might in any way be responsible have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien.

B. Engineer's Review of Application and Acceptance:

1. If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will, within ten days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of payment and present the Application for Payment to Owner for payment. At the same time Engineer will also give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of Paragraph 14.08. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. Payment Becomes Due:

1. Thirty days after the presentation to Owner of the Application for Payment and accompanying documentation, the amount recommended by Engineer, less any sum Owner is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages, will become due and will be paid by Owner to Contractor.

14.07 Final Completion Delayed:

- A. If, through no fault of Contractor, final completion of the Work is significantly delayed, and if Engineer so confirms, Owner shall, upon receipt of Contractor's final Application for Payment (for Work fully completed and accepted) and recommendation of Engineer, 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 to be held by Owner for Work not fully completed or corrected is less than the retainage withheld to date in accordance with State regulations, and if bonds have been furnished as required in Paragraph 5.01, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by Contractor to Engineer with the Application for such payment. Such payment shall be made under the terms and conditions governing final payment, except that it shall not constitute a waiver of Claims. The remaining balance of any sum included in the final Application for Payment but held by Owner for Work not fully completed and accepted will become due when the Work is fully completed and accepted.

14.08 Waiver of Claims:

- A. The making and acceptance of final payment will constitute:
 - 1. a waiver of all Claims by Owner against Contractor, except Claims arising from unsettled Liens, from defective Work appearing after final inspection pursuant to Paragraph 14.05, from failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Contractor's continuing obligations under the Contract Documents; and
 - 2. a waiver of all Claims by Contractor against Owner other than those previously made in accordance with the requirements herein and expressly acknowledged by Owner in writing as still unsettled.

ARTICLE 15. SUSPENSION OF WORK AND TERMINATION

15.01 Owner May Suspend Work:

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by notice in writing to Contractor and Engineer which will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be granted an adjustment in the Contract Price or an extension of the Contract Times, or both, directly attributable to any such suspension if Contractor makes a Claim there for as provided in Paragraph 10.05.
- B. Owner may suspend work if Owner determines independently of Engineer's Compliance Officer or Contractor's Compliance Officer that Aquatic Habitat Best Management Practices required by the Contract Documents have not been properly installed, are failing to meet aquatic habitat protection objectives, or are not being properly maintained. If such a determination is made, Owner may order Contractor to take appropriate corrective action.

15.02 Owner May Terminate for Cause:

- A. The occurrence of anyone or more of the following events will justify termination for cause:
 - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment or failure to adhere to the Progress Schedule established under Paragraph 2.07 as adjusted from time to time pursuant to Paragraph 6.04);
 - 2. Contractor's disregard of Laws or Regulations of any public body having jurisdiction, or if any permit or license under which Contractor is operating (whether issued under Contractor's or Owner's name), is suspended, revoked, or otherwise substantially adversely affected due to the actions of Contractor;
 - 3. Contractor's disregard of the authority of Engineer; or
 - 4. Contractor's violation in any substantial way of any provisions of the Contract Documents.
- B. If one or more of the events identified in Paragraph 15.02.A occur, Owner may, after giving Contractor (and surety) seven days written notice of its intent to terminate the services of Contractor:
 - 1. exclude Contractor from the Site, and take possession of the Work and of all Contractor's tools, appliances, construction equipment, and machinery at the Site, and use the same to the full extent they could be used by Contractor (without liability to Contractor for trespass or conversion),
 - 2. incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and
 - 3. complete the Work as Owner may deem expedient.
- C. If Owner proceeds as provided in Paragraph 15.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) sustained by Owner arising out of or relating to completing the Work, such excess will be paid to Contractor. If such claims, costs, losses, and damages exceed such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this Paragraph Owner shall not be required to obtain the lowest price for the Work performed. Owner may, but shall not be required, to seek a declaratory Judgment in Arbitration regarding the propriety of Owner's prospective termination of Contractor under the provisions of Paragraph 16.01.F hereof.
- D. Notwithstanding Paragraphs 15.02.B and 15.02.C, Contractor's services will not be terminated if Contractor begins within seven days of receipt of notice of intent to

terminate to correct its failure to perform and proceeds diligently to cure such failure within no more than 30 days of receipt of said notice.

- E. Where Contractor's services have been terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor than existing or which may thereafter accrue. Any retention or payment of moneys due Contractor by Owner will not release Contractor from liability.
- F. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 5.01.A, the termination procedures of that bond shall supersede the provisions of Paragraphs 15.02.B, and 15.02.C.

15.03 Owner May Terminate for Convenience:

- A. Upon seven days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
 - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
 - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses;
 - 3. all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) incurred in settlement of terminated contracts with Subcontractors, Suppliers, and others; and
 - 4. reasonable expenses directly attributable to termination.
- B. Contractor shall not be paid on account of loss of anticipated profits or revenue or other economic loss arising out of or resulting from such termination.
- C. If the parties are unable to agree as to the amount of payment, Contractor may make a Claim there for as provided in Paragraph 10.05.

15.04 Contractor May Stop Work or Terminate:

- A. If, through no act or fault of Contractor, (i) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (ii) Engineer fails to act on any Application prepare a pay estimate for Payment within 30 days after it is submitted a month in which Contractor performed Work that should entitle Contractor to payment, or (iii) Owner fails for 30 days to pay Contractor following presentation of a pay estimate to Owner by Engineer to pay Contractor any sum finally determined to be due, then Contractor may, upon seven days written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the Contract and recover from Owner payment on the same terms as provided in Paragraph 15.03.

- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, seven days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The provisions of this Paragraph 15.04 are not intended to preclude Contractor from making a Claim under Paragraph 10.05 for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this Paragraph.

ARTICLE 16. DISPUTE RESOLUTION

16.01 Methods and Procedures:

- A. Notice and Data: Contractor shall provide Owner with written notice of the amount of any claim and the extent of any claim for a change in the Contract Price prior to the Level 1 meeting described below. Prior to the Level I meeting, Contractor shall also provide all data supporting the claim upon which it will rely; however, either Contractor or Owner will be entitled to give the other written notice to delay the start of a properly requested Level I meeting for up to 15 days in order to review the supporting data or to assemble more accurate or complete data to support the claim.
1. Unless agreed to by the Owner, the failure to submit such data in support of a claim will be relied upon by Owner and shall constitute a waiver by the Contractor of the right to submit any such data during this dispute resolution procedure, or during litigation, even though such data would otherwise be admissible.
 2. The Notice of Claim shall include a statement that the claim covers all changes in cost and time (direct, indirect, impact, consequential, and otherwise) to which Contractor (and Subcontractors and Suppliers) claims it is entitled.
- B. Level 1: Within 14 days of the later of the receipt of the initial written notice of claim, or the receipt of the statement that the claim covers all changes in cost and time, the senior site representative of Contractor, the Project representative of Engineer, and the Project representative of Owner shall meet, confer, and attempt to resolve the claim. Such meeting may be delayed by either Contractor or Owner under the procedures set forth in paragraph 16.01.A.
- C. Level II: If the claim is not resolved within 10 days of the close of the Level I meeting, and Contractor still wishes to pursue its claim, Contractor may give written notice requesting a Level II meeting. At the Level II meeting, in addition to those who attended the Level I meeting, an officer of Contractor (who did not attend the Level I meeting), a principal of Engineer, and Owner's Operations Manager or designee, (who did not attend the Level I meeting) shall meet, confer and attempt to resolve the claim within 14 days after such written notice by the Contractor. Other personnel of the Contractor, the Engineer, and the Owner may also attend the Level II meeting at each party's discretion.
1. The terms of the resolution of all claims concluded in Level I or Level II meetings shall be memorialized in writing and signed by each party.

2. Contractor shall diligently carry on the Work and maintain the progress schedule during any dispute resolution proceedings, unless otherwise agreed by it and the Owner in writing.
- D. Mediation: Contractor may bring no claim against Owner in litigation unless the claim has first been subject to Level I and Level II meetings as outlined above and has been the subject of a non-binding mediation before a single mediator under the Voluntary Construction Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. This requirement cannot be waived except by an explicit written waiver signed by the Owner. The request for mediation shall be submitted in writing to the American Arbitration Association. Owner and Contractor shall participate in the mediation process in good faith. An officer of Contractor, and the Operations Manager or his designee from Owner, both having full authority to settle the claim, must attend the mediation session. To the extent there are other parties in interest, such as Engineer, Subcontractors, or Suppliers, their representatives, with full authority to settle any claim, shall also attend the mediation session. Unless Owner and Contractor mutually agree in writing otherwise, all unresolved claims shall be considered at a single mediation session which shall occur prior to final acceptance by the Owner.
- E. Litigation: Contractor may bring no litigation on claims unless such claims have been properly raised and considered under the procedures of Paragraphs 16.01.A through 16.01.D. All unresolved claims of Contractor shall be waived and released unless Contractor has strictly complied with the time limits of the Contract Documents, and litigation is served and filed within the earlier of (a) 120 days after the date of Substantial Completion designated in writing by Owner (provided that a mediation session has occurred) or (b) 60 days after Final Acceptance. This requirement cannot be waived except by an explicit written waiver signed by Owner.
1. Contractor agrees that Owner may join Contractor as a party to any litigation/arbitration involving the Project in any way. All disputes shall be decided by litigation in strict accordance with the time limits prescribed in the Contract.
- F. Declaratory Judgment: Notwithstanding the foregoing, Owner may demand arbitration before a single arbitrator appointed by the American Arbitration Association under the Expedited Procedure of the Construction Industry Arbitration Rules within five days of the demand, for the limited purpose of seeking a declaratory judgment regarding the propriety of Owner's prospective termination of Contractor. The hearing shall occur within seven days of the appointment of the arbitrator. The award shall be made within two days of the close of the hearing and shall be final and binding.

ARTICLE 17. MISCELLANEOUS

17.01 Giving Notice:

- A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if:
1. delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or

2. delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

17.02 Computation of Times:

- A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

17.03 Cumulative Remedies:

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents. The provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

17.04 Survival of Obligations:

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Work or termination or completion of the Contract or termination of the services of Contractor.

17.05 Controlling Laws:

- A. This Contract is to be governed by the law of the state of Washington and federal laws as applicable.

17.06 Headings:

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

(END OF SECTION)

SECTION B 3

SUPPLEMENTARY CONDITIONS

1. COORDINATION OF CONTRACT DOCUMENTS, DRAWINGS, SPECIAL PROVISIONS, SPECIFICATIONS, AND ADDENDA

The Contract terms, conditions and covenants are set forth in these documents and are all parts of said Contract and as fully a part thereof as if herein set out in full, and if not attached, as if hereto attached.

- PART A Legal and Procedural Documents
- PART B Instructions, Conditions and Requirements
- PART C Technical Specifications
- PART D Drawings
- PART E Prevailing Wage Rates Table
- PART F Agency Permits
- PART G Addenda
- PART H Change Orders
- PART I Geotechnical Investigation Report

Except as noted below, the Project is to be built and constructed in accordance with the current edition at the time of bid for the Standard Specifications for Road, Bridge, and Municipal Construction, prepared jointly by the Washington State Department of Transportation and the Washington State Chapter of the American Public Works Association as amended regularly by the Washington State Department of Transportation, and hereinafter referred to as the "Standard Specifications," except where supplemented or modified in these documents. In cases of conflicts between the Standard Specifications and these documents, these documents will supersede the Standard Specifications. All references to "the State" shall be understood to mean "the Owner".

Replace Division 1 of the Standard Specifications with Sections B 2 and B 3 of these Specifications, except as specifically noted in Specifications or on the Drawings.

2. DOCUMENTS

Specifications are of an abbreviated or streamlined nature and may include incomplete sentences. Omissions of words or phrases such as "Contractor shall," "shall be," "as noted on Drawings," "according to Drawings," "a," "an," "the," and "all" are intentional. Omitted words and phrases shall be supplied by inference in same manner as when a note occurs on Drawings.

Drawings are intended to show general arrangement, design and extent of Work and are partly diagrammatic. As such, they are not intended to be scaled for measurements or to serve as Shop Drawings.

3. ORDER OF PRECEDENCE OF DOCUMENTS

Article 3 of the General Conditions describes the intent and amending of the Contract Documents and includes a subsection Reporting and Resolving Discrepancies. Paragraph 3.03 shall be supplemented with the following.

The Contract Documents are intended to be complementary and to describe and provide for a complete Work. They are also interpreted in harmony so as to avoid conflict; words and phrases shall be interpreted consistent with construction and design industry standards. The Contract Documents identified below are listed in order of precedence, where Number 1 takes precedence over Number 2, Number 2 over Number 3, and so forth. To the extent that there are different Conditions in Contract Documents that address the same matter or subject and these different Conditions conflict, the document having the highest priority that addresses the matter or subject shall control. If conflicting Conditions within the same level of Contract Documents exist, and one is more stringent than another, the more stringent provision will prevail.

1. The signed Agreement (Section A 3) as modified by Addenda or Change Orders;
2. The General Conditions (Section B 2) as modified by the Supplementary Conditions (Section B 3), Addenda or Change Orders;
3. The Technical Specifications, Part C of the Contract as modified by Addenda or Change Orders;
4. Details not identified as "Typical", "General", "Standard", or similar label, as modified by Addenda or Change Orders;
5. Drawings, as modified by Addenda or Change Orders;
6. "Typical", "General", "Standard", and similarly labeled Details, as modified by Addenda or Change Orders;
7. Utility and Agency Standards, as modified by Addenda or Change Orders;
8. Industry Standards, when identified as being Contract Documents, as modified by Addenda or Change Orders.

This order of precedence shall not apply when Work is required by one part of the Contract but omitted from another part or parts of the Contract. The Work required in one part must be provided even if not mentioned in other parts of the Contract.

Written dimensions and figure dimensions shall take precedence over scaled dimensions.

Unless stated otherwise in the Contract Documents, the Work shall be performed in accordance with standard trade practice(s). For purposes of the Contract, a standard trade practice is one having such regularity of observance in the trade as to justify an expectation that it will be observed by the Contractor in doing the Work.

4. CONTRACTOR'S INSURANCE

Prior to the issuance of the Notice to Proceed and/or the performance of any physical labor at the Site, Contractor shall provide Owner Certificates of Insurance and Endorsements acceptable to Owner meeting the requirements of the Contract (specific insurance coverage limits are set forth below). Coverage shall be maintained without interruption from the commencement of Contractor's Work until Final Acceptance, or for such longer time as required by the Contract. Each policy obtained by Contractor shall be endorsed to provide Owner with 45 days' notice of material changes to or cancellation of such policy.

If the scope of Work is significantly expanded, or if the aggregate limits on any of Contractor's policies are eroded, Owner may require Contractor to obtain additional coverage or reinstate eroded coverage. If the need for additional coverage is due to the fault of Contractor or any of its subcontractors, Contractor shall be responsible for the cost of such additional coverage or any of its subcontractors' coverage. Contractor shall provide proof of additional insurance required because of changed Work (Change Orders).

If Contractor is required to correct damaged, defective or incomplete Work after Final Acceptance, it shall obtain at its own expense such insurance coverage as is required by the Contract, for the construction period. Such coverage shall be maintained throughout the period in which corrective work is performed.

Review of Contractor's insurance by Owner shall not relieve or decrease the duty of Contractor to comply with the requirements of the Contract Documents.

Nothing contained within these provisions shall affect and/or alter the application of any other provision within this agreement.

Neither Contractor nor any of its subcontractors shall begin work under the Contract until all required insurance has been obtained and approved by Owner. Purchase of appropriate insurance and providing satisfactory evidence of required insurance is wholly the obligation of Contractor, and any delay shall be attributed to Contractor.

(a) Waiver of Subrogation:

Contractor waives all rights against Owner, District's consultants, or any 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. Contractor shall require similar waivers from all subcontractors. This provision shall be valid and enforceable only to the extent permissible by the applicable property insurance policies.

(b) Evidence of Insurance:

Contractor shall furnish Owner with Certificates of Insurance and endorsements required by this Contract. All evidence of insurance must be certified by a properly authorized officer, agent, general agent or qualified representative of the insurer(s) and shall certify the name of the insured, the type and amount of insurance, the location and operations to which the insurance applies, the expiration date of the policy. Contractor shall, upon demand of Owner, make available to Owner, in Clallam County, certified copies of all such policies of insurance required in this Contract. Failure to provide such policies of insurance within a time acceptable to Owner shall entitle Owner to suspend or terminate Contractor's work hereunder. Suspension or termination of this Contract shall not relieve Contractor from its insurance obligation hereunder. All subcontractors shall be required to include Owner and Contractor as additional insurers on all Liability policies except Workers' Compensation and Professional Liability Errors and Omissions.

(c) Minimum Scope and Limits of Insurance:

Contractor shall obtain and maintain the minimum insurance set forth below. By requiring such minimum insurance, Owner shall not be deemed or construed to have assessed the risks that may be applicable to Contractor under this Contract. Owner does not warrant or represent that such coverages and limits are appropriate or adequate to

protect Contractor. Providing coverage in these stated minimum limits shall not be construed to relieve Contractor from liability in excess of such limits. Contractor shall assess its own risks and if it deems appropriate and/or prudent, maintain greater limits and/or broader coverage. Each insurance policy shall be written on an "occurrence" form; excepting that insurance for professional liability, errors and omissions when required, may be acceptable on a "claims made" form. If coverage is approved and purchased on a "claims made" basis, Contractor warrants continuation of coverage, either through policy renewals or the purchase of an extended discovery period, if such extended coverage is available, for not less than three years from the date of completion of the work which is the subject of this Contract Insurance coverage shall be at least as broad as stated below and with limits no less than:

- i) General Liability. Coverage shall be at least as broad as Insurance Services Office form number CG 00 01 covering COMMERCIAL GENERAL LIABILITY. \$5,000,000 combined single limit per occurrence, and for those policies with aggregate limits, a \$5,000,000 aggregate limit. Such insurance, with products/completed operations coverage, shall be maintained by Contractor for a minimum of six (6) years from Acceptance in accordance with the terms of the Contract.
- ii) Explosion & Collapse, Underground Damage (XCU). Coverages shall apply for the same limits as the General Liability. Evidence of Insurance must specifically state coverage has not been excluded.
- iii) Automobile Liability. Coverage shall be at least as broad as Insurance Services Office form number CA 00 01 covering BUSINESS AUTO COVERAGE, symbol 1 "any auto"; or the combination of symbols 2, 8, and 9. \$2,000,000 combined single limit per accident. If the work involves the transport of pollutants (as defined by the standard auto policy exclusion of pollution) the auto policy shall be endorsed to include endorsement CA 9948 (or its equivalent) and MCS 90.
- iv) Workers' Compensation. Statutory requirements of the State of residency. Coverage shall be at least as broad as Workers' Compensation coverage, as required by the Industrial Insurance Act of the State of Washington, as well as any similar coverage required for this work by applicable Federal or "other States" State Law.
- v) Employer's Liability or "Stop Gap". Coverage shall be at least as broad as the protection provided by the Workers Compensation policy Part 2 (Employers Liability) or, in states with monopolistic state funds, the protection provided by the "Stop Gap" endorsement to the general liability policy.
- vi) Professional Liability Errors and Omissions. \$2,000,000 per claim/aggregate. Contractor shall submit proof of Insurance as part of the required submittals or provide evidence of compliance from its subcontractors that these insurance requirements have been met 30 days prior to beginning of any work designated to be performed by a Professional Engineer.
- vii) Pollution Liability. Contractor shall provide Contractor's Pollution Liability coverage in the amount of \$1,000,000 per occurrence and in the aggregate to cover sudden and non-sudden bodily injury and/or property damage to include the destruction of tangible property, loss of use, clean-up costs and the loss of use of tangible property that has not been physically injured or destroyed. If Asbestos, Lead or PCB's are a potential exposure, such insurance shall not exclude pollution arising out of

Asbestos, Lead and/or PCB operations. Evidence of Insurance must specifically state that coverage is included.

(d) Deductibles/Self-Insured Retentions:

Any deductibles or self-insured retentions must be declared to, and approved by, Owner. The deductible and/or self-insured retention of the policies shall not limit or apply to Contractor's liability to Owner and shall be the sole responsibility of Contractor.

(e) Other Insurance Provisions:

- i) The insurance policies required in this Contract are to contain and be endorsed to contain the following provisions:
 - a. With respect to all Liability Policies except Professional Liability and Workers Compensation:
 - 1) "PUD No. 1 of Clallam County, its officers, officials, employees, agents and consultants are to be covered as additional insureds" as respects liability arising out of activities performed by or on behalf of Contractor in connection with this Contract. Use the above exact quoted language on the Endorsement Form.
 - 2) Contractor's insurance coverage shall be primary insurance as respects Owner, its officers, officials, employees, agents, and consultants. Any insurance and/or self-insurance maintained by Owner, its officers, officials, employees, agents and consultants shall be excess and not contributing with Contractor's insurance or benefit Contractor in any way.
 - 3) Contractor's insurance shall apply separately to each insured against whom a claim is made and/or lawsuit is brought, except with respect to the limits of the insurer's liability.
 - 4) A Per Project Aggregate shall apply to the General Liability policy.
 - b. For Protection and Indemnity Insurance Contractor shall waive all rights of subrogation against Owner.
 - c. Contractor shall add "BHC Consultants" as additional insured during the course of construction in event incident(s) including third party liability.
- ii) Contractor shall include in the "Description of the operations/locations." block of the insurance certificate, the Project Name and Contract Number.

(f) Acceptability of Insurers:

- i) Unless otherwise approved by Owner:
 - a. Insurance is to be placed with insurers with a Best's rating of no less than A: VIII, or, if not rated with Best's, with minimum surpluses the equivalent of Best's surplus size VIII.
 - b. Professional Liability, Errors and Omissions insurance may be placed with insurers with a Best's rating of B+; VII.

- ii) If at any time the foregoing required policies shall fail to meet the above minimum requirements, Contractor shall, upon notice to that effect from Owner, promptly obtain a new policy, and shall submit the same to Owner, with the appropriate certificates and endorsements, for approval.

(g) Subcontractors:

Contractor shall include all subcontractors as insured under its policies or shall furnish separate certificates of insurance and policy endorsements from each subcontractor. Insurance coverages provided by subcontractors, as evidence of compliance with the insurance requirements of this Contract shall be subject to all of the requirements stated herein. Contractor shall be responsible for assuring that all subcontractors obtain all insurance as required by the Contract and that Owner be specifically endorsed as an additional insured on such insurance.

(h) Job Site Safety:

Contractor shall have the "right to control" and bear the sole responsibility for the job site conditions, and job site safety. Contractor shall comply with all applicable federal, state, and local safety regulations governing the job site, employees and subcontractors. Contractor shall be responsible for subcontractor's compliance with these provisions.

5. CONTRACTOR'S USE OF PREMISES

Contractor shall at all times conduct its operations in such a manner as to ensure the least inconvenience to the general public. Contractor shall assume full responsibility for the protection and safekeeping of products, materials, and equipment stored on site or offsite under this Contract and shall obtain and pay for the use of additional storage or Work areas needed for its operations.

6. PREVAILING WAGES

The prevailing rate of wages to be paid to all workmen, laborers, or mechanics employed by the Contractor or Subcontractor (or other person doing any portion of the Work) in the performance of any part of this Contract shall be in accordance with the provisions of Chapter 39.12 RCW and 49.28 RCW, as amended or supplemented. The rules and regulations of the Department of Labor and Industries and the schedule of prevailing wages rates for the locality or localities where this Contract will be performed as determined by the Industrial Statistician of the Department of Labor and Industries, are by reference made a part of this Contract as though fully set forth herein. The current schedule of prevailing hourly wage rates for Clallam County (as received from the Department of Labor and Industries-dated 11/2/2023) is attached hereto in PART E.

Current prevailing wage data may be obtained upon request from the Industrial Statistician of the Department of Labor and Industries, ESAC Division, General Administration Building, Olympia, Washington 98504, telephone (206) 753-4019. For Projects funded in whole or part with Federal monies, current wage information may be obtained from the U.S. Department of Labor, Employment Standards Administration, Wage and Hour Division, Federal Office Building, Seattle, Washington 98104, telephone (206) 442-1914.

It shall be the sole responsibility of the Contractor to assign the appropriate classification to persons performing Work on this Contract, to ascertain the applicable prevailing rate of wages for each classification, and to not pay a worker less than the minimum hourly wage

rates and fringe benefits for said worker's classification. **The Contractor shall base wages for every mechanic and laborer on a standard 40-hour work week. Work over 40 hours is allowed, so long as the worker is paid at least one and a half times the base pay rate for all hours worked over 40 hours in the work week.** Inasmuch as Contractor will be held responsible for paying the prevailing wages, it is imperative that all Bidders familiarize themselves with the current wage rates before submitting Bids based on these Specifications.

In case any dispute arises regarding the prevailing rates of wages for Work of a similar nature and such dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries of the State and its decision therein shall be final and conclusive and binding on all parties involved in the dispute as provided for by RCW 39.12.060 as amended or supplemented.

Overtime requirements. No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in this section the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

Withholding for unpaid wages and liquidated damages. The PUD No. 1 of Clallam County shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in this section.

7. CONTROL OF MATERIAL

All materials and equipment shall be of good quality and new as provided in Section B 2 General Conditions, Paragraph 6.17. Contractor shall carefully examine Drawings and be

responsible for proper fittings of material, equipment and apparatus. Should Contract Documents fail to particularly describe materials or goods to be used, it shall be duty of Contractor to inquire of Owner as to what is to be used and to supply Engineer's choice at Contractor's expense or else, thereafter, to replace it to Engineer's satisfaction.

Contractor shall submit complete data and samples to Owner in a timely manner to allow review prior to installation of the materials. Contractor shall label samples to indicate material or product represented, grade, place of origin, name of Contractor. Materials delivered prior to Owner's approval are subject to rejection and immediate removal from the Project site. Approval of material is general and does not constitute waiver of Owner's right to demand full compliance with Contract requirements. Owner reserves the rights to require that the Contractor furnish certificates guaranteeing the material or equipment as submitted complies with the Contract requirements. Certificates shall be in notarized affidavit form. If statement originates with manufacturer, Contractor shall endorse all claims and submit statements in its own name.

8. SHOP DRAWINGS AND PRODUCT DATA

All Shop Drawings and Submittals shall be in accordance with Section B 2, Paragraph 6.17 and their Amendments and/or Supplements in Section B 3. The Contractor shall prepare a Schedule of Shop Drawing Submission. Such schedule shall include a complete listing of all items requiring either a Submittal or Shop Drawing, or for which the Contractor requests such review by the Engineer. The Engineer will review the schedule and indicate additional items, if any, requiring submittal. Such response shall not affect the Engineer's right to request submittal of additional information or submittals for additional items at any time. Acceptance of Contractor's submittal by Engineer does not constitute complete check by Engineer but indicates only that design, general method of construction, and detailing is satisfactory. Engineer's acceptance does not permit any deviation from Contract requirements, nor relieve Contractor of responsibility for errors in dimension, details, and the like, or for coordinating items with actual conditions. Contractor shall schedule submittal of data to Engineer so that no delays will result in delivery of items. Engineer will check data in order received unless Contractor indicates a priority at time of submittal. A minimum of two weeks must be provided for Engineer's processing, for each submittal.

Subcontractors submitting data shall first deliver duplicate copies to Contractor who shall thoroughly coordinate them for measurements, sizes, materials, details, actual conditions, and correlation with other Work. Errors or omissions shall be corrected prior to submittal to Engineer. Shop Drawings submitted to Engineer without first being properly checked and coordinated by Contractor shall be returned unchecked to Contractor. When required for correct fabrication of Work, field measurements shall be made and noted on Shop Drawings before submittal. Contractor who submits inadequate or incorrect Shop Drawings is responsible for delays caused by rejection of Submittal or Shop Drawing by Engineer. Contractor is responsible for seeing that only copies of Shop Drawings that have been stamped by reviewer are allowed on the job. Work being performed in accordance with Shop Drawings not marked in this manner will be stopped and items covered by Shop Drawings delivered to site without a review stamp will be rejected.

The list of items required for submittal shall include, but not be limited to the following:

Pipe & Fittings	CDF Mixes
Pumps	Pre-Engineered Buildings
Static Mixer	Sodium Hypochlorite System

Flow Meters
Meter Boxes
Valves & Valve Boxes
Gravel Sieve Tests
Asphalt and Concrete Mixes

Standby Power Equipment
Erosion & Sedimentation Control Plan
Schedule of Values
Traffic Control Plan
Concrete Water Tanks

The Engineer reserves the right to request submittals on additional items.

Corrections or comments made on the project data submittals and shop drawings during this review do not relieve the Contractor from his/her obligation to perform fully all contract requirements. Contractor is not entitled to rely upon the corrections or comments made on the project data submittals and shop drawings during this review. The review by the Engineer of project data and shop drawings is only for conformance with the general design concept of the project, and does not extend to consideration of specific dimensions, structural integrity, safety, detailed installation and construction requirements, or any other obligation of the Contractor. The review by the Engineer is for the benefit of the Owner only. Any action shown is subject to the requirements of the Contract Documents. Neither the review of the Contractor's submittal nor the corrections or comments provided herein, shall create any duty owed to or a cause of action in favor of the Contractor or any Subcontractor.

9. EXISTING MARKERS AND MONUMENTATION

Contractor shall take necessary precautions to locate and protect existing markers, property corners, monuments, and other reference points that may be affected by construction. Each such marker shall be identified, and if it is necessary for the marker to be removed due to construction then the following procedure shall be used:

- (a) Notify Resident Project Representative or Engineer of the location of the marker at least three days prior to any construction which may affect the marker.
- (b) If the marker is for survey use, or if requested by Engineer, a qualified land surveyor shall be scheduled by Engineer to establish reference points and eventually reset the marker.
- (c) If the marker is within the right-of-way or easement limits for the Work, Owner will pay for the required survey Work and recording of survey.
- (d) If the marker is at the edge of or outside the right-of-way or easement limits for the Work, Contractor will pay for the required survey Work and recording of survey.

Contractor shall not knowingly remove any such marker before a land surveyor can reference such marker. All survey costs for replacing markers and recording of survey shall be paid by Contractor if Contractor removes such markers prior to proper referencing by a land surveyor.

Contractor will not be entitled to any delay costs for referencing an existing marker unless its Work is physically delayed by the referencing Work, and a minimum of 72 hours (3 working days) notice has been previously given to Engineer of the existence of the marker and the need for it to be referenced.

10. EXISTING UTILITIES

The location of existing underground utilities, as shown on the Drawings, is approximate only and Contractor shall be responsible for determining the exact locations from the utility

companies. Failure of Owner to show the existence of subsurface objects or installations on the Drawings shall not relieve Contractor from its responsibility to make independent checks on the ground, nor relieve Contractor from all liability for damages resulting from Contractor's operations unless otherwise provided in the Contract Documents. Existing utilities may include:

Water:	PUD No. 1 of Clallam County	(360) 452-9771
Sewer:	Clallam County Public Works	(360) 417-2379
Storm:	Clallam County Road Department	(360) 417-2530
Power:	PUD No. 1 of Clallam County	(360) 452-9771
Cable T.V.:	Century Link	(206) 733-8860
Telephone:	Century Link	(206) 733-8860

The utility locating service shall be contacted 48 hours prior to construction. The telephone number is 1-800-424-5555.

11. TRAFFIC CONTROL AND SAFETY

Contractor shall conform to all requirements of the Clallam County Road Department and project permits when working on or adjacent to public rights-of-way. There shall be at all times adequate vehicle (to include emergency vehicles) and pedestrian access to and egress from the properties adjacent to the Work. During non-working hours, Contractor shall keep the existing traffic lanes clear for traffic without interference from its operations including all approaches and intersections, except for those portions of the Work where detours are necessary.

If detours are necessary, the Contractor shall design and submit a detour plan to the proper road agency at least 10 working days in advance. Contractor shall post "TO BE CLOSED" signs a minimum of five days prior to closing. Road agency specified signs, size, color, lettering, etc. shall be required indicating the alternative route (via "****" Street).

Where hazardous conditions exist, Contractor shall provide proper signing and barricading. Whenever directed by Owner, supplemental signs and barricades, including lanterns and/or high-rise warning devices shall be provided at the expense of Contractor. This shall include lighted barricades to remain overnight for any material or equipment stored in the right-of-way.

Some portions of the Work may require one-way traffic. During working hours a minimum of one-way traffic controlled by flaggers shall be maintained. During non-working hours two-way traffic shall be maintained. The Contractor shall erect and maintain all construction signs, warning 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. Flagging, signs, and all other traffic control devices furnished or provided shall conform to the standards established in the latest adopted edition of the "Manual on Uniform Traffic Control Devices" published by the U.S. Department of Transportation as modified for the State of Washington. Signs shall be installed before construction begins as appropriately needed for each phase of the Work to be done. Signs shall then be removed and/or modified as needed for the duration of the Work.

Any asphalt concrete, cold patch, crushed surfacing or other material required to maintain traffic during construction shall be furnished and placed by Contractor as needed, and immediately upon request by Owner or the road authority in amounts designated. If Owner

is forced to establish and/or maintain any traffic control or signing, Contractor shall be billed for all expenses.

The Contractor shall submit in writing at least two copies of the specific traffic control plan or plans required for the Contractor's method of performing the Work. The Contractor shall show the necessary construction signs and other traffic control devices required for the Project. For late night construction the Contractor shall also provide lighted signs, light banks, and any other traffic control devices required by the governing road agency or the Engineer. The Contractor's letter submitting the specific traffic control plan(s) shall be submitted to the Engineer at least 10 calendar days in advance of the time the signs and other traffic control devices will be required. The Engineer will forward a copy of said plan(s) to the governing agency for approval. No Work shall be performed within the public right of way without an approved traffic control plan.

No open excavations shall be allowed overnight within the public right-of-way or easement. Contractor shall backfill all open excavations by the end of each working day.

12. SCHEDULE OF VALUES

Contractor shall submit in accordance with Section B 2, Article 2.05, and Section B 3, four copies of a Schedule of Values entailing a detailed summary of the Lump Sum Bid items. One review copy will be returned to Contractor. The summary shall be a fair evaluation of the actual cost of each of the items of Work listed and shall be subject to the review of Engineer. Engineer shall review the Schedule of Values for a fair distribution of the costs for each item of Work listed and shall return comments, if any, to Contractor. Contractor shall revise the Schedule of Values to address the comments made by the Engineer and resubmit the Schedule of Values to the Engineer. This process shall be repeated until an acceptable Schedule of Values is agreed upon by the Contractor and the Engineer. The Engineer shall use the accepted Schedule of Values in processing Contractor's request for partial payment for the Lump Sum Bid items. The submittal of this breakdown will not otherwise affect the Contract terms.

