CONFEDERATED TRIBES
of the
CHEHALIS RESERVATION

Request for Proposal
for Construction Services
On our
Water Meter Installation Project

RFP Issued December 12, 2022

CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION

CONTRACT PROVISIONS

for

METERING IMPROVEMENTS

G&O #22242
DECEMBER 2022

Gray & Osborne, Inc.
CONSULTING ENGINEERS

CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION

CONTRACT PROVISIONS

for

METERING IMPROVEMENTS

12/6/22

Dec 6, 2022

G&O #22242
DECEMBER 2022

Gray & Osborne, Inc.
CONSULTING ENGINEERS

CALL FOR BIDS

CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION

METERING IMPROVEMENTS
ENGINEER'S ESTIMATE $120,000 TO $180,000

Sealed Proposals will be received by the undersigned at the Confederated Tribes of the Chehalis Reservation, 420 Howanut Road, Oakville, Washington 98568 or by email to Bvoncluck@ChehalisTribe.org, up to 2:00 p.m.; local time on Monday, January 16, 2023, for furnishing the necessary labor, materials, equipment, tools, and guarantees thereof to construct the Metering Improvements.

The work consists of replacing existing water meters with new meters, installing new water meters and meter boxes on existing service lines, as shown on the Plans, and hereinafter specified, throughout the water service area of the Confederated Tribes of the Chehalis Reservation (Tribe), procuring all necessary hardware and operations and training documentation in order to provide a complete automated metering system, and coordination with meter supplier to provide training on system installation and operation.

The Work shall be substantially complete within 60 working days after the commencement date stated in the Notice to Proceed. All bidding and construction is to be performed in compliance with the Contract Provisions and Contract Plans for this project and any addenda issued thereto that are on file at the office of the Tribe Office, Oakville, Washington.

Proposals will be opened and scored based on the selection criteria provided in Appendix B. Bid opening will not be open to the public. Proposals are to be submitted only on the form provided with the Bid Documents.

Bid Documents for this project are available free-of-charge at the following websites: http://gobids.grayandosborne.com or https://www.chehalistribe.org/departments/planning-department/view-our-current-projects/. Bidders are encouraged to register in order to receive automatic email notification of future addenda and to be placed on the Bidders List. For assistance, please call (206) 284-0860. Contract questions shall be directed only to the office of the Project Engineer.

A Prebid Conference is scheduled for Tuesday, December 20, 2022. The conference will begin at the Planning Department Office, 6 Niederman Road, Oakville, Washington at 11:00 a.m. (local time). Prospective bidders are encouraged to participate. Any other site visits shall be limited to 8:00 a.m. to 1:00 p.m., Monday through Friday, and shall be coordinated through Brian von Cluck, of the Chehalis Tribal Planning Department, by calling (253) 678-5557, at least 24 hours in advance of the visit. No unauthorized visits or unscheduled visits will be allowed.

Financing of the Project has been provided by Confederated Tribes of the Chehalis Reservation, Washington and the United States Bureau of Reclamation. The Confederated Tribes of the Chehalis Reservation expressly reserves the right to reject any or all Proposals and to waive minor irregularities or informalities in any Proposal.

(Signed) **BRIAN VON CLUCK**
UTILITIES CONSTRUCTION
PROJECT COORDINATOR

CONTRACT PROVISIONS

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PART 1

BID DOCUMENTS

BIDDER'S CHECKLIST

1. REQUIRED FORMS

The Bidder shall submit the following forms, which must be executed in full and submitted with the Proposal.

a. Proposal (including Statement of Bidder's Qualifications) (Pages P-1 - P-5)

2. AGREEMENT FORMS

The following forms (a., b., and c.) are to be executed and the Certificates of Insurance (d. and e.) are to be provided after the Contract is awarded and prior to Contract execution.

a. Construction Contract (Pages 1 - 5)
b. Performance Bond (Page B-1)
c. Public Works Payment Bond (Page B-2)
d. Certificate of Insurance
e. Certificate of Builders Risk Insurance

METERING IMPROVEMENTS

PROPOSAL

Confederated Tribes of the Chehalis Reservation
420 Howanut Road
Oakville, Washington 98568

The undersigned has examined the Work site(s), local conditions, the Contract, and all applicable laws and regulations covering the Work. The following unit and lump sum prices are tendered as an offer to perform the Work in accordance with all of the requirements set forth in the Contract and all applicable laws and regulations.

After the date and hour set for submitting the Proposals, no bidder may withdraw its Proposal, unless the Award of the contract is delayed for a period exceeding 60 consecutive calendar days.

The undersigned agrees that in the event it is Awarded the contract for the Work, it shall employ only Contractors and Subcontractors that are duly licensed by the Chehalis Tribe and the State of Washington and remain so at all times they are in any way involved with the Work.

The undersigned agrees that the Owner reserves the right to reject any or all Proposals and to waive any minor irregularities and informalities in any Proposal.

The undersigned agrees that the Owner will Award the Contract to whose Proposal is in the best interest of the Owner.

PROPOSAL - Continued

NO.	ITEM	QUANTITY		UNIT PRICE	AMOUNT
1.	Mobilization and Demobilization	1	LS	$_____	$_____
2.	Minor Change	1	CALC	$15,000.00	$15,000.00
3.	Utility Locates	1	LS	$_____	$_____
4.	5/8-Inch Water Meter Replacement	102	EA	$_____	$_____
5.	2-Inch Water Meter Replacement	1	EA	$_____	$_____
6.	4-Inch Water Meter Replacement	1	EA	$_____	$_____
7.	5/8-Inch Water Meter Installation w/Meter Box	8	EA	$_____	$_____
8.	1-Inch Water Meter Installation w/Meter Box	4	EA	$_____	$_____
9.	1-1/2-Inch Water Meter Installation w/Meter Box	2	EA	$_____	$_____
10.	2-Inch Water Meter Installation w/Meter Box	1	EA	$_____	$_____
11.	Lawn/Landscape Restoration	10	EA	$_____	$_____
12.	Asphalt Restoration	5	EA	$_____	$_____
13.	System Hardware	1	LS	$_____	$_____
14.	Training and Startup	1	LS	$_____	$_____
15.	Project Documentation	1	LS	$_____	$_____

TOTAL CONSTRUCTION COST: .....$_____

Note: A bid must be received on all items.

STATEMENT OF BIDDER'S QUALIFICATIONS

Name of Firm: _____

Address: _____

Telephone No. _____ Fax No. _____

Contact Person for this Project: _____

E-mail: _____

Number of years the Contractor has been engaged in the construction business under the present firm name, as indicated above:

_____

WORK TO BE COMPLETED BY BIDDER

List the Work and the dollar amount thereof that the Bidder will complete with its forces, if awarded the contract.

Work to be Performed	Dollar Amount

ADDENDA RECEIVED

Addendum No.	Date Received	Name of Recipient

NOTE: Bidder shall acknowledge receipt of all addenda. Bidder is responsible for verifying the actual number of addenda issued prior to submitting a Proposal.

Subject to any extensions of the Contract Time granted under the Contract, the undersigned agrees to substantially complete the Work required under this Contract within 20 working days (the Substantial Completion Date) and to physically complete the Work required under this contract within 30 working days (the Physical Completion Date) from when Contract Time begins.

The undersigned has reviewed and fully understands the provisions in the Contract regarding liquidated damages and agrees that liquidated damages shall be $500.00 per day for each and every working day beyond the Contract Time allowed for substantial completion until the Substantial Completion Date is achieved and $1,000.00 for each and every working day required beyond the Contract Time for physical completion until the Physical Completion Date is achieved.

The undersigned is, and will remain in, full compliance with all Washington State administrative agency requirements including, but not limited to registration requirements of Washington State Department of Labor & Industries for contractors, including but not limited to requirements for bond, proof of insurance and annual registration fee. The undersigned's Washington State:

Dept. of Labor and Industries Workman's Compensation Account No. is _____;
Dept. of Licensing Contractor's Registration No. is _____;
Unified Business Identifier Number is _____;
Excise Tax Registration Number is _____;
Employment Security Account Number is _____; and
The Undersigned Chehalis Tribal Business License No. is _____.

If the Contractor does not hold a Chehalis Tribal Business License, one must be purchased prior to Contract award.

The undersigned has reviewed all insurance requirements contained in the Contract and has verified the availability of and the undersigned's eligibility for all required insurance. The undersigned verifies that the cost for all required insurance, has been included in this Proposal.

PROPOSAL - Continued

By signing the proposal, the undersigned declares, under penalty of perjury under the laws of the United States and the State of Washington, that the following statements are true and correct:

1. That the undersigned person(s) or entity(ies) has(have) not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the project for which this Proposal is submitted.

The undersigned agrees that the Owner is authorized to obtain information from all references included herein.

Sincerely,

_____	_____
Sign Name	Date
By: _____	_____
Print Name, Title	Location Executed (City, State or County)
_____	
Print Company Name	

PART 2

AGREEMENT AND BONDS

Confederated Tribes of the Chehalis Reservation

CONSTRUCTION CONTRACT

This Contract is made on the 20th day of October 2015, by and between the **Confederated Tribes of the Chehalis Reservation**, hereinafter referred to as "Tribe" and (Insert name of company), (Type of contractor), hereinafter referred to as "Contractor." This Contract is made for work to be performed for the benefit of the Tribe in order to make the necessary improvements to afford safe, healthy, and sound construction for the Tribe and in compliance with appropriate Tribal and federal provisions.

RECITALS

Contractor, in consideration of the sum indicated on the Contractor's Proposal, which by this reference is made a part hereof, and in consideration of the other covenants and agreements herein contained, agrees to perform and complete the work herein described:

1. A. Contractor shall accomplish all the work for this project as indicated in the attached Bid Metering Improvements, which is made a part hereof, which includes the project specifications and are also incorporated as part of this Contract.

   B. The Scope of Work covered by this Contract shall be completed by (Name of contractor).

   C. Excusable delays.
   Except with respect to failures of subcontractors, the Contractor shall not be considered to have failed in performance of this contract if such failure arises out of causes beyond the control and without the fault or negligence of the Contractor. Such cause may include, but are not restricted to, Acts of God or the public enemy, acts of the Government in either its sovereign or contractual capacity, acts of the owner, fires, floods, quarantine restrictions, strikes, freight embargoes, and unusually severe weather, but in every case failure to perform must be beyond the control and without the fault or negligence of the Contractor. If the failure to perform is caused by the failure of a subcontractor to perform, and if such failure arises out of the cause beyond the control of both the Contractor and subcontractor and without the fault or negligence of either of them, the contractor shall not be deemed to have failed in performance of the Contract, unless (a) the supplies or services to be furnished by the subcontractor were obtained from other supplies, and (b) the Contractor shall have failed to comply reasonably with such order. The Contractor shall within 10 days from beginning of such delay notify the Tribe in writing of the causes of the delay. The Tribe shall ascertain the facts and extent of such failure and, if determined that any failure to perform was occasioned by any one or more of the said cause, the delivery schedule shall be revised accordingly.

2. The Tribe shall make payments to the Contractor of a sum not to exceed the total amount of $_____. The Tribe shall make payments within 30 days after completion of the work, or

by a timeline agreed to by both parties and attached and made part of this Contract. The last payment will be made with the approval of work by the Tribal Business Committee. A 5% retainage fee shall be held until all parties, including the Tribal Building Inspector, accept the work as being complete including all punch list items. All warranties and lien waivers and project as-builts as specified must be received prior to final payment.

3. Amendments and work orders to this Contract shall only be made upon written amendments agreed to and executed by the parties.

4. Contractor shall obtain and maintain all required licenses or permits, and meet all requirements of the Tribe, State, and/or Federal laws as applicable for the successful completion of this project. Contractor will provide copies of his Contractor's License, Workers Compensation, Bonding and/or Insurance Certificate.

5. Contractor shall not enter into any subcontracts for any of the work scheduled under this Contract, or assign any right, interest or obligation under this Contract, without obtaining prior written approval of the Tribe.

6. Warranty.
   Contractor warrants that all materials used will be new and of good quality unless use of other materials is approved in writing by the Tribe, and that all work will be free of defects in workmanship, and that the work will conform to the conditions of this Contract and the standards in the industry. This warranty is for a period of 12 months following the date the work is approved by the Business Committee. Any warranty claim shall be submitted to Contractor in writing within the 12 month period.

7. Termination Conditions.
   In event of contract termination by any of the following provisions, the parties agree to make notification in writing of the reasons for termination and the effective date.
   A. Termination for Cause.
      The Tribe, by written notice of default (including breach of contract) to the Contractor may immediately terminate the whole or any part of this Contract if Contractor failed to perform in the manner called for by this Contract; or fails to provide the services within the time specified herein, or any of the other provisions of this Contract; or fails to pursue the work as to endanger performance of this Contract in accordance with its terms and fails to correct such failures.

   B. Termination for Bankruptcy or Insolvency.
      The Tribe may immediately terminate Contract if Contractor files and is involuntarily declared to be bankrupt or insolvent according to law, or if assignment of Contractor's property shall be made for the benefit of creditors. The Tribe may thereupon remove Contractor and his effects, if any, forcibly if necessary, without being deemed guilty of trespass and without prejudice to any remedy which otherwise might be used.

   C. Termination for convenience.
      This Contract may be terminated in whole or in part if the Tribe and Contractor agree that continuation of the project would not produce beneficial results commensurate with the further expenditure of funds. The parties will agree upon termination conditions,

including effective date, and in the case of partial termination, the portions to be terminated.

D. Termination in Event of Damaged or Destroyed Property.
This Contract may be terminated by Contractor if the property is substantially damaged or destroyed by fire, natural disaster or causes other than by deliberate acts or negligence by the Contractor.

8. The rights and remedies of the Tribe provided in Section 7 related to defaults by the Contractor shall not be exclusive and are in addition to any other rights or remedies provided by law or under this Contract.

9. Compensation in Event of Termination.
If Contract is terminated for reasons identified in Section 7 above, the Tribe will compensate the Contractor proportionately for the work that has been satisfactorily completed. The Tribe in accordance with generally accepted standards of the trade will make the determination of satisfactory work.

10. Contractor shall comply with the Copeland "Anti-Kickback" Act (18 USC § 847) as supplemented in Department of Labor Regulations, (29 CFR Part 3) and shall not induce by any means, any person employed by this project, to give up any part of the compensation to which they are otherwise entitled.

11. Contractor Continuously throughout the term of this Agreement, Contractor shall carry and maintain, at Contractor's expense, general liability, errors and omissions, automobile, property damage, and if applicable, workman's compensation insurance. Contractor must provide a Certificate of Insurance naming the Tribe as Additional Insured showing the following coverages:

Commercial General Liability Each Occurrence $1,000,000
General Aggregate $2,000,000
Products/Completed Operations Aggregate $2,000,000
Personal Injury $1,000,000
Damages to Rented Premises $50,000
Automobile Liability Including: $1,000,000
Any Auto
Hired & Non-Owned Autos
Workers' Compensation:
Statutory Worker's Compensation insurance as prescribed by applicable law as evidenced by a Certificate of Insurance from State of Washington Department of Labor and Industries during the period of this contract.
WA Stop Gap (Employers Liability)
Per Accident $1,000,000
Disease $1,000,000
Each Employee $1,000,000

12. Contractor shall furnish all necessary machinery, tools, apparatus, equipment, supplies, materials, and labor unless otherwise specified in the Contract documents.

13. It is expressly understood that the laws of the Tribe and where applicable Federal laws shall govern this Contract.

14. Any litigation necessary to enforce the obligations of either party under this Contract must be brought into the Tribal Court of the Tribe to the extent jurisdiction obtains. Both as to interpretation and performance, the tribal laws of the Tribe shall govern this Contract; in the absence of tribal law, federal law applies. Nothing in this Contract shall be deemed or construed as a waiver of the sovereign immunity of the Tribe or any of its subsidiaries, officers, directors, employees, or representatives.

15. Contractor shall promptly, as due, make payments of all debts, dues, demands and obligations incurred in the performance of this Contract and shall not permit any lien or claim to be filed or prosecuted against the Owner or the Tribe.

16. Contactor hereby agrees to indemnify and hold Tribe harmless from any and all claims, causes of action, losses, damages, and expenses, including attorney's fees, arising out of Contractor's performance of the work.

17. If any provision of this Contract is held invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of any other provision of this Contract.

18. Contractor must apply for and be issued a Tribal Business License in order to work within the exterior boundaries of the Chehalis Reservation. The fee for the license is $50.00.

19. For all tribally-owned projects, Contractor and all sub-contractors shall exercise Native Preference and Chehalis Tribal Preference, as described in the Chehalis Tribal Procurement Policies, in hiring staff or engaging subcontractors for the completion of the work. The Tribe's Planning Department shall assist Contractor in exercising this preference by providing copies of relevant policy sections and advising Contractor with regard to hiring or engagement of subcontractors at Contractor's request.

20. Contractor acknowledges that Washington State sales and excise taxes do not apply to the delivery of the goods and/or services described under this Contract to the Chehalis Tribe within the Tribe's jurisdiction, and shall not include any Washington or other State sales or excise tax in the fee charged for performing the work.

21. Contractor shall retain for not less than three years all financial and other records pertinent to this Contract and make such records available to agents of the Tribe and to agents of any federal agency identified by the Tribe or the Comptroller General of the United States, for the purpose of conducting an audit.

22. Nothing in this Contract shall be construed so as to create any relationship of joint venture, partnership, employer/employee, agency, landlord/tenant or any similar relationship between the parties. Contractor is solely responsible for compliance with any laws and regulations applicable to Contractor, and for payment of any self-employment or other taxes that may apply to Contractor's earnings resulting from performance of this Contract.

23. Contractor shall maintain and enforce adequate policies to ensure that all of Contractor's employees, representatives, agents and subcontractors maintain a drug and alcohol-free working environment while performing the work. The use of drugs or alcohol by Contractor or any of Contractor's employees, agents, or subcontractors while providing services under this Agreement, or the performance of services under this Agreement by such persons while under the influence of drugs or alcohol, shall constitute a material breach of this Agreement. In the event of such a breach, the Chehalis Tribe may terminate this Agreement immediately by giving verbal or written notice to Contractor or to Contractor's senior on-site agent or employee.

24. The Chehalis Tribe maintains the inherent authority to remove and exclude from the territory of the Chehalis Tribe, which includes the Chehalis Reservation and tribal trust lands, any person who is not an enrolled Chehalis tribal member and whose presence in the Tribe's territory may be injurious to the peace, health, or welfare of the Chehalis Tribe. Contractor shall maintain and enforce adequate internal policies and procedures to ensure that neither Contractor nor Contractor's employees, agents, or subcontractors who enter the Tribe's territory pursuant to this Agreement shall have been convicted of a criminal offense consisting of a "sex offense" requiring registration as a "sex offender," or of a "domestic violence offense," as those terms are defined or understood under the laws of the United States, Chehalis tribal law, or the law of any tribe or state. The presence of such a person in the Tribe's territory on Contractor's behalf under this Agreement shall constitute a material breach of this Agreement. In the event of such a breach, the Chehalis Tribe may terminate this Agreement immediately by giving verbal or written notice to Contractor or to Contractor's senior on-site agent or employee. The Chehalis Tribe reserves the right to confirm Contractor's compliance with this provision by conducting a criminal background check of Contractor and any of Contractor's employees, agents, or subcontractors who perform work within the territory of the Chehalis Tribe under this Agreement. Contractor shall comply in a timely manner with the Chehalis Tribe's reasonable request for the personal identifying information of Contractor or Contractor's employees, agents, or subcontractors for the limited purpose of performing a criminal background check to verify Contractor's compliance with this provision.

Confederated Tribes of the Chehalis Reservation

Signed: _____ Date: DATE
Amy Loudermilk, Director of Planning

Contractor

Signed: _____ Date: _____
Name:

PUBLIC WORKS PERFORMANCE BOND
to CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION, WA

Bond No. _____

The **CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION**, Washington, (Tribe) has awarded to _____ (Principal), a contract for the construction of the project designated as Metering Improvements in Oakville, Washington (Contract), and said Principal is required under the terms of that Contract to furnish a bond for performance of all obligations under the Contract.

The Principal, and _____ (Surety), a corporation organized under the laws of the State of _____ and licensed to do business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Dept., are jointly and severally held and firmly bound to the Tribe, in the sum of _____ US Dollars ($_____ **amount to include sales tax**) Total Contract Amount, subject to the provisions herein.

This statutory performance bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall well and faithfully perform all of the Principal's obligations under the Contract and fulfill all the terms and conditions of all duly authorized modifications, additions, and changes to said Contract that may hereafter be made, at the time and in the manner therein specified; and if such performance obligations have not been fulfilled, this bond shall remain in full force and effect.

The Surety agrees to indemnify, defend, and protect the Tribe against any claim of direct or indirect loss resulting from the failure of the Principal, its heirs, executors, administrators, successors, or assigns (or any of the employees, subcontractors, or lower tier subcontractors of the Principal) to faithfully perform the Contract.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

This bond may be executed in two (2) original counterparts, and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety.

The Surety agrees to be bound by the laws of the Chehalis Tribe and subjected to the jurisdiction of the Tribal Court of the Tribe.

PRINCIPAL		SURETY	
_____		_____	
Principal Signature	Date	Surety Signature	Date
_____		_____	
Printed Name		Printed Name	
_____		_____	
Title		Title	

Local office/agent of Surety Company:

Name _____ Telephone _____

Address _____

PUBLIC WORKS PAYMENT BOND
to CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION, WA

Bond No. _____

The **CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION**, Washington, (Tribe) has awarded to _____ (Principal), a contract for the construction of the project designated as Metering Improvements in Oakville, Washington (Contract), and said Principal is required under the terms of that Contract to furnish a payment bond in accord with Title 39.08 Revised Code of Washington (RCW) and (where applicable) 60.28 RCW.

The Principal, and _____ (Surety), a corporation organized under the laws of the State of _____ and licensed to do business in the State of Washington as surety and named in the current list of "Surety Companies Acceptable in Federal Bonds" as published in the Federal Register by the Audit Staff Bureau of Accounts, U.S. Treasury Dept., are jointly and severally held and firmly bound to the Tribe, in the sum of _____ US Dollars ($_____ **amount to include sales tax**) Total Contract Amount, subject to the provisions herein.

This statutory payment bond shall become null and void, if and when the Principal, its heirs, executors, administrators, successors, or assigns shall pay all persons in accordance with RCW Titles 60.28, 39.08, and 39.12 including all workers, laborers, mechanics, subcontractors, lower tier subcontractors, and material suppliers, and all persons who shall supply such contractor or subcontractor with provisions and supplies for the carrying on of such work, and all taxes incurred on said Contract under Title 50 and 51 RCW and all taxes imposed on the Principal under Title 82 RCW; and if such payment obligations have not been fulfilled, this bond shall remain in full force and effect.

The Surety agrees to indemnify, defend, and protect the Tribe against any claim of direct or indirect loss resulting from the failure of the Principal, its heirs, executors, administrators, successors, or assigns, (or the subcontractors or lower tier subcontractors of the Principal) to pay all laborers, mechanics, subcontractors, lower tier subcontractors materialpersons, and all persons who shall supply such contractor or subcontractors with provisions and supplies for the carrying on of such work.

The Surety for value received agrees that no change, extension of time, alteration or addition to the terms of the Contract, the specifications accompanying the Contract, or to the work to be performed under the Contract shall in any way affect its obligation on this bond, except as provided herein, and waives notice of any change, extension of time, alteration or addition to the terms of the Contract or the work performed. The Surety agrees that modifications and changes to the terms and conditions of the Contract that increase the total amount to be paid the Principal shall automatically increase the obligation of the Surety on this bond and notice to Surety is not required for such increased obligation.

This bond may be executed in two (2) original counterparts, and shall be signed by the parties' duly authorized officers. This bond will only be accepted if it is accompanied by a fully executed and original power of attorney for the officer executing on behalf of the surety.

The Surety agrees to be bound by the laws of the Chehalis Tribe and subjected to the jurisdiction of the Tribal Court of the Tribe.

PRINCIPAL		SURETY	
_____	_____	_____	_____
Principal Signature	Date	Surety Signature	Date
_____		_____	
Printed Name		Printed Name	
_____		_____	
Title		Title	

Local office/agent of Surety Company:

Name _____ Telephone _____

Address _____

PART 3

GENERAL CONDITIONS

GENERAL CONDITIONS

SECTION 1 - GENERAL INFORMATION APPLICABLE TO PROPOSAL AND CONTRACT

1.01 DEFINITIONS AND TERMINOLOGY

The following terms are abbreviated and defined as they are used in the Contract. When used in the Proposal form to denote items of Work and units of measurements, abbreviations mean the full expression of the abbreviated term.

1.02 ABBREVIATIONS AND TERMINOLOGY

1.02.1 REFERENCED STANDARDS AND CODES

The following is a partial list of specifications and codes that may be referenced in sections of the Contract. The Contractor shall be responsible for conducting its Work and carrying out its operations and furnishing equipment in accordance with the latest edition or versions, in effect at the time of bid opening, of any applicable specified portions of the referenced standards and codes.

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AFBMA	Anti-friction Bearing Manufacturing Association
AGA	American Gas Association
AGC	Associated General Contractors of America
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Moving and Conditioning Association
ANLA	American Nursery and Landscape Association
ANSI	American National Standards Institute, Inc.
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ARA	American Railway Association
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASA	American Standards Association
ASCE	American Society of Civil Engineers
ASLA	American Society of Landscape Architects
ASME	American Society Mechanical Engineers
ASNT	American Society for Nondestructive Testing
ASTM	American Society for Testing and Material
AWPA	American Wood Preservers' Association
AWS	American Welding Society

AWWA	American Water Works Association
CFR	Code of Federal Regulations
CLI	Chain Link Institute
CRAB	County Road Administration Board
CRSI	Concrete Reinforcing Steel Institute
CSA	Canadian Standards Associations
CSI	Construction Specifications Institute
DIPRA	Ductile Iron Pipe Research Association
EEI	Edison Electric Institute
EPA	Environmental Protection Agency
ETL	Electrical Testing Laboratories
FHWA	Federal Highway Administration
FM	Factory Mutual
FSS	Federal Specifications and Standards, General Services Administration
HUD	United State Department of Housing and Urban Development
IBC	International Building Code
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical and Electronic Engineers
IES	Illumination Engineering Society
IMSA	International Municipal Signal Association
IPC	International Plumbing Code
ISA	Instrumentation Society of America
JIC	Joint Industry Conference Electrical Standards for Industrial Equipment
LID	Local Improvement District
LPI	Lightning Protection Institute
MSHA	Mine Safety and Health Act
MSS	Manufacturer's Standardization Society of the Valve and Fitting Industry
MUTCD	Manual on Uniform Traffic Control Devices
NCMA	National Concrete Manufacturer's Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturers' Association
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NRMCA	National Ready Mix Concrete Association
OMWBE	Office of Minority and Women's Business Enterprises
OSHA	Occupational Safety and Health Administration
PCA	Portland Cement Association
PPI	Plastic Pipe Institute
P/PCI	Precast/Prestressed Concrete Institute
RCW	Revised Code of Washington
SAE	Society of Automotive Engineers
SEPA	State Environmental Policy Act
SIES	Specifications and Illuminating Engineering Society
SSPC	Steel Structures Painting Council
UL	Underwriters' Laboratory
ULID	Utility Local Improvement District
UMTA	Urban Mass Transit Administration

WABO	Washington Association of Building Officials
WAC	Washington Administrative Code
WCLIB	West Coast Lumber Inspection Bureau
WISHA	Washington Industrial Safety and Health Administration
WRI	Wire Reinforcement Institute
WSDL&I	Washington State Department of Labor and Industries
WSDOE	Washington State Department of Ecology
WSDOT	Washington State Department of Transportation
WWPA	Western Wood Products Association

1.02.2 TERMINOLOGY

The use of pronouns of any gender in these General Conditions shall include pronouns of all genders, as applicable.

The terms "provide," "furnish" and "install" are used interchangeably in the Contract and mean that the Contractor shall provide, furnish, and install the item(s) described unless specifically noted otherwise.

The terms "Plans" and "Drawings" are used interchangeably in the Contract and shall mean the Contract Plans, which show location, character, and dimensions of prescribed Work, including layouts, profiles, cross-sections, and other details.

1.02.3 ITEMS OF WORK AND UNITS OF MEASUREMENT

AC	Asbestos Cement Pipe
Agg.	Aggregate
Al.	Aluminum
ATB	Asphalt Treated Base
BST	Bituminous Surface Treatment
CB	Catch Basin
Cfm	Cubic Feet per Minute
Cfs	Cubic Feet per Second
Cl.	Class
CMP	Corrugated Metal Pipe
Comb.	Combination
Conc.	Concrete
CPEP	Corrugated Polyethylene Pipe
Crib.	Cribbing
Culv.	Culvert
Cy or Cu. Yd.	Cubic Yard(s)
Dia.	Diameter
DI	Ductile Iron
DIM	Dimension
EA	Each
EL	Elevation
Est.	Estimate or Estimated

Excl.	Excluding
F	Fahrenheit
FIG	Figure
Ft.	Foot or Feet
GALV	Galvanized
Gph	Gallon(s) per Hour
Gpm	Gallon(s) per Minute
HDPE	High Density Polyethylene
HMA	Hot Mix Asphalt
HR	Hour
Hund.	Hundred
In.	Inch or Inches
Incl.	Including
L	Liter
Lb.	Pound(s)
LF or Lin. Ft.	Linear Foot (Feet)
LS	Lump Sum
M	Thousand
MBM	Thousand Feet Board Measure
Pres.	Pressure
PSI	Pounds per Square Inch
PSF	Pounds per Square Foot
PVC	Polyvinyl Chloride
QTY	Quantity
Reg.	Regulator
Reinf.	Reinforced, Reinforcing
SF	Square Foot (Feet)
Sec.	Section
SL	Slope
St.	Street
Stl.	Steel
SST	Stainless Steel
Str.	Structural
Sy or Sq. Yd.	Square Yard(s)
Th.	Thick or Thickness
TN	Ton
Tr.	Treatment
TYP	Typical
VC	Vitrified Clay

1.03 DEFINITIONS

ACCEPTANCE

The formal action by Owner or Owner's governing body to accept the work as complete.

ADDENDUM

A written or graphic document issued to all Bidders prior to bid opening and identified as an addendum, which clarifies, modifies or supplements the bid documents and becomes part of the Contract.

ADDITIVE

A supplemental unit of work or group of bid items, identified separately in the Proposal, which may, at the discretion of the Owner, be awarded in addition to the base bid.

ALTERNATE

One of two or more units of work or groups of bid items, identified separately in the Proposal, from which the Owner may make a choice between different methods or material of construction for performing the same work.

AWARD

The formal decision of the Owner awarding the Contract to the lowest or most favorable responsible and responsive Bidder for the Work.

BID DOCUMENTS

The component parts of the proposed Contract which may include, but not limited to, the Proposal form, the proposed Contract Provisions, the proposed Contract Plans, Addenda, and Subsurface Boring Logs (if any).

BIDDER

A natural person or legal entity (e.g., partnership, corporation, limited liability company, firm, or joint venture) submitting a proposal or bid.

BUSINESS DAY

A business day is any day from Monday through Friday, except holidays, as listed in Section 3.04.14.

CLERK

The duly elected or appointed Clerk of the Commission, Council, or Board of Directors of the Owner or authorized designee.

COMMISSION, COUNCIL, OR BOARD OF DIRECTORS

The duly elected or appointed Council, Commission, or Board of Directors of the Owner.

CONTRACT

The written agreement between the Owner and the Contractor. It describes, among other things:

1. What work will be done, and by when;

2. Who will provide labor and materials; and

3. How Contractor will be paid.

The Contract includes: the agreement form, Bidder's completed Proposal form, all required certificates and affidavits, Performance Bond and Public Works Payment Bond, Contract Provisions, Contract Plans, and all Addenda and Change Orders executed pursuant to the provisions of the Contract.

CONTRACT BOND

The approved form of security furnished by the Contractor and the Contractor's Surety as required by the Contract, that guarantees performance of all the Work required by the Contract and payment to anyone who provides supplies or labor for the performance of the Work.

CONTRACT DOCUMENTS

See definition for "Contract."

CONTRACT PLANS (PLANS OR DRAWINGS)

The Contract Plans (or drawings) are those plans, drawings or other illustrations and all addenda and revisions, whether issued before or after the award of the Contract to Contractor, which show location, character, and dimensions of the Work, including layouts, profiles, cross-sections and other details.

CONTRACT PROVISIONS

A publication addressing the Work required for an individual project. At the time of the Call for Bids, the Contract Provisions may include, for a specific individual project, general conditions, supplemental general conditions, specifications, a listing of the applicable WSDOT Standard Plans, the prevailing minimum hourly wage rates, and an informational Proposal form with the listing of Bid items. The proposed Contract Provisions may also include, for a specific individual project, various required certifications or declarations. At the time of the Contract execution date, the Contract Provisions include the proposed Contract Provisions and include any Addenda, a copy of the agreement form, and a copy of the Proposal form with the Contract prices and extensions.

CONTRACT TIME

The period of time established by the terms and conditions of the Contract within which the Work shall be complete.

CONTRACTOR

The natural person(s) or legal entity (e.g., partnership, corporation, limited liability company, firm, joint venture) Contracting with the Owner to do the prescribed Work.

DATES

Substantial Completion Date is the day that the Engineer determines the Owner has full and unrestricted use and benefit of the Work, from both an operational and safety standpoint, any remaining traffic disruptions will be rare and brief, and only minor incidental work, replacement of temporary substitute facilities, plant establishment periods, or correction or repair remains for the physical completion of the total Work.

Physical Completion Date is the day that the Engineer determines that all of the Work required by the Contract is physically completed and the Owner has received from the Contractor all required record drawings, operation and maintenance manuals, manufacturers' affidavits, and software and programming.

Contract Completion Date is the day when all the Work and all the obligations of the Contractor under the Contract are fulfilled by the Contractor. All documentation and other items required by the Contract and required by law shall be furnished by the Contractor before establishment of this date.

Final Acceptance Date is the date on which the Owner accepts the Work as complete.

FIELD REPRESENTATIVE

The Owner's representative who observes the Contractor's performance of the Work. Such observation shall not be relied upon by the Contractor or others as approval or acceptance of the Work, nor shall it in any manner relieve the Contractor from its obligations and responsibilities under the Contract.

NOTICE TO PROCEED

The written notice from the Owner or Engineer to the Contractor authorizing and directing the Contractor to proceed with the Work and establishing the date on which the Contract Time begins.

OWNER

The government entity or agency that awards the Contract to the Contractor and is responsible for the execution and administration of the Contract.

PROJECT ENGINEER/ENGINEER

The Owner's representative who administers the construction program for the Owner.

PROPOSAL (or BID)

A Bidder's offer, on a properly completed Proposal form, to perform the Work required by the Contract. The terms Proposal and Bid may be used interchangeably.

SPECIFICATIONS

Written provisions describing the Work and requirements thereof.

STANDARD PLANS

A manual of specific plans or drawings adopted by the Owner, which show frequently recurring components of work that, have been standardized for use.

SUBCONTRACTOR

A natural person, or entity (e.g., partnership, corporation, limited liability company, firm or joint venture) to which the Contractor sublets a portion of the Work.

SUBGRADE

The top surface of the roadbed on which subbase, base, surfacing, pavement, or layers of similar materials are placed.

SUPPLEMENTARY GENERAL CONDITIONS

That part of the Contract amends or supplements these General Conditions.

TRAVELED WAY

That part of the roadway made for vehicle travel, excluding shoulders and auxiliary lanes.

WORK

The provision of all labor, materials, tools, equipment, supervision and other things needed to complete the project in full accordance with the Contract Documents.

WORKING DRAWINGS

Shop drawings, shop plans, erection plans, falsework plans, framework plans, cofferdam, cribbing and shoring plans, bending diagrams for reinforcing steel, or any other supplementary plans or similar data, including a schedule of submittal dates for working drawings where specified, that the Contractor shall submit to the Engineer for approval.

SECTION 2 - INSTRUCTIONS FOR PREPARATION OF PROPOSAL (OR BID)

2.01 BID PROCEDURES AND CONDITIONS

2.01.1 QUALIFICATIONS OF BIDDERS

Where applicable and required, Bidders shall provide all requested information relating to experience, financing, equipment, and organization relating to their ability to properly perform the Work. The Owner reserves the right to take whatever action it deems necessary to ascertain the responsibility of the Bidder and the ability of the Bidder to perform the Work satisfactorily.

2.01.2 CONTRACT PROVISIONS AND CONTRACT PLANS

Contract Provisions and Contract Plans are on file in the offices of the Owner and the Engineer, Gray & Osborne, Inc. After award of the Contract, up to five sets of Contracts will be issued without charge to the Contractor. Additional sets of Contracts may be purchased from the Owner by the Contractor.

2.01.3 ESTIMATED QUANTITIES

The quantities shown in the Proposal form are estimates and are stated only for bid comparison purposes. The Owner does not warrant, expressly or by implication, that the actual quantities will correspond with those estimates. Payment will be made on the basis of the actual quantities of each item of Work satisfactorily completed in accordance with the requirements of the Contract.

2.01.4 EXAMINATION OF CONTRACT AND SITE

2.01.4(1) General

Bidders shall satisfy themselves by personal examination of Contract Provisions, Contract Plans, and site of the proposed improvements, and by any other examination and investigation which they may desire to make as to the accuracy of the estimate of quantities, the nature of the Work and the difficulties to be encountered. Bidders shall review the entire Contract to ensure that the completeness of their Proposal includes all items of Work regardless of where shown in the Contract. Bidders are cautioned that alternate sources of information (copies of the Contract obtained from third parties) are not necessarily an accurate or complete representation of the Contract. Bidders shall use such information at their own risk.

Bidders shall be familiar and comply with all applicable federal, state, and local laws, ordinances, and regulations in any way applicable to the performance the Work. Bidders are responsible for familiarizing themselves with all current state and federal wage rates applicable to the Work and its duration before submitting a Proposal based on the Contract Provisions and Contract Plans. Any wage determination contained in the Contract is for the Bidder's general information only and is not warranted to be complete or accurate. The Owner will not consider any plea of misunderstanding or ignorance of such requirements. Bid prices shall reflect what the Bidder has determined to be the total cost of completing the Work, including but not limited to: construction methods, materials, labor, administrative costs, any and all applicable taxes, and equipment.

Except as the Contract may provide, the Bidder to which the Contract is awarded shall receive no payment for any costs that exceed those set forth in the Proposal.

2.01.4(2) Interpretation of the Contract Provisions and Contract Plans

If any Bidder desires interpretation or clarification of the Contract Provisions and Contract Plans, the Bidder shall make a written request to the Engineer for such clarification or interpretation prior to the submission of a Proposal. If the Engineer determines that the Contract Provisions and/or Contract Plans do not require interpretation or clarification, the Engineer will so notify the Bidder making the request. All interpretations and clarifications made by the Engineer will be by written addendum to all planholders of record, and a copy of the addendum will be filed in the office of the Owner. Neither the Owner nor the Engineer will be responsible for any interpretation, clarification or explanation of the Contract Provisions and Contract Plans that is not set forth in a written addendum to all planholders of record, and Bidders shall not under any circumstances rely on any other interpretation, clarification or explanation.

2.01.4(3) Subsurface Information

If the Owner has made a subsurface investigation of the site of the proposed Work, the boring log data and soil sample test data accumulated by the Owner will be made available for inspection by the Bidders. However, the Owner makes no representation or warranty, express or implied, that:

a. The Bidders' interpretations from the boring logs may be correct;

b. Moisture conditions and indicated water tables will not vary from those found at the time the borings were made;

c. The ground at the location of the borings has not been physically disturbed or altered after the boring was made; and

d. Conditions below the surface of the ground are consistent throughout the site with the information made available hereunder, or that conditions to be encountered on the site are uniform or consistent with geological conditions usually encountered in the area.

The Owner makes no representations, guarantees, or warranties as to the condition, materials, or proportions of the materials between the specific borings, regardless of any subsurface information the Owner may make available to the prospective Bidders. Bidders are solely responsible for making the necessary investigations to support and/or verify any conclusions or assumptions used in preparation of their Proposals.

Any subsurface investigations and analysis were carried out for design purposes only. Contractor may not rely upon or make any claim against Owner, Engineer, or any of their subconsultants, with respect to:

1. The completeness of such reports 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 conclusions, interpretations, opinions, representations, and information contained in such reports; or

3. Any Contractor interpretation of or conclusion drawn from any "technical data" or any such other data, conclusions, interpretations, opinions or information.

2.01.4(4) Availability of Specified Items

Prior to submitting a Proposal, all Bidders shall verify that all items necessary to complete the Work will be available in time to allow the Work to be completed within the Contract Time. In the event that one or more items may not be available to allow the Work to be completed within the Contract Time, the Bidder shall notify the Engineer in writing prior to submitting a Proposal. Responsibility for delays and related costs because of non-availability of items necessary to complete the Work shall be borne by the Contractor.

2.01.5 NOT USED

2.01.6 PROPOSAL

(1) Proposals shall be submitted on the Proposal form included in the Contract Provisions. All Proposals shall be completed, signed by an authorized person and dated. To be considered by the Owner as a responsive Proposal, the Bidder shall bid on all Additive or Alternate items set forth in the Proposal form, unless otherwise specified in the Contract Documents.

(2) To be responsive, a Proposal shall state that it will remain valid for a period of 60 days following the date of Proposal opening. In the event that a conflict in this duration appears elsewhere in the Contract Provisions, the longest duration shall apply.

(3) All prices set forth on the Proposal form shall be legible and either be written in ink or typed. In the space provided on the Proposal form, Bidders shall identify all Addenda that have been received. The Proposal, Proposal Deposit, and all other certificates, forms or other documents required by the Contract Provisions to be executed and delivered with the Proposal shall be submitted in a sealed package, addressed to the Owner, and plainly marked "Proposal for _____ (insert name of project as shown on the Proposal) to be opened on the _____ day of _____, 20___," (insert the day, month and year shown in the published bid notice). The Owner will not consider any Proposal received after the time established for opening Proposals.

