



PROJECT 33-SBC-1004 CONTRACT DOCUMENTS

**SOUTH BRANCH CANAL
IMPROVEMENTS**

ROBINSON SIPHON TO MILEPOST 10.4

FOR

KITTITAS RECLAMATION DISTRICT

315 NORTH WATER STREET

P.O. BOX 276

ELLENSBURG, WA 98926


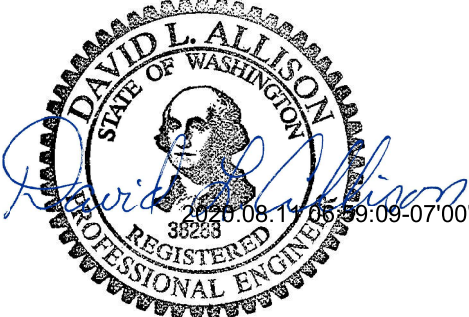
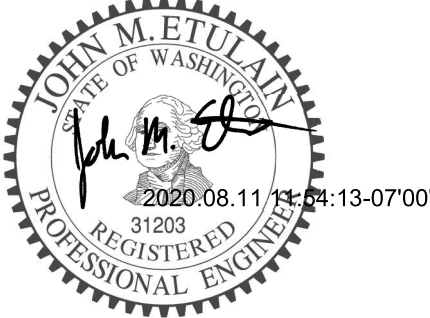
(509) 925-6158

AUGUST 2020

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SECTION 00 01 05 – CERTIFICATE OF ENGINEERS

The following individuals hereby certify that the following elements of these specifications have been properly prepared by them, or under their supervision and direction.

Certificate	Nature of Engineering Certification
 <p>Engineering Certification Not Applicable Kittitas Reclamation District Forms</p>	<p>§ 00 01 01 – Project Title Page § 00 01 05 – Certifications Page § 00 01 10 – Table of Contents § 00 10 00 – Invitation to Bid § 00 20 00 – Instructions to Bidders § 00 41 00 – Bid Forms § 00 45 00 – Representations and Certifications § 00 50 00 – Contract Forms § 00 61 00 – Bond Forms § 00 62 00 – Project Execution Forms § 00 72 00 – General Conditions § 00 73 00 – Supplementary Conditions</p>
 <p>David L. Allison, P.E. Jacobs Engineering Group, Inc.</p>	<p>§ 01 30 00 – Administrative Requirements § 01 33 00 – Submittal Procedures § 01 45 00 – Quality Control § 01 50 00 – Temporary Facilities and Controls § 01 60 00 – Product Requirements § 01 70 00 – Execution and Closeout Requirements § 02 41 00 – Demolition § 31 10 00 – Site Clearing</p>
 <p>John M, Etulain, P.E. Jacobs Engineering Group, Inc.</p>	<p>§ 03 30 00 – Cast-in-Place Concrete § 31 05 19 – Geosynthetics for Earthwork § 31 23 00 – Excavation and Fill § 32 31 26 – Wire Fence and Gates § 33 05 26 – Utility Identification § 33 11 00 – Water Utility Distribution Piping § 33 12 16 – Utility Valve and Gates § 33 42 23 – Precast Concrete Headwalls</p>

END OF SECTION

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SECTION 00 01 10 – TABLE OF CONTENTS

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END OF SECTION

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SECTION 00 10 00 – INVITATION TO BID

NOTICE: The Kittitas Reclamation District (“District”) hereby gives notice that it will accept sealed Bids for the construction of Project No. 33-SBC-1004, the South Branch Canal Improvements – Robinson Siphon to Milepost 10.4 project (“Project”).

PART 1 – GENERAL

1.01 BID SUBMISSION

The District will receive sealed Bids at the location listed below until **2:00 p.m. local time on September 4, 2020** and will then and there open and publicly read the Bids for the construction of the improvements.

Kittitas Reclamation District
315 North Water Street
Ellensburg, Washington 98926

1.02 WORK DESCRIPTION

Bid improvements consist of open channel canal replacement with large diameter pipeline, creek culvert replacement, drainage, earthwork and other work, all in accordance with the contract plans, the contract provisions, and the specifications. The improvements are for construction of water conservation and operational improvements to the KRD system. Requested base bid and pre-priced optional work follow the existing South Branch Canal alignment for a distance of approximately 2,000 feet from the KRD Operation and Maintenance Road crossing of Robinson Creek to a transition back to open canal approximately 1,800 feet downstream of the existing outlet of the Robinson Siphon. The Project has been divided into a Base Reach and an Optional Reach. The base bid improvements in these documents are for roadway improvements and pipeline replacement of open channel immediately downstream of the existing Robison Siphon described as work related to canal improvements between Stations 529+86 and Station 537+00.

It is the District's desire to improve the remaining reaches of the canal between Robinson Creek and Manastash Creek. Pricing of an initial reach extension is requested for potential optional award at the discretion of KRD. The optional bid improvements in these documents are for roadway improvements and pipeline replacement of open channel described as work related to canal improvements between Stations 537+00 to 548+00. Optional award will depend on a variety of factors, including, but not limited to, grant funding award, weather, cost, Contractors work plan, demonstrated productivity on base bid reach, and the anticipated start of the 2021 irrigation seasons on or about April. This optional pricing will not be factored into evaluation of apparent low bidder.

1.03 CONTRACT TIME

Contract time shall begin as defined by the Notice to Proceed and continue through completion in accordance with Section 00 73 00 (Supplementary Conditions). Anticipated award and Notice to Proceed to allow for construction during the annual canal outage beginning in fall 2020.

1.04 BID INSTRUCTIONS

Refer to Section 00 20 00 (Instructions to Bidders) for required documents and items to be included with sealed Bids submitted to the District for the work.

1.05 REGISTRATION AND PROCUREMENT OF BIDDING DOCUMENTS

- A. All Bidders may notify the District of interest and receive Complete sets of the Bidding Documents from the following location:

Kittitas Reclamation District
315 North Water Street
Ellensburg, Washington 98926

- B. Plans, specifications, and Bidding Documents are only available electronically.

- C. Bidding Documents are for the purpose of obtaining bids for the Work. No authorization or conference of license is granted by District issuance of the Bidding Documents.

1.06 PREBID CONFERENCE

A prebid conference will be held at 9 A.M. local time on August 18, 2020, beginning at the District office, 315 North Water Street, Ellensburg, Washington 98926. Representatives of District and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference.

1.07 BID PREPARATION COSTS

Bidders are solely responsible for the cost of preparing their Bids.

1.08 RESERVATION OF RIGHTS

The District specifically reserves the right, in its sole discretion, to reject any or all Bids or re-Bids or to waive inconsequential deviations from Bid requirements not involving time, price, or work quality.

KITTITAS RECLAMATION DISTRICT

Dated this 11th day of August, 2020

By: _____
Urban Eberhart

Title: _____
District Manager

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

SECTION 00 20 00 – INSTRUCTION TO BIDDERS

PART 1 – GENERAL

1.01 BIDDING DOCUMENTS

- A. Complete sets of the Bidding Documents may be obtained in accordance with the Section 00 10 00 (Invitation to Bid)
- B. Complete sets of Bidding Documents shall be used in preparing Bids. Neither Owner nor Engineer assumes responsibility for errors or misinterpretations resulting from use of incomplete sets of Bidding Documents.
- C. Plans, specifications, and Bidding Documents are only available electronically. After award of the contract, plans and specifications will be issued to the Contractor, if requested, at no cost as detailed below:

To Prime Contractor	No. of Sets
Reduced Plans (ANSI B, 17" x 11")	2
Contract Provisions	2
Full Size Plans (ANSI D, 34" x 22")	1

- D. Following Award of Contract, the District may prepare a conformed set of Contract Documents reflecting Addenda issued during bidding, which will, failing objection, constitute the approved set of Contract Documents.
- E. Any inconsistency in the parts of the Contract shall be resolved by the order of precedence in Section 00 72 00 (General Conditions).
- F. Quantities stated in the Bidding Documents are approximate only and are subject to correction upon final measurement of the work, and are subject further to the rights reserved by the District to increase or diminish the amount of work under any classification as advantages to design or construction needs require.

1.02 BID SUBMISSION

- A. All required Bidder's Data shall be delivered in a sealed, opaque Bid envelope to the address given in Section 00 10 00 (Invitation to Bid).
- B. Mark the Bid envelope as: "Bid for the Kittitas Reclamation District, Project No. 33-SBC-1004, South Branch Canal Improvements – Robinson Siphon to Milepost 10.4."
- C. Bid submitted will constitute an offer to the District and will be irrevocable for a period of sixty (60) calendar days following Bid opening. Contract Award, if any, shall be made within sixty (60) days from the date of Bid opening.
- D. Failure to submit documents strictly as required entitles the District to reject the Bid as nonresponsive.

1.03 CONTENTS OF SEALED BID ENVELOPES

To be considered a responsive Bidder, include the following in the sealed Bid:

- A. Completed and signed Bid Forms provided in Section 00 41 00 (Bid Form).
 - 1. Addenda acknowledgement (Item 2.2 table on Bid Form).
 - 2. Signed Bid proposal – schedule of rates and prices
- B. Bidder Certification (Bidder's Certification Form)
 - 1. Non-collusion declaration (included in Bidder's Certification Form)
 - 2. Federal anti-disbarment declaration (included in Bidder's Certification Form)
- C. Bid Security (see Paragraph 1.05 below)
- D. Subcontractor list in accordance with RCW 39.30.060 if bid includes subcontracted work for heating, ventilation, and air conditioning (HVAC); plumbing; or electrical work.

In addition, sealed in a separate envelope and labeled as Statement of Qualifications ("SOQ"):

- E. The District will only open the Apparent Successful Bidder's SOQ envelope and check for compliance as instructed below.

1.04 BIDDING PREPARATION

- A. Submit Bids using, where applicable, documents supplied in Section 00 41 00 (Bid Forms) without limitation.
 - 1. Complete Bid items and legibly supply all information required by Bidding Documents.
 - 2. Do not modify the Bid form or qualify Bids.
 - 3. Submit clearly and distinctly written Bids by typing or printing with ink and the Bid Form signed in ink.
 - 4. Make Bid erasures or alterations shall be initialed in ink by the person signing the Bid Form.
- B. Any submittals or data which may be required by the Contract Documents to support a Bid shall be attached to the Bid Form.
- C. The Bid Form must be properly executed, all blanks must be filled in. A Bid price shall be indicated for each Bid item, unit price item, alternate listed therein or the words "No Bid," "No Change," or "Not Applicable" entered

- D. All Bids shall be submitted in strict compliance with the Contract Documents and the technical and commercial requirements contained herein. Bids which do not comply with these requirements or which contain or are conditioned upon different terms provided by the Bidder may be rejected. Any Bid which attempts to disclaim liability for the Bidder's negligence or to disclaim liability for damage, which arises from Bidder's acts, to person or property, may be deemed a non-responsive Bid. The District reserves the right to reject any Bid as nonresponsive as a result of any error or omission or any Bid not clearly written.
- E. Bidder shall specifically identify by paragraph and page number and describe in detail in its Bid proposal each variation or departure from the Contract Documents. If, in the District's opinion, the Bid proposal contains material variations in or departures from the commercial terms or functional design requirements, it may be rejected as being non-responsive.
- F. The Bid shall contain an acknowledgement of receipt of all Addenda; the numbers of which shall be filled in on the Bid Form.
- G. Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

1.05 BID SECURITY

- A. Submit with Bids either cash, a cashier's check, a certified check from a responsible bank in the United States, or a corporate surety bond—furnished by a surety authorized to do business in the state of Washington—of not less than 5 percent of the total Bid amount payable to the "Kittitas Reclamation District." The District will reject as nonresponsive any Bid submitted without the necessary Bid security.
- B. The Bid security of the Apparent Successful Bidder will be retained until such Bidder has executed the Contract Documents, furnished the required contract security and met the other conditions of the Notice of Award, whereupon the Bid security will be returned. If the Apparent Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within the time period specified in Article Signing of Agreement, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited. Such forfeiture shall be Owner's exclusive remedy if Bidder defaults.
- C. Bid security of other Bidders whom District believes to have a reasonable chance of receiving the award may be retained by District for a period of 60 days after award or full execution of the Contract, whichever first occurs, whereupon Bid security furnished by such Bidders will be returned.

1.06 BIDDER AUTHORITY AND REGISTRATION

- A. The Bid shall contain evidence of Bidder's authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid.

- B. All Bidders, including general contractors and specialty contractors, shall be registered as Contractors by the State Department of Licenses in conformance with the requirements of applicable parts of Chapter 18.27, RCW.
- C. A Bid by a corporation shall be executed in the corporate name by the president or a vice president or other corporate officer accompanied by evidence of authority to sign. The corporate seal shall be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown.
- D. A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership shall be shown.
- E. A Bid by a limited liability company shall be executed in the name of the firm by a member and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm shall be shown.
- F. A Bid by an individual shall show the Bidder's name and official address.
- G. A Bid by a joint venture shall be executed by each joint venturer in the manner indicated on the Bid Form. The official address of the joint venture shall be shown.

1.07 STATEMENT OF QUALIFICATIONS

Submit a Statement of Qualifications ("SOQ") in a separately sealed envelope to be eligible to bid on this Contract. SOQ information must be current.

Bidder to meet the mandatory bidder responsibility criteria in RCW 39.04.350(1), as amended, and meet supplemental criteria A through H below.

By signing the Bidder's Certification Form, the Bidder provides the declaration required for criteria A, B, and E. As part of the SOQ, the Bidder shall provide evidence of meeting supplemental criteria C, D, and F through H.

A. Delinquent State Taxes

Criterion: No delinquent taxes owed to the Washington State Department of Revenue (WSDOR) without a payment plan approved by WSDOR.

Documentation: By signing the Bidder's Certification Form, the Bidder declares they do not owe delinquent taxes to WSDOR or; if delinquent taxes are owed to WSDOR, have submitted a written payment plan approved by WSDOR to the District.

B. Federal Debarment

Criterion: No current debarment or suspension by the Federal government.

Documentation: By signing the Bidder's Certification Form, the Bidder declares they have not been barred from bidding on Federally funded projects. Upon successful award, Contractor will provide on an annual bases documentation that

there are no “active exclusion” listings on the U.S. government’s “System for Award Management” database (www.sam.gov).

C. Subcontractor Responsibility

Criterion: Include the subcontractor responsibility language required by RCW 39.06.020 and have an established procedure to validate the responsibility of each subcontractor. Include a requirement that each subcontractor have and document a similar procedure to determine whether sub-tier subcontractors are also “responsible” subcontractors as defined by RCW 39.06.020.

Documentation: Submit a copy of the standard subcontract form for review by the District and a written description of the procedure for validating the responsibility of subcontractors under contract.

D. Claims Against Retainage and Bonds

Criterion: No record of excessive claims filed against the retainage or payment bonds for public works projects in the three years prior to the Bid submittal date that demonstrate ineffective management of making timely and appropriate payments to subcontractors, suppliers, and workers, unless there are extenuating circumstances and such circumstances are deemed acceptable to the District.

Documentation: Submit a list of the public works projects completed in the three years prior to the Bid submittal date that have had claims against retainage and bonds and include for each project the following information:

1. Project name
2. Owner name and contact information
3. List of claims filed against the retainage and/or payment bond for any listed projects
4. Written explanation of the circumstances surrounding each claim and the ultimate resolution of the claim

E. Public Bidding Crime

Criterion: No crime conviction involving bidding on a public works contract in the five years prior to the Bid submittal date.

Documentation: By signing the Bidder’s Certification Form, the Bidder declares that the Bidder and/or its owners have not been convicted of a crime involving bidding on a public works contract.

F. Termination for Cause/Termination for Default

Criterion: No public works contract termination for cause or default by a government agency in the five years prior to the Bid submittal date, unless there are extenuating circumstances and such circumstances are deemed acceptable to the District.

Documentation: The Bidder shall state if any of their public works contracts have been terminated for cause or default by a government agency in the five years prior to the Bid submittal date; if terminated, list all such incidents and describe any extenuating circumstances.

G. Lawsuits

Criterion: No lawsuits with judgments entered in the five years prior to the Bid submittal date that demonstrate a pattern of failing to meet the terms of contracts, unless there are extenuating circumstances and such circumstances are deemed acceptable to the District.

Documentation: The Bidder shall declare that no lawsuits with judgments have been entered against the Bidder in the five years prior to the Bid submittal date, or submit a list of all lawsuits with judgments entered against the Bidder in the five years prior to the Bid submittal date, along with a written explanation of the circumstances surrounding each such lawsuit. The District shall evaluate these explanations to determine whether the lawsuits demonstrate a pattern of failing to meet terms of construction-related contracts.

H. Project Experience

Criterion: Evidence that Bidder and its team, including without limitation its subcontractors (hereafter, including Bidder if Bidder performs such Work, "designated Subcontractor(s)," have the human and physical resources of sufficient quantity and quality to perform the Work under Contract Documents in a timely and Specification-compliant manner, to include the following:

Documentation:

1. Construction and management organizations with sufficient personnel and requisite disciplines, licenses, skills, experience, and equipment for the project.
2. Minimum experience requirements of the Contractor including the completion of projects of similar nature and complexity within the past five years.
3. Field organization with skills, experience, and equipment sufficient to perform on-Site work and necessary scheduling.
4. Expertise of key personnel to accomplish the duties and responsibilities required to perform the Work under the Contract Documents.

The District will open the Apparent Successful Bidder's SOQ Envelope and check its contents for Bidder responsibility. The District will notify the Apparent Successful Bidder in writing of any deficiencies found and will provide the Bidder the opportunity to respond in writing with reasonable clarifications but will not allow any changes in the nature of the Bidder as a business entity.

The District reserves the right to request further documentation as needed from the Apparent Successful Bidder and documentation from other Bidders to assess Bidder responsibility and compliance with all Bidder responsibility criteria. The District also reserves the right to obtain information from third parties and

independent sources of information concerning a Bidder's compliance with the mandatory and supplemental criteria, and to use that information in their evaluation.

If any Apparent Successful Bidder is determined to be nonresponsive or nonresponsible, the District may open the next Apparent Successful Bidder's SOQ Envelope, pursuant to any procedures determined in its reasonable discretion, and proceed for all purposes as if this Apparent Successful Bidder were the original Apparent Successful Bidder.

I. Other Requirements Prior to Bidding

Bidder is advised to carefully review those portions of the Bid Form requiring representations and certifications. Bid submission signifies the Bidder's careful examination of Bidding Documents and complete understanding of the nature, extent, and location of Work to be performed. Bid submission shall constitute the Bidder's express representation to the District that the Bidder is fully qualified to complete the Work to be performed.

1.08 SUBCONTRACTORS, SUPPLIERS, AND OTHERS

- A. Submit the required information for those subcontractors who will perform any portion of work related to HVAC, plumbing, or electrical; including labor, rendering of service, fabrication, or other work according to the plans and specifications in accordance with the Revised Code of Washington (RCW) 39.30.060. Violation of this requirement may result in the Bid being deemed nonresponsive.
- B. If District, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, District may, before the Notice of Award is given, request Apparent Successful Bidder to submit a substitute without an increase in Bid
- C. If Apparent Successful Bidder declines to make any such substitution, District may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, individuals, or entities. Declining to make requested substitutions will not constitute grounds for forfeiture of the Bid security of any Bidder.
- D. Any Subcontractor, Supplier, individual, or entity so listed and against which District makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to revocation of such acceptance after the Effective Date of the Agreement.

1.09 EXAMINATION OF BIDDING DOCUMENTS, OTHER RELATED DATA, AND SITE

- A. It is the responsibility of each Bidder before submitting a Bid to:
 - 1. Examine and carefully study the Bidding Documents, other related data identified in the Bidding Documents, and any Addenda.

2. Visit the Site to become familiar with and satisfy Bidder as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Become familiar with and satisfy Bidder as to all federal, state, and local Laws and Regulations that may affect cost, progress, and performance of the Work.
4. Consider the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site and; the Bidding Documents; with respect to the effect of such information, observations, and documents on:
 - a. Cost, progress, and performance of the Work.
 - b. Means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying any specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents.
5. Agree at the time of submitting its Bid that no further examinations, investigations, studies, data, and access are necessary for the determination of its Bid for performance of the Work at the price(s) Bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.
6. Become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
7. If a Bidder finds discrepancies in or omissions from the District's requirements, or if Bidder is in doubt as to the meaning of any provision in the Contract Documents, Bidder shall, at once, notify the District's Contract Officer. If appropriate, a notice of addendum shall be mailed, e-mailed, faxed or otherwise delivered to each person obtaining a set of Contract Documents. Each person requesting an interpretation shall be responsible for the delivery of his request to the District. The District shall not be bound by, nor responsible for, any other explanations or interpretations of the proposed documents other than those given in writing as set forth in this paragraph. Oral instructions, interpretations or representations shall not be binding upon the District.

B. Site and Other Areas:

The Site is identified in the Bidding Documents. All additional lands and access thereto required for temporary construction facilities, construction equipment, or storage of materials and equipment to be incorporated in the Work must be approved in writing by the District. Costs associated with obtaining or otherwise utilizing such additional lands and access rights will be paid for by Contractor.

1.10 PREBID CONFERENCE AND EXAMINATION OF SITE

- A. A prebid conference will be held at the time and place described in Section 00 10 00 (Invitation to Bid). Representatives of District and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference.
- B. Arrangements will be made by the District to allow prospective Bidders access to the site for the purpose of making preliminary inspections. Availability of and access to the site is otherwise limited; therefore the Bidders are advised to plan their inspections and preliminary measurements for the date specified.
- C. Engineer will transmit to prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.
- D. The Contractor shall satisfy itself concerning the nature and the location of the work, the general and local conditions, particularly those affecting transportation, disposal, handling and storage of materials, availability of labor and applicable wage rates, water and electric power, roads, climate conditions and seasons, and physical conditions at the actual work site and project area as a whole, the equipment and facilities needed preliminary to and during work prosecution, and all other matters which can in any way affect the work or the cost thereof. Failure of the Contractor to acquaint itself with all available information regarding any applicable condition shall not relieve him of the responsibility for properly estimating both the difficulties and the costs of successfully performing the work.

1.11 MODIFICATION AND WITHDRAWAL OF BIDS

After submitting a physical Bid proposal to the District, the Bidder may withdraw, revise, or supplement it if:

- A. The Bidder submits a written request signed by an authorized person and physically delivers it to the place designated for receipt of Bid proposals.
- B. The revised or supplemented Bid proposal (if any) is received by the District before the time set for receipt of Bid proposals.
- C. If the Bidder's request to withdraw, revise, or supplement its Bid proposal is received before the time set for receipt of Bid proposals, the District will return the unopened proposal package to the Bidder. The Bidder must then submit the revised or supplemented package in its entirety. If the Bidder does not submit a revised or supplemented package, then its Bid shall be considered withdrawn.
- D. Late revised or supplemented Bid proposals or late withdrawal requests will be date recorded by the District and returned unopened. Mailed, emailed, or faxed requests to withdraw, revise, or supplement a Bid proposal are not acceptable.
- E. If within 24 hours after Bids are opened any Bidder files a duly signed written notice with District and promptly thereafter demonstrates to the reasonable satisfaction of District that there was a material and substantial mistake in the

preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Project is rebid, that Bidder will be disqualified from further bidding on the Project.

1.12 INTERPRETATIONS AND ADDENDA

All questions about the meaning or intent of the Bidding Documents are to be submitted to District in writing. Interpretations or clarifications considered necessary by District in response to such questions will be issued by Addenda mailed or delivered to all parties recorded by the office issuing documents as having received the Bidding Documents. Questions received less than 2 days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

Addenda may also be issued to clarify, correct, or change the Bidding Documents as deemed advisable by District or Engineer.

1.13 PREVAILING WAGE RATES

The Contractor, any subcontractors, and all individuals or firms required by RCW 39.12, Washington Administrative Code (WAC) 296-127, or 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 RCW 39.12 or the DBRA.

When the project is subject to both state and federal hourly minimum rates for wages and fringe benefits and when the two rates differ for similar kinds of labor, the Contractor shall not pay less than the higher rate.

1.14 EQUAL EMPLOYMENT OPPORTUNITY

The District, in accordance with Title VI of the Civil Rights Act of 1964, hereby notifies Bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit Bids in response to this invitation and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award. The Contractor shall comply with applicable federal, state, and local laws, rules, and regulations in regard to nondiscrimination.

1.15 BID EVALUATION

- A. Apparent Low Bidder will be determined and an abstract of the Bids will be made available upon completion of Bid opening proposals.
- B. The District may reject any or all Bids and waive any informalities or minor irregularities in the Bids.
- C. The District will check Bids for correctness of extensions of the prices per unit and the total price. If a discrepancy exists between the price per unit and the extended amount of any Bid item, the price per unit will control.
- D. If a minimum Bid amount has been established for any item and the Bidder's unit or lump sum price is less than the minimum specified amount, the District will

unilaterally revise the unit or lump sum price, to the minimum specified amount and recalculate the extension.

- E. The total of extensions, corrected where necessary, including sales taxes where applicable and such additives and/or as selected by the District, will be used by the District for award purposes and to fix the awarded Contract price amount and the amount of the Contract bond.
- F. The District will notify Bidders of any deficiencies found and will provide the Bidders the opportunity to respond.
- G. In determining Apparent Successful Bidder, the District reserves the right to reject any or all nonconforming, nonresponsive, unbalanced, or conditional Bids, and to reject the Bid of any Bidder if the District believes that it would not be in the best interest of the project to make an award to that Bidder, whether because the Bid is not responsive or the Bidder is unqualified or of doubtful financial ability or fails to meet any other pertinent standard or criteria established by the District. For purposes of this paragraph, an "unbalanced Bid" is one having nominal prices for some work items and enhanced prices for other work items.
- H. In evaluating Bids, the District will consider Bidders' qualifications, whether or not the Bids comply with the prescribed requirements, unit prices, and other data. Consideration shall be given to the following:
 - 1. Bid responsiveness in accordance with the requirements set forth in Section 00 20 00 (Instructions to Bidders).
 - 2. Total Bid price, not including additives or alternate Bid items subject to optional District award.
 - 3. All elements or factors which shall affect the final cost to or benefits to be derived by the District, which may include, but not be limited to:
 - a. The ability, capacity, and skill of the Bidder to perform the contract or provide the services required;
 - b. The character, integrity, reputation, judgment, experience, and efficiency of the Bidder based on the SOQ and any additional information obtained by the District (whether from the Bidder or third parties) believed to be relevant to the matter;
 - c. Whether the Bidder can perform the contract within the time specified;
 - d. The quality of performance of previous contracts or services; and
 - e. The previous and existing compliance by the Bidder with laws relating to the contract or services.
- I. Subject to any pre-qualification process for the Bidders, the District may otherwise conduct reasonable investigations and reference checks of the Bidder,

proposed subcontractors, suppliers, and other persons and organizations as the District deems necessary to assist in the evaluation of any Bid. The District shall also have the right to communicate directly with the Bidder's Surety regarding the Bidder's bonds.

- J. Bidders with concerns about the relevancy or restrictiveness of SOQ responsibility and experience criteria may make or submit requests to the District to modify the criteria. Such requests shall be in writing, describe the nature of the concerns, and propose specific modifications to the criteria. Bidders shall submit such requests to the District no later than five business days prior to the Bid submittal deadline.
- K. District may determine whether a Bidder is qualified in its sole discretionary judgment.
- L. If the District determines the Apparent Low Bidder does not meet the Bidder responsibility and experience criteria and is therefore not a responsible Bidder, the District shall notify the Apparent Low Bidder in writing, with the reasons for its determination. If the Apparent Low Bidder disagrees with this determination, it may appeal the determination within two business days of the District's determination by presenting its appeal and any additional information to the District. The District will consider the appeal and any additional information before issuing its final determination. If the final determination affirms that the Apparent Low Bidder is not responsible, the District will not execute a contract with any other Bidder until at least two business days after the Bidder determined to be not responsible has received the District's final determination.
- M. The District also reserves the right, in its discretion, to reject any or all Bids and to rebid the Project.

1.16 AWARD

If the Contract is to be awarded, it will be awarded to the lowest responsive, responsible Bidder as determined by bid evaluation. Following completion of required District procedures and receipt of District approvals, the District will issue a Notice of Award in writing to the Apparent Successful Bidder.

Before awarding any contract, the District may require one or more of these items or actions of the Apparent Successful Bidder:

- A. A complete statement of the origin, composition, and manufacture of any or all materials to be used.
- B. Samples of these materials for quality and fitness tests.
- C. A work plan progress schedule showing the order of and time required for the various phases of the work.
- D. A breakdown of costs assigned to any Bid item.
- E. Attendance at a conference with the Engineer or representatives of the Engineer.

- F. A copy of the business license to do business in the city or county where the work is located.
- G. Any other information or action taken that is deemed necessary to ensure that the Bidder is the lowest responsible Bidder.

1.17 BID PROTEST

Any Bid protest must be submitted in writing to the District's offices within five days following posting of the Notice of Intent to Award for Construction.

- A. The initial protest must contain a complete statement of the basis for the protest.
- B. The protest must refer to the specific portion of the document that forms the basis for the protest.
- C. The protest must include the name, address, and telephone number of the person representing the protesting party.
- D. The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest.
- E. The procedure and time limits set forth in this paragraph are mandatory and are the Bidder's sole and exclusive remedy in the event of a Bid protest. The Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the Bid protest, including the filing of any legal proceedings. A Bidder may not rely on a protest submitted by another Bidder, but must timely pursue its own protest.

1.18 POST-NOTICE OF AWARD REQUIREMENTS

After Notice of Award, the Apparent Successful Bidder must execute and submit the following documents as indicated below:

- A. Submit the following documents to the District ten days following Notice of Award. Execution of Contract by the District depends upon approval of these documents, and any other document identified in District's Notice of Award:
- B. District-Prepared Contract: To be executed by the successful Bidder. Submit at least two (2) originals, each bearing an original signature.
- C. Construction Performance Bond: To be executed by the successful Bidder and Surety. Submit one original.
- D. Construction Payment Bond: To be executed by the successful Bidder and Surety, Submit one original.
- E. Insurance certificates and endorsements. Submit one original set.

1.19 CONSTRUCTION PAYMENT AND PERFORMANCE BOND FOR CONSTRUCTION
LABOR AND MATERIALS BOND SURETY

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

- A. Be on District-furnished form(s).
- B. Be signed by an approved Surety (or sureties) that is registered with the Washington State Insurance Commissioner and appears on the current Authorized Insurance List in the state of Washington published by the Office of the Insurance Commissioner.
- C. Guarantee that the Contractor will perform and comply with all obligations, duties, and conditions under the Contract, including but not limited to the duty and obligation to indemnify, defend, and protect the District against losses and claims related directly or indirectly from any failure of the Contractor (or any of the employees, subcontractors, or lower tier subcontractors of the Contractor) to faithfully perform and comply with contract obligations, conditions, and duties, or any failure of the Contractor (or the subcontractors or lower tier subcontractors of the Contractor) to pay laborers, mechanics, subcontractors, lower tier subcontractors, material person, or any other person who provides supplies or provisions for carrying out the work.
- D. Be conditioned upon the payment of taxes, increases, and penalties incurred on the project under Titles 50, 51, and 82 RCW.
- E. Be accompanied by a power of attorney for the Surety's officer empowered to sign the bond.
- F. 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(s) must be signed by the president or vice president, unless accompanied by written proof of the authority of the individual signing the bond(s) to bind the corporation (i.e., corporate resolution, power of attorney, or a letter to such effect signed by the president or vice president).
- G. The District shall have the right to communicate directly with the Apparent Successful Bidder's proposed performance bond Surety, to confirm the performance bond.

1.20 FAILURE TO EXECUTE AND DELIVER DOCUMENTS

- A. If the Bidder experiences circumstances beyond their control that prevents return of the Contract Documents, the District may elect to extend the time to return the required documents if the District deems the circumstances warrant it.
- B. The Bidder agrees that calculating the damages the District may suffer as a result of the Bidder's failure to execute and deliver all required Contract Documents would be extremely difficult and impractical and that the amount of

the Bidder's required Bid security shall be the agreed and presumed amount of the District's damages. In addition, upon such failure the District may determine the next Apparent Successful Bidder and proceed accordingly.

- C. The successful Bidder's failure to submit the documents required herein in a proper and timely manner entitles the District to rescind its award and to cause the Bidder's Bid security to be forfeited as provided herein.
- D. Until the District executes an Agreement, no proposal shall bind the District, nor shall any work begin within the project limits or within District-furnished sites. The Contractor shall bear all risks for any work begun outside such areas and for any materials ordered before the Contract is executed by the District.

END OF SECTION

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SECTION 00 41 00 – BID FORMS

PART 1 – GENERAL

1.01 Bond Forms

- A. Bid Form (see attached)
- B. Payment Bond (see attached)

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

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**BID FORM
(STIPULATED PRICE BASIS)**

1. GENERAL

1.1. The undersigned (Bidder) proposes and agrees, if this Bid is accepted, to enter into an Agreement with District in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

1.2. This Bid is submitted to:

Owner: Kittitas Reclamation District ("District")
Mail Address: P.O. Box 276, Ellensburg, WA 98926
Physical Address: 315 N. Water St., Ellensburg, WA 98926
Project Number: 33-SBC-1004
Project Name: South Branch Canal Improvements –
Robinson Siphon to Milepost 10.4.

1.3. This Bid is submitted by:

Bidder Name: _____

Date Submitted: _____

Business Address: _____

Telephone Number: _____

Fax Number: _____

Email Address: _____

Washington Contractor's License No.: _____

Contractor's License Class (where applicable): _____

2. BIDDER'S ACKNOWLEDGEMENTS

- 2.1. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.
- 2.2. Bidder has examined and carefully studied the Bidding Documents, the other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged.

Addendum No(s).	Addendum No(s).

(Bidder shall insert number of each Addendum received.)

- 2.3. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
- 2.4. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.
- 2.5. Bidder has carefully studied: drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 2.6. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.
- 2.7. Based on information and observations referred to in paragraph above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) Bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

- 2.8. Bidder is aware of the general nature of work to be performed by District and others at the Site that relates to the Work as indicated in the Bidding Documents.
 - 2.9. Bidder has given District written notice of conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by District is acceptable to Bidder.
 - 2.10. The Bidding Documents are generally sufficient to indicate and convey understanding of terms and conditions for the performance of the Work for which this Bid is submitted.
3. SCHEDULE OF BID PRICES

Fill in all Bid items completely, including lump sums, unit prices, and alternates. Quote in figures only, unless words are specifically requested.

3.1. Site Improvements and Base Reach (Sta. 529+86 to Sta. 537+00) Bid Schedule

Item No.	Approx. Quantity	Unit	Item Description	Unit Price	Total Amount
000.0	-	-	CONTRACTOR ADMINISTRATION	-	-
010.0	1	Lump Sum	Mobilization (5% max.)	\$	\$
020.0	1	Lump Sum	Permit documentation / compliance	\$	\$
030.0	1	Lump Sum	General Contractor Margin	\$	\$
040.0	1	Lump Sum	Sales and Use Tax	\$	\$
050.0	1	Lump Sum	Record Document Maintenance	\$	\$
060.0	1	Lump Sum	Demobilization (3% max.)	\$	\$
100.0	-	-	SITE PREPARATION	-	-
110.0	1	Lump Sum	Access Improvement (O&M road clear and rough grade)	\$	\$
115.0	1	Lump Sum	Robinson Creek Fish Passable Culvert (incls. Restoration)	\$	\$
120.0	1	Lump Sum	Staging Site Improvements (staging site clear and rough grade)	\$	\$
130.0	1	Lump Sum	Erosion Control / SWPP Plan	\$	\$
140.0	250	Lineal Feet	Wire Fence and Gates (incls. siphon outlet and vehicle gate)	\$	\$
200.0	-	-	CANAL PIPING (Sta. 529+86 to 537+00)	-	-
211.0	700	Lineal Feet	Trench Excavation and Final Grade (incls. common borrow, compaction, and soil stabilization seeding)	\$	\$
212.0	700	Lineal Feet	Pipe Materials (incls. material and delivery)	\$	\$
213.0	700	Lineal Feet	Pipe Bedding, Install, and Haunching (incls. placement and compaction)	\$	\$
214.0	700	Lineal Feet	Trench Initial Backfill and Compaction (incls. select borrow & compaction)	\$	\$
230.0	1	Each	Telemetry Station (incls. transducer, cell comm, solar)	\$	\$
240.0	1	Each	Canal Control Structure (incls. strct & install w/ misc. metal)	\$	\$
250.0	1	Each	Replacement Irrigation Turnout, Piping, and Delivery Box (SB10.1)	\$	\$
270.0	2	Each	Pipeline to Canal Transitions (incls. both upstream & downstream)	\$	\$
TOTAL BASE REACH BID PRICE					\$

☐ Acknowledgement that the District has no tax exemptions on this Work and the above prices include all applicable sales and use taxes.