13. PAYMENT FOR COMPACTION TESTING AND OTHER SPECIAL INSPECTION TESTING AND INSPECTIONS

The Contractor shall pay all costs in connection with compaction testing. The Contractor shall pay all costs in connection with retesting where the compaction or other special inspection tests do not meet Specification and permit requirements.

Owner will arrange and pay for laboratory or testing service(s) to provide the testing required by Owner and for the permits. Contractor shall provide a minimum of three (3) working days of notice to Engineer to allow for scheduling of any testing.

14. WORK BY OTHERS

Contractor is advised that Owner may perform certain items of the Work. Owner will schedule this Work to the best of its ability and Contractor shall coordinate Contractor's Work with Owner to the best of its ability. HOURS OF WORK, COORDINATION WITH Owner AND PROPERTY Owners.

Contractor shall conduct all Work between the hours of 7 a.m. and 8 p.m. Monday through Friday unless stated otherwise under the permit conditions. No Work on weekends shall be allowed unless Owner gives written approval prior to the weekend. Contractor shall give a minimum of 48 hours' notice if work on the weekend is necessary. Approved Work on the

weekends shall be conducted between the hours of 9 a.m. and 6 p.m. Work hours may be further restricted due to permit conditions.

Work within the Clallam County roadway shall be conducted between the hours 7 a.m. and 3:30 p.m. unless stated otherwise under the permit conditions.

(END OF SECTION)

PART C
TECHNICAL SPECIFICATIONS

SECTION C 1
GENERAL PROVISIONS

1. LOCATION OF WORK

The project is located in Carlsborg, WA.

2. WORK COVERED BY CONTRACT DOCUMENTS

Construction Work includes installation of approximately 3,300 LF of 8-inch PVC C900 water main with approximately 110 LF of 8-inch DIP and 18-inch HDPE casing pipe, installation of approximately 200 LF of 4-inch PVC Schedule 40 conduit for future electrical cable under Phase 2, four (4) fire hydrant assemblies, and a water main connection to the existing Carlsborg Water System.

3. SOILS INVESTIGATION

A geotechnical investigation was conducted at the Van Lan site. The geotechnical investigation report is located in Part I at the end of these specifications. The report also includes other areas outside of the Phase 1 work area. If additional soils information is required by the Contractor, the Contractor shall make his own independent examination, deductions, and conclusions as to the nature of the materials to be excavated to determine how the soils and subsurface conditions will affect the Project.

4. ESTIMATED PROGRESS SCHEDULE

Contractor shall submit his estimated and finalized progress schedules as required in Section B 2, Article 2.05. The graphic schedule shall be prepared in the form of a horizontal bar chart with the following features:

- Chronological order with columns divided into time periods with the first day of each work week identified.
- Horizontal rows shall be organized by trade, Work activity or location.
- Sheet size shall be sufficient to cover the Project.
- Size, scale and spacing shall be sufficient to allow for updating.

The contents of the progress schedule shall provide complete graphic representation of the sequence of construction by activity and shall incorporate the following:

- Shop Drawing and sample submittal dates where applicable.
- Dates for beginning and completion of each element of construction.
- Identification of Work in phases or other logically grouped activities.
- Sub-schedules to define critical portions of the Project schedule.

The progress schedules shall be updated by showing all changes occurring since previous submission of updated schedule. Indicate progress of each activity, show completion dates and include:

- Major changes in scope.
- Activities modified since previous updating.
- Revised timing due to changes.
- Other identifiable changes.

Provide a narrative report with the updated schedules addressing the following topics:

- Discussion of problem areas, including current and anticipated delay factors, and their impact.
- Corrective action taken, or proposed, and its effect. Effect of change in schedules of other contractors. Description of revisions.
- Effect on schedule due to change of scope. Revisions in duration of activities. Other changes that may affect schedule.

Submit an initial and monthly revised progress schedule electronically to the Owner and Engineer. One (1) review copy shall be returned to Contractor and Engineer shall retain four (4) copies. If required, resubmit five (5) copies of the revised schedule within seven (7) days after return of review copy.

Contractor shall coordinate his schedule with the public agencies concerned, such as the local Fire District, United States Postal Service, Sequim School District, and Clallam County. The Notice of Award, and early submittal of Shop Drawings, shall not release Contractor from the requirements of Article 2.05 of Section B 2, General Conditions. this Section, and Section B 3, Supplementary Conditions. Cost to develop and update the schedule shall be considered incidental and no direct payment shall be made.

5. WORK ON PUBLIC AND PRIVATE RIGHTS-OF-WAY AND EASEMENTS

Construction of this Contract will be located in public rights-of-way, on Public Utility District No. 1 of Clallam County property, private property, and private easements. Construction provisions shall conform to requirements of applicable portions of the Contract Documents and to the construction permits and franchises secured and paid for by the Contractor. The Owner has secured the County right-of-way permit.

Contractor is responsible for staking the construction and permanent easements and construction base line and appropriate offsets for the proposed water main and appurtenances. Contractor shall also stake proposed locations for all fittings, valves, and fire hydrants a minimum of two (2) working days in advance.

Contractor shall pay for all fines and penalties that become liable to the Owner due to Contractor's failure to abide by easement or temporary construction permit stipulations.

Unless otherwise noted in easement stipulations or on Drawings, Contractor shall protect and preserve all private and public property on or in the vicinity of the Work from any damage, destruction or interference with the use of such property, unless the removal, damage, or destruction of which is required by the terms of this Contract. This includes utilities, facilities, improvements lawfully occupying the right-of-way, trees, shrubbery and landscaping, markers and monuments, buildings and structures, conduits, pipes, sewer and water lines, wells, septic tank or drain fields, fences, highway facilities, including signs and

guard rails, and other property of all descriptions, whether shown on Drawings or not. On his own volition, or upon notice from Owner, Contractor, at his expense, shall provide and install safeguards acceptable to Owner to protect such property. If such property is damaged or destroyed, or its use interfered with by Contractor, Contractor's agent or employees, it shall be repaired and restored immediately to its former condition by Contractor, at Contractor's expense, and such interference terminated. If Contractor does not repair or restore such property, the costs to do so will be deducted from any money due or coming due Contractor under the Contract. It shall be Contractor's responsibility to ascertain the existence and location of all property and facilities that may be subject to damage by reason of Contractor's operations. Contractor shall be responsible for all damages to existing improvements resulting from Contractor's operations.

Contractor shall protect trees that are marked "SAVE" on the Drawings from damage and destruction. Any tree that is specifically marked to be "SAVED" that is destroyed or severely damaged shall be replaced by a tree of equal value acceptable to the Owner or property owner.

In passing through private property, or working in right-of-way adjacent to private property, Contractor shall keep up at his own expense such temporary fences as will be necessary for the preservation of crops and livestock and the protection of property, and Contractor shall be liable for any and all damages resulting from noncompliance with this requirement.

It shall be the Contractor's responsibility to follow any requirements of the U.S. Post Office Department for maintenance of postal service.

Where it becomes necessary to remove or otherwise disturb existing mail or newspaper boxes within the limits of Contract, Contractor shall install the boxes temporarily in such a position that their usefulness will not be impaired. After construction Work has been completed, the boxes shall be reinstalled at the original locations or at locations ordered by Engineer. Any damage caused by Contractor either to boxes or supports, due to Contractor's negligence, shall be repaired by Contractor at Contractor's expense to a condition equal to or better than that prior to the start of construction.

6. ABANDONING EXISTING UTILITIES AND FITTINGS

Existing PVC water mains and utility piping shall be abandoned in place and the pipe ends plugged with concrete or CDF.

7. PRECONSTRUCTION PHOTOGRAPHS

A minimum of one (1) preconstruction photograph shall be taken at each driveway and at each 100-foot station along the Carlsborg/Van Lan water main route and at the Van Lan site to properly document existing conditions for the installation of piping, valves, and appurtenances. In areas with extensive improvements, several photographs shall be taken. The photographs shall be 5 inches x 7 inches in size, color, glossy finish, a digital copy of the site photographs shall also be provided to the Owner on thumb drive(s). Photographs must show the flagged position of the route of the pipeline and adjacent property and improvements. Each photograph shall be marked with identification showing easement numbers or street location, date taken, and viewing direction. Two complete files of all photographs shall be delivered to Engineer prior to beginning of construction. All photographs shall be taken by an acceptable commercial photographer hired by Contractor.

8. GOVERNMENTAL AGENCIES HAVING SPECIAL INTERESTS IN THE CONTRACT WORK

- Clallam County Road Department.
- Local Fire Marshal.
- Sequim School District.

Each of these agencies have granted permits or expressed special interest in portions of the work in this Contract. All permit requirements are made a part of this Contract by reference.

9. SPECIAL INSTRUCTIONS

The BIDDER'S attention is directed to the following items, which are considered critical to the performance of the Work in this Contract:

- Conformance and compliance with various agency permits.
- Traffic control.
- Construction and maintenance of erosion control facilities.
- Separation of sewer/stormwater and water mains.
- Surface restoration.

The foregoing list is not intended to be inclusive and is not meant to indicate or exclude other matters that are necessary for the successful completion of this Project.

10. STANDARD SPECIFICATIONS

The project is to be built and constructed in accordance with these Specifications and the current, at bid, WSDOT Standard Specifications for Road, Bridge, and Municipal Construction," prepared jointly by the Washington State Department of Transportation and the Washington State Chapter of the American Public Works Association as amended regularly by the Washington State Department of Transportation, and hereinafter referred to as the "Standard Specifications," except where herein supplemented or modified in these documents. In cases of conflict the following supplements and modifications supersede the Standard Specifications. Improvements in the Clallam County right of way shall also conform to the latest revision of the Clallam County's Road Standards.

If a conflict occurs between these Specifications and the WSDOT Standard Specifications, these Specifications shall govern.

11. BID ITEM SPECIFICATIONS

Work performed under this Contract shall be paid according to the Bid items shown in the Proposal as described in Section C 2. Payment shall constitute full compensation for furnishing all labor, equipment and materials, and performing all operations required to complete the Work, as specified, and as shown on the Drawings. Payment shall be made only for those items specifically shown in the Proposal and all costs that do not appear as an item shall be included into one or all of the Bid items.

Payment of Bid items shall be in accordance with Article 14 of Section B 2, General Conditions, these Specifications and as amended herein. Partial payments shall not be made for material stored at the site. All payments shall be by certified and approved estimates of Work, which in the opinion of the Engineer, has been satisfactorily completed. Determination by the Owner as to whether or not an estimate for payment should be issued, or the amount of said payment, shall be in accordance with Article 14 of Section B 2.

Where items are specified to be paid by the cubic yard or ton the following records shall be kept, submitted to the Owner's representative daily:

- Owner's representative shall measure each truck to determine its volume capacity.
- Trucks shall be clearly numbered or marked.
- Tickets shall be prepared in duplicate to accompany each truckload of material delivered to the job site. The tickets shall contain the truck marking, quantity and location of delivery and the date.
- Pay quantities shall be prepared on the basis of these records, and provided that materials delivered are approved as having been used as specified herein.
- Contractor shall meet with Owner's representative weekly to review quantities, tickets, etc. for sign off by both parties. Any disagreement shall be reviewed between Engineer, Owner and Contractor within ten (10) days of noted conflict. Further disputes on quantities, tickets, etc. shall be handled as described in Articles 11,12, and 13 of Section B 2, General Conditions and these Specifications.
- Unless otherwise specified, the conversion for bank run gravel, crushed surfacing, and foundation gravel shall be 2,800 pounds (1.4 tons) equals one cubic yard volume.

(END OF SECTION)

SECTION C 2

DESCRIPTION OF WORK ITEMS

1. GENERAL

A. Description:

It is the intent of these Contract Documents that the performance of all work under the Bid Items will result in the complete construction of the Contract. Payment will be made only for items listed in the Bid Form in the Proposal. All other material, labor or equipment required for the work shall be considered as incidental to the construction.

Delete all references to Measurement and Payment Sections in the Standard Specifications. All measurement and payment for this project will be governed by Standard Specifications Section 1-09 and as amended by this Section.

The Contractor shall submit a breakdown of costs and a schedule of values for each lump sum Bid Item. The breakdown shall list the items included in the lump sum, together with a unit price for each item. The summation of the detailed unit prices for each item shall add up to the lump sum bid. The unit price values may be used as a guideline for determining partial payments or deductions for additional requested work changes.

The following construction activities and costs shall be considered incidental to the Bid Items of the contract and no separate measurement and payment will be made unless otherwise noted:

- (1) loading, hauling, and properly disposing of excavated and demolished materials unless otherwise noted,
- (2) offsite disposal fees and disposal records, unless otherwise noted,
- (3) dewatering trenches and excavations (including, but not limited to, pumping equipment, generators, tanks, filters, discharge permits, and if required, water quality treatment and removal of sediment),
- (4) saw cutting pavements, pipes, and structures,
- (5) locating existing buried utilities to determine precise location and depth, including potholing,
- (6) clearing and grubbing,
- (7) protecting existing utilities and power poles from damage or disturbance, including holding power poles and/or paying utility purveyor to hold power poles,
- (8) repair or replacement of utilities damaged by construction activities and/or financial reimbursement to affected utility purveyor,
- (9) furnishing, installing, maintaining, moving, and removing temporary steel trench plating,
- (10) furnishing, placing, and removing cold mix asphalt for temporary trench patch,

- (11) dust control,
- (12) stockpiling and covering suitable native material for uses described in the specifications and/or Drawings,
- (13) soil compaction testing and furnishing test reports,
- (14) moisture conditioning native soils for reuse on site, at optimum moisture content for compaction,
- (15) watering soils, plants, vegetation, and hydroseed,
- (16) trimming and cleanup,
- (17) costs for compliance with permit conditions set forth in approved permits,
- (18) furnishing submittals and manufacturer's certificates of compliance,
- (19) coordination and notifications with Owner staff and its agents, Engineer, governing agencies, property owners, and all other persons and entities participating in, or affected by, construction activities,
- (20) maintaining continual vehicular access to driveways,
- (21) furnishing, installing, inspecting, repairing, moving & removing temporary fencing and barricades for security and public safety,
- (22) any additional labor, materials, equipment and incidentals not specifically covered under a separate bid item.

2. BID ITEM 1 - MOBILIZATION

A. Description:

Work shall be as described in Section 1-09.7 of the Standard Specifications.

Work shall include, but not be limited to, pre-and post-construction costs such as those necessary for the movement of personnel, equipment, supplies, and incidentals to and from the Project site as well as taking preconstruction photographs.

B. Measurement:

Mobilization shall be measured on a lump sum basis and as such shall require a written listing of the items and Schedule of Values included in Mobilization.

The establishment of the Contractor's offices, buildings, and other facilities necessary for Work on this Project shall be included in this Bid item.

Premiums on bonds and insurance for the Project and for Work and operations that must be performed or costs that the Contractor must incur before beginning production Work on the various items of the Project shall be included in this Work item.

Mobilization costs for all Subcontracted Work shall be included in this Work item.

C. Payment:

The Lump Sum (LS) Contract Price for "Mobilization" shall constitute full compensation for all Work, labor, materials, equipment, tools, and incidentals necessary to begin and complete construction. The lump sum price for Mobilization shall not exceed ten (10) percent of the total cost of the Bid.

Complete compensation for preconstruction photographs as described in Standard Specifications Section C 1 shall also be included in this Mobilization.

Partial payment shall be allowed as outlined in Standard Specifications Section 1.09.7.

D. Materials:

Not applicable.

E. Construction Requirements:

Not applicable.

3. BID ITEM 2 - SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN

A. Description:

This Work shall include creating and updating an accepted Spill Prevention, Control, and Countermeasures (SPCC) Plan, and all costs associated with the setup of prevention measures and for implementing the SPCC Plan as specified in Standard Specifications Section 1-07.15(1).

B. Measurement:

SPCC Plan shall be measured on a lump sum basis and as such shall require a written listing of the items and Schedule of Values included in the SPCC Plan.

C. Payment:

The Lump Sum (LS) Contract Price for the "SPCC Plan" shall constitute full compensation for all Work, labor, materials, equipment, tools, and incidentals required to develop the Plan, setup of prevention measures and for implementing the SPCC Plan as specified in Standard Specifications Section 1-07.15(1).

D. Materials:

Provide all materials needed and/or required to execute the SPCC Plan.

E. Construction Requirements:

As specified in Standard Specification Section 1-07.15(1).

4. BID ITEM 3 - STORM WATER POLLUTION PREVENTION PLAN (SWPP) PLAN

A. Description:

This Work shall include developing and updating the Construction Storm Water Pollution Prevention (SWPP) Plan per Washington State Department of Ecology (Ecology).

B. Measurement:

SWPP Plan shall be measured on a lump sum basis and as such shall require a written listing of the items and Schedule of Values included in the SWPP Plan.

C. Payment:

The Lump Sum (LS) Contract Price for the "SWPP Plan" shall constitute full compensation for all Work, labor, materials, equipment, tools, and incidentals required to develop, set up and implementing the SWPP Plan.

D. Materials:

Provide all materials needed and/or required to execute the SWPP Plan.

E. Construction Requirements:

Construction requirements shall meet the requirements in the SWPP Plan and Standard Specifications Section 8-01.

5. BID ITEM 4 - TEMPORARY EROSION & SEDIMENTATION CONTROL (TESC) FACILITIES

A. Description:

This Work shall include the installation, maintenance, and removal of the temporary erosion and sedimentation control (TESC) facilities to prevent pollution, erosion, siltation, and damage to any wetland, stream, or other watercourse throughout the life of the Contract.

Refer to Part F Agency Permits for additional requirements pursuant to Clallam County, and other permit conditions.

The TESC measures shall limit the erosion possibility by covering disturbed soils, preventing sloughing or raveling of cut and natural slopes, and controlling surface runoff from flowing into excavations using measures such as curbs, berms, dikes, rock-lined ditches, and other approved measures. Filter fabric fence shall be used to treat small areas of non-concentrated runoff prior to discharge from the site.

The Contractor shall constantly monitor and maintain all areas to ensure they are protected from erosion, that the measures are working together to provide maximum protection, and that all areas are mulched or vegetated as soon as possible.

B. Measurement:

Temporary erosion and sedimentation control (TESC) facilities shall be measured on a LS basis and as such shall require a written listing of the items and Schedule of Values included in TESC Facilities.

C. Payment:

The Lump Sum LS Contract Price for the "Temporary Erosion and Sedimentation Control (TESC) Facilities" shall constitute full compensation for all Work, labor,

materials, equipment, tools, and incidentals required to furnish, install, maintain, and remove all TESC facilities unless specifically covered in another Work item.

TESC facilities shall include, but not be limited to any cover measures, runoff control measures, soil and site stabilization measures, inlet protection measures, and any other TESC measures necessary to prevent damage to the surrounding property.

D. Materials:

Cover measures shall include, but not be limited to mulches such as straw, wood fiber cellulose, compost, and chipped site vegetation; coir and jute netting; excelsior, straw and coir blankets; visqueen sheeting; or any other material necessary to prevent erosion of disturbed areas.

Other materials shall include, but not be limited to any items necessary to prevent sediment laden water from leaving the construction area as well as any additional topsoil or hydroseeding necessary to control erosion of disturbed areas.

The seed mix for those disturbed areas where a temporary vegetative cover is required shall be as follows:

<u>Temp. Erosion Control Seed Mix</u>	<u>% Weight</u>	<u>% Purity</u>	<u>% Germination</u>
Chewings or Red Fesque	40	98	90
Annual or Perennial Rye	40	98	90
Redtop or Colonial Bentgrass	10	92	85
White Dutch Clover	10	98	90

Slow-release 10-20-20 (nitrogen-phosphorus-potassium) fertilizer shall be used at a rate of 250 pounds per acre with all temporary and permanent seeding.

The geotextile material for silt fence shall meet the following standards.

AOS	=	30-100 sieve size for slit film
	=	50-100 sieve size for other fabrics
Water Permittivity	=	0.02 sec-1 min
Grab Tensile Strength	=	180 lbs. min. for extra strength fabric
	=	100 lbs. min for standard strength fabric
Grab Tensile Elongation	=	30% max
Ultraviolet Resistance	=	70% min

All gravel and crushed surfacing shall meet the requirements of the respective Bid item descriptions in these Specifications.

The geotextile material placed under the construction entrances to prevent fine sediment from pumping into the rock pad shall meet the following standards:

Grab Tensile Strength (ASTM D-4751)	=	200 psi min.
Grab Tensile Elongation (ASTM D-4632)	=	30% max.
Mullen Burst Strength (ASTM D-3786-80a)	=	400 psi min.
AOS (ASTM D-4751)	=	20-45 (U.S. std. sleeve)

Pipe used to convey captured runoff shall conform to the requirements of the respective Bid descriptions in these Specifications.

E. Construction Requirements:

Prior to any clearing or grading, the Contractor shall delineate the clearing limits with a continuous length of brightly colored survey tape. Contractor shall restrict clearing to only those areas necessary for construction that are within the delineated clearing limits. In addition, the Contractor shall plan construction so as to minimize the length of time the disturbed areas are exposed to erosion. If the survey tape becomes damaged or its visibility reduced, the Contractor shall repair or replace the tape immediately.

The Contractor shall install temporary cover to protect all disturbed areas that will remain un-worked for more than seven (7) days during the dry season (April 1 to September 30) or for more than two days during the wet season (October 1 to March 31). Any area to remain un-worked for more than 30 days shall be seeded or sodded.

During the wet season, the Contractor shall cover slopes and stockpiles with slopes of 3H:1V or steeper and with more than ten feet of vertical relief if they are to remain un-worked for more than 12 hours. Material necessary to cover all disturbed areas shall be stockpiled on-site during the wet season.

Accepted cover methods include, but are not limited to, mulch, erosion control nets and blankets, visqueen sheeting, seeding, and sodding.

Mulch may be used on disturbed areas that require cover measures for less than thirty (30) days, as a cover for seeding, and on steep slopes. Mulch shall meet the following standards:

Mulch Material	Quality Standards	Application Rate	Remarks
Straw	Air-dried; free from undesirable seed and coarse material	2 inch-3 inch thick; 2-3 bales per 1000 sq. ft. or 2-3 tons per acre	Straw shall be crimped to avoid wind blow. Thickness may be reduced by half when used with seeding.
Wood Fiber Cellulose	No growth inhibiting factors	approx. 25-30 lbs. per 1000 sq. ft. or 2-3 tons per acre	Shall be applied with hydromulcher and shall use seed and tackifier unless the application rate is at least doubled.
Compost	No visible water or dust during handling. Must be purchased from supplier with Solid Waste Handling Permit	3-inch-thick min; approx. 100 tons per acre	Can be tilled into soil as an amendment.
Chipped Site Vegetation	Average size shall be several inches	2-inch min. thickness	Shall not be used on slopes greater than 10%. Shall not be used within 200 ft. of surface waters.

The Contractor shall maintain the thickness of the cover and any areas that experience erosion shall be re-mulched or protected with a net or blanket.

The Contractor may use erosion control nets and blankets to prevent erosion and hold seed and mulch in place on steep slopes and in channels so that vegetation can become well established. They may also be used to stabilize 2H:1V or steeper slopes with more than ten feet of vertical relief.

If erosion control nets or blankets are used, the Contractor shall ensure that the nets and blankets make good contact with the ground with no erosion beneath the net or blanket. Any areas of the net or blanket that are damaged or not in close contact with the ground shall be repaired and stapled by the Contractor.

The Contractor may use visqueen sheeting on disturbed areas that require cover measures for less than thirty (30) days or for protecting cut and fill slopes and stockpiles. The visqueen sheeting shall have a minimum thickness of 0.06 millimeters. If the Contractor uses visqueen sheeting to cover steep slopes or stockpiles, quarry spalls or other suitable protection shall be installed at the toe of the slope to reduce the velocity of the runoff. The Contractor shall replace or repair torn sheets and open seams immediately. If the plastic begins to deteriorate due to ultraviolet radiation, the Contractor shall completely remove and replace it. When the plastic is no longer needed, the Contractor shall completely remove it.

The Contractor shall cover any areas that have reached their final grade or will not be disturbed for more than two (2) days, with plastic, mulch, or sod. To promote re-vegetation, the Contractor shall cover all disturbed areas with at least 4-inches of vegetative soil such as stripped forest duff and organic soil or imported topsoil. The vegetative soil shall be tracked in place with the equipment running perpendicular to the slope contours so that the truck grouser marks provide a texture to help resist erosion.

Outside private yards, the Contractor shall hydroseed any areas that have reached their final grade or will not be disturbed for more than thirty (30) days with a seed mix conforming to the materials portion of this bid description. Mulch shall be used in conjunction with the seeding to protect the seeds from heat, moisture loss, and transport due to runoff. To promote re-vegetation, the Contractor shall cover all disturbed areas with 2 to 3 inches of vegetative soil such as stripped forest duff and organic soil or imported topsoil. The vegetative soil shall be tracked in place with the equipment running perpendicular to the slope contours so that the truck grouser marks provide a texture to help resist erosion.

Slopes steeper than 3H:1V shall be surface roughened prior to seeding in such a manner so that surface runoff does not become channeled. Slow-release fertilizers shall be applied at a rate of 250 pounds per acre with the seed mix. Mulch shall be applied on top of the seed or simultaneously by hydroseeding. A tackifier shall be used with all hydroseeding. The Contractor shall reseed any areas that fail to establish at least 80 percent cover within one month. The Contractor shall reseed any areas that experience erosion and protect said area with mulching. Sod may be used to establish short or long-term cover for areas requiring immediate erosion protection and vegetative cover.

Contractor shall stabilize all unsurfaced entrances, roads, and parking areas used by construction traffic to minimize erosion and tracking of sediment off-site. Stabilized construction entrances as shown on the Drawings shall be installed as the first step in clearing and grading. A separation geotextile shall be placed under the spalls to prevent fine sediment from pumping up into the rock pad. The geotextile shall conform to the requirements in the materials portion of this bid description. The Contractor shall add quarry spalls as needed to maintain the rock pad in accordance with these Specifications and the Drawings. The Contractor shall immediately sweep up any sediment that is tracked onto the pavement.

When construction is along the shoulder of a street, the Contractor shall periodically sweep the street each day to remove sediment before it can become a traffic hazard. The Contractor shall immediately remove any quarry spalls that are loosened from the pad and end up on the roadway. Construction parking areas shall be stabilized by placing a 6- inch depth of gravel base or crushed surfacing base course.

The Contractor shall take measures to prevent wind-blown soil from becoming a traffic hazard. Oil shall not be used for dust control.

The Contractor shall maintain and review all TESC measures on a regular basis. A TESC supervisor shall be designated by the Contractor and shall be responsible for maintenance and review of TESC measures. The name, address, and phone number of the TESC supervisor shall be provided to the Engineer and governing agency prior to the start of construction.

During the dry season, the Contractor shall perform, at a minimum, monthly reviews of the TESC measures. During the wet season, the Contractor shall complete reviews of the TESC measures at least every 6 to 8 calendar days and within 24 hours of any significant storm (more than 0.5 inches of rain in 24 hours).

Prior to obtaining final construction approval, the site shall be completely stabilized and restored to a condition better than or equal to the preconstruction condition. The Contractor shall remove all structural TESC measures and clean all permanent surface water facilities, including but not limited to catch basins, manholes, pipes, and ditches which may have been impacted by construction.

The Contractor shall install any other TESC measures that may be required during the course of construction to effectively control erosion, runoff, and related damage.

The Contractor shall not allow discharge of sediment-laden runoff from pit or trench excavations to increase the existing turbidity of the receiving waters.

All debris, overburden, oil, grease, cement, concrete or other toxicant, or waste materials shall be prevented from entering into the adjacent wetlands and streams.

If a suspension of Work is ordered for an extended period of time, the Contractor shall take all action necessary to control erosion, pollution, and run-off during the shutdown period.

6. BID ITEM 5 - TRENCH SAFETY SYSTEMS

A. Description:

This Work shall consist of construction and removal of shoring and cribbing for all excavation, backfill, compaction and other Work required for compliance with Washington State Industrial Safety and Health Act (WISHA), Chapter 49.17 RCW, and Title 296 Washington Administrative Code (WAC), Part N.

Also included in this Work are all excavations, backfill, compaction and other Work required when extra excavation is used in lieu of shoring and cribbing for compliance with WISHA, Chapter 49.17 RCW, and Title 296 WAC, Part N.

B. Measurement:

Trench Safety Systems shall be measured on a lump sum basis and as such shall require a written listing of the items and Schedule of Values included in Trench Shoring Systems.

C. Payment:

The Lump Sum LS Contract Price for "Trench Safety Systems" shall be considered full payment for all labor, materials, tools, equipment, and incidentals necessary for furnishing, installing and removing shoring and cribbing or for all excavation, backfill, compaction and other Work required when extra excavation is used in lieu of shoring and cribbing for compliance with WISHA, Chapter 49.17 RCW and Title 296 WAC, Part N. Costs for WISHA compliance shall not be incidental to any other Work items.

D. Material:

Material shall be as specified in the Standard Specifications or as modified herein, to include but not be limited to shoring, cribbing, select backfill, and any extra restoration materials needed when extra excavation is used in lieu of shoring and cribbing.

E. Construction Requirements:

Any trench exceeding four feet in depth shall be provided with adequate safety systems meeting the requirements of WISHA, Chapter 49.17 RCW, Title 296 WAC, Part N, and all regulations adopted pursuant thereto. Contractor shall have a structural Engineer prepare and stamp any and all shoring plans and calculations. The Contractor alone shall be responsible for Worker safety and the Owner and the Engineer assume no responsibility.

Contractor shall adhere to the requirements of the Clallam County Owner #1 Contractor Safety Plan for compliance with all governmental safety agencies as may be required by law. The Contractor must furnish all safety equipment and tools for its employees to safely perform the work and comply with the applicable safety standards.

7. BID ITEM 6 - PROJECT TEMPORARY TRAFFIC CONTROL

A. Description:

This Work is as described in Sections 1-07.23 and 1-10 of the Standard Specifications and as modified and supplemented herein.

B. Measurement:

Project Temporary Traffic Control shall be measured on a lump sum basis and as such shall require a written listing of the items and Schedule of Values included in Project Temporary Traffic Control.

C. Payment:

The Lump Sum LS Contract Price for "Project Temporary Traffic Control" shall constitute full compensation for all Work, labor, materials, and equipment required to develop the Traffic Control Plan and implement the Plan as specified in Standard Specifications Section 1-10.

D. Materials:

Provide all materials needed and/or required as specified in Standard Specifications Section 1-10 and to execute the Project Traffic Control Plan.

E. Construction Requirements:

Construction requirements shall include, but not be limited to:

- (1) developing a traffic control/detour plan and submitting the plan to the Owner, Engineer, and County for approval,
- (2) revising traffic control/detour plan per the Owner, Engineer, and County comments/requirements or as the situation changes throughout the project,

- (3) furnishing, moving and maintaining temporary traffic control devices such as signage, cones, barricades, flashers and other channelization devices,
- (4) providing supervisory personnel for all traffic control labor,
- (5) providing certified traffic control flaggers and spotters,
- (6) providing labor and any necessary vehicles for set-up, moving, and removal of construction signs and the traffic control devices, which are placed daily,
- (7) providing labor and vehicles for patrolling and maintaining in position all of the construction signs and traffic control devices, and
- (8) maintaining a minimum of one lane of alternating traffic at all times or implementing an approved detour plan.

Upon failure of the Contractor to immediately provide traffic control labor and devices when ordered to do so by the Owner, the Owner may, without further notice to the Contractor or surety, perform any of the above and deduct all of the costs from the Contractor's payments.

Costs for revising traffic control/detour plans, as required, are incidental to this bid item.

8. BID ITEM 7 - CONSTRUCTION SURVEYING AND STAKING

A. Description:

This Work is required for construction surveying and staking to be performed by the Contractor and as specified in Standard Specifications Section 1-05.4 and as amended herein. Also, surveyor shall research and stake the location of all easements, private drives and access roads, and private property involving project work such as, fire hydrants and structures.

B. Measurement:

Construction Surveying and Staking shall be measured on a lump sum basis and as such shall require a written listing of the items and Schedule of Values included in Construction Surveying.

C. Payment:

The Lump Sum LS Contract Price for "Construction Surveying and Staking" shall constitute full compensation for all Work, labor, materials, tools, equipment, and incidentals required for construction surveying and staking.

Costs for furnishing a professional surveyor licensed in Washington State to perform the Work are included in this bid item.

D. Materials:

Provide all materials needed and/or required to perform construction surveying and staking.

E. Construction Requirements:

Construction requirements shall meet the requirements in the Standard Specification Section 1-05.4 and as described below.

Construction surveying also includes topographic survey of actual pre and post constructed surfaces of roadway improvements, grading, and the constructed locations of new water mains, structures, and appurtenances for purposes of determining construction quantities and for development of construction record drawings. Also, surveyor shall research and stake the location of all easements, private drives and access roads, and private property involving project work such as, fire hydrants and structures.

9. BID ITEM 8 - FORCE ACCOUNT

A. Description:

This Work involves any additional and unanticipated work not covered in Contract Documents and determined by the Engineer not to be the responsibility or oversight of the Contractor. The Force Account shall be per Standard Specification Section 1-09.6.

B. Measurement:

There is no measurement associated with this bid item.

C. Payment:

The Force Account (FA) amount indicated in the proposal for this bid item is to provide a common bid amount. The actual amount paid under this item may vary from no payment to the full amount of the bid item.

D. Material:

Furnish all materials required.

E. Construction Requirements:

The Contractor will be required to initiate discussion for any work they believe is additional work not included in the contract documents and shall be required to provide a cost estimate for the Engineer's review and approval prior to the work being performed. Approved additional work performed under this bid item will be performed only after a work directive is issued by the Owner/Engineer. Any additional work performed prior to the work directive issued by the Owner/Engineer will not be compensated under this bid item.

10. BID ITEM 9 - REMOVAL AND REPLACEMENT OF UNSUITABLE MATERIALS

A. Description:

This Work involves the removal and replacement of unsuitable foundation material within excavations for the new water mains, roadway pavement patch, electrical conduit, and fire hydrants in accordance with these Specifications and Standard Specifications Section 7-09.3(8).