(4) Where noted in the Proposal, the Bidder is to furnish information concerning its experience with work of a similar nature, equipment to be used on this project, and

general background information. Information that is incomplete, evasive, or of a general nature only, may be considered as grounds for rejection of the Proposal.

(5) Not Used

(6) After opening and reading Proposals, the Owner will check them for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any bid item, the price per unit, converted to the actual extension, will control. The total extensions, corrected where necessary, will be used by the Owner for comparison and award purposes and to establish the amount of the Contractor's Performance and Public Works Payment Bonds.

2.01.7 WITHDRAWING OR REVISING PROPOSAL

After submitting a physical Proposal to the Owner, the Bidder may withdraw, or revise it if:

1. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Proposals; and

2. The Owner receives the request before the time set for receipt of Proposals; and

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

If the Bidder's request to withdraw or revise its Proposal is received before the time set for receipt of Proposals, the Owner will return the unopened Proposal package to the Bidder. The Bidder must then submit the revised package in its entirety. If the Bidder does not submit a revised package, then its bid shall be considered withdrawn.

Late revised Proposals or late withdrawal requests will be date recorded by the Owner and returned unopened. Mailed, emailed, or faxed requests to withdraw or revise a Bid Proposal are not acceptable.

2.01.8 DISQUALIFICATION OF BIDDERS

1. A Proposal will be considered irregular and will be rejected if:

   a. The Bidder is not prequalified when so required;
   b. The authorized proposal form furnished by the Owner is not used or is altered;
   c. The completed proposal form contains any unauthorized additions, deletions, alternate Bids, or conditions;
   d. The Bidder adds provisions reserving the right to reject or accept the award, or enter into the Contract;
   e. A price per unit cannot be determined from the Bid Proposal;
   f. The Proposal form is not properly executed;

g. The Bidder fails to submit or properly complete a Subcontractor list, if applicable;
h. The Bidder fails to submit or properly complete a Disadvantaged, Minority or Women's Business Enterprise Certification, if applicable;
i. The Bid Proposal does not constitute a definite and unqualified offer to meet the material terms of the Bid invitation; or
j. More than one proposal is submitted for the same project from a Bidder under the same or different names.

2. A Proposal may be considered irregular and may be rejected if:

a. The Proposal does not include a unit price for every Bid item;
b. Any of the unit prices are excessively unbalanced (either above or below the amount of a reasonable Bid) to the potential detriment of the Owner;
c. Receipt of Addenda is not acknowledged;
d. A member of a joint venture or partnership and the joint venture or partnership submit Proposals for the same project (in such an instance, both Bids may be rejected); or
e. If Proposal form entries are not made in ink.

3. Not Used

2.01.9 PROPOSAL ERRORS

If a Bidder discovers an error in the Bidder's Proposal after the Proposals have been opened and tabulated and desires to withdraw the erroneous Proposal, the Bidder shall submit a notarized affidavit signed by the Bidder, accompanied by original certified worksheets used in the preparation of the Proposal, requesting relief from the Award. The affidavit shall describe the specific error(s) and certify that the worksheets are the originals used in the preparation of the Proposal.

The affidavit and the certified worksheets shall be received by the Engineer before 5:00 p.m. local time on the next business day following the day of the Proposal opening or the claim of error will not be considered. The Engineer will review the certified worksheets to determine the validity of the claimed error, and make its recommendation to the Owner. If the Owner and Engineer concur that the claim of error is allowable under applicable law, the Bidder will be relieved of responsibility for the Proposal, and the Proposal Deposit will be returned to the Bidder. Thereafter, at the discretion of the Owner, all Proposals may be rejected or an Award made to the next lowest responsive, responsible Bidder.

2.02 AWARD AND EXECUTION OF CONTRACT

2.02.1 AWARD OF CONTRACT

A Contract will not be awarded until the Owner is satisfied that the successful Bidder is responsible, reasonably familiar with the Work to be performed and has the necessary capital, tools, personnel and equipment to satisfactorily perform the Work.

The Owner reserves the right to waive informalities in the bidding, accept a Proposal, reject any or all Proposals, republish the call for Proposals, or revise or cancel the project.

After the date and hour set for the opening of the Proposals, no Bidder may withdraw its Proposal unless the Award of the Contract is delayed for a period exceeding 60 calendar days following Proposal opening. In the event that a conflicting duration appears elsewhere in the Invitation for Proposals or Contract Provisions or advertisement, the longer period shall govern.

2.02.2 EXECUTION OF CONTRACT

Within 10 calendar days after notification by the Owner of the Award, the successful Bidder shall return to the Engineer the signed Owner-prepared Contract, all insurance certificates and endorsements required by the Contract Provisions, all other certificates, information, and forms required by the Contract Provisions, and Performance and Public Works Payment Bonds required by the Contract Provisions. If the Contract is signed by an officer, agent, or other authorized representative of the Contractor, the officer, agent, or other representative shall furnish satisfactory evidence of authority to sign as the legal representative of the Contractor, if required by the Owner. An authorized partner of a joint venture may sign the Contract, subject to the approval of the Owner, which may, at its discretion, require each and every member of the joint venture to sign the Contract.

Should the successful Bidder fail to return to the Engineer the signed Owner-prepared Contract, all insurance certificates and endorsements required by the Contract Provisions, all other certifications, information, and forms required by the Contract Provisions, and Performance and Public Works Payment Bonds required by the Contract Provisions within 10 calendar days after notification by the Owner of the Award, the Owner reserves the right to and may elect to withdraw the award to the successful Bidder and award the Contract to the next responsible, responsive Bidder.

Until the Owner executes the Contract, no Proposal shall bind the Owner, and the Contractor shall not commence any Work. The Contractor shall bear all risks for any Work begun before the Contract is executed by the Owner.

2.02.3 FAILURE TO EXECUTE CONTRACT

If the Contractor fails to submit the insurance certificates, bonds, and all other certificates, forms, information and documents as required by the Contract Provisions, with the executed Contract within the time required by the Contract Provisions, the Owner may then award the Contract to the next lowest responsive, responsible Bidder or reject any or all Proposals.

2.02.4 NOT USED

2.02.5 NOTICE TO PROCEED

A written Notice to Proceed will be issued to the Contractor by the Owner or Engineer after the Contract has been executed by the Contractor and the Owner, and the Performance and Public Works Payment Bonds and required insurance and other certificates and documents are approved by the Owner and, when applicable, by State or Federal agencies responsible for funding any portion of the project. The Contractor shall not commence Work until the Notice to Proceed has been issued.

SECTION 3 - GENERAL REQUIREMENTS OF THE CONTRACT

3.01 SCOPE OF THE WORK

3.01.1 INTENT OF THE CONTRACT

The intent of the Contract is to describe a functionally complete project to be constructed in accordance with the Contract. The Contractor shall provide all labor, supervision, materials, tools, equipment, transportation, supplies, and other things required expressly by, or reasonably implied from, the Contract, to complete all Work. Omissions from the Contract of details of Work which are necessary to carry out the intent of the Contract, or which are customarily performed, shall not relieve the Contractor from performing the complete Work called for by the Contract; such Work shall be performed as if fully set forth and described in the Contract. The unit or other bid prices shall be full payment for everything required to complete the Work, including but not limited to labor, supervision, materials, equipment, jobsite and home office overhead and profit.

3.01.2 COORDINATION OF CONTRACT

The Contract Plans and the Contract Provisions for the Work shall be considered as a whole, and anything shown or called for in one and omitted in any other is as binding as if called for or shown on both. Figure dimensions shall, in all cases, be used in preference to scale dimensions. Any inconsistency in the Contract Documents shall be resolved by the following order of precedence (e.g., 1 presiding over 2 through 4, 2 presiding over 3 through 4, etc.):

1. Addenda;

2. The Agreement and Proposal Form;

3. Specifications;

3a. Supplementary General Conditions (including conditions supplied by federal or state agencies on projects funded, in whole or part, by such agencies. In the event of a conflict in various forms of General Conditions, those conditions affording the greatest benefit or protection to the Owner shall govern.);

3b. General Conditions;

3c. Technical Specifications;

4. Contract Plans.

3.01.3 ASSIGNMENT OF CONTRACT

The Contractor shall not assign the Contract or any part of the Contract or of the funds to be received under the Contract unless such assignment is approved by the Owner and the Contractor's Performance and Public Works Payment Bonds surety prior to the execution or effectiveness of the assignment.

3.02 CONTROL OF WORK

3.02.1 AUTHORITY AND ROLE OF THE ENGINEER

(1) The Engineer is the authorized representative of the Owner, and is employed to act as advisor and consultant to the Owner in engineering matters relating to the Contract. Among other things, the Engineer may determine the quantity of material installed or Work completed, evaluate whether materials and equipment comply with the Specifications, and assist the Owner with answering questions relating to the meaning and intent of the Contract. The Owner, with the advice of the Engineer, will make the final determination relating to quality, acceptability and conformity of labor and materials to the requirements of the Contract.

(2) The Engineer does not purport to be a safety expert, and is not engaged in that capacity under the Contract or the Engineer's contract with the Owner. The Engineer does not have either the authority or the responsibility to enforce construction safety laws, rules, regulations or procedures, or to order the stoppage of Work for claimed violations thereof. From time to time, the Engineer may inform the Contractor of conditions that may constitute safety issues or violations. Such information will be provided solely to cooperate with and assist the Contractor and shall not make the Field Representative or the Engineer responsible for the enforcement of safety laws, rules, regulations or procedures. After receiving information relating to safety issues from the Engineer, the Contractor shall make its own examination and analysis of the situation reported and take such action, if any, that the Contractor determines to be appropriate. The Engineer's performance of project representation and observation services shall not make the Engineer responsible for the enforcement of safety laws, rules, regulations or procedures; nor shall it make the Engineer responsible for construction means, methods, techniques, sequences, or procedures, or for the Contractor's failure to properly perform the Work, all of which are entirely the responsibility of the Contractor.

(3) The Engineer shall have no liability whatsoever to, or contractual relationship with, the Contractor in any way relating to the Contract. The Owner and the Contractor shall look solely to each other for the enforcement with respect to any rights, obligations, claims or liabilities arising under or in any way relating to the Contract. Neither the authority given to the Engineer herein, nor any action or service provided by the Engineer or its subconsultants with regard to the Work, shall create any duty owed by the Engineer or its subconsultants to the Contractor or a cause of action against the Engineer or its subconsultants by Contractor.

(4) Nothing in the Contract shall, in any way, be construed to place responsibility on the Field Representative, Engineer or the Owner for the method, manner, direction or superintendency of the performance of the Work by the Contractor. Such responsibility rests solely with the Contractor.

(5) Neither the Engineer nor any of its assistants or agents shall have any power to waive any obligation of the Contract. The Engineer's failure to reject Work that is defective or otherwise does not comply with the requirements of the Contract shall not constitute approval or acceptance of the Work or relieve the Contractor of its obligations under the Contract, notwithstanding that such Work has been estimated for payment or that payments have been made for that Work. Neither shall such failure to reject Work, nor any acceptance by the Engineer or by the Owner of any part or of the whole of the Work bar a claim by the Owner at any subsequent time for recovery of damages for the cost of removal and replacement of any portions of the Work that do not comply with the Contract.

(6) No order, measurement, determination or certificate by the Engineer or Owner for payment of money or payment for or acceptance of the whole or of any part of the Work by the Engineer or the Owner or extension of time or possession taken by the Owner shall constitute a waiver of any portion of the Contract, nor shall any waiver of any breach of the Contract constitute a waiver of any other or subsequent breach thereof.

3.02.2 AUTHORITY OF FIELD REPRESENTATIVE

(1) Field Representatives are assigned to the project site to keep the Engineer and Owner generally informed as to the progress of the Work and the manner in which it is being done; to keep records; and to act as liaison between the Contractor, Owner and Engineer. When observed, the Field Representative shall call the attention of the Contractor to any deviations from the Contract. However, failure of the Field Representative to call the attention of the Contractor to faulty Work or deviations from the Contract shall not constitute either a waiver of any requirement in the Contract or acceptance of said Work.

(2) Since one of the Field Representative's primary responsibilities is to observe that the Work progresses expediently and in a workmanlike manner, the Field Representative may offer suggestions to the Contractor, which the Contractor, at its sole discretion, may or may not choose to follow. Such suggestions are not to be considered as anything but suggestions offered to cooperate with and assist the Contractor and shall not constitute an assumption of responsibility, financial or otherwise, by the Field Representative, the Engineer or the Owner.

(3) The presence or absence of the Field Representative on the job site will be at the sole discretion of the Owner, and the presence or absence of the Field Representative at any time will not relieve the Contractor of its responsibility to properly perform the Work as required by the Contract.

(4) The Field Representative will have the authority, but not the obligation, to reject defective materials and equipment if observed; however, the failure of the Field Representative to reject defective materials and equipment or any other Work involving deviations from the Contract will not constitute acceptance of such Work. The Field Representative is not authorized to approve or accept any portion of the

Work or to issue instructions contrary to the Contract; all such approvals, acceptances or instructions shall be in writing and signed by the Engineer or the Owner.

(5) The Field Representative does not purport to be a safety expert, and is not engaged in that capacity under the Contract or the Engineer's contract with the Owner. The Field Representative does not have either the authority or the responsibility to enforce construction safety laws, rules, regulations or procedures, or to order the stoppage of Work for claimed violations thereof. From time to time, the Field Representative may inform the Contractor of conditions that may constitute safety issues or violations. Such information will be provided solely to cooperate with and assist the Contractor and shall not make the Field Representative or the Engineer responsible for the enforcement of safety laws, rules, regulations or procedures. After receiving information relating to safety issues from the Field Representative, the Contractor shall make its own examination and analysis of the situation reported and take such action, if any, that the Contractor determines to be appropriate. The Field Representative's performance of observation services shall not make the Field Representative responsible for the enforcement of safety laws, rules, regulations or procedures; nor shall it make the Field Representative responsible for construction means, methods, techniques, sequences, or procedures, or for the Contractor's failure to properly perform the Work, all of which are entirely the responsibility of the Contractor.

3.02.3 CONSTRUCTION OBSERVATION AND INSPECTIONS

(1) All Work required by the Contract, including all materials and equipment to be furnished and the manufacture and preparation thereof shall, at all times, be subject to observation by the Owner's designated representatives, who may, at any time in the performance of their duties, enter upon the Work or the shops and factories where any part of the Work, materials or equipment are being prepared, fabricated or manufactured.

(2) Observation of Work by the Owner, the Engineer, or the Field Representative shall not relieve the Contractor of its obligation to furnish satisfactory materials and workmanship. Work or materials found unsatisfactory at any time during the life of the Contract, and the applicable warranty periods, guarantees or limitation periods shall be promptly corrected or replaced immediately by the Contractor at its own expense.

(3) Upon request by the Owner or Engineer, the Contractor shall furnish all tools, labor, equipment and materials necessary to examine any Work that may be completed or in progress, even to the extent of uncovering or taking down portions of completed or covered Work. Work shall be left exposed until examined by the Owner or Engineer, at no additional cost to the Owner. If the Owner or the Engineer determines that the uncovered Work does not comply with the requirements of the Contract, the cost of such examination and the cost of reconstruction and/or repair shall be borne by the Contractor.

(4) The Contractor shall promptly comply with all directions of the Engineer with reference to correcting any Work or replacing any materials or equipment found to be not in accordance with the Contract. In the event of a dispute, the Contractor may appeal to the Engineer's decision to the Owner in accordance with the Contract, and the Owner's decision shall be final.

3.02.4 EMERGENCY CONTACT LIST

The Contractor shall submit an emergency contact list to the Engineer no later than five calendar days after the date the Contract is executed. The list shall include, at a minimum, the Contractor's project manager or equivalent, project superintendent, traffic control supervisor, and erosion and sediment control lead. The list shall identify a representative with delegated authority to act as the emergency contact on behalf of the Contractor and include one or more alternates. The emergency contact shall be available upon the Engineer's request at other than normal working hours. The emergency contact list shall include 24-hour telephone numbers for all individuals identified as emergency contacts or alternates.

3.02.5 ORAL AGREEMENTS

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

3.02.6 ELECTRONIC FILES

All Work performed shall be in conformity with the signed Contract Plans and Contract Provisions. If the Contractor requests electronic files, the Engineer may provide the files. The use of the electronic files shall be at the Contractor's sole risk. The Engineer does not warrant the completeness or accuracy of the electronic files and the Engineer assumes no liability for any errors or omissions in the digital data. The Contractor shall be responsible for reviewing and checking the electronic files to ensure that they are suitable for the Contractor's purpose.

3.03 LEGAL RELATIONS AND RESPONSIBILITIES

3.03.1 APPLICABLE LAWS AND REGULATIONS

3.03.1(1) General

The Contractor shall comply with all laws, ordinances, rules and regulations of any authority having jurisdiction in any way relating to the project, including, but not limited to, regulations governing site maintenance, clean-up, air pollution control, noise control, water quality control, surface water control and runoff, tree and vegetation protection, cultural resources and oil and hazardous substance control.

Nothing herein constitutes a waiver of the Tribe's sovereign immunity, nor will the Tribe waive that immunity under any circumstances.

3.03.1(2) Utilities and Similar Facilities

The Contractor shall protect all private and public utilities from damage. Utilities include, among others: telephone lines; cable television and high-speed internet lines; gas; electric power lines; sanitary sewer; septic sewer systems; storm sewer, waterlines, and irrigation lines; street lighting and traffic signal and signing systems; and railroad tracks and related equipment.

In accordance with Chapter 19.122 of the Revised Code of Washington, the Contractor shall call the One-Number Locator Service for the field location of underground utilities. If no locator service is available for the area where the project is located, the Contractor shall provide written notice to all owners of utilities known to, or suspected of, having underground facilities within or near all areas of that will be excavated.

The Contractor shall be responsible for all costs required to protect public and private utilities from damage.

3.03.1(3) Site Maintenance

The Contractor shall keep the Work site, staging areas, and Contractor's facilities clean and free from rubbish and debris. Materials and equipment shall be removed from the Work site when they are no longer necessary. Upon completion of the Work and before final acceptance, the Work site shall be cleared of equipment, unused materials, and rubbish and the Work site shall be left in clean and neat condition.

3.03.1(4) State Taxes

Washington State sales and excise taxes do not apply to the delivery of the goods and/or services described under this Contract to the Chehalis Tribe within the Tribe's jurisdiction, and shall not include any Washington or other State sales or excise tax in the fee charged for performing the work.

3.03.1(5) Equal Employment Responsibilities

The Contractor shall, at its sole cost and expense, comply with all applicable laws, policies and regulations pertaining to nondiscrimination and equal employment opportunities. The absence of specific provisions or other requirements mandated by state, municipal or federal laws, policies or regulations from these General Conditions shall not excuse the Contractor from compliance with such laws, regulations or policies.

3.03.1(6) Archaeological and Historical Objects

Archaeological or historical objects, such as ruins, human skeletal remains, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from a historical or scientific standpoint, which may be encountered by the Contractor, shall not be further disturbed. The Contractor shall immediately notify the Engineer of any such finds and shall follow the requirements of the Inadvertent Discovery Plan provided in the Appendix.

The Engineer will determine if the material is to be salvaged. The Contractor may be required to stop work in the vicinity of the discovery until such determination is made. The Engineer may require the Contractor to suspend Work in the vicinity of the discovery until salvage is accomplished.

If the Engineer finds that the suspension of Work in the vicinity of the discovery increases or decreases the cost or time required for performance of any part of the Work under the Contract, the Engineer will make an adjustment in payment or the time required for the performance of the Work in accordance with Section 3.04.6.

3.03.2 SAFETY MEASURES

All Work under the Contract shall be performed in a safe manner. The Contractor and all Subcontractors shall comply with all applicable rules, regulations, and safety standards of the Chehalis Tribe and all other federal, local and other governmental entities having jurisdiction over the project. Tribal codes are available online for reference at https://www.codepublishing.com/WA/ChehalisTribe/#!/ChehalisTribe11/ChehalisTribe1110.html. The Contractor shall be solely and completely responsible for the conditions of the job site, including the safety of all persons and property during the performance of the Work. This requirement shall apply continuously and not be limited to normal working hours.

The Engineer's review of the Contractor's work plan, safety plan, construction sequences, schedule or performance does not and is not intended to include review or approval of the adequacy of the Contractor's safety measures in, on, or near the job site. The Engineer does not purport to be a safety expert, and is not engaged in that capacity under the Contract. The Engineer has neither the authority nor the responsibility to enforce construction safety laws, rules, regulations, or procedures, or to order the stoppage of Work for claimed violations thereof.

The Contractor shall exercise all required and appropriate precautions to protect all persons and property from injury and damage.

The Contractor and any Subcontractor(s) shall have and enforce adequate internal policies for ensuring that they, their employees, and any subcontractors maintain a drug and alcohol-free working environment.

3.03.3 HAZARDOUS MATERIAL

Biological hazards and associated physical hazards may be present at the Work site. The Contractor shall take precautions and perform any necessary Work to provide and maintain a safe

and healthful Work site in accordance with all applicable laws. The cost for all Work necessary to provide and maintain a safe Work site shall be included in the Contractor's Proposal, unless the Contract includes provisions to the contrary.

3.03.4 PAYMENT OF WAGES AND RELATED REQUIREMENTS

3.03.4(1) Minimum Prevailing Wage Requirements

a. The Contract is subject to the minimum prevailing wage and hour requirements of the Davis-Bacon Act (as amended or supplemented). On projects having federal funding, federal wage laws and rules may also apply. The Contract may list minimum hourly rates for wages for trades or occupations in the locality within the state where such labor is performed as determined by the Industrial Statistician for the Department of Labor and Industries or under the federal Davis-Bacon Act. These rates are for general reference purposes only and may not be current or complete. The Contractor, any Subcontractor, or other person doing any Work under the Contract shall not pay any worker less than the applicable current minimum hourly wage rates required by applicable law. Higher wages and benefits may be paid.

b. The Contractor, any Subcontractor, and all individuals or firms required by the Federal Davis-Bacon and Related Acts (DBRA) to pay minimum prevailing wages, shall not pay any worker less than the minimum hourly wage rates and fringe benefits required by the DBRA. Higher wages and benefits may be paid.

c. The applicable prevailing wage rates that are in effect on the date when Proposals are due shall remain in effect for the duration of the Contract. By incorporating prevailing wage rates into the Contract, the Owner does not warrant or imply that the Contractor will find labor available at those rates. The Contractor shall calculate in its Proposal any amounts above the minimums that it will actually have to pay. Further, rates for wages and/or fringe benefits may change while the Contract is in force. If they do, the Contractor shall bear the cost of paying rates above those in effect at time of bid.

d. If employing labor in a class not listed in the Contract Provisions on a federally funded project, the Contractor shall request the U.S. Secretary of Labor to determine the correct wage and benefits rate.

e. The Contractor shall be responsible for compliance with the requirements of the DBRA by all firms (Subcontractors, lower tier Subcontractors, Suppliers, Manufacturers, or Fabricators) engaged in any part of the Work necessary to complete the Contract. Therefore, should a violation of this Subsection occur by any firm that is providing Work or materials for completion of the Contract whether directly or indirectly responsible to the Contractor, the Owner will take action against the Contractor, as provided by the provisions of the Contract, to achieve compliance, including, but not limited to, withholding payment on the Contract until compliance is achieved.

3.03.4(2) Posting Notice Requirements

Notice of intent to pay prevailing wages and prevailing wage rates for the project shall be posted for the benefit of workers. The Contractor shall post the following, together with anything else necessary to comply with all applicable laws and regulations:

a. One copy of the approved "Statement of Intent to Pay Prevailing Wages" for the Contractor, each Subcontractor;

b. One copy of the prevailing wage rates for the project; and

c. FHWA 1495/1495A "Wage Rate Information" poster if the project is funded with federal aid.

Notice shall be posted at a location readily visible to workers at the job site, or where no field office is established, at a local office. The Contractor shall supply a copy of the Notice to any employee upon request.

3.03.4(3) Not Used

3.03.4(4) Required Documents

1. General

   All "Statements of Intent to Pay Prevailing Wages", "Affidavits of Wages Paid" and Certified Payrolls, including a signed Statement of Compliance for Federal-aid projects, shall be submitted to the Owner.

2. Certified Payrolls

   Certified payrolls are required to be submitted by the Contractor for themselves, all Subcontractors and all lower tier Subcontractors. The payrolls shall be submitted weekly on all Federal-aid projects and no less than monthly on State funded projects. Payrolls shall be submitted via email to Bvoncluck@ChehalisTribe.org.

3. Penalties for Noncompliance

   The Contractor is advised, if these payrolls are not supplied within the prescribed deadlines, any or all payments may be withheld until compliance is achieved. In addition, failure to provide these payrolls may result in other sanctions as provided by Federal regulations (29 CFR 5.12).

3.03.5 BONDS, INSURANCE AND INDEMNITY OBLIGATIONS

3.03.5(1) Contract Bonds

The successful Bidder shall provide an executed Performance Bond and Public Works Payment Bond for the full Contract amount (including sales tax). The Contract Bonds shall:

1. Be on Owner-furnished forms;

2. Be signed by an approved Surety (or Sureties) that:

    a. Is registered with the Washington State Insurance Commissioner; and

    b. Appears on the current Authorized Insurance List in the State of Washington published by the Office of the Insurance Commissioner.

3. Be conditioned upon the faithful performance of the Contract by the Contractor within the prescribed time; and

4. Not Used

5. Guarantee that the Surety shall indemnify, defend, and protect the Owner against any claim of direct or indirect loss resulting from the failure:

    a. Of the Contractor (or any of the employees, Subcontractors, or lower tier Subcontractors of the Contractor) to faithfully perform the Contract; or

    b. Of the Contractor (or the Subcontractors or lower tier Subcontractors of the Contractor) to pay all laborers, mechanics, Subcontractors, lower tier Subcontractors, materialperson, or any other person who provides supplies or provisions for carrying out the Work.

6. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond; and

7. Be signed by an officer of the Contractor empowered to sign official statements (sole proprietor or partner). If the Contractor is a corporation, the bond must be signed by the president or vice-president, unless accompanied by written proof of the authority of the individual signing the bond to bind the corporation (i.e., corporate resolution, power of attorney or a letter to such effect by the president or vice-president).

The Owner may require Sureties or Surety companies on the Contract Bonds to appear and qualify themselves. Whenever the Owner deems the Surety or Sureties to be inadequate, it may, upon written demand, require the Contractor to furnish additional Surety to cover any remaining Work. Until the added Surety is furnished, payments on the Contract will stop.

3.03.5(1.1) Two-Year Guarantee Period

The Contractor shall return to the project and repair or replace all defects in workmanship and material discovered within 2 years after Final Acceptance of the Work. The Contractor shall start work to remedy any such defects within 7 calendar days of receiving Owner's written notice of a defect, and shall complete such Work within the time stated in the Owner's notice. In case of an emergency, where damage may result from delay or where loss of services may result, such corrections may be made by the Owner's own forces or another contractor, in which case the cost of corrections shall be paid by the Contractor. In the event the Contractor does not accomplish corrections within the time specified, the Work will be otherwise accomplished and the cost of same shall be paid by the Contractor.

When corrections of defects are made, the Contractor shall then be responsible for correcting all defects in workmanship and materials in the corrected work for 2 years after acceptance of the corrections by Owner.

This guarantee is supplemental to and does not limit or affect the requirements that the Contractor's Work comply with the requirements of the Contract or any other legal rights or remedies of the Owner.

3.03.5(2) Worker's Benefits

a. The Contractor shall make all payments required for unemployment compensation under RCW Title 50 and for industrial insurance and medical aid required under RCW Title 51. If any payment required by Title 50 or Title 51 is not made when due, the Contractor shall indemnify the Owner with respect to all costs and damages, including attorneys' fees and expenses, associated with such nonpayment. The Owner may retain payments due under Title 50 or Title 51 from any money due to the Contractor and make payment to the appropriate fund.

b. The Contractor shall include in the various items in its bid Proposal all costs for payment of unemployment compensation and for providing the required insurance coverage(s). The Contractor will not be entitled to any additional payment for: (1) failure to include such costs in the Proposal, or (2) post-Award determinations made by the U.S. Department of Labor, the Washington State Department of Labor and Industries, or any other agency or entity regarding insurance coverage requirements.

3.03.5(4) Public Liability & Property Damage Insurance

3.03.5(4.1) General Requirements

A. The Contractor shall procure and maintain insurance described in all subsections in this Section, from insurers with a current A.M. Best rating not less than A – VII and licensed to do business in the state of Washington. The Owner reserves the right to approve or reject the insurance provided, based on the insurer (including financial condition), terms and coverage, the Certificate of Insurance, and/or

endorsements.

B. The Contractor shall keep this insurance in force during the term of the Contract and for 30 days after the Physical Completion Date, unless otherwise indicated.

C. All insurance coverage required by this section shall be written and provided by "occurrence-based" policy forms rather than by "claims made" forms.

D. The insurance policies shall contain a "cross liability" provision.

E. The Contractor's and all Subcontractors' insurance coverage shall be primary and non-contributory insurance as respects the Owner's insurance, self-insurance, or insurance pool coverage. Any insurance, self-insurance or self-insured pool coverage maintained by the Owner shall be excess of the Contractor's insurance and shall not contribute with it.

F. The Contractor shall provide the Owner and all Additional Insured with written notice of any policy cancellation and the date of effective cancellation within 2 business days of receipt.

G. The Contractor shall not begin work under the Contract until the required insurance has been obtained and approved by the Owner.

H. Failure on the part of the Contractor to maintain the insurance as required shall constitute a material breach of Contract, upon which the Owner may, after giving 5 business days notice to the Contractor to correct the breach, immediately terminate the Contract or, at its discretion, procure or renew such insurance and pay any and all premiums in connection therewith, with any sums so expended to be repaid to the Owner on demand, or at the sole discretion of the Owner, offset against funds due the Contractor from the Owner.

I. All costs for insurance shall be incidental to and included in the unit or lump sum prices of the Contract and no additional payment will be made.

3.03.5(4.2) Additional Insured

All insurance policies, with the exception of Workers Compensation, shall name the following listed entities as additional insured(s) using the forms or endorsements required herein:

- The Owner and its officers, elected/appointed officials, employees, agents, and volunteers;
- Gray & Osborne, Inc.;

The above-listed entities shall be additional insured(s) for the full available limits of liability maintained by the Contractor, irrespective of whether such limits maintained by the Contractor are greater than those required by the Contract, and irrespective of whether the Certificate of Insurance provided by the Contractor pursuant to 3.03.5(4.4) describes limits lower than those maintained

by the Contractor.

3.03.5(4.3) Subcontractors

Contractor shall ensure that each Subcontractor of every tier obtains and maintains at a minimum the insurance coverages listed in 3.03.5(4.5)A and 3.03.5(4.5)B. Upon request of the Owner, the Contractor shall provide evidence of such insurance.

3.03.5(4.4) Verification of Coverage

The Contractor shall deliver to the Owner a Certificate(s) of Insurance and endorsements for each policy of insurance meeting the requirements set forth herein when the Contractor delivers the signed Contract for the Work. The certificate and endorsements shall conform to the following requirements:

1. An ACORD certificate or a form determined by the Owner to be equivalent. The certificate or an endorsement form shall indicate the Contractor's insurance is primary and non-contributory.

2. The Contractor shall obtain endorsement forms CG 2010 10 01, CG 2032 07 04 and CG 2037 10 01 or the equivalent of each, naming the Owner and all other entities listed in 3.03.5(4.2) as Additional Insured(s) and showing the policy number. If the Contractor is unsuccessful in securing these endorsements after exerting commercially reasonable efforts, the Contractor shall obtain other endorsements providing equivalent protection to the Additional Insured. Commercially reasonable efforts shall be evidenced by a signed statement by the Contractor's insurance broker indicating that endorsement forms CG 2010 10 01, CG 2032 07 04 and CG 2037 10 01 are not available and the endorsements submitted provide equivalent protection to the Additional Insured.

3. Any other amendatory endorsements to show the coverage required herein.

4. A notification of coverage enhancements on the Certification of Insurance shall not satisfy these requirements; actual endorsement must be submitted.

Upon request, the Contractor shall forward to the Owner a full and certified copy of the insurance policy(s). If Builders Risk Insurance is required on this project, a full and certified copy of that policy is required when the Contractor delivers the signed Contract for the Work.

3.03.5(4.5) Coverages and Limits

The insurance shall provide the minimum coverages and limits set forth below. Providing coverage in these stated minimum limits shall not be construed to relieve the Contractor from liability in excess of such limits. All deductibles and self-insured retentions shall be disclosed and are subject to approval by the Owner. The cost of any claim payments falling within the deductible shall be the responsibility of the Contractor.

3.03.5(4.5)A Commercial General Liability

Commercial General Liability insurance shall be written on coverage forms at least as broad as ISO occurrence form CG 00 01, including but not limited to liability arising from premises, operations, stop gap liability, independent contractors, products-completed operations, personal and advertising injury, and liability assumed under an insured contract. There shall be no exclusion for liability arising from explosion, collapse or underground property damage.

The Commercial General Liability insurance shall be endorsed to provide a per project general aggregate limit, using ISO form CG 25 03 05 09 or an equivalent endorsement.

Contractor shall maintain Commercial General Liability Insurance arising out of the Contractor's completed operations for at least 3 years following Substantial Completion of the Work.

Such policy must provide the following minimum limits:

$1,000,000	Each Occurrence
$2,000,000	General Aggregate
$2,000,000	Products & Completed Operations Aggregate
$1,000,000	Personal & Advertising Injury, each offence
$50,000	Damages to Rented Premises

3.03.5(4.5)B Automobile Liability

Automobile Liability for owned, non-owned, hired, and leased vehicles, with an MCS 90 endorsement and a CA 9948 endorsement attached if "pollutants" are to be transported. Such policy(ies) shall provide the following minimum limit:

$1,000,000	combined single limit each accident

3.03.5(4.5)C Workers' Compensation

The Contractor shall comply with Workers' Compensation coverage as required by the Industrial Insurance laws of the state of Washington.

3.03.5(4.5)D WA Stop Gap (Employer's Liability)

$1,000,000	Per accident
$1,000,000	Disease
$1,000,000	Each Employee

3.03.5(4.5)E Not Used

3.03.5(4.5)F Not Used

3.03.5(4.5)G Not Used

3.03.5(4.5)H Not Used

3.03.5(4.5)I Not Used

3.03.5(4.5)J Not Used

3.03.5(4.5)K Not Used

3.03.5(5) Indemnity and Hold Harmless

Contractor hereby agrees to indemnify and hold Tribe harmless from any and all claims, causes of action, losses, damages, and expenses, including attorney's fees, arising out of the Contractor's performance of the work.

3.03.5(6) Patent Royalties & Process Fees

The Contractor shall be responsible for all costs arising from the use of patented devices, materials, or processes used in or incorporated in the Work. The Contractor agrees to indemnify, defend, and save harmless the Owner from all claims and damages, in any way relating to the use of patented devices, materials, or processes used in or incorporated in the Work.

3.03.6 METHOD OF SERVING NOTICE

All correspondence from the Contractor constituting any notification, notice of protest, notice of dispute, or other correspondence constituting notification required to be furnished under the Contract, shall be in paper format, hand delivered or sent via mail delivery service to the Owner. Electronic formats such as emails or electronically delivered copies of correspondence will not constitute such notice and will not comply with the requirements of the Contract.

3.04 PROSECUTION AND PROGRESS OF THE WORK

3.04.1 QUALITY OF WORK

3.04.1(1) Workmanship

a. The Contractor represents that it is fully experienced and possesses all the necessary capital, facilities and expertise to perform all of the Work, and hereby guarantees that all of the Work performed by it under the Contract will be of the highest quality and done in a workmanlike fashion in strict accordance with the requirements of the Contract.

b. The Contractor shall at all times employ skilled workers and use skilled Subcontractors in the performance of the Work. When required in writing by the Owner or the Engineer, the Contractor or its Subcontractors shall remove from the Work site any person or Subcontractor who is, in the opinion of the Owner or the Engineer, not competent, not qualified, disorderly, or otherwise unsatisfactory and shall not again employ such discharged person or Subcontractor on the Work,

except with the prior written consent of the Owner. Discharge of any person or Subcontractor shall not be the basis of any claim for compensation or damages against the Owner or the Engineer.

c. All Work performed under the Contract shall be of first quality workmanship throughout, with the Work complete and in full working order upon completion.

d. Except when otherwise expressly specified in the Contract, the Contractor shall design, survey, layout and be responsible for all methods, materials and equipment used in performing the Work.

e. If, at any time, the Contractor's workforce (including Subcontractors), in the opinion of the Owner and/or the Engineer, shall be inadequate for maintaining the necessary progress required to complete the Work within the Contract Time, the Contractor shall at its sole cost, if so required by the Owner and/or the Engineer, increase the workforce or equipment to such an extent as to give reasonable assurance of compliance with the Work schedule. The failure of the Owner and/or the Engineer to make such demand shall not relieve the Contractor of its obligation to perform the Work in accordance with the requirements of the Contract. The Contractor alone shall be responsible for the safety, efficiency and adequacy of its activities, construction methods and the rate of progress required by the Contract.

3.04.1(2) Contractor's Supervisory and Site Personnel

a. The Contractor shall assign sufficient supervisory personnel to ensure the faithful prosecution of the Work and shall have adequate supervisory personnel present at the Work site who are either employees of the Contractor or duly authorized representatives designated in writing to the Owner and/or the Engineer. The Contractor shall at all times maintain at the Work site a complete copy of the Contract Provisions, Contract Plans, and record drawings of the Work that has been completed.

b. The Contractor shall at all times have at least one duly authorized supervisory representative at the Work site who shall be fully authorized to make binding decisions on behalf of the Contractor with respect to the Work. If the Contractor's duly authorized supervisory representative at the Work site will be absent from the Work site for more than four hours, he/she shall designate an assistant who possesses the same authority and so inform the Owner and the Field Representative, if applicable.

3.04.2 MATERIALS AND EQUIPMENT

(1) Materials and equipment furnished and installed shall be manufactured, fabricated or constructed to meet all applicable safety requirements. All material and equipment supplied by the Contractor and incorporated in the Work shall be of new manufacture, free from defects and in strict compliance with the requirements of

the Contract. When required by the Owner, a certificate from the manufacturer or other responsible supplier shall be supplied attesting to this fact.

(2) All tools and equipment used for construction operations shall be of the size and type suitable for the Work and shall be kept in safe and good working condition at all times.

(3) The Contractor shall, whenever required during the progress of the Work and after completion of the Work, furnish proof acceptable to the Owner that all items of equipment and all materials installed equal or exceed all requirements specified in the Contract.

(4) The Contractor shall use all means possible to protect materials and equipment from damage or degradation of any kind before, during and after installation.

(5) The Contractor shall replace any materials or equipment damaged during the performance of the Work to the approval of the Owner and the Engineer. The cost of replacing damaged materials and equipment shall be borne by the Contractor.

3.04.3 SPECIFICATION OF PARTICULAR MATERIALS AND EQUIPMENT

(1) Within the Contract, certain items are specified by brand, style, trade name, or manufacturer in order to set forth a standard of quality, and/or preference by the Owner. Unless specifically noted otherwise, it is not the intent of the Contract to exclude other processes or materials of a type and quality equal to those designated.

(2) The term "or equal" as used in the Contract does not mean that the Contractor's substitution of material or equipment will necessarily be approved as equal by the Engineer. If the Contractor desires to substitute material or equipment on the basis that it is equal to that specified, the Contractor shall submit a written request to the Engineer to substitute the material or equipment. The Contractor shall not use or incorporate such material or equipment into the Work until the Contractor has received written approval from the Engineer.

(3) If the Contractor proposes substitutions, the Engineer will record all time used to evaluate each proposed substitution. If an approved substitution requires revisions to the Contract Documents, the Engineer will record all time to accomplish the revisions. Whether or not the Engineer approves a proposed substitution all direct and indirect cost to evaluate the proposed substitution shall be deducted from amounts due or to become due to the Contractor.

(4) No additional compensation or extension of time will be allowed the Contractor for any changes required to incorporate substituted materials or equipment.

3.04.4 STORAGE

3.04.4(1) On-Site Storage

The Contractor shall store all equipment and materials in a safe and suitable place in accordance with the manufacturer's recommendations. Materials and equipment shall be covered or wrapped to protect them from moisture, dust and deterioration, as required or necessary. All on-site storage areas shall be approved in advance by the Owner and the Engineer.

3.04.4(2) Off-Site Storage

The Contractor may be required to provide offsite storage of equipment and materials to enable construction to occur at the Work site. The Contractor has full responsibility to secure all offsite storage areas, if needed, and shall include the costs for providing such storage areas in the bid Proposal for the individual equipment and material items requiring off-site storage. All off-site storage areas shall be enclosed or fenced and be secure.

3.04.5 DEFECTIVE MATERIALS, EQUIPMENT AND WORKMANSHIP

(1) Materials, equipment, or workmanship which, in the opinion of the Owner or the Engineer, does not conform to the Contract or are in any other way unsatisfactory or unsuited to the purpose for which they are intended may be rejected. The Contractor shall remove from the Work site without delay, all rejected materials, equipment and work, and shall promptly replace the same in strict conformity with the requirements of the Contract. Unsatisfactory materials, equipment and workmanship may be rejected at any time, notwithstanding any previous testing, inspection or acceptance of such materials, equipment or workmanship, or inclusion thereof in any previously issued progress estimates.