3.2. Optional Reach Extension

The District may elect to optionally expand the baseline award based on favorable anticipated weather conditions, demonstrated productivity, and project funding availability for the following additional price per reach.

Item No.	Approx. Quantity	Unit	Item Description	Unit Price	Total Amount
000.1	-	-	CONTRACTOR ADMINISTRATION (Mob., Demob., & Permit in base)	-	-
010.1	0	Lump Sum	Mobilization (included in base)	\$0.00	\$0.00
020.1	0	Lump Sum	Permit documentation / compliance (included in base)	\$0.00	\$0.00
030.1	1	Lump Sum	General Contractor Margin	\$	\$
040.1	1	Lump Sum	Sales and Use Tax	\$	\$
050.1	1	Lump Sum	Record Document Maintenance	\$	\$
060.1	0	Lump Sum	Demobilization (included in base)	\$0.00	\$0.00
100.1	-	-	SITE PREPARATION	-	-
110.1	1	Lump Sum	Access Improvement (O&M road clear and rough grade)	\$	\$
120.1	1	Lump Sum	Staging Site Improvements (staging site clear and rough grade)	\$	\$
130.1	1	Lump Sum	Erosion Control / SWPP Plan	\$	\$
140.1	250	Lineal Feet	Wire Fence and Gates (inclds. siphon outlet access control)	\$	\$
200.1	-	-	CANAL PIPING (Sta. 537+00 to 548+00)	-	-
211.1	1,100	Lineal Feet	Trench Excavation and Final Grade (inclds. common borrow, compaction, and soil stabilization seeding)	\$	\$
212.1	1,100	Lineal Feet	Pipe Materials (inclds. material and delivery)	\$	\$
213.1	1,100	Lineal Feet	Pipe Bedding, Install, and Haunching (inclds. placement and compaction)	\$	\$
214.1	1,100	Lineal Feet	Trench Initial Backfill and Compaction (inclds. select borrow & compaction)	\$	\$
220.1	1	Each	Overshot & Undershot Drains (inclds. all materials and installation)	\$	\$
270.1	0	Each	Pipeline to Canal Transitions (downstream transition incl'd in base)	\$0.00	\$0.00
TOTAL OPTIONAL REACH EXTENSION BID PRICE					\$

☐ Acknowledgement that the District has no tax exemptions on this Work and the above prices include all applicable sales and use taxes.

4. TIME OF COMPLETION

- 4.1. Bidder agrees the Work will be substantially complete in accordance with Section 00 73 00 (Supplementary Conditions). Anticipated award and Notice to Proceed to allow for construction during the annual canal outage beginning in fall 2020.
- 4.2. Bidder agrees the Work will be completed and ready for final payment 30 calendar days after the date of Substantial Completion.
- 4.3. Bidder accepts the provisions of the Agreement as to liquidated damages in the event of failure to complete the Work, and any specified Milestones, within the Contract Times.

5. ATTACHMENTS TO THIS BID

- 5.1. The following documents are submitted with and made a condition of this Bid:
 - 5.1.1. Signed Bidder's Certification Form.
 - 5.1.2. Issued Bid security in the form of Bid bond.
 - 5.1.3. Evidence of Bidder authority and registration to do business in the state of the Project; or a written covenant to obtain such license within the time for acceptance of Bids.
 - 5.1.4. Separately sealed Bidder's Statement of Qualifications packet.
 - 5.1.5. RCW 39.30.060 list of Proposed Subcontractors and Suppliers.

6. BID SUBMITTAL

6.1. This Bid submitted by: If Bidder is:

An Individual

Name (typed or printed): _____

By (signature): _____

Doing business as: _____

A Partnership

Partnership Name: _____ (SEAL)

By: _____
(Signature of general partner – attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation: _____

Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____ (CORPORATE SEAL)

Attest: _____
(Signature of Corporate Secretary)

Date of Qualification to do business in State of Washington is: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated below.)

A Joint Venture

Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

By: _____
(Signature of joint venture partner – attach evidence of authority to sign)

Name (typed or printed): _____

Title: _____

SECTION 00 45 00 – REPRESENTATIONS AND CERTIFICATIONS

PART 1 – General

1.01 REPRESENTATIONS AND CERTIFICATIONS FORMS

- A. Bidder's Certification Form (see attached)

PART 2 – PRODUCTS

(Not used)

PART 3 – Execution

(Not used)

END OF SECTION

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Bidder's Certification

NOTICE: Execute and submit with Bid.

BIDDER NAME: _____

The undersigned Bidder certifies to the Kittitas Reclamation District, as set forth in the following sections of this document.

1. BID LEGITIMACY AND NON-COLLUSION

By my signature hereunder, as the Bidder, I certify:

- a. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization or corporation.;
- b. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;
- c. Bidder has not solicited or induced any individual or entity to refrain from bidding; and
- d. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this paragraph:

“corrupt practice” means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process;

“fraudulent practice” means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish Bid prices at artificial noncompetitive levels, or (c) to deprive Owner of the benefits of free and open competition;

“collusive practice” means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, noncompetitive levels; and

“coercive practice” means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

2. DEBARMENT, SUSPENSION, OR PREVIOUS DISQUALIFICATIONS

The prospective contractor certifies to the best of its knowledge and belief that it and its principals:

- a. Are not presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- d. Have not within a three-year period preceding this application had one or more public transactions (Federal, State, or local) terminated for cause or default. By my signature hereunder, I hereby swear, under penalty of perjury, that the below indicated Bidder, any officer of such Bidder, or any employee of such Bidder who has a proprietary interest in such Bidder, has never been disqualified, removed, or otherwise prevented from bidding on or completing a federal, state, or local government project because of a violation of law or a safety regulation.

3. CERTIFICATION OF TAX COMPLIANCE

- a. By my signature hereunder, as the Bidder, I certify that no delinquent taxes are owed to the Washington State Department of Revenue (WSDOR) without a payment plan approved by WSDOR.
- b. Required sales and use taxes are included in the stated Bid prices for the Work unless provision is made herein for the Bidder to separately itemize the estimated amount of sales tax or if the Instructions to Bidders (Section 00 20 00) state Work is tax exempt.

4. CERTIFICATION OF WAGE LAW COMPLIANCE

By my signature hereunder, as the Bidder, I certify under the laws of the State of Washington on behalf of the firm identified below that, to the best of my knowledge and belief, this firm has NOT been determined by a final and binding citation and notice of assessment issued by the Washington State Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in the Revised Code of Washington (RCW) 49.48.082, any provision of RCW chapters 49.46, 49.48, or 49.52 within three years prior to the date of the Call for Bids.

5. CERTIFICATION OF ADEQUACY OF CONTRACT AMOUNT

By my signature hereunder, as the Bidder, I certify that, if awarded the Contract based on the undersigned's Bid, the Contract will include sufficient funds to allow the Bidder to comply with all applicable local, state, and federal laws or regulations governing the labor or services to be provided. I understand that the Kittitas Reclamation District will be relying on this certification if it awards the Contract to the undersigned.

Signature: _____

Name (printed): _____

Title: _____

Date: _____

SECTION 00 50 00 – CONTRACT FORMS

PART 1 – GENERAL

1.01 Contract FORMS

- A. Notice of Intent to Award for Construction (see attached)
- B. District Prepared Contract (see attached)
- C. Notice to Proceed (see attached)
- D. Certificate of Completion and Release (see attached)

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

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NOTICE OF INTENT TO AWARD FOR CONSTRUCTION

Date of Notice: _____

To: _____

Address: _____

Project Name: _____

Project No.: _____

Contract No.: _____

The Contract Sum of the accepted bid is _____ dollars.

1. Comply with the following conditions precedent by 2:00 p.m. of the tenth calendar day following the date of this Notice of Award and prior to the issuance of a Notice to Proceed; supply the following:
 - a. Deliver to Kittitas Reclamation District ("District") three fully executed copies of District-Prepared Contract.
 - b. Deliver to District one original Performance Bond, executed by you and your Surety.
 - c. Deliver to District one original Payment Bond, executed by you and your Surety.
 - d. Deliver to District one original set of the insurance certificates with endorsements as required under Section 00 72 00 (General Conditions).
2. Failure to comply with these conditions within the time specified will entitle the District to consider your Bid abandoned, to annul this Notice of Award, and to declare your Bid security forfeited.
3. Within 20 days after you comply with these conditions, the District will return to you one fully signed District-Prepared Contract with the Contract Documents.

KITTITAS RECLAMATION DISTRICT

By: _____

Title: _____

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DISTRICT PREPARED CONTRACT

This agreement, dated this ____ day of _____, _____ by and between _____ whose place of business is located at _____ ("Contractor"), and the KITTITAS RECLAMATION DISTRICT ("District"), an irrigation special district organized and existing under the Washington Irrigation District Law.

WHEREAS, District, has awarded to Contractor the following contract:

SOUTH BRANCH CANAL IMPROVEMENTS – ROBINSON SIPHON TO MILEPOST 10.4
PROJECT NO. 33-SBC-1004
CONTRACT NO.

Now, therefore, in consideration of the mutual covenants hereinafter set forth, Contractor and District agree as follows:

ARTICLE 1: SCOPE OF WORK

Contractor agrees to furnish all materials, equipment, machinery, tools, plant, labor, and transportation in the manner and form provided by Contract Documents 33-SBC-1004 made a part hereof, entitled South Branch Canal Improvements - Robinson Siphon to Milepost 10.4.

ARTICLE 2: COMPLETION

Contractor shall perform the work within the times required by the Contract Documents, failure to do so shall result in damage to the District. Liquidated damages for late completion of any work shall be applicable as provided in Section 00 73 00 (Supplementary Conditions). Any such liquidated damages may be deducted from any money due Contractor. No excuse for failure to timely perform shall be recognized except as specified in Section 00 72 00 (General Conditions).

ARTICLE 3: PAYMENT

District agrees to pay Contractor for the work herein to be performed for the not to exceed sum of \$ _____, in accordance with Contract Documents.

ARTICLE 4: PERFORMANCE BOND

Contractor shall furnish in favor of District, a Performance Bond as required by Contract Documents, and this Contract shall not obligate District until such Performance Bond has been tendered.

ARTICLE 5: SEVERABILITY

Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and remaining provisions shall continue to be valid and binding upon Owner and Contractor, who agree the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

ARTICLE 6: DISPUTE RESOLUTION

6.1 Dispute Resolution. The Parties intend that any dispute, controversy or claim arising under, out of or relating to this contract and any subsequent amendments of this contract, including, without limitation, its formation, validity, binding effect, interpretation, performance, breach or termination, as well as non-contractual claims (collectively referred to as a "Dispute"), shall be resolved using a phased approach to the resolution of Disputes that might arise between the Parties as described below.

6.1.1 Phase I Dispute Resolution. In the event of a Dispute, the Parties will meet and discuss the resolution of the Dispute(s) amongst themselves in good faith. In the event the Parties are unable to resolve the Dispute(s) through good faith meetings and discussion, then either Party may request, in writing, that Phase II of the dispute resolution process be used by sending the other party a Mediation Notice.

6.1.2 Phase II Dispute Resolution-Mediation. In the event the Parties resort to Phase II of the dispute resolution process, then the Parties shall select a mediator who shall be an independent party within twenty-one (21) days of the date of the Mediation Notice. The Parties agree to, in good faith, engage in mediation with the third-party mediator to resolve the Dispute. In the event the Parties are unable to agree upon a mediator, then each Party shall each select a mediator and the two selected mediators shall select a third mediator who shall mediate the Dispute(s) between the Parties. The Parties agree to split the costs of the mediation with each Party paying one half of the mediation fees and costs charged by the mediator(s). All mediation shall be conducted pursuant to the Uniform Mediation Act which is codified at Chapter 7.07 of the

Revised Code of Washington. In the event the Parties, after twenty-one (21) days of the commencement of mediation, are unable to resolve the Dispute(s) through mediation, then either Party may request, in writing, that Phase III the dispute resolution process be used by sending the other party an Arbitration Notice.

6.1.3 Phase III Dispute Resolution-Arbitration. Should no resolution of the issues be reached in Phase II of the dispute resolution process, the Dispute shall then be submitted by either Party for arbitration. The arbitration shall be conducted and processed, including any review of the Arbitrator's decision, pursuant to the Uniform Arbitration Act which is codified at Chapter 7.04A of the Revised Code of Washington. In the event the Parties are not able to agree on an arbitrator, then each Party shall select an arbitrator and the arbitrators so selected shall then select an arbitrator who shall preside over the arbitration. The costs of the arbitration shall be allocated to the Parties as determined by the Arbitrator.

ARTICLE 7: ATTORNEY FEES

If any party to this agreement is required to retain an attorney to enforce any provision of this Agreement, whether or not a legal proceeding commences, the substantially prevailing party shall be entitled to reasonable attorneys' fees regardless of whether at trial, on appeal, in any bankruptcy proceeding, arbitration matter or without resort to suit.

ARTICLE 8: GOVERNING LAW

This agreement shall be interpreted, construed and enforced according to the laws of the State of Washington.

ARTICLE 9: NOTICES

Subject to the requirements of any applicable statute, any notices required or permitted by law or under this agreement shall be in writing and shall be (i) personally delivered; (ii) sent by first class certified or registered mail, return receipt requested, with postage prepaid; or (iii) dispatched by facsimile transmission (accompanied with reasonable evidence of receipt of transmission and with a confirmation copy mailed no later than the day after transmission) to the parties' addresses set forth above. Either party may change such address for notice. All notices which are so addressed and paid for shall be deemed effective when personally delivered, or, if mailed, on the earlier of receipt or two days after deposit thereof in the U.S. mail.

ARTICLE 10: TIME OF PERFORMANCE

Time is of the essence of this agreement and of all acts required to be done and performed by the parties hereto, including, but not limited to, the proper tender of each of the sums required by the terms hereof to be paid.

ARTICLE 11: ENTIRE AGREEMENT

All understandings and agreements previously existing between the parties, if any, are merged into this Agreement, which alone fully and completely expresses their agreement, and the same is entered into after full investigation, neither party relying upon any statement or representation made by the other not embodied herein. This Agreement may be modified only by a written amendment executed by all parties.

ARTICLE 12: INTERPRETATION

This Agreement has been reviewed by both parties and each party has had the opportunity to consult with independent counsel with respect to the terms hereof and has done so to the extent that such party desired. No stricter construction or interpretation of the terms hereof shall be applied against either party as the drafter hereof.

ARTICLE 13: AMENDMENT

This Agreement may not be modified or amended except by the written agreement of the parties.

ARTICLE 14: DEBARMENT AND SUSPENSION (2 CFR 1400)

The Department of the Interior regulations at 2 CFR 1400-Governmentwide Debarment and Suspension (Nonprocurement), which adopt the common rule for the governmentwide system of debarment and suspension for nonprocurement activities, are hereby incorporated by reference and made a part of this Agreement. By District entering into a grant or cooperative Agreement with the Bureau of Reclamation, District is required to comply with 2 CFR 1400, Subpart C, and agrees to hereby include a similar term or condition in all lower-tier covered transactions. These regulations are available at <http://www.gpoaccess.gov/ecfr/>. Contractor represents and warrants that Contractor and Contractor's sub contractors and all lowered tier transactions will comply with 2 CFR 1400. Contractor further represents and warrants that Contractor is not currently suspended and is not currently Debarred under Federal Rules and Regulations. In the event during the course of this Contract, contractor is suspended and/or Debarred then Contractor shall immediately notify the District in writing.

ARTICLE 15: TRAFFICKING VICTIMS PROTECTION ACT OF 2000 (2 CFR 175.15)

Trafficking in persons.

(A) Provisions applicable to District, Contractor, or a subrecipient that is a private entity.

(1) District and Contractor, their employees, subrecipients under this award, and subrecipients employees may not

(i) Engage in severe forms of trafficking in persons during the period of time that the award is in effect;

(ii) Procure a commercial sex act during the period of time that the award is in effect; or

(iii) Use forced labor in the performance of the award or subawards under the award.

(2) The Federal awarding agency may unilaterally terminate the funding grant award, without penalty, if District, Contractor, or a subrecipient that is a private entity -

(i) Is determined to have violated a prohibition in paragraph a.1 of this award term; or

(ii) Has an employee who is determined by the agency official authorized to terminate the award to have violated a prohibition in paragraph a.1 of this award term through conduct that is either:

(A) Associated with performance under this award; or

(B) Imputed to District or the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our agency at 2 CFR part 1400.

(B) Provision applicable to District or the subrecipient other than a private entity. The Federal awarding agency may unilaterally terminate the funding grant award, without penalty, if a subrecipient that is a private entity-

(1) Is determined to have violated an applicable prohibition in paragraph a.1 of this award term; or

(2) Has an employee who is determined by the agency official authorized to terminate the funding grant award to have violated an applicable prohibition in paragraph a.1 of this award term through conduct that is either:

(i) Associated with performance under this award; or

(ii) Imputed to the subrecipient using the standards and due process for imputing the conduct of an individual to an organization that are provided in 2 CFR part 180, "OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," as implemented by our agency at 2 CFR part 1400.

(C) Provisions applicable to any recipient or subrecipient.

(1) You must inform us immediately of any information you receive from any source alleging a violation of a prohibition in paragraph a.1 of this award term.

(2) Our right to terminate unilaterally that is described in paragraph a.2 or b of this section:

(i) Implements section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), as amended (22 U.S.C. 7104(g)), and

(ii) Is in addition to all other remedies for noncompliance that are available to us under this award.

(3) You must include the requirements of paragraph a.1 of this award term in any subaward you make to a private entity.

(D) Definitions. For purposes of this award term :

(1) "Employee" means either:

(i) An individual employed by you or a subrecipient who is engaged in the performance of the project or program under this award; or

(ii) Another person engaged in the performance of the project or program under this award and not compensated by you including, but not limited to, a volunteer or

individual whose services are contributed by a third party as an in-kind contribution toward cost sharing or matching requirements.

(2) "Forced labor" means labor obtained by any of the following methods: the recruitment, harboring, transportation, provision, or obtaining of a person for labor or services, through the use of force, fraud, or coercion for the purpose of subjection to involuntary servitude, peonage, debt bondage, or slavery.

(3) "Private entity":

(i) Means any entity other than a state, local government, Indian tribe, or foreign public entity, as those terms are defined in 2 CFR 175.25.

(ii) Includes:

(a) A nonprofit organization, including any nonprofit institution of higher education, hospital, or tribal organization other than one included in the definition of Indian tribe at 2 CFR 175.25(b).

(b) A for-profit organization.

(4) "Severe forms of trafficking in persons," "commercial sex act," and "coercion" have the meanings given at section 103 of the TVPA, as amended (22 U.S.C. 7102).

ARTICLE 16: PROHIBITION ON TEXT MESSAGING AND USING ELECTRONIC EQUIPMENT SUPPLIED BY THE GOVERNMENT WHILE DRIVING

Executive Order 13513, *Federal Leadership On Reducing Text Messaging While Driving*, was signed by President Barack Obama on October 1, 2009 (ref: <http://edocket.access.gpo.gov/2009/pdf/E9-24203.pdf>). This Executive Order introduces a Federal Government-wide prohibition on the use of text messaging while driving on official business or while using Government-supplied equipment. Contractor agrees to adopt and enforce policies that immediately ban text messaging while driving company-owned or rented vehicles, government-owned or leased vehicles, or while driving privately owned vehicles when on official government business or when performing any work funded for or on behalf of the government.

**ARTICLE 17: RECIPIENT EMPLOYEE WHISTLEBLOWER RIGHTS AND REQUIREMENT TO
INFORM EMPLOYEES OF WHISTLEBLOWER RIGHTS (SEP 2013)**

- (A) This contract and employees working on this project are subject to the whistleblower rights and remedies in the pilot program on Award Recipient employee whistleblower protections established at 41 U.S.C. 4712 by section 828 of the National Defense Authorization Act for Fiscal Year 2013 (Pub.L. 112-239).
- (B) The District, Contractor, and any additional subrecipients shall inform its employees in writing, in the predominant language of the workforce, of employee whistleblower rights and protections under 41 U.S.C. 4712.
- (C) The District, Contractor, and any additional subrecipients shall insert the substance of this clause, including this paragraph (c), in all subawards or subcontracts over the simplified acquisition threshold. 48 CFR 52.203-17 (as referenced in 48 CFR 3.908-9).

In witness whereof the parties have executed this Agreement in triplicate the day and year first above written.

KITTITAS RECLAMATION DISTRICT

By:

By:

Urban Eberhart, District Manager

Name:

State Contractor's License No.

Classification

Expiration Date

Taxpayer ID No.

NOTICE TO PROCEED

Dated: _____ To: _____

Contact:

Name: _____

Mailing Address: _____

Telephone No.: () - _____

Fax No.: () - _____

Email Address: _____

Project Name: **South Branch Canal Improvements – Robinson Siphon to Milepost 10.4**

Project No.: **33-SBC-1004**

Contract No.: _____

Board Approval Date: _____

Authorized Amount (Contract Price): _____ \$

This document serves as notification that the Contract Time under the above Contract will commence to run on _____. On that date, you are to start performing your obligations with respect to Work at the Site under the Contract Documents. In accordance with the District Prepared Contract, the dates of Substantial Completion and Final Completion for the entire Work are _____ and _____, respectively.

Before starting any Work at the Site, the following is required:

1. Satisfy all **Post-Notice Award Requirements** as detailed in Section 00 20 00 (Instructions to Bidders).
2. Attend the preconstruction conference and provide the construction schedule in accordance with Section 01 30 00 (Administrative Requirements).

KITTITAS RECLAMATION DISTRICT

By:

Attachments: Signed Contract (2)

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CERTIFICATE OF COMPLETION AND RELEASE

From: _____
Contractor

To: _____
Kittitas Reclamation District

Contract No. KRD2018-GC-01 entered into the ____ day of _____, _____ by and between _____ whose place of business is located at _____ ("Contractor"), and the KITTITAS RECLAMATION DISTRICT ("District"), an irrigation special district organized and existing under the Washington Irrigation District Law for Project Number 33-SBC-1003 Contract Documents entitled South Branch Canal Lining – Swede Tunnel to Robinson Creek.

Know All Parties By These Presents:

1. The undersigned hereby certifies that there is due from and payable by the District to the Contractor under the Contract and duly approved Change Orders and modifications the balance of \$_____.
2. The undersigned further certifies that in addition to the amount set forth in Paragraph 1, there are outstanding and unsettled the following items which he claims are just and due and owing by the District to the Contractor:
 - a. _____
 - b. _____
 - c. _____
 - d. _____(Itemize claims and amounts due – If none, so state)
3. The undersigned further certifies that all work required under this Contract including work required under change orders has been performed in accordance with the terms thereof, and that there are no unpaid claims for materials, supplies, or equipment and no claims of laborers or mechanics for unpaid wages arising out of the performance of this Contract, and that the wage rates paid by the Contractor and all Subcontractors were in conformity with the Contract provisions relating to said wage rates.

4. Except for the amounts stated under Paragraphs 1 and 2, hereof, the undersigned has received from the District all sums of money payable to the undersigned under or pursuant to the above-mentioned Contractor or any modification or change thereof.
5. That in consideration of the payment of the amount stated in Paragraph 1 hereof the undersigned does hereby release the District from any and all claims arising under or by virtue of this Contract, except the amount listed in Paragraph 2 hereof; provided however, that if for any reason the District does not pay in full the amount stated in Paragraph 1 hereof, said deduction shall not affect the validity of this release, but the amount so deducted shall be automatically included under Paragraph 2 as an amount which the Contractor has not released but will release upon payment thereof. The Contractor further certifies that upon the payment of the amount listed in Paragraph 1, hereof, he will release the District from any and all claims of any nature whatsoever arising out of said Contractor or modification thereof, and will execute such further released or assurances as the District may request.

In witness whereof, the undersigned has signed and sealed this instrument this
____ day of _____, _____.

(Signature and Title of Officer) (Seal)

State of _____)

County of _____)

_____, being duly sworn on oath, deposes and says:

That he is the _____ of the

_____, that he has read the foregoing Certificate by

him subscribed as _____ (Title)

of the _____ (Corporation/Company).

Subscribed and sworn to before me this _____ day of _____, _____.

(Seal or Stamp)

Signature of Notary Public

Title

My Appointment Expires _____

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SECTION 00 61 00 – BOND FORMS

PART 1 – GENERAL

1.01 BOND FORMS

- A. Performance Bond (see attached)
- B. Payment Bond (see attached)

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

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PERFORMANCE BOND

The Kittitas Reclamation District, of Kittitas, Washington, has awarded to _____ (“Principal”) a contract for the construction of the project designated as the South Branch Canal Lining – Swede Tunnel to Robinson Creek, Contract No. KRD2018-GC-01 (“Contract”) in Kittitas County, Washington, and said Principal is required 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 Washington 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 Department, are jointly and severally held and firmly bound to the Kittitas Reclamation District, in the sum of U.S. dollars (\$_____) 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 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; if such performance obligations have not been fulfilled, this bond shall remain in force and effect.

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 to the Principal shall automatically increase the obligation of the Surety on this bond, and notice to the Surety is not required for such increased obligation. This bond may be executed in two 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 office executing on behalf of the Surety.

Principal as Contractor:

Surety:

Name

Name

Principal Place of Business Address

Surety Address

City/State/Zip

City/State/Zip

Company:

Company:

Signature

Signature

Name and Title

Name and Title

PAYMENT BOND

That whereas, the Kittitas Reclamation District ("District") has awarded to _____ as Contractor, Project No. _____, Contract No. _____ dated the _____ day of _____, _____ ("Contract"), titled the South Branch Canal Lining – Swede Tunnel to Robinson Creek, in the amount of \$_____ ("Contract Price"), which Contract is by this reference made a part hereof, for the work described as follows: The Work consists of concrete lining, drainage, earthwork and other work.

And whereas, Contractor is required to furnish a bond in connection with the Contract to secure the payment of claims of laborers, mechanics, material suppliers, and other persons as provided by law;

Now, therefore, we, the undersigned Contractor and _____ ("Surety"), are held and firmly bound unto District in the sum of 100 percent of the Contract price (TBD), for which payment well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

District has awarded to Contractor and Surety a contract for construction in Kittitas County, Washington, and said Contractor is required under the terms of that Contract to furnish a payment bond in accord with Title 39.08 of the Revised Code of Washington (RCW) and (where applicable) RCW 60.28.

The Contractor, and Surety, a corporation organized under the laws of the State of Washington 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 Department, are jointly and severally held and firmly bound to the District, in the sum of _____ U.S. dollars (\$ _____) Total Contract Amount, subject to the provisions herein.

This statutory payment bond shall become null and void, if and when the Contractor, its heirs, executors, administrators, successors, or assigns shall pay all persons in accordance with RCW 39.08, RCW 39.12, and RCW 60.28 including all workers, laborers, mechanics, subcontractors, and materialmen, 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 Titles 50 and 51 RCW and all taxes imposed on the Contractor under Title 82 RCW; and if such payment obligations have not been fulfilled, this bond shall remain in full force and effect.

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 changes, 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 to the Contractor 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 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 office executing on behalf of the Surety.

The Surety's obligations hereunder are independent of the obligations of any other surety for the payment of claims of laborers, mechanics, material suppliers, and other persons in connection with the Contract; suit may be brought against the Surety and such other sureties, jointly and severally, or against any one or more of them, or against less than all of them without impairing the District's rights against the other.

Correspondence or claims relating to this bond shall be sent to Surety at the address below.

Dated _____, _____ in the Amount of \$ _____

Contractor:

Surety:

Name

Name

Contractor Place of Business Address

Surety Address

City/State/Zip

City/State/Zip

Company:

Company:

Signature

Signature

Name and Title

Name and Title

SECTION 00 62 00 – PROJECT EXECUTION FORMS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Submittal Transmittal Form (see attached)
- B. Request for Information / Interpretation Form (see attached)
- C. Substitution Request Form (see attached)
- D. Change Order Form (see attached)

PART 2 – PRODUCTS

(not used)

PART 3 – EXECUTION

(not used)

END OF SECTION

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**KITTITAS
RECLAMATION
District**

Submittal

Project: _____
Contract: _____

Submittal No.: _____
Ref. No.: _____
Contractor's No. _____

To: District's Representative
315 N. Water St, P.O. Box 276
Ellensburg, WA 98926

From: Choose an item.
General Contracting
Firm Name / Address

Dwg. Ref: _____
Spec. Ref: § _____, ¶ _____

Sub. / Supplier: _____
Submittal Date: _____

Brief Description of Document(s) Transmitted:

Click here to enter text.

Attached:

Optional Submitters Comments:

Click here to enter text.

Attached:

Submitted By

Submitter Signature

Date

Distribution (Qty): Project Files

The District's approval of the Contractor's submittals shall in no way relieve the Contractor from its obligation to meet the requirements of the Contract Documents. Reviewed only for general conformance with the project requirements indicated in the Contract Documents and for consistency with the project design concept. Corrections or comments made on the shop drawings or product data submittal do not relieve the Contractor from responsibility for errors or omissions in designs for which the Contractor is responsible, for compliance with all requirements of the Contract Documents and for the safe and successful construction of the work. Contractor is also responsible for dimensions to be confirmed and correlated at the jobsite. This review does not consider the means, methods, techniques, sequence of assembly, and operations of construction, or said precautions or programs identical thereto, which are the sole responsibility of the Contractor.

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**KITTITAS
RECLAMATION
District**

Request for Interpretation / Info

Project: _____
Contract: _____

RFI No.: _____
Ref. No.: _____
Contractor's No. _____

To: District's Representative
315 N. Water St, P.O. Box 276
Ellensburg, WA 98926

From: Choose an item.
General Contracting
Firm Name / Address

Dwg. Ref: _____
Spec. Ref: § _____, ¶ _____

Sub. / Supplier: _____
Submittal Date: _____

Brief Description of RFI Request:

Click here to enter text.

Attached:

Optional Submitters Comments:

Click here to enter text.

Attached:

Submitted By

Submitter Signature

Date

Distribution (Qty): Project Files

The District's approval of the Contractor's submittals shall in no way relieve the Contractor from its obligation to meet the requirements of the Contract Documents. Reviewed only for general conformance with the project requirements indicated in the Contract Documents and for consistency with the project design concept. Corrections or comments made on the shop drawings or product data submittal do not relieve the Contractor from responsibility for errors or omissions in designs for which the Contractor is responsible, for compliance with all requirements of the Contract Documents and for the safe and successful construction of the work. Contractor is also responsible for dimensions to be confirmed and correlated at the jobsite. This review does not consider the means, methods, techniques, sequence of assembly, and operations of construction, or said precautions or programs identical thereto, which are the sole responsibility of the Contractor.

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**KITTITAS
RECLAMATION
District**

Substitution Request

Project:	_____	Substitution No.:	_____
Contract:	_____	Ref. No.:	_____
		Contractor's No.	_____
To:	District's Representative 315 N. Water St, P.O. Box 276 Ellensburg, WA 98926	From:	Choose an item. General Contracting Firm Name / Address
Dwg. Ref:	_____	Sub. / Supplier:	_____
Spec. Ref:	§ _____, ¶ _____	Submittal Date:	_____

Brief Description of Substitution Requested:

Click here to enter text.

Attached:

Optional Submitters Comments:

Click here to enter text.

Attached:

Submitted By

Submitter Signature

Date

Distribution (Qty): Project Files

The District's approval of the Contractor's submittals shall in no way relieve the Contractor from its obligation to meet the requirements of the Contract Documents. Reviewed only for general conformance with the project requirements indicated in the Contract Documents and for consistency with the project design concept. Corrections or comments made on the shop drawings or product data submittal do not relieve the Contractor from responsibility for errors or omissions in designs for which the Contractor is responsible, for compliance with all requirements of the Contract Documents and for the safe and successful construction of the work. Contractor is also responsible for dimensions to be confirmed and correlated at the jobsite. This review does not consider the means, methods, techniques, sequence of assembly, and operations of construction, or said precautions or programs identical thereto, which are the sole responsibility of the Contractor.

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CONTRACT NO.:	KITTITAS RECLAMATION DISTRICT CHANGE ORDER	CHANGE ORDER NUMBER:
CURRENT CONTRACT AMOUNT \$	NET CHANGE THIS ORDER \$	CONTRACT TOTAL AFTER CHANGE \$
KITTITAS RECLAMATION DISTRICT		CONTRACTOR:
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">SIGNATURE</div> <div style="width: 45%;">DATE</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">Urban Eberhart</div> <div style="width: 45%;">District Manager</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">NAME</div> <div style="width: 45%;">TITLE</div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">SIGNATURE</div> <div style="width: 45%;">DATE</div> </div> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">NAME</div> <div style="width: 45%;">TITLE</div> </div>	

SECTION 00 72 00 – GENERAL CONDITIONS

GC-1 FORM OF CONTRACT

The form of the Contract shall be lump sum and unit price type.

GC-2 DEFINITIONS

Whenever these words occur in the Contract Documents, they shall have the following meanings:

“BID” The written proposal submitted by the Bidder on the Bid Form.

“BIDDER” Any person or entity who submits a Bid.

“BID EVALUATION” The criteria for determining the lowest responsive Bid received in response to the Contract Documents.

“BID ITEM” A line item on the Bid Form.

“BID UNIT PRICE” The price per unit on a specific Bid Item.

“CONTRACT CONDITIONS” Consists of two parts: General Conditions and Supplementary Conditions.

1. General Conditions are general clauses that are common to the District Contracts,
2. Supplementary conditions modify or supplement General Conditions to meet specific requirements for this Contract.

“CHANGE ORDER” A written instrument prepared by District and signed by District and Contractor, stating their agreement upon all of the following:

1. a change in the Work;
2. the amount of the adjustment in the Contract Sum, if any; and the amount of the adjustment in the Contract Time, if any.

“CONTRACT DOCUMENTS” The Contract Documents shall include all sections listed in General Condition GC-24.

“CONTRACT AWARD” Contract Award is defined as the date the successful Bidder is first notified in writing that the District's Board of Directors has adopted a resolution accepting the Contractor's Bid.

“CONTRACTOR” The successful Bidder who is awarded the Contract to perform the work covered by these Contract Documents.

“CONTRACT PRICE” The Total Bid Price and any properly approved Change Orders approved subsequent to Contract Award.

“DISTRICT (or DISTRICT'S) REPRESENTATIVE” The employee designated by the District as its representative during the progress of the work.

“DISTRICT” OR “OWNER” The Kittitas Reclamation District.

“FINAL ACCEPTANCE” Acceptance of the work by the District in writing. Final Acceptance shall not constitute an acceptance by the District of any work performed or goods supplied which are not in strict compliance with the Contract Documents.

“SUBCONTRACTOR” A contractor hired by the Contractor to perform a portion of the work covered by these Contract Documents.

“TOTAL BID PRICE” The properly calculated total of the Bid Items on the Bid Forms.

“WORK” The entire completed construction, or the various separately identifiable parts thereof, required to be furnished under the Contract Documents within the Contract Time. Work includes and is the result of performing or furnishing labor and furnishing and incorporating materials and equipment into the construction, and performing or furnishing services and furnishing documents, all as required by the Contract Documents including everything shown in the Drawings and set forth in the Specifications. Wherever the word “work” is used, rather than the word “Work,” it shall be understood to have its ordinary and customary meaning.

GC-3 SUSPENSION OF WORK / TERMINATION OTHER THAN FOR DEFAULT

The District may, at its sole option, by notice in writing to the Contractor suspend or terminate at any time the performance of all or any portion of work to be performed under the Contract. Upon such notice of suspension or termination of work, the District shall designate the amount and type of plant, labor, and equipment to be committed to the work site during the period of suspension or termination. The Contractor shall use its best efforts to utilize its plant, labor, and equipment in such a manner as to minimize costs associated with suspension or termination.

- A. Upon receipt of any such notice, the Contractor shall:
 - 1. Immediately discontinue work as specified in the notice;
 - 2. Place no further orders or subcontracts for material, services, or equipment with respect to suspended or terminated work;
 - 3. Promptly suspend or terminate all orders, subcontracts, and rental agreements to the extent they relate to performance of work suspended or terminated; and
 - 4. Continue to protect and maintain the work, including those portions on which work has been suspended;
 - 5. Assist District Representative or District in the maintenance, protection, and disposition of work in progress, plant, tools, equipment property, and materials acquired by Contractor or furnished by Contractor under this Contract; and
 - 6. Complete performance of the Work which is not terminated.
- B. As full compensation for such suspension the Contractor shall be reimbursed for the following costs, reasonably incurred, without duplication of any item, to the extent that such costs directly result from such suspension of work:
 - 1. A standby charge, as determined to be equitable by the District Representative, to be paid to the Contractor during a period of suspension of work sufficient to compensate the Contractor for keeping, to the extent required in the notice, its organization and equipment committed to the Work in a standby status;

2. All reasonable costs, as determined to be equitable by the District Representative, associated with any demobilization and remobilization of the Contractor's plant, forces, and equipment;
 3. Any claim on the part of the Contractor for additional time or compensation shall be made within ten (10) calendar days after receipt, by Contractor, of a notice to suspend work. Failure to submit a claim within the ten (10) day period shall constitute a waiver of any such claim;
 4. In no event however, shall the amount to be paid the Contractor pursuant to this section exceed the Contract Price.
- C. Upon receipt of notice to resume suspended work, the Contractor shall immediately resume performance of the suspended work to the extent required in the notice. Any claim on the part of the Contractor for time or compensation shall be made within ten (10) calendar days after receipt of notice to resume work and the Contractor shall submit a revised project schedule for review.
- D. Upon delivery of a written notice to the Contractor, the District may, without cause and without prejudice to any other right or remedy, elect to terminate the Contract. Upon receipt of any such notice, the Contractor shall take all appropriate steps in part A of this section GC-3.