B. Measurement:

Measurement will only be made for excavations associated with the water main installations, roadway pavement patch, electrical conduit, and fire hydrants. Measurements will only be made for materials removed at a depth of 6 inches or greater below the trench bottom, below the roadway base, and below the structure base. The Removal and Replacement of Unsuitable Materials shall be measured per cubic yard for quantities actually removed. The quantities of authorized unsuitable material excavation paid for by the Owner shall be computed from in-place, field measurements and estimates made by the Engineer.

C. Payment:

The unit price Bid per cubic yard (CY) for "Removal and Replacement of Unsuitable Materials" shall be full compensation for all costs of the Work, labor, materials, tools, equipment, and incidentals necessary to remove unsuitable foundation material within excavations for new water main and under roadway foundation in accordance with these specifications and Standard Specifications Section 7-09.3(8). The unit Contract price per cubic yard includes excavating, loading, hauling, temporary stockpiling, and properly disposing off site of unsuitable material from the trench bottom and roadway foundation or base. Also included is the placement and compaction of the foundation material and furnishing and placing geotextile fabric. For the purpose of establishing a common basis for evaluating bids, an arbitrary quantity has been shown on the bid form and does not necessarily represent the quantity, if any, of "Removal and Replacement of Unsuitable Material" that may be necessary for project work. Therefore, the "significant change" provisions of Standard Specifications Section 1-04.6 do not apply. Actual quantities will be determined in the field as work progresses. "Removal and Replacement of Unsuitable Material" work will only be conducted with approval from the Engineer.

D. Material:

Hauling and furnishing imported replacement backfill material from a Contractor-supplied source will be paid for under the Foundation Material Class A or B bid item.

E. Construction Requirements:

Construction shall follow Standard Specifications Section 7-09.3(8).

If soft, saturated or organic soils are encountered at the base of the excavation or trench subgrade, the unsuitable trench foundation soils shall be removed and replaced. Unsuitable material encountered during excavation shall be removed to the depth directed by the Engineer and replaced with foundation gravel. Unsuitable material shall be disposed of at an off-site location selected by the Contractor.

After the unsuitable materials are removed and the existing subgrade is compacted, place and compact foundation material. The foundation material shall be placed in layers not more than 8 inches thick with each layer compacted to 95 percent of maximum density in accordance with ASTM D 1557. Compaction testing to be paid by the Contractor.

Construction geotextile for Soil Stabilization conforming to Section 9-33, Table 3 shall be installed before placing the foundation material when directed by the Engineer. All joints shall be overlapped a minimum of 18-inches.

11. BID ITEM 10 - CONTROLLED DENSITY FILL (AS REQUIRED)

A. Description:

Work shall be as needed for placement of controlled density fill (CDF) and as modified and supplemented herein.

This Work shall also include abandoning the existing water main and plugging pipe ends with controlled density fill (CDF) after the new main has been in successful operation for more than 24 hours, as well as properly disposing of any existing water main that is removed from the trench when filling the existing main with CDF.

B. Measurement:

Controlled Density Fill shall be measured per cubic yard for quantities actually installed. Certified delivery tickets shall be furnished with each load of materials delivered.

C. Payment:

The unit price Bid per cubic yard (CY) for "Controlled Density Fill" shall constitute full compensation for all Work, labor, materials, tools, equipment, and incidentals required to furnish, deliver, and place the CDF as required. For the purpose of establishing a common basis for evaluating bids, an arbitrary quantity has been shown on the bid form and does not necessarily represent the quantity, if any, of "CDF" that may be necessary for project work. Therefore, the "significant change" provisions of Section 1-04.6 do not apply. Actual quantities will be determined in the field as work progresses.

D. Materials:

Controlled Density Fill (As Required) shall be the following mix or approved equal.

(1) Portland Cement: Type I-II AASHTO M 85

(2) Mineral Filler Admixtures: pozzolans or fly ash (ASTM C-618, Class F)

(3) Aggregate: Everett Washed Coarse Sand No. 2.

(4) CDF shall be used in the following proportions for 1 cubic yard. Batch weights may vary depending on specific weight of aggregates.

Portland Cement	50 lbs./CY
Fly Ash	250 lbs./CY
Everett No. 2 Washed Coarse Sand (SSD)	3200 lbs./CY
Water	50 gals/CY (max.)

(5) Add sufficient water to provide a 6-inch to 8-inch slump delivered in place at the job site.

E. Construction Requirements:

Place CDF per Standard Specifications Section 2-09.3(1)E.

12. BID ITEM 11 - CRUSHED SURFACING TOP OR BASE COURSE

A. Description:

This bid item includes the haul and furnishing of the crushed surfacing material. The cost to place and compact the material is included under separate bid items. Work shall be as described in Standard Specifications Section 4-04.1 and as modified and supplemented herein.

B. Measurement:

Crushed Surfacing shall be measured by the ton for quantities actually installed. Weights shall be based on truck tickets stamped by a certified weight master.

C. Payment:

The unit price Bid per Ton for "Crushed Surfacing Top and Base Course" shall constitute full compensation for all Work, labor, materials, tools, equipment, and incidentals required to deliver and furnish the crushed surfacing material as specified under other bid items, as shown on the Drawings, and any other work requiring crushed surfacing material.

D. Materials:

Materials shall be as described in Section 9-03.9(3) of the Standard Specifications for base and top course material.

E. Construction Requirements:

Work shall only include the haul and furnishing of crushed surfacing materials to the site.

13. BID ITEM 12 - FOUNDATION MATERIAL CLASS A AND CLASS B (AS REQUIRED)

A. Description:

This bid item includes the haul and furnishing of Foundation Material Class A and Class B. The cost to place and compact the material is included in separate bid items.

B. Measurement:

Foundation Material shall be measured by the ton as separate Bid items for quantity actually installed. Weights shall be based on truck tickets stamped by a certified weight master.

C. Payment:

The unit price Bid per ton for "Foundation Material Class A and Class B shall constitute full compensation for all Work, labor, materials, tools, equipment, and incidentals necessary to deliver and furnish foundation material at locations as shown on the Drawings and where the Engineer determines the material in the bottom of the trench or under road base and structures is unsuitable and needs to be over-excavated and replaced.

Contractor shall refer to Section B 2, Articles 11 and 12 of this Contract, relating to possible price changes, in the event of increased or decreased quantities. Final quantities shall be based on actual quantities installed.

The cost to excavate, load, haul, and properly dispose of unsuitable materials shall be included under separate bid items.

D. Material:

Foundation material shall be Class A or B as described in Section 9-03.17 of the Standard Specifications.

E. Construction Requirements:

Foundation material shall be used to replace unsuitable material at the bottom of the trench or pavement base as described in Standard Specifications Section 7-09.3(8) or as determined by Engineer.

Work shall only include the haul and furnishing of foundation material to the site.

14. BID ITEM 13 - ASPHALT CONCRETE TRENCH PATCH

A. Description:

This Work shall include replacing all removed or damaged asphalt pavement along the new water main alignment and as shown on the Drawings and as described in Section 5-04.1 of the Standard Specifications, as modified and supplemented herein.

All asphalt road surfaces and private driveways, both inside and outside the public right-of-way that are damaged or removed during construction of this Project shall be restored in accordance with these specifications.

The Work shall include replacing pavement markings and markers damaged by construction and pavement repair. All Work shall meet the Clallam County road standards.

B. Measurement:

Delete Section 5-04.4 of the Standard Specifications.

Asphalt Concrete Trench Patch shall be measured by the ton for the quantities installed. Weights shall be based on truck tickets stamped by a certified weight master.

Replacing striping and pavement markings, which existed prior to the start of construction shall be included in this Work item.

Crushed surfacing material used for pavement base and subgrades and the repair of gravel and asphalt shoulders and driveways shall be included in a separate Work item.

C. Payment:

Delete Section 5-04.5 of the Standard Specifications.

The unit price Bid per ton for Asphalt Concrete Trench Patch shall constitute complete compensation for all Work, labor, materials, and equipment necessary to furnish and

install asphalt concrete patching to the compacted thickness as shown on the Drawings, including asphalt shoulders and driveways. In addition, this work shall include but not be limited to the costs of trimming the edges of the existing paving to neat lines, applying herbicide treatment and asphalt bonding tack, and replacing any striping and pavement markings that existed prior to construction.

Excavation, hauling, and disposal of native material so that the asphalt road surface and shoulders shall match the existing grade shall also be included in this Work item.

Where existing surfaces have been sealed, or otherwise treated, such treatment shall be restored and all costs thereof included in this Bid item.

All costs associated with placing and maintaining temporary asphalt concrete patching in areas scheduled for subsequent restoration with permanent asphalt concrete shall be included in the pipe Work.

No payment shall be made for the cost of restoring street surfacing which may be damaged by the Contractor's operations outside of the asphalt patch limits shown on the Drawings. Also, no payment shall be made for reshaping or recutting the edge of existing asphalt prior to trench patch based on inspection by the County.

Crushed surfacing material used for trench patch sub-grades or base and the repair of gravel shoulders and driveways shall be placed in layers not more than 8 inches thick with each layer compacted to 95% of maximum density in accordance with ASTM D 1557 compacted in maximum 8-inch lifts. Payment for crushed surfacing material and haul shall be included the CSTC or CSBC bid item. Placement and compaction of crushed surfacing material shall be paid under this bid item. Compaction testing shall be paid by the Contractor.

D. Materials:

Asphalt Materials shall be as described in Section 5-04.2 of the Standard Specifications and as modified and supplemented herein.

(1) Delete the second paragraph of Section 5-04.2.

(2) Delete the fourth paragraph of Section 5-04.2.

The base course shall be untreated crushed surfacing conforming to the requirements of the Bid item description for Crushed Surfacing, the requirements of Clallam County.

Asphalt concrete shall meet the requirements of the governing agency: AC Class B PG68-22 for Clallam County.

Temporary patch shall be cold or hot mix asphalt, at the discretion of the Contractor or governing road agency. Cement Concrete Pavement Rehabilitation shall be as described in Section 5-01.2.

E. Construction Requirements:

Work shall be as described in Section 5-04.3 of the Standard Specifications and as modified herein.

(1) Delete the second sentence of the eighth paragraph of Section 5-04.3(5)E.

(2) Replace Section 5-04.3(10)B with the following paragraph:

The base or sub-base shall be compacted to 95 percent of the maximum density by the Modified Proctor Test Method, ASTM D 1557-91. Compact asphalt concrete patch to 95 percent of maximum compaction.

Asphalt Concrete Shoulder Restoration:

Asphalt concrete shoulder restoration shall meet the requirements shown on the Drawings.

Asphalt Concrete Patching:

Asphalt concrete patching shall occur in locations shown on the Drawings.

The existing asphalt surface shall be cut on a neat line with a cutting disc or similar approved tool prior to excavation. Following proper backfill and compaction of the trench, the edges of the surfacing shall be retrimmed with straight vertical edges free from irregularities 12 inches wider than the excavation for longitudinal trenches and 24 inches wider than the excavation for transverse trenches.

AC Class B shall then be placed and compacted in 2-inch lifts to match the existing thickness and grade of the original surface. All asphalt patching shall extend to the existing edge of asphalt as a minimum. All asphalt joints shall be sealed with approved sealer. Contractor shall replace existing striping and pavement markings as required by Clallam County.

Contractor shall maintain temporary cold or hot mix asphalt patches daily during construction to the satisfaction of the County or Engineer until said patch is replaced with a permanent hot patch. The permanent hot mix asphalt patch shall be placed and sealed with a paving grade asphalt within 30 calendar days or as required by the road agency.

Asphalt Concrete Private Driveways:

Where a private driveway is damaged by either construction of the Project or by the Contractor's use and activity on the road, it shall be repaired to the satisfaction of the property owner, the Owner, and to its original condition or better. Damaged asphalt-concrete driveways shall be replaced by saw cutting to a straight line and replacing a full width section.

15. BID ITEM 14 - 8-INCH PVC C900 WATER MAIN

A. Description:

This Work is as described in Section 7-09 of the Standard Specifications and as modified and supplemented herein.

Water released during flushing and disinfection of new mains shall be dechlorinated prior to release or transmitted to a sanitary sewer or storm drainage system.

Work shall comply with the Clallam County road construction standards. Also, Work shall comply with the conditions of all permits obtained for this project, including time-of-day restrictions. No road closures shall be approved.

Pipe and Material Product Data:

Submit product data and pipe supplier data indicating conformance with this specification and applicable standards, including written documentation regarding any intended variance from this specification and applicable standards. This will include experience of pipe supplier by years and number of projects; warranty information; and independent laboratory testing certification.

B. Measurement:

8-Inch PVC C900 Water Main shall be measured per lineal foot as described in Section 7-09.4 of the Standard Specifications and as modified and supplemented herein.

C. Payment:

The unit price Bid per lineal foot of the 8-Inch PVC C900 Water Main of pipe shall constitute full payment for all Work, labor, materials, and equipment necessary to furnish and install said pipe, including but not limited to the following:

- (1) Trench excavation, furnishing, laying and jointing the pipe and fittings, providing, and installing tracer wire (including splicing wire with a splice kit) and warning tape for water main, placing, and compacting CSTC pipe bedding and trench backfill with approved native material or CSTC material, including topsoil and hydroseeding on top of pipe trench or CSBC or CSTC material at driveways and roads. Native material for trench zone backfill must be approved in writing by the Engineer before use.
- (2) Stockpiling and covering Engineer approved native backfill material.
- (3) Hauling and properly disposing of surplus and unsuitable excavated materials.
- (4) Hydrostatic pressure testing, pigging the PVC pipe, flushing, disinfecting, and dechlorinating water used on all pipe and fittings. Contractor shall furnish all testing materials, equipment, DOH approved backflow assembly, and temporary thrust blocks and blowoffs required for the Work. The Contractor shall collect and deliver water samples to an analytical laboratory for bacterial sampling. The Owner will inspect the sample collection and select the laboratory. Contractor shall bear all costs incurred in correcting any deficiencies found during testing, including the cost of any additional testing that may be required by the Owner to verify the correction of said deficiency.
- (5) Pavement removal, haul, and proper disposal of pavement debris.
- (6) Furnishing and installing all ductile iron fittings, including mechanical thrust restraint systems on ductile iron fittings.
- (7) All costs associated with the installation of thrust blocks.
- (8) All costs involved in maintaining and/or replacing any public or private utilities, structures, or other improvements that are disturbed or damaged by the Contractor unless specifically included in another Work item.

- (9) All costs involved in removing and replacing fences and mailboxes and erecting and maintaining any temporary fencing and mailboxes that may be necessary. Fences and mailboxes shall be equal to or better than the existing.
- (10) Extra depth excavation and added Work where required to place pipe under ditches, streams, utilities, under or over culverts, and on unimproved streets and easements.
- (11) Extra excavation required to make connections or cut-ins to the existing water system.
- (12) Potholing existing utilities as needed to allow water main to be installed at depths to avoid conflicts & minimize fittings.
- (13) Providing and installing Ethafoam pads or sand cushions where required.

Satisfactory cleanup shall not be considered complete until disturbed road surfaces have been permanently patched and all shoulders and non-paved areas restored. Contractor is therefore encouraged to complete this Work as soon as possible in order to minimize the amount of disturbance to the roadways and neighborhood.

Work, labor, materials, and equipment necessary to install the 8-inch PVC pipe and other Work shown on the Drawings or specified in these Specifications and not included in this bid item description shall be included in other associated bid items. If a bid item is not provided, the Work shall be considered incidental with no direct pay.

Furnishing CSTC and CSBC shall be included in the CSTC and CSBC bid item.

Contractor shall pay all costs in connection with the initial compaction testing and shall pay all costs in connection with any retesting where initial compaction does not meet Specification requirements.

D. Materials:

PVC C-900 (4 Inches and Over)

Section 9-30.1(5)A

PVC pipe shall conform to the current revision of AWWA C900 with material cell classification 12454 per ASTM D 1784. Provide standard pipe having integral bell and spigot with elastomeric gasket per ASTM D3139 and F477 and cast-iron equivalent outside pipe diameter. Provide pipe in standard 20-foot laying lengths. Pipe shall be minimum SDR 18.

Fittings, Couplings, and Restrained Joints

Section 9-30.2

Fittings may be flanged, mechanical joint or push on as required and as shown on the Drawings. Flanged fittings shall conform to a Class 125 pressure rating. Mechanical joint fittings used with PVC or ductile iron pipe shall be restrained with Mega-lug restraining devices or approved equal suitable for ductile iron or PVC pipe. The Contractor shall be responsible for installing the correct Mega-Lug system appropriate for the pipe material being restrained. The Contractor shall replace all incorrect Mega-lugs at his own expense. Restraining devices shall be manufactured of high strength ductile iron, ASTM A536, Grade 65-45-12. Bolts and connecting hardware shall be of high strength low alloy material in accordance with

ANSI/AWWA C111/A21.11. All restraining devices shall have a water working pressure rating equivalent to the full rated pressure of the pipe on which they are installed, with a minimum 2:1 safety factor in any nominal pipe size. Notarized certification from the manufacturer of the restraint device shall be provided with submittals.

The exterior of all ductile iron fittings shall be coated with bituminous paint.

Ductile iron fittings used for water utilities shall have a cement-mortar lining meeting the requirements of AWWA C104.

Detectable Warning Tape

Section 9-15(18)

Tracer Wire:

Tracer wire shall be AWG No. 10 stranded copper wire with high molecular weight polyethylene (HMW/PE) insulation specifically designed for direct burial in corrosive soil or water. Polyethylene insulation shall conform to ASTM D 1248, Type 1, Class C. Wires cut or damaged insulation are not acceptable and replacement of the entire wire which has been damaged will be required at the Contractor's expense. Tracer wire splice kit shall be DBR Splice Kit by 3-M or approved equal.

Gravel Backfill for Pipe Zone Bedding:

Section 9-03.12(3)

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Pipe Zone Backfill:

Section 9-03.19

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Trench Backfill:

Section 9-03.15 or 9-03.19

Section 9-03.19 is replaced with 9-03.9(3). Section 9-03.15 still applies.

Concrete Thrust Block:

Concrete shall meet the requirements for "Commercial Concrete" in Section 6-02.3(2)B.

E. Construction Requirements:

Work shall be as described in Sections 7-09.3 of the Standard Specifications and as modified and supplemented herein.

(1) Add the following paragraphs to Section 7-09.3(1):

If the connection to the existing system involves turning off the utility, Contractor shall notify the Owner by written notice of the time and duration of the shutdown at least 72 hours prior to the shutdown. Contractor shall be responsible for any damage caused to any customer's plumbing system due to the shutdown and subsequent recharging of the system. Contractor shall not operate any valve of the water system, at any time, without prior approval of the Owner. Owner may require assistance from Contractor in notification of customers.

Pipe zone bedding, pipe zone backfill, and trench backfill requirements shall conform to the trench details shown in the Drawings. In general, these requirements, as shown, are subject to variation depending on the following inter-related factors relating to the location of the water main:

- The surface restoration required, for example: paved traffic area, paved non-traffic area such as gravel road shoulder, landscaping, lawns, or areas requiring erosion control seeding.
- The road agency (right-of-way) jurisdiction: Clallam County.
- The land agency jurisdiction for easement areas outside of the right-of-way: Clallam County.
- The proximity of nearby utilities.

(2) Replace the last sentence of Section 7-09.3(3) with the following sentence:

All material from clearing and grubbing shall be hauled to an approved waste disposal site obtained by the Contractor. No onsite burning shall be allowed.

(3) Replace first sentence of the third paragraph of Section 7-09.3(5) with the following sentence:

The depth of trenching shall be such as to provide a minimum cover of 36 inches over the top of the pipe for 8-inch and smaller water mains and 48 inches over the top of 12-inch mains. Depth of cover at ditches shall be a minimum of 30 inches unless provided otherwise on the Drawings. Exceptions shall be allowed only with prior written approval of the Engineer.

(4) Replace the first sentence of the first paragraph of Section 7-09.3(7) with the following sentences:

Trench excavation shall be unclassified. The Contractor shall excavate all materials encountered to the depth shown on the Drawings or as directed by the Engineer. No extra payment will be allowed for bedrock, boulders, hardpan, cemented gravel, unauthorized over-excavation, or any other material encountered. All materials shall be properly disposed of at a site obtained by the Contractor.

(5) Replace the sixth paragraph of Section 7-09.3(7) with the following paragraphs:

Any trench exceeding four feet in depth shall be provided with adequate safety systems meeting the requirements of WISHA, Chapter 49.17 RCW, Title 296 WAC, Title N, and all regulations adopted pursuant thereto. Contractor shall have a structural Engineer review and stamp any and all shoring plans and calculations. The Contractor alone shall be responsible for Worker safety and the Owner and the Engineer assume no responsibility.

All ledge rock, boulders, and stones shall be removed to provide a minimum of six inches clearance under all portions of the pipe. All rock larger than four inches in diameter shall be disposed of at a site obtained by the Contractor and shall not be used for trench backfill.

(6) Add the following paragraphs to Section 7-09.3(7):

Do not over excavate without written authorization of Engineer. Excavation carried below the grade lines shown on the Drawings or established by the Engineer shall be replaced and compacted with import material in accordance with Section 7-09.3(8). Correct all unauthorized overexcavated areas at the Contractor's sole expense.

Remove obstructions within the trench area or adjacent thereto including, but not limited to, tree roots, stumps, abandoned piping, logs and debris of all types as specified in Section 2-02. The Engineer, if requested, may allow Contractor to make changes in the trench alignment to avoid major obstructions, if such alignment changes can be made without adversely affecting the intended function of the facility. All changes in trench alignment require the express written authorization of the Engineer. The Engineer's decision on alignment changes is final. The Contractor shall pay all additional costs resulting from such alignment changes.

The Contractor shall trench underneath existing piping and shall provide temporary supports, temporary piping to re-route existing piping around trench excavation areas and return piping to its original or similar configuration as approved by the Engineer after trench excavation and pipe installation is completed. The Contractor shall not interrupt operations of public or private utilities that rely on existing piping without prior approval and scheduling of activities with the appropriate utility.

Minimum separation of potable water mains and sanitary sewer lines shall be 10 feet horizontally for parallel pipe, and 1½ feet vertically for perpendicular or oblique crossings, measured from outside edge to outside edge. Situations occurring with less than minimum separation shall require construction in accordance with Section C1-9.1 of the Criteria for Sewage Works Design as published by the Washington State Department of Ecology, latest edition. Minimum separation between other utilities except sanitary sewers shall be six inches with a sand cushion.

Contractor shall pothole to verify all existing utilities in advance of pipe laying to afford the opportunity to adjust alignment and grade of the pipe to avoid any conflicts with other utilities.

(7) Add the following paragraphs to Section 7-09.3(7)A:

The Contractor shall ascertain to his own satisfaction the extent to which surface and ground water may affect the work. The Contractor shall install and maintain temporary drains and drain ditches, as required, to intercept or control and direct surface water which may affect the execution or condition of the work. Surface water runoff from the site shall not enter directly enter nearby creeks and streams.

Trenches shall be dewatered by whatever means and methods deemed most effective and efficient by the Contractor. The configuration, size, and capacity of dewatering systems and equipment shall maintain trenches free of water at all times and shall prevent bottom heave of the trench, instability of the pipe bedding or foundation, collapse of trench walls, and/or similar detrimental occurrences. The Contractor shall determine the size, capacity, and configuration of all piping and equipment required for dewatering and shall furnish, install, and maintain in operation all such piping and equipment until all construction is completed. The

Contractor shall maintain the dewatering systems in place and in operation for whatever time required to properly dewater trenches prior to and during excavation and during backfilling. The Contractor shall make all arrangements for and shall pay all costs of power and maintenance necessary for operation of pumps.

All surface or groundwater controlled and/or directed by the Contractor shall be disposed of in accordance with the requirements and regulations imposed by local, state, and federal agencies and the permits.

The Contractor shall construct temporary ditches, well points, sumps, drains, etc., and provide and operate equipment adequate to keep all excavations and trenches free of water. The Contractor shall remove all water during periods when: concrete is being placed; pipe is being laid; placing of embankment material; and at other such times as required for proper, efficient and safe execution of the work and to avoid settlement or damage to the facilities being constructed or adjacent facilities or property.

The Contractor shall grade and/or properly drain the ground surface adjacent to open excavations so as to prevent surface water from running into the open excavation.

Contractor shall be responsible for collecting, pumping, and conveying groundwater or stormwater. The removal and control of water and cleaning and flushing of existing conveyance piping shall be considered incidental to the construction and shall be included in the costs of other items of the work involved in the project.

(8) Add the following new Section, Section 7-09.3(7)D – Wet Weather Earthwork:

Wet weather generally begins in mid-October and continues through May, although precipitation may occur at any time of the year. Earthwork completed in wet weather or under wet conditions shall be accomplished in small sections to minimize exposure to wet weather. Each section shall be sufficiently small so that the removal of soil and placement of backfill can be accomplished on the same day. No soil shall be left un-compacted and exposed to water. Soil that is too wet for compaction shall be removed and replaced with clean, imported backfill material. Grading and earthwork should not be accomplished during periods of heavy continuous rainfall.

(9) Add the following paragraphs to Section 7-09.3(9):

Pipe zone bedding material shall be import CSTC as shown on the Drawings. No native material shall be used for pipe zone bedding. Limits of pipe bedding zone is 6-inches below and 6-inches above the pipe.

If the native material at the over-excavated trench bottom (6 inches below the specified grade) is unsuitable for foundation purposes or will have difficulty providing uniform bearing for the pipe, such material shall be removed and replaced with a minimum of 12 inches of compacted foundation material.

The bedding material shall be carried up evenly on both sides of the pipe simultaneously in approximately 6-inch layers and each layer thoroughly compacted with appropriate tools in such manner as to avoid injuring or disturbing the completed pipeline. All bedding and native material shall be stored away from the edges of excavation and off the paved roadway and shoulder.

(10) Replace Section 7-09.3(10) in its entirety with the following:

Trench backfill shall be CSTC material and meet the gradation requirements in Section 9-03.9(3) of the Standard Specifications or reuse of select native materials as trench backfill above the pipe zone. Native trench backfill material, is specified in Section 9-03.15. The requirements of Section 9-03.15 shall be revised to read "Trench backfill shall be excavated material free of wood waste, debris, clods or rocks greater than 4 inches in any dimension and shall be able to meet minimum compaction requirements. The native material may require moisture conditioning to meet the specified compaction requirements. Moisture conditioning shall be considered incidental".

If selective native material is not available, CSTC material shall be used.

Prior to placement and compaction, trench backfill should be moisture conditioned to within 2 percent of the optimum moisture content. Trench backfill material shall be placed in 6-inch maximum horizontal lifts and compacted. The Contractor must place 2 feet of material over the pipe before compacting with a "hoe-pack" attachment or other heavy-duty compaction device. Each lift must be compacted as required before placing subsequent layers.

All unused native material shall be hauled and disposed of off-site. No disposal site has been provided for the unused native material. The Contractor shall be responsible for obtaining a disposal site, and for paying any associated fees. The Contractor shall provide the Engineer with copies of any applicable permits or agreements related to the disposal of surplus materials prior to removing the materials from the construction site. The same requirements apply to wasting of unsuitable materials.

All water main pipe and services shall be installed with continuous tracer tape as shown on the Drawings. The marker shall be plastic non-biodegradable, metal core or backing marked water 2-inch-wide minimum, which can be detected by a standard metal detector. Tape shall be Terra Tape "D" or approved equal. In addition to tracer tape, install 14-gauge heavy duty direct bury coated copper wire (PAIGE "UF" single conductor or equal), wrapped around the pipe, brought up and tied off at valve body. All wire connections shall use wire nuts and a DBR Splice Kit, manufactured by 3-M or approved equal. All locator wire for service pipe shall be connected to the locator wire on the water main.

After backfilling and compaction, an immediate cold or hot asphalt mix patch shall be placed and maintained in a manner acceptable to the governing agency's inspector until replaced with a permanent hot asphalt mix patch.

(11) Replace Section 7-09.3(11) with the following paragraphs:

All trench backfill shall be mechanically compacted to at least 95% of maximum density within the right of way and in all areas (paved and unpaved) where streets, roadway shoulders, driveways, sidewalks, or parking lots will be constructed or reconstructed over the trench except for trenches over 8 feet in depth. When the trench depth exceeds 8 feet, trench backfill up to 4 feet from the top of the trench may be mechanically compacted to at least 90% of the maximum density. The remaining top 4 feet of the trench shall then be mechanically compacted to at least

95% of the maximum density. In unpaved areas and other areas not subject to vehicular traffic, trench backfill from the pipe to within 3 feet of the surface shall be compacted to at least 90% of the maximum density. The upper 3 feet shall be compacted to at least 95% of the maximum density. All densities shall be determined by testing per the Modified Proctor Method, ASTM D1557.

A minimum of one density test shall be taken within every 500 feet of trench length and at depths up to 50% of trench depth outside of the roadway prism and every 100 feet of trench length and at depths up to 50% of trench depth for trenches inside of the roadway prism, or as directed by the Owner or governing road agency. Compaction of laterals or service line trenches shall be tested where directed by the Owner or governing road agency. The Engineer reserves the right to request a compaction test at any time on the backfill material.

Backfill shall be placed in uniform loose layers no more than 6-inches thick and mechanically compacted as specified. In any location where native backfill was approved in writing by the Engineer, and the specified compaction cannot be achieved with native backfill, the top 4 feet shall be replaced and compacted to 95% of the maximum density with Crushed Surfacing Top or Base Course as specified in Section 9-03.9(3) of the Standard Specifications. The Engineer reserves the right to request a compaction test at any time on the backfill material.

The Owner will secure a testing company to conduct compaction tests. The Contractor shall pay for all compaction tests taken after the initial tests due to improper compaction.

(12) Add the following paragraphs to Section 7-09.3(12):

Contractor may obtain water from the Owner for use on this project through a meter which may be rented from the Owner. A DOH approved backflow prevention device shall be used in accordance with State Cross Connection Regulations and provided by the Owner.

Contractor shall provide all trucking, piping, fittings, and connections for the distribution and measurement of the water used on this project. Contractor shall assume sole responsibility for maintaining the temporary piping for the water used on this project.

Pipe shall not be strung out along a trench or shoulder of a road in a manner which causes a safety hazard to the public.

Rubber gaskets shall be stored in a cool, dark place to prevent damage from the direct rays of the sun.

All pipes shall be laid with one piece of 10-gauge or thicker insulated copper wire. The locating wire shall be situated immediately adjacent to the pipe and connected to all valves. Locating wire shall also connect to all fire hydrants, service lines and meters.

Install warning tape above water line as shown on the Drawings.

Plugs shall be used to seal installed water mains when they are to be left for any period of time, including lunch breaks, coffee break, overnight, etc. Material contaminated by petroleum products or questionable chemicals will be rejected. No trench water shall be allowed to enter installed water mains.

(13) Add the following paragraphs to Section 7-09.3(19)A:

Connections to existing water mains shall be made only after coordination with and approval by the Owner. The Contractor shall give the Owner minimum 72 hours written notice prior to requesting a shutdown. Connections shall be made only at the date and time required by the Owner. The Contractor shall perform all connection work at the date and time required by the Owner without extra or additional cost to the Owner.

The Contractor shall excavate and uncover the existing pipeline and shall determine the horizontal and vertical location of the pipe, pipe material, outside diameter, wall thickness, thrust blocks, and any and all other details and data required for each connection. Connections shall be made with the pipe, valves and fittings indicated on the Drawings and whatever additional pipe, fittings and adapters required by the material, configuration, and condition of the existing pipe. The excavation and uncovering of the existing pipeline shall occur a sufficient time before the actual construction of the connection to enable all required materials to be obtained.

Except for specific responsibilities designated by the Owner, the Contractor shall furnish all labor, equipment, and materials and shall perform all work required directly and indirectly for each connection.

The Contractor shall acquaint itself with all aspects of existing systems prior to starting construction on new mains. Pertinent information concerning existing systems may be obtained from the Owner and may be verified from the Owner records. The Contractor shall locate existing water mains and service lines prior to beginning work so they may be properly protected and maintained in service during construction.

As much as possible of the pipe, valves, and fittings composing the new pipeline shall be installed, tested, disinfected and flushed prior to connection to the existing mains. Temporary thrust blocking shall be installed as required to permit testing of the new pipeline.

The Contractor shall prepare and distribute a written notification of water service shut down to all affected costumers a minimum five (5) days prior to service interruptions. The Contractor shall not operate any valves on the existing system. All operation and/or shutdown activities required of the existing system will be performed by the Owner. Water shutdowns shall not be allowed to take place on Fridays.

Concrete thrust blocking shall be provided where shown on the Drawings. All fittings installed as part of connections to existing mains shall be installed with joint restraints (tie rods, joint harnesses, joint restraint follower glands, lock-type joint systems or other joint restraints). All joint restraints shall be designed for a working pressure of 250 psi, at a minimum.

Connections to the existing water main shall not be made without first making the necessary arrangements with the Owner in advance. Work shall not be started until all the traffic control and materials, equipment and labor necessary to properly complete the work are assembled on the site. Once work is started on a connection, it shall proceed continuously, without interruption, and as rapidly as possible until complete. No shut-off of mains will be permitted overnight, over weekends, or during weeks with holidays.

Only Owner personnel are permitted to operate valves on the certified, potable waterside of a line, including emergencies unless personnel safety is threatened.

No direct connection of the new system being constructed shall be made to the existing system until the new system has been pressure tested and accepted and until water quality (purity) tests have been satisfactorily completed.

(14) Add the following paragraph to Section 7-09.3(20):

Locator tape will not be used as an alternative to wire but will be used in addition to the wire. Install warning tape continuously above all water line pipes as shown on the Drawings.

(15) Add the following paragraphs to Section 7-09.3(21):

Blocking where shown on the Drawings shall consist of poured cement concrete, against undisturbed soil with enough concrete and $\frac{3}{4}$ -inch anchor rods, if required, to resist the resultant forces. Conform to Standard Thrust Block Detail shown on the Drawings. Blocking shall provide for removal of any connection to the fittings without damage to the fitting. Where unfavorable ground conditions are encountered, special blocking will be required as directed by the Engineer in the field. When digging near fittings of existing pipelines, temporary wood blocking or other restraining system shall be installed to prevent blowouts. Megalugs or field lock gaskets shall be required as shown on the Drawings or in select locations as determined by the Engineer.