(2) If the Contractor fails to correct defective Work, equipment or materials, the Owner shall have the right to exercise any of the following options or any combination thereof:

a. The Owner may replace the defective Work, materials or equipment by purchase from or contract with any other parties at the expense of the Contractor, and in this event, the Owner shall be entitled without compensation to the Contractor, to the use of the defective Work or equipment for such reasonable time as is necessary to enable Owner to replace such defective Work, materials or equipment.

b. The Owner may elect to accept the defective Work, materials or equipment and issue a Change Order reflecting a credit against the Contract price, computed under the terms of the Contract in an amount to be determined by the Engineer, which amount shall reflect the actual value to the Owner of the accepted Work.

c. Upon receipt of notice from the Owner of any defects in material, equipment or workmanship which appear within a two-year period following the Substantial Completion Date, or within any other warranty or guarantee period required by the Contract or provided by a manufacturer or supplier, the Contractor shall promptly and with the least possible delay and inconvenience to the Owner, repair or replace such defective workmanship, material or equipment without expense to the Owner.

d. The Contractor shall be responsible for the full cost of correcting defective Work and complying with warranties and guarantees as required by the Contract. Direct or indirect costs, including administrative and engineering, incurred by the Owner attributable to correcting and remedying defective or unauthorized work, or Work the Contractor failed or refused to perform, shall be paid by the Contractor. Payment will be deducted by the Owner from monies due, or to become due, the Contractor. Such direct and indirect costs shall include in particular, but without limitation, compensation for additional professional services required, and costs for repair and replacement of work of others destroyed or damaged by correction, removal, or replacement of the Contractor's unauthorized work.

e. All warranties, guarantees, and other obligations to correct work that does not comply with the Contract are material requirements of the Contract. The performance of all warranties, guarantees and other obligations shall be secured by the Performance Bond and the Public Works Payment Bond submitted by the Contractor at the time the Contract is signed.

3.04.6 CHANGES IN THE WORK

(1) The Owner or the Engineer may, at any time, without notice to the Performance Bond or Public Works Payment Bond sureties, by written order designated or indicated to be a Change Order or Change Directive, make any change, including modifications to, additions to or deletions from the Work including, but not limited to, changes:

a. To the Contract Provisions and Contract Plans;

b. To quantities or performance of the Work;

c. To Owner-furnished facilities, equipment, materials, services or the Work site; or

d. To the schedule for the Work or the Contract Time.

(2) A Change Order is an amendment to the Contract, which signifies changes in the scope of the Work, the Contract Time, and/or the Contract price. A Change Order shall be the complete expression of the agreement between the Owner and the Contractor. No claims or entitlement to an equitable adjustment or changes to the

Contract Time and/or Contract price will be allowed for alleged verbal or oral agreements or directives.

(3) The Engineer will issue a written change order for any change. If the Engineer determines that the change increased or decreased the Contractor's costs or time to do any of the Work, the Engineer will make an equitable adjustment to the Contract. The equitable adjustment will be by agreement with the Contractor. However, if the parties are unable to agree, the Engineer will determine the amount of the equitable adjustment in accordance with Section 3.04.6(7) and adjust the time as the Engineer deems appropriate. Extensions of time will be evaluated in accordance with Section 3.04.15(2).

The Contractor shall proceed with the Work upon receiving:

1. A written change order approved by the Owner; or

2. An oral order from the Engineer before actually receiving the written change order.

Within 14 calendar days of delivery of the change order the Contractor shall endorse and return the change order, request an extension of time for endorsement or respond in accordance with Section 3.04.8. The Owner may unilaterally process the change order if the Contractor fails to comply with these requirements. Changes normally noted on field stakes or variation from estimated quantities, except as provided in Section 3.04.6(8), will not require a written change order. These changes shall be made at the unit prices that apply. The Contractor shall respond immediately to changes shown on field stakes without waiting for further notice.

The Contractor shall obtain written consent of the Surety or Sureties if the Engineer requests such consent.

(4) All Change Orders will be prepared by the Owner or Engineer and executed in triplicate with one copy to the Owner, one to the Contractor, and one retained by the Engineer.

(5) If the Contractor encounters any circumstances during the performance of the Work that the Contractor contends creates any entitlement to a change in the Contract Time, the Contract price, or both, the Contractor shall immediately provide written notice to the Engineer. Within 10 calendar days after providing written notice, the Contractor shall provide a written request to the Engineer for a change to the Contract Time and/or Contract price and provide detailed information supporting the request, including cost and schedule information.

(6) No claim by the Contractor shall be allowed if the terms of this Section 3.04.6 are not strictly followed. In the event of any non-compliance, the Contractor shall be conclusively determined to have waived any claim or entitlement to an adjustment of the Contract Time or the Contract price.

(7) The cost to be included in an adjustment for any changes to the Work, adjustment of the Contract Time or Contract price and any equitable adjustment or entitlement related to the Work or the Contract shall meet the notice provisions of Section 3.04.6, and will be determined strictly by one or a combination of the following methods:

a. Contract unit bid prices previously agreed upon; or

b. If there are no unit bid prices, an agreed lump sum; or

c. If the amount of the adjustment cannot be agreed upon in advance or in the manner provided in subparagraph a or b above, the cost will be determined by the actual cost of:

1. Labor including working foremen. Labor rates will only include the basic wage and fringe benefits, the current rates for Federal Insurance Compensation Act (FICA), Federal Unemployment Tax Act (FUTA) and State Unemployment Tax Act (SUTA), and the company's present rates for medical aid and industrial insurance premiums. Labor reimbursement calculations will be based on a "Labor List" (List) prepared and submitted by the Contractor and any Subcontractor before the Contractor commences force account Work. The Engineer may compare the List to payrolls and other documents and may at any time, require the Contractor to submit a new List.

   In the event that an acceptable List is not received by the time that force account calculations are begun, the Engineer will develop a List unilaterally, utilizing the best data available.

2. Materials incorporated permanently into the Work;

3. The ownership or rental cost of equipment during the time of use on the extra work. Equipment rates shall be as set forth in the then current AGC/WSDOT Equipment Rental Agreement. These rates shall be full compensation for all costs incidental to furnishing and operating the equipment. The Contractor shall submit copies of the applicable portions of the AGC/WSDOT Equipment Rental Agreement to the Engineer. The rates listed in the Rental Rate Blue Book (as modified by the current AGC/WSDOT Equipment Rental Agreement) shall be full compensation for all fuel, oil, lubrication, ordinary repairs, maintenance, and all other costs incidental to furnishing and operating the equipment except labor for operation; plus

4. Overhead and Profit as follows:

For Work performed by the Contractor, an amount to be agreed upon but not to exceed 15 percent of the labor, material, and equipment cost agreed to by the Engineer as compensation for supervision, small tools, provisions for safety, home office and field overhead, profit and other general conditions expenses, including, but not limited to, insurance, bond and business and occupation taxes.

For Subcontractor Work, the Subcontractor will be allowed an amount to be agreed upon but not to exceed 15 percent of the labor, material, and equipment cost agreed to by the Engineer as compensation for supervision, small tools, provisions for safety, home office and field overhead, profit and other general conditions expenses, including, but not limited to, insurance, bond and business and occupation taxes. The Contractor will be allowed an additional markup of 10 percent to compensate the Contractor for all administrative costs, including home office and field overhead, profit, bonding, insurance, business and occupation taxes and any other costs incurred.

In no case will the total fixed fee for the Contractor and all Subcontractors of all tiers exceed 30 percent.

(8) Payment to the Contractor will be made only for the actual quantities of Work performed and accepted in conformance with the Contract. When the accepted quantity of Work performed under a unit item varies from the original bid quantity, payment will be at the unit Contract price for all Work unless the total accepted quantity of any Contract item, adjusted to exclude added or deleted amounts included in change orders accepted by both parties, increases or decreases by more than 25 percent from the original bid quantity, and that bid item represents 10 percent or more of the total original Contract price. In that case, payment for Contract Work may be adjusted as described herein.

The adjusted final quantity shall be determined by starting with the final accepted quantity measured after all Work under an item has been completed. From this amount, subtract any quantities included in additive change orders accepted by both parties. Then, to the resulting amount, add any quantities included in deductive change orders accepted by both parties. The final result of this calculation shall become the adjusted final quantity and the basis for comparison to the original Proposal quantity.

a. **Increased Quantities**. Either party to the Contract will be entitled to renegotiate the price for that portion of the adjusted final quantity in excess of 1.25 times the original Proposal quantity, if 10 percent or more of the original Contract price. The price for excessive increased quantities will be determined by agreement of the parties, or, where the parties cannot agree,

the price will be determined by the Engineer based upon the actual costs to perform the Work, including reasonable markup for overhead and profit. The final price will be determined by the Engineer.

b. **Decreased Quantities**. Either party to the Contract will be entitled to an equitable adjustment if the adjusted final quantity of Work performed is less than 75 percent of the original Bid quantity, if 10 percent or more of the original Contract price. The Contractor shall submit the documentation to support the equitable adjustment to the Engineer. The equitable adjustment shall be based upon and limited to three factors:

1. Any increase or decrease in unit costs of labor, materials or equipment, utilized for Work actually performed, resulting solely from the reduction in quantity;

2. Changes in production rates or methods of performing Work actually done to the extent that the nature of the Work actually performed differs from the nature of the Work included in the original plan; and

3. An adjustment for the anticipated contribution to unavoidable fixed cost and overhead from the units representing the difference between the adjusted final quantity and 75 percent of the original plan quantity.

The following limitations shall apply to renegotiated prices for increases and/or equitable adjustments for decreases:

1. The equipment rates shall be actual cost but shall not exceed the rates set forth in the AGC/WSDOT Equipment Rental Agreement.

2. No payment will be made for extended or unabsorbed home office overhead and field overhead expenses to the extent that there is an unbalanced allocation of such expenses among the Contract Bid items.

3. No payment for consequential damages or loss of anticipated profits will be allowed because of any variance in quantities from those originally shown in the Proposal form, Contract Provisions, and Contract Plans.

4. The total payment (including the adjustment amount and unit prices for Work performed) for any item that experiences an equitable adjustment for decreased quantity shall not exceed 75 percent of the amount originally Bid for the item.

If the adjusted final quantity of any item does not vary from the quantity shown in the Proposal by more than 25 percent, then the Contractor and the Owner agree that all Work under that item will be performed at the original Contract unit price.

When ordered by the Engineer, the Contractor shall proceed with the Work pending determination of the cost or time adjustment for the variation in quantities.

The Contractor and the Owner agree that there will be no cost adjustment for decreases if the Owner has entered the amount for the item in the Proposal form only to provide a common Proposal for Bidders.

3.04.7 DIFFERING SITE CONDITIONS

The Contractor shall promptly, and before such conditions are disturbed, notify the Engineer in writing of: (1) pre-existing subsurface or latent physical conditions at the Work site that differ materially from those indicated in the Contract Documents, or (2) pre-existing unknown physical conditions at the Work site, of an unusual nature, that differ materially from those ordinarily encountered and generally recognized as inherent in the Work of the character required by the Contract. The Engineer shall be given an opportunity to examine such conditions in order to advise the Owner of possible modifications to the Work to mitigate such conditions. If the Engineer determines that conditions are materially different and cause a material increase or decrease in the Contractor's cost of, or time required for, performance of any part of the Work, an equitable adjustment shall be made in the Contract Time and/or Contract price in accordance with other applicable provisions of the Contract relating to changes in the Work. Failure of the Contractor to give notice of such conditions at the time of discovery shall constitute a waiver of any claim for an equitable adjustment. Any such adjustments to the Contract price shall be computed strictly limited to amounts provided under paragraph 3.04.6.

3.04.8 PROTEST BY THE CONTRACTOR

If the Contractor disagrees with anything in a Change Order or a written directive, or with any interpretation or determination by the Engineer, the Contractor shall:

a. Immediately submit a signed written notice of protest to the Engineer before doing the Work;

b. Supplement the written protest within 14 calendar days with a written statement and supporting documents providing the following:

    1. The date and nature of the protested order, direction, instruction, interpretation or determination;

    2. A full discussion of the circumstances which caused the protest, including names of persons involved, time, duration, and nature of

the Work involved and a review of the Plans and Contract Provisions referenced to support the protest;

3. The estimated dollar cost, if any, of the protested Work and a detailed breakdown showing how that estimate was determined; and

4. An analysis of the progress schedule showing the schedule change or disruption if the Contractor is asserting a schedule change or disruption; and

5. If the protest is continuing, the information required above shall be supplemented upon request by the Engineer until the protest is resolved.

The Contractor shall keep detailed and complete records of extra costs and schedule impacts to Contract Time that in any way relate to a protest. The Contractor shall allow the Engineer to have access to all documents and records needed for evaluating the protest.

The Engineer will evaluate all protests that comply with this Section. If the Engineer determines that a protest is valid, the Engineer will adjust the Contract price and/or the Contract Time by an adjustment in accordance with Section 3.04.6 and 3.04.15(2).

During the time when any protest is pending, the Contractor shall proceed promptly with the Work, as the Engineer orders in writing.

The Contractor's failure to submit a protest in strict accordance with the requirements of this Section shall constitute a waiver of any claim for an adjustment to the Contract Time, the Contract price, or other relief.

3.04.9 SUBCONTRACTORS AND SUBCONTRACTS

3.04.9(1) Contractor Responsibility

Nothing contained in the Contract shall create any contractual or other relationship between the Owner and/or the Engineer and any Subcontractor or lower tier Subcontractor, and no performance undertaken by any such Subcontractor or lower tier Subcontractor shall, under any circumstances, relieve the Contractor of its obligations and responsibilities under the Contract.

Prior to subcontracting any Work, the Contractor shall verify that every first tier Subcontractor meets the responsibility criteria stated below at the time of subcontract execution. The Contractor shall include these responsibility criteria in every subcontract, and require every Subcontractor to:

1. Possess any electrical contractor license required by 19.28 RCW or elevator contractor license required by 70.87 RCW, if applicable;

2. Have a certificate of registration in compliance with Chapter 18.27 RCW;

3. Have a current State unified business identifier number;

4. If applicable, have:

   a. Industrial insurance coverage for the Subcontractor's employees working in Washington (Title 51 RCW);

   b. An employment security department number (Title 50 RCW);

   c. A state excise tax registration number (Title 82 RCW).

5. Not Used;

6. Verify these responsibility criteria for every lower tier subcontractor at the time of subcontract execution; and

7. Include these responsibility criteria in every lower tier subcontract.

3.04.9(2) Contractor Work Performance Requirement

Work done by the Contractor's own organization shall account for at least 30 percent of the awarded Contract price.

3.04.9(3) Approval of Subcontractors

The Contractor shall not subcontract Work unless the Engineer approves in writing. Each request to subcontract shall be on the form the Engineer provides. If the Engineer requests, the Contractor shall provide proof that the Subcontractor has the experience, ability, and equipment the Work requires. The Contractor shall require each Subcontractor to comply with Section 3.03.4 and to furnish all certificates and statements required by the contract. Approval of a Subcontractor by the Owner shall not relieve the Contractor or Subcontractor of any obligations or responsibilities under the Contract. Any delays or other impacts caused by the failure of the Contractor to provide required information and obtain approval of any Subcontractor in a timely manner will not be considered as justification for additional compensation or an extension of the Contract Time.

3.04.9(4) Subcontracts

Upon approval of Subcontractors by the Engineer, the Contractor shall, if requested, provide the Owner with complete copies of all subcontracts entered into between the Contractor and any Subcontractor. Providing requested subcontracts to the Owner shall be a condition precedent to the Owner's obligation to make any progress payment to the Contractor.

3.04.9(5) Incorporation of Contract

Every subcontract entered into by the Contractor shall expressly bind each Subcontractor to all of the terms and conditions of the Contract, which the Contractor shall incorporate into each subcontract by reference. The Contractor shall provide a copy of the Contract to all Subcontractors

and obtain written confirmation from Subcontractors that the Subcontractor received a copy of the Contract. All Subcontractors shall provide a copy of the Contract to all lower tier Subcontractors and obtain written confirmation from lower tier Subcontractors that the lower tier Subcontractor received a copy of the Contract.

3.04.9(6) Replacement of Subcontractors

Subject to the requirements of state and/or federal agencies having jurisdiction over MBE/WBE/DBE requirements applicable to the Work, should it become impossible for a Subcontractor to perform the Subcontractor's intended work, the Contractor shall submit the information required above for an alternate Subcontractor at least 10 days prior to the time that the Subcontractor is scheduled to begin work. The failure of any Subcontractor to perform its portion of the Work in a timely or workmanlike fashion is the sole responsibility of the Contractor.

3.04.10 MUTUAL RESPONSIBILITY OF CONTRACTORS

The Owner reserves the right to perform other work on or near the Work site using its own forces and/or other contractors. The Contractor shall take all reasonable steps to coordinate its performance of the Work with the Owner and/or such other contractors and Subcontractors. If, through acts of commission or omission on the part of the Contractor, any other contractor or any Subcontractor shall suffer loss or damage with respect to the other work being performed by the Owner, the Contractor agrees to promptly settle with such other Contractor or Subcontractor by agreement or other dispute resolution process. The Contractor agrees to indemnify and hold harmless the Owner and the Engineer from all claims asserted against and liability incurred by the Owner or the Engineer resulting from disputes between the Contractor and any other contractor or any Subcontractor or material supplier. The indemnification rights of the Owner and the Engineer include expenses such as, but not limited to, salaries/wages of employees and all other expenses relating to any mediation, litigation, or arbitration, including costs, consulting fees and attorneys' fees. If such other Contractor or Subcontractor shall assert any claim against the Owner on account of any damage alleged to have been sustained by an act or omission of the Contractor or anyone for whose acts it may be liable, the Owner or the Engineer shall notify the Contractor, which shall defend, indemnify and save harmless the Owner and the Engineer against such claim.

The coordination of the Work with other work by the Owner shall be taken into account by the Contractor as part of its site investigation obligations under Section 2.01.4, and all costs thereof shall be borne by the Contractor as part of the Contract price for the Work.

3.04.11 RISK OF LOSS

The Contractor shall have all risk of loss for all Work in progress, all materials, all equipment and all other items in any way relating to the Work through theft, fire, other casualty, act of God, or any other cause until the Contract Completion Date.

3.04.12 MEASUREMENT AND PAYMENT

3.04.12(1) General

The Contract price for the Work, whether lump sum or unit prices, shall constitute full compensation for furnishing all facilities, labor, materials, appurtenances, and incidentals and performing all operations necessary to construct and complete all items of the Work in accordance with the Contract, notwithstanding that minor or incidental features of the Work may not be shown on the Contract Plans or Contract Provisions.

3.04.12(2) Measurement

Measurement for all items shall be as specified in the Contract for unit price and lump sum price items.

3.04.12(3) Payment

Payment for all of the Work will be made at the lump sum or unit Contract price as set forth in the Contract. Payment of the Contract price shall constitute full compensation for the complete performance of all of the Work.

3.04.12(4) Access to Books and Records

The Contractor shall, whenever so requested, give the Owner and/or the Engineer access to all invoices, bills of lading and other documents relating to the Work. The Contractor shall, without charge, provide personnel and measures and scales with adequate capacity for measuring or weighing any materials or other items paid for on a unit price basis.

3.04.12(5) Progress Payment Estimates

Progress payment estimates shall be prepared by the Engineer and reviewed by the Contractor and will be submitted with the Engineer's recommendation to the Owner for its approval on the first day of the month for all Work completed through the 30th day of the preceding month, unless otherwise agreed upon by the Owner, the Engineer and the Contractor. The Engineer will prepare progress payment estimates as accurately as available information permits. The Owner will make no payment under the Contract for the Work performed until the "Statement of Intent to Pay Prevailing Wages" is submitted to the Engineer, including Subcontractor wage rates and certified payrolls are submitted and current. In general, each progress payment will be based upon the payment schedule and the value of Work performed during the preceding pay period. Before the final progress payment estimate is prepared, all quantities will be reviewed by the Engineer.

3.04.12(6) Payment for Materials on Hand

The Owner may reimburse the Contractor for 90 percent of the invoice amount of materials and equipment purchased before their incorporation into the Work if properly stored on or near the Work site. Invoices for equipment and materials will be verified and approved by the Engineer. Each invoice shall be sufficiently detailed to enable the Engineer to determine actual costs.

Payment for materials on hand shall not exceed the total Contract cost of the Contract item. Payment will not be made for granular materials, forming materials, consumables, nails, tie wire, etc. Payment will not be made for materials for any invoice that is less than $2,000.00 or for freight bills and similar items. Payment for equipment or materials on hand shall not constitute acceptance of the equipment or materials. Equipment and materials will be rejected if found to be faulty, even if payment for it has been made.

3.04.12(7) Payments Withheld

The Engineer may decide not to recommend approval of all or a portion of a progress estimate, and/or the Owner may decide to withhold from a progress estimate an amount sufficient to protect the Owner from loss because of:

a. Defective Work not remedied;

b. Third-party claims or reasonable evidence indicating the probability that a third-party claim will be asserted;

c. Failure of the Contractor to make timely and proper payments to Subcontractors or for labor, materials or equipment;

d. Reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract price;

e. Damage to the Owner or another contractor;

f. Reasonable evidence that the Work will not be completed within the Contract Time, and that the unpaid balance of the Contract price will not be adequate to cover actual or liquidated damages for the anticipated delay;

g. Repeated failure by the Contractor to comply with the directions of the Owner or the Engineer or to carry out the Work in accordance with the Contract;

h. Other appropriate reasons necessary to protect the Owner.

3.04.12(8) Payment Upon Correction of Deficiencies

When the reason or reasons for withholding payment are resolved, payment will be made for amounts previously withheld.

3.04.12(9) Final Payment

After final inspection (Section 3.04.16(2)) of the Work and a determination by the Engineer that the Physical Completion Date has been achieved, the balance of the Contract price due to the Contractor will be paid based upon the final estimate by the Engineer and presentation of a Final Contract Voucher Certification signed by the Contractor. The Final Contract Voucher Certification shall be deemed to be a release of all claims of the Contractor unless a claim is filed

in accordance with the requirements of Section 3.05 and is expressly excepted from release in the Contractor's Final Contract Voucher Certification. The date the Owner signs the Final Contract Voucher Certification constitutes the Contract Completion Date in accordance with Section 3.04.16(3).

If the Contractor fails, refuses, or is unable to sign and return the Final Contract Voucher Certification or any other documentation required in order to achieve the Contract Completion Date, the Owner reserves the right to establish a completion date and unilaterally accept the Work. Unilateral final acceptance will occur only after the Contractor has been provided the opportunity, by written request from the Engineer, to voluntarily submit such documents. If voluntary compliance is not achieved, formal notification of the impending establishment of a completion date and unilateral final acceptance will be provided by certified letter from the Owner to the Contractor, which will provide 30 calendar days for the Contractor to submit the necessary documents. The 30 calendar day period will begin on the date the certified letter is received by the Contractor. The date on which the Owner unilaterally signs the Final Contract Voucher Certification shall constitute the Contract Completion Date under Section 3.04.16(3). The Owner shall have the right to unilaterally establish a Contract Completion Date when either (1) the Physical Completion Date for the Work has been achieved in accordance with Section 3.04.16(2), or (2) the Owner terminates the contract in accordance with Section 3.07. Unilateral establishment of the Contract Completion Date by the Owner shall not in any way relieve the Contractor of any liability for failing to comply with the Contract or from responsibility for compliance with all federal, state, tribal, or local laws, ordinances, and regulations that affect the Work.

Payment to the Contractor of partial or final payment estimates and retained percentages shall be subject to applicable laws.

3.04.13 WORK HOURS

Except in the case of emergency or unless otherwise approved by the Owner, the normal straight time working hours for the Contract shall be any consecutive 8-hour period between 7:00 a.m. and 6:00 p.m. of a working day with a maximum 1-hour lunch break and a 5-day work week. The normal straight time 8-hour working period for the Contract shall be established at the preconstruction conference or prior to the Contractor commencing the Work.

Written permission from the Engineer is required, if a Contractor desires to perform Work on holidays, Saturdays, or Sundays; before 7:00 a.m. or after 6:00 p.m. on any day; or longer than an 8-hour period on any day. The Contractor shall apply in writing to the Engineer for such permission, no later than noon on the working day prior to the day for which the Contractor is requesting permission to work.

Permission to work between the hours of 10:00 p.m. and 7:00 a.m. during weekdays and between the hours of 10:00 p.m. and 9:00 a.m. on weekends or holidays may also be subject to noise control requirements. Approval to continue work during these hours may be revoked at any time the Contractor exceeds the Owner's noise control regulations or complaints are received from the public or adjoining property owners regarding the noise from the Contractor's operations. The Contractor shall have no claim for damages or delays should such permission be revoked for these reasons.

Permission to work Saturdays, Sundays, holidays, or other than the agreed upon normal straight time working hours Monday through Friday may be given subject to certain other conditions set forth by the Owner or Engineer. These conditions may include but are not limited to:

- The Engineer may require designated representatives to be present during the Work. Representatives who may be deemed necessary by the Engineer include, but are not limited to: survey crews; personnel from the Owner's material testing lab; inspectors; and other Owner employees when in the opinion of the Engineer, such Work necessitates their presence.

- Requiring the Contractor to reimburse the Owner all the costs in excess of straight time costs for the Owner's representatives who work during such times. These costs shall be deducted from amounts due or to become due to the Contractor.

- Considering the Work performed on Saturdays, Sundays, and holidays as working days with regard to the Contract Time.

- Considering multiple work shifts as multiple working days with respect to Contract Time, even though the multiple shifts occur in a single 24-hour period.

3.04.14 CONTRACT TIME

The Contract Time shall begin on the first working day following the 10th calendar day after the issuance of the written Notice to Proceed or the first day on which the Contractor begins to perform Work on the site, whichever occurs first. Time is of the essence of the Contract. All of the Work shall be completed within the time limits set forth in the Contract, and the Contractor's unexcused failure to do so shall result in the assessment of liquidated damages as provided in the Contract.

The Contractor shall complete all of the physical Work within the number of working days that are specified as the Contract Time. Every day will be counted as a working day unless it is a non-working day or the Engineer determines the day to be an unworkable day. A non-working day is a Saturday, a Sunday, a day on which the Contract suspends work, or one of the following holidays: January 1st; the third Monday of January; the third Monday of February; Memorial Day; June 19th; July 4th; Labor Day; November 11th; Thanksgiving Day; the day after Thanksgiving; and Christmas. Whenever any of these holidays falls on a Sunday, the following Monday shall be counted a non-working day. When the holiday falls on a Saturday, the preceding Friday shall be counted a non-working day.

The days between December 25th and January 1st will be classified as nonworking days, provided that the Contractor actually suspends performance of the Work.

An unworkable day is defined as a partial or whole day that the Engineer determines to be unworkable because of weather, conditions caused by the weather, or such other conditions beyond the control of the Contractor that prevent the satisfactory and timely performance of the Work, and such performance, if not hindered, would have otherwise progressed toward physical completion of the Work.

Each working day shall be charged to the Contract Time as it occurs until the Work is physically complete. If requested by the Contractor in writing, the Engineer will provide the Contractor with a weekly statement that shows the number of working days: (1) charged to the Contract Time the week before; (2) specified for the substantial and physical completion of the Contract Time; and (3) remaining to achieve the substantial and physical completion of the Contract. The statement will also show the nonworking days and any partial or whole days that the Engineer declares to be unworkable. If the Contractor disagrees with any statement issued by the Engineer, the Contractor shall submit a written protest within 10 calendar days after the date of the statement. The protest shall be sufficiently detailed to enable the Engineer to ascertain the basis for the dispute and amount of time disputed. Any statement that is not protested by the Contractor as required in this Section shall be deemed as having been accepted as correct. If the Contractor elects to work 10 hours a day 4 days a week (a 4-10 schedule), the fifth day of that week will be charged as a working day if that day would be chargeable as a working day if the Contractor had not elected to utilize a 4-10 schedule.

3.04.15 CONSTRUCTION SCHEDULE

3.04.15(1) Progress Schedule

a. The Contractor shall submit to the Engineer four copies of a progress schedule no later than at the preconstruction conference, or some other mutually agreed upon submittal time. The schedule shall be a critical path method (CPM) schedule, bar chart, or other standard schedule format unless otherwise specified in the Technical Specifications. Regardless of which format is used, the schedule shall identity the critical path. The Engineer will evaluate the schedule and return the schedule for corrections. No progress payments will be made until the required progress schedules have been submitted in a form acceptable to the Engineer.

b. Scheduling terms and practices shall conform to the standards established in Construction Planning and Scheduling, Second Edition, published by the Associated General Contractors of America. Except for Weekly Look-Ahead Schedules, all schedules shall meet these general requirements, and provide the following information:

   i. Show the construction start date.

   ii. Include all activities necessary to physically complete the Work on the project.

   iii. Show the planned order of Work activities in a logical sequence.

   iv. Show the durations of Work activities in working days as defined in Section 3.04.13 and 3.04.14.

   v. Show activities in durations that are reasonable for the intended Work.

vi. Define activity duration in sufficient detail to evaluate the progress of individual activities on a daily basis.

vii. Show the Substantial and Physical Completion of all Work within the Contract Time.

Total float belongs to the project and shall not be for the exclusive benefit of any party. If the Engineer determines that the Progress Schedule or any necessary Schedule Update does not provide the required information, then the schedule will be returned to the Contractor for correction and resubmittal.

c. Each week the Work is performed, the Contractor shall submit a Weekly Look-Ahead Schedule showing the Contractor's and all the Subcontractors' proposed Work activities for the next two weeks. The Weekly Look Ahead Schedule shall include the description, duration and sequence of Work, along with the planned hours of Work. This schedule may be network schedule, bar chart, or other standard schedule format. The Weekly Look-Ahead Schedule shall be submitted to the Engineer by the mid-point of the week preceding the scheduled Work or some other mutually agreed upon submittal time.

d. The Engineer may request a Schedule Update when any of the following events occur:

i. The project has experienced a change that affects the critical path.

ii. The sequence of Work is changed from that in the approved schedule.

iii. The project is significantly delayed.

iv. Upon receiving an extension of Contract Time.

The Contractor shall submit four copies of the Schedule Update within 15 calendar days of receiving a written request, or when an update is required by any other portion of the Contract. A "significant" delay in time is defined as 10 working days or 10 percent of the original Contract Time, whichever is greater.

In addition to the other requirements in this Section, Schedule Updates shall reflect the following information:

v. The actual duration and sequence of as-constructed Work activities, including changed Work.

vi. Approved time extensions.

vii. Any construction delays or other conditions that affect the progress of the Work.

viii. Any modifications to the as-planned sequence or duration of remaining activities.

ix. The Substantial and Physical Completion of all remaining Work in the remaining Contract Time.

Unresolved request for time extensions shall be reflected in the Schedule Update by assuming no time extension will be granted, and by showing the effects to follow-on activities necessary to substantially and physically complete the project within the currently authorized time for completion.

e. The original Progress Schedule and all Schedule Updates shall not conflict with any time and order-of-work requirement in the Contract.

f. If the Engineer deems that the original or any necessary supplemental progress schedule does not provide the information required in this section, the Owner may withhold progress payments until a schedule containing the required information has been submitted by the Contractor and accepted by the Engineer.

g. The Contractor shall comply with other progress schedule requirements that are further defined in the Technical Specifications.

h. The Engineer's approval of any schedule shall not transfer any of the Contractor's responsibilities to the Owner. The Contractor alone shall remain responsible for adjusting forces, equipment, and work schedules to ensure completion of the Work within the time(s) specified in the Contract.

3.04.15(2) <u>Extensions of the Contract Time</u>

a. The Contractor specifically waives claims for damages for any hindrance or delay, excepting unreasonable delays caused by the Owner. In lieu thereof, the Contractor will be granted equitable extensions of the Contract Time for which liquidated damages will not otherwise be claimed by the Owner under the following circumstances:

i. A delay caused by any suit or other legal action against the Owner will entitle the Contractor to an equivalent extension of time, unless the period of such delay exceeds 90 calendar days. When such period is exceeded, the Owner will, upon written request of the Contractor, either negotiate a termination of the Contract or grant a further extension of the Contract Time, whichever is in the best interests of the Owner.

ii. Should any other unforeseen condition occur that is beyond the reasonable control of Contractor, requires more time for the Contractor to complete the performance of the Work by the Substantial Completion Date, the Contractor shall notify the Owner and the Engineer in writing prior to the performance of such Work, and in any event within 10 calendar days after

the occurrence of the unforeseen condition. The notice shall set forth in detail the Contractor's estimate of the required time extension. The Owner will allow such equitable extension of the Contract Time that the Engineer determines to be appropriate. Failure to comply with the notice provisions required by the Contract shall be deemed a complete waiver of any entitlement to adjustment of the Contract Time.

3.04.15(3) Liquidated Damages

a. The Contractor acknowledges that the Owner will suffer monetary damages in the event of an unexcused delay in the Substantial Completion Date and the Physical Completion Date of the Work. If the Contractor fails, without excuse under the Contract, to complete the Work within the Contract Time, or any proper extension thereof granted by the Owner, the Contractor agrees to pay to the Owner the amount specified in the Proposal form, not as a penalty, but as liquidated damages for such breach of the Contract, for each day that the Contractor shall be in default after the time stipulated for the Substantial Completion Date and the Physical Completion Date of the Work.

b. The amount of liquidated damages is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is specifically agreed to be a reasonable approximation of damages that the Owner would sustain as a result of an unexcused delay in the Substantial Completion Date and the Physical Completion Date; said amount may be retained from time to time by the Owner from current progress payments.

3.04.16 COMPLETION AND ACCEPTANCE OF THE WORK

3.04.16(1) Substantial Completion Date

a. When the Contractor considers the Work to be substantially complete and ready for its intended purpose, the Contractor shall notify the Engineer in writing and include an itemized list of remaining Work to be completed. On the Substantial Completion Date, the Owner shall have full and unrestricted use and benefit of all of the facilities that comprise the Work, both from an operational and safety standpoint, with only minor incidental work, replacement of temporary substitute facilities, or correction or repair of work remaining for the physical completion of the total Work.

b. If the Engineer determines that the Work is not substantially complete, it will so notify the Contractor in writing identifying those items of the Work that shall be completed by the Contractor in order to achieve the Substantial Completion Date.

c. If the Engineer believes that the Work is substantially complete, the Engineer will meet with the Contractor to: (1) prepare a list of incomplete or unsatisfactory items of the Work that shall be completed or corrected; (2) define the division of

responsibility between Owner and Contractor with respect to security, operation, maintenance, heat, utilities, insurance, etc., for the facilities; and (3) describe any other issues related to approval of the substantially completed Work. Upon reaching agreement with the Contractor, the Engineer will notify the Owner that, in its opinion and based on the information supplied by the Contractor, the Work is substantially complete, listing the items of incomplete Work, defining the division of responsibilities for the facilities, and setting forth any other terms related to final completion and acceptance.

d. The Owner, who has sole authority to make the determination of the Substantial Completion Date, will review the Engineer's recommendation that the Work is substantially complete and, if it concurs, will instruct the Engineer to notify the Contractor that the Work is accepted as being substantially complete. Except for any portion(s) of Work specified for early completion or required by the Owner for early possession, substantial completion will not occur for any portion of the Work until the entire Work is ready for possession and use. The approval notice will include a list of incomplete Work items, establish the Substantial Completion Date, and describe any other terms relating to such approval. The Contractor shall acknowledge receipt of the approval notice in writing, indicating acceptance of all of its terms and provisions.

e. The date of Substantial Completion, as determined by the Engineer and agreed to by the Owner, shall be the date for the beginning of the warranty period.

f. Subsequent to the Substantial Completion Date, the Owner may exclude the Contractor from the Work during such periods when construction activities might interfere with the operation of the project. The Owner, however, shall allow the Contractor reasonable access for completion of incomplete punch list items.

3.04.16(2) <u>Physical Completion Date</u>

a. The Contractor shall complete all physical Work within the Contract Time.

b. Upon physical completion of the Work, including completion of all corrective Work described in Section 3.04.16(1) above and the submission of all required record drawings, operation and maintenance manuals, manufacturers' affidavits, software and programming, and other items required by the Contract, the Contractor shall notify the Engineer in writing that the Work is physically complete. Upon receipt of the notification, the Engineer will determine if the Work is physically complete in accordance with the Contract. If the Engineer determines that any materials, equipment, or workmanship do not meet the requirements of the Contract, the Engineer will prepare a list of such items and submit it to the Contractor. Following the satisfactory completion of the corrective Work by the Contractor, the Engineer will notify the Owner that the Work is physically complete in accordance with the requirements of the Contract.

c. The Engineer, with the concurrence of the Owner, will give the Contractor written notice of the Physical Completion Date for all of the Work. The Physical Completion Date shall not constitute the Owner's acceptance of the Work.

3.04.16(3) <u>Contract Completion Date (Acceptance of the Project)</u>

a. When all of the Contractor's obligations under the Contract have been performed satisfactorily, the Owner will provide the Contractor with written notice of the Contract Completion Date. The following events shall occur in order for the Contractor to achieve the Contract Completion Date:

1. The Contractor shall have achieved the Substantial Completion Date and the Physical Completion Date for the Work; and

2. The Contractor shall furnish all documentation required by the Contract and required by law. The documents shall include, but are not limited to, the following:

i. Complete and legally effective releases and/or waivers of liens or bond or retainage claims in a form acceptable to the Owner. Subject to prior approval of the Owner, the Contractor may, if approved by the Owner, submit in lieu of the lien or claims releases and waivers: (1) receipts showing payment of all accounts in full; (2) an affidavit that the release and receipts cover all labor, services, materials, and equipment for which a lien or other claim could be filed and that all payrolls, material, and equipment bills and other indebtedness connected with the Work for which the Owner or the Owner's property might in any way be responsible, have been paid; and (3) the consent of the surety, if any, to final payment. If any Subcontractor or supplier fails to furnish a release waiver or receipt in a form satisfactory to the Owner, the Contractor may be permitted by the Owner to furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any lien or similar claim;

ii. Certified Payrolls (Federal Aid projects or if requested);

iii. Final Contract Voucher Certification, prepared by the Engineer.

iv. Affidavits of Wages Paid for the Contractor and all Subcontractors must be submitted to the Owner.

b. The Contractor agrees that neither completion nor final acceptance shall relieve the Contractor of the responsibility to indemnify, defend, and protect the Owner against any claim or loss resulting from the failure of the Contractor (or the Subcontractors or lower tier Subcontractors) to pay all laborers, mechanics, Subcontractors, materialpersons, or any other person who provides labor, supplies, or provisions for carrying out the Work or for any payments required for unemployment

compensation under Title 50 RCW or for industrial insurance and medical aid required under Title 51 RCW.

Final acceptance shall not constitute acceptance of any unauthorized or defective work or material. The Owner shall not be barred from requiring the Contractor to remove, replace, repair, or dispose of any unauthorized or defective work or material or from recovering damages for any such work or material.

3.04.16(4) Use of Completed Portions of the Work

The Owner reserves the right to use and occupy any portion of the Work which has been completed sufficiently to permit partial use and occupancy, and such partial use and occupancy shall not be construed as an acceptance of the Work as a whole or any part thereof. Any claims that the Owner may have against the Contractor shall not be deemed to have been waived by such partial use and occupancy.

3.04.16(5) Waiver of Claims by Contractor

The Contractor's acceptance of the final payment from the Owner constitutes an irrevocable and complete waiver of any and all claims against the Owner under the Contract or otherwise arising from the Work, except for those claims that have been properly identified in writing in advance of final payment, and for which timely and sufficient prior written notice has been given, all in accordance with the Contract.

3.04.17 CORRECTION OF FAULTY WORK AFTER FINAL PAYMENT

The Owner's final payment to the Contractor shall not relieve the Contractor of responsibility for faulty materials, equipment or workmanship. The Contractor shall promptly repair or replace any such defects discovered within the warranty or other applicable limitations period.

3.04.18 RETAINAGE

1. A sum not to exceed 10% of the contract price will be retained from monies earned by the Contractor, if warranted by the nature of the contract, until all deliverables are received and accepted by the Chehalis Tribal Business Committee or their designated representative.

2. Monies retained shall, at the option of the Contractor, be:

    a. Retained in a fund by the Owner;

    b. Deposited by the Owner in an interest-bearing account in a bank, mutual savings bank, or savings and loan association (interest on monies so retained may be paid to the Contractor);

    c. Deposited by the Owner in an escrow (interest-bearing) account in a bank, mutual saving bank, or savings and loan association (interest on monies so

retained shall be paid to the Contractor). Deposits are to be in the name of the Owner and are not to be allowed to be withdrawn without the Owner's written authorization. The Owner will issue a check representing the sum of the monies reserved, payable to the bank or trust company;

d. In choosing option (b) or (c), the Contractor agrees to assume full responsibility to pay all costs which may accrue from escrow services, brokerage charges or both, and further agrees to assume all risks in connection with the investment of the retainage in securities.

e. Alternatively, the Contractor may submit a retainage bond to cover the amount of the retainage.

At the time the Contract is executed the Contractor shall designate the option desired.

3. Release of retainage will be made within 45 days of acceptance of the work, provided that the following conditions are met:

a. All claims by the Owner against the Contractor have been resolved;

b. No claims have been filed against the retained percentage;

c. All required "Affidavits of Wages Paid" are on file with the Owner for the Contractor and all Subcontractors, regardless of tier;

4. In the event that claims are filed against the retainage, the Contractor will be paid the retained percentage less an amount sufficient to pay all such claims, together with a sum determined by the Owner to be sufficient to pay the costs of foreclosing on claims and to attorneys' fees, all in accordance with applicable law.

3.05 DISPUTES AND CLAIMS

3.05.1 DISPUTES

When disputes occur, the Contractor shall pursue resolution through the Engineer. The Contractor shall follow the notice and protest procedures outlined in Section 3.04. If negotiation using the procedures outlined in Section 3.04 fails to provide satisfactory resolution, the Contractor shall pursue the more formalized method set forth in Section 3.05.2 for submitting claims.