Upon any such termination, Contractor shall waive any claims for damages including Contractor's overhead, loss of anticipated profits, and all other inconvenience, expenses, damages, costs and lost profits whatsoever.

If such termination is executed after Contract Award but prior to the District issuing Notice to Proceed (if applicable) to the Contractor, the District shall pay the reasonable, verifiable and directly attributable costs incurred by the Contractor in the preparation of his Bid plus fifteen percent of such costs. If such termination is effected after the District has issued Notice to Proceed and the Contractor has commenced performance hereunder, the District shall pay the reasonable, verifiable and directly attributable costs incurred by the Contractor as determined by the physical progress of the work satisfactorily completed to date of such termination evaluated against the approved schedule of values plus costs of removing equipment and materials and otherwise demobilizing, plus ten percent of the sum of all such costs; provided, said payment shall not in any event exceed the Contract Price hereunder. The payment of the District shall constitute full and complete satisfaction and settlement for the Contractor's overhead, anticipated profits, and all other inconvenience, expenses, damages, costs and lost profits whatsoever. The Contractor shall be entitled to no further payments whatsoever for the work. Amounts retained and accumulated under RCW Chapter 60.28 shall be held and disbursed as provided therein.

Contractor shall submit within 30 days after receipt of notice of termination, a request for adjustment to the Contract Price in accordance with the above provisions. District Representative shall review, analyze, and verify such request, and upon District Representative's approval, the Contract shall be amended in writing accordingly.

Those provisions of the Contract that by their nature survive Final Acceptance under the Contract shall remain in full force and effect after such termination.

GC-4 TERMINATION FOR DEFAULT / NONCOMPLIANCE

A. Acts of Default

If Contractor fails in any material way to comply with any of the conditions or provisions of the Contract Documents or is unable to pay its debts as they mature or authorizes or takes any action under bankruptcy or reorganization, readjustment of debt, insolvency, liquidation or other similar laws or proceedings it shall be considered an act of default.

B. Consequences of Default

In the event of default, the District may immediately, without limiting any other remedy available to it in law or equity, withhold any amount otherwise due under the Contract. The District shall provide written notice of default. In the event Contractor fails to correct the default within ten (10) calendar days after written notice of default, the District may terminate the Contractor's right to proceed with all or any portion of the Work. The District's right to liquidated damages shall not in any manner limit any other remedy available to the District, including but not limited to, the District's right to terminate the Contractor's right to proceed.

C. Noncompliance

The Contractor shall, upon receipt of written notice of noncompliance with any provision of this Contract and the action to be taken, immediately correct the conditions to which attention has been directed. Such notice, when served on the Contractor or his representative at the site of the Work, shall be deemed sufficient. If the Contractor fails or refuses to comply promptly, the District Representative may issue an order to suspend all or any part of the Work. When satisfactory corrective action is taken, an order to resume work shall be issued. No part of the time lost due to any such suspension order shall entitle the Contractor to any extension of time for the performance of the Contract or to reimbursement for excess costs or damages.

GC-5 SUCCESSORS

District and Contractor each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

GC-6 ASSIGNMENT

No assignment by a party hereto of any rights under or interests in the Contract shall be binding on another party hereto without the written consent of the party sought to be bound; and, specifically but without limitation, monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment shall release or discharge the assignor from any duty or responsibility under the Contract Documents. Any costs to District associated with assignment may be deducted from amounts due Contractor.

GC-7 INDEMNITY

- A. Contractor shall be responsible for any and all damage, loss or injury of any kind or nature whatsoever, direct or indirect, to person or property arising out of or in any manner connected with or caused by or resulting from or suffered in connection with the execution of the work provided for in this Contract, or in connection therewith. Contractor agrees to defend, indemnify and hold harmless the District and its representatives (which terms shall be deemed to include directors, officers, employees, agents, and servants, and any other persons directly or indirectly engaged in any activity connected with the performance of the work under the Contract Documents) from and against any and all liabilities, claims, losses, damages or expenses, including reasonable legal fees, and expert witness fees, which may be incurred or sustained by the District or any of their respective employees, by reason of any act, omission, misconduct, negligence, or default on the part of the Contractor or any Subcontractor of the Contractor, and any employees of the Contractor or Subcontractor and except as may otherwise be provided by applicable law. Contractor specifically assumes liability for actions brought by Contractor's own employees against the District and for that purpose Contractor specifically waives any immunity under the Workers Compensation Act, RCW Title 51. The indemnification obligation under this Contract shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable to or for any third party under workers' compensation acts, disability benefits acts, or other employee benefits acts; provided Contractor's waiver of immunity by the provisions of this paragraph extends only to claims against Contractor by District, and does not include, or extend to, any claims by Contractor's employees directly against Contractor.
- B. The District shall not be responsible or be held liable for any damage to person or property consequent upon the use, misuse or failure of any crane, hoist, rigging, blocking, scaffolding or other equipment used by the Contractor or any of his Subcontractors, even though the said crane, hoist, rigging, blocking, scaffolding, or other equipment be furnished or loaned to the Contractor by the District. The acceptance and/or use of any such crane, hoist, rigging, blocking, scaffolding or other equipment by the Contractor or his Subcontractors shall be construed to mean that the Contractor accepts all responsibility for any claims for damages whatsoever resulting from the use, misuse or failure of such apparatus whether such damages by his own employees or property or to the employees or property of other contractors, the District, or otherwise.
- C. Contractor's indemnification obligation shall not apply to liability for damages arising out of bodily injury to persons or damage to property caused by the negligence of the District or its agents or employees and not attributable to any act or omission on the part of the Contractor. In the event of damages to person or property caused by or resulting from the concurrent negligence of District or its agents or employees and the Contractor or its agents or employees, the Contractor's indemnity obligation shall apply only to the extent of the Contractor's (including that of its agents and employees) negligence.
- D. Contractor acknowledges that by entering into a contract with the District, he has mutually negotiated the above indemnity provisions with the District. Contractor's

indemnity and defense obligations shall survive the termination or completion of the Contract and remain in full force and effect until satisfied in full.

GC-8 LAWS, REGULATIONS, PERMITS

The Contractor represents that it is familiar with, and shall be governed by and comply with, all Federal, State and local statutes, laws, ordinances, and regulations including amendments and changes as they occur.

All written instruments, agreements, specifications and other writing of whatsoever nature which relate to or are a part of this Agreement shall be construed, for all purposes, solely and exclusively in accordance and pursuant to the laws of the State of Washington. The rights and obligations of the District and Contractor shall be governed by the laws of the State of Washington. Venue of any action filed to enforce or interpret the provisions of this Agreement shall be exclusively in the Superior Court, County of Kittitas, State of Washington or the Federal District Court for the Eastern District of Washington at the District's sole option. In the event of litigation to enforce the provisions of this Agreement, the prevailing party shall be entitled to reasonable legal fees in addition to any other relief allowed.

Contractor shall comply with all applicable sanitation and safety regulations and shall supply and maintain such equipment and facilities as are deemed necessary for such compliance, including traffic control, barricades and warning devices. Coordination must and shall be responsibility of the Contractor.

Unless the Contract Documents provide otherwise, all permits and licenses necessary to the prosecution of the work shall be secured by the Contractor at its own expense, and Contractor shall give all notices necessary and incident to the due and lawful prosecution of the work.

GC-9 DAMAGES

Any claims arising under the Contract by the Contractor shall be made in writing to the District Representative no later than ten calendar days after the beginning of the event or occurrence giving rise to the claim. Failure to make written claim prior to the time specified in the Contract Documents shall constitute waiver of any such claim.

GC-10 INDEPENDENT CONTRACTOR, SUPERINTENDENT, AND EMPLOYEES

It is understood and agreed that in all work covered by the Contract, the Contractor shall act as an independent contractor, maintaining complete control over his employees and all of his Subcontractors. The Contractor shall perform the work in accordance with his own methods, subject to compliance with the Contract. The Contractor shall perform the work in an orderly and workmanlike manner, enforce strict discipline and order among his employees and assure strict discipline and order by his Subcontractors, and shall not employ or permit to be employed on the work any unfit person or anyone unskilled in the work assigned to him.

The Contractor shall designate in writing before starting work competent, authorized site representative(s) who shall be authorized to represent and act for the Contractor in all matters relating to the Contract. The Contractor's letter designating representative(s) shall clearly define the scope of his authority to act for the Contractor and define any limitations of this authority. Said authorized representative(s) shall be present at the site of the work at all times when work is in progress. Arrangements acceptable to the District shall be made for any emergency work which may be required. The Contractor's

authorized representative(s) shall be supported by competent assistants as necessary, and the authorized representative(s) and assistants shall all be satisfactory to the District. All directions given to the authorized representative(s) by the District shall be binding as if given to the Contractor.

The Contractor and his Subcontractors shall employ only orderly workers. Employees deemed by the District to be incompetent, subversive, or disorderly shall be removed from the performance of the work, and such removal shall not form the basis of any claim for compensation or damage upon the District.

The Contractor and Subcontractor shall be responsible for insuring that its employees fully comply with all applicable federal, state and local laws and support the District's commitment to provide a safe healthy drug free work environment. The Contractor and Subcontractor shall immediately remove any employee from further work when it is determined that they are not fit for duty. Furthermore, the Contractor and Subcontractor shall immediately remove any employee from further work if it is determined by the District, at its discretion, that the employee is not fit for duty for any reason. Failure on the part of the Contractor or Subcontractor to comply with any of the above shall be considered an act of default in accordance with GC-4.

GC-11 CORRECTION OF WORK / WARRANTY

All materials and equipment incorporated into any work under the Contract shall be new and of the most suitable grade of their respective kinds for their intended uses unless otherwise specified. All workmanship shall be in accordance with sound work practices acceptable to District Representative. Contractor warrants all equipment, materials and labor it furnishes or performs under this Contract against defects in design, materials, and workmanship. Contractor's warranty shall remain in effect for a period of three hundred sixty-five (365) calendar days after Final Acceptance.

If at any time prior to the expiration of the warranty period, Contractor or District discovers any defect in such design, materials or workmanship, the Contractor shall, upon written notice from the District given within a reasonable time after discovery, correct such defects to the satisfaction of the District by redesigning, repairing or replacing the defective work at a time acceptable to District. All costs incidental to such corrective action including removal, disassembly, reinstallation, re-work, re-testing and re-inspection as may be necessary to correct the defect or demonstrate that the previously defective work conforms to the requirements of the Contract shall be borne by the Contractor.

Contractor warrants any and all corrective action against defects in design, materials, and workmanship for a period of twelve (12) months following acceptance by District of the corrected work.

If, after due notice, the Contractor shall refuse or persistently neglect to make corrections so as to meet the requirements of the Contract, the District may proceed to make such corrections as they may be required, and Contractor shall reimburse District for all cost and expenses incurred in connection therewith.

The warranty requirements in this section are the minimum requirements for materials, equipment and work under this Contract. Any other warranty requirements specified in the Contract, including the Technical Specifications, are in addition to, and not in lieu of the minimum requirements specified herein.

GC-12 CHANGES IN WORK

Without invalidating the Contract, the District may make changes by altering, adding or deducting from the work, and/or make changes in the drawings and specifications requiring changes in the work and/or materials and equipment to be furnished under this Contract; provided such additions, deductions or changes are within the general scope of the Contract. It shall be the responsibility of the Contractor before proceeding with any change, to satisfy himself that the execution of the written Change Order has been properly authorized on behalf of the District.

Charges or credits for the work covered by the approved changes shall be determined by one or more, or a combination of the following methods, at the District's option:

- A. Unit prices specified in the unit prices for changes in work submitted with the Contractor's Bid proposal, if any.
- B. An agreed lump sum. When requested, Contractor shall provide a detailed proposal for evaluation by the District, including, as applicable:
 - 1. Detailed proposed labor categories, hours, and rates.
 - 2. Specific materials and quantities.
 - 3. Equipment and equipment hours.
- C. The actual cost of:
 - 1. Labor, including foreman, only for employees who will work directly on the work covered by the Change Order.
 - 2. Materials entering permanently into the work.
 - 3. The ownership or rental cost of plant and equipment during the time of use on the project.
 - 4. Power and consumable supplies for the operation of power equipment.
 - 5. Insurance.
 - 6. Social Security and old age and unemployment contributions.
 - 7. To the sum of Items 1, 2, 4, 5, and 6 inclusive, there shall be added a fixed fee of ten percent (10%). The fee shall be compensation to cover the cost of supervision, overhead, bond, profit and any other general expenses.

When a change is ordered by the District, as provided herein, a Change Order shall be executed by the District and the Contractor before any Change Order work is performed. The District shall not be liable for any payment to Contractor, or claims arising therefrom, for Change Order work which is not first authorized in writing as set forth in this section. All terms and conditions contained in the Contract Documents shall be applicable to Change Order work. Change Orders shall be issued on the forms provided in "Section 00 50 00 Contract Forms."

The District Representative may instruct the Contractor to make minor changes in the work where such changes are not inconsistent with the purposes of the Contract, do not involve any additional cost and shall not require an extension of the Contract completion date. The Contractor shall make no such changes without receipt of a District Instruction, setting forth the changes to be made. Contractor's compliance therewith shall constitute its acknowledgment that such changes shall not result in any claim for additional payment or extension of the Contract completion date. If the Contractor believes the instruction shall result in additional costs or time extensions, Contractor shall promptly notify the District of the same and not proceed with the changes.

No waiver of any provision of the Contract, and no consent to departure there from, by either party, shall be effective unless in writing and signed by the waiving or consenting party, and no such waiver or consent shall extend beyond the particular case and purpose involved.

GC-13 TAXES

Required sales and use taxes shall be included in the stated Bid prices for the Work unless provision is made herein for the Bidder to separately itemize the estimated amount of sales tax or if Instructions to Bidders state District is tax exempt.

GC-14 PAYMENT / RETAINAGE

PAYMENT

- A. Work under Contract Documents, or under any Bid Item, allowance, or alternate, shall include all labor, materials, taxes, transport, handling, storage, supervision, administration, and all other items necessary for the satisfactory completion of Work, whether or not expressly specified or indicated.
- B. Payment shall be in the form of monthly progress payments according to the terms and conditions set forth in this document.
- C. Quantity of work to be paid for under any item for which a unit price is fixed in Contract Documents shall be number, as determined by District, of units of work satisfactorily completed in accordance with Contract Documents or as directed by District. Unless otherwise provided, determination of number of units of work so completed will be based, so far as practicable, on actual measurement or count within prescribed or ordered limits, and no payment will be made for work done outside of limits. Measurements and computations will be made by methods set forth in Contract Documents. If methods are not so set forth, measurements shall be made in any manner which District considers appropriate for class of Work measured (e.g., pre-assigned values, percentage completion, units completed or incremental milestones). Contractor must immediately inform District of any disputes regarding quantity measurements and shall immediately supply District with any documentation supporting the disputed measurements.
- D. Contract price for items listed in the bid form shall constitute full compensation for furnishing all labor, materials, tools, equipment, services, and incidentals, and performing all operations necessary to complete the items in accordance with these specifications and the applicable drawings. Payment for each item shall be considered as full compensation, notwithstanding that minor features may not be mentioned herein. Determination of quantities removed, and deductions made

therefrom to determine quantities of in-place measurement, after having once been made, will not be reopened, except on evidence of collusion, fraud, or obvious error.

- E. Indirect costs, such as supervision, overhead, profit, the general conditions specified in the Contract, all shall be allocated to each bid item as applicable for work defined in the bid item. No separate payment will be made to the Contractor for these items.
- F. Payment Schedule - On or before the last Day of each month (but after receipt of District's approval of the updated Schedule, Contractor shall submit to District two (2) copies of an Application for Payment for the cost of the Work put in place during the period from the 15th Day of the previous month to the 15th Day of the current month. Such Applications for Payment shall be for the total value of activities completed or partially completed, including approved activity costs, based upon the bid form of all labor and materials incorporated in the Work up until midnight of the last Day of that one-month period, less the aggregate of previous payments.
- G. No progress payment will be processed prior to District receiving all requested, acceptable schedule update information. Failure to submit a schedule update justifies denying the entire Application for Payment.
- H. District will review Contractor's Application for Payment following receipt. If adjustments need to be made to percent of completion of each activity, District will make appropriate notations and return to Contractor. Contractor shall revise and resubmit. Each Application for Payment may be reviewed by District and/or inspectors to determine whether the Application for Payment is proper, and shall be rejected, revised, or approved by District.
- I. The Contract Sum, whether lump sum, unit price or otherwise, shall be deemed to include all costs necessary to complete required Work, all costs (if any) for loss or damage arising from nature of Work or prosecution of the Work, and from action of elements. Unless Contract Documents expressly provide otherwise, the Contract Sum shall be deemed to include:
 - 1. Any and all costs arising from any unforeseen difficulties which may be encountered during, and all risks of any description connected with, prosecution of Work or prosecution of Bid Item (whether lump sum or unit price) until acceptance by District;
 - 2. All expenses incurred due to suspension, or discontinuance of Work or discontinuance of Bid Item (whether lump sum or unit price) as provided in Contract Documents;
 - 3. Escalation to allow for cost increases between time of Contract Award and completion of Work or completion of Bid Item (whether lump sum or unit price).
- J. Unit Prices shall apply to work covered by unit prices regardless of actual quantities performed on the Project.

- K. No payment shall be made for materials or equipment not yet incorporated into the Work except as specifically allowed below.
- L. The District may, in its discretion, where Contractor requests payment on the basis of materials and equipment not incorporated in the Work, require Contractor to satisfy the following conditions:
 - 1. The materials or equipment shall be delivered and suitably stored at the Site or at another local location agreed to in writing, for example, a mutually acceptable warehouse;
 - 2. Full title to the materials and/or equipment shall vest in District at the time of delivery to the Site, warehouse or other storage location;
 - 3. Obtain a negotiable warehouse receipt, endorsed over to District for materials or equipment stored in an off-site warehouse. No payment will be made until such endorsed receipts are delivered to District;
 - 4. Stockpiled materials or equipment shall be available for District inspection, but District shall have no obligation to inspect them and its inspection or failure to inspect shall not relieve Contractor of any obligations under the Contract Documents. Materials or equipment shall be segregated and labeled or tagged to identify these specific Contract Documents;
 - 5. After delivery of materials or equipment, if any inherent or acquired defects are discovered, defective materials or equipment shall be removed and replaced with suitable materials and/or equipment at Contractor's expense;
 - 6. At Contractor's expense, insure the materials or equipment against theft, fire, flood, vandalism, and malicious mischief, as well as any other coverages required under the Contract Documents;
 - 7. Contractor's Application for Payment shall be accompanied by a bill of sale, invoice or other documentation warranting that District has received the materials and equipment free and clear of all liens and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect District's interest therein, all of which must be satisfactory to District. This documentation shall include, but not be limited to, conditional releases of mechanics' liens and stop notices from all those providing materials and equipment as to which the Application for Payment relates, as well as unconditional releases of the same from the same as to the previous Application for Payment for which they have not already been provided.
 - 8. Amounts previously paid for materials and equipment prior to incorporation into the Work shall be deducted from amounts otherwise due Contractor as they are incorporated.

- M. Unit Price Quantities – When estimated quantity for specific portions of Work is listed in Bid Form, quantity of Work to be paid for shall be actual number of units satisfactorily completed, as determined by District and certified by Contractor, in accordance with Contract Documents.
- N. Lump Sum – When estimated quantity for specific portion of Work is not indicated and unit is designated as lump sum, payment will be on a lump sum basis for Work satisfactorily completed in accordance with Contract Documents.
- O. District does not expressly, or by implication, agree, warrant, or represent in any manner, that actual amount of Work will correspond with amount shown or estimated and reserves right to increase or decrease amount of any class or portion of Work, to leave out entire Bid Item or Items, or to add work not originally included in Bid or Contract Documents, when in its judgment such change is in best interest of District. No change in Work shall be considered a waiver of any other condition of Contract Documents. No claim shall be made for anticipated profit, for loss of profit, for damages, or for extra payment whatever, except as otherwise expressly provided for in Contract Documents, because of any differences between amount of work actually done and estimated amount as set forth herein, or for elimination of Bid Items.
- P. Granting of progress payment or payments by District, or receipt thereof by Contractor, shall not be understood as constituting in any sense acceptance of Work or of any portion thereof, and shall in no way lessen liability of Contractor to replace unsatisfactory work or material, though unsatisfactory character of work or material may have been apparent or detected at time payment was made.

RETAINAGE

- Q. The District shall withhold the sum of five percent (5%) of the amount of each progress payment to the Contractor as retainage in accordance with R.C.W. Chapter 60.28 of the Revised Code of the State of Washington.
- R. If the District is requested in writing by the Contractor, the monies reserved hereunder (retainage) shall be placed in escrow with a bank or trust company located in Kittitas County, State of Washington by the District and interest on such escrowed funds shall be paid to the Contractor as said interest accrues, all as more fully provided in R.C.W. Chapter 60.28. However, any payments made to the Contractor hereunder shall not relieve the Contractor from responsibility under provision of the Contract and warranties. Payment is not to be construed as acceptance by District or certification that the Contractor has performed the work correctly or according to Contract Documents.
- S. Schedule of Values
Contractor shall prepare a Schedule of Values with preparation of Contractor's Completion Schedule as required in section SC-2. The Schedule of Values shall be submitted for approval within fourteen (14) calendar days after notice of Contract Award. The Schedule shall include:

1. Project identification on each page:
 - a. Project name and location
 - b. District Contract number
 - c. Contractor's name and address
 - d. Date of submittal
2. Mobilization. See limitations for this item in SC-9.
3. Each of the stages in the Contractor's Completion Schedule (SC-2) and each required Milestone (SC-3): Provide a breakdown in enough detail to facilitate continued evaluation for payment and progress reports. Provide a separate line item in the Schedule of Values for each part of the work where invoice for payment may include materials or equipment purchased or fabricated and stored, but not yet installed. Provide separate line items in the Schedule of Values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the work.
4. Schedule Updating: Update and resubmit the Schedule of Values for approval before the next invoice for payment when Change Orders result in a change in the Contract Price.

GC-15 BOND IN LIEU OF RETAINAGE

Pursuant to RCW Chapter 60.28, the Contractor may submit a bond in lieu of the retainage that the District would otherwise keep under the terms of this Contract and pursuant to applicable law. Any such bond submitted in lieu of retainage must be on the form provided with these Contract Documents. In the event the Contractor fails at any time to pay persons protected under RCW Chapter 60.28 or the District has reason to believe that the District or other obligee under the bond has a claim against the retainage or for other good cause, the District may, at its option, resume retaining from monies earned by the Contractor in such amount as it would otherwise be entitled to retain had the bond not been accepted. Notwithstanding the District's resuming such retainage, said bond shall remain in full force and effect to the extent of its penal sum, limited to the amount of retainage released to the Contractor. After the Contractor has paid protected persons or otherwise cured any default, the District may, at its option, again release retainage pursuant to the terms of the Bond.

GC-16 PAYMENTS WITHHELD

In addition to the above percentage retained, the District may withhold the whole or part of any certificate for payment to such extent as may be reasonably necessary to protect itself from loss on account of:

- A. Defective or damaged work not remedied or warranties not met.
- B. Claims filed or reasonable evidence indicating filing of claims against the Contractor.

- C. Failure of the Contractor to make payments properly to Subcontractors or for materials, labor, or equipment.
- D. A reasonable doubt that the Contract can be completed for the balance then unpaid.
- E. Damage to another Contractor.
- F. Damage to or loss of District-furnished materials or District property.
- G. Contractor's failure to meet any performance warranties required by the Contract Documents.
- H. Failure of the Contractor to provide Submittals as required in Section 01 33 00 Technical Specifications.
- I. Contractor's liability for payments due to the District as the result of terms and conditions of these Contract Documents.

The Contractor shall provide a contact name, address, and email address to facilitate notification if any payment, or portion of any payment, is withheld for any of the reasons above, or for missing documentation or items incorrectly invoiced. Notification shall be made via email, or shall be mailed, properly addressed and stamped with the required postage to the person designated by the Contractor.

GC-17 ACCEPTANCE AND FINAL PAYMENT

- A. As soon as practicable after all required Work is completed in accordance with Contract Documents, including punchlists, testing, record documents and Contractor maintenance after Final Acceptance, District will pay to Contractor, in manner provided by law, unpaid balance of Contract Sum of Work (including without limitation retentions), or whole Contract Sum of Work if no progress payment has been made, determined in accordance with terms of Contract Documents, less sums as may be lawfully retained under any provisions of Contract Documents or by law.
- B. Final Completion occurs when Work meets requirements for District's Final Acceptance. When Contractor considers Work is Finally Complete, submit written certification that:
 - 1. Contractor has inspected Work for compliance with Contract Documents, and all requirements for Final Acceptance have been met.
 - 2. Except for Contractor maintenance after Final Acceptance, Work has been completed in accordance with Contract Documents and deficiencies listed with Certificate of Substantial Completion have been corrected. Equipment and systems have been tested in the presence of District and are operative.
 - 3. Work is complete and ready for final inspection.

- C. In addition to submittals required by Contract Documents, provide submittals required by governing authorities and submit final statement of accounting giving total adjusted Contract Sum, previous payments, and sum remaining due.
- D. When District finds Work is acceptable and final closeout submittals are complete, District will issue final Change Order reflecting approved adjustments to Contract Sum not previously made by Change Order. Should District determine that Work is incomplete or defective:
 - 1. District promptly will so notify Contractor, in writing, listing the incomplete or defective items.
 - 2. Promptly remedy the deficiencies and notify the District when it is ready for reinspection.
 - 3. When District determines that the Work is acceptable under the Contract Documents, District will request Contractor to make closeout submittals.
- E. Final adjustments of accounts:
 - 1. Submit a final statement of accounting to District, showing all adjustments to the Contract Sum.
 - 2. If so required, District shall prepare a final Change Order for submittal to Contractor, showing adjustments to the Contract Sum that were not previously made into a Contract Modification.
 - 3. Prior progress payments shall be subject to correction in the final payment. District's determination of amount due as final payment shall be final and conclusive evidence of amount of Work performed by Contractor under Contract Documents and shall be full measure of compensation to be received by Contractor.

GC-18 DISTRICT'S USE OF CONSTRUCTION AND EQUIPMENT

- A. The District shall have the right to take possession of, use and collect revenues from any completed, partially completed, satisfactory or unsatisfactory portions of the work after the time for completion of the work has expired, but such taking possession and use shall not be deemed an acceptance of any work not completed in accordance with the Contract Documents.
- B. The District shall be responsible for damages incurred as a result of use of the work except when such damages occur as a result of uncompleted work or faulty workmanship or materials. Prior to using any portion of the work, the District may notify the Contractor of inventory of work yet to be completed.
- C. During the progress of the work it may be necessary for the District to have access to the facilities to install and maintain certain material required for annual operation of District's canal and related irrigation system infrastructure.

- D. The District shall have the right to operate all equipment as soon and as long as it is in operational condition, whether or not such equipment has been accepted as complete and satisfactory, except that this shall not be construed to permit operation of any equipment which may be materially damaged by such operation before any required alterations or repairs have been made. All repairs or alterations required by the Contractor shall be made by the Contractor at such times as directed and, in such manner, as shall cause the minimum interruption in the use of the equipment by the District.

GC-19 COOPERATION WITH OTHERS

- A. There may be other contractors or forces of the District working the same area where work under this Contract shall be performed. The Contractor shall fully cooperate with such other contractors and the District's employees and carefully fit his work with the other work consistent with orderly and expeditious performance and completion of the project as a whole.
- B. Contractor will not enter into any agreement or understanding with third parties related to execution of the Work without explicit written District approval of such agreement. This includes any such agreement or understanding for lands and access required for temporary construction facilities, construction equipment, or storage of materials and equipment outside of the Site identified in the Contract Documents.

GC-20 WAGES PAID BY THE CONTRACTOR

- A. Contractor and its Subcontractors shall comply with all provisions of R.C.W. Chapter 39.12. Contractor and its Subcontractor shall pay all laborers, workmen, or mechanics employed by it or them in the performance of this Contract the applicable state prevailing wage rate required by R.C.W. Chapter 39.12. In the event the applicable wage rate(s) required to be paid by the Contractor or its Subcontractors change during the performance of this Contract, Contractor and its Subcontractors shall make any required adjustment so as to fully comply with any applicable state prevailing wage rate law (R.C.W. Chapter 39.12). Notwithstanding the foregoing, the District shall not be required to make any adjustment in the Contract Price as a result of changes in the state prevailing wage rate law.
- B. The Contractor or Subcontractor shall comply with the reporting requirements and instructions on the affidavit of wages paid form, and shall report the following information on the affidavit of wages paid form submitted to the Department of Labor and Industries in order to comply with the reporting requirements for use of "Off-Site, Prefabricated, Non-Standard, Project Specific" items:
 - 1. The estimated cost of the public works project;
 - 2. The name of the awarding agency and the project title;
 - 3. The contract value of the off-site, prefabricated, nonstandard, project specific items produced outside of Washington State, including labor and materials; and

4. The name, address, and federal employer identification number of the contractor that produced the off-site, prefabricated, nonstandard, project specific items.
- C. Prior to any payments being made to Contractor, the Contractor and each and every Subcontractor shall file a "Statement of Intent to Pay Prevailing Wages" which has been approved by the Department of Labor and Industries as required by R.C.W. 39.12.040.

GC-21 INSURANCE

- A. Prior to the commencement of any work under this Agreement, and at all times during the term of this Agreement, Contractor shall obtain and maintain continuously, at its own expense a policy, or policies of insurance with insurance companies rated A- VII or better by A.M. Best, as enumerated in A.1 through A.6 below. All insurance required by this Contract shall be primary insurance with respect to any insurance carried by the District. Contractor shall have no right to call upon or seek contribution from any insurance carried by the District. Any significant deductible, self-insured retention or coverage via captive must be disclosed and is subject to approval by District's Risk Manager. The cost of any claim payments falling within the deductible or self-insured retention shall be the responsibility of the Contractor.

Contractor shall ensure that all policies of insurance that Contractor carries as insurance shall include a waiver of the insurer's right of subrogation to the benefit of the District.

CONTRACTOR REQUIRED INSURANCE

- B. General Liability Insurance: Commercial general liability insurance, written on an occurrence form covering all operations by or on behalf of Contractor against claims for bodily injury (including death) and property damage (including loss of use). Such insurance shall provide coverage for:
 1. Premises and Operations;
 2. Products and Completed Operations
 3. Contractual Liability;
 4. Broad Form Property Damage (including Completed Operations);
 5. Explosion (X), Collapse (C) and Underground Hazards (U); including XCU coverage under both Premises/Operations and Contractual Liability;
 6. Personal Injury Liability (with deletion of the exclusion for liability assumed under Contract);
 7. Pollution Liability (sudden and accidental);
 8. Independent Contractor's Contingent Liability;

9. Territorial Extension for the area in which the work will be performed;
 10. Such insurance shall provide coverage for action-over liability claims.
with a minimum limit of \$1,000,000 per occurrence for bodily injury and property damage combined, provided that policy aggregates, if any, shall apply separately to each annual policy period.
- C. Stop Gap Employers Liability: Stop Gap Employer's Liability insurance (including Occupational Disease coverage) in the amount of \$1,000,000 for Each Accident, Each Employee, and Policy Limit. Such insurance shall provide coverage in the location in which the Work is performed and the location in which the Contractor is domiciled. The Contractor expressly agrees to comply with all provisions of the Workers' Compensation Laws of the states or countries where the Work is being performed.
 - D. Automobile Liability Insurance: Automobile Liability insurance against claims of bodily injury (including death) and property damage (including loss of use) covering all owned, rented, leased, non-owned, and hired vehicles used in the performance of the Work, with a minimum limit of \$1,000,000 per accident for bodily injury and property damage combined and containing appropriate uninsured motorist and No-Fault insurance provision, when applicable.
 - E. Excess Insurance: Excess (or Umbrella) Liability insurance with a minimum limit of \$10,000,000. This insurance shall provide coverage in excess of the underlying primary liability limits, terms, and conditions for each category of liability insurance in the foregoing subsections 1, 2 and 3. This insurance shall be written on a following form basis of underlying coverages, and the aggregate limits, if any, shall apply separately to each annual policy period. If this insurance is written on a claims-made policy form, then the policy shall be endorsed to include an automatic extended reporting period of at least five (5) years.
 - F. Pollution Liability Insurance with a minimum limit of \$5,000,000, if pollution coverage is provided outside of a P&I Club entry or outside of Protection and Indemnity Insurance coverage evidenced on the SP-23 form or equivalent. Pollution liability coverage shall cover bodily injury, property damage, including cleanup costs and defense costs resulting from sudden and gradual pollution conditions of contaminants or pollutants into or upon the land, the atmosphere or any water course or body of water.
 - G. Worker's Compensation - The Contractor shall comply with the provisions of Title 51 of the Revised Code of Washington.
 - H. Evidence of Insurance - Prior to performing any services, and within ten (10) days after receipt of the Contract Award, the Contractor shall file with the District a Certificate of Insurance showing the Insuring Company, policy numbers, effective dates, limits of liability and deductibles with a copy of the endorsement naming the District as an Additional Insured (not required for Worker's Compensation).
 - I. Failure of the District to demand such certificate or other evidence of compliance with these insurance requirements or failure of the District to identify a deficiency

from the provided evidence shall not be construed as a waiver of the Contractor's obligation to maintain such insurance. Acceptance by the District of any certificate or other evidence of compliance does not constitute approval or agreement by the District that the insurance requirements have been met or that the policies shown in the certificates or other evidence are in compliance with the requirements.

- J. The District shall have the right but not the obligation of prohibiting the contractor or subcontractor from entering the project site until such certificates or other evidence of insurance has been provided in full compliance with these requirements. If the Contractor fails to maintain insurance as set forth above, the District may purchase such insurance at the Contractor's expense. The Contractor's failure to maintain the required insurance may result in termination of this contract at the District's option.
- K. Sub-contractors - Contractor shall insure that each Subcontractor meets the applicable insurance requirements and specifications of this Agreement. All coverage for subcontractors shall be subject to all the requirements stated herein and applicable to their profession. Subcontractors shall not be excluded from coverage under Contractor's policies without proof of equivalent coverage being held directly by the subject subcontractors. Contractor shall furnish the District with copies of certificates of insurance evidencing coverage for each subcontractor
- L. Cancellation of Insurance - The Contractor shall not cause any insurance policy to be canceled or permit any policy to lapse. All insurance policies shall include a provision to the effect that the insurance policy shall not be subject to cancellation, lapse, or to reduction in the required limits of liability or amount of insurance until notice has been mailed to the District by the insuring company stating the date that such cancellation, lapse or reduction shall be effective which date shall be not less than thirty (30) calendar days after the mailing of such notice.

GC-22 SAFETY

The Contractor and Subcontractor's attention is alerted to the strict enforcement and requirements of the "Occupational Safety and Health Act" (OSHA) and the "Washington Industrial Safety and Health Act" (WISHA). The Contractor and Subcontractor shall comply with all provisions thereof and make such reports and maintain records as the Acts requires. Any accidents requiring medical attention or damage to District property shall be reported immediately to the District's Representative.

The Contractor shall furnish the District a copy of all Material Safety Data (MSD) sheets for all Contractors and Subcontractor supplied chemicals requiring such documentation as stated in OSHA and/or WISHA regulations. In addition, the Contractor shall maintain access to all MSD sheets at the work site as required by law. The Contractor and Subcontractor may obtain MSD sheets from the District for any District chemicals by contacting the District's Representative.

The Contractor and Subcontractors shall comply with all applicable building and construction codes.

The Contractor and Subcontractor shall comply with all traffic and flagger regulations in accordance with DOT and WAC regulations. If work is performed where significant traffic hazards are identified, the District may require additional pedestrian safety rules.

Nothing herein shall be deemed to impose any duty or obligation on the District to determine the adequacy or sufficiency of the Contractor and Subcontractor's safety program. Contractor's and Subcontractor's remain solely responsible for safety of the general public and employees, as provided herein.