All fittings which may come in contact with poured thrust blocks shall be wrapped with 8 mil thick plastic sheet. Form thrust blocking so that bolts, joints, gaskets, and flanges of adjacent joints are clear of concrete and so that bolts and joints can be dismantled without removing concrete.

(16) Add the following paragraphs to Section 7-09.3(23):

The Contractor shall provide at least two (2) working days in advance notice of hydrostatic testing.

Testing procedures shall be performed in accordance with the Drawings and Specifications, per ANSI/AWWA C600 and WSDOT/APWA 7.09.3(23) and (23)A, B, and C and per best industry practices and DOH requirements.

The Contractor shall not flush with source water before filling the new water main, nor make any connection between the existing distribution system and the new pipeline without a State Department of Health approved backflow preventer, installed in the connecting line.

The Contractor can obtain a hydrant meter from the Owner to fill the water main. The Contractor shall provide a DOH approved backflow preventer and shall be sized to achieve the required flow rate to adequately flush, pressure test, and disinfect the water main, and the device shall be certified from a certified testing lab. Certification documents shall be submitted to the Owner prior to use. Certification must be within 3 months prior to the start of the contract.

The Contractor shall hydrostatically test the water main, including all service connections to the meter setter, fire hydrants, air/vacuum valves, etc. using water pressure. Hydrant valves shall be open and hydrants in the closed position during the test. Pressure testing against a valve on the distribution system is not allowed.

- (17) The tenth paragraph of Section 7-09.3(23) is deleted in its entirety and replaced with the following:

Pressure gauges shall be certified for accuracy from a certified testing lab, within a maximum of six (6) months prior to the start of the Contract. The certification letter/form shall be submitted to the Owner for review and approval, prior to the start of the Contract.

- (18) Add the following paragraphs to Section 7-09.3(24)A:

The discharge shall be at a controlled rate that does not cause flooding or erosion of any surfaces. If necessary, Contractor shall provide erosion control measures in accordance with the Contract Documents and satisfactory to the Owner and regulating agency.

Prior to calling out the Owner to witness the pressure test, the Contractor shall have all equipment completely set up and ready for operation and shall have successfully performed the test to assure that the pipe is in satisfactory condition.

All disinfection requirements and bacteriological testing shall be in conformance with and performed in accordance with Washington State Department of Health requirements, the latest version of AWWA C651, the WSDOT Standard Specifications and these Specifications.

The Contractor shall pay particular attention to the requirements for neutralizing chlorinated water and the proper disposal of treated water. Contractor shall prepare and submit to the Engineer a plan for chlorination, de-chlorination and disposing of treated water prior to performing any disinfection. The Contractor shall not dispose of treated (chlorinated) water directly to any water course or natural drainage channel.

If the Contractor elects to dechlorinate, sodium ascorbate, or other approved chemical, shall be used as the neutralizing agent. Sodium thiosulfate shall not be used.

Following a successful test, water piping not immediately connected to the existing system shall be relieved of excess pressure and shall be left full of the chlorinated water. Contractor shall be responsible for proper disposal of super chlorinated water after testing.

Table shown below may be used as a guideline but does not relieve the Contractor from assuring a clean line.

Table 3.8.6 AWWA C651-92 suggested flow and openings to flush pipelines (40 psi residual pressure in water main¹:

Pipe (in inches)	To produce 2.5 ft/sec (approx.) Velocity in Main	Size of Tap, 2 inches/Number of taps on Pipe**	Number of 2-1/2-inch Hydrant Outlets
4	100 gpm	--	1
6	200 gpm	--	1
8	400 gpm	1	1
10	600 gpm	2	1
12	900 gpm	2	2
16	1,600 gpm	4	2
Notes: 1) With a 40-psi pressure in the main and the hydrant flowing to atmosphere, a 2-1/2-inch hydrant outlet will discharge approximately 1,000 gpm and 4-1/2-inch hydrant outlet will discharge approximately 2,500 gpm. 2) Number of taps on pipe based on discharge through 50 feet of galvanized iron pipe with one 90-degree elbow.			

16. BID ITEM 15 - 8-INCH DI PIPE CL 52

A. Description:

This Work includes furnishing and installing a section of ductile iron pipe (DIP) inside a casing pipe under Old Olympic Highway, Carlsborg Road at Cook Road, and associated roadside ditches and a short section of DIP outside of the casing pipe (approximately 10 to 12 feet total). The cost for furnishing and installing the casing pipe is included under Bid Item 16. The ductile iron pipe is part of the overall water main.

Water released during flushing and disinfection of new mains shall be dechlorinated prior to release or transmitted to a sanitary sewer or storm drainage system.

Pipe and Material Product Data:

Submit product data and pipe supplier data indicating conformance with this specification and applicable standards, including written documentation regarding any intended variance from this specification and applicable standards. This will include experience of pipe supplier by years and number of projects; warranty information; and independent laboratory testing certification.

B. Measurement:

8-Inch DI Pipe CL 52 shall be measured per lineal foot as described in Section 7-09.4 of the Standard Specifications and as modified and supplemented herein.

C. Payment:

The unit price Bid per lineal foot of the 8-Inch DI Pipe CL 52 shall constitute full payment for all Work, labor, materials, and equipment necessary to furnish and install said pipe, including but not limited to the following:

- (1) Furnishing, laying and jointing the pipe and fittings, furnishing and placing casing spacers around the ductile iron pipe, and installing the ductile iron pipe inside the casing pipe.
- (2) For the short section(s) of pipe outside the casing pipe, trench excavation, furnishing, laying and jointing the pipe and fittings, providing, and installing tracer wire and tracer wire splice kit and warning tape for water main, placing, and compacting CSTC pipe bedding and trench backfill with approved native material or CSTC material, including topsoil and hydroseeding on top of pipe trench or CSBC or CSTC material at driveways and roads. Native material for trench zone backfill must be approved in writing by the Engineer before use.
- (3) Hydrostatic pressure testing, pigging the DI pipe, flushing, disinfecting, and dechlorinating water used on all pipe and fittings. Contractor shall furnish all testing materials, equipment, DOH approved backflow assembly, and temporary blowoffs required for the Work. Contractor shall bear all costs incurred in correcting any deficiencies found during testing, including the cost of any additional testing that may be required by the Owner to verify the correction of said deficiency.
- (4) All costs involved in maintaining and/or replacing any public or private utilities, structures, or other improvements that are disturbed or damaged by the Contractor unless specifically included in another Work item.
- (5) All costs involved in removing and replacing fences and mailboxes and erecting and maintaining any temporary fencing and mailboxes that may be necessary. Fences and mailboxes shall be equal to or better than the existing.
- (6) Potholing existing utilities as needed to allow water main to be installed at depths to avoid conflicts & minimize fittings.
- (7) Providing and installing Ethafoam pads or sand cushions where required.

Work, labor, materials, and equipment necessary to connect the 8-inch DI pipe to the PVC C900 water main and DI 90 degree fittings, as shown on the Drawings, shall be included in this bid item.

Furnishing CSTC and CSBC shall be included in the CSTC and CSBC bid item.

Contractor shall pay all costs in connection with the initial compaction testing and shall pay all costs in connection with any retesting where initial compaction does not meet Specification requirements.

D. Materials:

Ductile Iron Pipe: Section 9-30.1(1)

Fittings, Couplings, and Restrained Joints: Section 9-30.2

Ductile iron pipe for slip lining inside casing pipe shall be Fastite Joint pipe with Fast Grip gasket by American Pipe Company, TR Flex pipe by US Pipe, or approved equal.. Fittings may be flanged, mechanical joint or push on as required and as shown on the Drawings. Flanged fittings shall conform to a Class 125 pressure rating. Mechanical joint fittings used with ductile iron pipe shall be restrained with Mega-lug restraining devices or approved equal suitable for ductile iron pipe. Restraining devices shall be manufactured of high strength ductile iron, ASTM A536, Grade 65-45-12. Bolts and connecting hardware shall be of high strength low alloy material in accordance with ANSI/AWWA C111/A21.11. All restraining devices shall have a water working pressure rating equivalent to the full rated pressure of the pipe on which they are installed, with a minimum 2:1 safety factor in any nominal pipe size. Notarized certification from the manufacturer of the restraint device shall be provided with submittals.

The exterior of all ductile iron fittings shall be coated with bituminous paint.

Ductile iron fittings used for water utilities shall have a cement-mortar lining meeting the requirements of AWWA C104.

Gravel Backfill for Pipe Zone Bedding: Section 9-03.12(3)

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Pipe Zone Backfill: Section 9-03.19

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Trench Backfill: Section 9-03.15 or 9-03.19

Section 9-03.19 is replaced with 9-03.9(3). Section 9-03.15 still applies.

Casing Spacers:

Casing spacers shall be polyethylene spacers.

Transition Coupling:

Transition coupling shall be Romac 501 (8-inch) or approved equal and be suited for ductile iron pipe to PVC pipe connection.

E. Construction Requirements:

Follow the applicable construction requirements under Bid Item 14 for the 8-inch ductile iron pipe not cased. Connect the north end of the ductile iron pipe to the PVC C900 pipe with a transition coupling. Install per manufacturer's recommendations. Also, connect the 8-inch ductile iron pipe to the 8-inch ductile iron fitting near Sta 51+00. Fitting to be paid under Bid Item 14.

Work to place the 8-inch ductile iron pipe inside the casing pipe shall be as described in Sections 7-09.3 of the Standard Specifications and as modified and supplemented herein.

(1) Add the following paragraphs to Section 7-09.3(12):

Contractor may obtain water from the Owner for use on this project through a meter which may be rented from the Owner. A DOH approved backflow prevention device shall be used in accordance with State Cross Connection Regulations.

Contractor shall provide all trucking, piping, fittings, and connections for the distribution and measurement of the water used on this project. Contractor shall assume sole responsibility for maintaining the temporary piping for the water used on this project.

Pipe shall not be strung out along a trench or shoulder of a road in a manner which causes a safety hazard to the public.

Rubber gaskets shall be stored in a cool, dark place to prevent damage from the direct rays of the sun.

Plugs shall be used to seal installed water mains when they are to be left for any period of time, including lunch breaks, coffee break, overnight, etc. Material contaminated by petroleum products or questionable chemicals will be rejected. No trench water shall be allowed to enter installed water mains.

(2) Install casing spacers per manufacturer's recommendations and as noted on the Drawings.

(3) Add the following paragraphs to Section 7-09.3(23):

The Contractor shall provide at least two (2) working days in advance notice of hydrostatic testing.

Testing procedures shall be performed in accordance with the Drawings and Specifications, per ANSI/AWWA C600 and WSDOT/APWA 7.09.3(23) and (23)A, B, and C and per best industry practices and DOH requirements.

The Contractor shall not flush with source water before filling the new water main, nor make any connection between the existing distribution system and the new pipeline without a State Department of Health approved backflow preventer, installed in the connecting line.

The Contractor can obtain a hydrant meter from the Owner to fill the water main. The Contractor shall provide a DOH approved backflow preventer and shall be sized to achieve the required flow rate to adequately flush, pressure test, and disinfect the water main, and the device shall be certified from a certified testing lab. Certification documents shall be submitted to the Owner prior to use. Certification must be within 3 months prior to the start of the contract.

The Contractor shall hydrostatically test the water main, including all fire hydrants, air/vacuum valves, etc. using water pressure. Hydrant valves shall be open and hydrants in the closed position during the test. Pressure testing against a valve on the distribution system is not allowed.

- (4) The tenth paragraph of Section 7-09.3(23) is deleted in its entirety and replaced with the following:

Pressure gauges shall be certified for accuracy from a certified testing lab, within a maximum of six (6) months prior to the start of the Contract. The certification letter/form shall be submitted to the Owner for review and approval, prior to the start of the Contract.

- (5) Add the following paragraphs to Section 7-09.3(24)A:

The discharge shall be at a controlled rate that does not cause flooding or erosion of any surfaces. If necessary, Contractor shall provide erosion control measures in accordance with the Contract Documents and satisfactory to the Owner and regulating agency.

Prior to calling out the Owner to witness the pressure test, the Contractor shall have all equipment completely set up and ready for operation and shall have successfully performed the test to assure that the pipe is in satisfactory condition.

All disinfection requirements and bacteriological testing shall be in conformance with and performed in accordance with the DOH requirements, the latest version of AWWA C651, the WSDOT Standard Specifications and these Specifications.

The Contractor shall pay particular attention to the requirements for neutralizing chlorinated water and the proper disposal of treated water. Contractor shall prepare and submit to the Engineer a plan for chlorination, de-chlorination and disposing of treated water prior to performing any disinfection. The Contractor shall not dispose of treated (chlorinated) water directly to any water course or natural drainage channel.

If the Contractor elects to dechlorinate, sodium ascorbate, or other approved chemical, shall be used as the neutralizing agent. Sodium thiosulfate shall not be used.

Following a successful test, water piping not immediately connected to the existing system shall be relieved of excess pressure and shall be left full of the chlorinated water. Contractor shall be responsible for proper disposal of super chlorinated water after testing.

Table shown below may be used as a guideline but does not relieve the Contractor from assuring a clean line.

Table 3.8.6 AWWA C651-92 suggested flow and openings to flush pipelines
(40 psi residual pressure in water main):

Pipe (in inches)	To Produce 2.5 ft/sec (approx.) Velocity in Main	Size of Tap, 2 inches/Number of Taps on Pipe**	Number of 2-1/2-inch Hydrant Outlets
4	100 gpm	--	1
6	200 gpm	--	1
8	400 gpm	1	1
10	600 gpm	2	1
12	900 gpm	2	2
16	1,600 gpm	4	2
Notes: 1) With a 40-psi pressure in the main and the hydrant flowing to atmosphere, a 2-1/2-inch hydrant outlet will discharge approximately 1,000 gpm and 4-1/2-inch hydrant outlet will discharge approximately 2,500 gpm. 2) Number of taps on pipe based on discharge through 50 feet of galvanized iron pipe with one 90-degree elbow.			

17. BID ITEM 16 - 18-INCH HDPE DR 17 CASING PIPE

A. Description:

This Work includes furnishing and installing a high-density polyethylene (HDPE) casing pipe under Old Olympic Highway, Carlsborg Road at Cook Road, and associated roadside ditches.

Pipe and Material Product Data:

Submit product data and pipe supplier data indicating conformance with this specification and applicable standards, including written documentation regarding any intended variance from this specification and applicable standards. This will include experience of pipe supplier by years and number of projects; warranty information; and independent laboratory testing certification.

Submit fusion joint data and fusion technician data indicating conformance with this specification and applicable standards, including written documentation regarding any intended variance from this specification and applicable standards. This shall include fusion joint warranty information and recommended project specific fusion parameters, including criteria to be logged and recorded by data logger.

B. Measurement:

18-Inch HDPE DR 17 Casing Pipe shall be measured per lineal foot as described in Section 7-09.4 of the Standard Specifications and as modified and supplemented herein.

C. Payment:

The unit price Bid per lineal foot of the 18-Inch HDPE DR 17 Casing Pipe shall constitute full payment for all Work, labor, materials, and equipment necessary to furnish and install said pipe, including but not limited to the following:

- (1) Trench excavation, furnishing, laying and jointing the pipe and fittings, providing, and installing tracer wire and tracer wire splice kits and warning tape for casing pipe, placing, and compacting CSTC pipe bedding and trench backfill with CSTC material under pavement and approved native material or CSTC material outside of paved areas, including topsoil and hydroseeding on top of pipe trench. Native material must be approved in writing by the Engineer before use.
- (2) Stockpiling and covering Engineer approved native backfill material.
- (3) Hauling and properly disposing of surplus and unsuitable excavated materials.
- (4) Welding of pipe joints.
- (5) Pavement removal, haul, and proper disposal of pavement debris.
- (6) All costs involved in maintaining and/or replacing any public or private utilities, structures, or other improvements that are disturbed or damaged by the Contractor unless specifically included in another Work item.
- (7) De-bead the inner weld on the HDPE casing pipe.
- (8) All costs involved in removing and replacing fences and mailboxes and erecting and maintaining any temporary fencing and mailboxes that may be necessary. Fences and mailboxes shall be equal to or better than the existing.
- (9) Extra depth excavation and added Work where required to place pipe under ditches, streams, utilities, under or over culverts, and on unimproved streets and easements.
- (10) Potholing existing utilities as needed to allow water main to be installed at depths to avoid conflicts & minimize fittings.
- (11) Providing and installing Ethafoam pads or sand cushions where required.

Satisfactory cleanup shall not be considered complete until disturbed road surfaces have been permanently patched and all shoulders and non-paved areas restored. Contractor is therefore encouraged to complete this Work as soon as possible in order to minimize the amount of disturbance to the neighborhood.

Work, labor, materials, and equipment necessary to install the 8-inch ductile iron pipe and other Work shown on the Drawings or specified in these Specifications and not included in this bid item description shall be included in other associated bid items. If a bid item is not provided, the Work shall be considered incidental with no direct pay.

Furnishing CSTC and CSBC shall be included in the CSTC and CSBC bid item.

Contractor shall pay all costs in connection with the initial compaction testing and shall pay all costs in connection with any retesting where initial compaction does not meet Specification requirements.

D. Materials:

Polyethylene (PE) Pressure Pipe (4 Inches and Over): Section 9-30.1(6)

Delete this section and replace with the following:

HDPE pipe and fittings shall conform to the current revision of AWWA C906, Standard for Polyethylene (PE) Pressure Pipe and Fittings, 4-inch through 65-inch for Waterworks, except as superseded and/or supplemented herein. If these specifications and AWWA C906 differ, these specifications shall govern.

Properties: HDPE pipe and fittings shall be made from HDPE having a material designation of PE4710 meeting ASTM D3350 cell classification 445574C. The material shall be listed in PPI (Plastic Pipe Institute) TR-4 with a standard grade HDB rating of 1600 psi at 73° F and shall be listed and approved for potable water use in accordance with NSF/ANSI 61.

Unless otherwise specified in the Contract Documents, all HDPE joints shall be thermally butt or electrofusion fused.

The HDPE pipe class 150, dimension ratio (DR) shall be 17 and match iron or ductile iron pipe sizing.

The pipe shall contain no recycled compound except that generated in the manufacturer's own plant from resin of the same specification from the same raw material pipe.

The Pipe shall be homogeneous throughout and free of cracks, holes, or other injurious defects. Pipe shall be uniform in density and other physical properties.

Any pipe not meeting these criteria shall be rejected.

The manufacturer shall include a print line on the pipe. This shall notate the manufacturer.

Detectable Warning Tape: Section 9-15(18)

Tracer Wire:

Tracer wire shall be AWG No. 10 stranded copper wire with high molecular weight polyethylene (HMW/PE) insulation specifically designed for direct burial in corrosive soil or water. Polyethylene insulation shall conform to ASTM D 1248, Type 1, Class C. Wires cut or damaged insulation are not acceptable and replacement of the entire wire which has been damaged will be required at the Contractor's expense. Tracer wire splice kit shall be DBR splice kit by 3-M or approved equal.

Gravel Backfill for Pipe Zone Bedding: Section 9-03.12(3)

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Pipe Zone Backfill:

Section 9-03.19

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Trench Backfill:

Section 9-03.15 or 9-03.19

Section 9-03.19 is replaced with 9-03.9(3).

E. Construction Requirements:

Work shall be as described in Sections 7-09.3 of the Standard Specifications and as modified and supplemented herein.

Pipe zone bedding, pipe zone backfill, and trench backfill requirements shall conform to the trench details shown in the Drawings. In general, these requirements, as shown, are subject to variation depending on the following inter-related factors relating to the location of the water main:

- The surface restoration required, for example: paved traffic area, paved non- traffic area such as gravel road shoulder, landscaping, lawns, or areas requiring erosion control seeding.
- The road agency (right-of-way) jurisdiction: Clallam County.
- The land agency jurisdiction for easement areas outside of the right-of-way: Clallam County.
- The proximity of nearby utilities.

- (1) Replace first sentence of the third paragraph of Section 7-09.3(5) with the following sentence:

The depth of trenching shall be such as to provide a minimum cover of 36 inches over the top of the pipe. Depth of cover at ditches shall be a minimum of 30 inches unless provided otherwise on the Drawings. Exceptions shall be allowed only with prior written approval of the Engineer.

- (2) Replace the first sentence of the first paragraph of Section 7-09.3(7) with the following sentences:

Trench excavation shall be unclassified. The Contractor shall excavate all materials encountered to the depth shown on the Drawings or as directed by the Engineer. No extra payment will be allowed for bedrock, boulders, hardpan, cemented gravel, unauthorized over-excavation, or any other material encountered. All materials shall be properly disposed of at a site obtained by the Contractor.

- (3) Replace the sixth paragraph of Section 7-09.3(7) with the following paragraphs:

Any trench exceeding four feet in depth shall be provided with adequate safety systems meeting the requirements of WISHA, Chapter 49.17 RCW, Title 296 WAC, Title N, and all regulations adopted pursuant thereto. Contractor shall have a structural Engineer review and stamp any and all shoring plans and calculations. The Contractor alone shall be responsible for Worker safety and the Owner and the Engineer assume no responsibility.

All ledge rock, boulders, and stones shall be removed to provide a minimum of four inches clearance under all portions of the pipe. All rock larger than four inches in diameter shall be disposed of at a site obtained by the Contractor and shall not be used for trench backfill.

(4) Add the following paragraphs to Section 7-09.3(7):

Do not over excavate without written authorization of Engineer. Excavation carried below the grade lines shown on the Drawings or established by the Engineer shall be replaced and compacted with import material in accordance with Section 7-09.3(8). Correct all unauthorized overexcavated areas at the Contractor's sole expense.

Remove obstructions within the trench area or adjacent thereto including, but not limited to, tree roots, stumps, abandoned piping, logs and debris of all types as specified in Section 2-02. The Engineer, if requested, may allow Contractor to make changes in the trench alignment to avoid major obstructions, if such alignment changes can be made without adversely affecting the intended function of the facility. All changes in trench alignment require the express written authorization of the Engineer. The Engineer's decision on alignment changes is final. The Contractor shall pay all additional costs resulting from such alignment changes.

The Contractor shall trench underneath existing piping and shall provide temporary supports, temporary piping to re-route existing piping around trench excavation areas and return piping to its original or similar configuration as approved by the Engineer after trench excavation and pipe installation is completed. The Contractor shall not interrupt operations of public or private utilities that rely on existing piping without prior approval and scheduling of activities with the appropriate utility.

Contractor shall pothole to verify all existing utilities in advance of pipe laying to afford the opportunity to adjust alignment and grade of the pipe to avoid any conflicts with other utilities.

(5) Add the following paragraphs to Section 7-09.3(7)A:

The Contractor shall ascertain to his own satisfaction the extent to which surface and ground water may affect the work. The Contractor shall install and maintain temporary drains and drain ditches, as required, to intercept or control and direct surface water which may affect the execution or condition of the work. Surface water runoff from the site shall not enter directly enter nearby creeks and streams.

Trenches shall be dewatered by whatever means and methods deemed most effective and efficient by the Contractor. The configuration, size, and capacity of dewatering systems and equipment shall maintain trenches free of water at all times and shall prevent bottom heave of the trench, instability of the pipe bedding or foundation, collapse of trench walls, and/or similar detrimental occurrences. The Contractor shall determine the size, capacity, and configuration of all piping and equipment required for dewatering and shall furnish, install, and maintain in operation all such piping and equipment until all construction is completed. The Contractor shall maintain the dewatering systems in place and in operation for whatever time required to properly dewater trenches prior to and during excavation and during backfilling. The Contractor shall make all arrangements for and shall pay all costs of power and maintenance necessary for operation of pumps.

All surface or groundwater controlled and/or directed by the Contractor shall be disposed of in accordance with the requirements and regulations imposed by local, state, and federal agencies and the permits.

The Contractor shall construct temporary ditches, well points, sumps, drains, etc., and provide and operate equipment adequate to keep all excavations and trenches free of water. The Contractor shall remove all water during periods when: concrete is being placed; pipe is being laid; placing of embankment material; and at other such times as required for proper, efficient and safe execution of the work and to avoid settlement or damage to the facilities being constructed or adjacent facilities or property.

The Contractor shall grade and/or properly drain the ground surface adjacent to open excavations so as to prevent surface water from running into the open excavation.

Contractor shall be responsible for collecting, pumping, and conveying groundwater or stormwater. The removal and control of water and cleaning and flushing of existing conveyance piping shall be considered incidental to the construction and shall be included in the costs of other items of the work involved in the project.

(6) Add the following new Section, Section 7-09.3(7)D – Wet Weather Earthwork:

Wet weather generally begins in mid-October and continues through May, although precipitation may occur at any time of the year. Earthwork completed in wet weather or under wet conditions shall be accomplished in small sections to minimize exposure to wet weather. Each section shall be sufficiently small so that the removal of soil and placement of backfill can be accomplished on the same day. No soil shall be left un-compacted and exposed to water. Soil that is too wet for compaction shall be removed and replaced with clean, imported backfill material. Grading and earthwork should not be accomplished during periods of heavy continuous rainfall.

(7) Add the following paragraphs to Section 7-09.3(9):

Pipe zone bedding material shall be import CSTC as shown on the Drawings. Limits of pipe bedding zone is 6-inches below and 6-inches above the pipe.

If the native material at the over-excavated trench bottom (6 inches below the specified grade) is unsuitable for foundation purposes or will have difficulty providing uniform bearing for the pipe, such material shall be removed and replaced with a minimum of 12 inches of compacted foundation material.

The bedding material shall be carried up evenly on both sides of the pipe simultaneously in approximately 6-inch layers and each layer thoroughly compacted with appropriate tools in such manner as to avoid injuring or disturbing the completed pipeline. All bedding and native material shall be stored away from the edges of excavation and off the paved roadway and shoulder.

(8) Replace Section 7-09.3(10) in its entirety with the following:

Trench backfill shall be CSTC and meet the gradation requirements in Section 9-03.9(3) of the Standard Specifications or reuse of select native materials as trench backfill above the pipe zone. Native trench backfill material, Select Native Material, is specified in Section 9-03.15. The requirements of Section 9-03.15 shall be revised to

read "Trench backfill shall be excavated material free of wood waste, debris, clods or rocks greater than 3 inches in any dimension and shall be able to meet minimum compaction requirements. The native material may require moisture conditioning to meet the specified compaction requirements. Moisture conditioning shall be considered incidental".

If selective native material is not available, CSTC material shall be used.

Prior to placement and compaction, trench backfill should be moisture conditioned to within 2 percent of the optimum moisture content. Trench backfill material shall be placed in 6-inch maximum horizontal lifts and compacted. The Contractor must place 2 feet of material over the pipe before compacting with a "hoe-pack" attachment or other heavy-duty compaction device. Each lift must be compacted as required before placing subsequent layers.

All unused native material shall be hauled and disposed of off-site. No disposal site has been provided for the unused native material. The Contractor shall be responsible for obtaining a disposal site, and for paying any associated fees. The Contractor shall provide the Engineer with copies of any applicable permits or agreements related to the disposal of surplus materials prior to removing the materials from the construction site. The same requirements apply to wasting of unsuitable materials.

The casing pipe shall be installed with continuous tracer tape as shown on the Drawings. The marker shall be plastic non-biodegradable, metal core or backing marked water 2-inch-wide minimum, which can be detected by a standard metal detector. Tape shall be Terra Tape "D" or approved equal. In addition to tracer tape, install 14-gauge heavy duty direct bury coated copper wire (PAIGE "UF" single conductor or equal), wrapped around the pipe, brought up and tied off at valve body. All wire connections shall use wire nuts and a DBR Splice Kit, manufactured by 3-M or approved equal. All locator wire for service pipe shall be connected to the locator wire on the water main.

After backfilling and compaction, an immediate cold or hot mix patch shall be placed and maintained in a manner acceptable to the governing agency's inspector until replaced with a permanent hot asphalt mix patch.

(9) Replace Section 7-09.3(11) with the following paragraphs:

All trench backfill shall be mechanically compacted to at least 95% of maximum density within the right of way and in all areas (paved and unpaved) where streets, roadway shoulders, driveways, sidewalks, or parking lots will be constructed or reconstructed over the trench except for trenches over 8 feet in depth. When the trench depth exceeds 8 feet, trench backfill up to 4 feet from the top of the trench may be mechanically compacted to at least 90% of the maximum density. The remaining top 4 feet of the trench shall then be mechanically compacted to at least 95% of the maximum density. In unpaved areas and other areas not subject to vehicular traffic, trench backfill from the pipe to within 3 feet of the surface shall be compacted to at least 90% of the maximum density. The upper 3 feet shall be compacted to at least 95% of the maximum density. All densities shall be determined by testing per the Modified Proctor Method, ASTM D1557.

A minimum of one density test shall be taken within every 500 feet of trench length and at depths up to 50% of trench depth outside of the roadway prism and every 100 feet of trench length and at depths up to 50% of trench depth for trenches inside of the roadway prism, or as directed by the Owner or governing road agency. Compaction of laterals or service line trenches shall be tested where directed by the Owner or governing road agency. The Engineer reserves the right to request a compaction test at any time on the backfill material.

Backfill shall be placed in uniform loose layers no more than 6-inches thick and mechanically compacted as specified. In any location where native backfill was approved in writing by the Engineer, and the specified compaction cannot be achieved with native backfill, the top 4 feet shall be replaced and compacted to 95% of the maximum density with Crushed Surfacing Top or Base Course as specified in Section 9-03.9(3) of the Standard Specifications. The Engineer reserves the right to request a compaction test at any time on the backfill material.

The Owner will secure a testing company to conduct compaction tests. The Contractor shall pay for all compaction tests taken after the initial tests due to improper compaction.

(10) Add the following paragraphs to Section 7-09.3(12):

Pipe shall not be strung out along a trench or shoulder of a road in a manner which causes a safety hazard to the public.

Rubber gaskets shall be stored in a cool, dark place to prevent damage from the direct rays of the sun.

All pipes shall be laid with one piece of 10-gauge or thicker insulated copper wire. The locating wire shall be situated immediately adjacent to the pipe and connected to all valves. Locating wire shall also connect to all service lines and meters.

Install warning tape above water line as shown on the Drawings.

Plugs shall be used to seal installed water mains when they are to be left for any period of time, including lunch breaks, coffee break, overnight, etc. Material contaminated by petroleum products or questionable chemicals will be rejected. No trench water shall be allowed to enter installed water mains.

(11) Add the following paragraph to Section 7-09.3(20):

Locator tape will not be used as an alternative to wire but will be used in addition to the wire. Install warning tape continuously as shown on the Drawings.

HDPE Pipe Installation:

Since no more than two HDPE pipe joints will be required for the casing pipe, joint fusion may be via electrofusion or butt fusion. Contractor shall remove the inside weld bead from the HDPE casing pipe.

References:

ASTM F1055	Standard Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene (PEX) Pipe and Tubing
PPI (2006)	Plastic Pipe Institute Handbook of Polyethylene Piping
ASTM F2620	Standard Practice for Heat Fusion Joining of Polyethylene Pipe and Fittings
ISO 12176-1 and 2	Equipment for Fusion and Electrofusion Joining Polyethylene Systems

Contractor HDPE Pipe Qualifications:

The Contractor shall have a minimum of 3 projects involving the installation of HDPE pipe, 12-inches or larger using electrofusion or butt fusion. The experience shall match the pipe joining method to be used by the Contractor.

Fusion Technician Qualifications:

The Contractor shall employ experienced Fusion Technicians qualified to fuse high-density polyethylene (HDPE) of the type and size being used. Qualifications shall be current as of the actual date of fusion performance on the project. Only qualified Fusion Technicians approved by the Owner shall perform the actual joint fusion work.

Delivery and Off-Loading:

- A. Pipe shall be loaded, off-loaded, and otherwise handled in accordance with pipe manufacturer's recommendations.
- B. All pipes shall be bundled or packaged in such a manner as to provide adequate protection of the ends during transportation to the site. Any pipe damaged in shipment shall be replaced.
- C. Each pipe shipment shall be checked for proper pipe size, color and type.

Fusion Process:

A. General:

- 1. Pipe shall be handled in a safe and non-destructive manner before, during, and after the fusion process and in accordance with this specification and pipe supplier's recommendations.
- 2. Pipe shall be fused by qualified Fusion Technicians, as documented by the pipe supplier or Contractor. Training and experience records for qualified fusion technicians shall be submitted to Owner.

3. Each joint fusion shall be recorded and logged by an electronic monitoring device (data logger) affixed to the fusion machine. Joint data shall be submitted as part of the As-Recorded information, in accordance with this specification.
4. All fusion equipment, whether new or used, rented or owned, shall comply with the requirements of ISO 12176-1 and 2.
5. Fusion quality can be adversely impacted if the welding is conducted in conditions that may result in contamination of the welding surface, such as moisture, dirt, dust, and/or potential contaminants from the site. The Contractor shall have the appropriate controls to manage these factors at the site. Also, the Contractor shall clean the surface of the pipe just prior to welding with a pipe manufacturer's approved pipe surface wipe. The solvent shall be fully evaporated prior to joint assembly. The use of clean rags and cleaning solution is not recommended.
6. Welds shall be conducted within the specified ambient temperature range per ASTM F1055 or ISO 12176-2. The pipe surfaces to be welded shall be shaded from direct sun light prior to welding.
7. Pipe ends for welding shall be cut square and the ends checked for correct ovality. Rounding clamps shall be used to correct the ovality of the pipe ends.
8. Generators used for power supply shall be calibrated and services within six (6) months prior to welding.

B. Butt Fusion:

1. Only appropriately sized and outfitted fusion machines that have been approved by the pipe supplier shall be used for the fusion process. Fusion machines must incorporate the following properties, including the following elements:
 - a) Heat Plate - Heat plates shall be in good condition with no deep gouges or scratches within the pipe circle being fused. Plates shall be clean and free of any contamination. Heater controls shall properly function, and cord and plug shall be in good condition. The appropriately sized heat plate shall be capable of maintaining a uniform and consistent heat profile and temperature for the size of pipe being fused, per the pipe supplier's recommendations.
 - b) Carriage – Carriage shall travel smoothly with no binding at less than 50 psi. Jaws shall be in good condition with proper inserts for the pipe size being fused. Insert pins shall be installed with no interference to carriage travel.
 - c) General Machine - Overview of machine body shall yield no obvious defects, missing parts, or potential safety issues during fusion.