3.05.2 CLAIMS

If the Contractor contends that additional payment is due, has provided timely notices and protests as required by Section 3.04, and the Contractor has pursued and exhausted all of the means provided in that section to resolve the dispute, the Contractor may submit a claim as provided in this Section. Any claim for an increase in the Contract price or for an extension of the Contract Time by the Contractor is waived if the written notifications and protests required in Section 3.04

have been not provided, or if the Engineer is not afforded reasonable access to the Contractor's complete records relating to the claim, as required by Section 3.04.8, or if a claim is not submitted in accordance with the requirements of this Section. The fact that the Contractor has provided proper notification, properly submitted a claim, or provided the Engineer with access to records, shall not in any way be construed as proving or substantiating the validity of the claim. If, after consideration by the Owner, the claim is found to have merit, the Owner will make an equitable adjustment to either the Contract price, the Contract Time, or both. If the Owner finds the claim to be without merit, no adjustment will be made.

All claims submitted by the Contractor shall be in writing and in sufficient detail to enable the Engineer to ascertain the basis for and amount of the claim. All claims shall be submitted to the Engineer in the manner in Section 3.03.6. The following information shall accompany each claim submitted:

1. A detailed factual statement of the basis for the claim for additional compensation and/or extension of time, including all relevant dates, locations, and items of work relating to the claim.

2. The date on which the events occurred that give rise to the claim.

3. The name of each person involved in or having knowledge about the claim.

4. The specific provisions of the Contract which support the claim and a statement of the reasons why such provisions support the claim.

5. If the claim relates to a decision of the Engineer that the Contract leaves to the Engineer's discretion or as to which the Contract provides that the Engineer's decision is final, the Contractor shall set out in detail all facts supporting its position relating to the decision of the Engineer.

6. The identification of any documents and the substance of any oral communications that support the claim.

7. Copies of any identified documents, other than Owner documents and documents previously furnished to the Owner by the Contractor, that support the claim (manuals which are standard to the industry may be included by reference).

8. If an extension of the Contract Time is sought:

    a. The specific days and dates for which the extension is sought;

    b. The specific reasons why the Contractor believes a time extension should be granted;

    c. The specific provisions of Section 3.04.15(2) under which the time extension is sought; and

d. An analysis of the Contractor's progress schedule, demonstrating the reasons why a time extension should be granted.

9. If additional compensation is sought, the exact amount sought and a breakdown of that amount into the following categories:

a. Labor;

b. Materials;

c. Direct equipment. The actual cost for each piece of equipment for which a claim is made, or, in the absence of actual cost, the rates established by the AGC/WSDOT Equipment Rental Agreement which was in effect when the Work was performed. The amounts claimed for any piece of equipment shall not exceed the rates established by the Equipment Rental Agreement, even if the actual cost for such equipment is higher. The Owner may audit the Contractor's cost records, as provided in Section 3.06, to determine actual equipment costs. The following information shall be provided for each piece of equipment:

i. Detailed description (e.g., make, model, year, diesel or gas, size of bucket);

ii. The hours of use or standby; and

iii. The specific day and dates of use or standby.

d. Subcontractor claims (in the same level of detail as specified herein); and

e. Other information as requested by the Engineer or the Owner.

10. A notarized statement containing the following language:

> Under the penalty of law for perjury or falsification, the undersigned,
>
> _____, _____
> (name) (title)
>
> of _____
> (company)
> hereby certifies that the claim for extra compensation and time, if any, made herein for work on this Contract is a true statement of the actual costs incurred and time sought, and is fully documented and supported under the Contract between the parties.
>
> If the claim for extra time and/or compensation involves any work of a Subcontractor or lower tier Subcontractor, the undersigned duly authorized agent of the Contractor hereby swears that Contractor has investigated the basis for the Subcontractor's or lower tier Subcontractor's claims and has determined that all such claims are justified as to entitlement and amount of money and/or time requested, has reviewed and verified the adequacy of all back-up documentation and has no reason to believe and does not believe that the factual basis for the Subcontractor's or lower tier Subcontractor's claim is falsely represented.
>
> Dated _____/s/_____
>
> Subscribed and sworn before me this _____ day of _____
>
> _____
> Notary Public
>
> My Commission Expires:_____

It will be the responsibility of the Contractor to keep full and complete records of the costs and additional time incurred with respect to any claim. The Contractor shall permit the Engineer to have access to those records and any other records and documents as may be required by the Engineer to determine the facts or contentions involved in the claim. The Contractor shall retain all records and documents in any way relating to the Work for a period of not less than three years after the Contract Completion Date.

The Contractor shall in good faith attempt to reach a negotiated resolution of all claims with the Engineer or its designee.

The Contractor's failure to submit with the Final Contract Voucher Certification a list of all claims, together with the information and details required by this Section shall operate as a waiver of the claims by the Contractor, as provided in Section 3.04.12(9).

If the Contractor submits a claim in full compliance with all the requirements of this Section, the Owner will respond in writing to the claim as follows:

1. Within 45 calendar days from the date the claim is received by the Owner, if the claim amount is less than $100,000;

2. Within 90 calendar days from the date the claim is received by the Owner, if the claim amount is equal to or greater than $100,000; or

3. If these time periods are unreasonable due to the complexity of the claim, the Contractor will be notified within 15 calendar days from the date the claim is received by the Owner of the amount of time which will be necessary for the Owner to evaluate the claim and issue a response.

Full compliance by the Contractor with the provisions of this Section is a condition precedent to the Contractor's right to commence a lawsuit or pursue other legal remedies.

3.05.3 TIMELINE AND JURISDICTION

For the convenience of the parties to the Contract it is mutually agreed by the parties that any claims or causes of action which the Contractor has against the Owner arising from the Contract shall be brought within 180 calendar days from the date of Physical Completion (Section 3.04.16(2)) of the Contract by the Owner. Any litigation necessary to enforce the obligations of either party under this Contract must be brought into the Tribal Court of the Tribe to the extent jurisdiction obtains. Both as to interpretation and performance, the tribal laws of the Tribe shall govern this Contract; in the absence of tribal law, federal law applies. Nothing in this Contract shall be deemed or construed as a waiver of the sovereign immunity of the Tribe or any of its subsidiaries, officers, directors, employees, or representatives. The parties understand and agree that the Contractor's failure to bring suit within the time period provided, shall be a complete bar to any such claims or causes of action. It is further mutually agreed by the parties that when any claims or causes of action which the Contractor asserts against the Owner arising from the Contract are filed with the Owner or initiated in court, the Contractor shall permit the Owner to have timely access to any records deemed necessary by the Owner to assist in evaluating the claims or action.

3.05.4 CONTINUATION OF WORK PENDING RESOLUTION OF DISPUTES

The Contractor shall expeditiously carry on the Work, adhere to the progress schedule, and comply with all written directives of the Owner or the Engineer regardless of any dispute or claim that may exist between the Owner and the Contractor. No Work shall be delayed or postponed pending resolution of any dispute or claim. Failure or refusal of the Contractor to comply with the written

directives of the Owner or the Engineer shall constitute a material breach of the Contract and immediately constitute grounds for the Owner to withhold payments to the Contractor, suspend the Work or terminate the Contract. Notice under this Section shall be in accordance with other provisions of the Contract.

3.06 AUDITS

If the Contractor requests an equitable adjustment to either the Contract price or the Contract Time, the Owner shall have the right to audit the Contractor's books, records, other documents, and accounting practices and procedures, and to inspect the Contractor's plant, equipment and facilities to examine all facts and verify all direct and indirect costs of whatever nature claimed to have been incurred or are anticipated to be incurred. The right to audit encompasses all subcontracts and is binding upon Subcontractors. All subcontracts that the Contractor enters into shall contain a clause allowing the Owner to audit all Subcontractor books, records, other documents, and accounting practices and procedures, and to inspect the Subcontractor's plant, equipment and facilities. All audits shall be performed by auditors of the Owner during normal working hours at the Contractor's or Subcontractor's office or any other location mutually agreed upon. The Contractor, Subcontractor, or lower tier Subcontractor shall cooperate fully with the auditor and shall make available all required information. Failure to cooperate or provide requested information shall be grounds for denial of the claim.

3.07 SUSPENSION OF WORK AND TERMINATION OF CONTRACT

3.07.1 SUSPENSION OF WORK

1. The Owner or the Engineer may order suspension of all or any part of the Work if:

    a. Unsuitable or other conditions that are beyond the reasonable control of the Contractor exist or arise that prevent satisfactory and timely performance of the Work; or

    b. The Contractor does not comply with the Contract; or

    c. It is in the public interest.

2. If the Engineer determines that the suspension is for reasons set forth in Subsection a. or c. above, an equitable adjustment will be made in the Contract Time but not the Contract price. If the Engineer determines that the suspension is for reasons set forth in Subsection b. above, no adjustment shall be made in the Contract Time or the Contract price.

3. If the Contract is suspended for reasons set forth in Subsection a. or c. above and the Contractor believes that the suspension of performance of all or part of the Work has continued for an unreasonable period of time, the Contractor shall give written notice to the Engineer of its intention to seek an equitable adjustment in the Contract Time or the Contract price. In the event that an equitable adjustment is allowed, no adjustment shall be allowed for any time lost or costs incurred more

than 10 calendar days before delivery of the written notice to the Engineer. No profit of any kind will be allowed on any increase in costs due to the suspension, delay or interruption.

3.07.2 TERMINATION FOR DEFAULT

1. The Owner may terminate the Contract for default, effective seven days following delivery of written notice of default to the Contractor, if the Contractor:

    a. Refuses or fails to supply enough properly skilled laborers or conforming materials to complete the Work in a timely manner;

    b. Refuses or fails to prosecute the Work with such diligence as will ensure its physical completion by the Physical Completion Date;

    c. Performs work which deviates from the requirements of the Contract and refuses or fails to correct the non-conforming work;

    d. Fails to make prompt payment to Subcontractors and/or suppliers for labor or materials;

    e. Fails to comply with laws, ordinances, rules, regulations or orders of a public authority having jurisdiction; or

    f. Otherwise fails to follow written directives of the Owner or the Engineer or is in default of a material provision of the Contract.

2. If the Contractor abandons the Work for any cause other than failure of the Owner to make monthly progress payments for Work properly performed, or if the Contractor refuses to comply with requirements of the Contract, the Owner has the additional right to notify the Contractor's performance bond surety and require the surety to complete the Work in accordance with the Contract.

3.07.3 TERMINATION FOR CONVENIENCE OF THE OWNER

The Owner may by written notice terminate the Contract at any time in whole or in part, without cause, and except where termination is due to the Contractor's default, the Owner shall pay the Contractor that portion of the Contract price corresponding to the acceptable Work completed to the Owner's satisfaction, together with reasonable costs, as determined in the sole discretion of the Owner, necessarily incurred by the Contractor in terminating the remaining portion of Work, less any payments made before termination. In no event shall the Owner be required to pay the Contractor any amount in excess of the completed portion Contract price. The Owner shall not be required to pay the Contractor any amount for consequential damages including but not by means of limitation lost or anticipated profits on Work that is not performed as a result of termination.

3.07.4 RESPONSIBILITY OF THE CONTRACTOR AND SURETY

Termination of the Contract shall not relieve the Contractor of any responsibilities under the Contract for Work performed. Nor shall termination of the Contract relieve the sureties of their obligations under the bonds required or permitted by the Contract or applicable law.

GENERAL CONDITIONS

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PART 4

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

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GENERAL TECHNICAL REQUIREMENTS

SECTION 01110

SUMMARY OF WORK

PART 1 GENERAL

1.1 SCOPE OF WORK

The work specified in this Section consists of furnishing all labor, materials, and equipment necessary for replacing existing water meters with new meters, and installing new water meters and meter boxes on existing service lines, as shown on the Plans, and hereinafter specified, throughout the water service area of the Confederated Tribes of the Chehalis Reservation (Tribe). Work shall include, but not be limited to, the following:

A. Install new water meters and water meter boxes per schedule provided in Section 11680. Work includes procurement and installation of all hardware necessary to provide a complete automated metering system and documentation of meter change-out.

B. Install new meter boxes per schedule provided in Section 11680.

C. Provide testing, commissioning, and training as specified herein, including coordination with meter vendor.

D. Provide all other associated work as specified herein, for a complete and workable system.

E. Removing and replacing seeded, gravel, or asphalt materials surrounding meter boxes that need to be replaced to accommodate the new meter boxes.

1.2 PROJECT INFORMATION

The Contract Documents show the location, arrangement, and type of work to be performed under the proposed project.

The accompanying Specifications describe the location, arrangement, and type of work to be performed under the proposed project.

All materials and labor are to be furnished by the Contractor unless otherwise specifically provided in the Specifications. All workmanship, equipment, and materials incorporated in the work covered by this Contract are to be new, unless otherwise noted to use salvaged existing materials, and shall be of the best available grade or quality.

It is the intent and purpose of these Contract Documents to have constructed complete facilities in good working order for the least practical cost to the Owner. Suggestions, recommendations, as well as inquiries from the Contractor that will serve this purpose are welcome and will be given consideration by the Owner and the Engineer.

The Contractor shall be responsible for proper notification to and coordination with all utility districts, service districts, and all other persons and services that will be affected by this Project at least 1 week in advance of beginning any construction that affects them. The contact for the Tribe will be Brian von Cluck.

The Contractor shall take all necessary precautions required to prevent damage to existing piping, utilities, and structures above or belowground during construction. Verification of elevations and locations of existing items shall be the responsibility of the Contractor.

1.3 CONTRACTOR USE OF SITE AND PREMISES

Construction operations shall be limited to the areas noted on the Plans and subject to the approval of the Engineer.

The Contractor shall allow representatives of the Owner, funding, and regulatory agencies access to the project site at all times.

The Contractor shall plan his work to be completed within the time limits indicated in these Specifications. The hours of construction work shall be confined to the period of 7:00 a.m. to 6:00 p.m., Monday through Friday. No construction equipment shall be started, warmed up, or tested prior to 7:00 a.m., and all construction equipment shall be promptly shutdown at 6:00 p.m. No work shall be permitted on holidays without prior approval of the Engineer. A recognized holiday shall be a day currently accepted by the trades or occupations in the locality where the work is being performed, and shall include New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Fourth of July, Labor Day, Veteran's Day, Thanksgiving Day, the day after Thanksgiving Day, and Christmas Day. Exceptions to these work hours will be allowed only for startup, testing, and commissioning as specified, or for work only with prior review and approval by the Engineer of the work and methods to be employed. The Contractor shall provide notice to each household regarding water shutoff. A household shall not be without water for more than 2 hours.

The Contractor shall be responsible for providing each customer with a door hanger notice informing them of the date and time that work will be performed. The notice shall provide a 4-hour window for the work and shall be placed on the door at least 48 hours in advance of performance of the work.

1.4 ORDER OF WORK

The order of work will be at the option of the Contractor, except as noted below, in keeping with good construction practice, time restrictions, requirements of the permits applicable to this project, and the order of work as outlined herein, all costs of which shall be included in the various bid amounts. The Contractor shall conduct the order of work to allow the existing facilities to remain operational during the construction of the Project and shall coordinate all of their activities through the Engineer with the Owner's operations and maintenance staff. The Contractor shall provide a written plan of activities to the Engineer and Owner each Thursday for the following week, for review and coordination with existing facility operations.

The implementation of any measure required to protect the environment shall supersede any order of work designated within these Specifications. The Contractor shall meet the conditions as outlined in any and all permits and requirements of the Federal, State, County, and City regulatory agencies.

The Contractor shall keep the disruption of the existing facility operations to a minimum Shutdowns of local utilities shall be limited to 4 hours unless approved by the Engineer. The Contractor shall provide a written plan of activities to the Engineer each Thursday for the following week.

Access to the existing operations areas shall be maintained. Disruption of this access shall be kept to a minimum and must be prearranged and scheduled through the Engineer with the Owner's operations and maintenance staff.

***** END OF SECTION *****

SECTION 01160

REGULATORY REQUIREMENTS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section contains information pertaining to permits and licenses, and use of private property.

1.2 PERMITS AND LICENSES

Except as noted below, the Contractor shall be responsible for obtaining and paying all fees associated with all the necessary permits, licenses, approvals, and construction permits necessary for the execution of this Contract, whether they be City, County, Tribal, or federal permits. All Tribal permits must be obtained through the Tribal Planning Department.

The Owner is in possession of, or will be responsible for obtaining the following approvals and permits, and will pay the fees associated with the application and procurement of such approvals and permits. The Contractor is advised to become familiar with these approvals and permits as necessary for this project. The Contractor shall comply with all conditions of each approval/permit as if the conditions were detailed herein. Copies of these permits are required to be onsite at all times.

A. All businesses/contractors/consultants/vendors conducting business activities within the jurisdiction of the Chehalis Tribe must obtain an annual tribal business license in accordance with Chehalis Tribal Code Chapter 9.05 Business Licensing. All contracts requiring the contractor to provide goods or services within the jurisdiction of the Chehalis Tribe shall include a provision requiring the contractor and any subcontractor to obtain a tribal business license. Failure to obtain a tribal business license is a violation resulting in fines assessed per individual per day for as long as the violation continues. It is also a violation for any person, department, enterprise or other entity affiliated with the Chehalis Tribe to receive or agree to receive goods or services from a person whom the recipient knows to be required to have a Chehalis Tribal business license and lacks a current and valid license.

1.3 USE OF PRIVATE PROPERTY

The Contractor shall be responsible for all conditions of any arrangements the Contractor makes for the use of any privately owned property.

In the event any dispute occurs and claims for damages are filed by the property owners, the Owner will request that the Contractor give evidence that they have requested their insurance company to make personal contact with the claimants. Any settlement for insurance claims shall be strictly an act restricted to the claimant, the Contractor, and their insurance company.

The Contractor is advised that in the event of any property damage, the Owner reserves the right to withhold monies to protect the property owner.

1.4 PROPERTY RELEASE FORM

The Contractor shall be held responsible for acquiring signed property release forms, in the format provided on the following page, for all properties that have been disturbed or damaged by the Contractor's operations, or utilized by the Contractor for staging, storing, or stock piling of materials or equipment.

This work shall include submitting the form(s), as further shown herein, by certified mail to each property owner effected and further including therein a self addressed stamped envelope for the property owner's use. The enclosed self addressed envelope shall be addressed to: Brian von Clück, Utilities Construction Project Coordinator, 420 Howanut Road, Oakville, WA 98568. Contractor shall provide evidence of all certified mailings.

***** END OF SECTION *****

PROPERTY RELEASE

_____
(Property Address)

_____

_____

DATE:_____

I, _____, owner of _____
(Property Owner's Name) (Property Description or

_____, hereby release
Address)

_____, from any property
(Contractor's Name)

damage or personal injury resulting from construction adjacent

to or on my property located at _____,
(Property Address)
during construction of the Metering Improvements.

My signature below is my acknowledgment and acceptance that my property, as identified above, was returned to a satisfactory condition.

Name: _____

Signed: _____

Address: _____

_____

Phone: _____

SECTION 01170

FUNDING REQUIREMENTS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section contains information regarding additional requirements that the Contractor must comply with.

1.2 ADDITIONAL REQUIREMENTS

The Contractor shall comply with all of the regulations and requirements listed and described below:

A. Copeland Act

All contracts and sub-grants for construction or repair shall include a provision requiring compliance with the Copeland "Anti-kickback" Act (18 USC § 874).

This act provides that each contractor or sub-grantee shall be prohibited from inducing, by any means, any person employed in the construction, completion or repair of public works to give up any part of the compensation to which he is otherwise entitled. It shall be the responsibility of the project Director of any such contract to report any suspected or reported violations to the funding agency.

B. Davis-Bacon Act

When required by funding agency legislation or regulations, all construction contracts awarded in excess of $2,000.00 shall include a provision requiring the contractor and any subcontractor(s) to comply with the Davis-Bacon Act (40 USC § 276a–276a7). It shall be the responsibility of the General Contractor to determine if funding agency regulations require the application of the Davis-Bacon Act, and to obtain copies of current prevailing wage determinations.

C. Contract Work Hours and Safety Standards Act

Where applicable, all contracts awarded by the Chehalis Tribe in excess of $2,000.00 for construction contracts and in excess of $2,500.00 for other contracts which involve the employment of mechanics or laborers shall include a provision requiring the contractor and any subcontractor(s) to

comply with applicable provisions of the Contract Work Hours and Safety Standards Act (40 USC §§ 327–330).

D. Reporting and Patent Rights

Any contract involving research, developmental, experimental or demonstration work shall include provisions which explain the requirements and regulations of the funding agency pertaining to reporting and patent rights with respect to any discovery or invention which arises or is developed under such a contract. It shall also contain any requirements or regulations of the funding agency with regard to copyrights and rights in data.

E. Equal Employment Opportunity

When required by the grantor as a condition of the award of a grant, all contracts funded by such grant in excess of $10,000.00 shall contain a provision requiring compliance with applicable federal equal employment opportunity laws and regulations.

F. Environmental Provisions

All contracts, subcontracts and sub-grants of amounts in excess of $100,000.00 shall contain a provision which requires the contractor and any subcontractor(s) to comply with all applicable standards, orders, or requirements issued under section 306 of the Clean Air Act (42 USC § 1857(h)), section 508 of the Clean Water Act (33 USC § 1368), Executive order 11738, and Environmental Protection Agency regulations (40 CFR, Part15) which prohibit the use under non-exempt Federal contracts, grants or loans, of facilities included on the EPA list of Violating Facilities. The provision shall require reporting of violations to the funding agency and to the USEPA Assistant Administrator for Enforcement (EN-329).

G. Energy Conservation

All contracts shall recognize mandatory standards and policies relating to energy efficiency contained in energy conservation plans issued in compliance with the Energy Policy and Conservation Act (P.L. 94-163, 42 USC 3201 *et seq.*).

***** END OF SECTION *****

SECTION 01200

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SCOPE

This Section further defines Measurement and Payment for this project.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
GC Section 3.04.12	Measurement and Payment
01290	Schedule of Values
01300	Submittals

1.3 MEASUREMENT

Measurement for all items shall be as indicated in these Specifications for unit price and lump sum price bid items. Bid items are outlined in detail in this Specification Section and listed in the Proposal.

Measurement shall be in accordance with Section 1-09.1 of the WSDOT Standard Specifications.

1.4 INDIVIDUAL BID ITEMS

The following is a list of bid items for the project. The contract price for each item constitutes full compensation for furnishing all equipment, labor, materials, appurtenances, and incidentals and performing all operations necessary to construct and complete the various bid items in accordance with the Contract Documents. Payment for each item shall be considered as full compensation, notwithstanding that minor features may not be mentioned herein. Work paid for under one item will not be paid for under any other item. If a particular item of work shown on the Plans or described in Specifications is not described in a specific bid item, this item of work shall be considered as incidental to the work and the costs for this work shall be merged into the various respective unit price and lump sum bid items.

1. Mobilization and Demobilization

    a. Measurement: Will be measured by lump sum.

b. Payment: The lump sum contract price for MOBILIZATION AND DEMOBILIZATION shall include all costs for the labor, materials, and equipment required for mobilization and demobilization on the project as described in Section 01505.

Payment for MOBILIZATION AND DEMOBILIZATION shall be as follows:

35% Payment: When Contractor has mobilized on-site and temporary facilities are in place.

50% Payment: When 5 percent of the total pay items are completed (not including payment for materials on hand).

75% Payment: When 50 percent of the total pay items are completed (not including payment for materials on hand).

100% Payment: When Project is completed and recommended for acceptance.

2. Minor Change

a. Measurement: Will be negotiated prior to commencing any such work under this pay item and shall be for work to remedy unforeseen conditions, utility conflicts, minor landscaping, minor drainage improvements, or special surface restoration.

b. Payment: Payment or credits for changes amounting to $15,000 or less may be made under the Bid Item MINOR CHANGE. At the discretion of the Owner, this procedure for Minor Changes may be used in lieu of the more formal procedure as outlined in General Conditions Section 3.04.6. The Contractor will be provided a copy of the completed order for Minor Changes. The agreement for the Minor Changes will be documented by signature of the Contractor or notation of the verbal agreement. If the Contractor is in disagreement with anything required by the order for Minor Changes, the Contractor may protest the order as provided in General Conditions Section 3.04.8.

Payments or credits will be determined in accordance with General Conditions Section 3.04.6. All Minor Change work will be within the scope of the Contract Work and will not change Contract Time. For the purpose of providing a common Proposal for all Bidders, the Owner has entered an amount for MINOR CHANGE in the Proposal to become part of the total Bid by the Contractor.

3. Utility Locates

   a. Measurement: Shall be measured by lump sum.

   b. Payment: The lump sum contract price for UTILITY LOCATES shall include all costs for the labor, material, and equipment used for locating existing water service meters where locations are unknown, as indicated on the Plans, prior to ground disturbance.

4. 5/8-Inch Water Meter Replacement

   a. Measurement: Will be measured per each.

   b. Payment: The unit price per each for 5/8-INCH WATER METER INSTALLATION shall include all costs for labor, material, and equipment to remove the existing residential-size meter and deliver it to the Owner, install a new 5/8-inch meter and verify that the register detects movement of water through the meter, and recording the location and size of the replacement meter.

5. 2-Inch Water Meter Replacement

   a. Measurement: Will be measured per each.

   b. Payment: The unit price per each for 2-INCH WATER METER INSTALLATION shall include all costs for labor, material, and equipment to remove the existing meter and deliver it to the Owner, install a new 2-inch meter and verify that the register detects movement of water through the meter, and recording the location and size of the replacement meter.

6. 4-Inch Water Meter Replacement

   a. Measurement: Will be measured per each.

b. Payment: The unit price per each for 4-INCH WATER METER INSTALLATION shall include all costs for labor, material, and equipment to remove the existing meter and deliver it to the Owner, install a new 4-inch meter and verify that the register detects movement of water through the meter, and recording the location and size of the replacement meter.

7. 5/8-Inch Water Meter Installation w/Meter Box

a. Measurement: Will be measured per each.

b. Payment: The unit price per each for 5/8-INCH WATER METER INSTALLATION W/METER BOX shall include all costs for labor, material, and equipment to install a new 5/8-inch meter on the existing service line, including excavation, installation of a meter box and lid, meter setter, connection to the existing service line, and verify that the register detects movement of water through the meter, and recording the location and size of the replacement meter.

8. 1-Inch Water Meter Installation w/Meter Box

a. Measurement: Will be measured per each.

b. Payment: The unit price per each for 1-INCH WATER METER INSTALLATION W/METER BOX shall include all costs for labor, material, and equipment to install a new 1-inch meter on the existing service line, including excavation, installation of a meter box and lid, meter setter, connection to the existing service line, and verify that the register detects movement of water through the meter, and recording the location and size of the replacement meter.

9. 1-1/2-Inch Water Meter Installation w/Meter Box

a. Measurement: Will be measured per each.

b. Payment: The unit price per each for 1-1/2-INCH WATER METER INSTALLATION W/METER BOX shall include all costs for labor, material, and equipment to install a new 1-1/2-inch meter on the existing service line, including excavation, installation of a meter box and lid, meter setter, connection to the existing service line, and verify that the

register detects movement of water through the meter, and recording the location and size of the replacement meter.

10. 2-Inch Water Meter Installation w/Meter Box

    a. Measurement: Will be measured per each.

    b. Payment: The unit price per each for 2-INCH WATER METER INSTALLATION W/METER BOX shall include all costs for labor, material, and equipment to install a new 2-inch meter on the existing service line, including excavation, installation of a meter box and lid, meter setter, connection to the existing service line, and verify that the register detects movement of water through the meter, and recording the location and size of the replacement meter.

11. Spare Parts

    a. Measurement: Will be measured per lump sum.

    b. Payment: The unit price per lump sum for SPARE PARTS shall include all costs for labor, material, and equipment to procure three additional 5/8" Water Meter assemblies, one additional 1" Water Meter assembly including meter, encoder and wire, a meter box and lid, and meter setter, as well as one additional 2" Water Meter and encoder for delivery to the Owner.

12. Lawn/Landscape Restoration

    a. Measurement: Will be measured per each.

    b. Payment: The unit price per each for LAWN/LANDSCAPE RESTORATION shall include all cost for labor, material, and equipment to restore any disturbed ground, lawn, or other vegetation around each newly installed meter box when removed up to 24-inches surrounding the new meter box as specified in Section 02900. Contractor shall furnish and install soil, seeding, and other required materials when this work is necessary to restore the surrounding area to existing conditions, as approved by the Owner and Engineer.

13. Asphalt Restoration

    a. Measurement: Will be measured per each.

    b. Payment: The unit price per each for ASPHALT RESTORATION shall include all cost for labor, material, and equipment to remove and install asphalt pavement around each newly installed meter box when removed up to 24-inches surrounding the new meter box as specified in Section 02740, including but not limited to sawcutting, removal and wastehaul of existing asphalt and subgrade materials, establishment of a suitable subgrade, crushed surfacing, compaction, asphalt pavement, joint sealing, and adjusting structures to grade. Contractor shall furnish and install asphalt pavement materials when this work is necessary to restore the surrounding area to existing conditions, as approved by the Owner and Engineer.

14. System Hardware

    a. Measurement: Will be measured per lump sum.

    b. Payment: The lump sum bid for SYSTEM HARDWARE shall include all costs for labor, material, and equipment required to procure and deliver the required metering system hardware from the meter vendor necessary to establish a working metering and data collection system as described in Section 11680.

15. Training and Startup

    a. Measurement: Will be measured per lump sum.

    b. Payment: The lump sum bid for TRAINING AND STARTUP shall include all costs for labor, material, and equipment required to coordinate training with the meter vendor in order to install a working metering and record keeping system as described in Section 01800.

16. Project Documentation

    a. Measurement: Will be measured per lump sum.

    b. Payment: The lump sum bid for PROJECT DOCUMENTATION shall include all costs for labor,

material, and equipment required to maintain record drawings to reflect as-built conditions, and procure and deliver to the Owner any operations and maintenance manuals necessary in order to operate and maintain a working metering system as described in Section 01720 and 01800.

1.5 PROJECT MATERIALS ON HAND

See General Conditions Section 3.04.12(6).

1.6 PAYMENT

Payment for all work will be made at the contract unit price or lump sum price as indicated in the Proposal, payment of which shall constitute full compensation, for a complete installation.

***** END OF SECTION *****

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes requirements that apply to all equipment and materials supplied on the Project.

The Contractor shall be responsible for the accuracy and completeness of the information contained in each submittal and shall assure that the material, equipment or method of work shall be as described in the submittal. The Contractor shall verify that all features of all products conform to the requirements of the Contract Documents. Submittal documents shall be clearly edited to indicate only those items, models, or series of equipment that are being submitted for review. All extraneous materials shall be crossed out or otherwise obliterated. The Contractor shall ensure that there is no conflict with other submittals and notify the Engineer in each case where their submittal may affect the work of another contractor or the Owner. The Contractor shall ensure coordination of submittals among the related crafts and subcontractors and shall verify such coordination on all submittals.

Where approved substitutions of specified equipment affect other materials or equipment, mechanical, structural, or electrical work, the Contractor shall note in the equipment submittal any necessary changes to accommodate the substituted equipment. It shall also be the responsibility of the Contractor to coordinate other mechanical, structural, or electrical equipment submittals to make sure that all changes necessary to accommodate the substituted equipment are addressed in these submittals as well.

1.2 WORK INCLUDED

Submittals required for this work shall include any or all of the following as required by the particular specification section and the submittal schedule:

A. Construction Schedules

B. Asphalt Submittals

C. Post Construction (Record) Drawings showing meter installation locations and details.

D. Post-Construction Photographic Records

E. Payment Schedules

F. Meter change form (for each meter replaced or modified).

1.3 SUBMITTAL INFORMATION

Shop, catalog, and other appropriate drawings and information shall be submitted to the Engineer for review prior to fabrication or ordering of all equipment and materials specified. The number of copies of submittal information to be submitted shall be as indicated below.

All submittal information shall be sent to the Engineer through the Contractor. The Contractor shall assign a separate submittal number to each item or group of items that relate to each specification section. Submittal numbers shall be assigned in consecutive ascending order, with the first project submittal assigned the number "1." Resubmittals shall be numbered using the same number followed by an alphabetical suffix. All submittals shall bear the Contractor's certification that they have reviewed, checked, and approved the submittal information prior to transmitting to the Engineer. The submittal number and related specification section shall be marked on each submittal.

PART 2 PRODUCTS

2.1 GENERAL

If requested by the Contractor and approved by the Engineer and Owner, the Contractor may submit one copy of submittals electronically. Hard copies of Equipment Manuals must be submitted. Hard copies of final, reviewed submittals must also be provided. If submittals are provided electronically, only one reviewed copy will be returned to the Contractor. Electronic submittals shall be provided in tabbable, searchable, pdf format and should include a table of contents bookmarked to provide a navigation link to each section of the submittal. Information should be clear and legible. Information pertaining to the specific materials proposed for use on the project shall be highlighted.

2.2 PRODUCT SUBMITTALS

A. GENERAL

When indicated in the Contract Documents the contractor shall submit product data for review by the Engineer. Unless otherwise specified, within 14 calendar days after receipt of the submittal, the Engineer shall review the submittal and return three copies of the marked-up submittal.

The reproducible original will be retained by the Engineer. The returned submittal shall indicate one of the following actions:

1. If the review indicates that the material, equipment, or work method complies with the project Specifications, submittal copies will be marked "NO EXCEPTIONS TAKEN." In this event, the Contractor may begin to implement the work method or incorporate the material or equipment covered by the submittal.

2. If the review indicates limited corrections are required, copies will be marked "MAKE CORRECTIONS NOTED." The Contractor may begin implementing the work method or incorporating the material and equipment covered by the submittal in accordance with the noted corrections. Where submittal information will be incorporated in operation and maintenance data, a corrected copy shall be provided.

3. If the review reveals that the submittal is insufficient or contains incorrect data, copies will be marked "AMEND AND RESUBMIT." Except at their own risk, the Contractor shall not undertake work covered by this submittal until it has been revised, resubmitted, and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

4. If the review indicates that the material, equipment, or work method does not comply with the project Specifications, copies of the submittal will be marked "REJECTED - SEE REMARKS." Submittals with deviations that have not been identified clearly may be rejected. Except at their own risk, the Contractor shall not undertake the work covered by such submittals until a new submittal is made and returned marked either "NO EXCEPTIONS TAKEN" or "MAKE CORRECTIONS NOTED."

B. MANUFACTURER'S LITERATURE

Where the contents of submitted literature include data not pertinent to the submittal, the portion(s) of the contents being submitted for the Engineer's review shall be clearly indicated.

C. TEST REPORTS

Copies of all test reports shall be submitted to the Engineer.

2.3 EQUIPMENT MANUALS

A. GENERAL

For all items of equipment, manufacturer's equipment operation and maintenance manuals shall be submitted to the Engineer for review. One copy will be returned to the Contractor with comments.

The following information shall be furnished for all items of equipment installed on the project requiring operational and/or maintenance procedures, and for any additional items indicated by the Engineer.

1. Lubrication Information

   This shall consist of the manufacturer's recommendations regarding the lubricants to be used and the lubrication schedule to be followed.

2. Electrical and Control Diagrams

   Diagrams shall show internal and connection wiring.

3. Startup Procedures

   These instructions consist of equipment manufacturer's recommendations for installation, adjustment, calibration, and troubleshooting.

4. Operating Procedures

   These instructions consist of the equipment manufacturer's recommended step-by-step procedures for starting, operating, and stopping the equipment under specified modes of operation.

5. Preventive Maintenance Procedures

   These instructions consist of the equipment manufacturer's recommended steps and schedules for maintaining the equipment.

6. Overhaul Instructions

   These instructions consist of the manufacturer's directions for the disassembly, repair, and reassembly of the equipment and any safety precautions that must be observed while performing the work.

7. Parts List

   This list consists of the generic title and identification number of each component part of the equipment.

8. Spare Parts List

   This list consists of the manufacturer's recommendations of number of parts, which should be stored by the Owner and any special storage precautions, which may be required.

9. Exploded View

   Exploded or cut views of equipment shall be provided if available as a standard item of the manufacturer's information. When exploded or cut views are not available, plan and section views shall be provided with detailed callouts.

10. Test Documentation

    Reports, records, data and forms documenting the results of equipment factory tests, including pump and blower performance curves, shall be provided, with the operating points for the specific equipment designated. When a special factory test of the supplied equipment is not performed, the manufacturer's standard performance reports and curves, with specified operating points, shall be provided for the supplied equipment.

11. Specific Information

    Where items of information not included in the above list are required, they will be provided as described in the specifications for the equipment.

12. Warranty Information

13. Maintenance Information Summaries

    In addition, the following items of equipment shall be provided with Maintenance Information Summaries in each appropriate section of the equipment manuals, prepared according to the format specified herein:

    - Potable Water Meters

Maintenance information summaries shall be prepared on 8-1/2-inch x 11-inch paper only and shall contain the following information compiled from manufacturer's recommendations in the order shown.

14. Description or name of item of equipment.

15. Manufacturer.

16. Name, address, and telephone number of local manufacturer's representative.

17. Recommended maintenance procedures:

    a. Description of procedures.

    b. Maintenance frequency required.

    c. Lubricant(s) or other materials required (where applicable), including type of lubricant, lubricant manufacturer, and specific compound.

    d. Additional information as required for proper maintenance.

18. Recommended spare parts.

    The maintenance information summary shall be placed at the beginning of the manual.

All operation and maintenance information shall be comprehensive and detailed, and shall contain information adequately covering all normal operation and maintenance procedures.

For ease of identification, each manufacturer's brochure and manual shall be appropriately labeled with the equipment name and equipment specification number as it appears in the project Specifications. The information shall be organized in binders. The binders shall be provided with a table of contents and tab sheets to permit easy location of desired information.

Lubricants shall be described in detail, including type, recommended manufacturer, and manufacturer's specific compound to be used.

It shall be the responsibility of the Contractor to ensure that all operation and maintenance materials are obtained. Material submitted must meet the approval of the Engineer prior to project acceptance.

B. EXTRANEOUS DATA

Where the contents of the manuals include manufacturers' standard brochures or catalog pages, the exact item(s) used in this installation shall be clearly indicated and all manufacturers' data which is extraneous shall be clearly deleted.

C. FINAL EQUIPMENT MANUALS

The Contractor shall be responsible for tracking and coordinating each separate manufacturer's equipment operation and maintenance manual submittal and shall resubmit, as necessary, until the Engineer's review indicates that the submittal is acceptable. The Contractor shall maintain equipment manual files until final approval copies are delivered to the Engineer. The Contractor shall be responsible for collating the approved operation and maintenance submittal sections into complete final manufacturers' equipment operation and maintenance manuals bound in post binders which are indexed to the Specifications. The Contractor shall deliver the complete final operation and maintenance manuals to the Engineer prior to project completion. All copies final manufacturers' equipment manuals submitted will be retained by the Engineer or Owner.

The Contractor shall also supply three USB copies of the final equipment manuals in a tabbed, searchable, .pdf format, with a table of contents bookmarked to provide a navigation link to each section of the manual.

PART 3 EXECUTION

3.1 IDENTIFICATION OF SUBMITTALS

A. GENERAL

Each submittal shall be accompanied by a letter of transmittal showing the date of transmittal, specification section, or drawing number to which the submittal pertains, submittal number, and a brief description of the material submitted.

B. RESUBMITTALS

When material is resubmitted for any reason, it shall be submitted under a new letter of transmittal and referenced to the previous submittal.

3.2 REVIEW OF SUBMITTALS

The Engineer will review all submittals for general conformance with the design and other requirements of the Contract Documents. Markings or comments shall not be construed as relieving the Contractor from compliance with the Contract Documents. Submittals may be rejected based on inadequate information and/or not meeting the requirements of the Contract Documents. Rejection of submittals requires action on the part of the Contractor to correct the reason for the rejection. The Contractor remains responsible for details and accuracy, for confirming and correlating all quantities and dimensions, for selecting fabrication processes, and for techniques of assembly and installation.

3.3 COORDINATION OF PRODUCT SUBMITTALS

A. GENERAL

Prior to submittal for review by the Engineer, all data shall be fully coordinated, including the following:

1. All field dimensions and conditions.

2. All trades and public agencies involved, including necessary approvals.

3. All deviations from the Contract Documents.

B. GROUPING OF SUBMITTALS

1. All submittals shall be grouped with associated items, unless otherwise specifically permitted by the Engineer.

2. The Engineer may reject the submittals in their entirety or any part thereof, if not in accordance with the Contract Documents.

C. CERTIFICATION

Submittals shall bear the Contractor's certification that they has reviewed, checked, and approved the shop drawings prior to forwarding them to the Engineer.

3.4 TIMING OF PRODUCT SUBMITTALS

A. GENERAL

1. All submittals shall be made far enough in advance of installation to provide all required time for reviews and securing necessary approvals.

2. In scheduling, the Contractor shall allow for the time indicated in Part 2.2A for the Engineer's review following their receipt of the submittal.

B. DELAYS

No additional or separate payment will be made for costs of delays occasioned by tardiness of submittals on the part of the Contractor.

3.5 EQUIPMENT MANUALS

The preliminary copies of the manufacturer's equipment manuals shall be delivered to the Engineer for review not later than the time of equipment delivery to the project site.

Final copies of the manufacturer's equipment manuals shall be delivered to the Engineer at least 14 calendar days prior to requesting payment in excess of 90 percent completion for the project. Prior to submittal of the final equipment manuals, the Contractor shall check the manuals for accuracy and completeness and shall verify that prior review comments have been addressed.

***** END OF SECTION *****

SECTION 01310

PROJECT MEETINGS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes information pertaining to the various meetings that will be held during the course of constructing this project.

1.2 PRECONSTRUCTION CONFERENCE

As soon as possible following the award of the Contract, a preconstruction conference shall be scheduled for representatives of the Owner, the Contractor, the Engineer, funding agencies, regulatory agencies, and affected utilities.

1.3 PROJECT PROGRESS MEETINGS

The Owner and the Engineer will schedule and attend regular weekly meetings with the Contractor for coordination, administrative, and procedural requirements of the project. Additionally, the Contractor, Owner's representative and Resident Inspector shall meet at the beginning of each work day to review planned work and ensure it has been coordinated with property owners whose property will be accessed to perform the work.