GC-23 INSPECTION

- A. The District's Representative, assistants, and inspectors shall have access to all places where work is being done or where materials used on the job site are being manufactured, stored, and or prepared for use under these Contract Documents and they shall have full access to facilities for unrestricted inspection during working hours of such materials, equipment and work. The District Representative, assistants, and inspectors shall also be authorized to record their observations in any manner reasonable, including but not limited to recording by photographs, video, or any other type of digital collection.
- B. The District Representative shall be kept informed of the production schedules so that inspections may be adequately performed. The Contractor shall give timely notice of any inspections required or desirable. Re-examination of any questioned work may be ordered by the District Representative, and, if so ordered, the work must be uncovered by the Contractor. If such work be found in accordance with the Contract Documents, the District shall pay the costs of re-examination and replacement. If such work be found not in accordance with the Contract Documents, the Contractor shall bear such cost and expedite such necessary corrections.
- C. The Contractor shall be responsible for setting, maintaining, and resetting all alignment stakes, slope stakes, and grades as necessary for the Project. Survey control data, calculations, and measuring required for the project will be furnished by the District. Detailed survey records shall be maintained, including work description, methods utilized, and control points used for each shift. These records will be furnished by the Contractor and must contain enough detail to be reproduced. Any calculations or staking data produced by the contractor must be provided to the District upon request. Spot checks of the accuracy of the performed work coinciding with the survey data shall be done routinely.
- D. Tests and inspections are Contractor's responsibility. Perform additional quality-control activities required to verify that the Work complies with requirements, whether specified or not.
- E. Where indicated, work alongside of a manufacturer's representative to observe and inspect the Work completed. Representative's responsibilities would include examination of substrates, inspection of Work completed, verification of materials and submittal of written reports.
- F. The Contractor is responsible for inspections and original test costs, providing quality-control services, including re-testing and re-inspecting for construction that failed to meet the Contract Documents.

- G. The Contractor shall manage the sequence of activities to assure quality-assurance and quality-control services with minimal delay, avoiding the need to remove and replace construction to accommodate testing and inspecting.
- H. An experienced firm with knowledge of manufacturing products or similar systems indicated for the Project. A record of successful in-service performance and adequate production capacity for needed units is also a requirement.
- I. Preconstruction Testing: Tests and inspections for materials incorporated into Work that directly relate to the Project, shall be tested to verify performance or compliance with a specified area.

GC-24 CONTRACT DOCUMENTS

The Contract Documents consist of:

- A. Instructions to Bidders (Section 00 20 00)
- B. Bid Form and Supplemental Bid Forms as required (Section 00 41 00)
- C. Representations and Certifications (Section 00 45 00)
- D. District Prepared Contract (Section 00 50 00)
- E. Notice to Proceed Form (Section 00 50 00)
- F. Certificate of Completion and Release Form (Section 00 50 00)
- G. Performance Bond Form (Section 00 61 00)
- H. Payment Bond Form (Section 00 61 00)
- I. Change Order Form (Section 00 62 00)
- J. General Conditions (Section 00 72 00)
- K. Supplementary Conditions (Section 00 73 00)
- L. Technical Specifications (Division 01 and higher Sections)
- M. Contract Drawings (Section 00 73 00, Paragraph SC-5)

GC-25 CONFLICT AND PRECEDENCE/INTENT

- A. In the event there are any conflicting provisions or requirements in the component parts of the Contract, the several Contract Documents shall take precedence in the following order:
 - 1. Change Orders
 - 2. Contract Form

3. Addenda
 4. Supplementary Conditions
 5. General Conditions
 6. Technical Specifications
 7. Contract Drawings
 8. Instructions to Bidders
 9. Performance Bond
 10. Bid Proposal
- B. The intent of the Contract Documents is to prescribe a complete work. Contractor shall furnish all labor, tools, equipment, transportation, supplies and incidentals required to complete all work. The Contract Price, whether lump sum or unit prices or a combination thereof, shall be full pay for all work and equipment required to fully complete the Contract work.

GC-26 PRE-WORK CONFERENCE

The Contractor, upon notification by the District, shall be required to attend a pre-work conference prior to starting any work. The purpose of the conference is to discuss, among other considerations, the responsibility of the Contractor and his Subcontractors in the prosecution and progress of the work. The conference, if any, shall be held on a date mutually agreed upon by the Contractor and the District Representative.

GC-27 PROGRESS MEETINGS

- A. Progress review meetings shall be held at regular intervals as deemed necessary by the District Representative. Progress meetings shall be utilized to review the work schedule and discuss any delays, unusual conditions, or critical items which have affected or could affect the progress of the work.
- B. Time is of the essence of this Contract. If at any time during the progress of work, the Contractor's actual progress, in the opinion of the District Representative, is inadequate to meet the Contract completion dates, the District may issue a written notice of noncompliance to the Contractor who shall thereupon take such steps as may be necessary to improve its progress. If within a reasonable period as determined by the District Representative, the Contractor does not improve performance to meet the work schedule, the District may direct the Contractor to accelerate the work through an increase in the Contractor's labor force, the number of shifts, overtime operations, additional days of work per week and/or an increase in the amount of plant; all without additional cost to the District. Neither such notice by the District nor the District's failure to issue such notice shall relieve the Contractor of its obligation to achieve the quality of work and rate of progress required by the Contract.

- C. Failure of the Contractor to comply with the instructions of the District may be grounds for determination by the District that the Contractor is not prosecuting its work with such diligence as shall assure completion within the times specified. Upon such determination, the District may terminate the Contractor's right to proceed with the performance of the Contract, or any separable part thereof in accordance with GC-4.

GC-28 DELAYS AND EXTENSIONS OF TIME

- A. If the Contractor is delayed at any time in the progress of work by any unforeseeable causes beyond the control of the Contractor, the Contract time shall be extended for such reasonable time as the District Representative shall determine. The Contractor agrees to complete the work within the Contract time as thus extended. Such extensions shall postpone the beginning of period for payment of liquidated damages but they and the events producing them shall not be grounds for claim by the Contractor of damages or for additional costs, expenses, overhead or profit or other compensation. Except for delays caused by the acts or omissions of the District or persons acting for it, extensions of time granted by the District Representative to the Contractor shall be the Contractor's sole and exclusive remedy for any delays due to causes beyond the control of the Contractor.
- B. All claims for extension of time shall be made in writing to the District no more than 3 days after the Contractor knows or by reasonable diligence should know of the event causing or likely to cause the delay; otherwise, they shall be waived. In the case of a continuing cause of delay only one claim is necessary. Contractor's failure to give such notice promptly and within such time limit shall be deemed sufficient reason by the District Representative for denial of any time extension request.
- C. Avoidable delays in the prosecution or completion of the work, for which no time extension shall be granted, shall include all delays which in the opinion of the District Representative could have been avoided by the exercise of care, prudence, foresight and diligence on the part of the Contractor or his Subcontractors. Additionally, delays in the prosecution of parts of the work which may in themselves be unavoidable but do not necessarily prevent or delay the prosecution of other parts of the work nor the completion of the whole work within the time herein specified shall constitute avoidable delays for which no time extension shall be granted.
- D. All changes of the time or changes of the schedule shall be made by Change Orders to the Contract pursuant to Section GC-12.

GC-29 AUDIT OF RECORDS

- A. Contractor shall maintain records and accounts in accordance with Generally Accepted Accounting Principles (GAAP) in connection with the performance of the contract which shall accurately document incurred costs both direct and indirect, of whatever nature. If District Representative establishes uniform codes of accounts for the project, Contractor shall use such codes in identifying its records and accounts. District Representative or their representatives shall have

the right to examine and copy at all reasonable times, with advance notification, Contractor's records and accounts for the limited purpose of verifying requests for payment when costs are the basis of such payment and for evaluating the reasonableness of proposed contract price adjustments and claims. Contractor shall make all records and accounts available to the District for inspection and copying at the District's offices in Ellensburg, Washington.

GC-30 ENVIRONMENTAL CONTROL

- A. The Contractor and Subcontracting Affiliates shall comply with all applicable county, state, and federal environmental regulations. The Contractor shall take suitable measures and provide suitable facilities to prevent pollution, oil and chemical spills, soil erosion and the introduction of any substances or materials into any stream, river, lake or any other body of water which may pollute or silt the water or constitute substances or materials deleterious to fish or wildlife. Furthermore, Contractor shall practice all reasonable methods of dust control where applicable, to maintain a work site free from dust. Contractor shall be responsible for all cost of corrective measures required as a result of any pollution, erosion or siltation, including its effects on adjacent properties.
- B. It is the Contractors responsibility to conduct and perform all Work in accordance with Environmental Regulations, Environmental Commitments, permits, and plans that the work is subject to.

GC-31 NON-WAIVER

No waiver of any provision of this Agreement, or any rights or obligations of either Party under this Agreement, shall be effective, except pursuant to a written instrument signed by the Party or Parties waiving compliance, and any such waiver shall be effective only in the specific instance and for the specific purpose stated in such writing. The failure of either Party to require the performance of any term of this Agreement or the waiver of either Party of any breach under this Agreement shall not operate or be construed as a waiver of any other provision hereof, nor shall it be construed as a waiver of any subsequent breach by the other Party hereto.

END OF SECTION

SECTION 00 73 00 – SUPPLEMENTARY CONDITIONS

SC-1 SCOPE OF WORK / WORK TO BE PERFORMED BY THE CONTRACTOR

The Project improvements consist of open channel canal replacement with large diameter pipeline, creek culvert replacement, drainage, earthwork and other work, all in accordance with the contract plans, the contract provisions, and the specifications. The improvements are for construction of water conservation and operational improvements to the KRD system. Requested Base Reach and pre-priced Optional Reach work follow the existing South Branch Canal alignment for a distance of approximately 2,000 feet from the KRD Operation and Maintenance Road crossing of Robinson Creek to a transition back to open canal approximately 1,800 feet downstream of the existing outlet of the Robinson Siphon. The Project has been divided into a Base Reach and an Optional Reach. The Base Reach improvements in these documents are for roadway improvements and pipeline replacement of open channel immediately downstream of the existing Robinson Siphon described as work related to canal improvements between Stations 529+86 and Station 537+00.

It is the District's desire to improve the remaining reaches of the canal between Robinson Creek and Manastash Creek. Pricing of an initial reach extension as the Optional Reach is requested for potential optional award at the discretion of KRD. The Optional Reach improvements in these documents are for roadway improvements and pipeline replacement of open channel described as work related to canal improvements between Stations 537+00 to 548+00. Optional Reach award will depend on a variety of factors, including, but not limited to, grant funding award, weather, cost, Contractors work plan, demonstrated productivity on base bid reach, and the anticipated start of the 2021 irrigation seasons on or about April.

Contractor will furnish all labor, materials, equipment, services, and construction facilities, and all general conditions, general requirements and incidentals required to complete the Work in its entirety as described in the Contract Documents.

The Work of this Contract includes work covered by unit prices, allowances, and alternates as shown in the Bid Form. The Work of this Contract comprises construction of all the Work indicated, described in the Specifications, or otherwise required by the Contract Documents.

SC-2 COMPLETION SCHEDULE / LIQUIDATED DAMAGES

- A. Contractor shall commence Work at the Site on the date established in the Notice to Proceed. District reserves the right to modify or alter the commencement date of the Work.
- B. Contractor shall achieve Substantial Completion of the entire Work, from the date when the Contract Time commences, by March 1, 2021 in accordance with the schedule constraints of the Contract Documents.
- C. Contractor shall achieve Final Completion of the entire Work, from the date when the Contract Time commences, by March 31, 2021.
- D. District operations will continue throughout the Project duration. In order to limit disruptions, the following work schedule will be followed, including allowed work windows and milestone completion dates:

1. District Irrigation Season:

The default District Irrigation Season ("Irrigation Season") is assumed to extend from the 1st day of April through the 15th day of October of each year. During each Irrigation Season, water deliveries up to the rated canal capacity will be made between the weather dependent spring turn-on date and a fall turn-off date. District shall formally notify Contractor in writing thirty (30) days prior to each turn-on date and the turn-off date of any adjustments to the Irrigation Season default dates.

2. Stream Supplementation Season

The default Stream Supplementation Season ("Supplementation Season") is assumed to extend from the 15th day of October through the 1st day of November of each year. During each Supplementation Season, water deliveries up to a 20 cubic-foot-per-second (cfs) capacity in the South Branch Canal will be made between the weather dependent turn-off date. District shall formally notify Contractor in writing thirty (30) days prior to each turn-on date and the turn-off date of any adjustments to the Supplementation Season default dates.

3. Winter Maintenance Work Window:

The Winter Maintenance Work Window ("Work Window") is defined as the calendar period between the end of the Stream Supplementation Season in one calendar year and the start of the Irrigation Season in the following calendar year. Unless specifically agreed to in writing by the District, no work disrupting planned operation of the canal system will be allowed outside of the Winter Maintenance Work Window.

E. Schedule Milestones: As a minimum, the following milestones shall be scheduled and progress toward their completion tracked by Contractor:

1. Base Reach Milestone: Substantial completion of Work related to canal improvements between Station 529+86 upstream and Station 537+00 downstream will reach substantial completion by March 1, 2021.
2. Optional Reach Milestone: If authorized in writing by District, Work related to canal improvements between Station 537+00 upstream and Station 548+00 downstream will reach substantial completion by March 1, 2021.

F. Immediately following Contract Award, the Contractor shall prepare and submit to the District for its approval a detailed progress schedule identifying the various stages of work required and the time allotted for each to ensure successful completion of the project within the time specified. The progress schedule is to be submitted within fourteen (14) calendar days after notice of Contract Award.

If, during construction, the actual progress of the Work varies significantly from the proposed schedule, or if the Contractor proposes to change the schedule for any reasons whatsoever, they shall submit to the District for approval the revised schedule they intend to follow. The proposed original and any revised schedules shall be adequate, in the opinion of the District, to meet the requirements for the completion of the Work, as set forth in these Contract Documents.

A progress report shall be submitted bi-weekly to the District Representative showing the percentage of completion of the job. The Contractor shall assign such forces and prosecute the work in such a manner as to assure compliance with the approved schedule.

- G. If, in the opinion of the District, the Contractor's proposed schedule or the actual progress of the Work is at any time insufficient to meet the specified requirements, the District may, in addition to any other rights which the District has under this Contract, direct the Contractor to accelerate performance at the Contractor's own expense by increasing the manpower, augmenting equipment, and working more shifts or longer hours, in specific areas as necessary for schedule maintenance.
- H. If the said Contractor shall neglect, fail, or refuse to complete the work within the required times, or any proper extension thereof granted by the District, then the Contractor does hereby agree, as a consideration for the awarding of this Contract, to pay to the District the amount of \$1,000.00 per calendar day, not as a penalty but as liquidated damages for each and every calendar day between the day stipulated for completion of all work and the day upon which the work is satisfactorily completed. The total amount of these liquidated damages under this Section shall be limited to Thirty Five Percent (35%) of the Contract Price.

The liquidated damages have been specifically negotiated by and between the Contractor and the District because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages, and said amount has been determined to be a reasonable estimate of the amount of damages which the District would sustain in the event of late completion of the work.
- I. Any work, turned over to the District, that in the sole opinion of the District, is determined not to be in compliance with the specifications and drawings shall be reassigned to the Contractor for rework/completion. The time required for this rework/completion shall be added to the milestone completion date with liquidated damages applied accordingly. If the Contractor has not resolved the District's issues and returned reworked item(s) to the District, then the District shall make the corrections/modifications and deduct the cost of this work from any monies due to the Contractor.

SC-3 MILESTONE COMPLETION

- A. The milestone completion date(s) will not be adjusted for any reason, cause or circumstance whatsoever, regardless of fault, save and except in the instance of a catastrophic event (i.e., earthquake or a declared state of emergency). In the event of such catastrophic event it will be at the District's sole discretion whether to discontinue the work or proceed with a revised milestone completion date.
- B. The parties anticipate that delays may be caused by or arise from any number of events during the course of the Contract, including, but not limited to, work performed, work deleted, Change Orders, delays, disruptions, differing site conditions, utility conflicts, design changes or defects, time extensions, extra work, actions of suppliers, Subcontractors or other Contractors, actions by third parties, shop drawing approval process delays, expansion of the physical limits of the project to make it functional, weather, weekends, holidays, suspensions of

Contractor's operations, or other such events, and forces or factors sometimes experienced in construction work. Such delays or events and their potential impacts on performance by the Contractor are specifically contemplated and acknowledged by the parties in entering into this Contract and shall not extend the milestone completion date. Further, any and all costs or impacts whatsoever incurred by the Contractor in accelerating the Contractor's work to overcome or absorb such delays or events in an effort to complete the milestone work by the required completion date, regardless of whether the Contractor successfully does so or not, shall be the sole responsibility of the Contractor in every instance.

- C. If the District determines that there is an impact to the milestone completion date due to a catastrophic event (i.e., earthquake or a declared state of emergency) directly and substantially affecting the Contractor's operations on the Contract, and the District decides to proceed with the work, the Contractor and the District shall agree as to the number of calendar days to extend the milestone completion date. In the event the Contractor and District are unable to agree to the number of calendar days to extend the milestone completion date, the District shall unilaterally determine the number of calendar days to extend the milestone completion date reasonably necessary and due solely to such catastrophic event and the Contractor shall have no right whatsoever to contest such determination, save and except that the Contractor establishes that the number of calendar days determined by the District were arbitrary or without any reasonable basis.
- D. Any work, turned over to the District, that in the sole opinion of the District, is determined not to be in compliance with the specifications, and /or drawings shall be reassigned to the Contractor for rework/completion. The time required for this rework/completion shall be added to the milestone completion date with liquidated damages applied accordingly. If the Contractor has not resolved the District's issues and returned reworked item(s) to the District, then the District shall make the corrections/modifications and deduct the cost of this work from any monies due to the Contractor.

SC-4 DISTRICT REPRESENTATION

- A. District has designated Bob Main (District Representative), to act as District Representative, who will represent District in performing District's duties and responsibilities and exercising District's rights and authorities in Contract Documents. District may change the individual(s) acting as District's Representative(s), or delegate one or more specific functions to one or more specific District's Representatives, including without limitation on general administrative functions, at any time with notice and without liability to Contractor. Each District's Representative is the beneficiary of all Contractor obligations to District, including without limitation, all releases and indemnities.

All notices or demands to District under the Contract Documents shall be in writing and directed to District's Representative at:

Kittitas Reclamation District
315 North Water Street
Ellensburg, Washington 98926

or to such other person(s) and address(es) as District shall provide to Contractor.

- A. District has designated Robin L. Radach, PE (Construction Manager), to act as Construction Manager. District may assign all or part of the District Representative's rights, responsibilities and duties to Construction Manager. District may change the identity of the Construction Manager at any time with notice and without liability to Contractor.
- B. The Project has been designed by Jacobs Engineering Inc. (Designer) and District has designated David L. Allison, PE (Engineer), to act as Engineer, assume duties and responsibilities, and have the rights and authority assigned to Engineer in the Contract Documents in connection with the completion of the Work in accordance with the Contract Documents.

SC-5 MATERIALS AND EQUIPMENT

- A. **Materials Furnished By Contractor**
The Contractor shall purchase and furnish for this Contract all materials for the project except for the equipment and materials which shall be supplied by the District. The materials to be furnished by the Contractor and incorporated into the work shall be new and of grades and quality specified. Any materials required for a completed project, that are not specified below as being furnished by the District are to be furnished by the Contractor.
- B. **Materials Furnished By District**
The following material and equipment shall be supplied by the District:
 - 1. N/A
- C. **Existing Materials**
Existing materials and equipment designated for salvage as a part of the Work will remain the property of the Kittitas Reclamation Districts. Existing materials and equipment designated for demolition or removal will be properly disposed of by the Contractor as directed by the Kittitas Reclamation District.

SC-6 SUBSTITUTION OF MATERIALS AND EQUIPMENT

Whenever a material, article or piece of equipment is identified on the Drawings or in the Specifications by reference to manufacturers' or vendors' names, trade names, catalog numbers, or the like, it is so identified for the purpose of establishing a standard, and any material, article or piece of equipment or other manufacturers or vendors which shall perform adequately the duties imposed by the general design shall be considered equally acceptable, provided the material, article, or piece of equipment so proposed is, in the opinion of the District, of equal substance, appearance and function. It shall not be purchased or installed by the Contractor without the District's prior written approval.

Offers of substitution of materials or equipment shall include data to substantiate that the "or equal" product meets the following criteria applicable to the time submitted.

- A. The change is adaptable to the design,
- B. The functional performance shall be equal to or better than the item specified,

- C. Where appearance affects the end product, the appearance of the item shall be as good as or better than the item specified,
- D. The maintenance cost for the product or item shall be equal to or less than the item specified including establishing and maintaining necessary stock at the District's facilities,
- E. The quality of materials used and the level of construction of the item shall be as good as or better than the item specified,
- F. The net price of the item shall be within the same price range as the item specified, and
- G. The cost to the District of furnishing and installing the item, including any necessary redesign costs authorized by the District Representative which shall be reimbursed to the District by the Contractor shall be equal to or less than that of the item specified.

When substitute materials or equipment necessitates changes to or coordination with other portions of the work, the data submitted shall include shop drawings showing all such changes. As part of any acceptance of substitute materials or equipment, the Contractor shall furnish all materials, perform all installation and make all other modifications as may be required to incorporate such changes at no additional cost to the District.

SC-7 CONTRACT DRAWINGS

The following drawings are hereby made a part of the Contract Documents:

NO	DRAWING	SHEET TITLE	SHEET SUBTITLE
1	G-001	Index Cover Sheet	Location and Vicinity Maps
2	G-002	Abbreviations	General
3	G-003	Notes & Specifications	General
4	G-004	Survey Control Points	General
5	G-005	Existing Canal Alignment & Survey Points	General
6	G-006	Project Alignments	Site Plan
7	G-007	Project Alignments	Alignment Tables
8	CG001	Site Plan	Key Map
9	CG101	Plan and Profile	Upstream
10	CG102	Plan and Profile	Sta. P10+00 to Sta. P13+00
11	CG103	Plan and Profile	Sta. P13+00 to Sta. P18+00
12	CG104	Plan and Profile	Sta. P18+00 to Sta. P22+50
13	CG105	Plan and Profile	Sta. P22+50 to Sta. P26+50
14	CG106	Plan and Profile	Sta. P26+50 to Sta. P28+30
15	CG301	Access Road and Pipeline Trenching	Typical Section
16	CG311	Cross Sections	Sta. 527+00 to Sta. 533+50

NO	DRAWING	SHEET TITLE	SHEET SUBTITLE
17	CG312	Cross Sections	Sta. P16+50 to Sta. P21+00
18	CG313	Cross Sections	Sta. P22+50 to Sta. P29+50
19	CG314	Cross Sections	Sta. P30+00 to Sta. P34+50
20	CG401	Robinson Culvert Crossing	Plan View
21	CG402	Robinson Culvert Crossing	Profile and Section
22	CG403	Robinson Culvert Crossing	Channel Profile
23	CG430	Canal Control Structure	Plan and Sections
24	CG440	Delivery Box Turnout	Typical Plan and Sections
25	CG450	Pipeline Transition to Canal	Typical Plan and Sections
26	RI801	Record Drawing 5.1-A-9 (23421)	South Branch Canal Location Map
27	RI802	Record Drawing 3.2-G-29 (23423)	Profile and Section Sta. 300+00 to Sta. 527+96.0
28	RI803	Record Drawing 3.2-G-30 (23435)	Profile and Section Sta. 527+96 to Sta. 756+00
29	RI804	Record Drawing 33-D-382 (23435)	Robinson Creek Siphon

SC-8 PROJECT RECORD DRAWINGS

This section specifies general, administrative and procedural requirements for Project Record Documents. Contractor shall have complete responsibility for preparation of marked-up Documents.

A. PROJECT DOCUMENTS AND MAINTENANCE

1. Project Record Documents required include:
 - a. Marked-up copies of Contract Plans
 - b. Marked-up copies of Shop Drawings, including Contractor's design documents and drawings
 - c. Newly prepared Drawings
 - d. Marked-up copies of Specifications, Addenda and Change Orders
 - e. Marked-up Project Data submittals
 - f. Record Samples
 - g. Field records for variable and concealed conditions
 - h. Record information on Work that is recorded only schematically
2. Maintenance of Documents and Samples:
 - a. Store Project Record Documents and samples in the field office apart from Contract Documents used for construction.

- b. Not permit Project Record Documents to be used for construction purposes.
- c. Maintain Project Record Documents in good order, and in a clean, dry, legible condition.
- d. Make documents and samples available at all times for inspection by District.

B. DRAWINGS

1. Mark-up Procedure: During the construction period, maintain a set of blue-line or blackline prints of Contract Plans and Shop Drawings for Project Record Document purposes. Label each document (on first sheet or page) 'PROJECT RECORD' in 2 in. high printed letters. Keep record documents current. Note: A reference by number to a Change Order, RFI, RFQ, Field Order or other such document is not acceptable as sufficient record information on any record document. Do not permanently conceal any Work until required information has been recorded.
 - a. Mark these Drawings to indicate the actual installation where the installation varies from the installation shown originally. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later. Items required to be marked include but are not limited to:
 - (1.) Dimensional changes to the Drawings
 - (2.) Revisions to details shown on the Drawings
 - (3.) Horizontal and vertical location of permanent improvements.
 - (4.) Establish locations of underground work, points of connection with existing utilities, changes in direction, valves, manholes, catch basins, capped stubouts, invert elevations, and similar items.
 - (5.) Field changes of dimension and detail.
 - (6.) Changes made by Change Order
 - (7.) Details not on original Contract Plans
 - b. Completely and accurately mark the Project Record Drawing prints of Contract Plans or Shop Drawings, whichever is the most capable of showing actual physical conditions. Where Shop Drawings are marked, show cross-reference on Contract Plans location.

- c. Mark Project Record Drawing sets with red erasable colored pencil; use other colors to distinguish between changes for different categories of the Work at the same location.
 - d. Mark important additional information that was either shown schematically or omitted from original Drawings.
 - e. Note Construction Change Directive numbers; alternate numbers; Change Order numbers and similar identification.
 - f. Responsibility for Mark-up: Where feasible, the individual or entity who obtained Project Record Drawing data, whether the individual or entity is the installer, subcontractor, or similar entity, is required to prepare the mark-up on Project Record Drawings.
 - (1.) Accurately record information in an understandable and legible drawing technique.
 - (2.) Record data as soon as possible after it has been obtained. In the case of concealed installations, record and check the mark-up prior to concealment.
2. Shop Drawings and Samples: Maintain as record documents; legibly annotate Shop Drawings and Samples to record changes made after review.

C. SPECIFICATIONS

- 1. During the construction period, Contractor shall maintain one copy of the Project Specifications, including addenda and modifications issued, for Project Record Document purposes.
- 2. Mark the Project Record Specifications to indicate the actual installation where the installation varies substantially from that indicated in Specifications and Modifications issued. Note related Project Record Drawing information, where applicable. Give particular attention to substitutions, selection of product options, change order work, and information on concealed installation that would be difficult to identify or measure and record later.
 - a. In each Specification Section where products, materials or units of equipment are specified or scheduled, mark the copy with the proprietary name and model number of the product furnished.
 - b. Record the name of the manufacturer, catalog number, supplier and installer, and other information necessary to provide a record of selections made and to document coordination with Project Record Product Data submittals and maintenance manuals.
 - c. Note related Project Record Product Data, where applicable, for each principal product specified, indicate whether Project Record

Product Data has been submitted in maintenance manual instead of submitted as Project Record Product Data.

3. Upon completion of mark-up, submit Project Record Specifications to District for District's records.

D. MATERIAL, EQUIPMENT AND FINISH DATA

1. Provide data for primary materials, equipment and finishes as required under each specification section.
2. Submit two sets prior to final inspection, bound in 8-1/2 inches by 11 inches three-ring binders with durable plastic covers; provide typewritten table of contents for each volume.
3. Arrange by Specification division and give names, addresses, and telephone numbers of subcontractors and suppliers. List:
 - a. Trade names.
 - b. Model or type numbers.
 - c. Assembly diagrams.
 - d. Operating instructions.
 - e. Cleaning instructions.
 - f. Maintenance instructions.
 - g. Recommended spare parts.
 - h. Product data.

E. RECORDING

Post changes and modifications to the Documents as they occur. Do not wait until the end of the Project. District may periodically review Project Record Documents to assure compliance with this requirement.

F. SUBMITTAL

At completion of Project, deliver record documents to District. Accompany submittal with transmittal letter containing: Date Project title and number Contractor's name and address Number and title of each record documents Certification that each document as submitted is complete and accurate, and signature of Contractor, or Contractor's authorized representative.

SC-9 MOBILIZATION

Mobilization consists of preconstruction expenses and the costs of preparatory Work and operations performed by the Contractor which occur before 10 percent of the total

original Contract amount is earned from other Contract items. Items which are not to be included in the item of Mobilization include but are not limited to:

- A. Any portion of the Work covered by the specific Contract item or incidental Work which is to be included in a Contract item or items.
- B. Profit, interest on borrowed money, overhead, or management costs.
- C. Any costs of mobilizing equipment for force account Work.

Based on the lump sum Contract price for "Mobilization", partial payments will be made as follows:

- 1. When 5 percent of the total original Contract amount is earned from other Contract items, excluding amounts paid for materials on hand, 50 percent of the amount Bid for mobilization, or 5 percent of the total original Contract amount, whichever is the least, will be paid.
- 2. When 10 percent of the total original Contract amount is earned from other Contract items, excluding amounts paid for materials on hand, 100 percent of the amount Bid for mobilization, or 10 percent of the total original Contract amount, whichever is the least, will be paid.
- 3. When the Substantial Completion Date has been established for the project, payment of any amount Bid for mobilization in excess of 10 percent of the total original Contract amount will be paid.

Nothing herein shall be construed to limit or preclude partial payments otherwise provided by the Contract.

SC-10 CONTRACTOR WORK HOURS

All work required to be performed by Contractor shall normally be done between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday, exclusive of District legal holidays or as identified in the approved schedule. Contractor shall provide a minimum 72-hour notice to the District's Representative if at any time it becomes necessary or Contractor desires to work at times other than those specified herein or as approved in advance by the District. Approval of any proposed alternative work schedule shall be at the sole discretion of the District Representative.

For every hour the Contractor works in excess of the approved work schedule, or proposes to work in excess of 40 hours per week, the District shall deduct and retain from the Contract Price, \$125.00 per manhour to cover the District's direct and incidental costs including overhead and overtime payroll costs, required for the inspection and observation of work performed outside of the normal work hours specified above or as identified in the approved schedule. If the unapproved hours or excess hours increase the number of days of work per week, two hours will be charged, in addition to the actual hours, for District's additional travel and preparation time. District legal holidays are as follows: New Year's Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

SC-11 UTILITIES

Where existing utilities interfere with the prosecution of the work, the Contractor shall relocate the utilities. All work must be coordinated with the utility owner.

The Drawings may indicate existing above- and below-grade structures, drainage lines, storm drains, sewers, water, gas, electrical, and other similar items and utilities that are known to District.

Contractor shall locate these known existing installations before proceeding with trenching or other operations which may cause damage, shall maintain them in service where appropriate, and shall repair any damage to them caused by the Work, at no increase in Contract Sum.

If additional utilities are encountered, Contractor must immediately report to District for disposition.

SC-12 STORAGE OF MATERIALS AND EQUIPMENT

Contractor's use of the premises for Work and storage is limited to the area(s) indicated. Parking, storage, staging, and work areas shall be coordinated with the District, and comply with all other Contract documents requirements.

The Contractor shall be responsible for receiving, unloading, storage and protection of materials. If any materials or equipment are stored, they shall be stored so as to ensure the preservation of their quality and fitness. Materials and equipment shall be placed on platforms or other hard, clean surfaces, and not on the ground, and shall be placed under cover and heated adequately to prevent condensation, oxidation or freezing. Stored materials and equipment shall be located so as to facilitate observation. The Contractor shall be responsible for all damage or loss that occurs as a result of its fault or negligence in connection with the care and protection of all materials and equipment until acceptance by the District.

- A. Transportation and Handling: The Contractor shall arrange the deliveries of products in accordance with construction schedules; coordinate to avoid conflict with Work and conditions at the site. The Contractor shall ensure the delivered products are in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible. The Contractor shall provide all necessary equipment and personnel to unload and handle the products by methods which will prevent soiling or damage to products or packaging.
- B. Storage and Protection: Store products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store products subject to damage by the elements in weather-tight enclosures. Maintain temperature and humidity within the ranges required by manufacturer's instructions.
- C. Any items damaged or lost shall be replaced at the Contractor's expense and in such a manner as not to jeopardize the completion of the work schedule.

SC-13 TEMPORARY FACILITIES AND CONTROLS

- A. Allow District to take possession of and use any completed or partially completed portion of the Work during the progress of the Work as soon as is possible without interference to the Work.

- B. Possession, use of Work, and placement and installation of equipment by District shall not in any way evidence the completion of the Work or any part of it.
- C. Contractor shall not be held responsible for damage to the occupied part of the Work resulting from District occupancy.
- D. Use and occupancy by District prior to acceptance of Work does not relieve Contractor of its responsibility to maintain insurance and bonds required under the Contract until entire Work is completed and accepted by District.
- E. Prior to date of Final Acceptance of the Work by District, all necessary repairs or renewals in Work or part thereof so used, not due to ordinary wear and tear, but due to defective materials or workmanship or to operations of Contractor, shall be made at expense of Contractor.
- F. Should any temporary traffic control be necessary for the project, the contractor will furnish the costs of signs, flaggers, and all other necessary items needed.
- G. The Contractor shall construct and maintain temporary roads and staging areas.
- H. Contractor shall provide, maintain, and pay for electrical power at the Site for construction purposes and for Contractor's and Construction Manager's trailers.
- I. Contractor shall provide, maintain, and pay for all applicable communications and data services (including without limitation telephone, facsimile, e-mail and internet) to field office commencing at time of Project mobilization, including all installation and connection charges.
- J. Contractor shall provide, maintain, and pay for suitable quality water service required for construction operations.
- K. Fences
 - 1. All existing fences affected by the Work shall be maintained by Contractor until Final Completion. Fences which interfere with construction operations shall not be relocated or dismantled until District gives written permission to do so, and the period the fence may be left relocated or dismantled has been agreed upon. Where fences must be maintained across the construction easement, adequate gates shall be installed. Gates shall be kept closed and locked at all times when not in use.
 - 2. On completion of the Work across any tract of land, Contractor shall restore all fences to their original or to a better condition and to their original locations.
- L. Protection of Public and Private Property
 - 1. Contractor shall protect, shore, brace, support, and maintain all underground pipes, conduits, drains, and other underground construction uncovered or otherwise affected by its construction operations. All pavement, surfacing, driveways, curbs, walks, buildings, utility poles, guy

wires, fences, and other surface structures affected by construction operations, together with all sod and shrubs in yards, parkways, and medians, shall be restored to their original condition, whether within or outside the easement. All replacements shall be made with new materials.

2. Contractor shall be responsible for all damage to streets, roads, highways, shoulders, ditches, embankments, culverts, bridges, and other public or private property, regardless of location or character, which may be caused by transporting equipment, materials, or workers to or from the Work, Site or any part thereof, whether by Contractor or Subcontractors. Contractor shall make satisfactory and acceptable arrangements with the District, or the agency or authority having jurisdiction over the damaged property, concerning its repair or replacement or payment of costs incurred in connection with the damage.

M. Temporary Sanitary Facilities

Contractor shall provide and maintain required temporary buildings with sanitary toilets for use of all workers. At a minimum, sanitary facilities shall be located at trailer site, staging area, and adjacent to work area.

N. Temporary Barriers and Enclosures

1. Contractor shall provide barriers to prevent unauthorized entry to construction areas to allow for District's use of Site, and to protect existing facilities and adjacent properties from damage from construction operations.
2. Contractor shall protect vehicular traffic, stored materials, the Site, and structures from damage.

SC-14 CONSTRUCTION SURVEY

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

The Contractor shall inform the District when monuments are discovered that were not identified in the Plans and construction activity may disturb or damage the monuments.

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

SC-15 FORCE-ACCOUNT WORK

If it is impracticable because of nature of Work, or for any other reason, to fix an increase or decrease in price definitely in advance, the Contractor may be directed to proceed at a not-to-exceed (NTE) maximum price which shall not under any circumstances be exceeded. Subject to such limitation, such extra Work shall be paid for

at actual necessary cost for Force-Account Work or at the negotiated cost, as determined by District. The cost for Force-Account Work shall be determined by the District. Force-Account Work shall not occur without on-site district representation.

Force-Account Work shall be used when it is not possible or practical to price out the changed Work prior to the start of that Work. In these cases, Force-Account Work will be utilized during the pricing and negotiation phase of the change. Once negotiations have been concluded and a bilateral agreement has been reached, the tracking of the Work under Force-Account is no longer necessary. Force-Account Work shall also be used when negotiations between District and Contractor have reached impasse and a bilateral agreement on the value of the changed Work cannot be reached. The District may approve other uses of Force-Account Work.