- d) Datalogger - The current version of the pipe supplier's recommended and compatible software shall be used. Protective case shall be utilized for the handheld wireless portion of the unit. Datalogger operations and maintenance manual shall be with the unit at all times. If fusing for extended periods of time, an independent 110V power source shall be available to extend battery life.
2. Other equipment specifically required for the fusion process shall include the following:
- a) Pipe rollers shall be used for support of pipe to either side of the machine.
 - b) A weather protection canopy that allows full machine motion of the heat plate, fusion assembly and carriage shall be provided for fusion in inclement and /or windy weather.
 - c) Fusion machine operations and maintenance manual shall be kept with the fusion machine at all times.
 - d) Facing blades specifically designed for cutting the pipe being installed.
3. Joint Recording:
- a) Each fusion joint shall be recorded and logged by an electronic monitoring device (data logger) connected to the fusion machine. The fusion data logging and joint report shall be generated by software developed specifically for the butt-fusion of pipe being joined. The software shall register and/or record the parameters required by the manufacturer and these specifications. Data not logged by the data logger shall be logged manually and be included in the Fusion Technician's joint report.
 - b) Fusion Reports:
 - 1) Submit a fusion report for each fusion joint performed on the project, including joints that were rejected. Specific requirements of the Fusion Technician's joint report shall include:
 - (1) Pipe Size and Dimensions.
 - (2) Machine Size.
 - (3) Fusion Technician Identification.
 - (4) Job Identification.
 - (5) Fusion Number.
 - (6) Fusion, Heating, and Drag Pressure Settings.
 - (7) Heat Plate Temperature.
 - (8) Time Stamp.

(9) Heating and Cool Down Time of Fusion.

(10) Ambient Temperature.

C. Electrofusion:

1. Only appropriately sized, and outfitted electrofusion machines that have been approved by the pipe supplier shall be used for the fusion process. Electrofusion equipment and tools shall incorporate, at a minimum, the following:
 - a) Electrofusion Processor – The processor features, at a minimum, are:
 - 1) Provide the voltage and amperage required to properly fuse HDPE pipe ends together.
 - 2) Handheld bar code scanner.
 - 3) Supplied with adequate size connection pins.
 - 4) 120V 30-amp twist lock plug and adapter for standard 120V outlets.
 - 5) Three welding modes of operation – barcode scanner, manual entry, and manual barcode entry.
 - 6) Built-in data logger with internal memory.
 - 7) Capable of scanning and recording traceability barcodes.
 - 8) Two-year minimum calibration interval.
 - 9) 40mm leads with 4.7mm adapters.
 - 10) Must be serviced within 6 months prior to use.
 - b) Mechanical Scraper Tool – The oxidized material that forms on the pipe surface shall be completely removed prior to welding. The scraper tool shall evenly remove the oxidized layer around the complete circumference and over the total insertion depth of the electrofusion fitting or coupler. The scrap depth shall be per the welding standards and/or pipe manufacturer's recommendations. Calipers shall be used to check peel depths regularly.
 - c) Electrofusion Coupler – Coupler shall be adequately sized for the pipe to be welded and provide the proper heating source based on the power source used.

18 BID ITEM 17 - 4-INCH RIGID NON-METALLIC CONDUIT (PVC SCH. 40)

A. Description:

This Work is as described in Section 7-09 of the Standard Specifications and as modified and supplemented herein.

Work shall comply with the Clallam County road construction standards. Also, Work shall comply with the conditions of all permits obtained for this project, including time-of-day restrictions. No road closures shall be approved.

(1) Pipe and Material Product Data:

Submit product data and pipe supplier data indicating conformance with this specification and applicable standards, including written documentation regarding any intended variance from this specification and applicable standards. This will include experience of pipe supplier by years and number of projects; warranty information; and independent laboratory testing certification.

B. Measurement:

4-Inch Rigid Non-Metallic Conduit (RNC) (PVC Sch. 40) shall be measured per lineal foot as described in Section 7-09.4 of the Standard Specifications and as modified and supplemented herein.

C. Payment:

The unit price Bid per lineal foot of the 4-Inch Rigid Non-Metallic Conduit (PVC Sch. 40) shall constitute full payment for all Work, labor, materials, and equipment necessary to furnish and install said pipe, including but not limited to the following:

- (2) Trench excavation, furnishing, laying and jointing the pipe and fittings, providing, and installing tracer wire and tracer wire splice kit and warning tape for RNC PVC conduit, placing, and compacting CSTC pipe bedding and trench backfill with approved native material or CSTC material, including topsoil and hydroseeding on top of pipe trench or CSBC or CSTC material at driveways and roads. Native material for trench zone backfill must be approved in writing by the Engineer before use.
- (3) Stockpiling and covering Engineer approved native backfill material.
- (4) Hauling and properly disposing of surplus and unsuitable excavated materials.
- (5) Pavement removal, haul, and proper disposal of pavement debris.
- (6) All costs involved in maintaining and/or replacing any public or private utilities, structures, or other improvements that are disturbed or damaged by the Contractor unless specifically included in another Work item.
- (7) All costs involved in removing and replacing fences and mailboxes and erecting and maintaining any temporary fencing and mailboxes that may be necessary. Fences and mailboxes shall be equal to or better than the existing.
- (8) Extra depth excavation and added Work where required to place pipe under ditches, streams, utilities, under or over culverts, and on unimproved streets and easements.
- (9) Potholing existing utilities as needed to allow RNC conduit to be installed at depths to avoid conflicts & minimize fittings.

(10) Providing and installing Ethafoam pads or sand cushions where required.

Satisfactory cleanup shall not be considered complete until disturbed road surfaces have been permanently patched and all shoulders and non-paved areas restored. Contractor is therefore encouraged to complete this Work as soon as possible in order to minimize the amount of disturbance to the roadways and neighborhood.

Work, labor, materials, and equipment necessary to install the 4-inch RNC conduit (PVC Sch. 40) and other Work shown on the Drawings or specified in these Specifications and not included in this bid item description shall be included in other associated bid items. If a bid item is not provided, the Work shall be considered incidental with no direct pay.

Furnishing CSTC and CSBC shall be included in the CSTC and CSBC bid item.

Contractor shall pay all costs in connection with the initial compaction testing and shall pay all costs in connection with any retesting where initial compaction does not meet Specification requirements.

D. Materials:

Rigid Non-Metallic Conduit (PVC Sch. 40): Section 9-29.1(5)B

RNC (PVC Sch. 40) shall comply with NEMA TC 2 and UL 651. The RNC (PVC Sch. 40) shall be Type EPC-40 PVC. Approved manufacturers are Atkore: Allied Tube and Conduit, Ridgeline Pipe manufacturing, Cantex, or Prime Conduit.

Detectable Warning Tape: Section 9-15(18)

Warning tape shall be 6 inches wide with tracer wire. The tape shall be red and labeled "Warning electrical."

Tracer Wire:

Tracer wire shall be AWG No. 10 stranded copper wire with high molecular weight polyethylene (HMW/PE) insulation specifically designed for direct burial in corrosive soil or water. Polyethylene insulation shall conform to ASTM D 1248, Type 1, Class C. Wires cut or damaged insulation are not acceptable and replacement of the entire wire which has been damaged will be required at the Contractor's expense. Tracer wire splice kit shall be DBR Splice Kit by 3-M or approved equal.

Gravel Backfill for Pipe Zone Bedding: Section 9-03.12(3)

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Pipe Zone Backfill: Section 9-03.19

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Trench Backfill: Section 9-03.15 or 9-03.19

Section 9-03.19 is replaced with 9-03.9(3). Section 9-03.15 still applies.

E. Construction Requirements:

Work shall be as described in Sections 7-09.3 of the Standard Specifications and as modified and supplemented herein.

(1) Add the following paragraphs to Section 7-09.3(1):

Pipe zone bedding, pipe zone backfill, and trench backfill requirements shall conform to the trench details shown in the Drawings. In general, these requirements, as shown, are subject to variation depending on the following inter-related factors relating to the location of the water main:

- The surface restoration required, for example: paved traffic area, paved non-traffic area such as gravel road shoulder, landscaping, lawns, or areas requiring erosion control seeding.
- The road agency (right-of-way) jurisdiction: Clallam County.
- The land agency jurisdiction for easement areas outside of the right-of-way: Clallam County.
- The proximity of nearby utilities.

(2) Replace the last sentence of Section 7-09.3(3) with the following sentence:

All material from clearing and grubbing shall be hauled to an approved waste disposal site obtained by the Contractor. No onsite burning shall be allowed.

(3) Replace first sentence of the third paragraph of Section 7-09.3(5) with the following sentence:

The depth of trenching shall be such as to provide a minimum cover of 30 inches over the top of the conduit. Depth of cover at ditches shall be a minimum of 30 inches unless provided otherwise on the Drawings. Exceptions shall be allowed only with prior written approval of the Engineer.

(4) Replace the first sentence of the first paragraph of Section 7-09.3(7) with the following sentences:

Trench excavation shall be unclassified. The Contractor shall excavate all materials encountered to the depth shown on the Drawings or as directed by the Engineer. No extra payment will be allowed for bedrock, boulders, hardpan, cemented gravel, unauthorized over-excavation, or any other material encountered. All materials shall be properly disposed of at a site obtained by the Contractor.

(5) Replace the sixth paragraph of Section 7-09.3(7) with the following paragraphs:

Any trench exceeding four feet in depth shall be provided with adequate safety systems meeting the requirements of WISHA, Chapter 49.17 RCW, Title 296 WAC, Title N, and all regulations adopted pursuant thereto. Contractor shall have a structural Engineer review and stamp any and all shoring plans and calculations. The Contractor alone shall be responsible for Worker safety and the Owner and the Engineer assume no responsibility.

All ledge rock, boulders, and stones shall be removed to provide a minimum of six inches clearance under all portions of the pipe. All rock larger than four inches in diameter shall be disposed of at a site obtained by the Contractor and shall not be used for trench backfill.

(6) Add the following paragraphs to Section 7-09.3(7):

Do not over excavate without written authorization of Engineer. Excavation carried below the grade lines shown on the Drawings or established by the Engineer shall be replaced and compacted with import material in accordance with Section 7-09.3(8). Correct all unauthorized overexcavated areas at the Contractor's sole expense.

Remove obstructions within the trench area or adjacent thereto including, but not limited to, tree roots, stumps, abandoned piping, logs and debris of all types as specified in Section 2-02 . The Engineer, if requested, may allow Contractor to make changes in the trench alignment to avoid major obstructions, if such alignment changes can be made without adversely affecting the intended function of the facility. All changes in trench alignment require the express written authorization of the Engineer. The Engineer's decision on alignment changes is final. The Contractor shall pay all additional costs resulting from such alignment changes.

The Contractor shall trench underneath existing piping and shall provide temporary supports, temporary piping to re-route existing piping around trench excavation areas and return piping to its original or similar configuration as approved by the Engineer after trench excavation and pipe installation is completed. The Contractor shall not interrupt operations of public or private utilities that rely on existing piping without prior approval and scheduling of activities with the appropriate utility.

Contractor shall pothole to verify all existing utilities in advance of pipe laying to afford the opportunity to adjust alignment and grade of the pipe to avoid any conflicts with other utilities.

(7) Add the following paragraphs to Section 7-09.3(7)A:

The Contractor shall ascertain to his own satisfaction the extent to which surface and ground water may affect the work. The Contractor shall install and maintain temporary drains and drain ditches, as required, to intercept or control and direct surface water which may affect the execution or condition of the work. Surface water runoff from the site shall not enter directly enter nearby creeks and streams.

Trenches shall be dewatered by whatever means and methods deemed most effective and efficient by the Contractor. The configuration, size, and capacity of dewatering systems and equipment shall maintain trenches free of water at all times and shall prevent bottom heave of the trench, instability of the pipe bedding or foundation, collapse of trench walls, and/or similar detrimental occurrences. The Contractor shall determine the size, capacity, and configuration of all piping and equipment required for dewatering and shall furnish, install, and maintain in operation all such piping and equipment until all construction is completed. The Contractor shall maintain the dewatering systems in place and in operation for whatever time required to properly dewater trenches prior to and during excavation and during backfilling. The Contractor shall make all arrangements for and shall pay all costs of power and maintenance necessary for operation of pumps.

All surface or groundwater controlled and/or directed by the Contractor shall be disposed of in accordance with the requirements and regulations imposed by local, state, and federal agencies and the permits.

The Contractor shall construct temporary ditches, well points, sumps, drains, etc., and provide and operate equipment adequate to keep all excavations and trenches free of water. The Contractor shall remove all water during periods when: concrete is being placed; pipe is being laid; placing of embankment material; and at other such times as required for proper, efficient and safe execution of the work and to avoid settlement or damage to the facilities being constructed or adjacent facilities or property.

The Contractor shall grade and/or properly drain the ground surface adjacent to open excavations so as to prevent surface water from running into the open excavation.

Contractor shall be responsible for collecting, pumping, and conveying groundwater or stormwater. The removal and control of water and cleaning and flushing of existing conveyance piping shall be considered incidental to the construction and shall be included in the costs of other items of the work involved in the project.

(8) Add the following new Section, Section 7-09.3(7)D – Wet Weather Earthwork:

Wet weather generally begins in mid-October and continues through May, although precipitation may occur at any time of the year. Earthwork completed in wet weather or under wet conditions shall be accomplished in small sections to minimize exposure to wet weather. Each section shall be sufficiently small so that the removal of soil and placement of backfill can be accomplished on the same day. No soil shall be left un-compacted and exposed to water. Soil that is too wet for compaction shall be removed and replaced with clean, imported backfill material. Grading and earthwork should not be accomplished during periods of heavy continuous rainfall.

(9) Add the following paragraphs to Section 7-09.3(9):

Pipe zone bedding material shall be import CSTC as shown on the Drawings. No native material shall be used for pipe zone bedding. Limits of pipe bedding zone is 6-inches below and 6-inches above the pipe.

If the native material at the over-excavated trench bottom (6 inches below the specified grade) is unsuitable for foundation purposes or will have difficulty providing uniform bearing for the pipe, such material shall be removed and replaced with a minimum of 12 inches of compacted foundation material.

The bedding material shall be carried up evenly on both sides of the pipe simultaneously in approximately 6-inch layers and each layer thoroughly compacted with appropriate tools in such manner as to avoid injuring or disturbing the completed pipeline. All bedding and native material shall be stored away from the edges of excavation and off the paved roadway and shoulder.

(10) Replace Section 7-09.3(10) in its entirety with the following:

Trench backfill shall be CSTC material and meet the gradation requirements in Section 9-03.9(3) of the Standard Specifications or reuse of select native materials as trench backfill above the pipe zone. Native trench backfill material, Select Native

Material, is specified in Section 9-03.15 . The requirements of Section 9-03.15 shall be revised to read "Trench backfill shall be excavated material free of wood waste, debris, clods or rocks greater than 4 inches in any dimension and shall be able to meet minimum compaction requirements. The native material may require moisture conditioning to meet the specified compaction requirements. Moisture conditioning shall be considered incidental".

If selective native material is not available, CSTC material shall be used.

Prior to placement and compaction, trench backfill should be moisture conditioned to within 2 percent of the optimum moisture content. Trench backfill material shall be placed in 6-inch maximum horizontal lifts and compacted. The Contractor must place 2 feet of material over the pipe before compacting with a "hoe-pack" attachment or other heavy-duty compaction device. Each lift must be compacted as required before placing subsequent layers.

All unused native material shall be hauled and disposed of off-site. No disposal site has been provided for the unused native material. The Contractor shall be responsible for obtaining a disposal site, and for paying any associated fees. The Contractor shall provide the Engineer with copies of any applicable permits or agreements related to the disposal of surplus materials prior to removing the materials from the construction site. The same requirements apply to wasting of unsuitable materials.

The PVC conduit shall be installed with continuous tracer tape as shown on the Drawings. The marker shall be plastic non-biodegradable, metal core or backing marked water 2-inch-wide minimum, which can be detected by a standard metal detector. Tape shall be installed 12 inches above conduit. In addition to tracer tape, install 10-gauge heavy duty direct bury coated copper wire (PAIGE "UF" single conductor or equal), wrapped around the pipe. All wire connections shall use wire nuts and a DBR Splice Kit, manufactured by 3-M or approved equal.

After backfilling and compaction, an immediate cold or hot asphalt mix patch shall be placed and maintained in a manner acceptable to the governing agency's inspector until replaced with a permanent hot asphalt mix patch.

(11) Replace Section 7-09.3(11) with the following paragraphs:

All trench backfill shall be mechanically compacted to at least 95% of maximum density within the right of way and in all areas (paved and unpaved) where streets, roadway shoulders, driveways, sidewalks, or parking lots will be constructed or reconstructed over the trench except for trenches over 8 feet in depth. When the trench depth exceeds 8 feet, trench backfill up to 4 feet from the top of the trench may be mechanically compacted to at least 90% of the maximum density. The remaining top 4 feet of the trench shall then be mechanically compacted to at least 95% of the maximum density. In unpaved areas and other areas not subject to vehicular traffic, trench backfill from the pipe to within 3 feet of the surface shall be compacted to at least 90% of the maximum density. The upper 3 feet shall be compacted to at least 95% of the maximum density. All densities shall be determined by testing per the Modified Proctor Method, ASTM D1557.

A minimum of one density test shall be taken within every 500 feet of trench length and at depths up to 50% of trench depth outside of the roadway prism and every 100 feet of trench length and at depths up to 50% of trench depth for trenches inside of the roadway prism, or as directed by the Owner or governing road agency. Compaction of laterals or service line trenches shall be tested where directed by the Owner or governing road agency. The Engineer reserves the right to request a compaction test at any time on the backfill material.

Backfill shall be placed in uniform loose layers no more than 6-inches thick and mechanically compacted as specified. In any location where native backfill was approved in writing by the Engineer, and the specified compaction cannot be achieved with native backfill, the top 4 feet shall be replaced and compacted to 95% of the maximum density with Crushed Surfacing Top or Base Course as specified in Section 9-03.9(3) of the Standard Specifications. The Engineer reserves the right to request a compaction test at any time on the backfill material.

The Owner will secure a testing company to conduct compaction tests. The Contractor shall pay for all compaction tests taken after the initial tests due to improper compaction.

(12) Add the following paragraph to Section 7-09.3(20):

Locator tape will not be used as an alternative to wire but will be used in addition to the wire. Install warning tape continuously above all water line pipes as shown on the Drawings.

19. BID ITEMS 18 AND 19 - GATE VALVE, RESILIENT WEDGE WITH VALVE BOX, 6-, AND 8-INCH

A. Description:

This Work shall be as described in Section 7-12.1 of the Standard Specifications and as modified and supplemented in these Specifications.

Contractor shall mark anticipated locations of valves in the field using paint or driven nails a minimum of two (2) working days in advance of construction. Markings shall be refreshed as necessary.

B. Measurement:

6-inch, and 8-Inch Gate Valve, Resilient Wedge with Valve Box shall be measured per each for each type and size permanently installed.

Valve boxes and marker posts for valves shall be included in this Work item.

C. Payment:

The unit price Bid for each "6-Inch, and 8-Inch Gate Valve, Resilient Wedge with Valve Box" shall constitute full compensation for all Work, labor, materials, equipment, and tools necessary to furnish and install the valve, valve box, valve extensions, lids, marker post, and concrete pad around valve box covers located in any paved surfaces, complete in place, including but not limited to, jointing, blocking, and painting.

Excavation, backfill with approved backfill material, compaction of backfill, testing and disinfecting shall be included in the Work for the pipe.

D. Materials:

The materials shall be as described in Section 7-12.2 of the Standard Specifications and as modified and supplemented herein.

(1) Delete the first table in Section 7-12.2.

Gate valves shall be of the size and type indicated on the Drawings with bronze-mounted resilient seat wedging devices and shall meet the following requirements:

- Gate valves shall be Mueller or approved equal, conforming to AWWA C509-01 or C515-01 and C550-01.
- Manufacturer shall provide catalog data, net weight, and assembly drawings of all valves to be purchased and installed for this Project as well as an affidavit of compliance.
- Valve shall have an O-ring stuffing box.
- All flange faces shall be machined and drilled to straddle the vertical centerline.
- Lock down set screws shall not be used on valve operating nut extensions.
- All valves shall have a water working pressure rating equivalent to the full rated pressure of the pipe on which they are installed, with a minimum 2:1 safety factor in any nominal pipe size.

Valve boxes shall be cast iron, two piece, rated for H-20 traffic loading with deep skirt lid marked "WATER" equal to Olympic Foundry #950, with 6-inch diameter casing cut to length. All boxes shall be adjusted to match the finish grade at the valve location. All valve box covers shall be painted blue. Orient the valve boxes so the "ears" are set the same as the pipe direction.

Valve marker posts shall be set at all valves or valve clusters, except hydrant valves. and installed with each valve unless the valve is located in pavement or inside a vault. Marker posts shall be concrete, 5 x 4 inches on one end and 6 x 6 inches on the other end, 42- inch length, and shall be reinforced with one 3/8 inch x 39 inch bar of reinforcing steel. Markers shall be placed at the edge of the right-of-way opposite the valve or as directed by the Owner with 18 inches of the post exposed above grade. The exposed portion shall be painted with two coats of blue exterior concrete paint with the size of the valve and the distance in feet and inches to the valve stenciled with black paint on the face of the post using a stencil that will produce letters two inches high.

E. Construction Requirements:

Work shall be as described in Section 7-12.3 of the Standard Specifications and as modified and supplemented herein.

Mark anticipated valve locations in advance of construction as specified in A. Description above.

Contractor shall provide three certified copies of performance tests, as specified in Section 6 of AWWA C509-01, to the Engineers for review.

Valve end connections may be flanged, threaded, mechanical joint, or push on as shown on the Drawings.

Valve stem extensions with plate welded to operating nut shall be required where operating nut is more than four feet below the surface. The valve stem extension top shall be installed within 18-inches to 24-inches below finish grade. Valve stem extensions shall have a 2-inch square operating nut and self-centering rock-plate support. Lock down set screws shall not be used on valve operating nut extensions.

All valve boxes shall be adjusted to match the finish grade at the valve location. Valve covers shall be painted blue for water utilities, and green for sewer utilities. Orient the valve boxes so that the "ears" are set the same as the pipe direction.

Valve marker posts shall be furnished and installed with each valve unless the valve is located in the pavement or in a vault or manhole. No marker post is required for valves located in the pavement or in a vault or manhole.

Valve marker posts shall be placed at the edge of the right of way opposite the valve or as directed by the Engineer with 18 inches of the post exposed above grade.

The exposed portion of the valve marker posts shall be painted white with two coats of white exterior masonry paint. The size of the valve and the distance in feet to the valve shall be stenciled with black paint on the face of the post, using a stencil which will produce a numeral two inches in height.

20. BID ITEM 20 - CONNECTION TO EXISTING WATER SYSTEM

A. Description:

Work shall involve connecting the new water main to the existing water main at Sta 82+15 (intersection of Carlsborg Road and Childers Lane).

Ductile iron water main spools, as shown and as required at a connection, shall be incidental to the Bid item.

B. Measurement:

Connection to Existing Water System shall be measured per each.

C. Payment:

The unit price Bid per each for "Connection to Existing Water System" shall constitute full compensation for all Work, labor, materials, and equipment necessary to make a proper connection or cut-in of the new water main to the existing water system. This shall include, but shall not be limited to, the following items:

- (1) Coordination with the Owner for shutdown of existing system to make the connection(s) or cut-in(s).
- (2) Verifying inverts of existing utilities and fittings required for the connection prior to construction.

- (3) Trench excavation, furnishing, placing, and compacting pipe bedding and trench backfill with approved native material or crushed surfacing base course material, including topsoil and hydroseeding on top of pipe trench or CSTC material at driveways and roads. Native material must be approved in writing by the Engineer before use.
- (4) Replacing existing concrete blocking with new concrete blocking on all fittings that are disturbed by the connection and on all new fittings.
- (5) Installing any temporary blocking necessary to make the connection.
- (6) Furnishing and installing pipe spools, couplings, fittings, and restraint devices as necessary.
- (7) Temporary air relief valves and blow-offs are necessary to aid in filling and draining the existing and proposed pipes.
- (8) Properly removing and disposing in a legal and safe manner of any existing water main and/or fittings that cannot be abandoned in place.

Permanent valves and fittings indicated at existing system connections shall be paid under separate Work items.

D. Materials:

Materials shall be as shown on the Drawings and as modified and supplemented herein.

E. Construction Requirements:

Work shall be as described in Section 7-09.3(19)A of the Standard Specifications and as modified and supplemented herein.

- (1) Replace the last sentence in the sixth paragraph of Section 7-09.3(19)A with the following sentence:

Contractor shall not operate any valve of the existing water system at any time, without prior approval of the Owner.

- (2) Delete the last paragraph of Section 7-09.3(19)A.

The Contractor shall notify the Owner's field representative and other utilities at least 48 hours in advance of any construction and make the necessary arrangements with the Owner's field representative for the connection to the existing water main. The Contractor shall not operate any gate valve of the water system before, during or after construction without prior approval of the Owner. The Contractor shall furnish all material, equipment and labor necessary for making the connection under the supervision of the Owner. The 48-hour notice requirement shall not include Saturdays, Sundays, and holidays.

Work shall not be started until all the material, equipment and labor necessary to properly complete work is assembled on the site. Once work is started on a connection, it shall proceed continuously without interruption and as rapidly as possible until the connection is completed. Before ordering materials for any connection to an existing water main, Contractor shall excavate the water main and

verify outside diameter of all pipes for determination of types of fittings to be used. The Contractor shall coordinate all work with the Owner's field representative.

Contractor shall verify the location and depth of all existing utilities affected by the connection prior to the start of any of this Work. Contractor shall pothole and verify all fittings prior to scheduling a shutdown of the existing system for connections.

If the connection to the existing water system involves turning off the utility, Contractor shall notify the Owner of the time and duration of the shutdown at least 48 hours prior to the shutdown. Contractor shall be responsible for any damage caused to any customer's system due to the shutdown and subsequent recharging of the system. Contractor shall not operate any valve of the water system, at any time, without prior approval of the Owner. Owner may require assistance from Contractor in notification of customers.

The Contractor shall have all required equipment and materials at the site prior to starting any Work involving a connection to the existing system. If the connection or abandonment of the existing main requires any existing pipe to be removed from the trench, then said pipe shall be properly removed and disposed of in a legal and safe manner.

21. BID ITEM 21 - FIRE HYDRANT ASSEMBLY

A. Description:

Work under this Item shall be as described in Section 7-14.1 of the Standard Specifications, as shown on the Drawings, and as modified and supplemented herein.

Contractor shall install fire hydrant assemblies at locations shown on Drawings.

B. Measurement:

Fire Hydrant Assembly shall be measured on a per each basis.

C. Payment:

The unit price Bid for each "Fire Hydrant Assembly" shall constitute full compensation for all Work, labor, materials, and equipment necessary to furnish and install the fire hydrant complete in place from the water main to the hydrant, including but not limited to, excavation, pipe and fittings associated with the assembly, main-line tee, gate valve, ductile iron pipe spools, ductile iron reducer, Meg-a-lug followers, hydrant, hydrant riser, Storz coupling, concrete blocks, asphaltic felt or filter fabric, washed gravel, concrete guard posts, backfill with approved backfill material, compaction and compaction testing of backfill, painting, testing and disinfecting, plugging casing pipe ends with non-shrink grout, and furnishing and installing a blue reflective hydrant marker within the pavement. Fittings and pipe spools needed to pass under or over the existing perforated PVC irrigation line shall be included in this pay item. Fire hydrant assembly shall also include, but not be limited to, any grading, culvert or rockery construction necessary to provide a five-foot radius level area around the hydrant.

D. Materials:

Materials shall be as described in Section 7-14.2 of the Standard Specifications, as shown on the Drawings, and as modified and supplemented herein.

Fire hydrants shall be a compression-type hydrant with a minimum of 5¼ inch main valve opening, two 2½ inch hose connections with National Standard (N.S.T.) hose thread, and one 4-inch pumper connection with P.C.T. thread, and ¾ -inch pentagon operating nut.

Hydrant shall close with water pressure and be of traffic type with designed replaceable break points. Hydrant shall allow full 360° rotation by loosening flange bolts and turning nozzle screw.

The pumper connection shall be equipped with a 5-inch Storz adapter meeting or exceeding the following specifications:

- (1) Storz adapter to be forged and/or extruded 6061-T6 aluminum alloy, hardcoat anodized.
- (2) Threaded portion to have no lugs and two set screws 180° apart.
- (3) Storz face to be metal with no gasket to weather.
- (4) Storz cap shall be forged and/or extruded 6061-T6 aluminum alloy with anodized hardcoat and synthetic molded rubber gasket. Storz cap shall be attached to hydrant adapter with 1/8-inch coated S.S. aircraft cable.
- (5) Cap shall be connected and disconnected with Storz wrenches only. Torque to be sufficient so cap cannot be removed by hand.
- (6) Storz adapter shall be attached to hydrant with 1/8 inch stainless steel cable.

Hydrants shall be furnished with a 6-inch mechanical joint outlet, two MEG-ALUG followers, a 6-inch auxiliary gate valve with valve box, and a riser to suit the trench depth at each installation. The gate valve shall be flanged to the main tee. Hydrant shall also be furnished with a break-off flange on the barrel and a break-off coupling for the stem. Hydrants shall conform to Owner's standards.

Fire hydrants shall be equipped with steamer and hose port threads in accordance with the requirements of the local fire protection district.

Fire hydrants shall be Mueller Centurion or approved equal.

Nozzles shall be fitted with renewable bronze nipple locked in place. Maintain 5 feet clearance between hydrant and property or easement line.

Blue reflective markers shall be Type 1 as described in Section 9-21.1 of the Standard Specifications.

E. Construction Requirements:

Mark anticipated fire hydrant locations in advance of construction as specified in A. Description above.

Work shall be as described in Section 7-14.3 of the Standard Specifications, as per the Owner's fire hydrant detail shown in the Drawings, and as modified and supplemented herein.

(1) Delete Section 7-14.3(2)C.

Contractor shall maintain five (5) feet of clearance between the hydrant and the property or easement line. The 5-foot area around the hydrant shall be leveled, graded and compacted. The pumper connection shall face the roadway or as directed by the local Fire Department.

The hydrant shall be cleansed and painted with two topcoats of Parker equipment enamel "Equipment Yellow".

During the chlorination process for the newly laid pipe, all valves associated with the fire hydrants shall be operated while the pipe is filled with the chlorinating agent and under normal operating pressure.

Blue reflective markers shall be installed in accordance with Clallam County Standards.

22. BID ITEM 22 - BLOW-OFF ASSEMBLY

A. Description:

Work under this Item shall be as described in Section 7-14.1 of the Standard Specifications, as shown on the Drawings, and as modified and supplemented herein.

Contractor shall install blow-off assembly at location shown on the Drawings.

B. Measurement:

Blow-off assembly shall be measured on a per each basis.

C. Payment:

The unit price Bid for each "Blow-Off Assembly" shall constitute full compensation for all Work, labor, materials, and equipment necessary to furnish and install the blow off assembly complete in place, including but not limited to, excavation, 8 inch gate valve with valve box, 18 inch corrugated PE culvert pipe with steel lid, couplings, 2 inch galvanized pipe, ductile iron cap, 2 inch elbow, 8 inch PVC C900 spool, pipe and fittings associated with the assembly, concrete blocks, locate wire, backfill with approved backfill material, compaction and compaction testing of backfill, testing and disinfecting,

D. Materials:

Valve and valve box shall match the valve materials listed under Bid Item 19, 8-Inch Gate Valve.

Tracer Wire:

Tracer wire shall be AWG No. 10 stranded copper wire with high molecular weight polyethylene (HMW/PE) insulation specifically designed for direct burial in corrosive soil or water. Polyethylene insulation shall conform to ASTM D 1248, Type 1, Class

C. Wires cut or damaged insulation are not acceptable and replacement of the entire wire which has been damaged will be required at the Contractor's expense. Tracer wire splice kit shall be DBR Splice Kit by 3-M or approved equal.

Gravel Backfill for Pipe Zone Bedding: Section 9-03.12(3)

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Pipe Zone Backfill: Section 9-03.19

This Section is replaced with Section 9-03.9(3) Crushed Surfacing.

Trench Backfill: Section 9-03.15 or 9-03.19

Section 9-03.19 is replaced with 9-03.9(3). Section 9-03.15 still applies.

E. Construction Requirements:

Work shall be as described in Section 7-09 of the Standard Specifications and per the Blow-off assembly detail shown on the Drawings.

Installation of the valve shall be as described in Section 7-12 of the Standard Specifications.

Pressure testing and disinfection shall be as described in Bid Item 19 and Section 7-09 of the Standard Specifications.

23. BID ITEM 23 - SURFACE RESTORATION AND CLEANUP

A. Description:

This Work shall include the surface restoration of areas disturbed or damaged during construction on all private easements, private property, staging areas, and all non-pavement portions of the public rights-of-way, as detailed in Standard Specifications Sections 2-11 and 8-02 and as modified and supplemented herein.

All improvements shall comply with Clallam County Road Standards, and the Clallam County Right-of-Way Permit, which has been obtained for this project.

B. Measurement:

Surface Restoration shall be measured on a lump sum for the work described under this pay item.

This Work item shall include but not be limited to restoration of all road and shoulder surfaces damaged or removed by the Contractor's operations except those areas as shown on the Drawings and as specified in the Work item description for Asphalt Concrete Patch in these Specifications. Replacing striping and pavement markings shall be included in the Work item for Asphalt Concrete Trench Patch.

Crushed surfacing material for the repair of gravel shoulders and driveways shall be included in the Bid item Crushed Surfacing.

Restoring all unpaved surfaces, lawns, landscaping, and block and concrete walls disturbed by the Contractor's operations shall be included as part of this Work item.

C. Payment:

The Lump Sum (LS) Contract Price for the "Surface Restoration and Cleanup" shall be full compensation for costs of all the Work, labor, materials, equipment, tools, and incidentals necessary to restore any disturbed private easements and all non-pavement restoration in public rights-of-way as detailed in Sections 2-11 and 8-02 of the Standard Specifications, Clallam County Road Standards, and as modified and supplemented herein. Payment shall be by percent of total restoration value completed as detailed in Contractor's schedule of values. This Work shall also include seeding for erosion control in locations where no other restoration is expressly required.