1.4 CONSTRUCTION MEETINGS

The Contractor shall schedule and hold regular meetings during the project:

A. Safety Meetings (Contractor's subcontractors shall attend if they are working onsite.)

B. Equipment Installation Meetings

C. Coordination Meetings

D. Startup and Testing Meetings

The Contractor shall notify the Owner and Engineer in advance of all meetings. The meetings may or may not be attended by the Owner and Engineer.

***** END OF SECTION *****

SECTION 01385

DOCUMENTATION OF EXISTING CONDITIONS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes all photography requirements for the project.

This Section relates to visual documentation of the existing and post-construction conditions. The Contractor shall be required to furnish and provide a photographic record of the site to include preconstruction photographs where construction work is to be performed. The photographic record shall be of commercial quality and performed in the presence of the Owner or Engineer. This work will only apply to the installation of meters.

A photographic record shall be provided showing complete coverage of all affected areas where work is going to be performed. A post-photographic record, shall be provided by the Contractor in the same format and perspective as the original preconstruction photographic record. The Contractor shall provide a digital photo of every meter replaced including a view of the meter with the lid removed and the finished ground level view of the meter, including all restoration work around the meter. The Contractor shall provide photographs (color) in a digital JPG format on a USB drive.

Upon completion of the work, the Contractor shall provide photos in the same manner and vantage point as the preconstruction photos. The intent is to provide comparison between post and preconstruction conditions.

When available light is not sufficient to produce a clear photo image, additional lighting shall be supplied by the photographer to ensure good picture quality. The camera crew shall be able to work independent of any power source, utilizing battery power to operate the camera and lighting.

***** END OF SECTION *****

SECTION 01400

QUALITY CONTROL

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the control tests, test sample collection, required field-testing, and special inspections as specified herein, and indicated on the Plans.

1.2 PAYMENT

All testing as required by this Section shall be paid for by the Contractor. All costs to prepare and implement the sample and testing program shall be included in the bid prices for the various items associated with the sampling and testing program.

Retesting and reinspection required because of defective work and testing performed for the convenience of the Contractor shall also be paid for by the Contractor.

Testing requirements shall not be cause for claims of delay by the Contractor and all expenses accruing therefrom shall be deemed incidental to the performance of the Contract.

PART 2 PRODUCTS

2.1 GENERAL

The Contractor shall be responsible for all material testing specified in the Contract Documents and any applicable permits and codes. The materials testing laboratory shall be accredited for performing the various testing methods either by AASHTO R18, AASHTO 150/IEC 17025 or the American Association for Laboratory Accreditation and further approved by the Owner. The materials testing laboratory shall send test results directly to the Engineer.

2.2 AGGREGATES

All aggregates shall be tested in accordance with applicable WSDOT test methods:

Title	Test Method
Sampling	AASHTO T2
Sieve Analysis of Fine and Coarse Aggregates	104A
Material Finer than No. 200 Sieve in Aggregates	102A
Percentage of Particles Smaller than 0.025 mm and 0.005 mm	603A
Organic Impurities	111A
Abrasion of Coarse Aggregates by Use of the Los Angeles Machine	101A
Sand Equivalent	109A

2.3 HOT MIX ASPHALT

Paving asphalt shall be tested in accordance with the following WSDOT test methods:

Characteristics	Test Method
Tests on Residue from RTFC Procedure	208
Absolute Viscosity at 140 degrees F, poise	203
Kinematic Viscosity at 275 degrees F., cSt, min.	202
Penetration at 77 degrees F., 100 g/5 sec., min.(1)	201
Percent of Original Penetration at 77 degrees F, min.	2
Ductility at 45 degrees F., cm, min.	
Flashpoint, (Cleveland Open Cup), degrees F min. (test on original asphalt)	206
Solubility in Trichloroethylene percent, min. (test on original asphalt)	214

(1) Original penetration, as well as penetration after RTFC loss shall be determined by AASHTO Test Method T 49.

A. COMPLETE EXTRACTIVE OF UNCOMPACTED MIX

Test methods shall be in accordance with the following:

1. AASHTO T68

2. ASTM D2172

3. AASHTO T30

B. DENSITY OF COMPACTED MIX

Test method shall be in accordance with AASHTO T166.

1. The Contractor shall employ an independent testing laboratory approved by the Owner to conduct complete extraction tests on the uncompacted asphalt concrete pavement mix.

2. The Contractor shall provide the Engineer with an affidavit from the asphalt supplier of the characteristics of the paving asphalt. The paving asphalt shall be tested in accordance with WSDOT Construction Manual and Standard Specifications, latest editions.

PART 3 EXECUTION

3.1 SAMPLING AND TESTING FREQUENCY

A. GENERAL

The Contractor shall provide the following quality control tests at the number and frequency described herein. On-site testing technicians and testing laboratories shall be WABO-certified. The precise location of the tests shall be designated by the Engineer. The Contractor shall cooperate with laboratory personnel employed to conduct the density testing, sampling of material(s), and special inspections. The Contractor shall provide safe access within the work site for laboratory personnel such that density testing and visual inspection can be performed. The Contractor shall provide samples of materials to be tested in the quantities required and herein specified to the appropriate laboratory personnel. The Contractor shall furnish all labor, equipment, tools, and materials necessary to obtain and deliver samples as herein designated. They shall also provide and repair any test holes required in order to facilitate the testing and sampling and to provide for the testing laboratory's exclusive use for storage and curing of test samples until removed to the laboratory.

Any areas tested and further failing compliance with the Specifications shall be recompacted and retested at the Contractor's expense, until a successful density test indicating compliance with these Specifications has been achieved.

B. HOT MIX ASPHALT TESTING FREQUENCY

The following hot mix asphalt quality control tests shall be completed at the given frequency:

Material	**Test**	**Minimum Sampling & Testing Frequency**
Mix Design (By Contractor)	Submittal	Design Mix (include test results). Aggregate (each size) – 100 pounds. Asphalt - 1 gallon. Mineral Filler – 10 pounds.
Asphalt (including prime and tack coat)	Sample and Tests	Submit a 1-quart sample and material certification with test results for each shipment or lot of asphalt. A duplicate 1-quart sample shall be retained by the Contractor until the completion of the job.
Aggregates (from bins or source)	Gradation	One test prior to start of paving operation and one every 1,500 tons or 1,000 cy.
	Fractured Faces	Same as gradation.
	LA Abrasion	One test prior to start of paving and one test every 10,000 tons thereafter.
	Specific Gravity	Same as gradation.
Hot Mix Asphalt (including Asphalt Treated Base)	Marshall Method Test	One initial test during mix design and one per 3,000 tons thereafter.
	Specific Gravity	One per each Marshall test.
	Compaction	One per 50 Tons

***** END OF SECTION *****

SECTION 01500

TEMPORARY FACILITIES

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the temporary facilities required for this project, but not necessarily limited to:

A. Temporary utilities such as water, electricity, telephone, off-site staging, and off-site parking.

B. Sanitary facilities.

PART 2 PRODUCTS

2.1 UTILITIES

A. TEMPORARY ELECTRICITY

The Contractor shall provide temporary power for construction at the project site. They shall make arrangements with the electrical utility (to obtain temporary power) and shall pay all costs and fees charged by the utility associated with connection of temporary power. The Contractor shall provide all special connections, receptacles, panelboards, etc., which are required for temporary service, and are not provided by the utility.

The Contractor shall furnish and install all temporary wiring and associated equipment required to keep all portions of the existing facilities in operation at all times.

Area distribution boxes shall be furnished, installed, and so located that the individual trades may use their own construction-type extension cords to obtain proper power and artificial lighting at all points where required. The Contractor shall provide a main disconnect on all temporary wiring panels, labeled "MAIN DISCONNECT," to ensure the safety of personnel using extension cords and hand tools. Panels shall also be properly grounded and equipped with GFCI breakers in accordance with WISHA requirements.

The Contractor shall provide the Engineer single line diagrams of the temporary wiring showing all circuit breakers. These diagrams shall be

provided prior to installation of this wiring. These diagrams are necessary to provide information to Owner personnel for off-hours operation.

The Contractor shall pay all demand, consumption, taxes, and fees associated with the temporary electrical service.

B. WATER

The Contractor shall be responsible for providing water necessary for construction. This includes costs for supplying potable water for hydrostatic pressure leak testing of all water-holding structures and operational testing of all equipment and processes. Water is available from the Owner free of charge, provided that it is used responsibly. The Contractor shall install a meter with backflow prevention device prior to obtaining water from the Owner.

2.2 SANITARY FACILITIES

The Contractor shall provide toilet and wash-up facilities for their workforce and the Engineer at the site of work. They shall comply with applicable laws, ordinances, and regulations pertaining to the public health and sanitation of dwellings and camps.

2.3 OFF-SITE STAGING AND PARKING

The Contractor shall note that space is limited throughout the construction site. Employees of the Contractor, all subcontractors, vendors, suppliers, and associated personnel shall not be allowed to park onsite during the course of construction without prior approval from the Owner. It shall be the responsibility of the Contractor to provide sufficient parking facilities in authorized area(s) other than the construction site for the above-mentioned personnel.

The Contractor shall not be allowed to stockpile and store equipment and materials throughout the construction site. The Contractor shall coordinate their schedule so that all equipment and materials shall be brought to the construction site only when they are to be installed/utilized.

The Contractor shall provide storage of equipment and materials at an offsite, bonded warehouse, to be approved by the Engineer. The Contractor shall pay all costs associated with off-site delivery, storage, and transfer to the construction site.

The Contractor shall be allowed to use a lay-down area located east of Anderson Road SW and south of Blairwood Drive, as indicated on the Plans at the

discretion of the Owner. No other area shall be allowed for this use without written approval by the Owner.

PART 3 EXECUTION

All temporary facilities and controls shall be maintained as long as required for the safe and proper completion of the work. The Contractor shall remove such temporary facilities and controls as rapidly as progress of the work will permit or as directed by the Owner.

***** END OF SECTION *****

SECTION 01505

MOBILIZATION AND DEMOBILIZATION

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section consists of mobilization and demobilization. Mobilization consists of preconstruction activities and preparatory work for the project necessary to mobilize labor, materials, and equipment to the project site, including but not necessarily limited to, the following items and work associated with any or all of the various schedules of the work when required by the Contract Documents:

A. Bonds and Insurance

B. Mobilization

C. Permits and Licenses

D. Invoice Preparation

E. Administration Costs

F. Temporary Facilities (as required by the Contractor)

G. Cleanup

H. Demobilization

Items which are not considered mobilization or demobilization include but are not limited to:

A. On-going activities throughout the duration of construction.

B. Profit, interest on borrowed money, overhead, or management costs.

PART 2 PRODUCTS

Products and materials required for mobilization and demobilization are described in the various sections of Division 1 and in other parts of the Contract Documents.

PART 3 EXECUTION

Complete mobilization and demobilization as required by the various sections of Division 1 and other parts of the Contract Documents.

***** END OF SECTION *****

SECTION 01720

RECORD DRAWINGS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the record drawings, which shall be maintained and annotated by the Contractor during construction.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01300	Submittals

1.3 INFORMATION PROVIDED BY THE OWNER

The Contractor will be provided with the following items to maintain record drawings for the project:

A. One full size paper set of Plans.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall maintain the following record drawings for the project:

A. A neat and legibly marked set of Contract Plans showing the final location of piping, equipment, electrical conduits, outlet boxes and cables;

B. Additional documents such as schedules, lists, drawings, and electrical and instrumentation diagrams included in the Contract Documents; and

C. Contractor layout and installation drawings.

Unless otherwise specified, record drawings shall be full size and maintained in a clean, dry, and legible condition. Record documents shall not be used for construction purposes and shall be available for review by the Engineer during normal working hours at the Contractor's field office. At the completion of the

work, prior to final payment, all record drawings shall be submitted to the Engineer.

Marking of the drawings shall be kept current and shall be done at the time the material and equipment are installed. Annotations to the record documents shall be made with an erasable colored pencil conforming to the following color code:

A. Additions - Red

B. Deletions - Green

C. Comments - Blue

D. Dimensions - Graphite

Legibly mark drawings to record actual depths, horizontal and vertical location of underground raceways, cables, and appurtenances referenced to permanent surface improvements.

The Contractor's record drawings (full-size hard-copy) will be reviewed monthly for completeness by the Engineer prior to preparing the progress estimate for payment. If the record drawings do not reflect the work performed, payment for that item of work will not be included in the progress estimate.

***** END OF SECTION *****

SECTION 01740

CLEANUP

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the maintenance of the building, structures, and site(s) in a standard of cleanliness throughout the construction period as described herein.

Throughout the construction period, the Contractor shall maintain the cleanliness of the site and structures as described herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

In addition to standards described in this Section, comply with all requirements for cleaning up when described in other sections of these Contract Documents.

1.3 QUALITY ASSURANCE

A. INSPECTION

The Contractor shall conduct daily site inspections, and more often if necessary, to verify that requirements are being met.

B. CODES AND STANDARDS

In addition to the standards described in this Section, comply with all pertinent requirements of governmental agencies having jurisdiction.

PART 2 PRODUCTS

2.1 CLEANING MATERIALS AND EQUIPMENT

Provide all required personnel, equipment, and materials needed to maintain the specified standard of cleanliness.

2.2 COMPATIBILITY

Use only the cleaning materials and equipment which are compatible with the surface being cleaned, as recommended by the manufacturer of the material or as approved by the Engineer.

PART 3 EXECUTION

3.1 PROGRESS CLEANING

A. GENERAL

Retain all stored materials and equipment in an orderly fashion allowing maximum access, not impeding drainage or traffic, and providing protection.

Do not allow the accumulation of scrap, debris, waste material, and other items not required for this work.

At least twice each month, and more often if necessary, completely remove all scrap, debris, and waste material from the project site.

Provide adequate storage for all materials awaiting removal from the project site, observing all requirements for fire protection and protection of the environment.

B. SITES

Daily, and more often if necessary, inspect the site and pick up all scrap, debris, and waste material. Move these items into a place designated for their storage until disposal becomes available.

Weekly, and more often if necessary, inspect all arrangements of materials stored on the site, restack, arrange, or otherwise service all arrangements to meet the requirements above.

Maintain the site in a neat and orderly condition at all times so as to meet the approval of the Engineer.

C. STREETS

All paved and unpaved streets in the vicinity of the project shall be kept free of material tracked from the project site(s) or dropped from vehicles entering and leaving the site(s). The Contractor shall inspect roads in each active area daily, and all material deposited on the road from the Contractor's activities shall be removed prior to the end of the workday. This shall include sweeping, as required, to collect any mud, dirt and dust from the surface. All catch basins and culverts in the work area shall be inspected before completion and cleaned as directed by the Engineer.

3.2 FINAL CLEANING

A. DEFINITION

Except as otherwise specifically provided, “clean” shall be interpreted as meaning the level of cleanliness generally provided by commercial building maintenance equipment and materials.

B. GENERAL

Prior to final inspection, remove from the jobsite all tools, surplus materials, equipment, scrap, debris, and waste. Conduct final project cleaning as described below.

C. WORK AREAS

Visually inspect all exterior grades and surfaces and remove all traces of construction debris. Any surfaces that are damaged or disturbed by the Contractor’s operations shall be repaired to their preconstruction condition. This shall include, but not be limited to regrading, restoring lawns with hydroseed and/or sod, repairing concrete sidewalks and driveways, restoring landscaping and other property features on and along the right-of-way including the adjacent private properties.

D. STRUCTURES

1. Exterior

Visually inspect all exterior surfaces and remove all traces of soil, waste, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. If necessary to achieve a uniform degree of exterior cleanliness, hose down the exterior of the structure. In the event of stubborn stains not removable with water, the Engineer may require light sandblasting or other cleaning at no additional cost to the Owner.

2. Interior

Visually inspect all interior surfaces and remove all traces of soil, waste, smudges, and other foreign matter. Remove all traces of splashed materials from adjacent surfaces. Remove all paint droppings, spots, stains, and dirt from finished surfaces. Use only appropriate cleaning materials and equipment.

3. Glass

Clean all glass inside and outside.

E. TIMING

Schedule final cleaning as approved by the Engineer to enable the Owner to accept a completely clean project, ready for occupancy.

***** END OF SECTION *****

SECTION 01800

TESTING, COMMISSIONING, AND TRAINING

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the installation, testing, commissioning, and training for all mechanical, electrical, and instrumentation systems and completed portions of the work.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01110	Scope of Work
01300	Submittals
01400	Quality Control
15050	Piping Systems

1.3 QUALITY ASSURANCE

A. INSTALLATION

All mechanical, electrical, and instrumentation equipment provided under this Contract shall be installed in conformity with the Contract Documents, including the manufacturer's requirements. Should a manufacturer's installation recommendation conflict with specific requirements of this Contract Document, the Contractor shall bring the matter to the attention of the Engineer. Any additional costs arising out of changes authorized by the Engineer to accommodate manufacturer's installation recommendations will be considered extra work. Any costs incurred by the Contractor through failure to timely notify the Engineer of a difference between Contract Document and manufacturer's installation requirements shall be borne by the Contractor.

B. TESTING

1. General Requirements

All equipment and partially complete or fully completed portions of the work included in this Contract shall be tested and inspected to prove compliance with the Contract requirements. Unless otherwise specified, all costs of testing, including temporary facilities and connections, shall be borne by the Contractor. For

the purpose of this Section, equipment shall mean any mechanical, electrical, instrumentation, or other device with moving parts or devices.

No tests specified herein shall be applied until the item to be tested has been inspected and approval given for the application of such test.

Tests and inspection shall include:

a. The delivery acceptance test and inspections.

b. The installed tests and inspections. These tests may be performed with water or the process fluid, as described in the accepted test plan.

c. The operational testing of completed sections of the facility. These tests may be performed with water or the process fluid, as described in the accepted test plan.

d. The commissioning of completed sections of the facility by Owner's personnel. The commissioning shall be performed with the process fluid at normal flows.

Tests and inspections, unless otherwise specified or accepted, shall be in accordance with the recognized standards of the industry. The Contractor shall see that scheduling and performance of all tests are coordinated with involved subcontractors and suppliers.

The form of evidence of satisfactory fulfillment of delivery acceptance test and inspection requirements shall be, at the discretion of the Engineer, either by tests and inspections carried out in their presence or by certificates or reports of tests and inspections carried out by approved persons or organizations. The Contractor shall provide and use forms that include all test information, including specified operational parameters. The content of the forms used shall be acceptable to the Engineer.

A master test log book shall be maintained by the Contractor, which shall cover all tests including piping, equipment, electrical, and instrumentation. The master test log book shall be provided with loose-leaf pages that shall be copied weekly after updating for transmittal to the Engineer. The master test log book shall be transmitted to the Engineer upon completion of the project.

2. Delivery Acceptance Tests and Inspections

The delivery acceptance tests and inspections shall be at the Contractor's expense for any equipment specified herein and shall include the following:

a. Test of items at the place of manufacture during and/or on completion of manufacture, electric and instrumentation subsystems tests, performance and operating tests and inspections in accordance with the relevant standards of the industry and more particularly as detailed in individual clauses of these Specifications to satisfy the Engineer that the items tested and inspected comply with the requirements of this Contract.

b. Inspection of all items delivered at the site or to any authorized place of storage so that the Engineer may be satisfied that such items are of the specified quality and workmanship and are in good order and condition at the time of delivery. The Contractor shall be prepared to remove all coverings, containers, or crates to permit the Engineer to conduct their inspection. Should the Engineer find, in their opinion, indication of damage or deficient quality of workmanship, the Contractor shall provide the necessary documentation or conduct such tests deemed necessary by the Engineer to demonstrate compliance.

3. Installed Tests and Inspections

a. General

All equipment shall be tested by the Contractor to the satisfaction of the Engineer before any facility is put into operation. Tests shall be as specified herein and shall be made to determine whether the equipment has been properly assembled, aligned, adjusted and connected. Any changes, adjustments, or replacements required to make the equipment operate as specified shall be carried out by the Contractor as part of the work.

b. Procedures

i. General

The procedures shall be divided into two distinct stages; preoperation checkout and water test. Testing procedures shall be designed to duplicate, as nearly as possible, all conditions of operation and shall be carefully selected to ensure that the equipment is not damaged. Once the testing procedures have been reviewed and approved by the Engineer, the Contractor shall produce checkout, alignment, adjustment and calibration sign-off forms for each item of equipment to be used in the field by the Contractor and the Engineer jointly to ensure that each item of electrical, mechanical and instrumentation equipment has been properly installed and tested. The Contractor is advised that failure to observe these precautions may place the acceptability of the subject equipment in question.

ii. Preoperation Checkout

The installed tests and inspection procedures shall incorporate all requirements of these Specifications and shall proceed in a logical, step-wise sequence to ensure that all equipment has been properly serviced, aligned, connected, calibrated, and adjusted prior to operation. Preoperation checkout procedures shall include, but not necessarily be limited to the electrical system connectivity and code requirements.

4. Operational Testing

After completion of all installed testing and review by the Engineer that all equipment complies with the requirements of the Specifications, the Contractor shall conduct operational testing.

The Contractor shall operate the completed facility for a period of not less than that specified in Part 3.4 of this Section during which all systems shall be operated as a complete facility at various loading conditions, as directed by the Engineer. Should the operational testing period be halted for any reason related to the facilities constructed or the equipment furnished under this

Contract, or the Contractor's temporary testing systems, the operational testing program shall be repeated until the specified continuous period has been accomplished without interruption.

Record drawings of facilities involved must be accepted and ready for turnover to the Owner at the time of operational testing.

All costs for water, fuel, power, and chemicals required during operational testing shall be borne by the Owner.

5. Commissioning

After completion of the operational testing and certifications by the Engineer that the systems meet all performance requirements, commissioning will begin. The commissioning period for all systems shall be 30 days. The Contractor shall remove all temporary piping that may have been in use during the operational testing and shall assist the Owner with the placement of the facility into its fully operational mode. The Owner's operations and maintenance personnel will be responsible for operation of the facility during this period of time. The facility shall be fully and continuously operational, performing all functions as designed.

The Contractor shall be available, with all appropriate subcontractors and trades, at all times during commissioning periods to provide immediate assistance in case of failure of any portion of the system being tested. This assistance shall be available, if needed, on a 24-hour basis. The Engineer will not issue a certificate of Substantial Completion until the end of the commissioning period (including training) and then only when all corrections required to assure a reliable and completely operational facility have been complete. The Contractor shall be responsible for all costs in excess of the Owner's normal expected costs of operations during the commissioning period. The Contractor shall bear the costs of all necessary repairs or replacements, including labor and materials, required to keep the portion of the plant being commissioned operational.

The commissioning period will be considered completed when the facility has been continuously operated without major interruption, equipment failure, or system breakdown for the specified commissioning period. A major interruption, failure or breakdown shall be a condition or event that prevents the facility from continuously and adequately handling normal flow, cannot be repaired or corrected immediately by the Contractor, and is not

caused by improper operation and maintenance of the facilities by the Owner. An interruption of the commissioning period under these circumstances will require a re-start of commissioning once required repairs and corrections are made by the Contractor. Should the commissioning period be halted for any reason related to the facilities constructed or the equipment furnished under this Contract, the commissioning shall be repeated until the specified continuous period has been accomplished without interruption.

Final O&M manuals for the facilities must be accepted and ready for turnover to the Owner before the start of commissioning.

C. TRAINING

During the phase of water testing of equipment, the Contractor shall make available experienced factory-trained representatives of the manufacturers of all the various pieces of equipment, to train the Owner's personnel in the operation and maintenance thereof. The time required for this training shall be as covered in the specifications for the specific piece of equipment. The Contractor shall notify the Engineer of the time of the training at least 10 days prior to the start time of the training.

PART 2 PRODUCTS

2.1 INSTALLATION

Materials employed in the installation shall conform to the requirements of the Contract Documents and the recommendations of the equipment manufacturers.

2.2 TESTING

A. GAUGES, METERS, RECORDERS, AND MONITORS

Gauges, meters, recorders, and monitors shall be provided by the Contractor as required to supplement or augment the instrumentation system provided under this Contract to properly demonstrate that all equipment fully satisfies the requirements of the Specifications. All devices employed for the purpose of measuring the performance of the facility's equipment and systems shall be specifically selected to be consistent with the variables to be monitored. All instruments shall be recently calibrated, and the Contractor shall be prepared at all times to demonstrate, through recalibration, the accuracy of all instruments employed for testing purposes. Calibration procedures shall be in accordance with applicable standards of ASTM, ISA, and IEEE. The

adequacy of all gauges, meters, recorders and monitors shall be subject to review by the Engineer.

B. RECORDS

The Contractor shall provide sign-off forms for all installed and operational testing to be accomplished under this Contract. Sign-off forms shall be provided for each item of mechanical, electrical and instrumentation equipment provided or installed under this Contract and shall contain provisions for recording relevant performance data for original testing and not less than three retests. Separate sections shall be provided to record values for the preoperation checkout, as well as signatures of representatives of the equipment manufacturers, the Contractor, and the Engineer.

PART 3 EXECUTION

3.1 INSTALLATION

All equipment and apparatus used in testing shall be installed by specialists properly skilled in the trades and professions required to assure first-class workmanship. Where required by detailed Specifications, the Contractor shall cause the installation of specific equipment testing items to be accomplished under the supervision of factory-trained installation specialists furnished by the equipment manufacturers. The Contractor shall be prepared to document the skills and training of all workmen engaged in the installation of all testing equipment furnished either by the Contractor or the Owner.

3.2 TESTING

Testing shall proceed on a step-by-step basis in accordance with the Contractor's written testing procedures. The Contractor's testing work shall be accomplished by a skilled team of specialists under the direction of a coordinator whose sole responsibility shall be the orderly, systematic testing of all equipment, systems, structures, and the complete facility as a unit. Each individual step in the procedures shall be witnessed by a representative of the Engineer.

During the facility operational testing period, all equipment and systems in operation shall be operated to the greatest extent practicable, at conditions, which represent the full range of operating parameters as defined by the Contract Documents.

3.3 TRAINING

Training of the Owner's personnel shall be done by experienced technical manufacturers' representatives. When required by these specifications, the training sessions shall be video and audio-taped by the Contractor and the final DVD delivered to the Owner. These manufacturers' representatives shall follow the outline presented here:

GENERAL OUTLINE FOR MANUFACTURER PRESENTATIONS

A. FAMILIARIZATION

1. Overview explaining theory of operation.

2. Show catalog, parts lists, drawings, etc., in the shop drawings and O&M manuals. Clearly identify the model or identification number of the equipment for which training is being provided.

3. Check out the installation of the specific equipment items.

4. Demonstrate the unit and show that all parts of the Specifications are met.

5. Answer questions.

B. SAFETY

1. Point out safety references.

2. Discuss proper precautions around equipment.

C. OPERATION

1. Point out reference literature.

2. Explain all modes of operation (including emergency).

3. Check out Owner's personnel on proper use of the equipment. (Let them do it).

D. PREVENTIVE MAINTENANCE (PM)

1. Pass out PM list including:

a. Reference material.

b. Daily, weekly, monthly, quarterly, semi-annual, and annual jobs.

2. Show how to perform PM jobs.

3. Show Owner's personnel what to look for as indicators of equipment problems.

E. CORRECTIVE MAINTENANCE

1. List possible problems.

2. Discuss repairs - point out special problems.

3. Open up equipment and demonstrate procedures, where practical.

F. PARTS

1. Show how to use parts list and order parts.

2. Check over spare parts on hand. Make recommendations.

G. LOCAL REPRESENTATIVES

1. Where to order parts: Name, address, telephone, fax, e-mail.

2. Service problems:

a. Who to call.

b. How to get emergency help.

3.4 FACILITY OPERATIONAL TESTING

The systems described below shall be tested to demonstrate the performance of mechanical, electrical, instrumentation and control subsystems together as an integrated system. Where the testing described in this Section conflicts with the testing requirements specified for individual equipment, or the manufacturer's recommended testing procedure, those requirements and procedures shall prevail.

Unless otherwise noted, a time period of 5 days shall be allowed for each facility operational test.

A. AMI METERING SYSTEM

Testing of the data collection system shall include, but not be limited to, the meter, register, MIU, and receiver. Tests must prove all performance requirements of Section 11680, Part 1.4.

***** END OF SECTION *****

SECTION 01900

SALVAGE AND DEMOLITION

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section covers the salvage of existing materials and equipment as indicated on the Plans and as specified herein.

1.2 SALVAGE

Salvageable equipment and material including existing water meters shall be removed with care so as not to impair future uses and shall include all equipment and material so indicated on the Plans. Salvaged equipment and material not reused or rejected by the Owner shall be protected from damage and delivered by the Contractor to the Owner.

Reuse of salvageable equipment and material by the Contractor will not be permitted except where specifically indicated on the Plans and in the Specifications or where approved by the Engineer and Owner. Salvageable equipment and materials rejected in writing by the Owner shall become the property of the Contractor and shall be disposed of away from the site without additional cost to the Owner.

***** END OF SECTION *****

SECTION 01950

TRAFFIC CONTROL

PART 1 GENERAL

1.1 SCOPE

Temporary traffic control refers to the control of all types of traffic, including vehicles, bicyclists and pedestrians (including pedestrians with disabilities). The Contractor, utilizing contractor labor and contractor-provided equipment and materials (except when such labor, equipment, or materials are to be provided by the Owner as specifically identified in the Contract Documents), shall plan, manage, supervise and perform all temporary traffic control activities need to support the work of the Contract.

The Contractor shall provide flaggers, signs, and other traffic control devices not otherwise specified as being furnished by the Owner. The Contractor shall erect and maintain all construction signs, warning signs, detour signs, and other traffic control devices, necessary to warn and protect the public at all times from injury or damage as a result of the Contractor's operations which may occur on highways, roads or streets. No work shall be done on or adjacent to the roadway until all necessary signs and traffic control devices are in place.

The traffic control resources and activities shall be used for the safety of the public, the Contractor's employees, the Owner's personnel and to facilitate the movement of the traveling public. Traffic control resources and activities may be used for the separation or merging of public and construction traffic when in accordance with a specific approved traffic control plan.

Upon failure of the Contractor to immediately provide flaggers; erect, maintain, and remove signs; or provide, erect, maintain, and remove other traffic control devices when ordered to do so by the Owner, the Owner may, without further notice to the Contractor or the Surety, perform any of the above and deduct all of the costs from the Contractor's payment.

The Contractor shall be responsible for providing adequate flaggers, signs and other traffic control devices for the protection of the work and the public at all times regardless of whether or not the flaggers, signs, and other traffic control devices are ordered by the Owner, furnished by the Owner, or paid for by the Owner.

1.2 REFERENCES

This Section references the latest revisions to the following documents:

Reference	**Title**
MUTCD	*Manual of Uniform Traffic Control Devices* *Washington State Modifications to the MUTCD* *Quality Guidelines for Temporary Traffic Control Devices*
ANSI 107	*High Visibility Garment Standard*

1.3 TRAFFIC CONTROL MANAGEMENT

A. GENERAL

It is the Contractor's responsibility to plan, conduct, and safely perform the work. The Contractor shall manage temporary traffic control with his or her own staff. Traffic control management responsibilities shall be formally assigned to one or more company supervisors who are actively involved in the planning and management of field Contract activities. The Contractor shall provide the Engineer with a copy of the formal assignment. The duties of traffic control management may not be subcontracted.

The Contractor shall designate an individual or individuals to perform the duties of the primary Traffic Control Supervisor (TCS). The designation shall also identify an alternate TCS who can assume the duties of the primary TCS in the event that person's inability to perform. The TCS shall be responsible for safe implementation of approved Traffic Control Plans provided by the Contractor.

The primary and alternate TCS shall be certified as worksite traffic control supervisors by one of the organizations listed herein. Possession of a current TCS card and flagging card by the primary and alternate TCS is mandatory. A traffic control management assignment and a TCS designation are required on all projects that will utilize traffic control.

The Contractor shall maintain 24-hour telephone numbers at which the Contractor's assigned traffic control management personnel and the TCS can be contacted and be available upon the Engineer's request at other than normal working hours. These persons shall have the resources, ability and authority to expeditiously correct any deficiency in the traffic control system.

The Contractor, at the end of each day, shall leave the Work area in such condition that it can be traveled without damage to the Work, without danger to traffic, and without one-way traffic control.

B. The duties of the Contractor's traffic control management personnel shall include:

1. Overseeing and approving the actions of the Traffic Control Supervisor (TCS) to ensure that proper safety and traffic control measures are implemented and consistent with the specific requirements created by the Contractor's work zones and the Contract. Some form of oversight shall be in place and effective even when the traffic control management personnel are not present at the jobsite.

2. Discussing proposed traffic control measures and coordinating implementation of the Contractor-adopted traffic control plan(s) with the Owner.

3. Coordinating all traffic control operations, including those of subcontractors, suppliers, and any adjacent construction or maintenance operations.

4. Coordinating the project's activities (road closures and lane closures) with appropriate police, fire control agencies, city or county engineering, medical emergency agencies, school districts, and transit companies.

5. Overseeing all requirements of the Contract, which contribute to the convenience, safety, and orderly movement of vehicular and pedestrian traffic.

6. Having the latest adopted edition of the MUTCD including the Modifications to the MUTCD for Streets and Highways for the State of Washington and applicable standards and specifications available at all times on the Project.

7. Attending all Project meetings where traffic management is discussed.

8. Being present onsite a sufficient amount of time to adequately accomplish the above-listed duties.

C. TRAFFIC CONTROL SUPERVISOR

A Traffic Control Supervisor (TCS) shall be on the Project whenever traffic control labor is required or less frequently, as approved by the Owner.

The TCS shall personally perform all the duties of the TCS. The TCS's duties shall include:

1. Inspecting traffic control devices and nighttime lighting for proper location, installation, message, cleanliness, and effect on the traveling public. Traffic control devices shall be inspected each work shift except that Class A signs and nighttime lighting need to be checked only once a week. Traffic control devices left in place for 24 hours or more should also be inspected once during the nonworking hours when they are initially set up (during daylight or darkness, whichever is opposite of the working hours).

2. Ensuring that corrections are made if traffic control devices are not functioning as required. The TCS may make minor revisions to the approved traffic control plan to accommodate site conditions as long as the original intent of the traffic control plan is maintained and the revision has concurrence of the TCM and/or Owner.

3. Attending traffic control coordinating meetings or coordination activities as authorized by the Owner.

4. Ensuring that all needed traffic control devices are available and in good working condition prior to the need to install those devices.

5. Ensuring that all pedestrian routes or access points, existing or temporary, are kept clear and free of obstructions and that all temporary pedestrian routes or access points are detectable and accessible to persons with disabilities as provided for in the approved plans.

6. Having a current set of approved TCPs and applicable contract provisions as provided by the TCM and the latest adopted edition of the MUTCD including the *Washington State Modifications to the MUTCD* and applicable standards and specifications.

1.4 TCM AND TCS QUALIFICATIONS

The TCM and TCS shall be certified by one of the following:

The Northwest Laborers – Employers Training Trust
27055 Ohio Avenue
Kingston, Washington 98346
(360) 297-3035

Evergreen Safety Council
401 Pontius Avenue N.
Seattle, Washington 98109
(800) 521-0778 or (206) 382-4090

The TCS and all flaggers shall have a current flagging card from the State of Washington, Oregon, or Idaho.

PART 2 PRODUCTS

2.1 TRAFFIC CONTROL DEVICES

Flagging, signs and all other traffic control devices furnished or provided shall conform to the standards established in the latest WSDOT adopted edition of the *Manual on Uniform Traffic Control Devices* (MUTCD) published by the U.S. Department of Transportation and the *Washington State Modifications to the MUTCD*. Requirements for pedestrian traffic control devices are addressed in the MUTCD.

2.2 CONSTRUCTION SIGNS

All construction signs required by the approved traffic control plan(s) as well as any other appropriate signs prescribed by the Owner shall be furnished by the Contractor. The Contractor shall provide the posts or supports and erect and maintain the signs in a clean, neat, and presentable condition until the necessity for them has ceased. All non-applicable signs shall be removed or completely covered with either metal or plywood during periods when they are not needed. When the need for any of these signs has ceased, the Contractor, upon approval of the Owner, shall take down these signs, post, or supports.

Construction signs will be divided into two classes. Class A construction signs are those signs that remain in service throughout the construction or during a major phase of the work. They are mounted on posts, existing fixed structures, or substantial supports of a semi-permanent nature. Sign and support installation for Class A signs shall be in accordance with the WSDOT Standard Plans. Class A signs shall be designated as such on the Traffic Control Plan. Class B

Construction signs are those signs that are placed and removed daily, or are used for short durations which may extend for 1 to 3 days. They are mounted on portable or temporary mountings.

Tripod-mounted signs in place more than 3 days in any one location, unless approved by the Engineer, shall be required to be post-mounted and shall be classified as Class A construction signs. Where it is necessary to add weight to the signs for stability, sandbags or other similar ballast may be used but the top of the ballast shall not be more than 4 inches above the road surface, and shall not interfere with the breakaway features of the device. The Contractor shall follow the manufacturer's recommendations for sign ballasting.

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall provide all labor and equipment to execute the Traffic Control Plan. It is the Contractor's responsibility to plan, conduct, and safely perform the work.

The TCS shall be responsible for safe implementation of approved Traffic Control Plans provided by the TCM.

3.2 TRAFFIC CONTROL LABOR

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

Vests and other high-visibility apparel shall be in conformance with ANSI 107.

Flaggers and spotters shall be posted where shown on the approved Traffic Control Plan. Flaggers and spotters shall possess a current flagging card issued by the State of Washington, Oregon, or Idaho. The flagging card shall be immediately available and shown upon request by the Owner.

During hours of darkness, flagging stations shall be illuminated in a manner that ensures that flaggers can easily be seen but that does not cause glare to the traveling public. Flagger station illumination shall meet the requirements of the MUTCD.

Flaggers shall be equipped with portable two-way radios, with a range suitable for the project. The radios shall be capable of having direct contact wit project management (foreman, superintendents, etc.)

The Contractor shall furnish flagger Stop/Slow paddles conforming to the requirements of the MUTCD, except the minimum width shall be 24 inches.

***** END OF SECTION *****

DIVISION 2

SITEWORK

SECTION 02050

LOCATE EXISTING UTILITIES

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the anticipated conflicts, which may exist with existing utilities. It shall be the responsibility of the Contractor to locate existing utilities and their depth.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01200	Measurement and Payment

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall determine the difficulties to be encountered in constructing the Project and his locate effort based upon the information provided on the Plans, field investigation, and the Contractor's contacts with the existing utility companies. The Contractor shall determine the extent of exploration required to first prevent damage to those existing utilities, and secondly to determine if the proposed improvements are in conflict with existing utilities.

The Contractor shall call the Utility Location Request Center (One Call Center), for field location, not less than 2 nor more than 10 business days before the scheduled date for commencement of excavation that may affect underground utility facilities, unless otherwise agreed upon by the parties involved. A business day is defined as any day other than Saturday, Sunday, or a legal local, State, or Federal holiday. The telephone number for the One Call Center for this project is (800) 424-5555. If no one-number locator service is available, notice shall be provided individually to those owners known to or suspected of having underground facilities within the area of the proposed excavation.

The Contractor is alerted to the existence of Chapter 19.122 RCW, a law relating to underground utilities. Any cost to the Contractor incurred as a result of this law shall be at the Contractor's expense.

No excavation shall begin until all know facilities in the vicinity of the excavation area have been located and marked.

***** END OF SECTION *****

SECTION 02240

DEWATERING

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes dewatering excavations of any kind and location, including but not limited to groundwater, surface water, and precipitation, until backfilling has been completed to finished grade.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01160	Regulatory Requirements
01200	Measurement and Payment
01300	Submittals

PART 2 PRODUCTS

The Contractor shall provide sufficient dewatering equipment and/or other machinery to adequately dewater excavations.

PART 3 EXECUTION

3.1 INSTALLATION AND APPLICATION

High groundwater conditions may exist throughout the project area. During excavation and the installation of meters and meter boxes, excavations shall be kept free of water, subsurface or otherwise. The Contractor shall furnish all equipment necessary to dewater the excavations and shall dispose of the water so as not to cause a nuisance or menace to the public. The dewatering system shall be installed and operated by the Contractor so that the groundwater level outside the excavation is not reduced to the extent that would damage or endanger adjacent structures or property. The release of groundwater to its static levels shall be performed so as to maintain the undisturbed state of the foundation soils, prevent disturbance of backfill and prevent movement of all pavement, structures, and pipelines.

Design, implementation, and maintenance of any dewatering equipment shall be the responsibility of the Contractor.

***** END OF SECTION *****

SECTION 02300

EARTHWORK

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the earthwork, including trench excavation and backfill for piping, excavation and backfill for structures, and finish grading.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01200	Measurement and Payment
01300	Submittals
02370	Erosion Control
02700	Gravel Materials

PART 2 PRODUCTS

2.1 GRAVEL MATERIALS

All gravel materials shall conform to Section 02700.

PART 3 EXECUTION

3.1 PREPARATION

Excavation may commence once all erosion control measures are in place in accordance with the Plans and Section 02370 and to the satisfaction of the Owner.

3.2 GENERAL REQUIREMENTS

All excavation performed on this Project shall be considered unclassified. Excavation shall consist of the removal of any and all material encountered, including debris, rubble, concrete, metal, topsoil, cutting and removal of existing surfacing, tree stumps, trees, logs, abandoned rail ties, abandoned piping, piling, riprap, etc.

Excavations shall be kept free of water, both surface water and groundwater, during the excavation, installation of pipelines and structures, and the placement of backfill.

The Contractor's attention is also called to the depth of the structures and piping; for this reason, special shoring and bracing may be required. All shoring and bracing or sheeting required to perform and protect the excavation and to safeguard the employees, shall be furnished by the Contractor.

No timber bracing, lagging, sheathing or other lumber shall be left in any excavation except with permission of the Engineer and in the event such permission is granted, no separate payment shall be allowed for burying such material.

All stockpiles shall be covered with plastic and no stockpile shall be higher than 6 feet above existing grade.