Whenever any Force-Account Work is in progress, and there is not a definite price which has been agreed on in advance, Contractor shall report to District each Business Day in writing in detail amount and cost of labor and material used, and any other expense incurred in Force-Account Work on preceding Day, by using the Cost Proposal form attached hereto. No claim for compensation for Force-Account Work will be allowed unless report shall have been made.

Whenever Force-Account Work is in progress, definite price for which has not been agreed on in advance, Contractor shall report to District when 75 percent of the NTE amount has been expended.

Force-Account Work shall be paid as extra Work. Methods of determining payment for Work and materials shall not apply to performance of Work or furnishings of material that, in judgment of District, may properly be classified under items for which prices are otherwise established in Contract Documents.

SC-16 ARCHAEOLOGICAL RESOURCES

In the event the Contractor or any of its Subcontractors inadvertently discover archaeological resources at any time during the project, Contractor shall immediately notify the District's Representative and suspend all excavation activities at the site.

"Archaeological Resource" shall mean any material remains of human life or activities which are of interest. This shall include all sites, objects, structures, artifacts, implements, and locations of prehistoric or archaeological interest, whether previously recorded or still unrecognized, including, but not limited to objects pertaining to prehistoric and historic American Indian or aboriginal burials, campsites, dwellings, and their habitation sites, including rock shelters and caves, their artifacts and implements of culture such as projectile points, arrowheads, skeletal remains, grave goods, basketry, pestles, mauls and grinding stones, knives scrapers, rock carvings and paintings, and other implements and artifacts of any material or form.

The disturbance of any cairn or Native Indian grave is prohibited by the Indian Graves and Records Act (RCW 27.44).

SC-17 UNFAVORABLE CONDITIONS

The Contractor may encounter extreme winter weather conditions during the performance of the work. Notwithstanding Section GC-28, no time extensions or extra compensation will be given by the District based on weather conditions. The Contractor shall be responsible for the cost of protecting/sheltering of all work vulnerable to such

extreme weather conditions so that work can progress on schedule. The Contractor shall replace all work damaged by such conditions.

SC-18 CONCRETE IN COLD WEATHER

Provisions for placing concrete in cold weather shall apply when the average daily temperature is less than 40 Degrees Fahrenheit (°F) or when the maximum daily temperature is less than 50°F for 12 hours or less in a 24-hour period.

- A. Concrete linings shall not be placed when the ground temperature is less than 40°F.
- B. Prior to the placement of concrete all ice, snow and frost shall be completely removed from all surfaces to be in contact with the concrete.
- C. The temperature of the concrete at the time of placement shall not be less than 50°F nor more than 90°F. Heated water shall not exceed 140°F when cement is added to the mix.
- D. The use of antifreeze or accelerator compounds is not allowed.
- E. When the daily minimum ambient air temperature for the nearest weather station is predicted to be less than 40°F within a 3-day weather forecast, the concrete shall be insulated for 48 hours within 1 hour after placement using one of the following methods:
 - 1. Eight inches of straw covered with a polyethylene film.
 - 2. Two inches of sawdust or shavings covered with a polyethylene film.
 - 3. One-inch thick mineral fiber blanket.
- F. In lieu of providing frost protection, the owner may proceed with the understanding that if the fresh concrete is unprotected and subjected to freezing temperatures within 48 hours after placement and the concrete lining will not be accepted as meeting this specification.

END OF SECTION

SECTION 01 30 00 – ADMINISTRATIVE REQUIREMENTS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Coordination and project conditions.
- B. Field engineering and Surveying.
- C. Preconstruction meeting.
- D. Site mobilization meeting.
- E. Progress meetings.
- F. Special procedures.

1.02 ONSITE PROJECT MANAGEMENT AND AUTHORITY

The Contractor shall employ an onsite management team that shall be onsite during all construction activities. The management team shall, at a minimum, consist of the following:

Project Manager
Superintendent
Working Foreman

At a minimum, one member of the project management team shall be an authorized site representative for the Contractor in accordance with General Conditions.

1.03 COORDINATION AND PROJECT CONDITIONS

- A. Coordinate scheduling, submittals, and the work of the various sections of the project to ensure efficient and orderly sequence of installation of interdependent construction elements.
- B. Verify that utility requirements and characteristics of operating equipment are compatible with existing utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
- C. Coordinate the work of the various sections of the project, see Supplemental Conditions.
- D. Coordinate Cold Weather protection for concrete placement, see Supplemental Conditions.
- E. Coordinate completion and clean-up of work of separate sections in preparation for District's use or occupancy.

- F. After District occupancy of premises or project, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of District activities.

1.04 FIELD ENGINEERING AND SURVEYING

- A. Employ Land Surveyor registered in State of Washington and acceptable to the District.
- B. Locate and protect survey control and reference points. Promptly notify the District of discrepancies discovered.
- C. Control datum for survey, if applicable, is that shown on Drawings.
- D. Verify set backs and easements, confirm drawing dimensions and elevations.
- E. Provide field engineering services. Establish elevations, lines, and levels, utilizing recognized engineering survey practices.
- F. Submit copy of site drawing and certificate signed by Land Surveyor certifying elevations and locations of the Work are in conformance with Contract Documents.
- G. Maintain complete and accurate log of control and survey work as Work progresses.
- H. On completion of foundation walls and major site improvements, prepare certified survey illustrating dimensions, locations, angles, and elevations of construction and site work.
- I. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- J. Promptly report to the District loss or destruction of reference point or relocation required because of changes in grades or other reasons.
- K. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to the District.

1.05 REQUEST FOR INFORMATION (RFI)

- A. Definition: RFI – Request For Information from Contractor or District, seeking information from each other during construction.
- B. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit a RFI with content as described in Section, 01 31 00 1.04.C below. Note the following regarding RFIs.
 - 1. District will return RFIs submitted to District by other entities controlled by Contractor with no response.

2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor' work or work of Subcontractors.
- C. Content of RFI: Include the following:
1. Project name.
 2. Project number.
 3. Date.
 4. Name of Contractor.
 5. Name of District Representative.
 6. RFI number, numbered sequentially.
 7. RFI subject.
 8. Technical Specification Section number and title and related paragraphs, as appropriate.
 9. Contract drawing number and detail references, as appropriate.
 10. A detailed, legible description of required information or interpretation.
 11. Field dimensions and conditions, as appropriate.
 12. Contractor's suggested resolution.
 13. Contractor's signature.
 14. Attachments: Include sketches, descriptions, measurements, photos, product data, shop drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- D. District's Action: District will review each RFI, determine action required, and respond. The District response will come in the form of a District Instruction. Allow 5 working days for District's response for each RFI. RFIs received by District after 2:00 p.m. will be considered as received the following working day.
1. The following RFIs will be returned without action:
 - a. Requests for approval of submittals
 - b. Requests for approval of substitutions.
 - c. Requests for adjustments in the Contract time or the Contract Price.
 - d. Requests for interpretation of District's actions on submittals.

- e. Incomplete RFIs or inaccurately prepared RFIs
- 2. The District's action may include a request for additional information, in which case the District's time for response will date from time of receipt of additional information.
- 3. If Contractor believes the RFI response warrants change in the Contract time or Contract Price, see General Conditions for notification requirements.
- E. On receipt of District's action, update the RFI log and immediately distribute the RFI response to affected parties.
- F. Content of RFI Log: Prepare, maintain, and submit tabular log of RFIs organized by the RFI number. Submit log monthly to the District Representative.
 - 1. Project name.
 - 2. Name and address of Contractor.
 - 3. Name and address of District Representative.
 - 4. RFI number including RFIs that were dropped and not submitted.
 - 5. RFI description.
 - 6. Date the RFI was submitted.
 - 7. Date District's response was received.

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

3.01 Preconstruction Meeting

- A. The District will schedule meeting after Notice of Award.
- B. Attendance Required: The District, and Contractor.
- C. Agenda:
 - 1. Execution of District-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.

4. Submission of list of Subcontractors, list of products, schedule of values, and progress schedule.
 5. Designation of personnel representing parties in Contract and District.
 6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 7. Scheduling.
 8. Use of premises by the District and Contractor.
 9. The District's requirements and occupancy.
 10. Construction facilities and controls provided by the District.
 11. Temporary utilities provided by the District.
 12. Survey and layout.
 13. Security and housekeeping procedures.
 14. Application for payment procedures.
 15. Procedures for testing.
 16. Procedures for maintaining record documents.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to the District, and those affected by decisions made.

3.02 Progress Meetings

- A. Contractor shall schedule a meeting at least 7 days prior to mobilization to the site.
- B. Location of the meetings: The project field office of the Contractor, Kittitas Reclamation District Office, or as otherwise indicated in the meeting notice.
- C. Attendees
 1. District Representative and their representatives, as needed.
 2. Contractor
 3. Subcontractors, as appropriate to the agenda.
 4. Suppliers, as appropriate to the agenda.

5. Others, as deemed appropriate by the Contractor or as requested by the District Representative.

D. Agenda:

1. Review of work progress since previous meeting.
2. Field observations, problems, conflicts and decisions.
3. Plan progress, schedule, during succeeding work period.
4. Review of submittals and submittal schedules; discussion of means to expedite, as required.
5. Coordination and revisions to the construction schedule.
6. Other business relating to Work.
7. Scheduling of next progress meeting.

- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to the District, and those affected by decisions made.

3.03 Pre-Installation Meetings

- A. Schedule and administer meetings throughout progress of the Work at maximum weekly intervals.
- B. Attendance Required: Job superintendent, major subcontractors and suppliers, the District, personnel as appropriate to agenda topics for each meeting.

END OF SECTION

SECTION 01 33 00 – SUBMITTAL PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

This section covers the requirements and procedures for submittals presented by the Contractor for review and approval, to demonstrate conformance with the design concept and the Contract Documents. This section includes definitions of the types of submittals required by the project specifications and specifies the administrative and procedural requirements for submittals.

1.02 DEFINITIONS

- A. Submittals: Submittals will typically consist of, but are not limited to, shop drawings, product data, samples, and administrative submittals presented for review and approval.
- B. Types of Submittals: The submittals are grouped as follows:
 - 1. Shop Drawings: As used in this section, drawings, schedules, diagrams, and other data prepared specifically for this Contract, by the Contractor or through the Contractor by way of a Subcontractor, manufacturer, supplier, distributor, or other lower tier contractor, to illustrate a portion of the work.
 - 2. Product Data: Preprinted material such as illustrations, standard schedules, performance charts, instructions, brochures, diagrams, manufacturer's descriptive literature, catalog data, and other data to illustrate a portion of the work, but not prepared exclusively for this Contract.
 - 3. Samples: Physical examples of products, materials, equipment, assemblies, or workmanship that are physically identical to a portion of the work, illustrating a portion of the work or establishing standards for evaluating the appearance of the finished work or both.
 - 4. Administrative Submittals: Data presented for information, review and/or approval to ensure that the administrative requirements of the project are adequately met but not to ensure directly that the work is in accordance with the design concept and in compliance with the Contract Documents.
 - 5. Other items required by the District Representative or specified in the Contract Documents.
- C. Approving Authority: The person authorized to approve a submittal.
- D. Work: As used in this Contract, both on and off-site construction and fabrication required by the Contract Documents, including labor necessary to produce the construction and materials, products, equipment, and systems incorporated or to be incorporated in such construction.

1.03 SUBMITTAL REGISTER

- A. The Contractor shall prepare and submit a submittal register. Sample forms are attached at the end of this section. The sample submittal register, or an equivalent thereof, with column (f) completed by the Contractor is the required submittal under this section. Other items may be requested for submittal by the District Representative during the course of the work and shall be added to the submittal register.
- B. For column (c), the specification paragraph number which contains either the reference to the submittal requirements or performance requirements for the submittal item is indicated. Not all requirements will be referenced in this column. The Contractor shall review the specifications to determine the additional requirements.
- C. Column (e) of the sample submittal register identifies the submittals by category. Category definitions are as follows:
 - Category 1 A submittal required with the bid.
 - Category 2 A critical submittal required during the initial portion of the Contract.
 - Category 3 A submittal required during the course of the Contract.
 - Category 4 A submittal or documentation required at project close out.
- D. State for each submittal the Contractor's planned submittal date. Submit the filled in submittal register within 15 days after Contract Award.
- E. Column (a) shall be filled in as submittals are provided to the District. The first item submitted is Submittal 1, the second item submitted is Submittal 2, etc. See also Section 01 33 00, 1.05B.

1.04 PROCEDURES FOR SUBMITTALS

- A. **Reviewing and Certifying:** The Contractor shall be responsible for reviewing and certifying that submittals are in compliance with Contract requirements. This certification shall be clearly indicated on the submittal cover page accompanying each submittal.
- B. **Approving Authority:** The approving authority on submittals is the District Representative unless otherwise indicated for the specific item.
- C. **Constraints**
 - 1. Submittals listed or specified in this Contract shall conform to the provisions of this section, unless explicitly stated otherwise.
 - 2. Submittals shall be complete for each definable feature of work; components of the definable feature interrelated as a system shall be submitted at the same time.

3. When acceptability of a submittal is dependent on conditions, items, or materials included in separate subsequent submittals, the submittal will be returned without review and will be deemed as not having been submitted.
4. Approval of a separate material, product, or component does not imply approval of assembly in which the item functions.

D. Scheduling

1. Coordinate scheduling, sequencing, preparing and processing of submittals with performance of the work so that work will not be delayed by submittal processing. Allow for potential requirements to resubmit.
2. Except as specified otherwise, allow a review period, beginning with receipt by the District that includes at least twenty (20) working days for approval of submittals. The period of review for each resubmittal is the same as for the initial submittal.
3. Submittals received by the District after 2:00 PM will be considered as received on the following working day.

E. Variations or Substitutions

1. Substitution requests shall be in accordance with the provisions of this section and the other Contract Document requirements.
2. Variations from Contract requirements require District approval. When proposing a variation, submit a written request to the District, with documentation of the nature and features of the variation and why the variation is desirable and beneficial to the District.
3. Identify the proposed variation separately and include the documentation for the proposed variation along with the required submittal for the item. When submitting a variation for approval, the Contractor warrants the following:
 - a. Variation is compatible: The Contract has been reviewed to establish that the variation, if incorporated, will be compatible with other elements of the work.
 - b. Contractor is responsible: The Contractor shall take actions and bear the additional costs.
 - c. Review schedule is modified: In addition to the normal submittal review period, a period of ten (10) working days will be allowed for consideration by the District of submittals with variations.

F. Contractor's Responsibilities

1. Determine and verify field measurements, materials, field construction criteria; review each submittal; and check and coordinate each submittal with requirements of the work and Contract Documents.
2. Transmit submittals to the District in orderly sequence to prevent delays in the work, delays to the District, or delays to separate contractors and Subcontractors.
3. Advise the District Representative of proposed variations or substitutions, as required by the Contract.
4. Correct and resubmit any submittal as directed by the approving authority. Direct specific attention, in writing or on resubmitted submittal, to any revisions not requested by the approving authority on previous submissions.
5. Complete work that must be accomplished as a basis of a submittal in time to allow the submittal to occur as scheduled.
6. Ensure no work has begun until submittals for that work have been returned as "Approved", "Approved as Submitted", or "Approved as Noted".
7. Review and certify each submittal.

G. District Responsibilities

1. Note the date and time on which the submittal was received from the Contractor, on each submittal for which the District is the approving authority.
2. Review submittals for approval within the scheduling period specified and for conformance with project design concepts and compliance with the Contract Documents.
3. Identify returned submittals with one of the actions defined in the paragraph entitled "Actions Possible" and with markings appropriate for the action indicated.
4. Retain three copies of each submittal, except "samples," where two copies will be retained.

H. Actions Possible

Submittals will be returned with one of the following notations:

1. Submittals marked "Approved" or "Approved as Submitted" authorize the Contractor to proceed with the work covered.

2. Submittals marked "Approved as Noted" authorize the Contractor to proceed with the work as noted provided the Contractor takes no exception to the notations.
3. Submittals marked "Revise and Resubmit" or "Not Approved" indicate the submittal is deemed incomplete or does not comply with the design concept or with the requirements of the Contract Documents and shall be resubmitted with appropriate changes.

1.05 FORMAT OF SUBMITTALS

A. Submittal Cover Page

Transmit each individually numbered submittal to the District for approval. Provide submittals with a submittal cover page or form approved by the District Representative and standard for the project. The submittal cover page shall identify the Contractor, indicate the date of the submittal, and include information required in Section 01 33 00, 1.05B.

B. Identifying Submittals

Identify submittals with the following information permanently adhered to or noted (electronic filename) on each separate component of each submittal and noted on the submittal cover page. Mark each copy of each submittal identically, with the following:

1. Project title and location.
2. Construction Contract number.
3. Contractor's name.
4. The section number of the Contract Documents by which the submittal is required.
5. A brief description of each component of the submittal.
6. When the submittal document is a resubmission, include an alphabetic suffix on the submittal description, for example, 10A, to indicate the first resubmission of submittal number 10. The suffix shall be used consistently for all resubmittals.
7. The name, address, and telephone number of the Subcontractor, supplier, manufacturer and any other second tier contractor associated with the submittal.
8. Product identification and location in project.

C. Format for Product Data

1. Present product data submittals for each section as required.

2. Indicate, by prominent notation, each product that is being submitted; indicate the specification section number and paragraph number to which it pertains.
3. Supplement product data with material prepared for the project to satisfy submittal requirements for which product data does not exist. Identify this material as developed specifically for the project.
4. See the Specific Requirements for additional requirements.

D. Format for Shop Drawings

1. Shop drawings shall not be less than 8.5 by 11 inches or more than 24 by 36 inches.
2. Present shop drawings in sets.
3. Include on each drawing the drawing title, number, date, and revision numbers and dates, in addition to the information required in Section 01 33 00, 1.05B.
4. Dimension the drawings, except for diagrams and schematic drawings. Prepare drawings demonstrating interface with other trades to scale. Identify materials and products for work shown.
5. When shop drawings are prepared electronically, the District's standard is AutoCAD. See Exhibit "M" Hydro Division - Drafting Standards.

E. Format of Samples

1. Furnish samples in the sizes below, unless otherwise specified or unless the manufacturer has prepackaged samples of approximately the same size as specified:
 - a. Sample of Equipment or Device: Full size.
 - b. Sample of Materials Less Than 2 by 3 inches: Built up to 8.5 by 11 inches.
 - c. Sample of Materials Exceeding 8.5 by 11 inches: Cut down to 8.5 by 11 inches and adequate to indicate color, texture, and material variations.
 - d. Sample of Linear Devices or Materials: 10-inch length or length to be supplied, if less than 10 inches. Examples of linear devices or materials are conduit and handrails.
 - e. Sample of Non-Solid Materials: Pint. Examples of non-solid materials are sand and paint.
 - f. Color Selection Samples: 2 by 4 inches, minimum.

- g. Sample Panel: 4 by 4 feet.
 - h. Mock Up Requirements: See individual section for requirements.
 - 2. Samples Showing Range of Variation: Where variations are unavoidable due to the nature of the materials, submit sets of samples of not less than three units showing the opposite extremes and middle of the range.
 - 3. Reusable Samples: Incorporate returned samples into the work only if so specified or indicated. Incorporated samples shall be in undamaged condition at the time of use.
 - 4. When a color, texture or pattern is specified in naming a particular manufacturer and style, include one sample of that manufacturer and style, for comparison.
- F. Format of Administrative Submittals
- 1. When the submittal includes a document that is to be used in the project or become a part of the project record, other than as a submittal, do not apply the Contractor's approval stamp to the document, but to a separate sheet accompanying the document.
 - 2. Operation and Maintenance Manual Data: Submit in accordance with Section 01 78 00. Include components required in that Section and the various technical sections. See also Specific Requirements for additional requirements.

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

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SECTION 01 45 00 – QUALITY CONTROL

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Quality control and control of installation.
- B. Tolerances.
- C. References.
- D. Testing and inspection services.
- E. Testing requirements.
- F. Examination.

1.02 RELATED SECTIONS

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 00 72 00 – General Conditions
- B. Section 00 73 00 - Supplementary Conditions
- C. Section 01 30 00 – Administrative Requirements
- D. Section 01 33 00 – Submittal Procedures
- E. Section 03 30 00 – Cast-In-Place Concrete
- F. Section 31 22 00 – Grading
- G. Section 31 23 00 – Excavation and Fill
- H. Section 33 05 16 – Utility Structures
- I. Section 33 41 00 – Storm Utility Drainage Piping

1.03 QUALITY CONTROL AND CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. If manufacturers' instructions conflict with Contract Documents, request clarification from District Representative before proceeding.

- D. Comply with specified standards as the minimum quality for the work except where more stringent tolerances or codes apply; or where specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce the required and specified quality.
- F. Verify field measurements are as indicated on shop drawings or as instructed by manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.04 TOLERANCES

- A. Monitor fabrication and installation tolerance control of products to produce acceptable work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. If manufacturers' tolerances conflict with Contract Documents, request clarification from District Representative before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.
- D. Where multiple tolerances apply the most stringent tolerance is to be used.

1.05 REFERENCES

- A. For products or workmanship specified by association, trade, or other consensus standards, comply with the most stringent requirements of standard, except when more rigid requirements are specified or are required by applicable codes or other provisions of the Contract Documents.
- B. Conform to reference standard by date set for receipt of bids except where specific date is established by code. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.
- C. Obtain copies of standards where required by product specification sections.
- D. If specified reference standards conflict with Contract Documents, request clarification from District Representative before proceeding.
- E. Neither contractual relationships, duties, nor responsibilities of parties in contract nor those of the District Representative shall be altered from Contract Documents by mention or inference otherwise in reference documents.
- F. American Concrete Institute (ACI)

- 1. ACI CP1ACI Certification Concrete Field Testing Technician
– Grade 1

G. ASTM International (ASTM)

1. ASTM C31..... Standard Practice for Making and Curing Concrete Test Specimens in the Field.
2. ASTM C39..... Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
3. ASTM C42..... Standard Test Method for Obtaining and Testing Drilled Cores and Sawed Beams of Concrete.
4. ASTM C143..... Standard Test Method for Slump of Hydraulic Cement Concrete.
5. ASTM C173..... Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method.
6. ASTM C231..... Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method.
7. ASTM D1557..... Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 Ft-Lbf/Ft³ (2,700 kN-m/m³))
8. ASTM D2922..... Standard Test Methods for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
9. ASTM E329..... Standard Specification for Agencies Engaged in Construction Inspection and/or Testing
10. ASTM E543..... Standard Practice for Agencies Performing Nondestructive Testing
11. ASTM F1417 Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-pressure Air

H. American Society for Non-destructive Testing (ASNT)

1. SNT-TC-1A Personnel Qualification and Certification in Non-destructive Testing
2. CP-189..... Standard for Qualification and Certification of Nondestructive Testing Personnel

I. American Water Works Association (AWWA)

1. AWWA C206 Field Welding of Steel Water Pipe

J. American Welding Society (AWS)

1. AWS B5.2..... Specification for the Qualification of Welding Inspector Specialists and Welding Inspector Assistants
2. AWS D1.1 Structural Welding Code - Steel
3. AWS D1.6 Structural Welding Code – Stainless Steel
4. AWS D1.2 Structural Welding Code –Aluminum
5. AWS QC-1 Standard for AWS Certification of Welding Inspectors

1.06 TESTING AND INSPECTION SERVICES

- A. Quality Control: The test procedures defined in this section apply to all tests required in these Technical Specifications.
- B. Tests by Independent Testing Laboratory
1. Independent Testing Laboratory
 - a. The Contractor shall retain the services of an independent testing laboratory to perform all necessary tests.
 - b. More than one independent testing laboratory may be retained as required to facilitate the testing.
 - c. The testing services to be performed may be either on or off site as required by the work.
 2. Contractor's Responsibilities
 - a. Make available to the testing laboratory all materials to be tested.
 - b. Advise the testing laboratory of the identity of material sources and instruct suppliers to allow inspections by the laboratory.
 - c. Pay for testing.
 3. Tests will be conducted in accordance with the requirements of the specifications designated or, where not specified, the latest standards of ASTM International.

1.07 TESTING REQUIREMENTS

A. Survey Control

1. The Contractor shall utilize the services of a surveyor licensed in the State of Washington to oversee all surveying, alignment and positioning

work on the Project. The surveyor shall extend vertical and horizontal control to the project, set temporary surveying control, establish primary work lines, and spot check as-built locations of exposed project elements. The choice of surveyor shall be subject to the approval of the District and the Contractor shall submit qualifications for approval. The surveyor shall have a minimum of five years of documented experience in land surveying.

2. Surveys shall be accomplished using the best available technology for the application and subject to District review and approval.

B. Factory Tests

Unless otherwise specified, the Contractor shall arrange for factory tests when they are required under the Contract. Certified copies of test reports on materials to be incorporated into the work will be acceptable, provided they are performed by the manufacturer or by agencies or laboratories acceptable to the District Representative and show the materials conform to the specification.

C. Testing Services and Tests Required

1. Pipeline Joint Low-Pressure Air Testing

- a. Low pressure air testing shall be performed to demonstrate acceptable gasket installation and pipe joining.
- b. Contractor shall furnish all necessary equipment and be responsible for conducting all low-pressure air tests.
 - (1.) Pneumatic plugs shall have a sealing length equal to or greater than the diameter of the pipe tested.
 - (2.) Pneumatic plugs shall resist internal test pressures without requiring external bracing or blocking.
 - (3.) Pressure gauges shall have minimum gradation of 0.1 psig and accuracy of plus or minus 0.05 psig.
- c. Plug and brace each end of the segment of pipeline to be tested. In addition to the self-bracing capacity of the plugs themselves, Contractor should externally brace all plugs as an added safety precaution throughout testing.
- d. Pressurize the pipeline to a minimum gauge pressure of 3.5 psi and a maximum gauge pressure of 4 psi and record pressures in accordance with the time-pressure drop method in ASTM F1417.
- e. If the gauge pressure drop is more than 0.5 psi during the test time, the line is presumed to have failed joints.
- f. Test duration times shall be calculated as:

$$T = 0.0425 * (D * K) / Q$$

Where:

T = Shortest time, in seconds allowed for the are pressure to drop 0.5 psig;

K = $0.000419 * D * L$, but not less than 1.0;

Q = 0.0015 cubic-feet/minute/square feet of internal surface;

D = Nominal pipe diameter in inches; and

L = Length of pipeline segment tested in feet.

- g. If there has been no measurable pressure drop after one hour of testing, the test segment shall be accepted, and the test can be terminated short of the calculated test duration.
- h. If the segment of pipeline fails to meet the requirements, Contractor shall determine at their own expense the source, or sources of leakage, and shall repair or replace all defective materials and/or workmanship.

2. Concrete Testing and Inspection Services and Tests Required

- a. Inspect and test materials during concrete work to substantiate compliance with specifications and mix requirements.
- b. Placement Tests
 - (1.) The District Representative reserves the right to order slump tests at any time.
 - (2.) The District Representative reserves the right to order air entrainment tests at any time.
 - (3.) Temperature Tests as required in Paragraph 1.10 of this Section.
- c. Test Cylinders
 - (1.) Comply with Paragraph 1.10 of this Section.
 - (2.) Note on record drawings placement locations represented by test cylinders.
- d. Test Results: Comply with Paragraph 1.08 of this Section.

3. Soils Testing and Inspection

- a. The Contractor will take samples and perform moisture content, gradation, compaction, and density tests prior to and during placement of backfill materials to check compliance with these specifications.

- b. Remove surface material at locations designated by the District Representative and provide such assistance as necessary for sampling and testing.
- c. If an independent testing laboratory is hired by the Contractor to provide soils testing, such testing does not relieve the Contractor of its responsibility to determine to its own satisfaction when and if its work meets the specification.
- d. Test procedures shall meet:
 - (1.) Moisture content ASTM D3017
 - (2.) Gradation ASTM C136, D422
 - (3.) Density in-place ASTM D1556, D2922
 - (4.) Moisture-density relationships ASTM D1557
 - (5.) Organic content ASTM D2974
 - (6.) Liquid limit ASTM D4318
- e. Perform compaction tests at a frequency of one test per 100 lineal feet, or fraction thereof, of prepared subgrade during placement of each lift of backfill material.

4. Reporting of Test Results

Test results provided shall cite the Contract requirements, the test or analytical procedures used, the actual results, and include a statement that the item tested or analyzed conforms or fails to conform to the specification requirements. All test reports shall be signed by the representative authorized to sign certified test reports. The Contractor shall arrange for immediate and direct delivery of the signed reports, certifications, and other documentation to the District Representative.

1.08 SUBMITTALS

- A. Surveyor: The name, certification and qualifications of the licensed surveyor shall be submitted to the District for approval.
- B. Concrete Testing Qualifications
 - 1. Submit names and qualifications of testing representative and any independent concrete testing laboratories proposed for the work.
 - 2. Concrete Test Results: Submit tabulations and results of all tests performed in connection with the Contract. Conforming, non-conforming, and retesting shall be clearly indicated. The tabulation(s) shall be certified as complete and signed by a testing representative authorized to sign certified test reports and hard copies shall be submitted every week

to the District Representative. A summary report of all field tests containing both "required" and "actual" results plus "passed" or "failed" for conforming, non-conforming, and repeated test results shall be submitted to the District Representative at the end of each month.

C. Soils Testing Qualifications

1. Submit names and qualifications of testing representatives and any independent soils testing laboratories proposed for the work.
2. Soils Tests Results: Submit tabulations and results of all tests performed in connection with the Contract. Conforming, non-conforming, and retesting shall be clearly indicated. The tabulation(s) shall be certified as complete and signed by a testing representative authorized to sign certified test reports and hard copies shall be submitted every week to the District Representative. A summary report of all field tests containing both "required" and "actual" results plus "passed" or "failed" for conforming, non-conforming, and repeated test results shall be submitted to the District Representative at the end of each month.

1.09 CONCRETE EVALUATION AND ACCEPTANCE

- A. Each concrete mix design proposed for use in execution of the Work shall be submitted with sample batch compressive strength test results.
- B. A test result shall be the average of the strengths of the two test cylinders made in accordance with Paragraph 1.10 of this Section. The strength level of the concrete will be considered satisfactory if the average of all sets of three consecutive strength tests equal or exceed the specified strength $f'(c)$ and no individual test falls below the specified value by more than 500 psi. Members manufactured with concrete that does not meet the strength requirements shall be rejected.
- C. Air Content: All members cast with concrete having a measured air content beyond the limits of the specified air content by either plus or minus 1.5 percent shall be rejected.

1.10 FIELD QUALITY CONTROL

A. Concrete Testing

1. Slump Tests:
 - a. Conform to the requirements of ASTM C143. Take concrete samples during concrete placement. The maximum slump may be increased as specified with the addition of an approved admixture provided that the water-cement ratio is not exceeded.
 - b. Perform tests at commencement of concrete placement, when test cylinders are made, and for each batch (minimum required) or every 40 cubic yards (maximum allowed) of concrete.

2. Temperature Tests

Test the concrete delivered and the placed concrete. Perform tests for each batch (minimum required) or every 40 cubic yards (maximum allowed) of concrete, until the specified temperature is obtained, and whenever test cylinders and slump tests are made.

3. Compressive Strength Tests

- a. Field compressive strength tests are only required for structural walls and shall not be required for concrete used in canal liner slabs.
- b. Conform to the requirements of ASTM C39. Identify all test cylinders with symbols to indicate location on the job where concrete test was made. Record on record drawings the location of the tested concrete. Make and cure a minimum of six (6) test cylinders for ordinary concrete in accordance with ASTM C31. Cure of cylinders to match the environmental conditions of the placed concrete. Precautions shall be taken to prevent evaporation and loss of water from the specimen, and to protect the cylinders from freezing. For 28-day strength concrete, test two cylinders at seven (7) days, two cylinders at 28 days, and hold two cylinders in reserve. Samples for strength tests of each mix design of concrete placed each day shall be taken not less than once a day, nor less than once for each 100 cubic yards of concrete, nor less than once for each 1500 square feet of surface area for slabs or walls. Each strength test result shall be the average of two cylinders from the same concrete sample tested at the same time interval.
- c. If the average of any three consecutive strength test results is less than f'_c or if any strength test result falls below f'_c by more than 500 psi, take a minimum of three ASTM C42 core samples from the in-place work represented by the low test cylinder results and test. Concrete represented by core test shall be considered structurally adequate if the average of three cores is equal to at least 85 percent of f'_c and if no single core is less than 75 percent of f'_c . Locations represented by erratic core strengths shall be retested. Remove concrete not meeting strength criteria and provide new acceptable concrete. Repair core holes with nonshrink grout. Match color and finish of adjacent concrete.

4. Air Content: Conform to the requirements of ASTM C173 or ASTM C231 for normal weight concrete. Test air-entrained concrete for air content at the same frequency as specified for slump tests.

B. Soil Compaction Testing

1. Determination of Density: Conform to the requirements of ASTM D1557 to determine the maximum dry density.

2. Density of Soil In Place By Nuclear Methods: Conform to the requirements of ASTM D2922.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify existing site conditions and substrate surfaces are acceptable for subsequent work. Beginning new work means acceptance of existing conditions.
- B. Verify existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Verify utility services are available, of correct characteristics, and in correct locations.
- E. Verify dimensions noted on contract drawings or required for proper installation or construction.

3.02 PREPARATION

- A. Clean substrate surfaces as specified prior to applying next material or substance.
- B. Seal cracks or openings of substrate as specified prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying new material or substance in contact or bond.

END OF SECTION

SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Temporary environmental controls required to be maintained during construction.
- B. Furnishing, installing, maintaining, removing, and disposing of water pollution and erosion control items in accordance with these Technical Specifications and as shown in the contract drawings or as designated by the District.
- C. Preparing and using a project specific spill prevention, control, and countermeasures plan in accordance with these Technical Specifications.
- D. Environmental mitigations required to be maintained during construction.
- E. Requirements for temporary utilities, support facilities, and security and protection facilities.

1.02 RELATED SECTIONS

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 00 72 00 – General Conditions
- B. Section 00 73 00 – Special Conditions
- C. Section 01 33 00 – Submittal Procedures
- D. Section 02 41 00 – Demolition
- E. Section 03 30 00 – Cast-in-Place Concrete

1.03 REFERENCES

- A. Washington State Department of Transportation (WSDOT)
Standard Specifications for Road, Bridge, and Municipal Construction, 2018
(referred herein as the WSDOT Standard Specifications)
- B. ASTM International (ASTM):
 - 1. ASTM A392..... Specification for Zinc-Coated Steel Chain-Link Fence Fabric
 - 2. ASTM D882..... Test Method for Tensile Properties of Thin Plastic Sheeting
 - 3. ASTM D1004..... Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting

4. ASTM D1388..... Test Method for Stiffness of Fabrics
5. ASTM D1777..... Test Method for Thickness of Textile Materials
6. ASTM D3776..... Test Methods for Mass Per Unit Area (Weight) of Fabric
7. ASTM D5034..... Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)
8. ASTM D5035..... Test Method for Breaking Force and Elongation of Textile Fabrics (Strip Method)

1.04 SUBMITTALS

- A. Procedures: Submit in accordance with Section 01 33 00 - Submittal Procedures.
- B. Environmental Mitigation Plan (E.M. Plan) – Original issue and any revisions thereto.
- C. Manufacturer or supplier's certifications of compliance with specifications.
- D. Disposal site permits.

1.05 QUALITY ASSURANCE

- A. Regulatory Requirements: This section incorporates by reference the latest revisions of the following documents. They are part of this section as specified and modified. In case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.
 1. Department of Ecology Model Municipal Stormwater Program for Eastern Washington, September 2003
 2. RCW 90.48..... Water Pollution Control
 3. WAC 173-201A Water Quality Standards for Surface Waters of the State of Washington
- B. Comply with all applicable requirements of local, state, and federal agencies.
- C. Conform to the National Pollutant Discharge Elimination System (NPDES) permit for the project.
- D. Conform to local and state Water Quality Standards for stormwater discharge and local agency sewer discharge permits if placed in combined sanitary sewer system.
- E. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.

- F. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.06 APPLICABLE REGULATIONS

In order to prevent, and to provide for abatement and control of, any environmental degradation arising from the Work, all applicable federal, state, and local laws and regulations concerning environmental pollution control and abatement, as well as specific requirements stated elsewhere in specifications, shall be complied with.

1.07 PROJECT CONDITIONS

Temporary Use of Permanent Facilities: Engage installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before District's acceptance, regardless of previously assigned responsibilities.

1.08 USE CHARGES

Installation and removal of and use charges for temporary facilities shall be included in the Contract Price unless otherwise indicated. Allow other entities to use temporary services and facilities without cost, including, but not limited to, District, testing agencies, and authorities having jurisdiction.