Surface Restoration and Cleanup shall also constitute full compensation for all Work, labor, materials, and equipment involved in restoring all unpaved surfaces, lawns, and landscaping to a condition equal to or better than that which existed prior to construction or as stated in the private easement or construction permit requirements.

This Work shall also include any surface restoration around temporary water mains and temporary water service lines that may be required to connect temporary water service lines to the existing private services.

Surface restoration and Cleanup shall include, but not be limited to, replacement of sod, topsoil, block and concrete walls, miscellaneous landscaping items, replacing existing trees and shrubs, irrigation piping or other materials as exist on site in kind, and no extra payment will be made for this Work.

D. Materials:

All rock materials, including but not limited to bank run gravel, foundations gravel, gravel backfill, native backfill, and crushed surfacing shall meet the requirements of the related Work item description in these Specifications.

Pipe used to replace existing culverts that are damaged shall conform to the requirements for culvert pipe as stated in these specifications.

Cultivated lawns shall be restored with sod. Reseeding of cultivated lawns will not be allowed without prior approval of property owner, Owner, and Engineer. Uncultivated lawns, pasture and vacant land shall be restored with a pasture grass meeting the following requirements.

Seed Mix: 40% perennial ryegrass.

10% white clover.

30% fescue.

20% red creeping fescue.

apply at the rate of 100 pounds per acre.

Mulch: Silva fiber mulch applied at 1500 to 2000 pounds per acre.

Fertilizer: Commercial mix 10/20/20 of nitrate, phosphate and potash applied at rate of 450 pounds per acre.

E. Construction Requirements:

Work shall meet the requirements in Sections 2-11.3 and 8-02.3 of the Standard Specifications and as modified and supplemented herein.

All road surfaces that are damaged or removed during construction of this Project shall be restored in accordance with the Specifications herein.

Contractor shall shape and generally restore all roadways and shoulders, restore all drainage facilities, remove any debris and surplus material, adjust all utilities to finished grade, and restore or protect all private improvements such as fences, mailboxes, and shrubbery, all to the satisfaction of the Owner and the permit issued by the governing road agency.

The surface of road shoulders shall be restored to a condition equal to or better than that which existed before starting the Work and to the satisfaction of the Owner and road agency with jurisdiction. All shoulders shall be reconstructed with crushed surfacing as described in the Work item description for Crushed Surfacing in these Specifications.

The Contractor shall take care to avoid damaging existing driveway and street culverts. If a culvert pipe must be disturbed, the Contractor shall remove the culvert without damaging it and reinstall it once the new utility is installed. If the culvert is damaged due to the Contractor's operations, the damaged culvert shall be removed and replaced with a culvert of a similar size and material which conforms to the requirements specified in Clallam County standards. All unpaved surfaces shall be restored to a condition equal to or better than that which existed prior to construction. All trees, shrubs, and other improvements shall be saved, relocated, or replaced by Contractor unless specifically noted otherwise on the Drawings or in easement stipulations. Preconstruction photographs shall be used to approve restoration.

Final restoration of easements shall include, but shall not be limited to, sod replacement in existing lawns, hydroseeding in unimproved areas, replanting of existing shrubs and bushes or replacement of same. Fences, rockeries and concrete, asphalt and/or gravel driveways, and other improvements shall be repaired or replaced. The permanent and temporary easements shall be graded back to original contours.

Contractor shall use a qualified landscape gardener whose principal business is this type of Work to perform landscape restoration. Where ornamental trees and shrubs are in the Work area, they shall be carefully removed with the earth surrounding their roots wrapped in burlap and replanted in their original position within four (4) days. Work may be required to be halted elsewhere on the Project to ensure this Work is done in a timely manner.

Tree and shrubbery removal and transplanting shall be done only by a landscape gardener. Ornamental trees and shrubs shall be protected, but if through some unavoidable situation such trees or shrubbery are destroyed or damaged whether in public or private property, they shall be replaced by the Contractor with material of equal quality and no additional compensation will be allowed for such replacement.

Contractor shall take reasonable precautions to protect existing ornamental trees and shrubs that are not removed. Protection may include tying back limbs where necessary to provide room for construction. Such tying back shall be done carefully to avoid breakage or other limb damage. No limbs shall be removed or trimmed without the

written permission of the property owner, with a copy of such permission given to Owner. Said Work shall be performed in a professional manner by a qualified landscape gardener.

Lawn installation:

In areas where lawns are disturbed, the lawns shall be replaced with a minimum of 4 inches of topsoil under new sod to match the removed sod. Sod strips shall be placed within ten (10) working days of being cut. Placement shall be without voids and have the end joints staggered. Following placement, the sod shall be rolled with a smooth roller to establish contact with the soil.

Barriers shall be erected, with warning signs where necessary, to preclude pedestrian traffic access to the newly placed lawn during the establishment period.

Lawn Establishment:

Lawn establishment shall consist of caring for all new lawn areas within the limits of the project.

The lawn establishment period shall begin immediately after the new sod has been installed and shall extend to project completion and final acceptance by the Engineer and Owner.

During the lawn establishment period, it shall be the Contractor's responsibility to ensure the continuing healthy growth of the new sod. This care shall include labor and materials necessary to keep the project in presentable condition, including but not limited to, fertilization, insecticide and fungicide applications, weed control, watering, repair, and re-sodding any and all disturbed and damaged lawn areas.

Temporary barriers shall be removed only with written permission from the Engineer. All Work performed under the surface restoration lawn establishment shall comply with established turf management practices.

Acceptance of lawn planting as specified shall be based on a uniform stand of grass and uniform grade at the time of project completion and final acceptance by the Owner. Areas that are bare or have a poor stand of grass, and areas not having a uniform grade through any cause before project completion and final acceptance by the Owner shall be re-cultivated, re-graded, re-sodded, and fertilized as specified at no additional cost to the Owner.

Uncultivated lawns, pasture and vacant land shall be restored with a pasture grass in addition to the protection, restoration or replacement of any improvements or trees unless otherwise required by private easement or construction permit requirements. Disturbed areas shall not be left unprotected for long periods of time. Temporary seeding, covering or other protection shall be used as required. Final restoration shall be as specified herein.

Previously established grades conforming to the requirements of the Drawings shall be maintained in a true and even condition. If necessary, repairs shall be made prior to seeding.

The surface (of uncultivated lawns, pasture, and vacant land) to be seeded shall be cleared of stones or other debris larger than 1 inch. The top 4 inches shall be cultivated by raking or rototilling after all compaction and prior to seeding. The surface shall receive approval of the Engineer before beginning seeding operations.

Seed mix, fertilizer and mulch shall be hydroseeded with appropriate equipment upon approval of the seedbed. Appropriate quantities of seed, fertilizer and mulch shall be combined with the proper amounts of water to ensure that a uniform coat is sprayed on the soil. Method of application and proportions of seed mix may be revised to suit type of soil and time of year, provided prior approval is given by the Engineer.

The Contractor shall water protect and maintain newly sodded and seeded areas until established and accepted by the Owner at project completion. Where seeded areas fail to develop after normal allowance for germination, the Contractor shall reseed.

Surface restoration to include, but not limited to, sod, topsoil, grass seed (uncultivated lawns, pasture, and vacant land), and, crushed rock, block and concrete walls, miscellaneous landscaping items, replacement of existing trees and shrubs, irrigation piping or other materials as exist on site in kind, and no extra payment shall be made for this Work.

24. BID ITEM 24 - MINOR CHANGES

A. Description:

The Owner will provide the Contractor a copy of the request for a minor change and will require the Contractor to provide a cost estimate for the Engineer's review and approval prior to the work being performed. Approved minor change work performed under this bid item will be performed only after a work directive is issued by the Engineer. Any additional work performed prior to the work directive issued by the Engineer will not be compensated under this bid item.

B. Measurement:

At the time of authorization, the Engineer and Contractor will agree to the basis of compensation for that work, by an accepted lump sum/allowance proposal from the Contractor.

C. Payment:

The Contract Price for "Minor Changes" shall be per Lump Sum/Allowance in accordance with Section 1-04.4(1) of the Standard Specifications and has been included for any additional Work associated with minor changes. An estimated dollar amount for Minor Changes Item has been entered in the Bid Proposal by the Owner, to provide a common proposal for all Bidders which have been figured into the Contract Sum.

Payments or credits for changes amounting to \$10,000 or less may be made under the bid item "Minor Changes", at the discretion of the Owner, and in accordance with Section 1-04.4(1) of the Standard Specifications. The actual amount paid under this item may vary from no payment to the full amount of the bid item.

25. BID ITEM 25 - RECORD DRAWINGS

A. Description:

This Work shall include providing record drawings at the completion of the project.

B. Measurement:

Measurement for this bid item shall be lump sum for the work described under this pay item.

C. Payment:

The Lump Sum (LS) Contract Price for "Record Drawings" shall be full compensation for costs of all the Work, labor, tools, materials, equipment, and incidentals necessary to provide the Engineer with final marked up drawings with deviations from the construction Drawings for the Work per the Drawings and Specifications. The record drawings shall be submitted to the Engineer no later than 14 calendar days after project acceptance.

(END OF SECTION)

SECTION C 3

EASEMENTS AND TEMPORARY CONSTRUCTION PERMITS

Section C 3 contains the expected easement conditions and permit conditions required by private property owners impacted by the Project. One permanent utility easement has been acquired for this contract. Contractor is responsible for obtaining any temporary construction easements or temporary construction permits necessary for the Contractor's operations.

(END OF SECTION)

PART D
DRAWINGS

PART E
PREVAILING WAGE RATES

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: 11/2/2023

<u>County</u>	<u>Trade</u>	<u>Job Classification</u>	<u>Wage</u>	<u>Holiday</u>	<u>Overtime</u>	<u>Note</u>	<u>*Risk Class</u>
Clallam	Asbestos Abatement Workers	Journey Level	\$59.07	<u>5D</u>	<u>1H</u>		View
Clallam	Boilermakers	Journey Level	\$74.29	<u>5N</u>	<u>1C</u>		View
Clallam	Brick Mason	Journey Level	\$69.07	<u>7E</u>	<u>1N</u>		View
Clallam	Brick Mason	Pointer-Caulker-Cleaner	\$69.07	<u>7E</u>	<u>1N</u>		View
Clallam	Building Service Employees	Janitor	\$15.74		<u>1</u>		View
Clallam	Building Service Employees	Shampooer	\$15.74		<u>1</u>		View
Clallam	Building Service Employees	Waxer	\$15.74		<u>1</u>		View
Clallam	Building Service Employees	Window Cleaner	\$15.74		<u>1</u>		View
Clallam	Cabinet Makers (In Shop)	Journey Level	\$16.04		<u>1</u>		View
Clallam	Carpenters	Acoustical Worker	\$74.96	<u>15J</u>	<u>4C</u>		View
Clallam	Carpenters	Bridge, Dock And Wharf Carpenters	\$74.96	<u>15J</u>	<u>4C</u>		View
Clallam	Carpenters	Floor Layer & Floor Finisher	\$74.96	<u>15J</u>	<u>4C</u>		View
Clallam	Carpenters	Journey Level	\$74.96	<u>15J</u>	<u>4C</u>		View
Clallam	Carpenters	Scaffold Erector	\$74.96	<u>15J</u>	<u>4C</u>		View
Clallam	Cement Masons	Application of all Composition Mastic	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Application of all Epoxy Material	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Application of all Plastic Material	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Application of Sealing Compound	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Application of Underlayment	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Building General	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Composition or Kalman Floors	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Concrete Paving	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Curb & Gutter Machine	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Curb & Gutter, Sidewalks	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Curing Concrete	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Finish Colored Concrete	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Floor Grinding	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Floor Grinding/Polisher	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Green Concrete Saw, self-powered	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Grouting of all Plates	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Grouting of all Tilt-up Panels	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Guniting Nozzleman	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Hand Powered Grinder	\$72.87	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Journey Level	\$72.37	<u>15J</u>	<u>4U</u>		View
Clallam	Cement Masons	Patching Concrete	\$72.37	<u>15J</u>	<u>4U</u>		View

Clallam	Cement Masons	Pneumatic Power Tools	\$72.87	15J	4U		View
Clallam	Cement Masons	Power Chipping & Brushing	\$72.87	15J	4U		View
Clallam	Cement Masons	Sand Blasting Architectural Finish	\$72.87	15J	4U		View
Clallam	Cement Masons	Screed & Rodding Machine	\$72.87	15J	4U		View
Clallam	Cement Masons	Spackling or Skim Coat Concrete	\$72.37	15J	4U		View
Clallam	Cement Masons	Troweling Machine Operator	\$72.87	15J	4U		View
Clallam	Cement Masons	Troweling Machine Operator on Colored Slabs	\$72.87	15J	4U		View
Clallam	Cement Masons	Tunnel Workers	\$72.87	15J	4U		View
Clallam	Divers & Tenders	Bell/Vehicle or Submersible Operator (Not Under Pressure)	\$129.71	15J	4C		View
Clallam	Divers & Tenders	Dive Supervisor/Master	\$93.94	15J	4C		View
Clallam	Divers & Tenders	Diver	\$129.71	15J	4C	8V	View
Clallam	Divers & Tenders	Diver On Standby	\$88.94	15J	4C		View
Clallam	Divers & Tenders	Diver Tender	\$80.82	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 0-30.00 PSI	\$93.26	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 30.01 - 44.00 PSI	\$98.26	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 44.01 - 54.00 PSI	\$102.26	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 54.01 - 60.00 PSI	\$107.26	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 60.01 - 64.00 PSI	\$109.76	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 64.01 - 68.00 PSI	\$114.76	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 68.01 - 70.00 PSI	\$116.76	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 70.01 - 72.00 PSI	\$118.76	15J	4C		View
Clallam	Divers & Tenders	Hyperbaric Worker - Compressed Air Worker 72.01 - 74.00 PSI	\$120.76	15J	4C		View
Clallam	Divers & Tenders	Manifold Operator	\$80.82	15J	4C		View
Clallam	Divers & Tenders	Manifold Operator Mixed Gas	\$85.82	15J	4C		View
Clallam	Divers & Tenders	Remote Operated Vehicle Operator/Technician	\$80.82	15J	4C		View
Clallam	Divers & Tenders	Remote Operated Vehicle Tender	\$75.41	15J	4C		View
Clallam	Dredge Workers	Assistant Engineer	\$79.62	5D	3F		View
Clallam	Dredge Workers	Assistant Mate (Deckhand)	\$79.01	5D	3F		View
Clallam	Dredge Workers	Boatmen	\$79.62	5D	3F		View
Clallam	Dredge Workers	Engineer Welder	\$81.15	5D	3F		View
Clallam	Dredge Workers	Leverman, Hydraulic	\$82.77	5D	3F		View
Clallam	Dredge Workers	Mates	\$79.62	5D	3F		View
Clallam	Dredge Workers	Oiler	\$79.01	5D	3F		View
Clallam	Drywall Applicator	Journey Level	\$74.96	15J	4C		View
Clallam	Drywall Tapers	Journey Level	\$74.50	5P	1E		View
Clallam	Electrical Fixture Maintenance Workers	Journey Level	\$37.19	5L	1E		View
Clallam	Electricians - Inside	Cable Splicer	\$105.59	7C	4E		View
Clallam	Electricians - Inside	Cable Splicer (tunnel)	\$113.52	7C	4E		View
Clallam	Electricians - Inside	Certified Welder	\$101.98	7C	4E		View
Clallam	Electricians - Inside	Certified Welder (tunnel)	\$109.56	7C	4E		View
Clallam	Electricians - Inside	Construction Stock Person	\$49.28	7C	4E		View
Clallam	Electricians - Inside	Journey Level	\$98.38	7C	4E		View

Clallam	Electricians - Inside	Journey Level (tunnel)	\$105.59	<u>7C</u>	<u>4E</u>		View
Clallam	Electricians - Motor Shop	Craftsman	\$15.74		<u>1</u>		View
Clallam	Electricians - Motor Shop	Journey Level	\$15.74		<u>1</u>		View
Clallam	Electricians - Powerline Construction	Cable Splicer	\$93.00	<u>5A</u>	<u>4D</u>		View
Clallam	Electricians - Powerline Construction	Certified Line Welder	\$85.42	<u>5A</u>	<u>4D</u>		View
Clallam	Electricians - Powerline Construction	Groundperson	\$55.27	<u>5A</u>	<u>4D</u>		View
Clallam	Electricians - Powerline Construction	Heavy Line Equipment Operator	\$85.42	<u>5A</u>	<u>4D</u>		View
Clallam	Electricians - Powerline Construction	Journey Level Lineperson	\$85.42	<u>5A</u>	<u>4D</u>		View
Clallam	Electricians - Powerline Construction	Line Equipment Operator	\$73.35	<u>5A</u>	<u>4D</u>		View
Clallam	Electricians - Powerline Construction	Meter Installer	\$55.27	<u>5A</u>	<u>4D</u>	<u>8W</u>	View
Clallam	Electricians - Powerline Construction	Pole Sprayer	\$85.42	<u>5A</u>	<u>4D</u>		View
Clallam	Electricians - Powerline Construction	Powderperson	\$63.50	<u>5A</u>	<u>4D</u>		View
Clallam	Electronic Technicians	Journey Level	\$63.38	<u>7E</u>	<u>1E</u>		View
Clallam	Elevator Constructors	Mechanic	\$107.49	<u>7D</u>	<u>4A</u>		View
Clallam	Elevator Constructors	Mechanic In Charge	\$116.13	<u>7D</u>	<u>4A</u>		View
Clallam	Fabricated Precast Concrete Products	Journey Level	\$15.74		<u>1</u>		View
Clallam	Fabricated Precast Concrete Products	Journey Level - In-Factory Work Only	\$15.74		<u>1</u>		View
Clallam	Fence Erectors	Fence Erector	\$50.07	<u>15J</u>	<u>4V</u>	<u>8Y</u>	View
Clallam	Fence Erectors	Fence Laborer	\$50.07	<u>15J</u>	<u>4V</u>	<u>8Y</u>	View
Clallam	Flaggers	Journey Level	\$50.07	<u>15J</u>	<u>4V</u>	<u>8Y</u>	View
Clallam	Glaziers	Journey Level	\$79.16	<u>7L</u>	<u>1Y</u>		View
Clallam	Heat & Frost Insulators And Asbestos Workers	Journey Level	\$87.15	<u>15H</u>	<u>11C</u>		View
Clallam	Heating Equipment Mechanics	Journey Level	\$96.42	<u>7F</u>	<u>1E</u>		View
Clallam	Hod Carriers & Mason Tenders	Journey Level	\$62.49	<u>15J</u>	<u>4V</u>	<u>8Y</u>	View
Clallam	Industrial Power Vacuum Cleaner	Journey Level	\$15.74		<u>1</u>		View
Clallam	Inland Boatmen	Boat Operator	\$61.41	<u>5B</u>	<u>1K</u>		View
Clallam	Inland Boatmen	Cook	\$56.48	<u>5B</u>	<u>1K</u>		View
Clallam	Inland Boatmen	Deckhand	\$57.48	<u>5B</u>	<u>1K</u>		View
Clallam	Inland Boatmen	Deckhand Engineer	\$58.81	<u>5B</u>	<u>1K</u>		View
Clallam	Inland Boatmen	Launch Operator	\$58.89	<u>5B</u>	<u>1K</u>		View
Clallam	Inland Boatmen	Mate	\$57.31	<u>5B</u>	<u>1K</u>		View
Clallam	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Cleaner Operator	\$49.48	<u>15M</u>	<u>11O</u>		View
Clallam	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Foamer Operator	\$49.48	<u>15M</u>	<u>11O</u>		View
Clallam	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Grout Truck Operator	\$49.48	<u>15M</u>	<u>11O</u>		View
Clallam	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Head Operator	\$47.41	<u>15M</u>	<u>11O</u>		View

Clallam	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	Technician	\$41.20	15M	110		View
Clallam	Inspection/Cleaning/Sealing Of Sewer & Water Systems By Remote Control	TV Truck Operator	\$44.31	15M	110		View
Clallam	Insulation Applicators	Journey Level	\$74.96	15J	4C		View
Clallam	Ironworkers	Journeyman	\$85.80	15K	11N		View
Clallam	Laborers	Air, Gas Or Electric Vibrating Screed	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Airtrac Drill Operator	\$60.90	15J	4V	8Y	View
Clallam	Laborers	Ballast Regular Machine	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Batch Weighman	\$50.07	15J	4V	8Y	View
Clallam	Laborers	Brick Pavers	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Brush Cutter	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Brush Hog Feeder	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Burner	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Caisson Worker	\$60.90	15J	4V	8Y	View
Clallam	Laborers	Carpenter Tender	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Cement Dumper-paving	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Cement Finisher Tender	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Change House Or Dry Shack	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Chipping Gun (30 Lbs. And Over)	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Chipping Gun (Under 30 Lbs.)	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Choker Setter	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Chuck Tender	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Clary Power Spreader	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Clean-up Laborer	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Concrete Dumper/Chute Operator	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Concrete Form Stripper	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Concrete Placement Crew	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Concrete Saw Operator/Core Driller	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Crusher Feeder	\$50.07	15J	4V	8Y	View
Clallam	Laborers	Curing Laborer	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Demolition: Wrecking & Moving (Incl. Charred Material)	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Ditch Digger	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Diver	\$60.90	15J	4V	8Y	View
Clallam	Laborers	Drill Operator (Hydraulic, Diamond)	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Dry Stack Walls	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Dump Person	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Epoxy Technician	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Erosion Control Worker	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Faller & Bucker Chain Saw	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Fine Graders	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Firewatch	\$50.07	15J	4V	8Y	View
Clallam	Laborers	Form Setter	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Gabian Basket Builders	\$59.07	15J	4V	8Y	View
Clallam	Laborers	General Laborer	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Grade Checker & Transit Person	\$62.49	15J	4V	8Y	View
Clallam	Laborers	Grinders	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Grout Machine Tender	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Groutmen (Pressure) Including Post Tension Beams	\$60.15	15J	4V	8Y	View

Clallam	Laborers	Guardrail Erector	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Hazardous Waste Worker (Level A)	\$60.90	15J	4V	8Y	View
Clallam	Laborers	Hazardous Waste Worker (Level B)	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Hazardous Waste Worker (Level C)	\$59.07	15J	4V	8Y	View
Clallam	Laborers	High Scaler	\$60.90	15J	4V	8Y	View
Clallam	Laborers	Jackhammer	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Laserbeam Operator	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Maintenance Person	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Manhole Builder-Mudman	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Material Yard Person	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Mold Abatement Worker	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Motorman-Dinky Locomotive	\$62.59	15J	4V	8Y	View
Clallam	Laborers	nozzleman (concrete pump, green cutter when using combination of high pressure air & water on concrete & rock, sandblast, gunite, shotcrete, water blaster, vacuum blaster)	\$62.49	15J	4V	8Y	View
Clallam	Laborers	Pavement Breaker	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Pilot Car	\$50.07	15J	4V	8Y	View
Clallam	Laborers	Pipe Layer (Lead)	\$62.49	15J	4V	8Y	View
Clallam	Laborers	Pipe Layer/Tailor	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Pipe Pot Tender	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Pipe Reliner	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Pipe Wrapper	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Pot Tender	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Powderman	\$60.90	15J	4V	8Y	View
Clallam	Laborers	Powderman's Helper	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Power Jacks	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Railroad Spike Puller - Power	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Raker - Asphalt	\$62.49	15J	4V	8Y	View
Clallam	Laborers	Re-timberman	\$60.90	15J	4V	8Y	View
Clallam	Laborers	Remote Equipment Operator	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Rigger/Signal Person	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Rip Rap Person	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Rivet Buster	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Rodder	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Scaffold Erector	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Scale Person	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Sloper (Over 20")	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Sloper Sprayer	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Spreader (Concrete)	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Stake Hopper	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Stock Piler	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Swinging Stage/Boatswain Chair	\$50.07	15J	4V	8Y	View
Clallam	Laborers	Tamper & Similar Electric, Air & Gas Operated Tools	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Tamper (Multiple & Self-propelled)	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Timber Person - Sewer (Lagger, Shorer & Cribber)	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Toolroom Person (at Jobsite)	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Topper	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Track Laborer	\$59.07	15J	4V	8Y	View

Clallam	Laborers	Track Liner (Power)	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Traffic Control Laborer	\$53.54	15J	4V	9C	View
Clallam	Laborers	Traffic Control Supervisor	\$56.73	15J	4V	9C	View
Clallam	Laborers	Truck Spotter	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Tugger Operator	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 0-30 psi	\$175.79	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 30.01-44.00 psi	\$180.82	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 44.01-54.00 psi	\$184.50	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 54.01-60.00 psi	\$190.20	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 60.01-64.00 psi	\$192.32	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 64.01-68.00 psi	\$197.42	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 68.01-70.00 psi	\$199.32	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 70.01-72.00 psi	\$201.32	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Compressed Air Worker 72.01-74.00 psi	\$203.32	15J	4V	9B	View
Clallam	Laborers	Tunnel Work-Guage and Lock Tender	\$62.59	15J	4V	8Y	View
Clallam	Laborers	Tunnel Work-Miner	\$62.59	15J	4V	8Y	View
Clallam	Laborers	Vibrator	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Vinyl Seamer	\$59.07	15J	4V	8Y	View
Clallam	Laborers	Watchman	\$45.51	15J	4V	8Y	View
Clallam	Laborers	Welder	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Well Point Laborer	\$60.15	15J	4V	8Y	View
Clallam	Laborers	Window Washer/Cleaner	\$45.51	15J	4V	8Y	View
Clallam	Laborers - Underground Sewer & Water	General Laborer & Topman	\$59.07	15J	4V	8Y	View
Clallam	Laborers - Underground Sewer & Water	Pipe Layer	\$60.15	15J	4V	8Y	View
Clallam	Landscape Construction	Landscape Construction/Landscaping Or Planting Laborers	\$45.51	15J	4V	8Y	View
Clallam	Landscape Construction	Landscape Operator	\$78.71	15J	11G	8X	View
Clallam	Landscape Maintenance	Groundskeeper	\$15.74		1		View
Clallam	Lathers	Journey Level	\$74.96	15J	4C		View
Clallam	Marble Setters	Journey Level	\$69.07	7E	1N		View
Clallam	Metal Fabrication (In Shop)	Fitter	\$15.74		1		View
Clallam	Metal Fabrication (In Shop)	Laborer	\$15.74		1		View
Clallam	Metal Fabrication (In Shop)	Machine Operator	\$15.74		1		View
Clallam	Metal Fabrication (In Shop)	Painter	\$15.74		1		View
Clallam	Metal Fabrication (In Shop)	Welder	\$15.74		1		View
Clallam	Millwright	Journey Level	\$76.51	15J	4C		View
Clallam	Modular Buildings	Journey Level	\$15.74		1		View
Clallam	Painters	Journey Level	\$51.71	6Z	11J		View
Clallam	Pile Driver	Crew Tender	\$80.82	15J	4C		View
Clallam	Pile Driver	Journey Level	\$75.41	15J	4C		View
Clallam	Plasterers	Journey Level	\$70.91	7Q	1R		View
Clallam	Plasterers	Nozzleman	\$74.91	7Q	1R		View

Clallam	Playground & Park Equipment Installers	Journey Level	\$15.74		1		View
Clallam	Plumbers & Pipefitters	Journey Level	\$100.69	6Z	1G		View
Clallam	Power Equipment Operators	Asphalt Plant Operators	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Assistant Engineer	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Barrier Machine (zipper)	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Batch Plant Operator: concrete	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Boat Operator	\$80.05	7A	11H	8X	View
Clallam	Power Equipment Operators	Bobcat	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Brokk - Remote Demolition Equipment	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Brooms	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Bump Cutter	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Cableways	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Chipper	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Compressor	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Concrete Finish Machine - Laser Screed	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Conveyors	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Cranes Friction: 200 tons and over	\$82.49	7A	11H	8X	View
Clallam	Power Equipment Operators	Cranes, A-frame: 10 tons and under	\$75.29	7A	11H	8X	View
Clallam	Power Equipment Operators	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	\$80.86	7A	11H	8X	View
Clallam	Power Equipment Operators	Cranes: 20 tons through 44 tons with attachments	\$79.35	7A	11H	8X	View
Clallam	Power Equipment Operators	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$81.69	7A	11H	8X	View
Clallam	Power Equipment Operators	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$82.49	7A	11H	8X	View
Clallam	Power Equipment Operators	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	\$80.05	7A	11H	8X	View
Clallam	Power Equipment Operators	Cranes: Friction cranes through 199 tons	\$81.69	7A	11H	8X	View
Clallam	Power Equipment Operators	Cranes: through 19 tons with attachments, a-frame over 10 tons	\$78.74	7A	11H	8X	View
Clallam	Power Equipment Operators	Crusher	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Deck Engineer/Deck Winches (power)	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Derricks, On Building Work	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Dozers D-9 & Under	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Drill Oilers: Auger Type, Truck Or Crane Mount	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Drilling Machine	\$80.82	15J	11G	8X	View
Clallam	Power Equipment Operators	Elevator and man-lift: permanent and shaft type	\$75.26	15J	11G	8X	View

Clallam	Power Equipment Operators	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Forklift: 3000 lbs and over with attachments	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Forklifts: under 3000 lbs. with attachments	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Gradechecker/Stakeman	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Guardrail Punch	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Horizontal/Directional Drill Locator	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Horizontal/Directional Drill Operator	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Hydralifts/Boom Trucks Over 10 Tons	\$78.74	7A	11H	8X	View
Clallam	Power Equipment Operators	Hydralifts/boom trucks: 10 tons and under	\$75.29	7A	11H	8X	View
Clallam	Power Equipment Operators	Leverman	\$81.65	15J	11G	8X	View
Clallam	Power Equipment Operators	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Loaders, Overhead Under 6 Yards	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Loaders, Plant Feed	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Loaders: Elevating Type Belt	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Locomotives, All	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Material Transfer Device	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Mechanics: All (Leadmen - \$0.50 per hour over mechanic)	\$80.82	15J	11G	8X	View
Clallam	Power Equipment Operators	Motor Patrol Graders	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Overhead, bridge type Crane: 20 tons through 44 tons	\$79.35	7A	11H	8X	View
Clallam	Power Equipment Operators	Overhead, bridge type: 100 tons and over	\$80.86	7A	11H	8X	View
Clallam	Power Equipment Operators	Overhead, bridge type: 45 tons through 99 tons	\$80.05	7A	11H	8X	View
Clallam	Power Equipment Operators	Pavement Breaker	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Pile Driver (other Than Crane Mount)	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Plant Oiler - Asphalt, Crusher	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Posthole Digger, Mechanical	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Power Plant	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Pumps - Water	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Quad 9, Hd 41, D10 And Over	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Quick Tower: no cab, under 100 feet in height base to boom	\$79.31	15J	11G	8X	View

Clallam	Power Equipment Operators	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Rigger and Bellman	\$75.29	7A	11H	8X	View
Clallam	Power Equipment Operators	Rigger/Signal Person, Bellman(Certified)	\$78.74	7A	11H	8X	View
Clallam	Power Equipment Operators	Rollagon	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Roller, Other Than Plant Mix	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Roller, Plant Mix Or Multi-lift Materials	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Roto-mill, Roto-grinder	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Saws - Concrete	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Scraper, Self Propelled Under 45 Yards	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Scrapers - Concrete & Carry All	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Scrapers, Self-propelled: 45 Yards And Over	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Service Engineers: Equipment	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Shotcrete/Gunite Equipment	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$80.82	15J	11G	8X	View
Clallam	Power Equipment Operators	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$81.65	15J	11G	8X	View
Clallam	Power Equipment Operators	Slipform Pavers	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Spreader, Topsider & Screedman	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Subgrader Trimmer	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Tower Bucket Elevators	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Tower Crane: over 175' through 250' in height, base to boom	\$81.69	7A	11H	8X	View
Clallam	Power Equipment Operators	Tower crane: up to 175' in height base to boom	\$80.86	7A	11H	8X	View
Clallam	Power Equipment Operators	Tower Cranes: over 250' in height from base to boom	\$82.49	7A	11H	8X	View
Clallam	Power Equipment Operators	Transporters, All Track Or Truck Type	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Trenching Machines	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators	Truck Crane Oiler/Driver: 100 tons and over	\$79.35	7A	11H	8X	View
Clallam	Power Equipment Operators	Truck crane oiler/driver: under 100 tons	\$78.74	7A	11H	8X	View
Clallam	Power Equipment Operators	Truck Mount Portable Conveyor	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Vac Truck (Vactor Guzzler, Hydro Excavator)	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators	Welder	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators	Wheel Tractors, Farmall Type	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators	Yo Yo Pay Dozer	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Asphalt Plant Operators	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Assistant Engineer	\$75.26	15J	11G	8X	View

Clallam	Power Equipment Operators-Underground Sewer & Water	Barrier Machine (zipper)	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Batch Plant Operator, Concrete	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Boat Operator	\$80.05	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Bobcat	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Brokk - Remote Demolition Equipment	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Brooms	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Bump Cutter	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cableways	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Chipper	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Compressor	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Concrete Finish Machine - Laser Screed	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Concrete Pump - Mounted Or Trailer High Pressure Line Pump, Pump High Pressure	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Over 42 M	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Concrete Pump: Truck Mount With Boom Attachment Up To 42m	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Conveyors	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes Friction: 200 tons and over	\$82.49	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes, A-frame: 10 tons and under	\$75.29	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes: 100 tons through 199 tons, or 150' of boom (including jib with attachments)	\$80.86	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes: 20 tons through 44 tons with attachments	\$79.35	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes: 200 tons- 299 tons, or 250' of boom including jib with attachments	\$81.69	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes: 300 tons and over or 300' of boom including jib with attachments	\$82.49	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes: 45 tons through 99 tons, under 150' of boom(including jib with attachments)	\$80.05	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes: Friction cranes through 199 tons	\$81.69	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Cranes: through 19 tons with attachments, a-frame over 10 tons	\$78.74	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Crusher	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Deck Engineer/Deck Winches (power)	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Derricks, On Building Work	\$80.02	15J	11G	8X	View