3.3 PROTECTION OF FOUNDATION SURFACES

Care shall be taken to preserve the existing foundation surfaces throughout the project sites in an undisturbed condition. If the Contractor unnecessarily over excavates or disturbs the foundation surfaces shown on the Plans or specified herein without written authorization of the Engineer the Contractor shall replace such foundations with concrete fill or other suitable material approved by the Owner in a manner which will show by test an equal bearing capacity with the undisturbed foundation material. No additional payment shall be made for the added quantity of concrete fill or other suitable material used because of unnecessary over excavation caused by the Contractor or their operations.

3.4 EXCAVATION AND BACKFILL FOR TRENCHES

Excavation and backfill for trenches shall be in conformance with Sections 7-08 and 7-09 of the WSDOT Standard Specifications, and as further described herein. The following pipe materials shall be considered flexible:

- PVC
- Polyethylene Tubing
- FRP
- HDPE
- Polyethylene
- Corrugated Polyethylene

All other pipe materials shall be considered rigid.

Upon completion of work each day, all pipeline open trenches shall be completely backfilled, leveled, and temporarily patched or graveled, as herein specified. Under certain conditions, the trench may be left open at the last length of pipe laid during the day to avoid re-excavation the following morning, provided that the opening is adequately plated or covered for vehicle traffic.

The Engineer reserves the right to restrict the Contractor in the amount of trench for pipeline that can be opened during the working day. Should the Contractor, in the Engineer's opinion, fail to diligently pursue backfilling, an allowable limit of open trench shall be 100 lineal feet and shall be strictly enforced.

The width of the trench at or below a point 12 inches above the top of the outside diameter of the pipe shall be carefully controlled and maintained to ensure the strength of the pipe and prevent pipe failures. Backfilling shall proceed as follows:

A. SUBGRADE PREPARATION

The subgrade for piping is defined as the elevation of the bottom of the pipe bedding material as shown on the Plans.

In the event unsuitable material is encountered below the subgrade shown on the Plans and described herein, the Contractor, as required by the Engineer, shall over-excavate until a suitable foundation is reached. The Contractor shall then replace the material with compacted foundation gravel, as specified in Section 02700.

B. BEDDING FOR PIPE

Above the foundation material, if any, Gravel Backfill for pipe bedding, as specified in Section 02700, shall be placed in lifts of approximately 8 inches up to a point 12 inches above the pipe. This material shall be hand shoveled in place and carefully worked under and around the pipe.

C. BACKFILL FOR TRENCHES

Partial backfill to protect the pipe will be permitted immediately after the pipe has been properly laid in accordance with the Plans and these Specifications. Complete backfilling of trenches will not be permitted until the section of pipe installed has been inspected by the Engineer.

From the point 12 inches above the top of the pipe barrel, the backfill material to be used in the trench section shall be suitable native material or Bank Run Gravel, as specified in Section 02700, except where required or shown on the Plans to use other material. The Contractor shall place backfill in horizontal lifts not to exceed 8 inches in thickness. All backfill shall be free of large rocks, organic matter, stumps, trees, pieces of pavement, broken concrete and other deleterious substances.

The Contractor shall remedy, at their expense, any defects that appear in the backfill prior to final acceptance of the work. Cleanup operations shall progress immediately behind backfilling to accommodate the return to normal use of the trench area.

During placement of the initial lifts, the backfill material shall not be bulldozed into the trench or dropped directly over the pipe with less than 3 feet of backfill material above the top of the pipe.

3.5 REUSE AND DISPOSAL OF EXCAVATED MATERIAL

Excavated materials shall be properly protected and reused where possible. Excavated materials not used for fill shall be hauled to an approved waste site(s), as selected by the Contractor. The Contractor shall submit a list of approved waste haul site(s) to the Owner prior to the commencement of hauling of waste materials. Any permits required for waste haul and disposal shall be the responsibility of the Contractor.

3.6 TRENCH COMPACTION

Trench backfill materials shall be moisture conditions to within three percent of optimum moisture content. Water settlement is not allowed for compaction.

Pipe bedding materials, for both rigid and flexible pipes, shall be compacted to at least 95 percent of the maximum dry density, using the Modified Proctor, per ASTM D1557.

Compaction of the backfill above the bedding material in all trenches in non-structural and non-paved areas shall be performed by using mechanical equipment to at least 90 percent of the maximum dry density, using the Modified Proctor, per ASTM D1557.

Compaction of the backfill above the bedding material in all trenches in structural or paved areas shall be performed by using mechanical equipment to at least 95 percent of the maximum dry density, using the Modified Proctor, per ASTM D1557.

***** END OF SECTION *****

SECTION 02370

EROSION CONTROL

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the temporary erosion and sedimentation control (TESC) in and around the site caused by the actions of the Contractor as shown on the Plans and as specified herein.

Work under this Section shall be directed towards site areas disturbed during construction as well as all off-site storage and parking areas maintained by the Contractor.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01160	Regulatory Requirements
01200	Measurement and Payment
01300	Submittals
02240	Dewatering

PART 2 PRODUCTS

2.1 STORM DRAIN INLET (CATCH BASIN) PROTECTION

Storm drain inlet protection shall be with a "silt sack," as manufactured by ACF Environmental or equal.

PART 3 EXECUTION

3.1 PREPARATION

Site preparation work shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture or other unsatisfactory conditions prevail, the work shall be stopped.

3.2 BEST MANAGEMENT PRACTICES (BMPS)

All areas or drainage ways downstream of the construction site shall have Best Management Practices (BMPs) installed prior to the beginning of any clearing activities. Runoff from cleared or disturbed area shall be directed through the BMPs. Disturbed ground shall be stabilized at the end of each work day.

Permanent soil stabilization and erosion and sedimentation control shall be implemented upon reaching finish grade. Slope protection shall be immediately implemented upon any soils showing signs of erosion. This shall be done in a manner approved by the Owner.

All BMPs shall be inspected, maintained and kept in a condition sufficient to provide effective erosion and sedimentation control at all times. The site shall be inspected to ensure the BMPs are properly located, constructed and operating as designed during the first storm. Any necessary adjustments or repairs shall be made immediately and be approved by the Owner.

All BMPs shall be removed no later than 30 consecutive calendar days after final site stabilization has been achieved as determined by the Owner. BMPs such as storm drain inlet protection, straw bales, silt fences and supports and plastic coverings shall be removed and properly disposed of offsite by the Contractor. Areas disturbed by removal of these BMPs shall be immediately stabilized in a manner approved by the Owner.

***** END OF SECTION *****

SECTION 02500

WATER DISTRIBUTION

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes water pipe, fittings and accessories described herein and as required for a complete installation as shown on the Plans.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01200	Measurement and Payment
01300	Submittals
01400	Quality Control
02240	Dewatering

PART 2 PRODUCTS

2.1 GENERAL

All materials delivered to the job site shall be new, free from defects, and marked to identify the material, class, and other appropriate data such as thickness for piping.

Acceptance of materials shall be subject to inspection of the complete product.

All water piping shall be certified under NSF 61 for potable water use.

2.2 METER SETTERS

Meter setters shall be Ford with the type and style noted on the Plans or approved equal. Included as a part of the meter installation shall be the furnishing and installation of the meter box complete with lid, set flush with the existing grade of the lot in the designated location near the property line, where indicated on the Plans.

2.3 SERVICE PIPE COUPLINGS

Service pipe couplings shall be pack joint for HDPE pipe by flare copper or female copper thread, as applicable, as manufactured by the Ford Meter Box Co., Inc., or equal.

PART 3 INSTALLATION

3.1 PIPE HANDLING

Valves and fittings shall be stored on pallets or similar materials to keep them off the ground and prevent dirt and debris from entering them.

3.2 EXCAVATION

All earthwork, excavation, bedding, backfill and compaction shall meet the requirements of Section 02300.

3.3 DEWATERING

Dewatering of excavations, if necessary, shall meet the requirements of Section 02240.

3.4 CUTTING PIPE

Whenever it becomes necessary to cut a length of pipe, the cut shall be made by abrasive saw or by a special pipe cutter. Pipe ends shall be square with the longitudinal axis of the pipe and shall be reamed and otherwise smoothed so that good connections can be made.

The Contractor shall have the approval from the Owner and notification shall be given to the Owner before any pipe cutting on existing water mains or services will be allowed. The Contractor shall comply with all the conditions established by the Owner. The Contractor shall give the Owner a minimum notice of 48 hours before cutting any water main or service. No pipe cutting will be allowed on holidays or weekends, unless specifically agreed to by the Owner.

3.5 CONNECTION TO EXISTING SYSTEM

The Contractor shall notify (i.e. door hangers) all of the Owner's customers who will experience a scheduled service interruption. The notices shall be hand delivered not less than 48 hours or more than 72 hours before the scheduled "shut down."

3.6 SERVICE LINES

Service lines between the main and the property line shall be placed at a trench depth sufficient to maintain a 3-foot cover over the top of the service line for its full length, taking into consideration the final finished grade of the proposed street and the final finished grade of any storm ditches.

Upon completion of each service line as indicated herein, the Contractor shall flush the service line to remove the debris that may interfere with the future meter installation and further verify that the service line has full pressure and flow to the meter box.

3.7 WATER PIPE DISINFECTION

During the process of sterilizing, all appurtenances shall be operated to ensure complete contact.

All closure fittings shall be swabbed with a very strong chlorine solution at least as strong as liquid household bleach (5 to 6 percent chlorine).

The cost of disposal of water used for disinfection shall be borne by the Contractor.

Only the Owner's staff will be allowed to operate existing and new tie-in valves. The Contractor's personnel are expressly forbidden to operate any valve on any section of line which is part of the Owner's potable water system.

***** END OF SECTION *****

SECTION 02511

CONNECTION TO EXISTING SYSTEM

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the connection of pipelines being constructed under this project to existing water mains as shown on the Plans and as specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01200	Measurement and Payment
15050	Piping Systems

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

The location, type and size of existing facilities have been determined from available records and are approximate. It is anticipated that connections to these existing facilities may be made, in general, as shown on the Plans except adjustments may be required for vertical and horizontal alignment.

It shall be the responsibility of the Contractor to determine the exact location and ascertain the type and size of the existing facilities prior to starting work on each connection and to provide any alternations as required in the connection detail.

Connections to existing facilities shall be made with the use of fittings, valves, flexible couplings, solid sleeves, shackling and other miscellaneous fittings, and thrust blocks as shown on the or with additional pipe or fittings as approved by the Owner and as indicated in Piping Systems to connect the new construction under this Project to the existing pipelines.

All pipe and fittings used for the connection shall be clean and disinfected with a minimum 5 percent chlorinated solution immediately prior to making said connection. The Contractor shall take extra precautions to ensure the tightness of the connections, nuts, and bolts. The existing water main shall be placed back into service by the Owner and the connection observed by the Owner prior to backfilling the pipe.

All valves shall be operated by Owner personnel only. Where it is necessary to shut off the existing mains to make a connection, the Contractor shall notify the Owner and all water customers affected 48 hours in advance of such shut off, and the Owner will shut off the mains. Once the water has been shut off, the Contractor shall diligently pursue the connection to completion so that the time required for the shut off is held to a minimum.

All connections to existing mains shall be completed the same day as they are started. The Contractor shall time its operations so that the water will not be shut off overnight or over weekends or during holidays.

***** END OF SECTION *****

SECTION 02700

GRAVEL MATERIALS

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the various types of granular materials that are to be used in trenches and other excavations as shown on the Plans and as specified herein.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01200	Measurement and Payment
01300	Submittals
02300	Earthwork

1.3 SUBMITTALS

The Contractor shall provide certificates of laboratory tests in accordance with Section 01300, indicating particle size distribution for review for each type of granular material furnished and proctor test reports for all material to be placed as pipe bedding material, trench backfill, backfill under and around structures and underneath crushed surfacing and asphalt concrete pavements.

The certificates and proctor test reports shall be provided to the Owner at least 5 calendar days prior to placement.

PART 2 PRODUCTS

2.1 GRAVEL BACKFILL FOR PIPE BEDDING

Gravel backfill for pipe bedding shall meet the requirements of Section 9-03.12(3) of the WSDOT Standard Specifications.

2.2 BANK RUN GRAVEL FOR TRENCH BACKFILL

Bank run gravel for trench backfill shall be free from organic matter or other deleterious materials and in conformance with Section 9-03.19 of the WSDOT Standard Specifications.

2.3 CRUSHED SURFACING

Crushed surfacing base course and top course shall conform to Section 9-03.9(3) of the WSDOT Standard Specifications.

2.4 MISCELLANEOUS GRAVEL

If the Plans call for a gravel that is not herein specified than the gravel shall conform to the type of gravel called for as per the WSDOT Specifications.

PART 3 EXECUTION

3.1 GRAVEL BACKFILL FOR PIPE BEDDING

Bedding material shall be placed simultaneously on both sides of the pipe for the full width of the trench in lifts not exceeding 6 inches. To assure uniform support, the material shall be carefully worked underneath the pipe haunches with a tool capable of preventing the formation of void spaces around the pipe. In the event the Contractor overexcavates the pipe trench, or if the width of the pipe trench becomes wider than the pay limit shown on the Plans, all material so placed shall be at the Contractor's sole expense.

3.2 BANK RUN GRAVEL FOR TRENCH BACKFILL

Bank run gravel for trench backfill shall be used where excavated material is unsuitable or unavailable for the backfill of trenches as approved by the Owner.

In the event the Contractor overexcavates the pipe trench, or if the width of the pipe trench becomes wider than the pay limit shown on the Plans, all material so placed shall be at the Contractor's sole expense.

3.3 CRUSHED SURFACING

Crushed surfacing base course and/or top course shall be placed underneath asphalt paving, to the lines and grades shown on the Plans or as required by the Plans and shall be compacted to a dense, unyielding state of at least 95 percent of the maximum dry density, using the modified Proctor, per ASTM D1557.

3.4 MISCELLANEOUS GRAVEL

Miscellaneous gravel shall be installed per the Plans.

***** END OF SECTION *****

SECTION 02740

HOT MIX ASPHALT AND ASPHALT TREATED BASE PAVING

PART 1 GENERAL

1.1 SCOPE

The work in this section shall be accomplished in accordance with the Standard Specifications for Road, Bridge and Municipal Construction, 2018 edition, as issued by the Washington State Department of Transportation (WSDOT) and the American Public Works Association (APWA), Washington State Chapter (hereafter "Standard Specifications"). Delete section 5-04 of the Standard Specifications, with the exception of 5-04.2(1), and replace it with the following:

The work specified in this Section includes providing and placing one or more layers of plant-mixed hot mix asphalt (HMA) on a prepared foundation or base in accordance with these Specifications and the lines, grades, thicknesses, and typical cross-sections shown in the Plans. The manufacture of HMA may include warm mix asphalt (WMA) processes in accordance with these Specifications. WMA processes include organic additives, chemical additives, and foaming.

This work also consists of adjusting castings to grade, furnishing and installing temporary HMA per the details in the Contract Plans.

The Work shall also consist of one or more courses of asphalt treated base (ATB) placed on the Subgrade in accordance with these Specifications and in conformity with the lines, grades, thicknesses, and typical cross-sections shown in the Plans or as staked.

HMA shall be composed of asphalt binder and mineral materials as may be required, mixed in the proportions specified to provide a homogeneous, stable, and workable mixture.

ATB shall be composed of a compacted course of base material which has been weatherproofed and stabilized by treatment with an asphalt binder.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01200	Measurement and Payment
01300	Submittals
01400	Quality Control
02300	Earthwork
02700	Gravel Materials

1.3 SUBMITTALS

A. MIX DESIGN – OBTAINING PROJECT APPROVAL

1. ESALs

The number of ESALs for the design and acceptance of the HMA shall be <0.3 million.

Commercial HMA shall be an HMA Cl. 1/2" PG 58H-22 design mix or HMA Cl. 3/8" PG 58H-22**.**

No paving shall begin prior to the approval of the mix design by the Engineer.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Project Engineer. Sampling and testing of HMA mixture accepted by commercial evaluation will be at the option of the Project Engineer.

Commercial Evaluation Mix Design Approval of a mix design for "Commercial Evaluation" will be based on a review of a Mix Design from the current WSDOT QPL. At the discretion of the Engineer, agencies may accept verified mix designs older than 12 months from the original verification date with a certification from the Contractor that the materials and sources are the same as those shown on the original mix design. Testing of the HMA by the Contracting Agency for mix design approval is not required.

Using Warm Mix Asphalt Processes. The Contractor may elect to use additives that reduce the optimum mixing temperature or serve as a compaction aid for producing HMA. Additives include organic additives, chemical additives and foaming processes. The use of Additives is subject to the following:

- Do not use additives that reduce the mixing temperature more than allowed in subsection 3.3 F. in the production of mixtures.
- Before using additives, obtain the Engineer's approval using WSDOT Form 350-076 to describe the proposed additive and process.

PART 2 PRODUCTS

2.1 HMA PAVEMENT

HMA pavement, Commercial HMA, HMA Cl. 1/2" PG 58H-22 or HMA Cl. 3/8" PG 58H-22.

A. MATERIALS

Materials shall meet the requirements of the following sections of the Standard Specifications:

Asphalt Binder	9-02.1(4)
Cationic Emulsified Asphalt	9-02.1(6)
Anti-Stripping Additive	9-02.4
HMA Additive	9-02.5
Aggregates	9-03.8
Recycled Asphalt Pavement	9-03.8(3)B
Mineral Filler	9-03.8(5)
Recycled Material	9-03.21
Portland Cement	9-01
Sand	9-03.1(2).
(As noted in subsection 3.3D.1. for crack sealing)	
Joint Sealant	9-04.2
Foam Backer Rod	9-04.2(3)A

The Contract documents may establish that the various mineral materials required for the manufacture of HMA will be furnished in whole or in part by the Contracting Agency. If the documents do not establish the furnishing of any of these mineral materials by the Contracting Agency, the Contractor shall be required to furnish such materials in the amounts required for the designated mix. Mineral materials include coarse and fine aggregates, and mineral filler.

The Contractor may choose to utilize recycled asphalt pavement (RAP) in the production of HMA. The RAP may be from pavements removed under the Contract, if any, or pavement material from an existing stockpile.

The Contractor may use up to 20 percent RAP by total weight of HMA. The asphalt content and gradation test data shall be reported to the Contracting Agency when submitting the mix design for approval on the

QPL. The Contractor shall include the RAP as part of the mix design as defined in these Specifications.

The grade of asphalt binder shall be as required by the Contract. Blending of asphalt binder from different sources is not permitted.

The Contractor may only use warm mix asphalt (WMA) processes in the production of HMA with 20 percent or less RAP by total weight of HMA. The Contractor shall submit to the Engineer for approval the process that is proposed and how it will be used in the manufacture of HMA.

Production of aggregates shall comply with the requirements of Section 3-01 of the Standard Specifications.

Preparation of stockpile site, the stockpiling of aggregates, and the removal of aggregates from stockpiles shall comply with the requirements of Section 3-02 of the Standard Specifications.

B. HMA TOLERANCES AND ADJUSTMENTS

1. Job Mix Formula (JFM) Tolerances

After the JMF is determined as required in subsection 3.6A. The constituents of the mixture at the time of acceptance shall conform to the following tolerances:

Aggregate, percent passing	Commercial Evaluation
1", 3/4", 1/2", and 3/8" sieves	±8%
U.S. No. 4 sieve	±8%
U.S. No. 8 sieve	±8%
U.S. No. 200 sieve	±3.0%
Asphalt Binder	±0.7%

These tolerance limits constitute the allowable limits as described in Standard Specification Section 1-06.2. The tolerance limit for aggregate shall not exceed the limits of the control points section, except the tolerance limits for sieves designated as 100 percent passing will be 99-100. The tolerance limits on sieves shall only apply to sieves with control points.

PART 3 EXECUTION

3.1 GENERAL

Where paving occurs on a facility, the Contractor shall maintain access to the facility at all times. The Contractor shall provide 1-week notification to the Contracting Agency prior to paving and shall coordinate all work with the Contracting Agency to ensure their paving plan does not interfere with the Contracting Agency's on-going operations.

When paving occurs on a roadway open to traffic, the requirements of subsection 3.3B. apply.

The Contractor shall provide, place and maintain all temporary markings and signage as required to warn and direct facility traffic as necessary during their paving operations.

3.2 HMA PLACEMENT

A. WEATHER LIMITATIONS

Do not place HMA for wearing course on any Traveled Way beginning October 1st through March 31st of the following year without written concurrence from the Engineer.

Do not place HMA on any wet surface, or when the average surface temperatures are less than those specified below, or when weather conditions otherwise prevent the proper handling or finishing of the HMA.

Minimum Surface Temperature for Paving

Compacted Thickness (Feet)	Wearing Course	Other Courses
Less than 0.10	55 degrees F	45 degrees F
0.10 to .20	45 degrees F	35 degrees F
More than 0.20	35 degrees F	35 degrees F

B. PAVING UNDER TRAFFIC

When the Roadway being paved is open to traffic, the requirements of this Section shall apply.

The Contractor shall keep intersections open to traffic at all times except when paving the intersection or paving across the intersection. During such time, and provided that there has been an advance warning to the

public, the intersection may be closed for the minimum time required to place and compact the mixture. In hot weather, the Engineer may require the application of water to the pavement to accelerate the finish rolling of the pavement and to shorten the time required before reopening to traffic.

Before closing an intersection, advance warning signs shall be placed and signs placed marking the detour or alternate route.

During paving operations, temporary pavement markings shall be maintained throughout the project. Temporary pavement markings shall be installed on the Roadway prior to opening to traffic. Temporary pavement markings shall be in accordance with Standard Specifications Section 8-23.

All costs in connection with performing the Work in accordance with these requirements shall be included in the unit Contract prices for the various Bid items involved in the Contract.

C. EQUIPMENT

1. Mixing Plant

Plants used for the preparation of HMA shall conform to the following requirements:

a. Equipment for Preparation of Asphalt Binder

Tanks for the storage of asphalt binder shall be equipped to heat and hold the material at the required temperatures. The heating shall be accomplished by steam coils, electricity, or other approved means so that no flame shall be in contact with the storage tank. The circulating system for the asphalt binder shall be designed to ensure proper and continuous circulation during the operating period. A valve for the purpose of sampling the asphalt binder shall be placed in either the storage tank or in the supply line to the mixer.

b. Thermometric Equipment

An armored thermometer, capable of detecting temperature ranges expected in the HMA mix, shall be fixed in the asphalt binder feed line at a location near the charging valve at the mixer unit. The thermometer location shall be convenient and safe for access by Inspectors. The plant

shall also be equipped with an approved dial-scale thermometer, a mercury actuated thermometer, an electric pyrometer, or another approved thermometric instrument placed at the discharge chute of the drier to automatically register or indicate the temperature of the heated aggregates. This device shall be in full view of the plant operator.

c. Heating of Asphalt Binder

The temperature of the asphalt binder shall not exceed the maximum recommended by the asphalt binder manufacturer nor shall it be below the minimum temperature required to maintain the asphalt binder in a homogeneous state. The asphalt binder shall be heated in a manner that will avoid local variations in heating. The heating method shall provide a continuous supply of asphalt binder to the mixer at a uniform average temperature with no individual variations exceeding 25 degrees F. Also, when a WMA additive is included in the asphalt binder, the temperature of the asphalt binder shall not exceed the maximum recommended by the manufacturer of the WMA additive.

2. Hauling Equipment

Trucks used for hauling HMA shall have tight, clean, smooth metal beds and shall have a cover of canvas or other suitable material of sufficient size to protect the mixture from adverse weather. Whenever the weather conditions during the work shift include, or are forecast to include, precipitation or an air temperature less than 45 degrees F or when time from loading to unloading exceeds 30 minutes, the cover shall be securely attached to protect the HMA.

The Contractor shall provide an environmentally benign means to prevent the HMA mixture from adhering to the hauling equipment. Excess release agent shall be drained prior to filling hauling equipment with HMA. Petroleum derivatives or other coating material that contaminate or alter the characteristics of the HMA shall not be used. For live bed trucks, the conveyer shall be in operation during the process of applying the release agent.

3. Pavers

HMA pavers shall be self-contained, power-propelled units, provided with an internally heated vibratory screed and shall be capable of spreading and finishing courses of HMA plant mix material in lane widths required by the paving section shown in the Plans.

The HMA paver shall be in good condition and shall have the most current equipment available from the manufacturer for the prevention of segregation of the HMA mixture installed, in good condition, and in working order. The equipment certification shall list the make, model, and year of the paver and any equipment that has been retrofitted.

The screed shall be operated in accordance with the manufacturer's recommendations and shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, segregating, or gouging the mixture. A copy of the manufacturer's recommendations shall be provided upon request by the Contracting Agency. Extensions will be allowed provided they produce the same results, including ride, density, and surface texture as obtained by the primary screed. Extensions without augers and an internally heated vibratory screed shall not be used in the Traveled Way.

When specified in the Contract, reference lines for vertical control will be required. Lines shall be placed on both outer edges of the Traveled Way of each Roadway. Horizontal control utilizing the reference line will be permitted. The grade and slope for intermediate lanes shall be controlled automatically from reference lines or by means of a mat referencing device and a slope control device. When the finish of the grade prepared for paving is superior to the established tolerances and when, in the opinion of the Engineer, further improvement to the line, grade, cross-section, and smoothness can best be achieved without the use of the reference line, a mat referencing device may be substituted for the reference line. Substitution of the device will be subject to the continued approval of the Engineer. A joint matcher may be used subject to the approval of the Engineer. The reference line may be removed after the completion of the first course of HMA when approved by the Engineer. Whenever the Engineer determines that any of these methods are failing to provide the necessary vertical control, the reference lines will be reinstalled by the Contractor.

The Contractor shall furnish and install all pins, brackets, tensioning devices, wire, and accessories necessary for satisfactory operation of the automatic control equipment.

If the paving machine in use is not providing the required finish, the Engineer may suspend Work as allowed by Standard Specification Section 1-08.6. Any cleaning or solvent type liquids spilled on the pavement shall be thoroughly removed before paving proceeds.

4. Rollers

Rollers shall be of the steel wheel, vibratory, oscillatory, or pneumatic tire type, in good condition and capable of reversing without backlash. Operation of the roller shall be in accordance with the manufacturer's recommendations. When ordered by the Engineer for any roller planned for use on the project, the Contractor shall provide a copy of the manufacturer's recommendation for the use of that roller for compaction of HMA. The number and weight of rollers shall be sufficient to compact the mixture in compliance with the requirements of subsection 3.3J. The use of equipment that results in crushing of the aggregate will not be permitted. Rollers producing pickup, washboard, uneven compaction of the surface, displacement of the mixture or other undesirable results shall not be used.

D. PREPARATION OF TREATED SURFACES FOR HMA

A treated surface includes cement concrete, asphalt concrete, brick, seal coat, bituminous surface treatment and cement treated base. When the treated surface or old base is irregular, the Contractor shall bring it to a uniform grade and cross-section as shown on the Plans or approved by the Engineer.

Preleveling of uneven or broken treated surfaces over which HMA is to be placed may be accomplished by using an asphalt paver, a motor patrol grader, or by hand raking, as approved by the Engineer.

Compaction of preleveling HMA shall be to the satisfaction of the Engineer and may require the use of small steel wheel rollers, plate compactors, or pneumatic rollers to avoid bridging across preleveled areas by the compaction equipment. Equipment used for the compaction of preleveling HMA shall be approved by the Engineer.

Before construction of HMA on an existing paved surface, the entire surface of the pavement shall be clean. All fatty asphalt patches, grease drippings, and other objectionable matter shall be entirely removed from the existing pavement.

All treated surfaces over which HMA is to be placed shall be thoroughly cleaned of dust, soil, pavement grindings, and other foreign matter. All holes and small depressions shall be filled with an appropriate class of HMA. The surface of the patched area shall be leveled and compacted thoroughly. Prior to the application of tack coat, or paving, the condition of the surface shall be approved by the Engineer.

A tack coat of asphalt shall be applied to all treated surfaces on which any course of HMA is to be placed or abutted. Tack coat shall be uniformly applied to cover the treated surface with a thin film of residual asphalt free of streaks and bare spots at a rate between 0.02 and 0.10 gallons per square yard of retained asphalt. The rate of application shall be approved by the Engineer. A heavy application of tack coat shall be applied to all joints. For Roadways open to traffic, the application of tack coat shall be limited to surfaces that will be paved during the same working shift. The spreading equipment shall be equipped with a thermometer to indicate the temperature of the tack coat material.

Equipment shall not operate on tacked surfaces until the tack has broken and cured. If the Contractor's operation damages the tack coat it shall be repaired prior to placement of the HMA.

The tack coat shall be CSS-1, or CSS-1h emulsified asphalt. The CSS-1 and CSS-1h emulsified asphalt may be diluted once with water at a rate not to exceed one part water to one part emulsified asphalt. The tack coat shall have sufficient temperature such that it may be applied uniformly at the specified rate of application and shall not exceed the maximum temperature recommended by the emulsified asphalt manufacturer.

1. Crack Sealing

   When the Proposal includes a pay item for crack sealing, seal all cracks 1/4 inch in width and greater.

   a. Cleaning

      Ensure that cracks are thoroughly clean, dry and free of all loose and foreign material when filling with crack sealant material. Use a hot compressed air lance to dry and warm the pavement surfaces within the crack immediately prior

to filling a crack with the sealant material. Do not overheat pavement. Do not use direct flame dryers. Routing cracks is not required.

b. Sand Slurry

For cracks that are to be filled with sand slurry, thoroughly mix the components and pour the mixture into the cracks until full. Add additional CSS-1 cationic emulsified asphalt to the sand slurry as needed for workability to ensure the mixture will completely fill the cracks. Strike off the sand slurry flush with the existing pavement surface and allow the mixture to cure. Top off cracks that were not completely filled with additional sand slurry. Do not place the HMA overlay until the slurry has fully cured.

The sand slurry shall consist of approximately 20 percent CSS-1 emulsified asphalt, approximately 2 percent portland cement, water (if required), and the remainder clean Class 1 or 2 fine aggregate per Standard Specification Section 9-03.1(2). The components shall be thoroughly mixed and then poured into the cracks and joints until full. The following day, any cracks or joints that are not completely filled shall be topped off with additional sand slurry. After the sand slurry is placed, the filler shall be struck off flush with the existing pavement surface and allowed to cure. The HMA overlay shall not be placed until the slurry has fully cured. The requirements of Standard Specification Section 1-06 will not apply to the portland cement and sand used in the sand slurry.

In areas where HMA will be placed, use sand slurry to fill the cracks.

In areas where HMA will not be placed, fill the cracks as follows:

- Cracks 1/4 inch to 1 inch in width – fill with hot pressure fed sealant.
- Cracks greater than 1 inch in width – fill with sand slurry.

c. Hot Pressure Fed Sealant

For cracks that are to be filled with hot poured sealant, apply the material in accordance with these requirements and the manufacturer's recommendations. Furnish a Type 1 Working Drawing of the manufacturer's product information and recommendations to the Engineer prior to the start of work, including the manufacturer's recommended heating time and temperatures, allowable storage time and temperatures after initial heating, allowable reheating criteria, and application temperature range. Confine hot poured sealant material within the crack. Clean any overflow of sealant from the pavement surface. If, in the opinion of the Engineer, the Contractor's method of sealing the cracks with hot pressure fed sealant results in an excessive amount of material on the pavement surface, stop and correct the operation to eliminate the excess material. Pouring sealant is not an acceptable method.

2. Crack Sealing Areas Prior to Paving

In areas where HMA will be placed, use sand slurry to fill the cracks.

3. Crack Sealing Areas Not to be Paved

In areas where HMA will not be placed, fill the cracks as follows:

a. Cracks 1/4 inch to 1 inch in width - fill with hot pressure fed sealant.

b. Cracks greater than 1 inch in width – fill with sand slurry.

4. Pavement Repair

The Contractor shall excavate pavement repair areas and shall backfill these with HMA in accordance with the details shown in the Plans and as marked in the field. The Contractor shall conduct the excavation operations in a manner that will protect the pavement that is to remain. Pavement not designated to be removed that is damaged as a result of the Contractor's operations shall be repaired by the Contractor to the satisfaction of the Engineer at no cost to the Contracting Agency. The Contractor shall excavate only within one lane at a time unless approved otherwise by the Engineer. The Contractor shall not excavate more

area than can be completely finished during the same shift, unless approved by the Engineer.

Unless otherwise shown in the Plans or determined by the Engineer, excavate to a depth of 1.0 feet. The Engineer will make the final determination of the excavation depth required. The minimum width of any pavement repair area shall be 40 inches unless shown otherwise in the Plans. Before any excavation, the existing pavement shall be sawcut or shall be removed by a pavement grinder. Excavated materials will become the property of the Contractor and shall be disposed of in a Contractor-provided site off the Right of Way or used in accordance with Standard Specifications Sections 2-02.3(3) or 9-03.21.

Asphalt for tack coat shall be required as specified in subsection D. A heavy application of tack coat shall be applied to all surfaces of existing pavement in the pavement repair area.

Placement of the HMA backfill shall be accomplished in lifts not to exceed 0.35-foot compacted depth. Lifts that exceed 0.35 foot of compacted depth may be accomplished with the approval of the Engineer. Each lift shall be thoroughly compacted by a mechanical tamper or a roller.

E. PRODUCING/STOCKPILING AGGREGATES AND RAP

Aggregates and RAP shall be stockpiled according to the requirements of Standard Specifications Section 3-02. Sufficient storage space shall be provided for each size of aggregate and RAP. Materials shall be removed from stockpile(s) in a manner to ensure minimal segregation when being moved to the HMA plant for processing into the final mixture. Different aggregate sizes shall be kept separated until they have been delivered to the HMA plant.

F. MIXING

After the required amount of mineral materials, asphalt binder, recycling agent and anti-stripping additives have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials is ensured.

When discharged, the temperature of the HMA shall not exceed the optimum mixing temperature by more than 25 degrees F as shown on the reference mix design report or as approved by the Engineer. Also, when a

WMA additive is included in the manufacture of HMA, the discharge temperature of the HMA shall not exceed the maximum recommended by the manufacturer of the WMA additive. A maximum water content of 2 percent in the mix, at discharge, will be allowed providing the water causes no problems with handling, stripping, or flushing. If the water in the HMA causes any of these problems, the moisture content shall be reduced as directed by the Engineer.

Storing or holding of the HMA in approved storage facilities will be permitted with approval of the Engineer, but in no event shall the HMA be held for more than 24 hours. HMA held for more than 24 hours after mixing shall be rejected. Rejected HMA shall be disposed of by the Contractor at no expense to the Contracting Agency. The storage facility shall have an accessible device located at the top of the cone or about the third point. The device shall indicate the amount of material in storage. No HMA shall be accepted from the storage facility when the HMA in storage is below the top of the cone of the storage facility, except as the storage facility is being emptied at the end of the working shift.

Recycled asphalt pavement (RAP) utilized in the production of HMA shall be sized prior to entering the mixer so that a uniform and thoroughly mixed HMA is produced. If there is evidence of the RAP not breaking down during the heating and mixing of the HMA, the Contractor shall immediately suspend the use of the RAP until changes have been approved by the Engineer. After the required amount of mineral materials, RAP, new asphalt binder and asphalt rejuvenator have been introduced into the mixer the HMA shall be mixed until complete and uniform coating of the particles and thorough distribution of the asphalt binder throughout the mineral materials, and RAP is ensured.

G. SPREADING AND FINISHING

The mixture shall be laid upon an approved surface, spread, and struck off to the grade and elevation established. HMA pavers complying with subsection 3.3C. shall be used to distribute the mixture. Unless otherwise directed by the Engineer, the nominal compacted depth of any layer of any course shall not exceed the following:

HMA Class 1"	0.35 feet
HMA Class 3/4" and HMA Class 1/2" wearing course	0.30 feet
HMA Class 3/4" and HMA Class 1/2" other courses	0.35 feet
HMA Class 3/8" wearing course	0.25 feet
HMA Class 3/8" other courses	0.30 feet

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the paving may be done with other equipment or by hand.

When more than one job mix formula (JMF) is being utilized to produce HMA, the material produced for each JMF shall be placed by separate spreading and compacting equipment. The intermingling of HMA produced from more than one JMF is prohibited. Each strip of HMA placed during a work shift shall conform to a single JMF established for the class of HMA specified unless there is a need to make an adjustment in the JMF.

H. AGGREGATE ACCEPTANCE PRIOR TO INCORPORATION IN HMA

Sampling and testing of aggregates for HMA accepted by commercial evaluation will be at the option of the Engineer.

I. SURFACE SMOOTHNESS

The completed surface of all courses shall be of uniform texture, smooth, uniform as to crown and grade, and free from defects of all kinds. The completed surface of the wearing course of the following sections of Roadway shall not vary more than 1/4 inch from the lower edge of a 10-foot straightedge placed on the surface parallel to centerline on all Sections of roadway within the project limits that are posted less than 45 mph.

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

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

When deviations in excess of the above tolerances are found that result from a high place in the HMA, the pavement surface shall be corrected by one of the following methods:

1. Removal of material from high places by grinding with an approved grinding machine; or

2. Removal and replacement of the wearing course of HMA; or

3. By other method approved by the Engineer.

Correction of defects shall be carried out until there are no deviations anywhere greater than the allowable tolerances.

Deviations in excess of the above tolerances that result from a low place in the HMA and deviations resulting from a high place where corrective action, in the opinion of the Engineer, will not produce satisfactory results will be accepted with a price adjustment. The Engineer shall deduct from monies due or that may become due to the Contractor the sum of $500.00 for each and every section of single traffic lane 100 feet in length in which any excessive deviations described above are found.

J. SEALING PAVEMENT SURFACES

Apply a fog seal where shown in the plans. Construct the fog seal in accordance with Standard Specifications Section 5-02.3. Unless otherwise approved by the Engineer, apply the fog seal prior to opening to traffic.

K. HMA ROAD APPROACHES

HMA approaches shall be constructed at the locations shown in the Plans or where staked by the Engineer. The Work shall be performed in accordance with Section 3.3.

3.3 TEMPORARY PAVEMENT REPAIR

During the course of construction, it may be necessary to provide improved temporary vehicle and/or pedestrian access within the project limits. Such temporary access shall be provided by temporarily patching trench crossings or other areas with temporary HMA until such time as the permanent surface restoration is installed. Locations shall include those areas specifically indicated on the Plans, directed by the Engineer or as further specified herein. This material will be furnished, placed, compacted, and removed and wastehauled at various locations throughout the project. The trenches and/or subgrade shall be thoroughly compacted and brought to a smooth grade prior to placing the material. It shall be placed, maintained (daily), and removed and wastehauled by the Contractor. Typical compacted depth will be 4 inches. Temporary HMA and shall also be used around castings, after grinding, to provide a transition until final lift of HMA paving is installed.

3.4 HMA JOINTS

A. TRANSVERSE JOINTS

The Contractor shall conduct operations such that the placing of the top or wearing course is a continuous operation or as close to continuous as possible. Unscheduled transverse joints will be allowed and the roller may pass over the unprotected end of the freshly laid mixture only when the placement of the course must be discontinued for such a length of time that the mixture will cool below compaction temperature. When the Work is resumed, the previously compacted mixture shall be cut back to produce a slightly beveled edge for the full thickness of the course.

A temporary wedge of HMA constructed on a 20H:1V shall be constructed where a transverse joint as a result of paving or planing is open to traffic. The HMA in the temporary wedge shall be separated from the permanent HMA by strips of heavy wrapping paper or other methods approved by the Engineer. The wrapping paper shall be removed and the joint trimmed to a slightly beveled edge for the full thickness of the course prior to resumption of paving.

The material that is cut away shall be wasted and new mix shall be laid against the cut. Rollers or tamping irons shall be used to seal the joint.

B. LONGITUDINAL JOINTS

The longitudinal joint in any one course shall be offset from the course immediately below by not more than 6 inches nor less than 2 inches. All longitudinal joints constructed in the wearing course shall be located at a lane line or an edge line of the Traveled Way. A notched wedge joint shall be constructed along all longitudinal joints in the wearing surface of new HMA unless otherwise approved by the Engineer. The notched wedge joint shall have a vertical edge of not less than the maximum aggregate size or more than 1/2 of the compacted lift thickness and then taper down on a slope not steeper than 4H:1V. The sloped portion of the HMA notched wedge joint shall be uniformly compacted.

3.5 QUALITY CONTROL

A. HMA MIXTURE ACCEPTANCE

Acceptance of HMA shall be as provided under nonstatistical, or commercial evaluation.

Commercial evaluation will be used for Commercial HMA and for other classes of HMA in the following applications: sidewalks, road approaches, ditches, slopes, paths, trails, gores, prelevel, temporary pavement, and pavement repair. Other nonstructural applications of HMA accepted by commercial evaluation shall be as approved by the Engineer. Sampling and testing of HMA mix accepted by commercial evaluation will be at the option of the Engineer.

The mix design will be the initial JMF for the class of HMA. The Contractor may request a change in the JMF. Any adjustments to the JMF will require the approval of the Engineer and may be made in accordance with this section.

1. HMA Tolerances and Adjustments

   See Section 2.2 for Job Mix Formula Tolerances.

   a. Job Mix Formula Adjustments – An adjustment to the aggregate gradation or asphalt binder content of the JMF requires approval of the Engineer. Adjustments to the JMF will only be considered if the change produces material of equal or better quality and may require the development of a new mix design if the adjustment exceeds the amounts listed below.

      i. Aggregates – 2 percent for the aggregate passing the 1-1/2", 1", 3/4", 1/2", 3/8", and the No. 4 sieves, 1 percent for aggregate passing the No. 8 sieve, and 0.5 percent for the aggregate passing the No. 200 sieve. The adjusted JMF shall be within the range of the control points in Standard Specifications Section 9-03.8(6).

      ii. Asphalt Binder Content – The Engineer may order or approve changes to asphalt binder content. The maximum adjustment from the approved mix design for the asphalt binder content shall be 0.3 percent.