1.09 ENVIRONMENTAL MITIGATION PLAN

- A. Develop and maintain for the duration of the Contract an Environmental Mitigation Plan (E.M. Plan), which will effectively incorporate and implement all required environmental protection precautions, including, but not limited to, water and erosion control, air pollution control, noise control, water quality protection and stormwater control and oil spill prevention and control.
- B. Submit the E.M. Plan prior to initiating any demolition activities.
- C. The Spill Prevention, Containment, and Control (SPCC) Plan and the Erosion Control Plan (includes Water Quality) shall be incorporated in the E.M. Plan.
- D. Appoint an employee who is qualified and authorized to supervise and enforce compliance with the E.M. Plan. Ensure that all necessary pollution control equipment, supplies, or materials are available to implement the E.M. Plan.
- E. In the event that the District, regulatory agencies or jurisdictions determine the E.M. Plan to be inadequate to protect the environment:
 - 1. Stop the work in progress until adequate environmental protection measures are implemented.
 - 2. Modify the E.M. Plan to meet the requirements of said regulatory agencies, jurisdictions, and the District.
 - 3. Submit the revisions to the E.M. Plan within seven (7) days of the notice of deficiency.

1.10 EROSION AND SEDIMENT CONTROL

- A. Prepare a Water and Erosion Control Plan. Contractor shall submit an erosion control plan for approval that includes the locations of appropriate and effective erosion and other water quality control devices (such as, silt fencing, silt curtains, sealed sand or gravel bags, straw bale check dams, temporary floating booms and floating silt barrier) to prevent sediment entering any waters of the state. Provide at a minimum, the following specific information for the Water and Erosion Control Plan:
1. All requirements in the contract drawings and Technical Specifications.
 2. List of erosion and water quality control materials and devices that will be available onsite during the construction of the project.
 3. Locations of appropriate and effective erosion and other water quality control devices (such as, silt fencing, silt curtains, sealed sand or gravel bags, straw bale check dams, temporary floating booms and floating silt barrier) to limit the amount of sediment entering the river, reduce the area affected by turbidity during construction activities, and protect the streambank and shoreline protection.
 4. Installation, inspection and maintenance schedule for temporary erosion and other water quality control devices
 5. Method and frequency of monitoring activities to assure compliance with specified regulations.
 6. Rerouting of existing water within site to erosion control facilities prior to release.
 7. Method of monitoring water quality and quantity.
 8. Maintenance of erosion control system.
 9. Identify specific Best Management Practices (BMPs) required for construction of pipelines and structures.
 10. Identify specific BMPs required for stockpiling and storing soils and construction materials.
- B. Silt fencing, straw bales, detention ponds, and other erosion control and reduction measures may be necessary to provide satisfactory erosion control. No additional payment will be made for erosion control measures.

1.11 PROTECTION AND RESTORATION OF PROPERTY

The Work shall include the preservation of all public and private property, monuments, power and telephone line, other utilities, etc., along and adjacent to the disposal area insofar as they may be endangered. All utility lines damaged shall be repaired. When or where any direct or indirect damages or injury are done to public or private property by, or on account of, any act, omission, neglect, or misconduct in the execution of the Work,

or in consequence of the non-execution thereof, such property shall be restored to a condition similar and equal to that existing before such damage or injury was done.

1.12 NOISE, AIR, AND WATER POLLUTION

- A. All federal laws concerning contamination of air and water shall be complied with. Contractor shall comply with state, county, and municipal laws.
- B. Fouling or polluting the water will not be permitted and special precautions shall be taken to preserve water quality.
- C. A turbidity curtain shall be used around the in-water construction area to prevent the discharge of turbid water beyond the immediate construction zone. The curtain shall meet all applicable permit requirements and shall be configured and maintained as follows:
 - 1. Curtain: The curtain shall be a synthetic material coated with suitable elastomeric or polymeric compound and have a high resistance to weathering, hydrocarbons, fresh and salt water, and temperature extremes. The material shall have a tensile strength of not less than 200 lbs. when measured lengthwise or crosswise. Seams, if required, shall be either vulcanized, welded, or sewn and shall develop the full strength of the material.
 - 2. Flotation Units: Flotation units shall be flexible, buoyant units contained in a flotation sleeve or collar attached to the turbidity curtain. Buoyancy provided by the flotation units shall be sufficient to support the required width of the turbidity curtain and maintain a freeboard of at least 3" above the water surface level.
 - 3. Load Lines: Load lines shall be fabricated into the top and bottom of the turbidity curtain. The load lines shall have suitable devices which develop the full breaking strength for connecting to load lines in adjacent sections
 - 4. Anchors: Anchors shall be standard marine type boat anchors. The Contractor shall use Danforth type anchors for sandy bottoms, or kedge or mushroom type anchors for mud bottoms. The size, weight, and overall number of the anchors shall be sufficient to hold the turbidity curtain in its intended location. Alternate anchoring methods such as heavy concrete weights or driven pilings may be used if approved, prior to use, by the Engineer.
 - 5. Construction of Curtain: When assembling and installing a turbidity curtain, the Contractor shall follow all the directions of the turbidity curtain manufacturer. The turbidity curtain shall not be installed perpendicular to the direction of stream flow, such as across a river. The turbidity curtain shall be installed parallel to the flow of water only, such as along a river bank. All construction activities which generate any sediment or turbidity into the waterway shall be contained within the turbidity curtain. Unless otherwise directed by the District, the Contractor shall begin installation at maximum water level (prior to any lowering of the reservoir) from a

shoreline anchorage and work along with the current in a downstream direction. The turbidity curtain shall form a continuous vertical and horizontal barrier to suspended sediment. The bottom of the turbidity curtain shall rest in contact with the bottom of the waterway for the entire length of the turbidity curtain.

6. Maintenance of Curtain: Throughout the Project construction period, the Contractor shall maintain the turbidity curtain so that no sediment caused by the Project enters the waterway beyond the turbidity curtain. All turbidity curtain damaged prior to installation, during installation, or during the life of the Contract shall be repaired or replaced to the satisfaction of the District.
7. Removal of Curtain: The turbidity curtain shall remain in place until the Project is complete and the turbidity has settled to no more than what existed prior to the start of construction. When directed by the District, the turbidity curtain shall be furled in place, then released from its anchors and towed out of the water. The turbidity curtain and all materials incidental to the construction of the turbidity curtain shall be removed in such a manner as to minimize turbidity to adjacent waters. The turbidity curtain and related components shall become the property of the Contractor and shall be removed from the Project.

1.13 DUST CONTROL

The Contractor shall maintain all access roads, plant sites, and work areas free from dust, which would cause a hazard or nuisance to the job. Approved methods of stabilization will be permitted. No separate payment will be made for dust control, which the Contractor will be required to maintain. The costs for dust control shall be included in appropriate Contract unit prices.

1.14 OIL SPILL PREVENTION AND CONTROL

- A. Prepare a project specific spill prevention, control and countermeasures (SPCC) plan to be used for the duration of the project; a part of the Environmental Mitigation Plan. The plan shall be submitted to the District Representative prior to the commencement of any on site construction activities. The Contractor shall maintain a copy of the plan at the work site, including any necessary updates as the work progresses. If hazardous materials are encountered during construction, the Contractor shall do everything possible to control and contain the material until appropriate measures can be taken. Hazardous material, as referred to within this specification, is defined in RCW 70.105.010 under "Hazardous Substances". Occupational safety and health requirements that pertain to SPCC planning are contained in WAC 296-155 and WAC 296-62.
- B. The SPCC plan shall address the project-specific information outlined below. A site plan will be included that shows the locations listed in Paragraph 2 below. A copy of Spill and Incident Report Forms, if any that the Contractor will be using shall be included as well.

1. Site Information – Identify general site information useful in construction planning, recognizing potential sources of spills, and identifying personnel responsible for managing and implementing the plan.
2. Project Site Description – Identify staging, storage, maintenance, and refueling areas and their relationship to drainage pathways, waterways, and other sensitive areas. Specifically address:
 - a. The Contractor's equipment maintenance, refueling, and cleaning activities; and security practices that will be used to discourage vandalism.
 - b. The practices that will be used to prevent erosion and sedimentation associated with access roads, stream crossings, construction sites, borrow pit operations, haul roads, equipment and material storage sites, fueling operations, and staging areas.
 - c. The removal and disposal of excess concrete, cement, and other mortars or bonding agents including measures for washout facilities.
 - d. The hazardous products or materials that will be used for the project and procedures for inventory, storage, handling, and monitoring.
3. Spill Prevention and Containment – Identify spill prevention and containment methods to be used at each of the locations identified in Paragraph 2, above.
4. Spill Response – Outline spill response procedures including notification procedures, assessment of the hazard, securing spill response and personal protective equipment, containing and eliminating the spill source, and mitigation, removal and disposal of the material.
5. Standby, On-Site, Material and Equipment – The plan shall identify the equipment and materials the Contractor will maintain on site to carry out the preventive and responsive measures for the items listed.
6. Reporting – The plan shall list all federal, state and local agency telephone numbers the Contractor must notify in the event of a spill.
7. Program Management – Identify site security measures, inspection procedures and personnel training procedures as they relate to spill prevention, containment, response, management and cleanup.
8. Preexisting Contamination – If preexisting contamination in the project area is described elsewhere in the plans or specifications, the SPCC plan shall indicate measures the Contractor will take to conduct work without allowing release or further spreading of the materials.

- C. Prevent, contain, and clean the spilling of oil, fuel, and other petroleum products used. Discharge of oil from equipment or facilities into state waters or onto adjacent land is not permitted and violates state water quality regulations. Prepare a Spill Prevention, Control, and Countermeasure Plan (SPCC) describing the contractor's plan for oil spill prevention, preparedness, and response to prevent oil discharges to navigable waters and adjoining shorelines.

1.15 NOTWITHSTANDING ANY OTHER PROVISION OF THIS CONTRACT

- A. No adjustment in contract price will be made for any increase in the cost of performance of this contract incurred as a result of the requirements of this section. This shall specifically include, but not be limited to, increases in costs resulting from suspensions or delays in the work for the protection of water quality and/or aquatic life.
- B. Where the time required for performance of the contract work is increased due to such suspensions or delays, an adjustment will be made in the time allowed for completion of the contract work unless the suspension or delay arises, in whole or in part, out of the fault or negligence of the Contractor.

1.16 ENVIRONMENTAL LITIGATION

- A. If the performance of all or any part of the work is suspended, delayed, or interrupted due to an order of a court of competent jurisdiction as a result of environmental litigation, as defined below, the District's Representative, at the request of the Contractor, shall determine whether the order is due in any part to the acts or omissions of the Contractor or a Subcontractor at any tier not required by the terms of this contract. If it is determined that the order is not due in any part to acts or omissions of the Contractor or a Subcontractor at any tier other than as required by the terms of this contract, such suspension, delay, or interruption shall be considered as if ordered by the District's Representative in the administration of this contract under the terms of the General Conditions of this contract. The period of such suspension, delay or interruption shall be considered unreasonable, and an adjustment shall be made for any increase in the cost of performance of this contract (excluding profit) as provided in that clause, subject to all the provisions thereof.
- B. The term "environmental litigation", as used herein, means a lawsuit alleging that the Work will have an adverse effect on the environment or that the District has not duly considered, either substantially or procedurally, the effect of the Work on the environment.

1.17 FINES

Contractor shall be responsible for all fines incurred from non-compliance with environmental regulations of governing authorities.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Fabrics/mats/blankets: Geotextile fabric including slope stabilization fabric, drainage fabric, filter fence fabric and soil reinforcing fabric.
- B. Straw: Conform to WSDOT Standard Specifications Section 9-14.4(1).
- C. Other materials as shown in the contract drawings or as directed by the District Representative.
- D. Other materials as identified in the approved EM Plan.

2.02 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. HVAC Equipment: Unless District authorizes use of permanent HVAC system, provide vented, self-contained, electric heating and air conditioning with individual space thermostatic control.
 - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.
 - 2. Heating Units: Listed and labeled for type of fuel being consumed, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
 - 3. Permanent HVAC System: If District authorizes use of permanent HVAC system for temporary use during construction, provide filter with MERV of 8 at each return air grille in system and remove at end of construction and clean HVAC system as required.

PART 3 – EXECUTION

3.01 SITE MAINTENANCE

- A. Keep the work site, including staging areas and Contractors' facilities, clean, neat and free from rubbish and debris. Remove materials and equipment from the site when they are no longer necessary. Upon completion of the work and before request for inspection, clear the work site of equipment, unused materials, and rubbish to present a clean and neat appearance.
- B. Do not allow waste material to remain on the site of the work or on adjacent roads. Collect, carry off the site and legally dispose of such materials daily, weekly, or as otherwise specified by the District Representative. Potentially contaminated soils (suspect soils) that require determination of makeup may be stockpiled on the site per the District Representative requirements.

- C. Be responsible for obtaining necessary permits or approval for the Contractor's disposal sites.
- D. In the event that wastes material, refuse, debris, and rubbish are not removed from the work site, the District reserves the right to have the waste material, refuse, debris and rubbish removed. The expense of such removal will be charged to the Contractor.
- E. Handle paints, solvents, and other construction materials with care to prevent entry of contaminants into storm drains, surface waters, or soils.
- F. Unless specified otherwise in the Contract, restore ground surface to its pre-construction condition. Restore disturbed areas by replanting or repaving as soon as practical after construction.

3.02 PROGRESS CLEANING

- A. Use sealed trucks for the removal of all contaminated or seeping soils from the construction site.
- B. Clean the exposed surfaces of equipment that has become soiled with dirt, mortar, or other materials.
- C. Prevent dirt and dust from escaping trucks departing the work site by covering dusty loads, washing truck tires before leaving the site, using crushed rock at entrances, or other reasonable methods as applicable.
- D. Provide a legal, off-site disposal site for all material that leaves the work site.
- E. Flush no solid material or soils into catch basins or the Columbia River. Flushing activities shall be restricted to comply with water quality protection requirements.

3.03 WATER AND EROSION CONTROL

- A. Temporary drainage: Conform to the regulations and requirements of legally authorized surface water management agencies.
- B. Comply with the requirements of all applicable permits.
- C. Erosion and sedimentation control measures shall be in place prior to any excavation activity. Work shall be suspended if it cannot be performed within the specified regulatory requirements.

3.04 AIR POLLUTION CONTROL

- A. Do not discharge smoke, dust, and other contaminants into the atmosphere that violate the regulations of legally constituted authorities. Maintain construction vehicles and equipment in good repair.
- B. Use electrically powered equipment where practical.

- C. Minimize dust nuisance by cleaning, sweeping, and sprinkling with water, or other means. Make equipment for this operation available at all times.

3.05 NOISE CONTROL

- A. Noisy operations shall be scheduled to minimize their duration.
- B. Comply with local controls and noise level rules, regulations and ordinances, which apply to work performed unless permitted otherwise through a noise variance.
- C. Each internal combustion engine, used on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated without said muffler.

3.06 WATER QUALITY PROTECTION AND STORMWATER CONTROL

- A. Conform to the regulations and requirements of legally authorized surface water management agencies.
- B. Conduct operations in such a manner as to prevent sediment, construction equipment wash water, and other pollutants from reaching existing surface waters.
- C. Implement erosion and sedimentation control measures. Erosion and sedimentation control measures shall be in place prior to any demolition activity.
- D. Prevent additional construction wastes (such as paper, wood, garbage, sanitary wastes, and fertilizer), from leaving the site and entering waterways. Dispose of all debris on land in such a manner that it cannot enter a waterway or cause water quality degradation.
- E. Maintain:
 - 1. Maintain and modify the erosion control system throughout construction to meet the specified requirements and as indicated in the Water and Erosion Control Plan.
 - 2. If erosion is occurring, the Contractor will make modifications to the erosion control system to mitigate the problems.
 - 3. Clean, repair and restore adjoining properties and roads affected by erosion and sedimentation from the project site during the course of the project.
 - 4. General maintenance activities:
 - a. Inspect daily and immediately after each rainfall.
 - b. Repair or replace damaged or missing items immediately.
 - c. Maintain seeded surfaces throughout construction.

5. Excavate sediment out of basins, catch basins, straw bale dams, and traps when capacity has been reduced by 50 percent or when more than 1 ft of sediment has accumulated, whichever occurs first:
 - a. Remove sediment from behind sediment fence to prevent overtopping.
 - b. Prevent sediment from being flushed to the downstream system during cleaning.
- F. Removal of Erosion Control Measures:

When temporary erosion and sedimentation control devices are no longer needed, the Contractor shall remove them and restore the areas they occupied, and stabilize areas disturbed during removal. The Contractor shall remove and dispose of all accumulated sediment. Lawn and landscaping shall be restored where appropriate.

3.07 OIL SPILL PREVENTION AND CONTROL

- A. The Contractor shall implement prevention and containment measures identified in the SPCC plan prior to performing any of the following:
 1. Placing materials or equipment in staging or storage areas.
 2. Equipment refueling.
 3. Equipment washing.
 4. Stockpiling contaminated materials.
- B. Inspect fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums, and other equipment and facilities regularly for drips, leaks, or signs of damage, and maintain and store properly to prevent spills. Maintain proper security to discourage vandalism.
- C. Dike or locate all land-based oil and petroleum products storage tanks so as to prevent spills from escaping into the water. Line dikes and subsoils with impervious material to prevent oil from seeping through the ground and dikes.
- D. In the event of a hazardous spill within the project limits, the Contractor shall prepare and shall carry out a SPCC plan in accordance with these specifications.
- E. In the event of any oil or product discharges into public waters, or onto land with a potential for entry into public waters, immediately notify the appropriate agencies at their listed 24-hour response numbers.
- F. As a minimum, maintain at each work site, and restock as necessary to ensure an adequate and continuous supply, the following materials:
 1. Oil-absorbent pads or bulk material, adequate for coverage of 200 square feet of surface area.

2. Straw bales.
3. Oil dryall, gloves and plastic bags.
4. Oil absorbent material, such as kitty litter or sawdust, for material spills on land.

3.08 WATER CONTROL

Water quality and control shall comply with all applicable environmental approvals, permits, rules and regulations.

3.09 INSTALLATION, TEMPORARY FACILITIES

- A. Locate facilities as directed by the District Representative. Relocate and modify facilities as required by progress of the Work.
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

END OF SECTION

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SECTION 01 60 00 – PRODUCT REQUIREMENTS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Products.
- B. Product delivery requirements.
- C. Product storage and handling requirements.
- D. Product options.
- E. Product substitution procedures.

1.02 PRODUCTS

- A. Furnish products of qualified manufacturers suitable for intended use. Furnish products of each type by single manufacturer unless specified otherwise.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by Contract Documents.

1.03 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Upon delivery inspect shipments to ensure products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.04 PRODUCT STORAGE AND HANDLING REQUIREMENTS

- A. Store and protect products in accordance with manufacturers' instructions.
- B. Store with seals and labels intact and legible.
- C. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- D. Provide off-site storage and protection when site does not permit on-site storage or protection.
- E. Store loose granular materials on solid flat surfaces in well-drained area. Prevent mixing with foreign matter.
- F. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

1.05 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers with Provision for Substitutions: Submit request for substitution for any manufacturer not named in accordance with Paragraph 1.6.

1.06 PRODUCT SUBSTITUTION PROCEDURES

- A. The District will consider requests for Substitutions only within 15 days after date established in Notice to Proceed.
- B. Substitutions may be considered when a product becomes unavailable through no fault of Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A substitution request constitutes a representation that Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds quality level of specified product.
 - 2. Will provide same warranty for Substitution as for specified product.
 - 3. Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to the District.
 - 4. Waives claims for additional costs or time extension which may subsequently become apparent.
 - 5. Will reimburse the District for review or redesign services associated with re-approval by authorities having jurisdiction.
- E. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals, without separate written request, or when acceptance will require revision to Contract Documents.
- F. Substitution Submittal Procedure: Submit three copies of request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 1. Submit Shop Drawings, Product Data, and certified test results attesting to proposed product equivalence. Burden of proof is on proposer.
 - 2. The District will notify Contractor in writing of decision to accept or reject request.

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

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SECTION 01 70 00 – EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Protecting installed construction.
- D. Project record documents.

1.02 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Architect/Engineer's review.
- B. Provide submittals to the District required by authorities having jurisdiction.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

1.03 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Clean site, sweep paved areas, rake clean landscaped surfaces.
- C. Remove waste and surplus materials, rubbish, and construction facilities from site.

1.04 PROTECTING INSTALLED CONSTRUCTION

- A. Protect installed Work and provide special protection where specified in individual specification sections.
- B. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- C. Prohibit traffic from landscaped areas.

1.05 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
 - 1. Drawings.
 - 2. Specifications.

3. Addenda.
 4. Change Orders and other modifications to the Contract.
 5. Reviewed Shop Drawings, Product Data, and Samples.
- B. Ensure entries are complete and accurate, enabling future reference by the District.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
1. Manufacturer's name and product model and number.
 2. Product substitutions or alternates utilized.
 3. Changes made by Addenda and modifications.
- F. Record Drawings: Legibly mark each item to record actual construction including:
1. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 2. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
 3. Field changes of dimension and detail.
 4. Details not on original Contract drawings.
- G. Submit documents to the District with claim for final Application for Payment.

PART 2 – PRODUCTS

(Not used)

PART 3 – EXECUTION

(Not used)

END OF SECTION

SECTION 02 41 00 – DEMOLITION

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Demolition of designated structures and other obstructions.
- B. Salvage and disposal of demolition materials.

1.02 RELATED WORK SPECIFIED ELSEWHERE

The provisions and intent of the Contract, including the General Conditions, apply to this work as if specified in this section.

1.03 DESCRIPTION OF WORK

The extent and location of the Demolition work is indicated on the Drawings.

The Demolition work is included on the Drawings for guidance only to indicate typical general construction features of the various types of structures and is not to be construed as definitive or adequate to supplant the actual on-site inspection by the Contractor.

1.04 JOB CONDITIONS

The Contractor represents that it has visited the site to become familiar with the quantity and character of all materials to be demolished. The Contractor agrees that the premises were made available prior to deadline for submission of bids for whatever inspection and tests the Contractor deemed appropriate. The Contractor assumes full responsibility for the proper disposal of all demolition materials.

1.05 SUBMITTALS

- A. Contractor shall submit a demolition plan for approval that includes procedures for removal and disposition of materials, clearing and grading (if applicable), coordination with other work in progress, a disconnection schedule of utility services (if applicable), a detailed description of methods and equipment to be used for each operation, the sequence of operations, and cleanup procedures. Contractor shall not begin demolition work until written approval is received.
- B. Two weeks prior to transport, the Contractor shall submit to the District or District Representative the name of recycling or disposal facilities and documentation that the facility is permitted to receive such materials.

PART 2 – PRODUCTS

2.01 GENERAL

Products that are required to accomplish, or to be incorporated into, the work of this section shall be as selected by the Contractor and described under the methods and equipment section of the demolition plan, subject to the approval of the District or District Representative.

2.02 SALVAGE ITEMS

No items are to be salvaged by the District unless indicated otherwise on the Drawings. All products of demolition become the property of the Contractor.

2.03 WORK BY UTILITY

The Contractor shall contact all utilities within limits of this project and have them mark their utilities prior to the start of construction (if applicable). It shall be the Contractor's responsibility to protect the utilities from damage during the construction of this project.

PART 3 – EXECUTION

3.01 DEMOLITION OF STRUCTURES

- A. The Contractor shall completely remove and dispose of designated structures, existing concrete lining, and other obstructions. Adjacent materials designated to remain that are damaged by the Contractor due to his operations shall be replaced at no additional cost to the District.
- B. Blasting or other special operations necessary for the removal of an existing structure or obstruction shall be subject to the approval of the District or District Representative.

3.02 DISPOSAL

- A. All materials shall upon their demolition or severance become the property of the Contractor. Such material shall be removed and promptly recycled or disposed of in accordance with all applicable laws and regulations at an industrial or commercially zoned facility permitted to receive such material. The District encourages the salvage and recycling of materials from demolished structures. The Contractor shall salvage or recycle, in an acceptable manner to environmental agencies and the District, at its option all of the materials designated for disposal.
- B. No material shall be placed on property owned by the District except as otherwise provided herein. No material shall be disposed of in adjoining waterways.
- C. Upon request, the Contractor shall submit to the District or District Representative receiving tickets or other documentation demonstrating appropriate disposal of material.

END OF SECTION

SECTION 03 30 00 – CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Placement, curing and finishing of Cast-in-Place Concrete.

1.02 RELATED WORK SPECIFIED ELSEWHERE

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01 33 00 – Submittal Procedures
- B. Section 01 45 00 – Quality Control
- C. Section 01 50 00 – Temporary Facilities and Controls
- D. Section 01 60 00 – Product Requirements

1.03 REFERENCES

- A. General: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
- B. American Concrete Institute (ACI)
 - 1. ACI 211.1 Standard Practice for Selecting Proportions for Normal, Heavyweight, and Mass Concrete
 - 2. ACI 214R..... Evaluation of Strength Test Results of Concrete
 - 3. ACI 301 Specifications for Structural Concrete
 - 4. ACI 302.1R..... Guide for Concrete Floor and Slab Construction
 - 5. ACI 304R..... Guide for Measuring, Mixing, Transporting and Placing Concrete
 - 6. ACI 304.2R..... Placing Concrete by Pumping Methods
 - 7. ACI 305R..... Guide to Hot Weather Concreting
 - 8. ACI 306R..... Guide to Cold Weather Concreting
 - 9. ACI 318/318R..... Building Code Requirements for Structural Concrete and Commentary
 - 10. ACI 347R..... Guide to Formwork for Concrete

11. ACI 350 Code Requirements for Environmental Engineering
Concrete Structures and Commentary
- C. ASTM International (ASTM)
 1. ASTM C31..... Standard Practice for Making and Curing Concrete
Test Specimens in the Field
 2. ASTM C33..... Specification for Concrete Aggregates
 3. ASTM C39..... Test Method for Compressive Strength of
Cylindrical Concrete Specimens
 4. ASTM C94..... Specification for Ready Mixed Concrete
 5. ASTM C143..... Test Method for Slump of Hydraulic Cement
Concrete
 6. ASTM C150..... Standard Specification for Portland Cement
 7. ASTM C171..... Specification for Sheet Materials for Curing
Concrete
 8. ASTM C172..... Standard Practice for Sampling Freshly Mixed
Concrete
 9. ASTM C173..... Test Method for Air Content of Freshly Mixed
Concrete by the Volumetric Method
 10. ASTM C231..... Test Method for Air Content of Freshly Mixed
Concrete by the Pressure Method
 11. ASTM C260..... Specification for Air-Entraining Admixtures for
Concrete
 12. ASTM C295..... Standard Guide for Petrographic Examination of
Aggregates for Concrete
 13. ASTM C309..... Specification for Liquid Membrane-Forming
Compounds for Curing
 14. ASTM C457..... Test Method for Microscopical Determination of
Parameters of the Air-Void System in Hardened
Concrete
 15. ASTM C494..... Specification for Chemical Admixtures for Concrete
 16. ASTM C618..... Specification for Coal Fly Ash and Raw or Calcined
Natural Pozzolan for Use in Concrete
 17. ASTM C881..... Specification for Epoxy-Resin-Base Bonding
Systems for Concrete

18. ASTM C1017.....Specification for Chemical Admixtures for Use in Producing Flowing Concrete
19. ASTM C1260.....Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
20. ASTM D1751.....Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
21. ASTM E329.....Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection

D. American Welding Society (AWS)

1. AWS D1.4Structural Welding Code - Reinforcing Steel

1.04 DEFINITIONS

- A. "Cementitious material" as used herein shall include all Portland cement, pozzolan, ground granulated blast furnace slag, and fly ash.
- B. "Defective Concrete": Concrete not conforming to required lines, details, dimensions, tolerances or specified requirements.
- C. "Design strength" (f'_c) is the specified compressive strength of concrete to meet structural design criteria.

1.05 SUBMITTALS

- A. General: Submit the following in accordance with Section 01 33 00 –Submittal Procedures.
- B. Concrete Mix Designs
 1. Thirty days minimum prior to concrete placement, submit mix designs for each strength and type of concrete to be used on the project. Submit a complete list of materials including type; brand; source and amount of cement, fly ash, pozzolans, and admixtures; and applicable reference specifications. Submit additional data regarding concrete aggregates if the source of aggregate changes. Submittal shall clearly indicate where each mixture will be used when more than one mix design is submitted.
 2. A copy of the manufacturer's written data and mixing procedure shall be furnished to the District Representative prior to use of any admixture. Any deviations from the manufacturer's written procedures shall be submitted to the District Representative for approval. Admixtures shall not be added to the concrete with the modified procedures until the District Representative has approved them in writing.

C. Cold Weather Placing Procedures

Submit proposed materials and methods to be used when concrete placement occurs at temperatures below 50 degrees Fahrenheit. Include proposed curing and temperature control methods.

D. Test Reports

1. Concrete Mix Design: Submit copies of test reports with concrete mix design showing that the mix has been successfully tested to produce concrete with the properties specified, that mitigation measures for alkali silica reactivity, if needed, are effective, and that mix will be suitable for the job conditions. Test reports shall be submitted along with the concrete mix design. Obtain approval before concrete placement.
2. Aggregates: Submit with mix design and prior to start of concrete placement: ASTM C1260 for potential alkali-silica reactions, ASTM C295 for petrographic analysis. ASTM C33 for aggregate quality.
3. Admixtures: When the Contractor is proposing to use admixtures from different admixture manufacturers they shall provide evidence to the District Representative that the admixture will be compatible and not adversely affect the air void system of the hardened concrete. Submit test results complying with ASTM C457 as evidence to satisfy this requirement.

E. Finishing, Curing and Concrete Protection Procedures: Submit finishing and curing procedures to be used on the project. Include descriptions of methods to be used to protect the surface finish before the final curing methods can be used.

1.06 MODIFICATION OF REFERENCES

Accomplish work in accordance with ACI publications except as modified herein. Consider the advisory or recommended provisions to be mandatory, as though the word "shall" had been substituted for the words "should" or "could" or "may," wherever they appear. Interpret references to the "Building Official," the "Structural Engineer," and the "Architect/Engineer" to mean the District Representative.

1.07 CONSTRUCTION TOLERANCES

- A. Except as specified otherwise, a plus tolerance increases and a minus tolerance decreases the dimension to which it applies. A tolerance without sign means plus or minus. Where only one sign is specified, there is no limit in the other direction.
- B. Slip Formed Concrete Surfaces:
- Variation from the level, or from the grades indicated on the drawings, in the lines and surfaces of the slip formed canal liner slabs shall not exceed 1/8 inch in any 10 foot length (less than 0.001 foot-per-foot slope variance) with cumulative maximum of 1 inch (0.083 feet) variance at ties to existing structures.

C. Formed Concrete Surfaces:

Tolerances are not cumulative. The most restrictive tolerance will control. Tolerances shall not extend the structure beyond legal boundaries.

1. Level and grade tolerance measurements of formed slabs shall be made as soon as possible after finishing. When forms or shoring are used, the measurements shall be made prior to removal.
2. Construction tolerances shall meet the requirements of ACI 117. All concrete other than for canal liner slabs is classified as cast in place concrete for buildings.
3. Permanently Exposed Surfaces: Class A form offset
4. Permanently Hidden Surfaces: Class C form offset.

1.08 QUALITY ASSURANCE

- A. Testing: to demonstrate conformance with the specified requirements for cast-in-place concrete, provide testing which complies with the requirements of ASTM E329. See Section 01 45 00.
- B. Basis for Quality: Comply with ACI 301, except as modified herein.
- C. Qualifications of Workmen:
 1. Provide at least one person who shall be present at all times during execution of this portion of the work and who shall be thoroughly trained and experienced in placing the types of concrete specified and the concrete placing and finishing methods used and who shall direct all work performed under this section.
 2. Thoroughly trained and experienced journeyman concrete finishers shall be responsible for finishing of exposed surfaces.
- D. Concrete Placement: Do not commence placement of concrete until mix designs have been reviewed and approved by the District Representative and until copies of the approved mix designs are at the job site and the batch plant.
- E. Certificates: Provide proposed materials and method for curing concrete elements.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver concrete until necessary slips, forms, reinforcement, embedded items, construction joints are prepared, in place, and ready for concrete placement.
- B. Protect materials from contaminants such as grease, oil, and dirt. Ensure materials can be accurately identified after bundles are broken and tags removed.

- C. Transport concrete to the placing site in truck mixers, or by approved pumping equipment. Truck mixers operating at agitating speed or truck agitators used for transporting plant-mixed concrete shall conform to the requirements of ASTM C94. Permitted use of nonagitating equipment only for transporting plan-mixed concrete over a smooth road and when the hauling time is less than 15 minutes.
- D. Water shall not be added at the placing site unless specifically approved; and in no case shall it exceed the specified water-cement ratio. Any such water shall be injected at the base of the mixer, not at the discharge end.

PART 2 – PRODUCTS

2.01 CONCRETE

- A. Contractor-Furnished Mix Design
 - 1. Mix designs shall conform to requirements of ACI 301, except as otherwise specified.
 - 2. All concrete mixes shall comply with the current Washington State Department of Transportation Standard Specifications for Class 4000 concrete unless noted otherwise.
 - 3. Calcium chloride (CaCl_2) or other water-soluble chloride ion admixtures shall not be used.
 - 4. Normal Concrete Design. Use for all cast-in-place concrete locations unless specifically specified otherwise.

Minimum 28-day compressive strength, f'_c (psi)	4,000
Maximum Water-Cement Ratio (by weight)	0.45
Range of Slump (inches)	3-7 inches
Minimum Cementitious Material Content	Per ACI 350 table 4.1.2.1
Air Entrainment per ACI 350 table 4.2.1	Severe Exposure
Water Reducing Admixture	As required to achieve desired slump.
Aggregate (nominal maximum)	3/4 inch
Fiber Reinforcement (unless otherwise noted, can omit when steel reinforcement called out)	Synthetic Macrofiber

- B. Required Average Strength of Mix Design: The selected mixture shall produce an average compressive strength exceeding the specified strength by the amount determined using ACI 301 based on the number of field test records.

2.02 CONCRETE MIXTURE PROPORTIONING

- A. Quality of Mixture: For each portion of the structure, mixture proportions shall be selected so that the specified mix requirements are met.
- B. Air Content: Air content as delivered and as determined by ASTM C231 shall meet the specified requirement for the mix being placed.
- C. Slump: The slump shall be determined in accordance with ASTM C143/C143M and shall meet the specified requirement for the mix type being placed.

2.03 MATERIALS

- A. Cement: ASTM C150, Type I, II, or III and shall be the product of one manufacturer. Type I cement shall be used for all concrete unless the use of Type II or III cement is specifically approved by the District.
- B. Water: Water for mixing and curing shall be fresh, clean, and potable.
- C. Aggregates:
 - 1. Aggregates shall conform to ASTM C33, except as modified herein. Furnish aggregates from one source. Aggregates shall not contain any substance that may be deleteriously reactive with the alkalis in the cement unless effective mitigating measures are taken to control reactivity.
 - 2. Aggregates shall show expansions less than 0.10 percent at sixteen (16) days when tested in accordance with ASTM C1260 using a cement with an alkali content above 0.8 percent (expressed as sodium oxide), and shall not possess properties or constituents that are known to have specific unfavorable effects in concrete when tested in accordance with ASTM C295.
 - 3. If mitigating measures are used to control reactivity, submit satisfactory test results from ASTM C1260 as modified below. Satisfactory results shall have a measured expansion of no more than 0.08 percent at 16 days. Should the test data indicate an expansion of more than 0.08 percent, the aggregate(s) will be rejected and a new aggregate source submitted for retesting.
 - a. ASTM C1260 shall be modified as follows:
 - (1.) The laboratory shall use the Contractor's proposed combination of low alkali Portland cement and Class F fly ash for test proportioning. The laboratory shall use the Contractor's proposed percentage of cement and fly ash.

D. Fiber Reinforcement:

1. For canal slabs where reinforcing bars are not called out in the drawings, synthetic macrofiber shall be incorporated into the concrete mix to control cracking due to temperature/shrinkage. Acceptable fiber types and dosages (pounds of fiber per cubic yard of concrete) are listed in the schedule below. Any proposed alternative must be approved by the district. Synthetic microfibers are not an acceptable alternative.

PREAPPROVED MACROFIBER REINFORCEMENT			
<u>Name / Model</u>	<u>Length</u>	<u>Dosage</u>	<u>Manufacturer</u>
Forta-Ferro	2.25"	3 lbs./cy	FORTA
Materfiber Mac Matrix	2.1"	3 lbs/cy	BASF

Note that the addition of fibers is anticipated to reduce the concrete mix slump by approximately 3 to 4 inches. Adjustments to compensate for loss of slump due to the addition of fibers shall be accomplished by the addition of high range water reducer rather than the addition of water unless approved by the District Representative.