Clallam	Power Equipment Operators-Underground Sewer & Water	Dozers D-9 & Under	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Drill Oilers: Auger Type, Truck Or Crane Mount	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Drilling Machine	\$80.82	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Elevator and man-lift: permanent and shaft type	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Finishing Machine, Bidwell And Gamaco & Similar Equipment	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Forklift: 3000 lbs and over with attachments	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Forklifts: under 3000 lbs. with attachments	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Grade Engineer: Using Blue Prints, Cut Sheets, Etc	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Gradechecker/Stakeman	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Guardrail Punch	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off- Road Equipment 45 Yards. & Over	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Hard Tail End Dump Articulating Off-road Equipment Under 45 Yards	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Horizontal/Directional Drill Locator	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Horizontal/Directional Drill Operator	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom trucks: 10 tons and under	\$75.29	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Hydralifts/boom trucks: over 10 tons	\$78.74	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Leverman	\$81.65	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Loader, Overhead, 6 Yards. But Not Including 8 Yards	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Loaders, Overhead Under 6 Yards	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Loaders, Plant Feed	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Loaders: Elevating Type Belt	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Locomotives, All	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Material Transfer Device	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Mechanics: All (Leadmen - \$0.50 per hour over mechanic)	\$80.82	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Motor Patrol Graders	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Mucking Machine, Mole, Tunnel Drill, Boring, Road Header And/or Shield	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Oil Distributors, Blower Distribution & Mulch Seeding Operator	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Outside Hoists (Elevators and Manlifts), Air Tuggers, Strato	\$78.71	15J	11G	8X	View

Clallam	Power Equipment Operators-Underground Sewer & Water	Overhead, bridge type Crane: 20 tons through 44 tons	\$79.35	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Overhead, bridge type: 100 tons and over	\$80.86	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Overhead, bridge type: 45 tons through 99 tons	\$80.05	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Pavement Breaker	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Pile Driver (other Than Crane Mount)	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Plant Oiler - Asphalt, Crusher	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Posthole Digger, Mechanical	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Power Plant	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Pumps - Water	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Quad 9, Hd 41, D10 And Over	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Quick Tower: no cab, under 100 feet in height base to boom	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Remote Control Operator On Rubber Tired Earth Moving Equipment	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Rigger and Bellman	\$75.29	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Rigger/Signal Person, Bellman(Certified)	\$78.74	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Rollagon	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Roller, Other Than Plant Mix	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Roller, Plant Mix Or Multi-lift Materials	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Roto-mill, Roto-grinder	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Saws - Concrete	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Scraper, Self Propelled Under 45 Yards	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Scrapers - Concrete & Carry All	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Scrapers, Self-propelled: 45 Yards And Over	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Shotcrete/Gunite Equipment	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoe, Tractors Under 15 Metric Tons	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoe: Over 30 Metric Tons To 50 Metric Tons	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes, Tractors: 15 To 30 Metric Tons	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 50 Metric Tons To 90 Metric Tons	\$80.82	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Shovel, Excavator, Backhoes: Over 90 Metric Tons	\$81.65	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Slipform Pavers	\$80.02	15J	11G	8X	View

Clallam	Power Equipment Operators-Underground Sewer & Water	Spreader, Topsider & Screedman	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Subgrader Trimmer	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Tower Bucket Elevators	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Tower Crane: over 175' through 250' in height, base to boom	\$81.69	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Tower crane: up to 175' in height base to boom	\$80.86	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Tower Cranes: over 250' in height from base to boom	\$82.49	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Transporters, All Track Or Truck Type	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Trenching Machines	\$78.71	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Truck Crane Oiler/Driver: 100 tons and over	\$79.35	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Truck crane oiler/driver: under 100 tons	\$78.74	7A	11H	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Truck Mount Portable Conveyor	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Vac Truck (Vactor Guzzler, Hydro Excavator)	\$79.31	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Welder	\$80.02	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Wheel Tractors, Farmall Type	\$75.26	15J	11G	8X	View
Clallam	Power Equipment Operators-Underground Sewer & Water	Yo Yo Pay Dozer	\$79.31	15J	11G	8X	View
Clallam	Power Line Clearance Tree Trimmers	Journey Level In Charge	\$57.22	5A	4A		View
Clallam	Power Line Clearance Tree Trimmers	Spray Person	\$54.32	5A	4A		View
Clallam	Power Line Clearance Tree Trimmers	Tree Equipment Operator	\$57.22	5A	4A		View
Clallam	Power Line Clearance Tree Trimmers	Tree Trimmer	\$51.18	5A	4A		View
Clallam	Power Line Clearance Tree Trimmers	Tree Trimmer Groundperson	\$38.99	5A	4A		View
Clallam	Refrigeration & Air Conditioning Mechanics	Journey Level	\$93.51	6Z	1G		View
Clallam	Residential Brick Mason	Journey Level	\$69.07	7E	1N		View
Clallam	Residential Carpenters	Journey Level	\$74.96	15J	4C		View
Clallam	Residential Cement Masons	Journey Level	\$59.07	15J	4V	8Y	View
Clallam	Residential Drywall Applicators	Journey Level	\$49.92	15J	4C		View
Clallam	Residential Drywall Tapers	Journey Level	\$39.13		1		View
Clallam	Residential Electricians	Journey Level	\$39.64		1		View
Clallam	Residential Glaziers	Journey Level	\$20.00		1		View
Clallam	Residential Insulation Applicators	Journey Level	\$15.74		1		View
Clallam	Residential Laborers	Journey Level	\$20.00		1		View
Clallam	Residential Marble Setters	Journey Level	\$69.07	7E	1N		View
Clallam	Residential Painters	Journey Level	\$51.71	6Z	11J		View
Clallam	Residential Plumbers & Pipefitters	Journey Level	\$60.50	5A	1G		View
Clallam	Residential Refrigeration & Air Conditioning Mechanics	Journey Level	\$60.50	5A	1G		View
Clallam	Residential Sheet Metal Workers	Journey Level	\$24.80		1		View

Clallam	Residential Soft Floor Layers	Journey Level	\$20.00		1	View
Clallam	Residential Sprinkler Fitters (Fire Protection)	Journey Level	\$25.41		1	View
Clallam	Residential Stone Masons	Journey Level	\$69.07	7E	1N	View
Clallam	Residential Terrazzo Workers	Journey Level	\$15.74		1	View
Clallam	Residential Terrazzo/Tile Finishers	Journey Level	\$15.74		1	View
Clallam	Residential Tile Setters	Journey Level	\$20.79		1	View
Clallam	Roofers	Journey Level	\$61.95	5A	3H	View
Clallam	Roofers	Using Irritable Bituminous Materials	\$64.95	5A	3H	View
Clallam	Sheet Metal Workers	Journey Level (Field or Shop)	\$96.42	7F	1E	View
Clallam	Shipbuilding & Ship Repair	New Construction Boilermaker	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Carpenter	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Crane Operator	\$41.83	7V	1	View
Clallam	Shipbuilding & Ship Repair	New Construction Electrician	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Heat & Frost Insulator	\$87.15	15H	11C	View
Clallam	Shipbuilding & Ship Repair	New Construction Laborer	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Machinist	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Operating Engineer	\$41.83	7V	1	View
Clallam	Shipbuilding & Ship Repair	New Construction Painter	\$51.95	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Pipefitter	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Rigger	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Sheet Metal	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Shipwright	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	New Construction Warehouse/Teamster	\$41.83	7V	1	View
Clallam	Shipbuilding & Ship Repair	New Construction Welder / Burner	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Boilermaker	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Carpenter	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Crane Operator	\$45.06	7Y	4K	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Electrician	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Heat & Frost Insulator	\$87.15	15H	11C	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Laborer	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Machinist	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Operating Engineer	\$45.06	7Y	4K	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Painter	\$51.95	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Pipefitter	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Rigger	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Sheet Metal	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Shipwright	\$51.85	7X	4J	View
Clallam	Shipbuilding & Ship Repair	Ship Repair Warehouse / Teamster	\$45.06	7Y	4K	View
Clallam	Sign Makers & Installers (Electrical)	Journey Level	\$58.04	Q	1	View
Clallam	Sign Makers & Installers (Non-Electrical)	Journey Level	\$37.08	Q	1	View
Clallam	Soft Floor Layers	Journey Level	\$66.32	15J	4C	View
Clallam	Solar Controls For Windows	Journey Level	\$15.74		1	View
Clallam	Sprinkler Fitters (Fire Protection)	Journey Level	\$72.57	7J	1R	View
Clallam	Stage Rigging Mechanics (Non Structural)	Journey Level	\$15.74		1	View
Clallam	Stone Masons	Journey Level	\$69.07	7E	1N	View
Clallam	Street And Parking Lot Sweeper Workers	Journey Level	\$16.00		1	View

Clallam	Surveyors	Assistant Construction Site Surveyor	\$78.74	7A	11H	8X	View
Clallam	Surveyors	Chainman	\$75.29	7A	11H	8X	View
Clallam	Surveyors	Construction Site Surveyor	\$80.05	7A	11H	8X	View
Clallam	Surveyors	Drone Operator (when used in conjunction with survey work only)	\$75.29	7A	11H	8X	View
Clallam	Surveyors	Ground Penetrating Radar Operator	\$75.29	7A	11H	8X	View
Clallam	Telecommunication Technicians	Journey Level	\$63.38	7E	1E		View
Clallam	Telephone Line Construction - Outside	Cable Splicer	\$40.11	5A	2B		View
Clallam	Telephone Line Construction - Outside	Hole Digger/Ground Person	\$26.67	5A	2B		View
Clallam	Telephone Line Construction - Outside	Telephone Equipment Operator (Light)	\$33.49	5A	2B		View
Clallam	Telephone Line Construction - Outside	Telephone Lineperson	\$37.90	5A	2B		View
Clallam	Terrazzo Workers	Journey Level	\$62.36	7E	1N		View
Clallam	Tile Setters	Journey Level	\$62.36	7E	1N		View
Clallam	Tile, Marble & Terrazzo Finishers	Finisher	\$53.19	7E	1N		View
Clallam	Traffic Control Stripers	Journey Level	\$89.54	15L	1K		View
Clallam	Truck Drivers	Asphalt Mix Over 16 Yards	\$74.20	15J	11M	8L	View
Clallam	Truck Drivers	Asphalt Mix To 16 Yards	\$73.36	15J	11M	8L	View
Clallam	Truck Drivers	Dump Truck	\$73.36	15J	11M	8L	View
Clallam	Truck Drivers	Dump Truck & Trailer	\$74.20	15J	11M	8L	View
Clallam	Truck Drivers	Other Trucks	\$74.20	15J	11M	8L	View
Clallam	Truck Drivers - Ready Mix	Transit Mix	\$74.20	15J	11M	8L	View
Clallam	Well Drillers & Irrigation Pump Installers	Irrigation Pump Installer	\$15.74		1		View
Clallam	Well Drillers & Irrigation Pump Installers	Oiler	\$15.74		1		View
Clallam	Well Drillers & Irrigation Pump Installers	Well Driller	\$15.74		1		View

PART F
AGENCY PERMITS

PART G
ADDENDA

PART H
CHANGE ORDERS

PART I
GEOTECHNICAL INVESTIGATION REPORT

GEOTECHNICAL REPORT

Carlsborg/Van-Lan Water System

Clallam County, Washington

Project No. 22-077
September 2023



Prepared for:

BHC Consultants LLC



*Geotechnical & Earthquake
Engineering Consultants*

September 25, 2023
PanGEO Project No. 22-077

BHC Consultants

Attention: John Gillespie, P.E.
1155 North State Street, Suite 528
Bellingham, Washington 98225

**Subject: Geotechnical Report
 Proposed Carlsborg/Van-Lan Water Systems Improvement
 Clallam County, Washington**

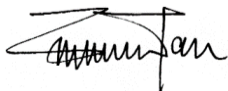
Dear Mr. Gillespie:

Attached please find our geotechnical report to assist the project team with the design and construction of the proposed improvements for the Carlsborg/Van-Lan water system in Clallam County.

Our studies focused on the site improvements at the Idea Place Site and the Van-Lan Site. In summary, based on the results of our test borings, we infer that both sites are underlain by approximately 5 to 8 feet of fill and loose soils overlaying medium dense to dense older alluvial sands, gravels, and cobbles. Based on the subsurface conditions, depending on the proposed design foundation elevation, over excavation to remove the unsuitable foundation soils maybe needed. We recommend that the proposed tanks be supported on a mat foundation bearing on competent alluvial soils, or on compacted crushed rock placed on the undisturbed alluvial soils.

Should you have any questions, please do not hesitate to call.

Sincerely,



Siew L. Tan, P.E.
Principal Geotechnical Engineer

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LIST OF ATTACHMENTS

Figure 1	Vicinity Map
Figure 2A	Site and Exploration Plan, Idea Place Site
Figure 2B	Site and Exploration Plan, Van-Lan Site

Appendix A Summary Boring Logs

Figure A-1	Terms and Symbols for Boring and Test Pit Logs
Figure A-2	Log of Test Boring PG-1
Figure A-3	Log of Test Boring PG-2A
Figure A-4	Log of Test Boring PG-2B

GEOTECHNICAL REPORT
PROPOSED CARLSBORG/VAN-LAN WATER SYSTEM IMPROVEMENTS
CLALLAM COUNTY, WASHINGTON

1.0 GENERAL

PanGEO has completed a geotechnical study to assist the project team with the design and construction of the proposed improvements for the Carlsborg/Van-Lan Water System for Clallam County PUD #1. Our services were provided in general accordance with our proposal dated January 18, 2022, and subsequently approved on February 8, 2022. The purpose of our geotechnical study was to evaluate subsurface conditions at the sites, and based on the conditions encountered, provide geotechnical recommendations pertinent to the design and construction of the proposed structures. Our services included a site reconnaissance, completion of a subsurface exploration program, and developing the conclusions and recommendations presented in this report.

2.0 SITE AND PROJECT DESCRIPTION

We understand the proposed improvements include constructing a new, approximately 18-foot-diameter water storage tank and booster pump station at Lot 8 of the Van-Lan development located northeast of the approximate intersection of Carlsborg Road and Old Olympic Highway (immediately north of 6283 Old Olympic Highway). The water will then be conveyed to a proposed 30-foot-diameter blending tank, mixer vault, and pump station located approximately one mile southeast at the Clallam County PUD #1 property, which is located east of the intersection of Idea Place and Carlsborg Road (110 Idea Place). Each tank is assumed to be less than 200,000 gallons in size. The approximate site locations are shown in Figure 1, Vicinity Map.

Both sites are currently vacant and covered with light vegetation consisting of grass and brush. A water supply was previously installed at the Van-Lan Site. Both sites are practically level. Plates 1 and 2, below, show a view of the project sites and the surrounding features.



Plate 1. PUD Site looking southwest (07/06/2022)



Plate 2. Van-Lan Site looking west from existing well on site (07/06/2022)

3.0 SUBSURFACE EXPLORATION

Three test borings (PG-1, PG-2A, PG-2B) were drilled at the sites on July 6, 2022, at the approximate locations shown on the attached Figures 2A (PUD Site) and 2B (Van-Lan Site). The borings were drilled to a maximum depth of about 41 feet below the existing ground surface using a B-58 truck-mounted drill rig equipped with hollow stem augers.

For borings PG-1 and PG-2A, Standard Penetration Tests (SPT) were performed in the borings at 2½- and 5-foot depth intervals using a standard, 2-inch diameter OD split-spoon sampler. The sampler was advanced with a 140-pound hammer falling a distance of 30 inches for each strike, in general accordance with ASTM D-1586, *Standard Test Method for Penetration Test and Split Barrel Sampling of Soils*.

For boring PG-2A, a modified California sampler was used to obtain larger-size soil samples at 5-foot intervals from 10 to 25 feet using a 3¼-inch diameter OD split-spoon sampler. The sampler was advanced with a 300-pound hammer falling a distance of 30 inches for each strike.

A geologist from PanGEO was present during the field exploration to observe the drilling, obtain representative soil samples, and describe and document the subsurface conditions encountered. The system used to classify the soils is summarized on Figure A-1, Terms and Symbols for Boring and Test Pit Logs. Summary boring logs are presented in Appendix A. The log provides descriptions of the materials encountered, depths to soil contacts, and depths of groundwater seepage.

4.0 SUBSURFACE CONDITIONS

4.1 SITE GEOLOGY AND SOILS

General geologic information for the project area was obtained by reviewing the *Geologic Map of the Carlsborg 7.5-minute Quadrangle, Clallam County, Washington* (Schasse and Wegmann, 2000). According to the geologic map, the Van-Lan site is mapped as underlain by Older Alluvium (Qoa), which is described as “*flood-plain terrace deposits of ancestral Dungeness River and McDonald Creek (Holocene to Pleistocene?)*.” The PUD site is mapped as underlain by Holocene Alluvium (Qa), which typically consists of soft/loose soils deposited by streams.

4.2 SOIL CONDITIONS

For a detailed description of the subsurface conditions encountered in our borings, please refer to the boring logs provided in Appendix A. The stratigraphic contacts indicated on the boring logs represent the approximate depth to boundaries between soil units. Actual transitions between soil units may be more gradual or occur at different elevations. Where soil contacts were gradual or undulating, the average depth of the contact was recorded in the log. The descriptions of groundwater conditions and depths are likewise approximate.

Our descriptions of subsurface conditions are based on the conditions encountered at the time of our exploration. Soil conditions away from our exploration locations may vary from those encountered. The nature and extent of variations may not become evident until construction. If variations do appear, PanGEO should be requested to re-evaluate the recommendations in this report and to modify or verify them in writing prior to proceeding with earthwork and construction.

The following is a generalized description of the soils encountered at the sites.

4.2.1 PUD (*Idea Place*) Site

Test boring PG-1 was drilled at the PUD site, at the approximate location indicated on Figure 2A. The soil conditions encountered in PG-1 are summarized below:

Soil Unit 1: Directly below about 6 inches of grass and topsoil, the test boring encountered about 4 feet of medium dense gravelly sand with silt and a trace of rootlets. We interpret this surficial soil layer as fill or re-worked soils.

Soil Unit 2: Between 4 and 8 feet below the existing ground surface, boring PG-1 encountered a layer of very loose, fine sandy silt (see Plate 3, below). This soil unit appeared consistent with the recent alluvium mapped at the site.

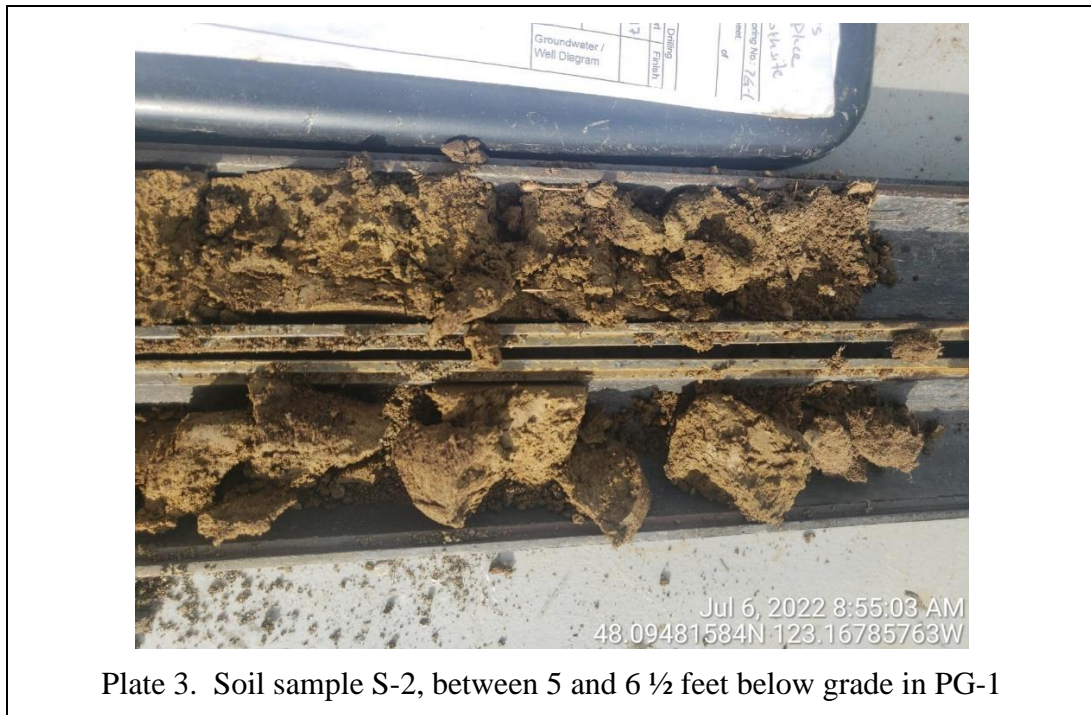


Plate 3. Soil sample S-2, between 5 and 6 ½ feet below grade in PG-1

Soil Unit 3: Between 8 and about 18 feet below the existing ground surface, boring PG-1 encountered dense to very dense, sandy gravel with some silt. We interpret this soil unit as the Older Alluvium mapped near the site. The SPT N-values may have been inflated due to presence of gravel.

Soil Unit 4: Below about 18 feet to the termination depth of the test boring at about 41 feet, the soil encountered in the test boring consisted of dense to very dense, poorly graded sand with silt a trace of gravel. This unit appeared to be part of the Older Alluvium.

4.2.2 Van-Lan Site

Test borings PG-2A and PG-2B were drilled at the Van-Lan site, at the approximate locations indicated on Figure 2B.

Soil Unit 1: Directly below about 6 inches of grass and topsoil, the test borings an approximately 4-foot-thick layer of loose, silty fine sand. This soil unit appeared consistent with the recent alluvium mapped near the site.

Soil Unit 2: Between about 4 and 11 feet below the existing ground surface, borings PG-2A and 2B encountered a layer of medium dense sand with gravel. This soil unit appeared consistent with the Older Alluvium mapped at the site.

Soil Unit 4: Between 11 and 25 feet below the existing ground surface, borings PG-2A and 2B encountered a layer of medium dense to dense, sandy gravel. This soil unit appeared consistent with the Older Alluvium mapped at the site.



Plate 4. Soil sample S-5, between 15 and 16½ feet below grade in boring PG-2A

Soil Unit 4: Below about 25 feet to the termination depth of test boring PG-2A at about 41 feet, the soil encountered in the test boring consisted of very dense, silty sand and sandy silt. We interpret this soil unit as Vashon Ice-Contact Deposits (Qgoi). This unit was not encountered in test boring PG-1 completed at the PUD site.

4.3 GROUNDWATER

At the PUD site, groundwater was encountered at about 32 feet deep (Elevation 134 feet) in boring PG-1 at the time of our drilling. At the Van-Lan site, groundwater was encountered at about 12 feet deep (about Elevation 116 feet) in both test borings PG-2A and PG-2B at the time of drilling.

It should be noted that groundwater levels will fluctuate seasonally due to amount of rainfall, surface water runoff, and other factors. Generally, the water level is higher and seepage rates are greater in the wetter, winter months (typically October through May).

6.0 GEOTECHNICAL RECOMMENDATIONS

6.1 SEISMIC DESIGN CONSIDERATIONS

6.1.1 Seismic Site Class

The seismic design should be accomplished using the 2018 edition of the International Building Code (IBC), which specifies a design earthquake having a 2% probability of occurrence in 50 years (return interval of 2,475 years). Based on the soil conditions encountered and the site geology, Site Class D is appropriate for both the PUD site and the Van-Lan site.

6.1.2 Liquefaction

Liquefaction is a process that can occur when soils lose shear strength for short periods of time during a seismic event. Ground shaking of sufficient strength and duration can result in the loss of grain-to-grain contact and an increase in pore water pressure, causing the soil to behave as a fluid. Soils with a potential for liquefaction are typically loose cohesionless, predominately silt and sand located below groundwater table.

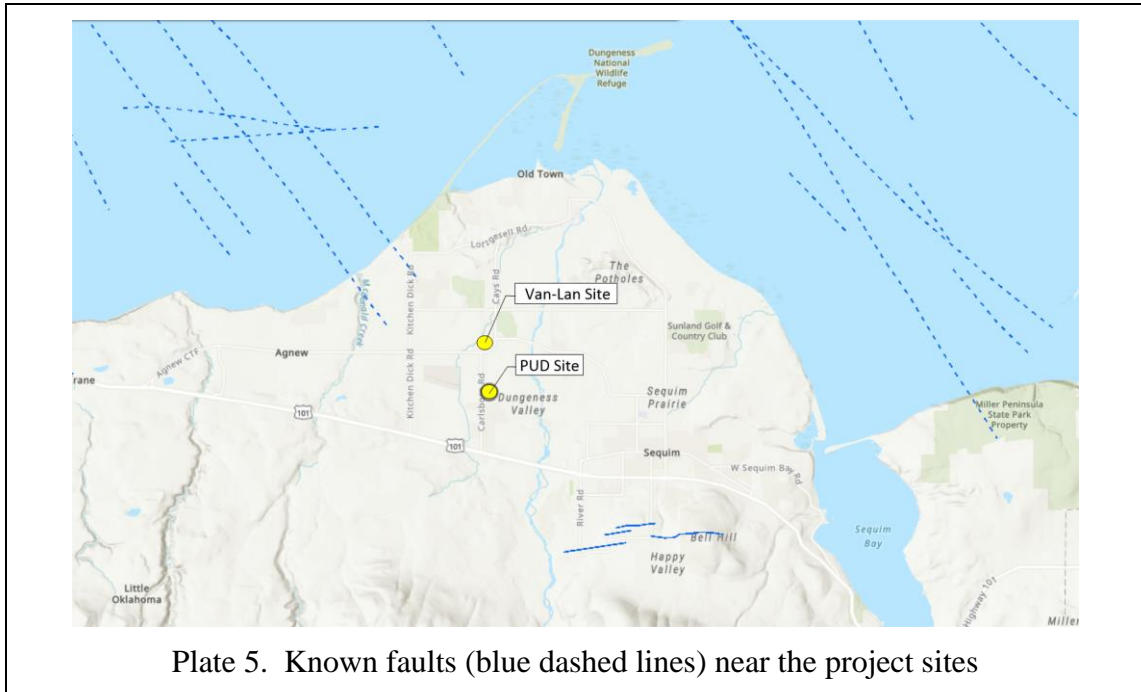
At the PUD site, the submerged soils are very dense and hence the risk of soil liquefaction is considered very low.

At the Van-Lan site, although a relatively low SPT N-value was encountered at about 15 feet deep, the soil consisted of gravel (see Plate 4, above) that is highly permeable and hence build up of excess pore pressure to result in soil liquefaction is unlikely.

In summary, it is our opinion that liquefaction at both sites is negligible and design considerations related to soil liquefaction are not necessary for this project.

6.1.3 Ground Rupture

Based on USGS mapping, there are no known faults located at the site (see Plate 5 below). Hence, the risk of ground rupture due to seismic events is considered low.



6.2 FOUNDATION DESIGN - TANKS

Based on the results of our test borings completed at the sites, it is our opinion that the proposed tanks should be supported on a mat foundation.

- At the PUD site, the upper 7 to 8 feet of the soils should be removed to expose the dense to very dense gravelly sand;
- At the Van-Lan site, the upper 5 feet of the soils should be removed to expose the medium dense to dense gravel.

The over-excavation should be backfilled with crushed surfacing base course (CSBC) as specified in WSDOT Section 9-03.9(3) (WSDOT, 2022). The foundation backfill should extend at least two feet beyond the edge of the mat foundation.

6.2.1 Allowable Soil Bearing Pressure

With the over-excavation and backfill as discussed above, the mat foundation should be sized using an allowable bearing pressure of 7,000 psf and a modulus of subgrade reaction of 400 pounds per cubic inch (pci) at the PUD site. For the Van-Lan site, we recommend an allowable bearing pressure of 4,500 psf and a modulus of subgrade reaction of 300 pounds per cubic inch (pci).

The allowable soil bearing pressures may be refined once the foundation elevations have been determined.

The recommended allowable bearing pressure is for dead plus live loads. For allowable stress design, the recommended bearing pressure may be increased by one-third for transient loading, such as wind or seismic forces.

For frost protection considerations, the mat foundation should be placed at a minimum depth of 18 inches below final exterior grade.

Foundation designed and constructed in accordance with the above recommendations should experience total settlement of less than one inch and differential settlement of less than ½ inch. Most of the anticipated settlement should occur during construction as dead loads are applied.

6.2.2 Foundation Subgrade Preparation

Foundation subgrade should be in a firm and unyielding condition. Any over-excavation below the tank foundation should be backfilled with properly compacted crushed surfacing base course (CSBC) as specified in WSDOT Section 9-03.9(3) (WSDOT, 2022).

It is the contractors' responsibilities to protect the foundation subgrade. If needed, the exposed footing subgrade may be covered with a layer of CSBC for protection.

The adequacy of the foundation subgrade should be verified by a qualified professional prior to placing the new fill.

6.2.3 Lateral Resistance

Lateral forces from wind or seismic loadings may be resisted by a combination of passive earth pressures acting against the embedded portions of the foundations, and by friction acting on the base of the foundations. The following parameters are appropriate for both the PUD and Van-Lan sites:

- **Passive resistance** may be determined using an equivalent fluid weight of 350 pounds per cubic foot (pcf). The passive pressure in the uppermost one foot of the ground surface should be ignored, unless it will be covered with pavement. This value includes a factor safety of at least 1.5 assuming that properly compacted structural fill will be placed adjacent to the sides of the foundation, and assuming level ground surface adjacent to the reservoir.
- A **friction coefficient** of 0.45 may be used to determine the frictional resistance at the base of the foundation. This coefficient includes a factor safety of approximately 1.5.

6.3 FOUNDATION – LIGHTWEIGHT BUILDINGS/STRUCTURES

Lightly loaded buildings and structures may be supported on conventional footings. Due to presence of marginal soil conditions near the surface, we recommend at least 2 feet of over-excavation below the bottom of the footings, in lieu of complete removal for the tanks. The footing over-excavation should be backfilled with 1¼ inch minus crushed rock (CSBC). The over-excavation should extend at least one foot beyond the edge of the footings.

Footings constructed as described above may be sized using an allowable bearing pressure of 2,000 psf. The recommended allowable bearing pressure is for dead plus live loads. For allowable stress design, the recommended bearing pressure may be increased by one-third for transient loading, such as wind or seismic forces.

Recommendations outlined in *Sections 6.2.2 and 6.2.3*, above, are also applicable for footings.

6.4 BUILDING FLOOR SLABS

Interior floor slabs for the proposed buildings may be constructed using conventional concrete slab-on-grade floor construction. The floor slabs should be supported on at least one foot of compacted structural fill.

Interior concrete floors should be underlain by a capillary break consisting of at least of 4 inches of capillary break material meeting the gradational requirements provided in Table 1, below.

Table 1 – Capillary Break Gradation

Sieve Size	Percent Passing
¾-inch	100
No. 4	0 – 10
No. 100	0 – 5
No. 200	0 – 3

The capillary break should be placed on subgrade soils that have been compacted to a dense and unyielding condition.

A 10-mil polyethylene vapor barrier should also be placed directly below the slab. Construction joints should be incorporated into the floor slab to control cracking.

6.5 BELOW GRADE STRUCTURES

All below grade structures including but not limited to buried portion of reservoirs, retaining walls, and underground vaults should be designed to resist the lateral earth pressures exerted by the soils behind the walls. Proper drainage provisions should be provided behind the walls to intercept and remove groundwater that may be present behind the wall. If it is not feasible to provide drainage provisions, the walls should be designed for hydrostatic pressures.

Where drainage provisions will be provided to mitigate the risk of hydrostatic pressures, an active earth pressure of 35 pcf should be used for cantilevered walls with level backfill; an at rest earth pressure of 50 pcf should be used for braced walls with a level ground surface behind the walls.

Where drainage provisions will not be provided, a lateral pressure of 90 pcf should be used to size the walls (both active and at-rest conditions), assuming perched water can reach within one foot of the ground surface.

Permanent walls should also be designed for an additional uniform lateral pressure of 9H psf for seismic loading, where H corresponds to the height of the buried depth of the walls.

6.6 PERMANENT CUT AND FILL SLOPES

We recommend that permanent cut slopes in soil, where applicable, be constructed no steeper than 3H:1V (Horizontal:Vertical). Permanent fill slope should be no steeper than 2H:1V. Slopes should be covered with mulch or planted with an appropriate species of vegetation to reduce erosion.

7.0 NEW UTILITIES

7.1 PIPE SUPPORT AND BEDDING

Based on our field exploration and review of nearby previous explorations, we anticipate the trench excavation to encounter a sequence of loose silty sand and sandy silt, to medium dense and very dense sand and gravel. Conventional excavation equipment should be adequate to complete the trenching. Trench boxes may be used to support the trench excavation.

Perched groundwater may be present near the ground surface, especially if the excavation will be made during wet weather.

Utility installation should be conducted in accordance with the *2022 WSDOT Standard Specifications* or other applicable specifications for placement and compaction of pipe bedding and backfill. In general, pipe bedding should be placed in loose lifts not exceeding 6 inches thick, and compacted to a firm and unyielding condition. Bedding materials and thicknesses provided should be suitable for the utility system and materials installed, and in accordance with any applicable manufacturers' recommendations. Pipe bedding materials should be placed on relatively undisturbed native soil. Loose or soft soils, if present, should be removed and be replaced with additional pipe bedding material.

7.2 TRENCH BACKFILL

The native soils within the anticipated excavation depths are expected to range from sandy silt and silty sand to sand and gravel, depending on the depth of the excavations. Compaction of the on-site finer grained soils (silty sand and sandy silt) will be difficult if the soil moisture increases significantly above their optimum moisture content and should be used only in non-structural areas.

The granular portion of the site soils (sand and gravel) may be re-used as trench backfill.

If imported fill will be needed to backfill the trenches, we recommend the imported fill to consist of WSDOT 9-03.14(1) Gravel Borrow (WSDOT, 2022).

Trench backfill in structural areas should be compacted to at least 95 percent maximum density, determined using ASTM D 1557 (Modified Proctor). In non-structural areas where potential future settlements along the trench alignment is acceptable, the compaction level may be reduced to 90 percent of maximum dry density per ASTM D-1557, Modified Proctor. Heavy compaction equipment should not be permitted to operate directly over utilities until a minimum of 2 feet of backfill has been placed.

7.3 THRUST BLOCKS

Where needed, thrust blocks should be sized using an allowable passive pressure calculated using an equivalent fluid unit weight of 300 pcf, assuming the thrust blocks will be constructed against undisturbed native soil or compacted structural backfill.