2. Mixture Acceptance – Commercial Evaluation

   If sampled and tested, HMA mix produced under Commercial Evaluation and having all constituents falling within the tolerance limits of the job mix formula shall be accepted at the unit Contract price with no further evaluation. When one or more constituents fall outside the commercial tolerance limits in the Job Mix

Formula shown in Section 2.2, the lot may be subject to rejection. When less than three sublots exist, backup samples of the existing sublots or samples from the street shall be tested to provide a minimum of three sets of results for evaluation.

B. HMA COMPACTION ACCEPTANCE

HMA mixture accepted by commercial evaluation and HMA constructed under conditions other than those listed above shall be compacted on the basis of a test point evaluation of the compaction train or by testing of roadway cores. Compaction of the HMA mixture to a minimum of 92 percent of the reference maximum density is required for acceptance.

1. HMA Compaction – General Compaction Requirements

Compaction shall take place when the mixture is in the proper condition so that no undue displacement, cracking, or shoving occurs. Areas inaccessible to large compaction equipment shall be compacted by other mechanical means. Any HMA that becomes loose, broken, contaminated, shows an excess or deficiency of asphalt, or is in any way defective, shall be removed and replaced with new hot mix that shall be immediately compacted to conform to the surrounding area.

The type of rollers to be used and their relative position in the compaction sequence shall generally be the Contractor's option, provided the specified densities are attained. Unless the Engineer has approved otherwise, rollers shall only be operated in the static mode when the internal temperature of the mix is less than 175 degrees F. Regardless of mix temperature, a roller shall not be operated in a mode that results in checking or cracking of the mat. Rollers shall only be operated in static mode on bridge decks.

2. HMA Commercial Evaluation Compaction

The location of the HMA compaction tests will be randomly selected by the Engineer.

Tests for the determination of the pavement density will be taken by the Contractor, in accordance with the required procedures for measurement by a nuclear density gauge or roadway cores, after completion of the finish rolling.

HMA mixture accepted by commercial evaluation shall be compacted on the basis of a test point evaluation of the compaction

train. The Contractor shall provide the RICE density test results for the HMA mixture, identifying the reference maximum density of the mix, prior to the first day of paving. The test point evaluation shall be performed by the Contractor, in accordance with instructions from the Engineer. The number of passes with an approved compaction train, required to attain a minimum of 92 percent of the reference maximum density, shall be used on all subsequent paving.

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

Alternatively, the HMA mixture accepted by commercial evaluation may be evaluated by testing of roadway cores taken after completion of the finish rolling, resulting in a minimum of 92 percent of the reference maximum density. Roadway cores for density shall be obtained by the Contractor in accordance with WSDOT SOP 734. The core diameter shall be 4-inches minimum, unless otherwise approved by the Engineer. Roadway cores will be tested by the Contractor in accordance with WSDOT FOP for AASHTO T 166. Core locations shall be outside of wheel paths and as determined by the Engineer

If the Contract includes the Bid item "Roadway Core" the cores shall be obtained by the Contractor in the presence of the Engineer on the same day the mix is placed and at locations designated by the Engineer.

C. REJECT WORK

1. Reject Work General

Work that is defective or does not conform to Contract requirements shall be rejected. The Contractor may propose, in writing, alternatives to removal and replacement of rejected material. Acceptability of such alternative proposals will be determined at the sole discretion of the Engineer.

2. Rejection by Contractor

The Contractor may, prior to sampling, elect to remove any defective material and replace it with new material. Any such new material will be sampled, tested, and evaluated for acceptance.

3. Rejection Without Testing (Mixture or Compaction)

The Engineer may, without sampling, reject any batch, load, or section of Roadway that appears defective. Material rejected before placement shall not be incorporated into the pavement. Any rejected section of Roadway shall be removed.

No payment will be made for the rejected materials or the removal of the materials unless the Contractor requests that the rejected material be tested.

Commercial Evaluation: If the Contractor elects to have the rejected material tested, a minimum of three representative samples shall be obtained and tested by the Contractor. Acceptance of rejected material will be based on conformance with the commercial evaluation tolerances in Section 2.2. If one or more of the mixture components are out of tolerance then, no payment will be made for the rejected material; in addition, the cost of sampling and testing shall be borne by the Contractor. If the material is rejected before placement and all of the mixture components are within the commercial evaluation tolerances, then compensation for the rejected material will be at the unit Contract price, with an addition of 25 percent of the unit Contract price added for the cost of testing, removal and disposal.

3.6 SAWCUTTING

Where directed in the field by the Contracting Agency, the Contractor shall make a neat vertical sawcut at the boundaries of the area to be removed. Care shall be taken during sawcutting so as to prevent damage to the existing HMA or cement concrete pavement, to remain in place. Any pavement or cement concrete surface that is damaged by the Contractor outside the area scheduled for removal due to the Contractor's operations or negligence shall be repaired or replaced to the Contracting Agency's satisfaction by the Contractor at no additional cost to the Contracting Agency.

All cuts shall be continuous, full depth, and shall be made with saws specifically equipped for this purpose. No skip cutting, wheel cutting or jack hammering will be allowed unless specifically approved otherwise in writing by the Contracting Agency. However, even if preapproved as a method of cutting, no payment will be made for this type of work, and it shall be considered incidental and included in the various unit contract and lump sum prices listed in the Proposal.

The location of all pavement cuts shall be preapproved by the Contracting Agency in the field before cutting commences.

All water and slurry material resulting from sawcutting operations shall not be allowed to enter the storm drainage or sanitary sewer system and shall be removed from the site and disposed of in accordance with the Washington State Department of Ecology regulations.

All existing pavement edges shall be saw cut back to sound material, in uniform lines immediately prior to paving operations. Any edges broken between the time of cutting and placement of new paving shall be recut to the satisfaction of the Contracting Agency at no additional cost to the Contracting Agency. All excess excavated materials shall be hauled to waste.

3.7 HMA TRENCH PATCH

This work shall consist of the preparation, placing and compaction of HMA above trench sections, in accordance with the details included on the plans and the requirements outlined herein. The work shall be in conformance with Section 3.3 herein unless specifically directed otherwise by the Contracting Agency.

The Contractor shall restore all paved surfaces excavated or disturbed to a condition acceptable to the Contracting Agency or the municipality having control of the road. The trench section shall be patched as indicated on the plans and in accordance with the following steps:

A. Crushed rock shall be installed to the top of the existing pavement. Crushed rock shall be installed in the trench section on a daily basis as required to maintain the existing pavement surface elevation. For areas that will be open to traffic, the Contractor shall inspect the condition of the temporary trench patch daily and maintain as directed by the Contracting Agency. Use of steel sheets to provide temporary trench protection for traffic is subject to Contracting Agency approval.

B. Crushed rock shall be removed to the depth of existing pavement or to the depth of the pavement section specified on the plans, whichever is thicker. The trench shall be paved to match the existing pavement surface. HMA trench patching shall be constructed by the Friday following pipe installation. All trench areas shall be patched and cleaned by close of work that day.

Before any HMA material is placed, all pavement cuts shall be trued so that marginal lines of the patch will form a rectangle with straight edges and vertical faces a minimum of 1 foot back from the maximum trench width.

The HMA shall be placed per subsection 3.3G., Spreading and Finishing. The HMA trench patch thickness shall match existing pavement thickness or the minimum pavement repair section indicated on the plans whichever is thicker.

Seal all joints per Section 3.5, HMA Joints.

3.8 PAVEMENT MARKINGS

In those areas where the proposed work causes existing pavement with striping and/or pavement markings to be removed, the Contractor shall not only replace the pavement, as noted herein, but shall also remark and restripe the new pavement so as to restore the new pavement to its former condition. No payment will be made for this type of work, and it shall be considered incidental and included in the various unit contract and lump sum prices listed in the Proposal.

Pavement markings shall conform to Standard Specification Section 8-22.2 and 8-22.3, and the latest edition and amendments thereto of the Manual on Uniform Traffic Control Devices (MUTCD) as adopted by the State of Washington, and shall be constructed as shown in the Plans except as modified herein.

Raised pavement markers shall conform to Standard Specifications Section 8-09.2 and 8-09.3.

3.9 ADJUSTING STRUCTURES TO GRADE

All utility castings and monuments within the existing and/or new pavement area shall be referenced by the Contractor prior to any pavement removal or planing. The Contractor shall keep a record of such references and submit a copy to the Contracting Agency.

Existing structures and new structures shall be adjusted to the finished grade as shown on the Plans and as further specified herein. Existing boxes, rings, grates, covers, and lids shall be reset in a careful and workmanlike manner to conform to the required grades.

The new and existing utility castings and monuments shall be adjusted to grade in the following manner:

As soon as the street has been paved past each structure or casting, the HMA mat shall be scored around the location of the structure or casting. After rolling has been completed and the mat has cooled, it shall be cut along the scored lines. The structure or casting shall then be raised to finished pavement grade and the annular spaces filled as indicated on the Plans. The Contractor shall install the pavement to give a smooth finished appearance. All covers, lids, frames, and grates shall be thoroughly cleaned.

After pavement is in place, all new pavement joints shall be sealed with a 6-inch-wide strip of hot asphalt sealer. A sand blanket shall be applied to the surface of the hot asphalt sealer immediately after the placement of the sealer to help alleviate the tracking of the asphalt. The sealer shall meet the requirements of the Standard Specifications Section 9-04.2(1).

***** END OF SECTION *****

SECTION 02900

LANDSCAPING

PART 1 GENERAL

1.1 SCOPE

The work specified in this Section includes the installation of all landscaping work as shown on the Plans and as specified herein. Landscaping activities shall include work both at the project location as well as any residential properties that are affected by construction activities.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01200	Measurement and Payment
01300	Submittals
02300	Earthwork

1.3 SUBMITTALS

A. SOIL ANALYSIS REPORTS

See Section 2.1 and 2.2 of this Specification.

B. SEED MIX

See Section 2.4 of this Specification.

1.4 QUALITY ASSURANCE

A. PLANT MATERIAL

Quality, size, and conditions as determined by standards set forth in the American Association of Nurserymen Standard ANSI Z60.1.

B. FERTILIZER

Conform to Washington State Department of Agriculture Laws and Federal Specification O-F-241D pertaining to commercial fertilizers.

C. SEED

Conform to the minimum standards for “certified” grade seed.

Furnished in standard container on which the following information is shown: seed name, lot number, net weight, percentage of purity, germination, weed seed and inert material.

Furnish to the Owner duplicate copies of a statement signed by the vendor, certifying that each lot of seed has been tested by a recognized seed testing laboratory within 6 months before the date of delivery on the Project.

Seed that is wet, moldy, or otherwise damaged in transit or storage will not be accepted.

1.5 GUARANTEE

A. GUARANTEE PERIOD

Guarantee work within this Specification for 2 years against all defects of materials and workmanship. The guarantee period begins after the date of Final Acceptance. Replace plants and seed areas not in normal healthy growing condition at the end of guarantee period. Replace with plants with identical species, size, and seed mix. Final Acceptance will be certified in writing by the Owner.

B. DEAD AND DISFIGURED PLANT MATERIAL

Any plant material that is 25 percent or more dead or disfigured shall be considered dead and must be replaced at no charge. A tree shall be considered dead when the main leader has died back or there is 25 percent of the crown dead. Plants shall be considered disfigured when excessive dead wood has been removed or when the symmetry, typical habit of growth, or sculptured form has been impaired by the removal of dead wood.

During the 2-year guarantee period, should any seed areas showing signs of failure such as dead or dying areas of grass or bare spots larger than 6-inch square, the Contractor shall repair or replace all deficient areas to the satisfaction of the Owner.

C. SEED PLANT REPLACEMENT

All plants are subject to one replacement only per item, and the Contractor shall submit, after each replacement period, a marked planting plan showing the exact location of each item replaced at that time. The owner may require the contractor to replace dead plants prior to the end of the

guarantee period at no additional cost. This applies only after Final Acceptance.

Replacements made by the Contractor shall be made in the same manner as specified for the original planting, and shall be done at no extra cost to the Owner.

Replace all trees, shrubs, and groundcovers and seed areas when plants are no longer in a satisfactory growing condition as determined by the Owner for the duration of the guarantee period. Make replacements within 10 working days of notification from the Owner.

D. ACCESS TO PROJECT SITE

Contractor has the right to enter upon the property for inspection and curative treatment of any materials needing such which are still under warranty during the entire guarantee period. The Owner must be notified at least 48 hours in advance of any corrective or curative treatment measures so as to arrange for convenient access to the area.

E. APPLICABLE CONDITIONS

The guarantee shall be applicable to any growing conditions through which plants of like kind could be expected to survive, and any deformity or cause of death which could be attributed to, or affected by, the physiological condition of the plant shall be deemed replaceable cause; however, this would not apply to plant losses due to abnormal weather conditions such as floods, excessive wind damage, drought, severe freezing or abnormal rains, as determined by the National Weather Service.

F. MAINTENANCE DURING GUARANTEE

It is expressly understood that the Contractor will be responsible, during the Guarantee Period, for normal landscape maintenance of the project. Maintenance of the landscape shall include, but not be limited to hand watering, mowing, weeding, monitoring and treating any disease and/or pest-problems, cultivating and any other maintenance requirements, per standard trade practices, to keep the plant materials in a normal healthy growing condition.

PART 2 MATERIALS

2.1 TOPSOIL

The topsoil shall consist of 67 percent sandy loam and 33 percent composted organic material by volume.

The soil shall meet the following requirements:

Soil shall be sandy loam or loamy sand consisting largely of sand, but with enough silt and clay present to give it a small amount of stability. Individual sand grains can be seen and felt readily. On squeezing in the hand when dry, it shall fall apart when the pressure is released; on squeezing when moist, it shall form a cast that does not only hold its shape when the pressure is released, but shall withstand careful handling without breaking.

The mixed soil shall meet the following gradation:

Screen Size	Percent Passing
1/2 inch	100
1/4 inch	95 – 100
#10	85 – 95
#30	60 – 75
#60	50 – 60
#100	20 – 30
#200	5 – 15

Shall have a pH range of 5.5 to 7.5. Soils indicated having a pH below 5.5 shall be treated with dolomitic limestone as necessary to attain this pH range. Soils having a pH greater than 7.5 shall be treated with sulfur as necessary to attain this pH range. The pH shall be determined by soil test.

Organic material shall consist of composted yard debris or organic waste material composted for a minimum of 3 months. Compost shall consist of 100 percent recycled content. In addition, the organic material shall have the following physical characteristics:

1. Shall pass a standard cress test for seed germination (90 percent germination compared to standard).

2. Shall have a pH from 5.5 to 7.5.

3. Shall have a maximum electrical conductivity of 3.0 ohms/cm.

4. Shall have a maximum carbon to nitrogen ratio of 40:1.

5. Shall be certified by the "Process to Further Reduce Pathogens" (PFRP) guideline for hot composting as established by the United States Environmental Protection Agency.

Submit a certified laboratory analysis from an accredited soils testing laboratory indicating the Material source and compliance with all planting soil Specifications to the Engineer for approval before delivery to the Project Site. The analysis shall be with a sample size of no less than 1 pound.

2.2 COMPOST

Composted material shall be derived from a Type 1 feedstock and produced by a facility in compliance with WAC 173-350-220. The compost shall meet Grade AA Compost as defined by Ecology's Interim Guidelines for Compost Quality (Publication #94-38, Revised November 1994). Compost material shall have 100 percent passing a 1/2-inch screen. The carbon to nitrogen ratio (C:N) of the compost shall be in the range of 20:1 to 35:1. Organic matter of the composted material shall be between 4 percent and 10 percent, and the moisture content shall be between 35 percent to 50 percent as determined by ASTM D 2974. The pH of the compost shall be within the range of 5.5 to 7.0 as determined by ASTM D 2976. The maximum electrical conductivity of composted material shall be 6 ohms/cm. Decomposed Organic Compost shall be mature as determined by US Composting Council stability test ratings referred to in the Ch 173-350 WAC. The product shall be tested within 6 months of proposed use.

2.3 ARBORIST WOOD CHIP MULCH

Clean recycled wood chip from tree-trimming, composting operations or wood reclamation operations and shall not contain elements in quantities that would be detrimental to plant life. The product shall be certified free of all plant parasitic organisms, viable weed seeds, heavy metals or parasitic residues.

2.4 SEEDING, FERTILIZING, AND MULCHING

All areas that have been cleared and grubbed, graded, and where restoration is required, shall receive seeding, fertilizing and mulching. These areas shall be leveled, acceptable to the Owner, existing topsoil broken up to a depth of 6 inches and hydroseeded. Graded areas shall receive 6 inches of Class A topsoil prior to hydroseeding. Native materials selected by the Engineer from material excavated for foundations and stockpiled on site shall be used for topsoil.

For those areas in which hydroseeding would be difficult, the Contractor may request approval from the Owner to hand-apply the hydroseeding mix. Approval

shall be granted for hand-application only after reviewing and approving the procedure that the Contractor recommends.

Seeding, fertilizing and mulching shall be installed using an approved-type hydroseeder.

The seed mixture shall have the following composition, proportion and quality:

Kind and Variety of Seed in Mixture	Percent By Weight	Minimum Percent of Pure Seed	Minimum Percent of Germination
Colonial Bent Grass (Highland or Astoria)	10%	9.8%	85%
Creeping Red Fescus (Illahee Rainier or Pennlawn)	40%	39.2%	90%
Perennial Rye Grass	30%	29.4%	90%
White Clover (Pre-inoculated)	20%	19.6%	90%
Maximum Percentage of Weed Seed	1.0%		
Maximum Inert and Other Crops	1.0%		

The seed shall be applied at a minimum rate of 120 pounds per acre.

A commercial fertilizer of the following formulation shall be furnished as specified, and all fertilizer shall be premixed prior to use on the job. The fertilizer shall be applied at the rate of 500 lbs. per acre.

Nitrogen (Inorganic) as N_2	Nitrogen (Organic) Ureaformaldehyde	Phosphorous as P_20_5	as K_20	Potassium lbs/Acre
10%	38%	20%	20%	500

Wood cellulose fiber mulch shall be applied at the rate of 2,000 pounds per acre.

2.5 PLANT MATERIALS

A. QUALITY

Genera, species, and variety; quantity, size, and conditions shall match existing plant materials such that they are replaced in-kind.

B. TREES, SHRUBS, AND GROUNDCOVER

All plants shall be nursery grown, or normal habit of growth, healthy, vigorous and free of disease, insect eggs and larvae. Plants shall not be

pruned prior to delivery. Plants shall have all leaders and buds intact. Grading of plant material and root ball/container sizes shall be in accordance with the code of standards of the American Landscape and Nursery Association. Names shall conform to accepted nomenclature in the nursery trade.

Trees with multiple leaders, unless specified, will be rejected. Trees with a damaged or crooked leader, bark abrasions, sunscald, disfiguring knots, insect damage, or cuts of limbs over 3/4 inch in diameter that are not completely closed will be rejected.

No less than 10 percent of each variety and/or species of plant delivered to the project shall be accurately labeled. Whether or not labeled, any plants, which do not conform to the Plant Schedule and/or the Plans shall be replaced immediately with appropriate plant type. Plant material labels shall be durable, legible labels stating the correct plant name.

Provide the number of plants shown on the Plans. Collected plant material is not acceptable. Plant material with weeds in the top of the rootballs or containers will be rejected.

Trees grown in fabric bags shall have a well-established root system reaching the sides of the fabric bag to maintain a firm ball when the fabric is removed, but shall not have excessive root growth encircling the fabric bag. Fabric bags shall be entirely removed prior to planting.

PART 3 EXECUTION

3.1 PRODUCT DELIVERY, STORAGE, AND HANDLING

A. DELIVERY

Deliver fertilizer and soil additives to the site in original unopened containers bearing manufacturer's guaranteed chemical analysis, weight, manufacturer's name, trademark, and conformance with state law.

Protect plant material during delivery to prevent damage to root ball, trunks, stems, or desiccation of leaves.

Transport plants in enclosed trucks. Large trees shall be totally wrapped to prevent damage and windburn. Provide adequate protection so that trunks are not scarred in transport and branches are not broken. Tree trunks shall be wrapped with protective covering prior to handling and loading. Covering shall be removed at the time of plant materials inspection at the job site.

B. HANDLING

Exercise care in handling, loading, unloading, and storing of plant materials. Plant materials damaged in any way shall be discarded and replaced with undamaged materials.

C. STORAGE

Protect plant materials from mechanical damage, wind, excessive sun, and drying out. If planting is delayed more than 4 hours after delivery, set plants in shade and keep roots moist by covering with mulch, soil or other acceptable means of retaining moisture.

Protect packaged materials from deterioration during storage.

3.2 SEED INSTALLATION

Seeding, fertilizing and mulching shall be installed in conformance with Sections 8-01 and 9-14 of the WSDOT Standard Specifications.

The seed materials will be applied in two applications. The first application shall consist of seed and a non-toxic tracer. The second application shall consist of a homogenous mixture of fertilizer and wood cellulose fiber mulch, and shall be uniformly applied over the seed within 48 hours of the seed application unless otherwise directed by the Owner.

When weather conditions are not conducive to satisfactory results from seeding operations, the Owner may order the work suspended and it shall be resumed only when the desired results are likely to be obtained.

Inspection is required for each area when seeding and fertilizing is complete, and again after mulching is complete.

Areas not receiving a uniform application of seeding at the specified rate as determined by the Engineer shall be reseeded at the Contractor's expense prior to mulching or payment.

3.3 SEEDED AREA SOIL PREPARATION

Verify that planting bed grades are in accordance with those indicated on the Plans before proceeding with work. Verify that soil conditions are satisfactory for soil preparation work.

Prepare soil no closer than 3 feet from existing tree trunks up to 6 inches in diameter; no closer than 4 feet from existing tree trunks up to 12 inches in diameter; no closer than 6 feet from existing tree trunks larger than 12 inches in diameter.

Loosen compacted soils to a depth of 12 inches. Rake and remove all material larger than 1-1/2 inches in diameter.

Place 2 inches of compost over existing soil, mix and till to a depth of 6 inches. This material shall be suitable topsoil from the site or imported material.

3.4 LANDSCAPE AREA SOIL PREPARATION

Verify that planting bed grades are in accordance with those indicated on the Plans before proceeding with work. Verify that soil conditions are satisfactory for soil preparation work.

Prepare soil no closer than 3 feet from existing tree trunks up to 6 inches in diameter; no closer than 4 feet from existing tree trunks up to 12 inches in diameter; no closer than 6 feet from existing tree trunks larger than 12 inches in diameter.

Loosen compacted soils to a depth of 12 inches. Rake and remove all material larger than 1-1/2 inches in diameter.

Place 2 inches of compost over existing soil, mix and till to a depth of 6 inches. Place additional 6 inches of topsoil on top of this throughout all buffer planting areas.

3.5 INSTALLATION OF PLANTS

Planting should occur in spring or fall of the year and when weather conditions are consistent with good horticultural practice. If container stock looks to be rootbound, slash roots vertically with a sharp knife along outside of ball in three places minimum before planting. Finish grade at plants, after planting and settling, shall afford positive drainage away from crown.

Set all trees, shrubs and groundcovers according to the Plans. Plant trees upright and face to give best appearance or relationship to adjacent public right-of-way or properties.

Excavate all planting holes twice the spread of the tree, shrub, or groundcover root ball or root system. Place 3 inches minimum lightly compacted layer of prepared topsoil under root system of each tree and shrub. Loosen planting hole subsurface to a depth of 4 to 6 inches prior to placement.

Loosen and remove from container as shown on the Plans. Pulling burlap from under balls will not be permitted on large and loose root balls. Cut off cleanly all broken or frayed roots.

Place and compact backfill soil consisting of topsoil carefully to avoid injury to roots, then fill all voids. When hole is nearly filled, completely fill with water and allow water to soak away. Fill holes to finish grade and prepare for other work indicated.

Provide all planting areas with uniform 2-inch layer of mulch over a properly cleaned and graded surface unless otherwise noted on the Plans.

All groundcover plant materials shall be installed continuous under all trees and shrubs as indicated on the Plans.

Fertilize all trees, shrubs and groundcover with Triple 14 slow-release fertilizer. Place fertilizer on surface of mulch around plant. Apply in quantities per manufacturer's specifications.

3.6 PROTECTION

All planting materials shall be properly protected against harm from normal weather conditions and the public by the Contractor until Final Acceptance. Maintenance of all the planted areas until Final Acceptance, shall include, but not be limited to, watering, mowing, weeding, and pruning as well as replacement of any plants that appear to be in distress. Tree stakes shall be kept secure at all times. Although planting should occur in spring or fall and when weather conditions are favorable, special planting techniques, defoliating, wilt proofing or spray misting may be required should unseasonable planting conditions occur. No work shall be performed in, over or adjacent to planting areas without approved protection and safeguards.

Plant losses due to abnormal weather conditions such as, floods, excessive wind, drought, severe freezing or abnormal rains; as determined by the National Weather Service shall not be the responsibility of the Contractor.

3.7 WEED CONTROL

The Contractor shall use extreme care to ensure chemicals remain within the designated areas. The use of chemical herbicides shall require the use of anti-drift and activating agents and a spray pattern indicator, unless otherwise allowed by the Owner.

All applications of post-emergent herbicides shall be made while green and growing tissue is present. Should unwanted vegetation reach the seed stage in violation of these Specifications, the Contractor shall physically remove and bag the seed heads. All physically removed vegetation and seed heads shall be disposed of offsite at no cost to the Owner.

The Contractor shall assume all responsibility for rendering any area unsatisfactory for planting by reason of chemical application. The Contractor shall replace, repair and pay for all damages caused by their negligence to the satisfaction of the Owner prior to final payment.

3.8 PEST CONTROL

The Contractor shall use extreme care to ensure chemicals remain within the designated areas. The use of spray chemical pesticides shall require the use of anti-drift and activating agents and a spray pattern indicator, unless otherwise allowed by the Owner.

The Contractor shall assume all responsibility for rendering any area unsatisfactory for planting by reason of chemical application. The Contractor shall replace, repair and pay for all damages caused by their negligence to the satisfaction of the Owner prior to final payment.

3.9 CONSTRUCTION ACCEPTANCE

Construction acceptance shall be subject to well-established trees, shrubs, groundcover, and seeded areas that fulfills the requirement of the approved Plans. The Contractor shall protect and care for all plantings until fully established and healthy. Care shall include equipment and labor necessary to provide sufficient and continuous watering of all seeded areas until final acceptance.

Final Acceptance of all landscaping work described in this Specification, with the exclusion of possible replacements of plant materials under the Guarantee, shall be made by the Owner to determine 100 percent completion of the Contract work. This review shall be made upon written request to the Owner no less than 48 hours prior to the anticipated date of inspection.

***** END OF SECTION *****

DIVISION 11

EQUIPMENT

SECTION 11680

WATER SERVICE METERS

PART 1 GENERAL

1.1 SCOPE OF WORK

The work shall include the installation of water service meters for the Owner's water utility. The project will consist of the replacement of 5/8-inch to 4-inch manual read water meters with new radio-read capable water meters as well as replacement boxes, risers and all work related to making the meter functional. Unless otherwise indicated, the Contractor shall procure the meters The Contractor is not responsible for verifying that the transmitter on each new meter is operable, only that the meter is installed per these specifications and is registering the movement of water through the meter. Where Owner furnished materials are used, the Contractor is responsible for using proper tools, equipment and workmanship to install these items and provide all necessary documentation as specified in this contract.

Note that the Contractor shall furnish all meters and registers.

A. ABBREVIATIONS

1. AMI

   Metering Infrastructure

2. FCC

   Communications Commission

3. MIU

   Interface Unit

B. DEFINITIONS

1. Meter Set

   Includes meter, encoder, register, and meter transmitter unit.

2. Meter Interface Unit or Endpoint

The equipment that transmits data from the meter register to the receiver.

3. Register

The device attached to the meter that registers and records flow data and transmits the meter data to the meter transmitter unit. The register shall be of the absolute encoder type.

4. Receiver

The fixed device that collects readings transmitted from the MIUs.

1.2 RELATED WORK SPECIFIED ELSEWHERE

Section	Item
01200	Measurement and Payment
02950	Site Restoration and Rehabilitation

1.3 SUBMITTALS

Submittal procedures are further specified in Section 01300.

The Owner's water system is shown on the Plans. An electronic version of a list of addresses will be provided to the selected contractor. The Plans indicate the locations of the Tribe's meters, new meters, and meters that are to be replaced.

A TECHNICAL SUBMITTALS

The Contractor shall provide the Engineer with three copies of the following submittals within 30 days of the Contract start date listed in the Notice to Proceed.

1. Equipment Submittals

Equipment submittals shall be provided for all equipment. The following minimum requirements shall be included for each piece of equipment:

a. Overall dimensions and weight.

b. Mounting arrangement and dimensions for MIUs and other system components.

c. Description of materials.

d. Location of electrical connections if any.

e. Rating data – Mechanical and Electrical as applicable.

f. List of any special tools and/or spare parts required and to be furnished, if any.

g. Any exceptions taken to the Specifications and detailed explanation why the exception is being taken.

B TEST RESULTS

The Contractor shall provide the Engineer with three copies of the following prior to substantial completion:

1. Factory Tests

All AMI system equipment shall be tested in the factory prior to shipment to verify proper operation and performance.

The Owner shall not accept equipment that does not pass factory testing.

2. Field Tests

The AMI system shall be tested in the field per Section 3.3. The Contractor shall submit the field test results to the Owner within five (5) calendar days of the time of completing the field test.

C OPERATION AND MAINTENANCE MANUAL

The following information shall be furnished for all items of equipment installed on the project requiring operational and/or maintenance procedures, and for any additional items indicated by the Engineer, prior to substantial completion.

1. AMI Equipment Drawings

Drawings shall be provided for each type of equipment and shall include exploded views for clarity, as necessary. Major components, connection points, and interface points shall be labeled with their part name.

2. AMI Operating Procedures

   Instructions shall consist of equipment manufacturer's recommended step-by-step procedures for starting and operating the AMI system.

3. AMI Equipment Preventive Maintenance Procedures

   These instructions shall consist of the equipment manufacturer's recommended steps and schedules for maintaining all equipment procured for this project.

4. Parts List

   This list shall consist of the generic title and identification number of each component part of the equipment.

5. Spare Part List

   This list shall consist of the manufacturer's recommendations of number and type of parts that should be stored by the Owner and any special storage precautions that may be required.

6. Software User's Manual

   Written instructions shall be included on using the meter reading system software provided. The instructions shall discuss all standard features of the software package and include contact information for questions.

The number of copies of final operations and maintenance materials to be submitted shall be determined by the Contractor's requirement plus two copies to be provided to the Engineer.

Only equipment and materials properly installed and operating in good order with approved Operational and Maintenance information will be recommended for acceptance in the final work.

1.4 PERFORMANCE REQUIREMENTS

The AMI system shall be designed to collect, transfer, store, and analyze water consumption data from the Owner's water service meters. The AMI system is comprised of Zenner Meter Interface Units (MIUs), or endpoints, located at each

meter that transmit readings to the central Receiver using each Transmitter Unit, and additional endpoints as needed, as a fixed-mesh communication network.

The AMI system shall be capable of performing the following functions in combination with endpoints located at the meter:

- Read each AMI equipped meter within the system.
- Provide reads for all AMI-equipped meters on a scheduled basis and when prompted by Facility Personnel.
- Discover and integrate into the system all AMI-equipped meters.
- Provide 100 percent accurate read or no read.
- Be tamper-proof with respect to the ability of unauthorized persons or equipment to affect the reading accuracy.
- Operate at full performance in an underground meter box setting and shall withstand typical meter vault conditions such as water and soil buildup.
- Provide the Facility with desktop computer-based graphics software that charts individual histories of water usage at each water service. Graphics shall be capable of showing consumption for each water service as well as high-low usages for a selected period.
- The water meters, registers, and MIUs shall fit within the meter box sizes as shown on the Plans.

Failure to meet the performance requirements within two 30-day intervals per year shall require that the Contractor correct, at its own expense, the data collection system such that its performance precision is improved within the standards set forth in this Section.

Additional or replacement equipment required to achieve this standard shall be designed, furnished, and installed by the Contractor at no additional expense to the Owner.

Unpredictable conditions and events that affect the performance of the AMI system, such as vandalism, terrorism, natural disaster, or other as determined by the Owner, shall be omitted from consideration when determining the precision of the system.

Weather typical to the region shall not be considered unpredictable conditions or events.

1.5 DELIVERY, STORAGE, AND HANDLING

The Contractor will be responsible for procuring, storing, and protecting all meters, meter boxes, risers, lids, meter setters, and other appurtenances.

1.6 GUARANTEES

A. WARRANTY

The Contractor shall warrant all work and equipment being supplied to the Owner against defects in workmanship and material for a minimum period of 2 years from Substantial Completion of the entire project. The Contractor shall repair or replace, at the Contractor's expense, any parts or equipment that fail during the 2-year warranty period. The warrantee shall be in printed form and shall be provided with the Operations and Maintenance manuals. If different standard warrantee periods are provided for individual system components from their respective manufacturers, these warrantee periods shall remain in effect and shall be identified at the time the bid proposal is submitted.

B. PERFORMANCE GUARANTEE

The Contractor shall guarantee that the AMI system provides the performance required in Part 1.4 of these Specifications. It will be the responsibility of the Contractor to provide personnel trained in the operation of the proposed equipment during the field test of the facilities to demonstrate compliance with Part 1.4. If the equipment does not perform as specified, the Contractor shall immediately remedy the problem, replace the equipment with equipment that does meet the performance requirements, or remove the equipment and refund the entire purchase price to the Owner.

PART 2 PRODUCTS

2.1 GENERAL

The AMI system shall be provided as a complete system by a single Contractor. The equipment criteria provided in the following Sections are intended to provide minimum requirements for preparation of bid proposals. The design, sizing, location, and selection of the various equipment items are solely the responsibility of the Contractor to provide a system that meets the performance requirements of Part 1.4 of these Specifications

2.2 GENERAL

The AMI system shall be provided as a complete system by a single Contractor. The equipment criteria provided in the following Sections are intended to provide minimum requirements for preparation of bid proposals. The design, sizing, location, and selection of the various equipment items are solely the responsibility of the Contractor to provide a system that meets the performance requirements of Part 1.4 of these Specifications.

2.3 ACCEPTABLE MANUFACTURERS

A. WATER METERS AND REGISTERS

Water meters shall only be Zenner Multi-Jet Bottom Load, Zenner Ultrasonic Residential, and Zenner Bulk Ultrasonic meters with Stealth radio interface units, as described on the Plans.

B. AMI EQUIPMENT

Automated Meter Reading equipment including MIUs and receiver, shall be manufactured by Zenner.

1. MIUs

    a. Zenner Model Stealth Meter Interface Unit

2. Cellular Collector

    a. Zenner Stealth Collector

3. Cellular Repeater

    a. Zenner Stealth Enhanced Repeater (Battery Powered)

    b. Zenner Stealth Meter Interface Unit Repeater

2.4 EQUIPMENT

A. WATER METERS

Meters shall be as specified in Section 15150. The meter manufacturer shall guarantee the main case for a period of 20 years from the date of delivery to the Owner.

The meter serial number and direction of flow shall be clearly visible from the top of the meter and shall be stamped on the main case of the meter.

The meter shall be capable of withstanding working pressures of 150 pounds per square inch.

The bottom plate shall be made of bronze or cast iron, and held in place.

B. AUTOMATED METER READING SYSTEM

1. Meter Interface Unit (MIU)

The Zenner Stealth MIU shall be of a flexible design that allows for mounting the transmitter in through the lid.

The MIU must maintain operation within the temperature range of -40 degrees F to +140 degrees F. The housing shall be sealed to prevent water and moisture intrusion and be capable of full submersion in water without damage.

The MIU shall be easily mounted on the underside of the meter box lid, the side of the meter box or through the meter box lid. If the MIU is installed through the meter box lid, the installation shall be ADA compliant where necessary. The MIU, including batteries, shall be designed for a minimum of a 20-year pro-rated warranty under typical operating conditions. The battery shall be disposable without permit.

The MIU shall comply with all FCC requirements for operations. The Contractor shall provide any licenses required by the FCC to operate the AMI equipment.

MIUs must be capable of transmitting the radio signal to the data receiving system through the water meter box lid shown on the Plans. If lid modifications are required as part of the MIU installation, the extent of such modifications must be disclosed at the time of bid and included in the lump sum bid price.

Training shall be provided to Tribe utility workers on how to install MIUs for future installation.

2. Receiver

The receiver shall be comprised of a fixed data collector with an integrated or external receiver board for reading data transmitted

by the MIUs. The receiver shall automatically upload data to the Zenner Stealth Command Cloud storage system.

The receiver shall operate as a non-licensed system in the 902 to 928 MHz utility frequency band and comply with all FCC requirements for operations.

3. Software Requirements

The Contractor shall provide the Zenner Stealth Vision system for data management software interfacing and managing the AMI system. The reading data management software shall be supplied out of the box with an SQL database, an internal custom report building that does not require additional software or licenses to operate. The read data management software must provide the Tribe the ability to schedule transmitter data downloads from the Zenner Stealth Command Cloud system at user-defined intervals determined by data requirements of the utility.

The software package shall provide the Owner with reports that indicate the system's compliance with the minimum performance standards. The reports shall provide charts showing individual histories of water usage at each water service. Graphics shall be capable of showing consumption for each water service as well as high-low usages for a selected period.

PART 3 EXECUTION

3.1 GENERAL

The Contractor shall design and install all equipment necessary to provide a fully functioning AMI data collection system.

3.2 INSTALLATION

A. METER SETS

The Contractor shall furnish and install meters, registers, and MIUs as indicated on the Plans. Any modifications required to existing service meter settings shall be the responsibility of the Contractor.

B. METER BOXES

The Contractor shall install all meters, boxes, and surrounding materials, as necessary. Any modifications required to existing service meter

settings shall be the responsibility of the Contractor. The Contractor will be required to raise or lower meters that have been deemed deep or shallow, respectively. The City will provide the riser for this modification when a meter is elevated.

Meters may be submerged in water at the time of installation. Contractor is responsible for dewatering the area around the meter as necessary to install the meter and shall provide equipment needed to dewater as needed.

Copies of the Owner's standard details for water service meter installations are provided in the Plans. Deviations from these standard installations shall only be allowed after approval by the City and the Engineer. The Owner reserves the right to vary contract quantities in accordance with Section 3.04.6 of the General Conditions.

Contractor shall provide all labor, equipment and tools required to replace meters, meter boxes, and risers.

When sawcutting, removal and replacement of concrete or asphalt pavement is required to install a new meter box, the Contractor shall provide all labor, tools, equipment and materials for such work and follow specifications and procedures as outlined in Section 02950 of the specifications.

The Contractor shall swab or dip all pipe and fittings with 5 to 6 percent chlorine solution prior to installation. Water shall be flushed from the service meter and piping prior to delivery to system.

The installed meter shall be visually free of leaks upon completion. If leaks are detected, it is the responsibility of the Contractor to fix the leaks. The Contractor is responsible for repairing all damage to existing meter boxes and service lines incurred during meter replacement and restoring areas surrounding the meter box that are disturbed by the Contractor's activities as described in Section 02950

3.3 FIELD TEST

Once the Contractor has completed the AMI system installation, the Contractor shall perform a field test for the AMI system. The Contractor shall notify the Owner and the Engineer at least 72 hours in advance of the commencement of the field test. The field test shall commence as scheduled regardless of weather conditions at the time of the test, unless otherwise approved by the Owner.

The field test shall determine the AMI system's ability to:

- Collect accurate meter readings
- Identify and integrate new AMI equipped meters into the system
- Identify meters that have been disconnected from the system
- Analyze and Report data

All meters installed shall be identified by the AMI system and provide an accurate reading during the test. The Contractor shall provide the Owner with a signed copy of the field test results for review. The field test will be evaluated and deemed sufficient if the following conditions are met:

- All AMI equipped meters are identified.
- The data collection system reports correct data.
- The data collection system identifies disconnected AMI equipped meters.

If the field test is unsuccessful, the Contractor shall identify, locate, and correct all deficiencies prior to subsequent testing. All subsequent tests shall include the same meter locations and conditions as determined for the initial test in addition to any meter sets installed between tests. The Contractor shall notify the Owner of all corrections, new equipment, or changes to the system between each test.

3.4 TRAINING

The Contractor shall provide training as specified in Section 01800 to the Owner. Training shall include each of the following topics: (1) AMI system operation and maintenance; and (2) Utility data interface. Training shall be completed within 5 working days of passing the field test. Facility personnel need to be trained. Provide a list of training requirements with proposal.

The training shall be videotaped and two copies of the edited CD-Rom should be provided to the Owner upon completion of the training. Training of the Owner's personnel shall be done by experienced technical manufacturers' representatives.

The manufacturer shall provide continued support of the AMI system after completion of training. Technical support shall be available 24-hours a day, 365 days a year.

***** END OF SECTION *****

PART 5

FEDERAL WAGE RATES

"General Decision Number: WA20220046 09/09/2022

Superseded General Decision Number: WA20210046

State: Washington

Construction Type: Heavy
including water and sewer line construction

County: Grays Harbor County in Washington.

HEAVY CONSTRUCTION PROJECTS (including sewer/water construction).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at https://www.dol.gov/agencies/whd/government-contracts.