2. The typical canal concrete side slabs shall be reinforced with synthetic macrofiber as an equivalent replacement for welded wire mesh size 6x6-w3.5xw3.5.
3. The typical canal concrete bottom slabs shall be reinforced with synthetic macrofiber as an equivalent replacement for welded wire mesh size 6x6-w5xw3.5.
4. The canal concrete side slabs designated in the drawings for vehicle access (ramp) shall be reinforced with synthetic macrofiber as an equivalent replacement for welded wire mesh size 6x6-w5xw3.5

E. Admixtures: Admixtures, if used, shall conform to the following requirements.

1. Non-Chloride Accelerators – The use of calcium chloride is not permitted. Only non-chloride admixtures are permitted for accelerating concrete hardening in cold weather.
2. Air Entraining – Air entraining admixtures shall conform to ASTM C260.
3. Accelerating – Accelerating admixtures shall conform to ASTM C494, Type C.
4. Retarding – Retarding admixtures shall conform to ASTM C494, Types B, D, or G.

5. Water Reducing – Water reducing admixtures shall conform to ASTM C494, Types A, E, or F.
 6. High Range Water Reducer (Superplasticizer) – High range water reducing admixtures shall conform to ASTM C494, Type F and ASTM C1017.
- F. Materials for Curing Concrete
1. Impervious Sheeting – ASTM C171; waterproof paper, clear or white polyethylene sheeting, or polyethylene-coated burlap.
 2. Liquid Membrane-Forming Compound – ASTM C309, white-pigmented, Type 2, Class B

PART 3 – EXECUTION

3.01 BATCHING, MEASURING, MIXING, AND TRANSPORTING CONCRETE

A. General

Conform to the requirements of ASTM C94, ACI 301, ACI 302.1R, and ACI 304.2R, except as modified herein. Batching equipment shall be such that the concrete ingredients are consistently measured within the following tolerances: one (1) percent for cementitious materials and water, two (2) percent for aggregate, and three (3) percent for admixtures. Furnish mandatory batch ticket information for each load of concrete.

B. Mixing

1. Conform to the requirements of ASTM C94 and ACI 301. Machine mix concrete. Begin mixing within 30 minutes after the cement has been added to the aggregates. Place concrete within 90 minutes of either addition of mixing water to cement and aggregates or addition of cement to aggregates if the air temperature is less than 85 degrees Fahrenheit.
2. Reduce mixing time and place concrete within 60 minutes if the air temperature is greater than 85 degrees Fahrenheit except as follows: If set retarding admixture is used and slump requirements can be met, limit for placing concrete may remain at 90 minutes.

C. Transporting and Conveying for Placement

1. Clean transporting equipment thoroughly before each batch.
2. Transport concrete from the mixer to the forms as rapidly as practicable. Discharge mixed concrete within 1.5 hours (90 minutes) or before the mixer drum has revolved 300 revolutions, whichever comes first. The time to discharge shall be measured from the introduction of the mixing water to the cement and aggregates.
3. Prevent segregation or loss of ingredients.

4. Do not use aluminum pipe or chutes.
5. Remove concrete, which has segregated in transporting and dispose of as directed.

3.02 MISCELLANEOUS MATERIALS

- A. Embedded Items: Care shall be taken to determine that all embedded items are in place and secured to avoid displacement and as indicated on the contract drawings. Voids in sleeves, inserts, and anchors slots shall be filled temporarily with readily removable materials to prevent the entry of concrete into the voids. Welding, including tack welding, will not be permitted on embedded metals within 2 feet of the surface of concrete.
- B. Embedded Metals: Miscellaneous metal to be embedded in concrete shall be placed accurately and held in correct position while the concrete is placed. The surfaces of metalwork in contact with or embedded in concrete shall be thoroughly cleaned of all rust, dirt, grease, loose scale, grout, mortar, and other foreign matter. All metalwork shall have proper fit and shall be job measured where necessary.

3.03 PLACING CONCRETE

- A. General
Place concrete as soon as practicable after the forms, embedments, attachments, and reinforcement have been inspected and approved. Do not place concrete when weather conditions prevent proper placement and consolidation, in uncovered areas during periods of precipitation, in standing water, or before foundation subgrades are accepted. Prior to placing concrete, remove dirt, construction debris, water, snow, and ice from within the forms or path of the slip former.. Deposit concrete as close as practicable to the final position. Do not exceed a free vertical drop of three (3) feet from the point of discharge. Provide adequate procedures to assure that the concrete completely fills the formed, slip formed, or excavated areas.
- B. Dimensional Control
Provide the minimum slab thicknesses shown in the drawings for the typical canal concrete bottom and side slabs. The minimum slab thickness is measured at the base high point. The base of these slabs rests on a canal liner placed on grade. This base shall be prepared to a tolerance of zero distance high to 1 inch low from the theoretical straight line at the bottom of the slab as measured over any single panel (distance between isolation joints).
- C. Pumping
 1. Conform to the requirements of ACI 304R and ACI 304.2R. Pumping shall not result in separation or loss of materials nor cause interruptions sufficient to permit loss of plasticity between successive increments. Loss of slump in pumping equipment shall not exceed two (2) inches. Concrete shall not be conveyed through pipe made of aluminum or

aluminum alloy. Minimum size of pipe diameter shall be five (5) inches. Rapid changes in pipe sizes shall be avoided. Maximum size of coarse aggregate shall be limited to 33 percent of the diameter of the pipe. Maximum size of well-rounded aggregate shall be limited to 40 percent of the pipe diameter. Samples for testing shall be taken at the discharge end.

2. Forms for walls and other structures shall be designed to resist the applied pumping pressures.

D. Vibration

1. Conform to the requirements of ACI 301. Furnish a spare vibrator on the job site whenever concrete is placed. Consolidate concrete slabs greater than four (4) inches in depth with high frequency, internal, mechanical vibrating equipment supplemented by hand spading and tamping. Consolidate concrete slabs four (4) inches or less in depth by wood tampers, spading, and settling with a heavy leveling straightedge. Operate vibrators with vibratory element submerged in the concrete, with a minimum frequency of not less than 6000 impulses per minute when submerged. Do not use vibrators to transport the concrete in the forms.
2. Penetrate the previously placed lift with the vibrator when more than one lift is required. Place concrete in 20-inch maximum vertical lifts.

E. Cold Weather

1. Conform to the requirements of ACI 306R.
2. Do not allow concrete temperature to decrease below 50 degrees Fahrenheit. Obtain approval prior to placing concrete when the ambient temperature is below 40 degrees Fahrenheit or when concrete is likely to be subjected to freezing temperatures within 24 hours. Have insulating materials and heaters on hand for immediate protection of fresh concrete.
3. Insulate concrete and provide sufficient heat to maintain 50 degrees Fahrenheit minimum adjacent to both the formwork and the structure while curing. Include maximum/minimum recording thermometers against concrete to verify that concrete surface is kept above 45 degrees Fahrenheit. Limit the rate of cooling to five (5) degrees Fahrenheit in any one (1) hour and 30 degrees Fahrenheit per 24 hours after curing period is complete.
4. Use no frozen materials or materials containing ice in concrete.
5. Do not use salt or other chemicals to prevent freezing

3.04 SURFACE FINISHES

Finish concrete surfaces in accordance with the procedure specified for each type of surface.

- A. Repair of Surface Defects: As specified in ACI 301. Repair methods and materials shall be submitted to the District for review prior to initiating repairs. Defects include repairs to meet specified tolerances.
- B. Permanently Hidden Unformed Surfaces: Float finish per ACI 301 or as required to install finish floor materials to the manufacturer's requirements.
- C. Permanently Exposed Unformed Surfaces:
 - 1. Canal concrete bottom slabs shall have a medium Broom Finish (nominally 1/32 to 3/64 inch deep striations) conforming to ACI 301.
 - 2. Canal concrete side slabs designated in the drawings for vehicle access (ramp) shall have one of the following finishes:
 - a. Ramp surface shall have a coarse or heavy Broom Finish (nominally 3/64 to 1/8 inch deep striations) running perpendicular to ramp traffic.
 - b. Ramp surface shall be textured with raised diamond pattern texture. Texturing shall be done through the use of an standard expanded metal grate stamped into the concrete.
- D. Permanently Hidden Formed Surfaces: Rough form finish per ACI 301.
- E. Permanently Exposed Formed Surfaces: The surface shall be ground smooth to remove all fins and protrusions, all rock pockets, and tie holes, and shall be repaired by dry-packing. The surface plane dimension shall be within a tolerance of plus or minus 1/4 inch of design dimensions, and the surface shall be free of irregularities greater than 3/16 inch in ten feet in any direction.

3.05 CONCRETE JOINTING

- A. The typical canal bottom concrete slabs shall have longitudinal control joints along the canal centerline. The control joints may be construction joints or formed by saw cutting.
- B. The typical canal bottom concrete slabs and the concrete side slabs shall have transverse control joints spaced longitudinally along the canal centerline at a nominal spacing of 8'-0
- C. The typical junction of the bottom concrete side slabs with the concrete side slabs shall have longitudinal control joints. The control joints may be construction joints or formed by saw cutting.
- D. Control joints in canal concrete slabs shall be formed by as described below.
 - 1. Control joints formed as construction joints shall result where the initial slip forming (first pour) is allowed to adequate prior to the adjacent slip forming (second pour) being placed. The first pours shall have sides finished with smooth slab edges (ends) perpendicular to the top exposed

slab face by the slip form or trowel finishing. This smooth slab edge finish shall extend a minimum depth of 1 1/2 inch down from the top of slab. The second pours have natural side forms from the first pours.

2. Control joints placed using the saw-cutting method require a minimum depth of saw cut of 1 1/2 inch. Saw cutting shall be performed immediately after the concrete has adequately hardened to prevent spalling during cutting and before significant drying shrinkage begins. The delay between completion of concrete finishing and saw cutting shall not be less than 4 hours for hot weather and shall not be more than 12 hours for cold weather unless approved by the District Representative.

3.06 CURING AND PROTECTION

A. General

Conform to the requirements of ACI 301 unless otherwise specified. Begin curing immediately following form removal or concrete finishing using any of the methods specified below. Protect concrete from injurious action by sun, rain, flowing water, frost, mechanical injury, tire marks, and oil stains. Do not allow concrete to dry out from time of placement until the expiration of the specified curing period. Do not use membrane-forming compound on any surface to be painted, where coverings are to be bonded to the concrete, or on concrete to which other concrete is to be bonded.

- #### B. Cold-Weather Curing and Protection: Follow approved cold weather concrete placing and protection plan.

- #### C. Moist Curing: Use fogging or mats kept continuously dripping wet without interruption for the entire curing period. Sprinklers are allowed 12 hours after finishing is complete. Check concrete covered with mats at least daily to verify the concrete surface is kept continuously damp.

D. Impervious Sheeting

1. Wet the entire exposed surface of the concrete thoroughly with a fine spray of water and cover with impervious sheeting throughout the curing period.
2. Lay sheeting directly on the concrete surface and overlap edges 12 inches minimum. Provide sheeting not less than 18 inches wider than the concrete surface to be cured. Secure edges and transverse laps to form closed joints. Repair torn or damaged sheeting or provide new sheeting. Cover or wrap columns, walls, and other vertical structural elements from the top down with impervious sheeting; overlap and continuously tape sheeting joints.
3. Check concrete surfaces every other day and introduce additional water when needed to keep concrete surfaces damp.

E. Liquid Membrane-Forming Curing Compound

Seal or cover joint openings prior to application of curing compound. Prevent curing compound from entering the joint. Apply in accordance with the recommendations of the manufacturer immediately after any water sheen, which may develop after finishing has disappeared from the concrete surface. Provide and maintain compound on the concrete surface throughout the curing period. Do not use this method of curing where the use of Figure 2.1.5 in ACI 305R indicates that hot weather conditions will cause an evaporation rate exceeding 0.2 pound of water per square foot per hour.

1. Application of Liquid Membrane-Forming Curing Compound

- a. Unless the manufacturer recommends otherwise, apply compound immediately after the surface loses its water sheen and has a dull appearance, and before joints are sawed. Mechanically agitate curing compound thoroughly during use. Use approved power-spraying equipment to uniformly apply two coats of compound in a continuous operation. The total coverage for the two coats shall be 200 square feet maximum per gallon of undiluted compound unless otherwise recommended by the manufacturer's written instructions.
- b. The compound shall form a uniform, continuous, coherent film that will not check, crack, or peel. Immediately apply an additional coat of compound to areas where the film is defective. Respray concrete surfaces subjected to rainfall within three (3) hours after the curing compound application.

2. Protection of treated surfaces: Prohibit pedestrian traffic and other sources of abrasion for at least 72 hours after compound application. Maintain continuity of the coating for the entire curing period and immediately repair any damage.

F. Curing Periods: As per ACI 301. Seven day minimum cure. Begin curing immediately after placement. Protect concrete from premature drying, excessively hot temperatures, and mechanical injury; and maintain minimal moisture loss at a relatively constant temperature for the period necessary for hydration of the cement and hardening of the concrete. The materials and methods of curing shall be subject to approval by the District Representative

3.08 FIELD QUALITY CONTROL

- A. Sampling: Conform to the requirements of ASTM C172. Collect samples of fresh concrete to perform tests specified. Conform to the requirements of ASTM C31 for making test specimens. See also Section 01 45 00.
- B. Testing: Conduct testing in accordance with Section 01 45 00.
- C. Repair and replacement: The locations of repairs or replacement of defective concrete shall be determined by the District Representative. Replacement or repair procedures shall be subject to the approval of the District Representative.

END OF SECTION

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SECTION 31 05 19 – GEOSYNTHETICS FOR EARTHWORK

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Impermeable membrane.
- B. Stabilizing fabric.
- C. Filter Fabric.

1.02 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

A. ASTM INTERNATIONAL (ASTM)

- 1. ASTM D4354..... Sampling of Geosynthetics for Testing
- 2. ASTM D4355/D4355M Deterioration of Geotextiles from Exposure to Light, Moisture and Heat in a Xenon-Arc Type Apparatus
- 3. ASTM D4491/D4491M Standard Test Methods for Water Permeability of Geotextiles by Permittivity
- 4. ASTM D4533/D4533M Standard Test Method for Trapezoid Tearing Strength of Geotextiles
- 5. ASTM D4632/D4632M Grab Breaking Load and Elongation of Geotextiles
- 6. ASTM D4751..... Standard Test Method for Determining Apparent Opening Size of a Geotextile
- 7. ASTM D4759..... Standard Practice for Determining the Specification Conformance of Geosynthetics
- 8. ASTM D4833/D4833M Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products
- 9. ASTM D4873/D4873M Standard Guide for Identification, Storage, and Handling of Geosynthetic Rolls and Samples
- 10. ASTM D5199..... Standard Test Method for Measuring the Nominal Thickness of Geosynthetics

11. ASTM D5261..... Standard Test Method for Measuring Mass per Unit Area of Geotextiles
12. ASTM D6241..... Standard Test Method for the Static Puncture Strength of Geotextiles and Geotextile-Related Products Using a 50-mm Probe

1.03 SUBMITTALS

- A. Submit the following in accordance with Section 01 33 00 - Submittals.
- B. Manufacturer's data for the following:
 1. Impermeable Membrane: Submit for approval manufacturer's literature, specifications, and installation instructions for the geomembrane composite.
 2. Stabilizing Fabric: Submit for approval manufacturer's literature, specifications, and installation instructions for the stabilizing geotextile fabric.
 3. Filter Fabric: Submit for approval manufacturer's literature, specifications, and installation instructions for the filtering geotextile fabric.
- C. Contractor's installation plans addressing the following:
 1. Typical laying methodology showing typical overlap or seaming.
 2. Typical details of edge anchoring trench or staking methodology.
 3. Typical cleaning, protecting, and repairing methodology for custom cut or damaged geosynthetics.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Ship, handle, store, and care for geosynthetics in accordance with manufacturer's instructions.
- B. Wrap geosynthetics in opaque plastic to prevent damage during transit and handling.
- C. Use 2 to 3 slings for lifting and positioning the rolls of geosynthetics.
- D. Mark each roll of geosynthetics with name of material, approved roll good numbers, specifications number, quantity contained, name of Contractor, and order or purchase number.
- E. Do not stack rolls more than 3 rolls high.
- F. Store geosynthetics onsite in accordance with manufacturer's instructions.

- G. Protect geosynthetics rolls from puncture, dirt, grease, water, moisture, mud, mechanical abrasions, excessive heat or cold, direct sunlight, or other damage.

PART 2 – PRODUCTS

2.01 IMPERMEABLE MEMBRANE

- A. The impermeable membrane shall a three-layer geomembrane composite consisting of two layers (top and bottom) of minimum polyester or polypropylene nonwoven geotextile factory-bonded to either a non-reinforced or reinforced PVC geomembrane meeting the following performance characteristics:
1. Formulated for use as a reservoir and canal liner.
 2. Integrated stabilizers and biocides for durability.
 3. Uniform throughout and free from dirt, oil, foreign matter, scratches, cracks, creases, bubbles, tears, holes, pinholes, or other defects which may affect its serviceability.
 4. Unless otherwise indicated, required values in the table below are nominal values when tested in weaker principle direction.

Property	Test Method	Value for non-reinforced Impermeable Membrane	Value for reinforced geomembrane composite
Mass per Unit Area, nominal	ASTM D5261	44 oz/yd ²	40 oz/yd ²
Membrane Thickness, minimum	ASTM D5199	30 mils	24 mils
Grab Tensile, machine direction	ASTM D4632	400 lbs	450 lbs
Grab elongation, minimum	ASTM D4632	50 percent	15 percent
Trapezoid Tear, minimum	ASTM D4533	180 lbs	200 lbs
Puncture Strength, minimum (5/16 inch diameter)	ASTM D4833	250 lbs	250 lbs
Permeability at 15 psi, maximum	ASTM D4491	4.5x10 ⁻¹¹ cm/s	4.5x10 ⁻¹¹ cm/s
UV Resistance, minimum strength retained at 500 hours	ASTM D4355 ASTM D4632	90 percent	90 percent

- B. Preapproved impermeable membrane products:

1. Canal³ 123012 geomembrane composite (nonreinforced) manufactured by Huesker (P.O. Box 411529, Charlotte, NC 28241-1529; (800) 942-9418; www.huesker.com)
2. Versa Shield 8/24/8 24mil Western Series geomembrane composite (reinforced) manufactured by Western Environmental Liner (8120 W. Harrison St., Tolleson, AZ 85353, (623) 232-8215, www.westernliner.com)

2.02 STABILIZING FABRIC

- A. The stabilizing fabric shall be a geogrid manufactured from a punched polypropylene sheet, which is then oriented in three substantially equilateral directions so that resulting ribs form triangular openings having the following general properties:

Property	Test Method	Longitudinal / Transverse	Diagonal
Rib pitch, nominal	ASTM D4759	1.6" (40mm)	1.6" (40mm)
Mid-rib depth, nominal	ASTM D4759	0.06" (1.6mm)	0.08" (2.0mm)
Mid-rib width, nominal	ASTM D4759	0.05" (1.3mm)	0.04" (1.0mm)

- B. Preapproved stabilizing fabric products:

1. TriAx TX7 geogrid manufactured by Tensar International Corporation (2500 Northwinds Parkway, Atlanta, GA 30009; (800) 836-7271; www.tensarcorp.com)

2.03 FILTER FABRIC

- A. The filter fabric shall be a nonwoven needle punched polypropylene geotextile that resists ultraviolet and biological deterioration, rotting, naturally encountered basics and acids. The fabric shall meet the following general properties:

Property	Test Method	Value
Water Flow Rate	ASTM D4491	100 gal./min./sf
Mass per Unit Area, nominal	ASTM D5261	6.0 oz/yd ²

Tensile Strength	ASTM D4632	160 lbs
Grab-elongation, minimum	ASTM D4632	50 percent
Trapezoidal Tear, minimum	ASTM D4533	60 lbs
Puncture Strength, minimum	ASTM D4833	90 lbs
UV Resistance, minimum strength retained at 500 hours	ASTM D4355	70 percent

B. Preapproved filter fabric products:

1. US 160NW nonwoven geotextile manufactured by US Fabrics, Inc. (3904 Virginia Avenue, Cincinnati, OH 45227; (800) 518-2290;www.usfabricsinc.com)

PART 3 – EXECUTION

3.01 SUBGRADE PREPARATION

Prepare subgrade in accordance with Section 31 23 00 – Excavation and Fill, Contract Drawings, and approved installation plan.

3.02 INSTALLATION

- A. Install geosynthetics in accordance with this section, as shown on Contract Drawings, and in accordance with approved installation plan.
- B. Do not drive equipment on geomembrane composite liner.
- C. Protect and maintain any completed geomembrane composite installations during periods of installation inactivity in accordance with approved installation plan.
- D. Install membrane so that field seams are transverse to the canal flow direction unless approved by the Engineer. Any longitudinal seams run along the canal flow direction, parallel to the canal banks, will be factory formed seams unless approved by the Engineer.
- E. Anchor geomembrane composite in anchor trenches or above normal waterline staking as shown on drawings. Hold in place by using sandbags or other approved means until concrete cover material has been placed.
- F. Place geomembrane composite in a slackened condition so it will conform to subgrade contour without being taut when covered with concrete cover material.
- G. Ballast to prevent relocation of compensating slack by wind and to prevent uplift by wind at edges, ends, and other locations as required.

- H. Place, position, and anchor geomembrane without penetration below normal waterline. Staking through the geomembrane composite is not allowed unless located at the outer edge of the canal, above normal waterline staking as shown on drawings.
- I. Overlap adjacent sheets of geomembrane composite and shingle downstream.
- J. Cover geomembrane composite as soon as possible after installation.
- K. Repair damage to geomembrane composite immediately using approved repair techniques at the Contractor's expense. Repair of damage is solely the responsibility of the Contractor.

3.03 GEOMEMBRANE SEAMING

- A. Perform continuous field seaming in accordance with the manufacturer's instructions, the approved geomembrane composite installation plan, and this Section.
- B. Ensure that field seams form a continuous, homogeneous connection between geomembrane composite panels.
- C. Use wedge welds, hot air, and hot glue welds as the primary field seaming method.
- D. Use hot glue welds or hot air welds for patches and repairs.
- E. Install and field seam the geomembrane composite under the direct guidance of the geomembrane composite manufacturer's technical representative and in the direct presence of the installer's geomembrane composite installation supervisor/field engineer and/or master welder.
- F. Ambient Conditions:
 - 1. Do not perform field seaming when geomembrane composite is wet or when wind is displacing geomembrane composite panels.
 - 2. Seam only when air temperature is above 40 degrees F and below 90 degrees F.
- G. Field seam contact surfaces only if dry and thoroughly cleaned of all dirt, dust, grease, oil, and other foreign materials.
- H. Where seaming of geomembrane composite panels is required to fabricate the connection between separate portions of the geomembrane composite installation, remove any protective materials used, such as tape, and thoroughly clean the geomembrane composite surface(s) to be seamed, using appropriate cleaning agents.

- I. Joining Adjacent Panels:
 - 1. Overlap geomembrane composite according to manufacturer's recommendations.
 - 2. Weld using only approved methods for primary field seaming method.
 - 3. Overlap finished edges a minimum of 6 inches. Provide sufficient overlap to allow peel tests to be performed on seam.
- J. Patching Geomembrane Composite:
 - 1. Overlap finished edges a minimum of 6 inches. Provide sufficient overlap to allow peel tests to be performed on seam.

3.04 GEOMEMBRANE ATTACHMENT DETAILS

- A. Attach geomembrane composite to existing concrete structures in accordance with these specifications and with manufacturer's requirements.
- B. Attach geomembrane composite with stainless steel batten strips with minimum dimensions of 1/4-inch thick by 2 inches wide, anchored on 6-inch centers.
- C. Attach batten strips with 3/8 inch diameter x 3-1/2-inch long stainless steel anchor bolts.
- D. Attach geomembrane composite around existing pipe penetrations with geomembrane composite boots in accordance with manufacturer's requirements.

3.05 FILTER FABRIC LAPPING

- A. The filter fabric geotextile shall be placed directly in the prepared trench in a manner that minimizes folds and creases.
- B. Successive sheets of filter fabric geotextile shall be overlapped a minimum of one foot with the upstream (underdrain pipe slope) sheet overlapping the downstream sheet.
- C. Filter fabric geotextile folded over the top of drainage aggregate trenches shall have a one foot minimum overlap.

END OF SECTION

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SECTION 31 10 00 – SITE CLEARING

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Site clearing, as staked or as described on the contract drawings.
- B. Grubbing as staked or as described on the contract drawings.
- C. Clean up areas staked, as shown on the contract drawings, or as described in Technical Specifications.
- D. Removals as shown on the contract drawings, identified in the Technical Specifications, or identified by the District. Work also includes backfilling of trenches, holes, or pits that result from such removal.

1.02 RELATED SECTIONS

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01 33 00 – Submittal Procedures
- B. Section 01 50 00 – Temporary Facilities and Controls
- C. Section 02 41 00 – Demolition
- D. Section 31 23 00 – Excavation and Fill

1.03 REFERENCES

- A. Washington State Department of Transportation (WSDOT)
 - 1. WSDOT..... Standard Specifications for Road, Bridge, and Municipal Construction, 2018 (referred herein as the WSDOT Standard Specifications)

1.04 SUBMITTALS

- A. Furnish submittals in accordance with Section 01 33 00.
- B. Provide location of all disposal sites to be used and copies of the permits and approvals for such disposal sites before any waste is hauled off the project.

1.05 DEFINITIONS

- A. Clearing: Removing and disposing of all unwanted material from the surface, such as trees, brush, or other natural material.

- B. Grubbing: Removing and disposing of all unwanted vegetative matter from underground, such as sod, grass, stumps, roots, buried logs, or other debris.
- C. Cleanup: Where inside or outside the staked area, work done to give the area an attractive, finished appearance.
- D. Debris: All unusable natural material produced by clearing, grubbing, or cleanup
- E. Removals: Materials that are removed and disposed of, or salvaged as identified on contract drawings, in Technical Specifications or directed by the District Representative.

1.06 QUALITY ASSURANCE

- A. Obtain District Representative's approval of staked clearing, grubbing, and cleanup areas prior to commencing site clearing.
- B. Prepare site only after adequate erosion and sediment controls are in place.

1.07 EXISTING SITE CONDITIONS

- A. General site conditions are as follows:
 - 1. Location: The South Branch Canal is located along the south western side of the Kittitas Valley. The Project reaches run from the Robinson Creek Siphon on the upstream end to the Manastash Creek Siphon on the upstream end. The site is accessible via the District operation and maintenance access road where it crosses the Robinson Canyon Road southwest of Ellensburg, Washington.
 - 2. The Project canal reaches are generally abutted to the west by hilly range land. This upslope area above the canal right bank vary from nearly flat to steeply-sloped bare soil and vegetation consisting of tall grass, shrubs and small trees, or steeply-sloped to vertical basalt rock faces. To the east, the canal reaches are generally abutted to by agricultural land. This downslope area consists of the drivable embankment and side slopes which are typically vegetated with grass, trees, shrubs and variable topography ranging from nearly flat to steeply-sloped.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

3.01 PROTECTION OF EXISTING UTILITIES

- A. Prior to site clearing, locate and mark all existing utilities. Protect all existing utilities and markings from damage. In case of damage to existing utilities caused by construction activities, contact the District Representative and owner of the utility immediately. Repair any damage to existing utilities or markings

caused by construction activities in coordination with or as directed by the owner of the Utility.

3.02 PROCEDURES

- A. Disposal of Usable Materials and Debris shall be in conformance with WSDOT Standard Specifications Section 2-01.2. Usable materials shall be utilized onsite before disposal of excess materials. Excess usable materials and debris shall be disposed of at Contractor-provided disposal site.
- B. Clearing and grubbing:
 - 1. Notify District prior to commencing work, including work intended for survey or other site investigation.
 - 2. Clear and grub areas indicated on the contract drawings and as directed by the District to allow completion of the work.
 - 3. Follow sequencing outlined in the Technical Specifications and on the construction schedule.
 - 4. Do not damage existing structures, landscaping, or vegetation adjacent to the site.
 - 5. Repair or replace any damaged property, structures, or vegetation not designated for removal.
 - 6. Notify the District Representative when site clearing is complete.
 - 7. Do not remove trees or significant vegetation without prior written authorization from the District Representative.
 - 8. Remove obstructions such as brush, trees, logs, stumps, roots, heavy sod, vegetation, rocks, stones larger than 6 inches in any dimension, broken or old concrete and pavement, debris, and structures where the completion of the work requires their removal.
 - 9. Remove all obstructions to a minimum depth of 12 inches below finished grade of new construction, unless shown otherwise on the contract drawings.
 - 10. Legally dispose of material that is removed and is not to be incorporated in the work.
- C. Cleanup Work: Provide cleanup as ordered by the District. Methods and equipment used in cleanup shall be approved by District Representative. Cleanup work may include:
 - 1. Filling holes, and smoothing and contouring the ground.
 - 2. Shaping the ends of cuts and fills to fit adjacent terrain and to enhance the area's appearance.

- D. Removals: Remove items as indicated on the contract drawings, or identified in the Specifications, or as directed by the District.
- E. Utility interference: Where existing utilities interfere with the work, Contractor will notify the District Representative for approval of proposed utility relocation.
- F. Protection and safety: Provide protection devices, including barricades, fencing, warning signs, lights and other items necessary to ensure the security of, and safety within, the work site during this phase of work.

END OF SECTION

SECTION 31 23 00 – EXCAVATION AND FILL

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Ballast Rock
- B. Gravel Drain
- C. Gravel Base
- D. Crushed Surfacing
- E. Select Borrow
- F. Common Borrow
- G. Controlled Density Fill
- H. Excavation
- I. Bedding
- J. Backfill
- K. Compaction
- L. Control of Water

1.02 RELATED SECTIONS

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01 33 00 – Submittal Procedures
- B. Section 01 43 00 – Quality Assurance
- C. Section 01 50 00 – Temporary Facilities and Controls
- D. Section 07 26 16 – Below Grade Vapor Barriers
- E. Section 31 50 00 – Excavation Support and Protection

1.03 REFERENCES

- A. General: Publications listed below form a part of this Specification to the extent indicated by references thereto.
- B. Washington State Department of Transportation (WSDOT)

1. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction, 2018 (referred herein as the WSDOT Standard Specifications)
2. WSDOT Materials Manual, 2018
- C. American Association of State Highway and Transportation Officials (AASHTO)
 1. AASHTO T 180 Specification for Moisture-Density Relations of Soils Using a 4.54 kg (10-lb) Rammer and a 457 mm (18 in.) Drop; American Association of State Highway and Transportation Officials; 2001 (2004).
- D. Standard Specifications for Transportation Materials and Methods of Sampling and Testing, 25th Edition.
- E. ASTM International (ASTM):
 1. ASTM C136..... Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
 2. ASTM D422..... Standard Test Method for Particle-Size Analysis of Soils
 3. ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft³ (600 kN-m/m³)); 2007.
 4. ASTM D1556..... Standard Test Method for Density and Unit Weight of Soil and Unit Weight in Place by the Sand-Cone Method
 5. ASTM D1557..... Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN m/m³)); 2007.
 6. ASTM D2167..... Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method.
 7. ASTM D2487..... Standard Classification of Soils for Engineering Purposes.
 8. ASTM D3017..... Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).
 9. ASTM D4318..... Test Method for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

10. ASTM D6938.....Standard Test Methods for In-Place and Water Content of Soil and Soil-Aggregate by nuclear Methods (Shallow Depth).

F. Occupational Safety and Health Administration (OSHA)

9. OSHA.....Part 1926, Subpart P, "Excavations", most recent edition

1.04 QUALITY ASSURANCE

Conduct tests and submit test reports in accordance with the requirements of Section 01 33 00 and Section 01 45 00.

1.05 JOB CONDITIONS

- A. Existing Utilities: The Contractor shall locate existing utilities in the area of the work. These utilities shall be adequately protected from damage during construction of this project as approved by the District Representative.
- B. The Contractor shall utilize the services of a surveyor licensed in the State of Washington to oversee all surveying, alignment and positioning work on the Project. The surveyor shall extend vertical and horizontal control to the project, set temporary surveying control, establish primary work lines, and spot check as-built locations of exposed project elements. The choice of surveyor shall be subject to the approval of the District and the Contractor shall submit qualifications for approval. The surveyor shall have a minimum of five years of documented experience in land surveying.
- C. Protect bench marks, survey control points, existing structures, fences, other features to remain from excavating equipment and vehicular traffic.
- D. Do not commence with excavation operations until temporary erosion and sedimentation control measures are in place.
- E. Provide dust alleviation and control measures continuously during the course of work; as approved by the District.

1.06 PROTECTION

- A. Use all means necessary to protect all items outside of the limits of work shown in the contract drawings. In the event of damage, immediately make all repairs and requirements necessary to the approval of the District Representative and at no additional cost to the District.
- B. Utilities: Use all means necessary to protect existing utilities. Contact the District Representative before disconnecting any utility. All utilities serving adjacent facilities shall remain active unless disconnection is approved by the District Representative.
- C. Traffic: Contractor shall coordinate all their equipment and employee traffic with the District Representative. Inform the District Representative a minimum 48

hours prior to any revision in traffic flow. Contractor is responsible for coordinating any traffic revisions to State, County, or City roadways with the respective agency. Barricades, signs, and other temporary traffic control zone measures shall be in compliance with the Manual of Uniform Traffic Control Devices (MUTCD).

- D. Hazards: Provide lighted barricades around all hazardous areas including but not limited to excavations, trenches, and stored materials or debris left over night.
- E. Erosion and Sediment Control: Contractor shall take all necessary precautions to prevent silt laden runoff from leaving the site. Silt fencing, ditch lining, straw bales, detention ponds, catch basin/inlet inserts, and other erosion control and reduction measures may be necessary to provide satisfactory erosion control in accordance with Section 01 50 00. No additional payment will be made for erosion control measures.
- F. Cover stockpiles if weather conditions necessitate.

1.07 SUBMITTALS

- A. Certifications: Submit sieve analysis and suppliers certification of compliance for each imported material. Submit sieve analysis for on-site materials to be incorporated into the work.
- B. Materials Sources: Submit name of imported materials source.
- C. Fill Composition Test Reports: Results of laboratory tests on proposed and actual materials used.
- D. Compaction Density Test Reports.
- E. Waste Material Disposal: Submit location of all disposal sites to be used and provide copies of permits and approvals for such disposal sites.

PART 2 – PRODUCTS

2.01 BALLAST ROCK

Ballast rock shall be 2 1/2 inch minus crushed or naturally occurring granular material conform with the requirements of the WSDOT Standard Specifications 9-03.9(2) "Permeable Ballast".

2.02 GRAVEL DRAIN

Gravel backfill for drains shall conform with the requirements of the WSDOT Standard Specifications 9-03.12(4) "Gravel Backfill for Drains".

2.03 GRAVEL BASE

Gravel base material shall be crushed or naturally angular material conforming with the requirements of the WSDOT Standard Specification 9-03.10 for "Aggregate for Gravel Base".

2.04 CRUSHED SURFACING

Crushed surfacing material, also referred to as Crushed Surfacing Top Course (CSTC), shall be 3/4 inch minus crushed material conforming with the requirements of the WSDOT Standard Specifications 9-03.9(3) for "Crushed Surfacing" under the table heading "Top Course and Keystone".

2.05 SELECT BORROW

- A. Select Borrow shall consist of granular aggregate or nongranular soil material, either naturally occurring or processed, free of refuse, organic materials, roots over 1/2 inch in diameter, and rocks over 4 inches in diameter. Grading and quality shall conform with the requirements of the WSDOT Standard Specifications 9-03.14(2) "Select Borrow".
- B. Material shall be obtained from required excavations or other Contractor furnished sources and shall be approved by the District Representative prior to placement.

2.06 COMMON BORROW

- A. Common Borrow shall consist of granular aggregate or nongranular soil material, either naturally occurring or processed, free of refuse, organic materials, roots over 1/2 inch in diameter, and rocks over 6 inches in diameter.
- B. Material shall conform to soil plasticity Option 1 of the WSDOT Standard Specifications 9-03.14(3) "Common Borrow".
- C. Material shall be obtained from required excavations or other Contractor furnished sources and shall be approved by the District Representative prior to placement.

2.07 CONTROLLED DENSITY FILL (CDF)

Controlled Density Fill (CDF) shall be a self-compacting, cementitious, flowable material requiring no subsequent vibration or tamping to achieve consolidation. CDF shall be designed to have a minimum 28-day strength of 50 psi and a maximum 28-day strength not to exceed 300 psi with an approximate slump of 3 to 10 inches.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Identify required lines, levels, contours and datum locations.
- B. Locate, identify, and protect utilities that remain and protect from damage.
- C. Protect and maintain erosion and sedimentation controls during excavation operations.

3.02 SCARIFICATION AND COMPACTION

Following the site stripping and any required grubbing and/or over excavation, uniformly moisture-conditioned to be between zero (0) percent and five (5) percent above the optimum moisture content, and compacted to at least 90 percent of the maximum dry density.