8.0 EARTHWORK CONSIDERATIONS

8.1 STRIPPING

Areas to receive structural fill should be stripped and cleared of surface vegetation, organic matter, and other deleterious material. Existing utility pipes to be abandoned should be plugged or removed so they do not provide a conduit for water and cause soil saturation and stability problems.

Based on the thickness of the topsoil horizon encountered in our boring, we anticipate a stripping depth of about 6 inches to a foot will be needed to remove the topsoil horizon. The actual stripping depth should be based on field observation at the time of construction.

In no case should the stripped or grubbed materials be used as structural fill or mixed with material to be used as structural fill. The stripped materials may be “wasted” on site in non-structural landscaping areas or they should be exported.

Following the stripping operation and excavations necessary to achieve construction subgrade elevations, the ground surface where structural fill, foundations, slabs, or pavements are to be placed should be observed by a qualified individual experienced in earthwork construction.

Proof-rolling may be necessary to identify soft or unstable areas. The needs for proof rolling should be determined at the time of construction. Loose or soft areas, if re-compacted and still yielding, should be over excavated and replaced with structural fill. The optional use of a geotextile fabric placed directly on the over excavated surface may also help to bridge unstable areas.

8.2 TEMPORARY EXCAVATIONS

Temporary excavations should be performed in accordance with Part N of WAC (Washington Administrative Code) 296-155. The contractor is responsible for maintaining safe excavation slopes and/or shoring.

For planning purposes, for excavation no deeper than 10 feet, the temporary excavations should be sloped no steeper than 1.5H:1V.

Excavation slopes can be further evaluated in the field during construction based on actual observed soil conditions.

During wet weather, the cut slopes may need to be flattened to reduce potential erosion or covered with plastic sheeting.

8.3 MATERIAL REUSE

Some of the native soils underlying the site (i.e., silty sand and sandy silt) are moisture sensitive and will become disturbed and soft when exposed to inclement weather conditions and/or groundwater seepage and should not be considered suitable for reuse as structural fill.

The sand/gravel portion of the native soils may be re-used as structural fill (except below the reservoir foundations, which should consist of CSBC as previously discussed), provided that adequate compactions can be achieved.

If the existing soils will be used in non-structural areas, any excavated soil should be stockpiled and protected from precipitation with plastic sheeting.

8.4 STRUCTURAL FILL AND COMPACTION

Structural fill to be placed below the reservoir foundation, if needed, should consist of crushed surfacing base course as specified in WSDOT Section 9-03.9(3) (WSDOT, 2023wsdot).

Other structural fill, unless otherwise specified, should consist of WSDOT 9-03.14(1) Gravel Borrow (WSDOT, 2023), or on-site sand and gravel. On-site silty sand and sandy silt should not be used as structural fill.

Structural fill should be properly moisture conditioned, placed in loose, horizontal lifts or no more than 8 to 12 inches in thickness, and compacted to at least 95 percent maximum density, determined using ASTM D 1557 (Modified Proctor). The procedure to achieve proper density of a compacted fill depends on the size and type of compacting equipment, the number of passes, thickness of the layer being compacted, and certain soil properties. In areas where the size of the excavation restricts the use of heavy equipment, smaller equipment can be used, but the soil must be placed in thin enough lifts to achieve the required relative compaction.

Generally, soils not achieving compaction are a result of poor construction technique or improper moisture content. Soils with high fines contents are particularly susceptible to becoming too wet, and coarse-grained materials easily become too dry, for proper compaction. Silty or clayey soils with a moisture content too high for adequate compaction should be dried as necessary, or moisture conditioned by mixing with drier materials, or other methods.

8.5 WET WEATHER CONSTRUCTION

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

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

- Bales of straw and/or geotextile silt fences should be installed at strategic locations around the site to control erosion and the movement of soil.
- Excavation slopes and soils stockpiled on site should be covered with plastic sheets.

8.6 SURFACE WATER DRAINAGE AND EROSION CONSIDERATIONS

Surface runoff can be controlled during construction by careful grading practices. Typically, this includes the construction of shallow, upgrade perimeter ditches or low earthen berms in conjunction with silt fences to collect runoff and prevent water from entering excavations or to prevent runoff from the construction area from leaving the immediate work site. Temporary erosion control may require the use of hay bales on the downhill side of the project to prevent water from leaving the site and potential storm water detention to trap sand and silt before the water is discharged to a suitable outlet. All collected water should be directed under control to a positive and permanent discharge system.

Permanent control of surface water should be incorporated in the final grading design. Adequate surface gradients and drainage systems should be incorporated into the design such that surface runoff is collected and directed away from the reservoir structure and away from the southeast slope and to a suitable outlet. Potential problems associated with erosion may also be reduced by establishing vegetation within disturbed areas immediately following grading operations.

8.7 DURING-CONSTRUCTION GROUNDWATER CONTROL

At the PUD site, groundwater was encountered at about 32 feet deep, and hence we do not anticipate the site work at the PUD site to be impacted by groundwater.

At the Van-Lan site, groundwater was encountered at 12 feet deep at the time of drilling. Groundwater may be a few feet higher during the winter-spring months. Depending on the depth of the proposed excavation, construction dewatering may be needed. PanGEO can provide additional recommendations for dewatering when the planned excavation depth is determined.

9.0 UNCERTAINTY AND LIMITATIONS

We have prepared this report for use by BHC. Recommendations contained in this report are based on a site reconnaissance, a subsurface exploration program, review of pertinent geologic publications, and our understanding of the project. The study was performed using a mutually agreed-upon scope of work.

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

Our scope of services does not include those related to construction safety precautions. Our recommendations are not intended to direct the contractors' methods, techniques, sequences or procedures, except as specifically described in our report for consideration in design. Additionally, the scope of our work specifically excludes the assessment of environmental characteristics, particularly those involving hazardous substances. We are not mold consultants nor are our recommendations to be interpreted as being preventative of mold development. A mold specialist should be consulted for all mold-related issues.

This report may be used only by the client and for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both off and on-site), or other factors including advances in our understanding of applied science, may change over time and could materially affect our findings. Therefore, this report should not be relied upon after 24 months from its issuance. PanGEO should be notified if the project is delayed by more than 24 months from the date of this report so that we may review the applicability of our conclusions considering the time lapse.

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

updated report be reissued. Noncompliance with any of these requirements will release PanGEO from any liability resulting from the use this report.

Within the limitation of scope, schedule and budget, PanGEO engages in the practice of geotechnical engineering and endeavors to perform its services in accordance with generally accepted professional principles and practices at the time the Report or its contents were prepared. No warranty, express or implied, is made.

We appreciate the opportunity to be of service to you on this project. Please feel free to contact our office with any questions you have regarding our study, this report, or any geotechnical engineering related project issues.

Sincerely,

PanGEO, Inc.



Spenser Scott, LG
Project Geologist



September 25, 2023

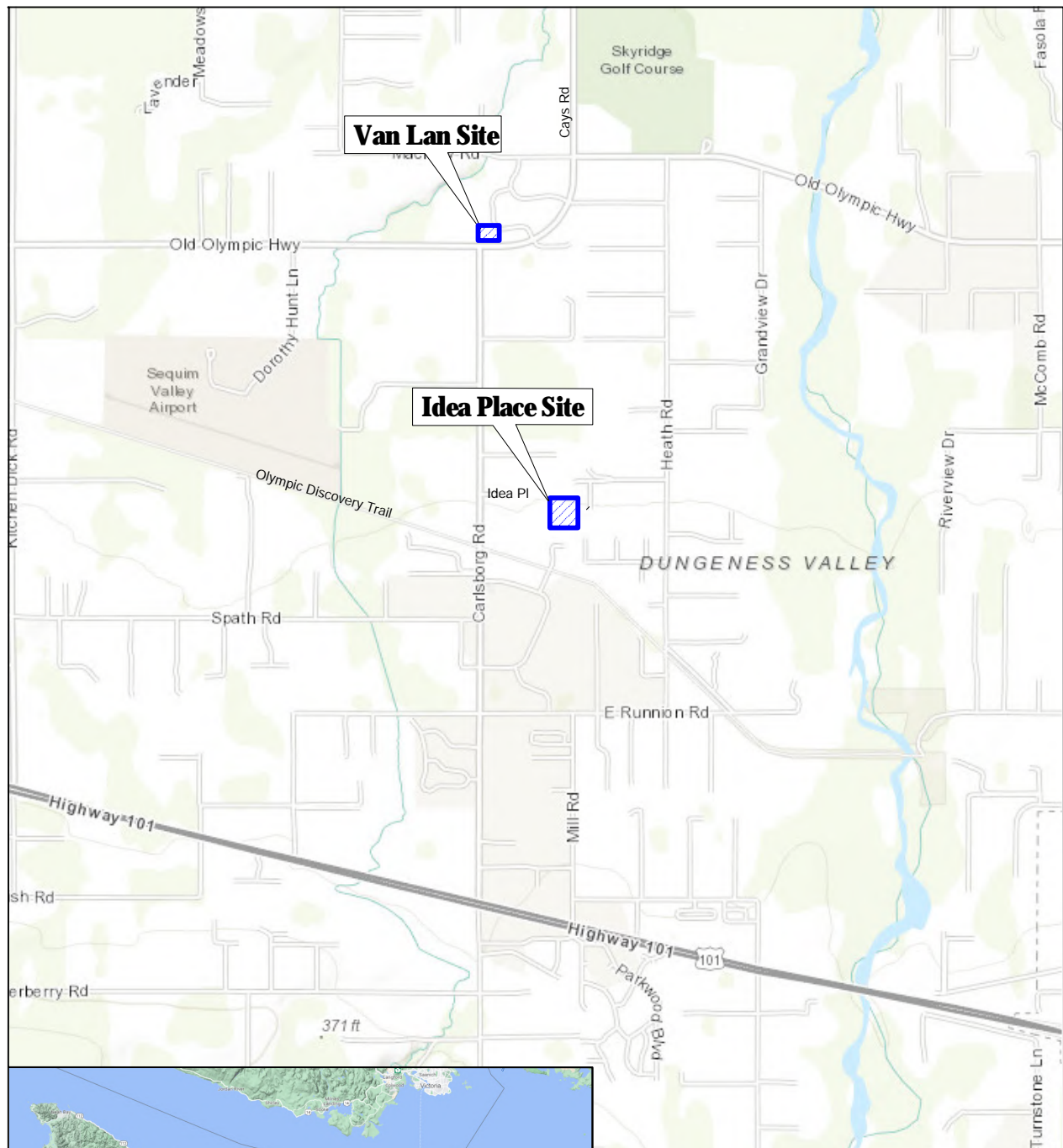
Siew L. Tan, P.E.
Principal Geotechnical Engineer

10.0 REFERENCES

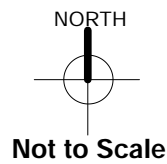
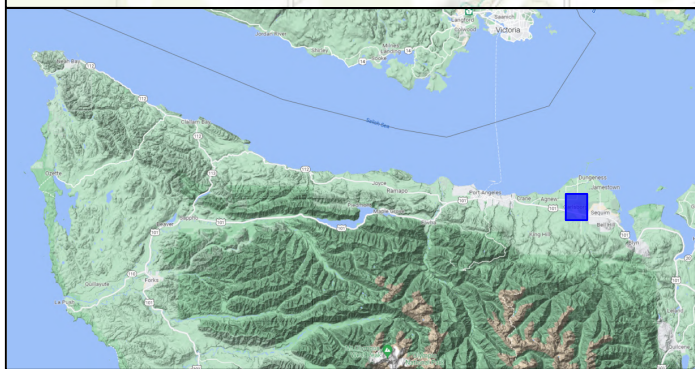
International Building Code (IBC), 2018, International Code Council.

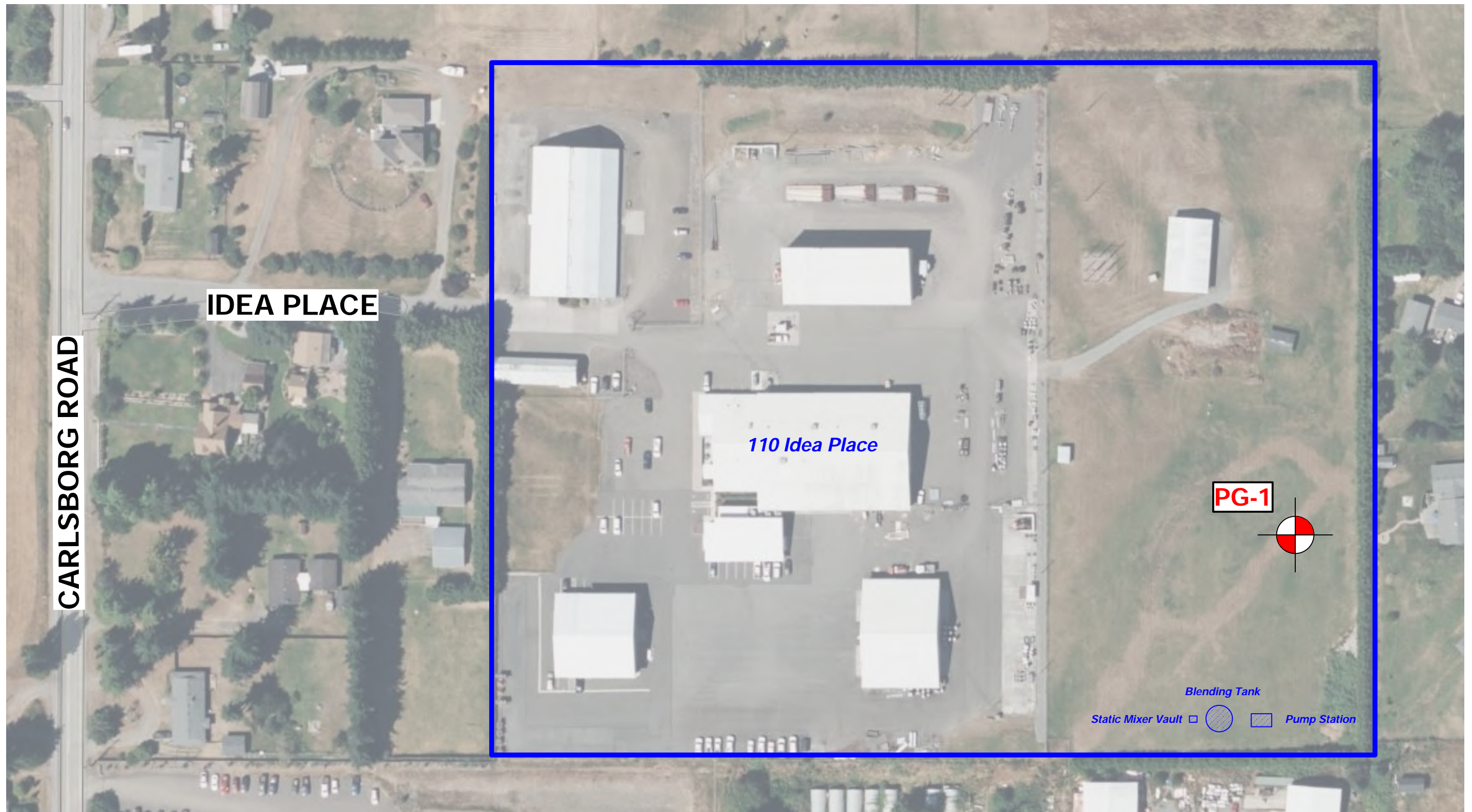
Schasse, H. and Wegmann, K., 2000, *Geologic Map of the Carlsborg 7.5-minute Quadrangle, Clallam County, Washington*. Washington Division of Geology and Earth Resources; Open file report 2000-7.

WSDOT, 2023. *Standard Specifications for Road, Bridges, and Municipal Construction*.







Base Map: ESRI Topographic





Legend:

-  Approximate Test Boring Location
PanGEO, Inc., July 2022
-  Approximate Proposed Structure
-  Approximate Site Boundary


Approx. Scale:
1 inch = 100 feet

PanGEO
INCORPORATED

**Carlsborg/Van-Lan
Water System
Clallam County PUD
Carlsborg, Washington**

Base map modified from Orthophoto from Bing Maps, dated 2022




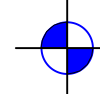
**SITE AND EXPLORATION PLAN
IDEA PLACE SITE**

Project No. 22-077

Figure No. 2A




Legend:

- 
Approximate Test Boring Location
PanGEO, Inc., July 2022
- 
Approximate Proposed Structures
- 
Approximate Site Boundary
- 
Approximate Well Location
By Others, February 2020



Approx. Scale:
1 inch = 50 feet

	Carlsborg/Van-Lan Water System Clallam County PUD Carlsborg, Washington	SITE AND EXPLORATION PLAN VAN-LAN SITE	
		Project No. 22-077	Figure No. 2B

Base map modified from Orthophoto from Bing Maps, dated 2022















APPENDIX A

SUMMARY BORING LOG

RELATIVE DENSITY / CONSISTENCY

SAND / GRAVEL			SILT / CLAY		
Density	SPT N-values	Approx. Relative Density (%)	Consistency	SPT N-values	Approx. Undrained Shear Strength (psf)
Very Loose	<4	<15	Very Soft	<2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Med. Dense	10 to 30	35 - 65	Med. Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	>50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	>30	>4000

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		GROUP DESCRIPTIONS	
Gravel 50% or more of the coarse fraction retained on the #4 sieve. Use dual symbols (eg. GP-GM) for 5% to 12% fines.	GRAVEL (<5% fines)		GW: Well-graded GRAVEL
	GRAVEL (>12% fines)		GP: Poorly-graded GRAVEL
Sand 50% or more of the coarse fraction passing the #4 sieve. Use dual symbols (eg. SP-SM) for 5% to 12% fines.	SAND (<5% fines)		GM: Silty GRAVEL
			GC: Clayey GRAVEL
	SAND (>12% fines)		SW: Well-graded SAND
			SP: Poorly-graded SAND
			SM: Silty SAND
			SC: Clayey SAND
Silt and Clay 50% or more passing #200 sieve	Liquid Limit < 50		ML: SILT
			CL: Lean CLAY
			OL: Organic SILT or CLAY
	Liquid Limit > 50		MH: Elastic SILT
			CH: Fat CLAY
			OH: Organic SILT or CLAY
		Highly Organic Soils	

- Notes:**
- Soil exploration logs contain material descriptions based on visual observation and field tests using a system modified from the Uniform Soil Classification System (USCS). Where necessary laboratory tests have been conducted (as noted in the "Other Tests" column), unit descriptions may include a classification. Please refer to the discussions in the report text for a more complete description of the subsurface conditions.
 - The graphic symbols given above are not inclusive of all symbols that may appear on the borehole logs. Other symbols may be used where field observations indicated mixed soil constituents or dual constituent materials.

DESCRIPTIONS OF SOIL STRUCTURES

Layered: Units of material distinguished by color and/or composition from material units above and below	Fissured: Breaks along defined planes
Laminated: Layers of soil typically 0.05 to 1mm thick, max. 1 cm	Slickensided: Fracture planes that are polished or glossy
Lens: Layer of soil that pinches out laterally	Blocky: Angular soil lumps that resist breakdown
Interlayered: Alternating layers of differing soil material	Disrupted: Soil that is broken and mixed
Pocket: Erratic, discontinuous deposit of limited extent	Scattered: Less than one per foot
Homogeneous: Soil with uniform color and composition throughout	Numerous: More than one per foot
	BCN: Angle between bedding plane and a plane normal to core axis

COMPONENT DEFINITIONS

COMPONENT	SIZE / SIEVE RANGE	COMPONENT	SIZE / SIEVE RANGE
Boulder:	> 12 inches	Sand	
Cobbles:	3 to 12 inches	Coarse Sand:	#4 to #10 sieve (4.5 to 2.0 mm)
Gravel		Medium Sand:	#10 to #40 sieve (2.0 to 0.42 mm)
Coarse Gravel:	3 to 3/4 inches	Fine Sand:	#40 to #200 sieve (0.42 to 0.074 mm)
Fine Gravel:	3/4 inches to #4 sieve	Silt	0.074 to 0.002 mm
		Clay	<0.002 mm








TEST SYMBOLS

for In Situ and Laboratory Tests listed in "Other Tests" column.









ATT	Atterberg Limit Test
Comp	Compaction Tests
Con	Consolidation
DD	Dry Density
DS	Direct Shear
%F	Fines Content
GS	Grain Size
Perm	Permeability
PP	Pocket Penetrometer
R	R-value
SG	Specific Gravity
TV	Torvane
TXC	Triaxial Compression
UCC	Unconfined Compression

SYMBOLS

Sample/In Situ test types and intervals

	2-inch OD Split Spoon, SPT (140-lb. hammer, 30" drop)
	3.25-inch OD Split Spoon (300-lb hammer, 30" drop)
	Non-standard penetration test (see boring log for details)
	Thin wall (Shelby) tube
	Grab
	Rock core
	Vane Shear

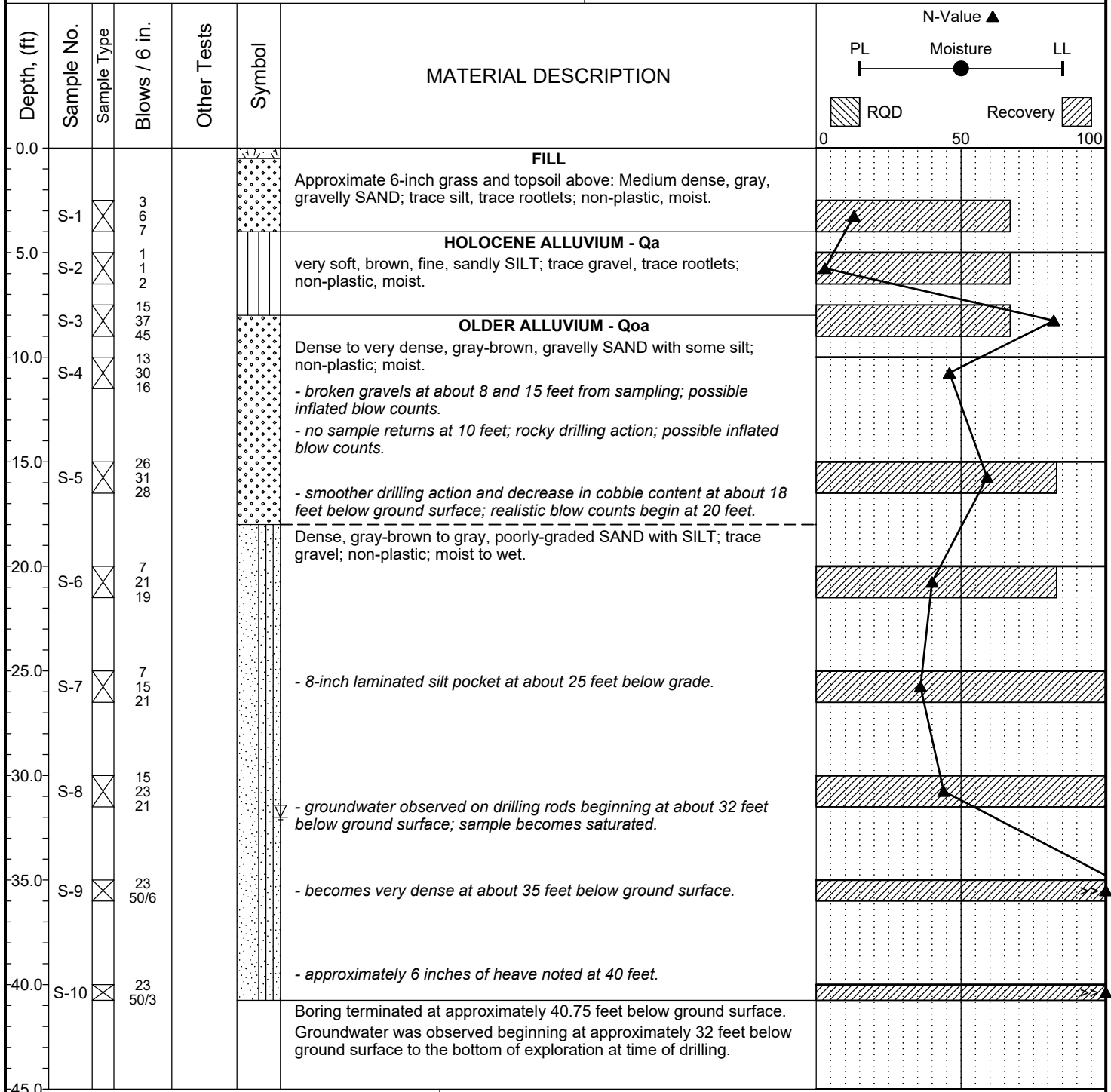
MONITORING WELL

	Groundwater Level at time of drilling (ATD)
	Static Groundwater Level
	Cement / Concrete Seal
	Bentonite grout / seal
	Silica sand backfill
	Slotted tip
	Slough
	Bottom of Boring

MOISTURE CONTENT

Dry	Dusty, dry to the touch
Moist	Damp but no visible water
Wet	Visible free water

Project:	Carlsborg/Van-Lan Water System	Surface Elevation:	~166 feet (Google Earth)
Job Number:	22-077	Top of Casing Elev.:	N/A
Location:	Carlsborg, Clallam County, WA	Drilling Method:	B-58 Mobile Truck Mounted Drill Rig, HSA
Coordinates:	Northing: 48.09483, Easting: -123.16783	Sampling Method:	SPT w/auto-hammer



Completion Depth: 40.8ft
 Date Borehole Started: 7/6/22
 Date Borehole Completed: 7/6/22
 Logged By: S. Scott
 Drilling Company: Holocene Drilling

Remarks: Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer w/30" drop. Hammer operated with auto-hammer mechanism with 97% hammer efficiency rating. Coordinates and elevation are approximate and based on their relative location to known site features. This information is provided for relative information only and is not a substitution for field survey. **Datum: WGS84 / NAVD88**

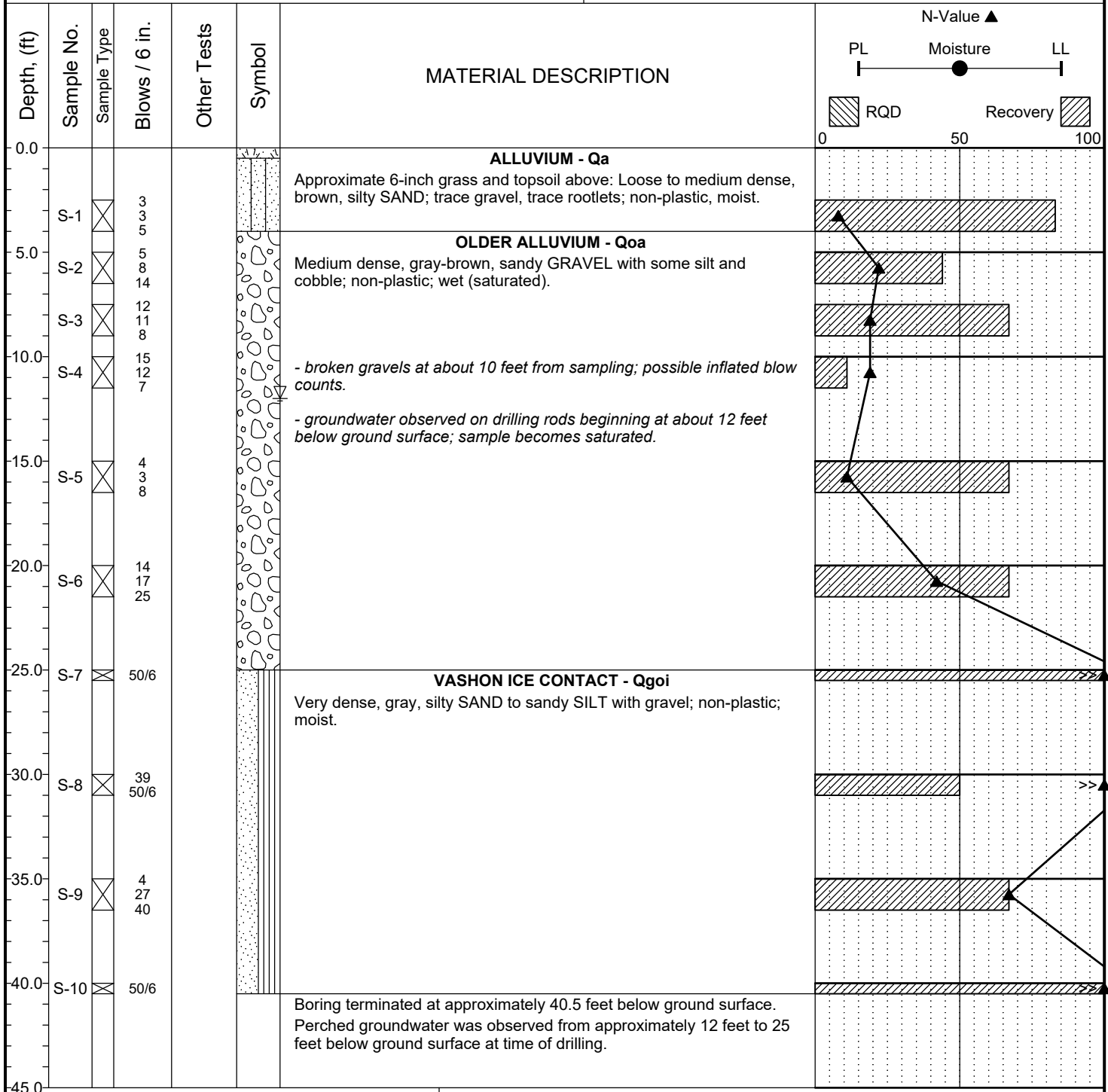


LOG OF TEST BORING PG-1

Figure A-2

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

Project:	Carlsborg/Van-Lan Water System	Surface Elevation:	~128 feet (Google Earth)
Job Number:	22-077	Top of Casing Elev.:	N/A
Location:	Carlsborg, Clallam County, WA	Drilling Method:	B-58 Mobile Truck Mounted Drill Rig, HSA
Coordinates:	Northing: 48.10584, Easting: -123.17242	Sampling Method:	SPT w/auto-hammer



Completion Depth: 40.5ft
 Date Borehole Started: 7/6/22
 Date Borehole Completed: 7/6/22
 Logged By: S. Scott
 Drilling Company: Holocene Drilling

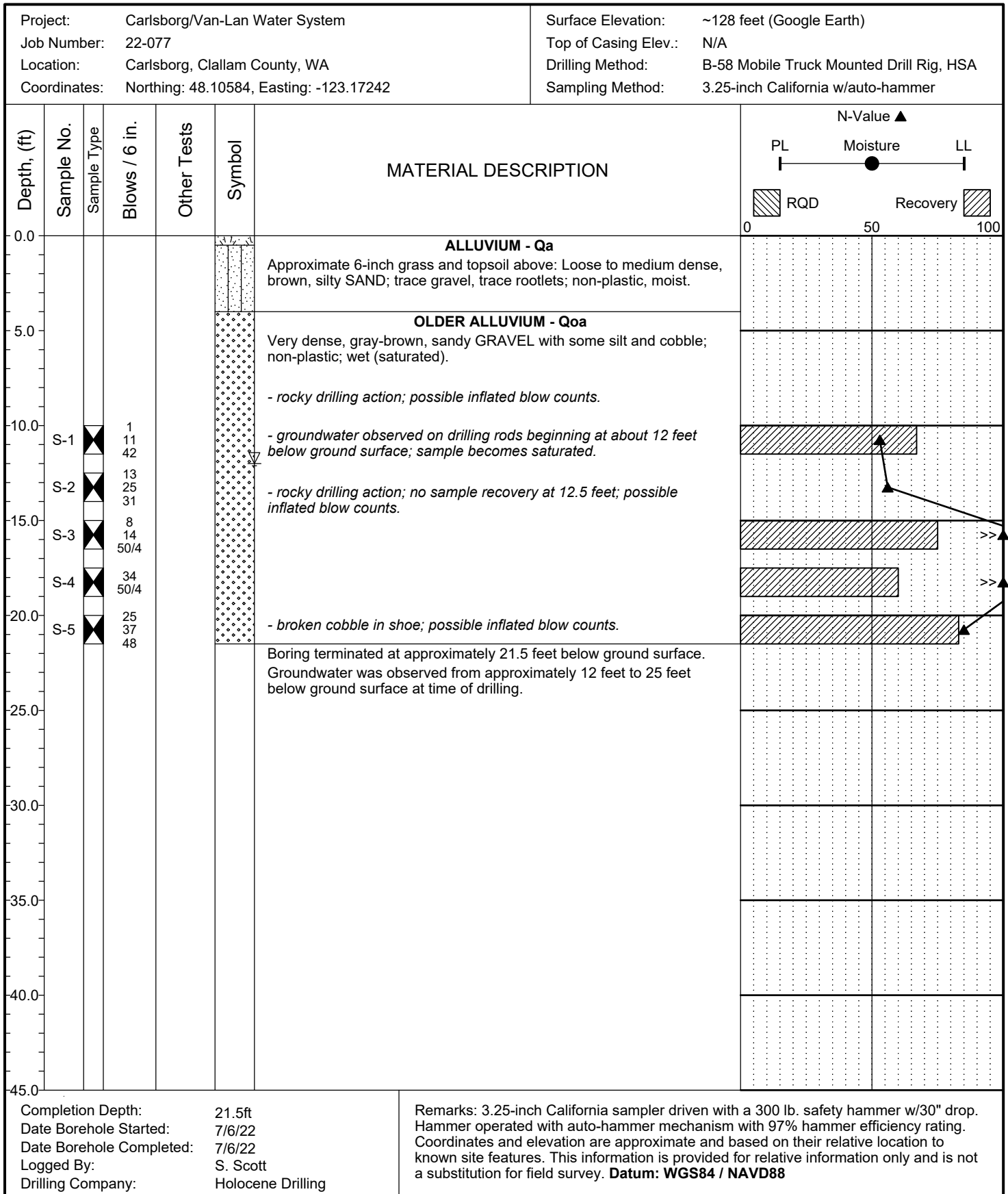
Remarks: Standard penetration test (SPT) sampler driven with a 140 lb. safety hammer w/30" drop. Hammer operated with auto-hammer mechanism with 97% hammer efficiency rating. Coordinates and elevation are approximate and based on their relative location to known site features. This information is provided for relative information only and is not a substitution for field survey. **Datum: WGS84 / NAVD88**



LOG OF TEST BORING PG-2A

Figure A-3

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



LOG OF TEST BORING PG-2B

Figure A-4

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