Modification Number	Publication Date
0	01/07/2022
1	02/18/2022
2	02/25/2022
3	06/24/2022
4	08/05/2022
5	09/09/2022

CARP0030-001 06/01/2021

	Rates	Fringes
CARPENTER	$ 49.18	19.01

(HOURLY ZONE PAY: WESTERN AND CENTRAL WASHINGTON - ALL CLASSIFICATIONS EXCEPT MILLWRIGHTS AND PILEDRIVERS

Hourly Zone Pay shall be paid on jobs located outside of the free zone computed from the city center of the following listed cities:

Seattle	Olympia	Bellingham
Auburn	Bremerton	Anacortes
Renton	Shelton	Yakima
Aberdeen-Hoquiam	Tacoma	Wenatchee
Ellensburg	Everett	Port Angeles
Centralia	Mount Vernon	Sunnyside
Chelan	Pt. Townsend	

Zone Pay:

0 -25 radius miles	Free
26-35 radius miles	$1.00/hour
36-45 radius miles	$1.15/hour
46-55 radius miles	$1.35/hour
Over 55 radius miles	$1.55/hour

(HOURLY ZONE PAY: WESTERN AND CENTRAL WASHINGTON - MILLWRIGHT AND PILEDRIVER ONLY)

Hourly Zone Pay shall be computed from Seattle Union Hall, Tacoma City center, and Everett City center

Zone Pay:

0 -25 radius miles	Free
26-45 radius miles	$ .70/hour
Over 45 radius miles	$1.50/hour

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* ELEC0076-005 08/31/2022

	Rates	Fringes
ELECTRICIAN	$ 53.47	24.73

ENGI0302-001 06/01/2022

	Rates	Fringes
Power equipment operators:		
Group 1A	$ 54.20	24.47
Group 1AA	$ 54.98	24.47

Group 1AAA	$ 55.78	24.47
Group 1	$ 53.40	24.47
Group 2	$ 52.72	24.47
Group 3	$ 52.12	24.47
Group 4	$ 48.78	24.47

Zone Differential (Add to Zone 1 rates):
Zone 2 (26-45 radius miles) - $1.00
Zone 3 (Over 45 radius miles) - $1.30

BASEPOINTS: Aberdeen, Bellingham, Bremerton, Everett, Kent, Mount Vernon, Port Angeles, Port Townsend, Seattle, Shelton, Wenatchee, Yakima

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1AAA - Cranes-over 300 tons, or 300 ft of boom (including jib with attachments)

GROUP 1AA - Cranes 200 to 300 tons, or 250 ft of boom (including jib with attachments); Tower crane over 175 ft in height, base to boom; Excavator/Trackhoe, Backhoes: Over 90 metric tons

GROUP 1A - Cranes, 100 tons thru 199 tons, or 150 ft of boom (including jib with attachments); Crane-overhead, bridge type, 100 tons and over; Tower crane up to 175 ft in height base to boom; Loaders-overhead, 8 yards and over; excavator/Trackhoe, backhoes: over 50 metric tons to 90 metric tons

GROUP 1 - Cranes 45 tons thru 99 tons, under 150 ft of boom (including jib with attachments); Crane-overhead, bridge type, 45 tons thru 99 tons; Derricks on building work;; Excavator/Trackhoe, backhoes: over 30 metric tons to 50 metric tons; Loader- overhead 6 yards to, but not including 8 yards; Dozer D-10

GROUP 2 - Cranes, 20 tons thru 44 tons with attachments; Crane-overhead, bridge type-20 tons through 44 tons;; Excavator/Trackhoe, backhoe: 15 to 30 metric tons; Loaders-overhead under 6 yards; Mechanic; Drilling Machine; Grader (finishing)

GROUP 3 - Cranes-thru 19 tons with attachments; A-frame crane over 10 tons;; Dozers-D-9 and under; Roller-Plant Mix; Excavator/Trackhoe, backhoe: under 15 metric tons; Forklift: 3000 lbs and over with attachments; Oiler; Grader (non-finishing);Boom Truck over 10 tons

GROUP 4 - Cranes-A frame-10 tons and under; Roller-other than plant mix; Forklift: under 3000 lbs with attachments; Boom Truck 10 tons and under

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IRON0086-012 07/04/2022

	Rates	Fringes
Ironworker (REINFORCING & STRUCTURAL)	$ 49.90	31.82

LABO0252-002 06/02/2022

ZONE 1:

	Rates	Fringes
LABORER		
GROUP 2A	$ 34.20	13.80
GROUP 3	$ 42.86	13.80
GROUP 4	$ 43.90	13.80
GROUP 5	$ 44.62	13.80

ZONE DIFFERENTIAL (ADD TO ZONE 1 RATES):
ZONE 2 - $1.00
ZONE 3 - $1.30

BASE POINTS: BELLINGHAM, MT. VERNON, EVERETT, SEATTLE, KENT, TACOMA, OLYMPIA, CENTRALIA, ABERDEEN, SHELTON, PT. TOWNSEND, PT. ANGELES, AND BREMERTON

ZONE 1 - Projects within 25 radius miles of the respective city hall
ZONE 2 - More than 25 but less than 45 radius miles from the respective city hall
ZONE 3 - More than 45 radius miles from the respective city hall

LABORERS CLASSIFICATIONS

GROUP 2A: Flagger

GROUP 3: General or Common Laborer; Chipping Guns (Under 30 lbs)

GROUP 4: Chipping Guns (Over 30 lbs); Groutmen; Pipe Layer

GROUP 5: Mason Tender-Brick; Mason Tender-Cement/Concrete; Grade Checker

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PAIN0005-008 07/01/2020

	Rates	Fringes
PAINTER (Brush, Roller and Spray)	$ 25.19	13.20

PLAS0528-004 06/01/2022

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 50.00	19.59

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* TEAM0174-002 06/01/2019

	Rates	Fringes
Truck drivers:		
ZONE A:		
GROUP 1:	$ 40.38	20.46
GROUP 2:	$ 39.54	20.46

ZONE B (25-45 miles from center of listed cities*): Add $.70 per hour to Zone A rates.
ZONE C (over 45 miles from centr of listed cities*): Add $1.00 per hour to Zone A rates.

*Zone pay will be calculated from the city center of the following listed cities:

BELLINGHAM	CENTRALIA	RAYMOND	OLYMPIA
EVERETT	SHELTON	ANACORTES	BELLEVUE
SEATTLE	PORT ANGELES	MT. VERNON	KENT
TACOMA	PORT TOWNSEND	ABERDEEN	BREMERTON

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1 - Dump Trucks, side, end and bottom dump, including semi-trucks and trains or combinations thereof with 16 yards to 30 yards capacity: Over 30 yards $.15 per hour additional for each 10 yard increment.

GROUP 2 - Dump trucks, side, end and bottom dump, including semi-trucks and trains or combinations thereof with less than 16 yards capacity.

HAZMAT PROJECTS

Anyone working on a HAZMAT job, where HAZMAT certification is required, shall be compensated as a premium, in addition to the classification working in as follows:
LEVEL C: +$.25 per hour - This level uses an air purifying respirator or additional protective clothing.
LEVEL B: +$.50 per hour - Uses same respirator protection as Level A. Supplied air line is provided in conjunction with a chemical ""splash suit.""
LEVEL A: +$.75 per hour - This level utilizes a fully-encapsulated suit with a self-contained breathing apparatus or a supplied air line.

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* SUWA2009-037 08/07/2009

	Rates	Fringes
LABORER: Landscape	$ 14.67 **	0.00
PIPEFITTER	$ 30.00	8.35
TRUCK DRIVER: Water Truck	$ 24.36	8.30
TRUCK DRIVER: 10 Yard Truck	$ 24.61	8.34

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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** Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 ($15.00) or 13658 ($11.25). Please see the Note at the top of the wage determination for more information.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average

rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.

Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

PART 6

PLANS

PART 7

APPENDIX

APPENDIX A

PROPOSAL SCORING SHEET

Metering Project
November 2022

Reviewer Name _____

Firms Names _

Scored Criteria	**Points Available**				
Professional Qualifications – Qualifications of the firm and staff to complete the work. Discussion of professional licensure, academic work, professional experience, and professional affiliation relative to this project.	**10**				
Specialized Experience – Specialized experience and demonstrated technical competence in the development of similar work.	**15**				
Capacity to Accomplish Work – Firm's capacity to complete the project in a timely period including financial resources to complete work. Provide an anticipated date of completion.	**10**				
Indian Preference - Extent of active participation of Indian Owned firms, Indian professional staff members, or Indian support staff.	**10**				

Past Performance – Past performance on similar contracts with Government and/or Tribal agencies in terms of cost control, quality of work, and compliance with performance schedules. Past performance documentation should include a list of at least three (3) comparable projects including project contact, project description, cost and duration of the project	**15**				
Cost Proposal – Bid amount will be scored based on both the reasonableness of the proposed costs and the thoroughness of the detail provided of expected expenses. Preference will be given for detailed cost breakdown that clearly shows bid amount for each item in the proposal.	**40**				

APPENDIX B

METER CHANGE OUT FORM

WATER METER INSTALLATION DATA

ADDRESS _____

SERVICE REQUEST/WORK ORDER #

NEW METER INFORMATION

INSTALLED BY _____ **INSTALLATION DATE** _____

NEW SERIAL NUMBER
(REGISTER NUMBER)
_____

Place Meter Register Tag Here
(Serial Number/UPC Code)

METER BODY NUMBER _____ **MANUFACTURER** _____

METER SIZE (CIRCLE ONE) | 5/8" | 1" | 1.5" | 2" | 4 | _____

CURRENT READING _____ **NO. OF DIGITS** _____

METER GPS COORDINATES **LAT:** _____

LONG: _____

OLD METER INFORMATION

OLD METER REGISTER NO.
(SERIAL NUMBER) _____ **MANUFACTURER** _____

OLD METER BODY NUMBER _____ **OLD METER READING** _____

READING METHOD **DIRECT** ☐ **TOUCH** ☐ **RADIO** ☐ **CHECK ONE BOX**

REMOVED BY _____ **REMOVAL DATE** _____

ADDRESS

OTHER PARTS USED _____

_____

_____

REQUIRED MAINTENANCE

(not lockable?, riser needed?....)
(bad register, body leaks..)

_____

_____

_____

Office use **PW** ☐ **GIS** ☐ **UB** ☐

ROUTE-SEQUENCE _____ **REFERENCE NUMBER** _____

APPENDIX C

INADVERTENT DISCOVERY PLAN

Inadvertent Discovery Plan for Cultural Resources

For the duration of the response, or until replaced by an updated version, this plan will be followed to identify, report and protect potential cultural materials which are discovered during the course of emergency response operations being conducted to protect human health and the environment. This does NOT include significant ground disturbing activities involving excavation, dredging, drilling, etc. which would be covered by a project specific plan. This plan also is also not intended to protect sites in areas where cultural resources have already been documented which should have site-specific project plan to protect cultural resources.

This Inadvertent Discovery Plan (IDP) should be followed if cultural materials, including human remains, are encountered during any field or site activities including but not limited to: excavation, berming, under/overflow dam construction, boom deployment, development of staging areas, access paths/routes, or during reconnaissance activities.

When to stop work:

Construction work or other ground disturbing activities may uncover previously unidentified Native American artifacts. Work must stop when the following types of artifacts and/or features are encountered:

Native American artifacts may include (but are not limited to)-

- Flaked stone tools (arrowheads, knives scrapers etc.);
- Bones or small pieces of bone.
- An accumulation of shells, burned rocks, or other food related materials.
- Waste flakes that resulted from the construction of flaked stone tools;
- Ground stone tools like mortars and pestles;
- Layers (strata) of discolored earth resulting from fire hearths. May be black, red or mottled brown and often contain discolored cracked rocks or dark soil with broken shell;
- Human remains;
- Historical structural remains- wooden beams, post holes, fish weirs.
- Petroglyphs (carvings in stone) or petrographs (drawings in stone).

When in doubt, assume the material is a cultural resource.

Protocol for coordination in the event of inadvertent discovery:

- In the event of an inadvertent discovery of items suspected to be cultural materials, including possible human remains, stop all work immediately in the vicinity of the find. Notify your Supervisor as soon as possible.
- Notify the Tribal Historic Preservation Office (THPO) and the Tribal Project manager.

Project Manager: Name: Brian von Clück Phone: 253-678-5557 Email: Bvoncluck@chehalistribe.org	***Assigned Project Manager Alternate:*** Name: Bryan Sanders Phone: 360-709-1767 Email: dterry@chehalistribe.org

Tribal Historic Preservation Officer Name: Dann Penn Phone: 360-709-1747 Email: dpenn@chehalistribe.org	

 The area should be secured and protected. A 50 feet buffer should be placed around the discovery with work being able to proceed outside of this buffered area unless additional cultural materials are encountered.

 If human remains are encountered, do not disturb them in any way. ***Do not call 911***. Do not speak with the media. Secure the location. Do not take Photos. The location should be **secured** and work will not resume in the area of discovery until all parties involved agree upon a course of action.

 Any human skeletal remains, regardless of antiquity or ethnic origin, will at all times be treated with dignity and respect. Do not take photographs by any means unless you are pre-approved to do so. If the project occurs on federal lands or receives federal funding (e.g., national forest or park, military reservation) the provisions of the Native American Graves Protection and Repatriation Act of 1990 apply, and the responsible federal agency will follow its provisions. Note that state highways that cross federal lands are on an easement and are not owned by the State.

 No work may resume within the secured area until consultation with the THPO has occurred and a professional archaeologist is able to assess the discovery.

 A professional archaeologist may be needed to assess the discovery; they will consult with THPO and appropriate Tribal Government personnel to determine an appropriate course of action.

 Archaeological excavations may be required after the emergency response phase of the incident. This is handled on a case by case basis by the professional archaeologist and project manager, in consultation with THPO.

Proceeding with Construction or other Ground Disturbing Activities

 Construction can proceed only after the proper archaeological inspections have occurred and clearance to proceed is obtained. This requires close coordination with THPO.
 After an inadvertent discovery, some areas may be specified for "**Close Monitoring**" or '**No Work Zones**'. Any such areas will be identified by the professional archaeologist, and relayed to the Tribal Project Manager.
 In coordination with the THPO or professional archaeologist, will verify these identified areas and be sure that the areas are clearly demarcated in the field, as needed.

DOCUMENTATION OF ARCHAEOLOGICAL MATERIALS

Archaeological deposits discovered during construction will be assumed eligible for inclusion in the National Register of Historic Places under Criterion D until a formal Determination of Eligibility is made.

Project staff will ensure the proper documentation and field assessment will be made of any discovered cultural resources in cooperation with all parties:

All prehistoric and historic cultural material discovered during project construction will be recorded by a professional archaeologist on a cultural resource site or isolate form using standard and approved techniques. Site overviews, features, and artifacts will be photographed; stratigraphic profiles and soil/sediment descriptions will be prepared for minimal subsurface exposures. Discovery locations will be documented on scaled site plans and site location maps.

Cultural features, horizons and artifacts detected in buried sediments may require further evaluation using hand-dug test units. Units may be dug in controlled fashion to expose features, collect samples from undisturbed contexts, or to interpret complex stratigraphy. A test excavation unit or small trench might also be used to determine if an intact occupation surface is present. Test units will be used only when necessary to gather information on the nature, extent, and integrity of subsurface cultural deposits to evaluate the site's significance. Excavations will be conducted using state-of-the-art techniques for controlling provenience, and the chronology of ownership, custody and location recorded with precision.

Spatial information, depth of excavation levels, natural and cultural stratigraphy, presence or absence of cultural material, and depth to sterile soil, regolith, or bedrock will be recorded for each probe on a standard form. Test excavation units will be recorded on unit-level forms, which include plan maps for each excavated level, and material type, number, and vertical provenience (depth below surface and stratum association where applicable) for all artifacts recovered from the level. A stratigraphic profile will be drawn for at least one wall of each test excavation unit.

Sediments excavated for purposes of cultural resources investigation will be screened through 1/8-inch mesh, unless soil conditions warrant ¼-inch mesh.

All prehistoric and historic artifacts collected from the surface and from probes and excavation units will be analyzed, catalogued, and temporarily curated. Ultimate disposition of cultural materials will be determined in consultation with the THPO officer and Tribal Officials.

Within 90 days of concluding fieldwork, a technical report describing any and all monitoring and resultant archaeological excavations will be provided to the Project Manager, who will forward the report for review and delivery to the Tribal Project Manager.

Implement the IDP / UDP if …

You see chipped stone artifacts.

- Glass-like material
- Angular
- “Unusual” material for area
- “Unusual” shape
- Regularity of flaking
- Variability of size

Stone Artifacts from Oregon

Implement the IDP / UDP if …

You see ground or pecked stone artifacts.

- Striations or scratching
- Unusual or unnatural shapes
- Unusual stone
- Etching
- Perforations
- Pecking
- Regularity in modifications
- Variability of size, function, and complexity

Implement the IDP / UDP if …

You see bone or shell artifacts.

- Often smooth
- Unusual shape
- Carved
- Often pointed if used as a tool
- Often wedge shaped like a "shoehorn"

Bone Awls from Oregon and Bone Wedge from California

Implement the IDP / UDP if …

You see bone or shell artifacts.

- Often smooth
- Unusual shape
- Perforated
- Variability of size

Tooth Pendant and Bone Pendants from Oregon and Washington

Implement the IDP / UDP if …

You see fiber or wood artifacts.

- Wet environments needed for preservation
- Variability of size, function, and complexity
- Rare

Artifacts from Mud Bay, Olympia, Washington

Implement the IDP / UDP if …

You see historic period artifacts.

Artifacts from Downtown Seattle, Alaskan Way Viaduct (Upper Left and Lower) and Unknown Site (Upper Right)

Implement the IDP / UDP if …

You see strange, different or interesting looking dirt, rocks, or

- Human activities leave traces in the ground that may or may not have artifacts associated with them
- “Unusual” accumulations of rock (especially fire-cracked rock)
- “Unusual” shaped accumulations of rock (e.g., similar to a fire ring)
- Charcoal or charcoal-stained soils
- Oxidized or burnt-looking soils
- Accumulations of shell
- Accumulations of bones or artifacts
- Look for the “unusual” or out of place (e.g., rock piles or accumulations in areas with few rock)

Implement the IDP / UDP if …

You see strange, different or interesting looking dirt, rocks, or

- “Unusual” accumulations of rock (especially fire-cracked rock)
- “Unusual” shaped accumulations of rock (e.g., similar to a fire ring)
- Look for the “unusual” or out of place (e.g., rock piles or accumulations in areas with few rock)

Site on Muckleshoot Indian Reservation, near WSDOT ROW along SR 164

Implement the IDP / UDP if …

You see strange, different or interesting looking dirt, rocks, or

- Often have a layered or “layer cake” appearance
- Often associated with black or blackish soil
- Often have very crushed and compacted shells

Site located within WSDOT ROW near Anacortes Ferry Terminal

Implement the IDP / UDP if …

You see historic foundations or buried structures.

CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION

GRAYS HARBOR COUNTY

WASHINGTON

WATER SYSTEM PLAN AND METERING IMPROVEMENTS

OFFICIALS

DUSTIN KLATUSH
Chairman

LEROY BOYD, SR. — **SHEILAH BRAY**

CHARLOTTE LOPEZ — **RACHELLE FERGUSON**

Business Committee

AMY LOUDERMILK
Planning Director

BRIAN VON CLÜCK
Project Manager

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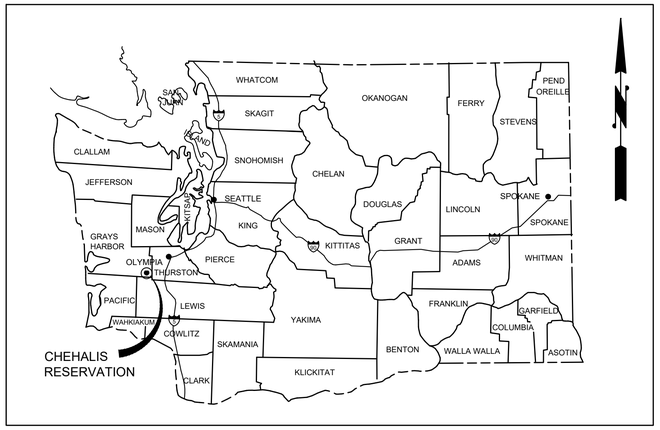
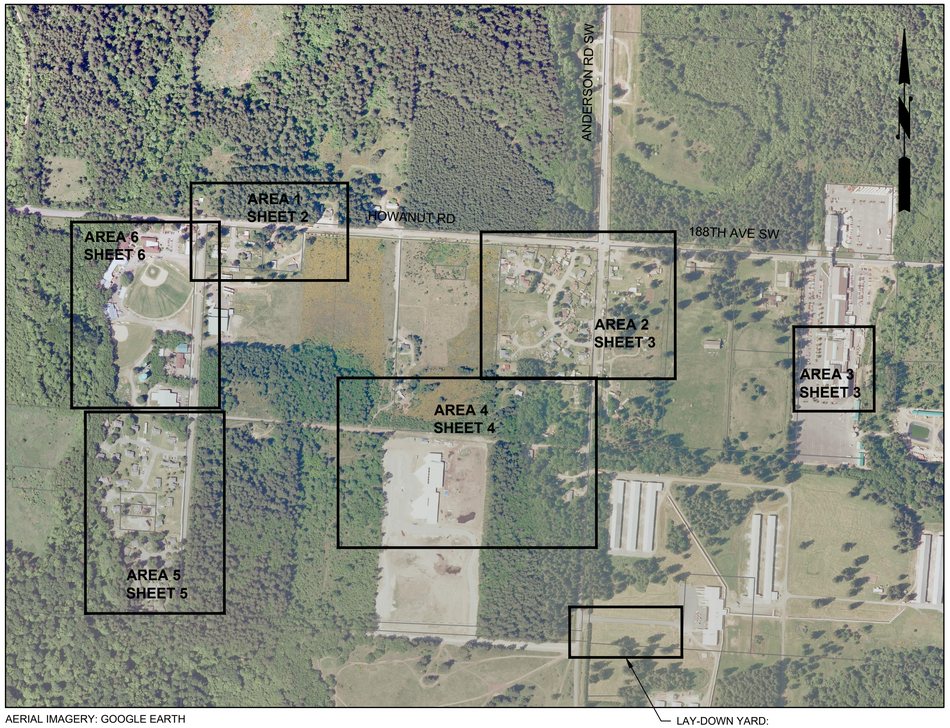
DECEMBER 2022
G&O #22242



VICINITY MAP
NOT TO SCALE



AERIAL IMAGERY: GOOGLE EARTH

LOCATION MAP
SCALE: 1"=1000'

ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE
ADJ	ADJUST
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AP	ANGLE POINT
ASPH	ASPHALT
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AVE	AVENUE
BF	BLIND FLANGE
BLDG	BUILDING
BLK	BLOCK
BO	BLOW OFF
BOP	BEGINNING OF PROJECT
BVCE	BEGIN VERTICAL CURVE ELEVATION
BVCS	BEGIN VERTICAL CURVE STATION
C	CONDUIT
CAP	CORRUGATED ALUMINUM PIPE
CB	CATCH BASIN
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CICL	CAST IRON CLASS
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUED/CONTINUOUS
CPEP	CORRUGATED POLYETHYLENE PIPE
CPLG	COUPLING
CTR	CENTER
CY	CUBIC YARD
℄	CENTER LINE
D	DRAIN
DC	DEGREE OF CURVATURE
DI	DUCTILE IRON
DIA	DIAMETER
DIM	DIMENSION
DOT	DEPARTMENT OF TRANSPORTATION
DWGS	DRAWING(S)
E	EAST
EA	EACH
EL	ELEVATION
ELEC	ELECTRICAL
EOA	EDGE OF ASPHALT
EOP	END OF PROJECT
EVCE	END VERTICAL CURVE ELEVATION
EVCS	END VERTICAL CURVE STATION
EXIST	EXISTING
FIG	FIGURE
FIN	FINISHED
FL	FLANGE
FT	FEET
GA	GAUGE
GALV	GALVANIZED
GI	GALVANIZED IRON
GV	GATE VALVE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IN	INCH
INV	INVERT
L	LENGTH
LB	POUND
LF	LINEAR FEET
MAX	MAXIMUM
MFR	MANUFACTURER
MH	MANHOLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
N	NORTH
NO	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
PC	POINT OF CURVATURE
PE	PLAIN END
PERF	PERFORATED
PI	POINT OF INTERSECTION
PP	POWER POLE
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENT
QTY	QUANTITY
R	RADIUS
R/W	RIGHT-OF-WAY
RED	REDUCER
REINF	REINFORCE
REQD	REQUIRED
RET	RETAINING
RR	RAILROAD
S	SOUTH
SCH	SCHEDULE
SF	SQUARE FEET
SHT	SHEET
SL	SLOPE
SPECS	SPECIFICATIONS
SQ	SQUARE
STA	STATION
STD	STANDARD
TB	THRUST BLOCK
TC	TOP OF CURB
TEL	TELEPHONE
TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
THRD	THREADED
THRU	THROUGH
TYP	TYPICAL
VERT	VERTICAL
W	WEST
W/	WITH
W/O	WITHOUT
WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

LINETYPES

EXISTING	PROPOSED	DESCRIPTION
	SURFACE FEATURES	
		ASPHALT PAVEMENT
		GRAVEL SURFACING
		CONCRETE SURFACING
		CEMENT CONC. SIDEWALK
	SURVEY	
		RIGHT-OF-WAY LINE
		SAWCUT LINE (APPROXIMATE LOCATION)
	UTILITIES	
W	W	WATER MAIN (SIZE AS NOTED)

WATER SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
⊞	■	WATER METER

SHEET INDEX

SHEET NO.	SHEET DESCRIPTION
--	
1	VICINITY MAP, LOCATION MAP, ABBREVIATIONS AND SYMBOLS, AND SHEET INDEX
2	AREA 1 (MAKUM LANE AND HOWANUT ROAD)
3	AREA 2 (TAHOWN DEVELOPMENT AND 188TH AVE SW) AND AREA 3 (CASINO)
4	AREA 4 (NIEDERMAN ROAD AND COMMUNITY CENTER)
5	AREA 5 (DAVIS AND FERN DEVELOPMENTS)
6	AREA 6 (GOVERNMENT COMPLEX)
7	WATER DETAILS
8	RESTORATION DETAILS

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Dec 6, 2022

CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION
WATER SYSTEM PLAN AND METERING IMPROVEMENTS

No.	DATE	REVISION

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DRAWN BY:	MAN
DESIGNER:	KS
G & O JOB NO.:	22242
FILE:	VIC-LOC.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

GENERAL

VICINITY MAP, LOCATION MAP, ABBREVIATIONS AND SYMBOLS, AND SHEET INDEX

DRAWING: 1 OF: 8

AERIAL IMAGERY: GOOGLE EARTH

AREA 1
MAKUM LANE AND HOWANUT ROAD

40' 20' 0 40' 80'
SCALE: 1"=40'

SCHEDULE OF METERS, AREA 1

LOCATION NO.	ADDRESS	METER SIZE	REQUIRES BOX/SETTER	METER DETAIL	RESTORATION DETAIL
1	6 MAKUM LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
2	7 MAKUM LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
3	5 MAKUM LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
4	3 MAKUM LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
5	450 HOWANUT RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
6	452 HOWANUT RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
7	456 HOWANUT RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
8	6 MAKUM LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8

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IF NOT, SCALE ACCORDINGLY

GENERAL

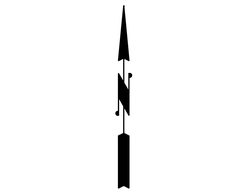
AREA 1 (MAKUM LANE AND HOWANUT ROAD)

DRAWING: **2** OF: **8**

AERIAL IMAGERY: GOOGLE EARTH

AREA 2
TAHOWN DEVELOPMENT AND 188TH AVE SW

1 / - **EXISTING CASINO METER AND VAULT**
NOT TO SCALE



AERIAL IMAGERY: GOOGLE EARTH

AREA 3
CASINO

SCHEDULE OF METERS, AREAS 2 & 3					
LOCATION NO.	ADDRESS	METER SIZE	REQUIRES BOX/SETTER	METER DETAIL	RESTORATION DETAIL
9	2 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
10	2 LACAMUS LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
11	4 LACAMUS LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
12	6 LACAMUS LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
13	8 LACAMUS LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
14	9 LACAMUS LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
15	7 LACAMUS LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
16	5 LACAMUS LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
17	3 LACAMUS LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
18	12 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
19	21 PRAIRIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
20	22 PRAIRIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
21	16 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
22	18 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
23	20 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
24	17 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
25	15 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
26	11 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
27	7 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
28	5 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
29	3 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
30	1 TAHOWN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
31	19011 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
32	13115 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
33	18956 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
34	18958 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
35	18960 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
36	18982 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
37	19002 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
38	19018 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
39	12888 188TH AVE SW	4"	NO	DETAIL 1, SHEET 7	DETAIL 1, SHEET 8

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0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

GENERAL

AREA 2 (TAHOWN DEVELOPMENT AND 188TH AVE SW) AND AREA 3 (CASINO)

DRAWING: 3 OF: 8

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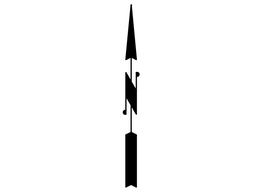
AERIAL IMAGERY: GOOGLE EARTH

AREA 4
COMMUNITY CENTER



CONSTRUCTION NOTES:

1. CONTRACTOR SHALL LOCATE EXISTING SERVICE LINE PRIOR TO INSTALLATION OF NEW METER AND METER BOX.

SCHEDULE OF METERS, AREA 4

LOCATION NO.	ADDRESS	METER SIZE	REQUIRES BOX/SETTER	METER DETAIL	RESTORATION DETAIL
40	468 HOWANUT RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
41	468 HOWANUT RD B	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
42	19041 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
43	19039 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
44	19043 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
45	19150 ANDERSON DR SW	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
46	461 SECENA RD	5/8"	YES	DETAIL 2, SHEET 7	DETAIL 4, SHEET 8
47	461 SECENA RD	1-1/2"	YES	DETAIL 3, SHEET 7	DETAIL 3, SHEET 8
48	461 SECENA RD	2"	YES	DETAIL 3, SHEET 7	DETAIL 3, SHEET 8
49	413 SECENA RD	5/8"	YES	DETAIL 2, SHEET 7	DETAIL 3, SHEET 8

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GENERAL

AREA 4 (NIEDERMAN ROAD AND COMMUNITY CENTER)

DRAWING: **4** OF: **8**

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AERIAL IMAGERY: GOOGLE EARTH

AREA 5
DAVIS AND FERN DEVELOPMENTS

60' 30' 0 60' 120'
SCALE: 1"=80'

SCHEDULE OF METERS, AREA 5

LOCATION NO.	ADDRESS	METER SIZE	REQUIRES BOX/SETTER	METER DETAIL	RESTORATION DETAIL
50	31 FERN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
51	32 FERN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
52	33 FERN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
53	34 FERN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
54	35 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
55	36 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
56	37 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
57	38 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
58	39 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
59	40 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
60	41 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
61	42 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
62	43 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
63	44 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
64	45 OAK LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
65	46 FERN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
66	47 FERN DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
67	26 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
68	27 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
69	28 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
70	29 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
71	1 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
72	2 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
73	31 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
74	31 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
75	3 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
76	4 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
77	5 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
78	6 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
79	7 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
80	8 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
81	9 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
82	10 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
83	11 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
84	12 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
85	10 PETOIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
86	10 PETOIE RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
87	10 PETOIE RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
88	15 PETOIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
89	16 PETOIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
90	17 PETOIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
91	18 PETOIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
92	19 PETOIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
93	20 PETOIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
94	21 PARSONS CIR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
95	22 PARSONS CIR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
96	23 PARSONS CIR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
97	24 PARSONS CIR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
98	25 PETOIE LN	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
99	50 NIEDERMAN RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
114	30 DAVIS DR	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8

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TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

GENERAL

AREA 5 (DAVIS AND FERN DEVELOPMENTS)

DRAWING: 5 OF: 8

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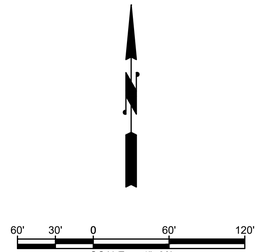
AERIAL IMAGERY: GOOGLE EARTH

AREA 6
GOVERNMENT COMPLEX



CONSTRUCTION NOTES:

(1) CONTRACTOR SHALL LOCATE EXISTING SERVICE LINE PRIOR TO INSTALLATION OF NEW METER AND METER BOX.

SCHEDULE OF METERS, AREA 6

LOCATION NO.	ADDRESS	METER SIZE	REQUIRES BOX/SETTER	METER DETAIL	RESTORATION DETAIL
100	2 NIEDERMAN RD	5/8"	YES	DETAIL 2, SHEET 7	DETAIL 1, SHEET 8
101	6 NIEDERMAN RD	5/8"	YES	DETAIL 2, SHEET 7	DETAIL 1, SHEET 8
102	420 HOWANUT RD	5/8"	YES	DETAIL 2, SHEET 7	DETAIL 3, SHEET 8
103	420 HOWANUT RD	1"	YES	DETAIL 2, SHEET 7	DETAIL 1, SHEET 8
104	18 TOMAHAWK LOOP	1"	YES	DETAIL 2, SHEET 7	DETAIL 1, SHEET 8
105	20 TOMAHAWK LOOP	1"	YES	DETAIL 2, SHEET 7	DETAIL 3, SHEET 8
106	20 TOMAHAWK LOOP	1"	YES	DETAIL 2, SHEET 7	DETAIL 1, SHEET 8
107	22 TOMAHAWK LOOP	1-1/2"	YES	DETAIL 3, SHEET 7	DETAIL 3, SHEET 8
108	30 NIEDERMAN RD	5/8"	YES	DETAIL 2, SHEET 7	DETAIL 3, SHEET 8
110	26 NIEDERMAN RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
111	24 NIEDERMAN RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
112	26 NIEDERMAN RD	5/8"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8
113	21 NIEDERMAN RD	2"	NO	DETAIL 4, SHEET 7	DETAIL 3, SHEET 8

Gray & Osborne, Inc.
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(206) 284-0860

MICHAEL B. JOHNSON — STATE OF WASHINGTON — 36405 — REGISTERED PROFESSIONAL ENGINEER
12/6/22

KERRI SIDEBOTTOM — STATE OF WASHINGTON — 56378 — REGISTERED PROFESSIONAL ENGINEER
Dec 6, 2022

THE CHEHALIS TRIBE

CONFEDERATED TRIBES OF THE CHEHALIS RESERVATION
WATER SYSTEM PLAN AND METERING IMPROVEMENTS

No.	DATE	REVISION

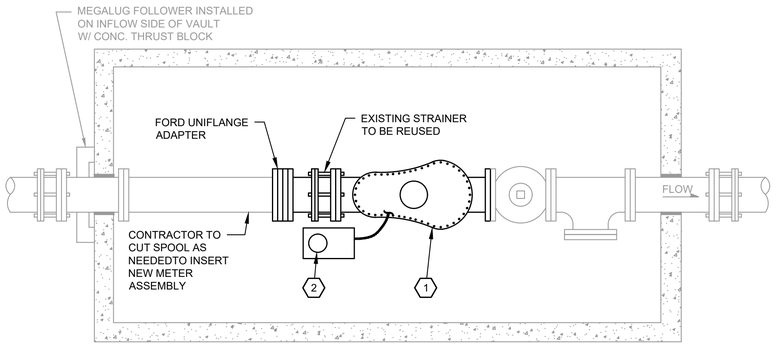
ISSUED FOR:	PRELIMINARY, NOT FOR CONSTRUCTION
ISSUE DATE:	DEC 2022
APPROVED BY:	MBJ
CHECKED BY:	KS
DRAWN BY:	MAN
DESIGNER:	KS
G & O JOB NO.:	22242
FILE:	SITES.DWG

0 1" 2"
TWO INCHES AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

GENERAL

AREA 6 (GOVERNMENT COMPLEX)

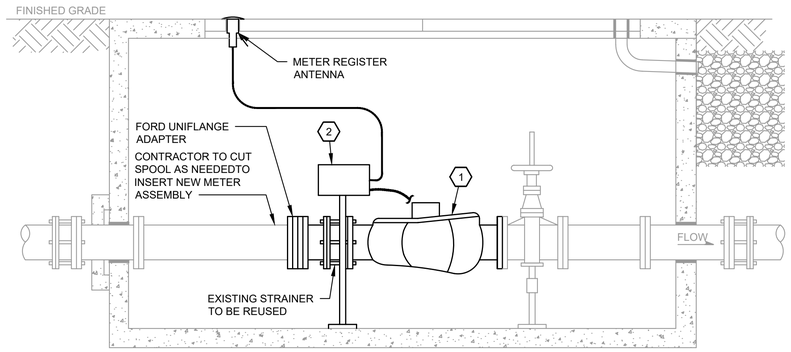
DRAWING: **6** OF: **8**



1 4" ZENNER BULK ULTRASONIC METER. INSTALL ENCODER AS REQUIRED

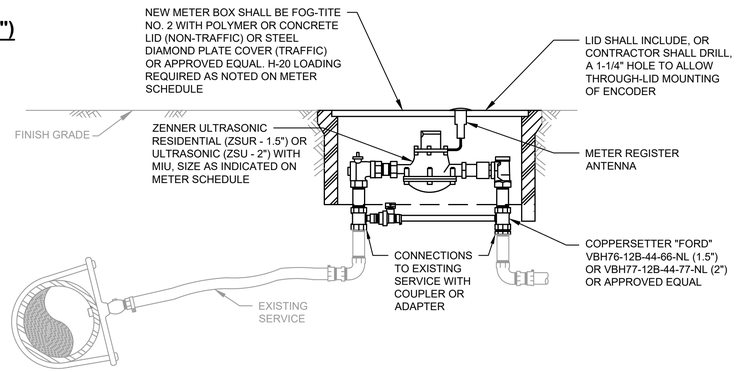
2 METER INTERFACE UNIT

PLAN



ELEVATION

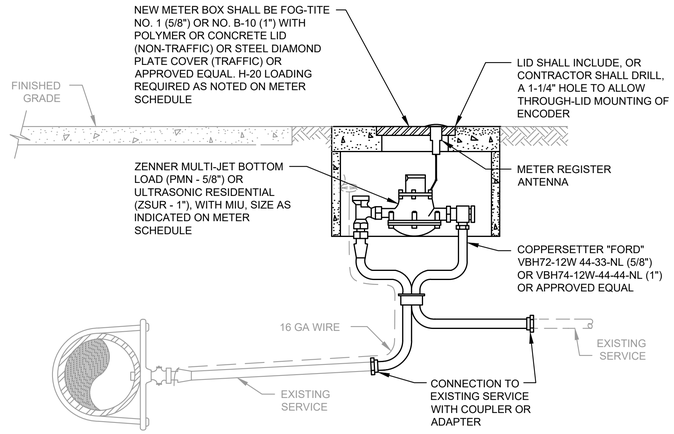
1 / TYP **WATER METER REPLACEMENT (4")**
NOT TO SCALE



NOTE:

ANY METERS DAMAGED OR CLOGGED DURING CONSTRUCTION SHALL BE REPLACED BY THE TRIBES AND BACKCHARGED TO THE CONTRACTOR.

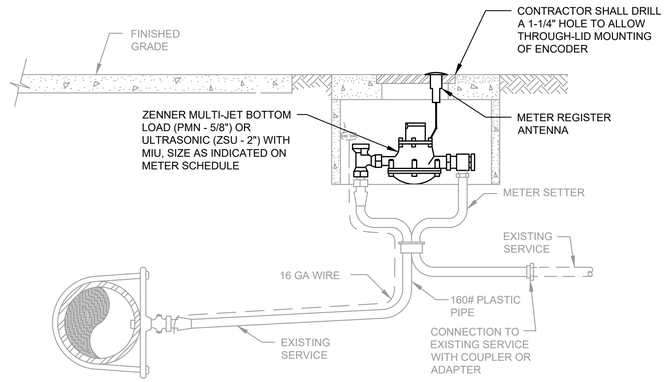
3 / - **WATER METER AND BOX (1.5" AND 2")**
NOT TO SCALE



NOTE:

ANY METERS DAMAGED OR CLOGGED DURING CONSTRUCTION SHALL BE REPLACED BY THE TRIBES AND BACKCHARGED TO THE CONTRACTOR.

2 / - **WATER METER AND BOX (1" & SMALLER)**
NOT TO SCALE



NOTE:

ANY METERS DAMAGED OR CLOGGED DURING CONSTRUCTION SHALL BE REPLACED BY THE TRIBES AND BACKCHARGED TO THE CONTRACTOR.

4 / - **WATER METER REPLACEMENT (2" & SMALLER)**
NOT TO SCALE

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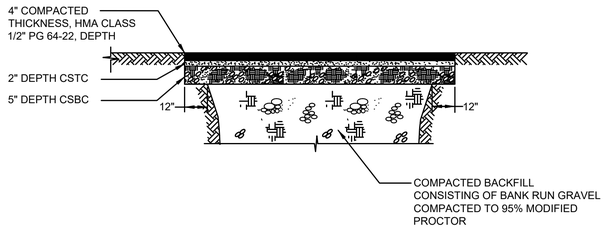
IF NOT, SCALE ACCORDINGLY

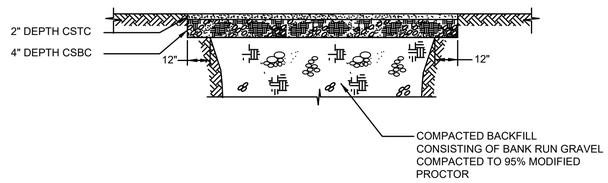
GENERAL

WATER DETAILS

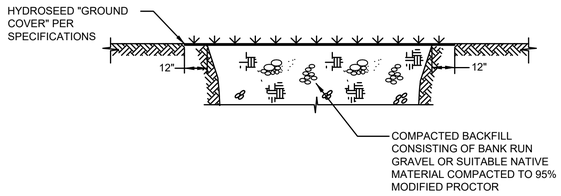
DRAWING: **7** OF: **8**



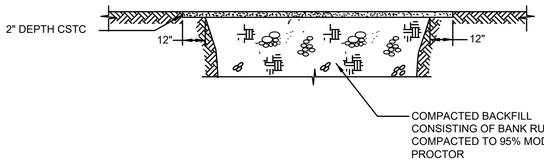
1 TYP **HMA REPAIR**
NOT TO SCALE



2 TYP **GRAVEL ROAD REPAIR**
NOT TO SCALE



3 TYP **HYDROSEED REPAIR**
NOT TO SCALE



4 TYP **GRAVEL SHOULDER REPAIR**
NOT TO SCALE

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GENERAL

RESTORATION DETAILS

DRAWING: **8** OF: **8**