3.03 TRENCH EXCAVATION

- A. This section is applicable to excavations required for the placement of all underground drain collection pipes, turnout pipes, and undershot culverts.
- B. The trench shall be excavated to permit placement of the pipe, or culvert to the alignment and grade shown on the contract drawings. Excavation depth shall include an allowance for the required bedding. Trench bottom shall be cleaned of all loosened soil and rocks. Shape and dimension of the trench shall allow a minimum trench width as specified on the plans. If, without written authorization, the pipe trench is excavated below the required depth, it shall be backfilled at the Contractor's expense with bedding material specified as Gravel Base in Paragraph 2.03 in this Section.
- C. Material obtained from pipeline excavation and meeting the backfill requirements specified in Paragraph 2.05 of this Section may be used for non-classified material trench backfill. Material not meeting specified material requirements shall be disposed of by the Contractor in an approved off-site disposal location.
- D. Contractor shall provide shoring, signs, and barricades, etc., in accordance with OSHA Standards and Section 31 50 00.

3.04 STRUCTURAL EXCAVATION

- A. Structural excavations include excavations required for steel reinforced walls, inlet and outlet transition structures, foundations, manholes, and catch basins.
- B. Slabs and footings shall bear on a minimum of one (1) foot of structural fill consisting material specified as Gravel Base in Paragraph 2.03 of this Section compacted to 95% maximum dry density.
- C. The bottom of excavations shall be within + 0.10 feet of the elevations shown on the contract drawings. The bottom of all structural excavations shall be cleaned to remove all rocks over three (3) inches in diameter and loosened soil.
 - 1. All excavations shall be carried to the depth indicated on the contract drawings and/or approved by the District Representative. Should the Contractor, through their own negligence or other fault, excavate below the designated elevations, they shall replace such over excavation with approved materials and methods at their own expense.
 - 2. The District Representative shall be notified as soon as excavations for footings or foundations are made, in order that inspections can be made prior to building forms and pouring concrete.

3. Excess cuts under existing adjacent footings shall be filled with concrete.
4. All excavations must be clean, dry, free from loose earth or other materials, and firm with an unyielding surface at time of placing concrete. Remove excess excavated materials from site.

3.05 UNCLASSIFIED EXCAVATION

- A. Unclassified excavations include excavations required for roadway cuts, paving and grading, site contouring, and other excavation not classified as Trench Excavation as defined in Paragraph 3.03 of this Section or Structural Excavation as defined in Paragraph 3.04 of this Section.
- B. The Contractor shall remove all material to sufficient elevation to allow proper placement and compaction of any necessary fill and surfacing to meet the elevations shown on the contract drawings or as required for removal of unsuitable material as directed by the District Representative.

3.06 WASTE MATERIAL DISPOSAL

- A. Concrete, large rock, organic material, and other excavated material not suitable for or included in fills and backfills shall be disposed of by the Contractor in an approved off-site disposal location.
- B. The Contractor shall make his own arrangements for disposal of surplus material and shall protect the District from any and all damages arising there from. All costs for such disposal shall be considered to be incidental to the Contract and no additional compensation will be made.
- C. The Contractor shall provide the District Representative with the location of all disposal sites to be used, and also provide copies of the permits and approvals for such disposal sites.

3.07 PIPE ZONE BEDDING

- A. The word pipeline shall include all underground drain collection pipes, turnout pipes, and undershot culverts.
- B. Trenches shall not be backfilled until the District Representative or his designee has determined that installation and testing requirements have been met. Pipe bedding shall be brought up evenly on both sides of the pipe to avoid lateral displacement of the pipe and damage to the joints.
- C. All pipelines shall be bedded with material specified as Gravel Base in Paragraph 2.03 in this Section. Minimum thickness of the compacted bedding layer under the pipeline shall be six (6) inches. Compaction shall be to at least 90 percent of maximum dry density.
- D. After the pipeline is in place on the bedding, bedding materials shall be placed uniformly along each side of the pipe in 6-inch thick, loose depth layers, and compacting each layer to at least 90 percent of maximum dry density, until the

pipeline is covered by at least six (6) inches of material for rigid pipe and at least twelve (12) inches of material for flexible pipe.

3.08 TRENCH BACKFILL

- A. Trenches shall be backfilled as soon after the pipe laying as possible. The remaining portion of the trench (trench backfill) shall be backfilled in layers not exceeding one (1) foot thick loose depths and compacted to at least 90 percent maximum dry density. Backfill above the pipe zone shall be accomplished in such a manner that the pipe is not damaged or disturbed.
- B. Where undershot culverts and turnouts cross under the access roadway, the trench backfill material shall be compacted to at least 95 percent of maximum dry density.
- C. Where pipeline installation adjacent to structures or other pipelines and utilities restricted compaction of the standard pipe zone envelope (trench width and bedding material coverage), Controlled Density Fill (CDF) shall be used in lieu of the standard pipe bedding material.

3.09 STRUCTURAL BACKFILL

- A. All backfill within a horizontal distance of 2 feet from concrete structures such as footings, manholes, vaults, etc. is defined as structural fill.
- B. Structural fill material shall be material specified as Gravel Base in Paragraph 2.03 of this Section placed and compacted in 8-inch maximum thickness layers, loose measure, to at least 95 percent of maximum dry density.
- C. Where backfill is to be placed against both sides of concrete walls, the backfill shall be brought up evenly on both sides of the wall.
- D. Backfill shall not be placed against just one side of concrete walls until the concrete has developed sufficient strength to resist the loading imposed by the backfill. Any abutting concrete walls shall also have attained sufficient strength. In any case, the backfill placement shall not begin prior to 7 days after concrete placing and shall not exceed the following schedule:

Age of Concrete	Backfill Depth
7 days	2/3 wall height
28 days	full wall height

- E. Perform compaction within two (2) feet of walls with hand operated vibratory compactors.

3.10 COMPACTED FILL

- A. All fill not otherwise classified shall be compacted fill. Material for fill shall be uniformly moisture-conditioned to between zero (0) percent and five (5) percent

above the optimum moisture content and shall be placed in 8-inch maximum layers loose depth, and shall be compacted to at least 90 percent of maximum dry density.

- B. Compacted fill shall be placed to the shapes and elevations shown on the contract drawings, sloped to drain, and without noticeable irregularities.

3.11 COMPACTION

- A. Compaction to the density required shall be by means of an appropriately sized static, vibratory or impact type compactor suited to the soil and physical restrictions of the area to be compacted. Although the Contractor is responsible for the selection of the method of compaction, selection of an inappropriate method shall not relieve the Contractor of the responsibility to achieve the specified result.
- B. Jetting, sluicing, or water settling will not be permitted.

3.12 COMPACTION CONTROL TESTS:

Laboratory and field tests shall be performed by the Contractor as follows:

- A. Compaction control density shall be the maximum density at optimum moisture content as determined by ASTM D1557, Standard Methods for Moisture-Density Relationships of Soil and Soil Aggregates, Methods A, B, C or D as applicable.
- B. Field tests to determine in-place compliance with required densities as specified, shall be performed in accordance with ASTM D1556, D2167, or D6938.

3.13 CONTROL OF WATER

- A. The Contractor shall furnish, install, and operate all necessary machinery, appliances, and equipment to control water in excavations during construction and shall control the water so as not to cause injury to public or private property or to cause a nuisance or menace to the public.
- B. The Contractor shall at all times have on hand sufficient pumping equipment and machinery in good working condition for all ordinary emergencies, including power outage and shall have available at all times competent workers for the operation of pumping equipment.

Discharge water may be routed to the underdrain collection system, once installed, or back in to the remaining downstream canal system. Adequate sheeting, sand bagging, cut-off wall, or other damming shall be provided to prevent flow of discharged water back upstream into the excavation.
- C. The control of groundwater shall be such that softening of the bottom of excavations shall be prevented.
- D. Water control systems shall be designed and operated so as to prevent removal of the natural soils.

- E. Where soil has been softened or eroded by flooding or placement during unfavorable weather, remove all damaged areas and recompact as specified for fill and compaction.
- F. Control of water in the pipeline trench shall be considered as incidental to the construction and all costs thereof shall be included in the Total Bid Price.

END OF SECTION

SECTION 32 31 26 – WIRE FENCE AND GATES

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Barbed Wire
- B. Posts
- C. Wire Gates
- D. Walkthrough Stile
- E. Cattle Guards

1.02 RELATED SECTIONS

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01 33 00 – Submittal Procedures
- B. Section 01 43 00 – Quality Assurance

1.03 REFERENCES

- A. ASTM International (ASTM):
 - 1. ASTM A116.....Standard Specification for Metallic-Coated Steel-Woven Wire Fence Fabric
 - 2. ASTM A121Standard Specification for Metallic-Coated Carbon Steel Barbed Wire.
 - 3. ASTM A123/A123M...Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
 - 4. ASTM A702.....Standard Specification for Steel Fence Posts and Assemblies, Hot Wrought.

1.04 JOB CONDITIONS

- A. The Contractor shall utilize the services of a surveyor licensed in the State of Washington to oversee all surveying, alignment and positioning work on the Project. The surveyor shall extend vertical and horizontal control to the project, set temporary surveying control, establish existing right of way lines, and proposed fence alignment and gate locations. The choice of surveyor shall be subject to the approval of the District and the Contractor shall submit qualifications for approval. The surveyor shall have a minimum of five years of documented experience in land surveying.

- B. Fence alignment and gate locations to be approved by the District prior to installation.

1.05 SUBMITTALS

- G. Shop Drawings: Include construction details, material descriptions, dimensions of individual components, and finishes for fence and gates.
- H. Samples:
 - 1. Posts, Rails, and Braces: Minimum 6-inch length.
 - 2. Barbed Wire: Minimum 12-inch length.
 - 3. Ties, Fasteners, Fittings: One each.

PART 2 – PRODUCTS

2.01 General

- A. Fencing materials and gates shall carry a tag identifying manufacturer.
- B. Legibly mark each roll of fencing material with style, class of zinc coating, and other pertinent identifying information.
- C. Manufactured Materials: Same kind and color for each type of fence on Project.

2.02 BARBED WIRE

- A. Zinc-Coated Barbed Wire: ASTM A121, Standard Grade.
 - 1. Line Wire: Two strands of No. 12-1/2 gauge.
 - 2. Barbs:
 - a. Number of Points: Four.]
 - b. Length: 1 inch.
 - c. Shape: Either round or half-round.
 - d. Diameter: No. 14 gauge.
 - e. Spacing: 5 inches.
- B. VERTICAL FENCE STAYS
 - 1. 9-1/2-gauge galvanized wire, 42 inches long.
- C. METAL POSTS AND ASSEMBLIES
 - 1. General: Conform to ASTM A702.

2. Line Post Section: Either T or pipe section, length as indicated.
 3. Wire Attachments: Conform to ASTM A702; do not furnish posts with punched tabs for fastening wires to post by closing tabs.
 4. Finish:
 - a. Galvanized or painted and baked on.
 - b. Color: If painted, As selected by District from manufacturer's standard colors.
- D. BRACING WIRE
- No. 9 or heavier, zinc-coated, soft smooth wire.
- E. Cattle Guard Foundation
1. Cattle Guard foundations to be precast concrete as required by manufacturer.
 2. Foundation to be installed, level on minimum 4 inches of crushed aggregate.
- F. Welded Steel Cattle Guard
1. Cattle Guard to be minimum HS-20 loading.
 2. Coating to be painted steel.
 3. Approved manufacturers:
 - a. Big R Bridge
 - b. Powder River
 - c. Or approved equal

PART 3 – EXECUTION

3.01 PREPARATION

- A. Clear area to extent specified in Section 31 10 00, Site Clearing, on both sides of fence. Eliminate ground surface irregularities along fence line to extent necessary to maintain 12-inch clearance between bottom of wire fence and finish grade.
1. Stake locations of fence lines, gates, and terminal posts. Do not exceed intervals of 500 feet or line of sight between stakes. Indicate locations of utilities, lawn sprinkler system, underground structures, benchmarks, and property monuments.

3.02 Installation—General

- A. Erect fencing in straight lines between angle points.
- B. Connections:
 - 1. Junctions or Intersections:
 - a. Install corner post with braces in every direction of strain for connections at each fence junction or intersection.
 - b. Fasten wire of both new and existing fence segments to post.
 - 2. Structures: Install end post and fasten wire to post.
 - a. Provide necessary hardware for a complete fence and gate installation.
 - b. Posts:
 - (1.) Set with minimum embedment below finished grade of 30 inches.
 - (2.) Verify set plumb, aligned, and at correct height and spacing.
 - (3.) Set end posts at beginning and end of fence not terminating at gates.
 - (4.) Set gate posts at each end of each gate opening.
 - (5.) Set corner posts at angle points in fence alignment where deflection angle between adjoining panels of fence is 5 degrees or more for metal line posts and 15 degrees or more for wood line posts.
 - (6.) Spacing intermediate end posts between end, gate, and corner posts maximum 1,000 feet apart.
 - 3. Drainage Crossings: Where fence must cross drainage ditches or swales, main fence shall be carried across a ditch or swale with additional fence added below:
 - 4. Frames and Bracing: Fence added below shall be fabricated with 2-inch by 4-inch Redwood or Cedar lumber.
 - a. Construction of frame shall be assembled with galvanized bolts. Frame shall be rigid and shall maintain 12-inch clearance between bottom of frame and finish grade. If necessary to maintain rigidity, attach to frame a series of 3/8-inch diameter galvanized steel pipe stakes that are embedded a minimum of 2 feet to sides and bottom of ditch.

- b. Attach wire securely to frame at intervals not exceeding 12 inches.

C. Metal Post Installation

1. Embedment Coating: Coat portion of galvanized-coated steel posts that will be embedded in concrete as specified in Section 09 90 00, Painting and Coating. Extend coating 1 inch above top of concrete.]
2. Backfill:
 - a. Place and vibrate or tamp concrete around posts and braces after they are in proper position and are securely restrained from movement.
 - b. Strike off concrete to a reasonably smooth surface to 2 inches above ground level. Crown each surface to drain away from post or brace.
 - c. Wait for concrete to cure for at least 7 days before subjecting posts and braces to stress or strain, unless otherwise authorized by Engineer.
3. Line Post Spacing: Maximum 14 feet. Set posts on lines and grades established or designated by Engineer. When posts are set, grade line on tops of posts shall present a neat, uniform appearance.
4. Line posts that are set by driving shall be free of damage when in place. Remove and replace with a new post any post which is twisted or bent, or which has a misshaped top.
5. Bracing:
 - a. Gate and End Posts: Install one metal brace in line of fence. Maintain plumb position and alignment of fencing.
 - b. Corner and Intermediate End Posts:
 - (1.) Install two braces, one each way from post in line with fence.
 - (2.) Install one additional brace at each intersection with another fence in line of intersecting fence.

D. Barbed Wire Installation

1. Draw barbed wire tight and securely attach posts. Attach to side of post inside of enclosure.
 - a. Terminate barbed wire at each end post, gate post, corner post, and intermediate end post.
 - b. Wrap each line of barbed wire around terminating post and splice to itself with at least four turns.

- c. Securely fasten each line of barbed wire at each metal line post with galvanized wire ties or clamps.
 - d. Securely fasten each line of barbed wire at each wood line post with staples.
 - 2. Splices of barbed wire between terminating posts will be permitted provided no more than one splice occurs between two adjacent terminating posts.
 - 3. In final position, barbed wire shall be tight and free from sag.
 - 4. In crossing gullies, ditches, and abrupt depressions where bottom line of fence as normally constructed leaves an unfenced opening beneath it exceeding 10 inches in height, add an additional line of barbed wire, so that at no point along fence will there be side openings or bottom openings exceeding 10 inches in dimension.
 - 5. Fence Condition Upon Completion: Straight between corners.
 - a. Posts: Vertical and firmly set.
 - b. Braces, Fittings, and Fixtures: Tight and firm.
- E. Vertical Fence Stays

Install midway between posts. Twist wire to permit weaving into horizontal fence wires to provide rigid spacing. Weave barbed wires into stay.
- F. Gate Installation
 - 1. Install gate at each location shown and where fences cross access roads and where adequate gates do not exist.
 - 2. Install mechanical gate closer per manufacturer requirements.
- G. Cattle Guard Installation
 - 1. Place footings to grade and at locations as shown on the drawings.
 - 2. End wings shall be securely attached to end posts.
- H. Repair

Repair damage to galvanized surfaces, including welding, with paint containing zinc dust in accordance with ASTM A780.
- I. Cleanup

Remove excess fencing materials and other debris from Site.

END OF SECTION

SECTION 33 05 26 – UTILITY IDENTIFICATION

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Markings for utility pipes, including canal mainline pipes and turnout feed pipes.
- B. Marking tape and tracing wire.

1.02 RELATED SECTIONS

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01 33 00 – Submittal Procedures
- B. Section 31 23 00 – Excavation and Fill
- C. Section 33 11 00 –Water Utility Distribution Piping

1.03 REFERENCES

- A. Washington State Department of Transportation (WSDOT)
 - 1. WSDOT Standard Specifications for Road, Bridge, and Municipal Construction, 2019 (referred herein as the WSDOT Standard Specifications)
- B. ASTM International (ASTM):
 - 1. ASTM D2683 Specification for Socket-Type Polyethylene Fittings for Outside Diameter-Controlled Polyethylene Pipe and Tubing
 - 2. ASTM D3261 Specification for Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing
 - 3. ASTM F1055 Specification for Electrofusion Type Polyethylene Fittings for Outside Diameter Controlled Polyethylene and Crosslinked Polyethylene Pipe and Tubing
- C. American Water Works Association (AWWA):
 - 1. AWWA C900 Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 4 in. Through 12 In. (100 mm Through 300 mm), for Water Transmission and Distribution

2. AWWA C901 Standard for Polyethylene (PE) Pressure Pipe and Tubing, ½ In. (13 mm) Through 3 In. (76 mm), for Water Service
 3. AWWA C905 Polyvinyl Chloride (PVC) Pressure Pipe and Fabricated Fittings, 14 in. Through 48 In. (350 mm Through 1,200 mm)
 4. AWWA C906 Polyethylene (PE) Pressure Pipe and Fittings, 4 in. (100 mm) Through 63 in. (1,600 mm), for Water Distribution and Transmission.
- D. American Association of State Highway and Transportation Officials (AASHTO):
1. AASHTO M294 Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm Diameter

1.04 SUBMITTALS

- A. For submittal procedures see Section 01 33 00 – Submittal Procedures.
- B. Submit manufacturers' product data for each product.

PART 2 – PRODUCTS

2.01 DETECTABLE MARKING TAPE

Detectable marking tape shall meet the requirements of WSDOT Standard Specifications Section 9-15.18, with the following color coding of the tape:

Purple Tape – Irrigation Pipeline / Non-Potable Water

PART 3 – EXECUTION

3.01 PIPE MARKINGS

- A. Plastic (PVC, PE, HDPE, Fusible PVC) pipe and tubing shall be marked in accordance with AWWA C900, AWWA C901, AWWA C905, or AWWA C906, whichever applies.
- B. Marking shall be legible and shall remain legible under normal handling and installation practices.
- C. Indent marking may be utilized provided:
 1. The marking does not reduce the wall thickness to less than the minimum value for the pipe or tubing.
 2. It has been demonstrated that these marks have no effect on the long term strength of the pipe or tubing.

3. The marks do not provide leakage channels when elastomeric gasket compression fittings are used to make the joints.
- D. Fittings shall be marked on the body or hub. Marking shall be in accordance with either ASTM D2683, ASTM D3261, AWWA C900, AWWA C901, AWWA C905, AWWA C906 or ASTM F1055, depending on fitting type and the standard that applies
- E. Mechanical fittings shall be marked with size, body material designation code, pressure rating and manufacturer's name or trademark.

3.02 DETECTABLE MARKING TAPE

A single line of tape shall be provided no less than 12 inches above and parallel to each buried pipe. Tape shall be spread flat with message side up before backfilling. Backfill shall be as specified in Section 31 23 00 – Excavation and Fill

END OF SECTION

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SECTION 33 11 00 – WATER UTILITY DISTRIBUTION PIPING

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Perforated Corrugated High Density Polyethylene (HDPE) pipe and fittings for drainage.
- B. Polyvinyl Chloride Irrigation Pipe (PIP) pipe and fittings for irrigation turnouts.
- C. Steel Reinforced Polyethylene (SRPE) pipe and fittings for mainline canal piping 48-inch diameter and larger.
- D. Alternative requirements for substitution of SRPE with profile wall high-density polyethylene (HDPE) pipe and fittings for mainline canal supply lines less than 48-inch diameter.

1.02 RELATED WORK SPECIFIED ELSEWHERE

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01 33 00 – Submittal Procedures
- B. Section 01 45 00 – Quality Control
- C. Section 01 60 00 – Product Requirements
- D. Section 31 23 00 – Excavation and Fill
- E. Section 33 05 26 – Utility Line Signs, Markers, and Flags
- F. Section 33 12 16 – Utility Valves and Gates

1.03 REFERENCES

- A. ASTM International (ASTM):
 - 1. D1784 Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds
 - 2. D2241 Specification for Poly(Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series)
 - 3. D2321 Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications

4. D3212 Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals
5. D3350 Standard Specification for Polyethylene Plastics Pipe and Fittings Materials
6. F477 Specification for Elastomeric Seals (Gasket) for Joining Plastic Pipe
7. F1417 Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-Pressure Air.
8. F2562 Standard Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage

1.04 ALTERNATE MATERIALS

- A. The contract drawings have been prepared based on use of specific pipe materials and details developed accordingly; but it is not intended to preclude use of alternate materials subject to contract requirements and approval by the District Representative. Any request for alternate pipe materials is to comply with Section 01 33 00.
- B. SRPE pipe and fittings for mainline canal piping 48-inch diameter and greater may be used if the alternate pipe is approved by the District Representative. The alternate material pipe characteristics shall meet or exceed the following technical criteria in addition to other Contract requirements:
 1. Pressure rating of all pipe, fittings, and associated gaskets or other joining methodology shall meet or exceed laboratory tests to 10.8 psi (25 feet hydraulic head) when tested in accordance with ASTM D3212.
 2. HS-20 loading with 1'-6" minimum soil cover and 25'-0" maximum soil cover.
- C. Redesign for Alternative Piping
 1. The Contract pipe alignment, appurtenances, valves, and other features are to be retained in the redesign. Variations from the contract drawings are to be clearly identified. No reduction in pipe size is allowed.
 2. Typical unrestrained fittings to be bell and spigot type unless otherwise noted.
 3. Restrained fittings are to be flanged unless otherwise noted.

4. The complete design drawings, specifications, design calculations, product information, and supporting data are to be submitted for District review.

1.05 SUBMITTALS

- A. Alternative Material to SRPE Pipe: Submit Variance Request at time of bid containing material tests and calculations demonstrating compliance with Paragraph 1.04 above.
- B. Manufacturer's data for the following:
 1. Polyvinyl Chloride Irrigation Pipe (PIP): Submit for approval, manufacturer's literature, specifications, and installation instructions for pipe and fittings for irrigation turnouts.
 2. Steel Reinforced Polyethylene (SRPE): Submit for approval, manufacturer's literature, specifications, and installation instructions for pipe and fittings for mainline canal piping 48-inch diameter and larger.
- C. Shop Drawings:
 1. Shop drawings showing dimensions and details of pipe joint fittings, fitting specials, valves and appurtenances.
 2. Detailed layout, spacers, adapters, connectors, fittings and pipe supports not indicated in the Contract Documents.
 3. Fittings and specials details such as elbows, wyes, tees, outlets, connections, or other specials where shown on the contract drawings. All fittings and specials shall be properly reinforced to withstand the internal pressure, both circumferential and longitudinal, and the external loading conditions shown in the Contract Documents.
- D. Testing Plan: Include standard procedures to be followed for Low-pressure air testing with a list of all equipment to be utilized. Provide corrective actions to be undertaken if tests come back negative.

1.06 QUALITY ASSURANCE

- A. The contract drawings indicate the extent and general arrangement of the piping systems. The Contractor shall be responsible for the coordination and proper relation of his work to the buildings and structures and to the work of all trades. The Contractor shall familiarize himself with all details of the work and working conditions, verify all dimensions in the field, and advise the District Representative of any discrepancy before performing any work.
- B. The pipe manufacturer shall test all pipe and fittings as required by these specifications and the reference standards. The pipe manufacturer shall submit to the District two copies of all test results including a written certification that material to be delivered is represented by the samples tested and that such

delivered materials meet or exceed specified requirements. No pipe shall be delivered until test results and certifications are in the hands of the District.

- C. The District shall have free access to all testing records pertaining to material to be delivered to the job site. The District may elect to be present at any or all material testing operations.
- D. The basis of acceptance shall be manufacturer's certificate of compliance, accompanied by two copies of pressure test results of the pipe or fittings involved.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle pipe, fittings and accessories on site under provisions of Section 01 60 00.
- B. Handle pipe accessories so as to ensure delivery in a sound and undamaged condition.
 - 1. Pipe shall be handled in a manner that will prevent damage to the pipe. Damaged pipe shall be rejected, and the Contractor shall immediately place damaged pipe apart from the undamaged and shall remove the damaged pipe from the site within 24 hours.
 - 2. Ropes, fabric or rubber protected slings and straps shall be used when handling pipes. Chains, cables or hooks inserted into the pipe ends shall not be used. Two slings spread apart shall be used for lifting each length of pipe.
 - 3. On nested loads, unload each pipe size independently.
- C. Pipes shall be stored on level ground, preferably turf or sand, free of sharp objects, which could damage the pipe. Stacking of the pipe shall be limited to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature conditions. Where necessary due to ground conditions, the pipe shall be stored on wooden sleepers, spaced suitably and of such width as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.
- D. Pipe shall be stored on clean level ground to prevent undue scratching or gouging. The handling of the pipe shall be in such a manner that the pipe is not damaged by dragging it over sharp and cutting objects.
 - 1. The interior of all pipe surface shall be free of cuts, gouges, or scratches.
 - 2. For PVC Irrigation Pipe, the maximum allowable depth of cuts, scratches or gouges on the exterior of the pipe is 5 percent of wall thickness.
- E. Dirt or other foreign material shall be prevented from entering the pipe during handling or storage. Thoroughly clean interior of pipe and accessories before

placing pipe. Keep the pipe clean during the placing operations by plugging or other method approved by the District Representative.

- F. Before installation, inspect each piece of pipe and each fitting for defects. Material found to be defective before or after placement shall be replaced with sound material meeting the specified requirements, and without additional cost to the District.
- G. Rubber gaskets: Store loose gaskets in a cool dark place until just prior to time of installation.
- H. Provide proper blocking and storage practices to protect bell and spigot pipe and fittings from deformation of the pipe bells.

PART 2 – PRODUCTS

2.01 GENERAL

All pipe shall be clearly marked with manufacturer's name, type, class, and thickness applicable. Lettering shall be legible and permanent under normal conditions of handling and storage.

2.02 PIPES

- A. Perforated Corrugated High Density Polyethylene (HDPE) Underdrain Pipe:
 - 1. Pipe and fittings (up to 10 inch nominal diameter) shall conform to WSDOT 9-05.2(7) "Perforated Corrugated Polyethylene Underdrain Pipe (Up to 10 inch)".
 - 2. Pipe and fittings (12 inch nominal diameter and larger) shall conform to WSDOT 9-05.2(8) "Perforated Corrugated Polyethylene Underdrain Pipe (12-inch Through 60-inch Diameter Maximum), Couplings, and Fittings".
 - 3. Unless otherwise noted, perforation pattern shall be AASHTO Class I for use in combined storm/underdrain systems.
- B. Polyvinyl Chloride (PVC) Irrigation Pipe:
 - 1. PVC pipe and fittings shall conform to ASTM D2241 for diameters from 6 inches to 27 inches.
 - 2. All pipe shall be made from quality PVC resin, compounded to provide physical and mechanical properties that equal or exceed cell class 12454 as defined in ASTM D1784
 - 3. All pipes shall be suitable for use as pressure conduits and shall have a Dimension Ratio (DR) of 41 unless indicated otherwise.
 - 4. Rubber gaskets shall be factory installed and conform to ASTM F477.
- C. Steel Reinforced Polyethylene (SRPE) Mainline Canal Pipe

1. SRPE shall be manufactured in accordance with the applicable requirements of ASTM F2562.
2. Virgin high density polyethylene stress-rated resins will be used to manufacture SRPE pipe and complimentary fabricated fittings. Resins will conform to the minimum requirements of cell classification 345464C as defined and described in the latest version of ASTM D3350.
3. Pipe lengths shall be joined on site using coupling bands, bell & spigots, or welded couplers especially designed for SRPE pipe. Joints shall be gasketed, bell and spigot joints where both the bell and spigot are reinforced with steel that is fully encased in stress-rated high density polyethylene (meeting the requirements set forth in the above Material Properties paragraph) and that have been laboratory tested to 10.8 psi in accordance with ASTM D3212.
4. The SRPE system shall be designed for a minimum HS-20/HS-25 final live loading conditions with the minimum pipe stiffness in accordance with ASTM F2562. The SRPE system shall meet HS-20/HS-25 loading requirements with a minimum cover of 18-inches.
5. Elastomeric gaskets shall comply with the requirements specified in ASTM F477.

2.03 LUBRICANT

The lubricant used for the assembly of gasketed joints shall have no detrimental effect on the gasket or on the pipe.

2.04 BEDDING AND BACKFILL MATERIAL

Bedding and backfill materials shall be in accordance with Section 31 23 00.

2.05 MARKING TAPE OR TRACER WIRE

Furnish marking tape or tracer wire in accordance with Section 33 05 26.

2.06 FITTINGS

All fabricated fittings and couplings supplied by manufacturer shall be constructed to ensure no loss of structural integrity or joint tightness at welded seems and joints. Only those fittings supplied by or recommended by the manufacturer shall be used.

2.07 VALVES AND GATES

Valves and gates shall be in accordance with Section 33 12 16.

PART 3 – EXECUTION

3.01 FIELD MEASUREMENT

Make necessary measurements in the field to assure precise fit of items in accordance with the approved design.

3.02 INSTALLATION

- A. All pipe, fittings, and couplings shall be installed in accordance with ASTM D2321 unless otherwise directed by the manufacturer, the contract drawings, these specifications, and with the best commercial trade practice.
- B. Any special tools required for laying, jointing, cutting, etc., shall be supplied and properly used.
- C. All pipe shall be thoroughly cleaned before laying and shall be kept clean until accepted in the completed work
- D. Bell and spigot pipe shall be laid with the bell-ends pointing in the direction of laying. Pipe shall be graded in straight lines taking care to avoid the formation of any dips or low points. All joints shall be made in strict conformance with the manufacturer's recommendations.
- E. Open Trench Installation
 - 1. Under no circumstances shall the pipe or accessories be dropped into the trench.
 - 2. Pipe shall be laid to the lines and grade shown on the contract drawings with bedding and backfill in conformance with Section 31 23 00.
 - 3. The full length of each section of pipe and fittings shall rest solidly on the pipe bed, with recessed excavation to accommodate bells, joints and couplings. Anchors and supports shall be provided where necessary and where indicated on the contract drawings for fastening work into place.
 - 4. The Contractor shall establish line and grade and transfer it into the trench where they shall be carried by means of laser level or taut grade line supported on firmly set batter boards at intervals of not more than thirty (30) feet. Not less than three (3) batter boards shall be in use at one time. Grades shall be constantly checked and in the event that batter boards do not line up, the work shall be immediately stopped and the cause remedied before proceeding with the work. Any other procedure shall have the written approval of the District.
 - 5. Good alignment shall be preserved during installation. Deflection of the pipe shall occur only at those places on design drawings, as required for control of thermal expansion and contraction, and as approved by the District Representative. Fittings, in addition to those shown on the contract drawings, shall be used only if necessary or required by the District Representative.
 - 6. When moveable trench bracing such as trench boxes, moveable sheeting, shoring or plates are used to support the sides of the trench, care shall be taken in placing and moving the boxes or supporting bracing to prevent movement of the pipe, or disturbance of the pipe bedding and the backfill. Trench boxes, moveable sheeting, shoring or plates shall not

be allowed to extend below top of the pipe. As trench boxes, moveable sheeting, shoring or plates are moved, pipe bedding shall be placed to fill any voids created and the backfill shall be recompact to provide uniform side support for the pipe.

3.03 FIELD QUALITY CONTROL

- A. Upon completion of the work in this section, remove all rubbish, trash and debris resulting from construction operations. Structures and pipes should be free from sediment and debris at the end of construction. Provide all necessary facilities for the inspection and clearing and dispose of waste, including water.
- B. Perform field inspection and testing in accordance with Section 01 45 00. Inspect the pipe for defects before installation and joining. Defective, damaged, or unsound pipe will be rejected.
- C. Pipe cleaning and pressure testing of piping systems shall be conducted in accordance with ASTM F1417.
- D. Each valve shall be tested by closing each in turn and relieving the pressure beyond. This test of the valve will be acceptable if there is no immediate loss of pressure on the gauge when the pressure comes against the valve being checked. The Contractor shall verify that the pressure differential across the valve does not exceed the rated working pressure of the valve. Should any defects in design, materials, or workmanship appear during these tests, the Contractor shall correct such defects with the least possible delay and to the satisfaction of the District.

END OF SECTION

SECTION 33 12 16 – UTILITY VALVES AND GATES

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Canal Gates.
- B. Stop Logs

1.02 RELATED WORK SPECIFIED ELSEWHERE

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01 33 00 – Submittal Procedures
- B. Section 01 45 00 – Quality Control

1.03 REFERENCES

- A. ASTM International (ASTM):
 - 1. A240 / A276Stainless and Heat Resisting Steel Bars and Shapes
 - 2. B308.....Aluminum-Alloy 6061-T6 Standard Structural Profiles
 - 3. D2000Classification System for Rubber Products in Automotive Applications.

1.04 SUBMITTALS

- A. Product Data: Submit material list naming each product to be used identified by manufacturer and model or type number. Provide data on valves, gates, and accessories.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Solvent Cement: Store in accordance with ASTM D2855.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. All valves and gates shall be manufacturer's standard design unless otherwise specified, and shall be furnished with operating wheel, extension stems, wrench nut or lever, and other accessories, which are required for proper completion of the work. Unless otherwise indicated, the direction to open the valve shall be to the left.

2.02 CANAL GATES

- A. Canal gates shall be self-contained with yoke and bench stand operators.
- B. Frame and cover shall be epoxy coated, cast iron with machined seating faces. The cover shall be domed design to withstand a maximum seating head of 20 feet.
- C. Guide rails and head rails to be stainless steel, minimum ¼ inch thick, designed and built to withstand the total thrust of the gate slide due to water pressure and wedge action.
- D. Stems shall be stainless steel and shall have a slenderness ratio (L/R) less than 200.
- E. Operator to be as shown on gate schedule.
- F. Fasteners and yoke to be stainless steel.

2.03 STOP LOGS

- A. Stop logs shall be of the quantity and dimensions shown on plans.
- B. Stop log planks, lifting lugs, and appurtenances shall conform to the requirements of ASTM B308 and to aluminum alloy 6061-T6
- C. Unless otherwise specified, seals shall be extruded neoprene conforming to ASTM D2000 with a durometer of 60 +/- 5.
- D. Guides, anchor bolts, and miscellaneous hardware and lifting devices shall be of Type 304 stainless steel conforming to ASTM A276
- E. The stop log planks shall not deflect more than 1/360 of the span of the plank under a design seating head of 10 feet of water.
- F. Stop log planks shall be fabricated of aluminum plate reinforced with extruded or structural aluminum horizontal and vertical members.
- G. Planks will be of sufficient weight to be submerged under their own weight.
- H. Each stop log plank shall be provided with uninterrupted seals along the bottom of the plank and up both sides. The seals shall be attached to the plank with Type 304 stainless steel bars and fasteners.
- I. Two lifting lugs shall be provided for each stop log plank. Lifting lugs shall be capable of withstanding the lifting load necessary to remove the stop log plank under the field design head.
- J. Lifting device shall be provided to remove and install the stop log plank as specified herein and shown on the Contract Drawings. The lifters shall be extendible so that they will function with different stop log plank lengths.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. Prior to installation of valves and gates, Contractor shall clean and touch up all surfaces previously primed or painted, make visual check of operating parts for proper and satisfactory operation and clean and remove all foreign matter from valve or gate.
- B. All valves shall be installed according to the manufacturer's instructions and as shown on the contract drawings.

3.02 FIELD QUALITY CONTROL

- A. Upon completion of installation, valves, and gates shall be tested by operation through a complete cycle of opening, closing and opening. Gates shall be adjusted so that they operate freely. Gate leakage shall be within the manufacturer's specifications for gate leakage
- B. Valves shall be leak tested in conjunction with testing of the piping system to which they are attached. Joints shall show no visible leakage under test. Repair joints that show signs of leakage prior to final acceptance. If there are any special parts of control systems or operators that might be damaged by the pipeline test, they shall be properly protected. The Contractor will be held responsible for any damage caused by the testing.

END OF SECTION

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SECTION 33 42 23 – PRECAST CONCRETE STRUCTURES

PART 1 – GENERAL

1.01 Section Includes

- A. Four Sided Box Culvert
- B. Canal Control Structure
- C. Delivery Box Turnout
- D. Concrete Headwalls.

1.02 Related Work Specified Elsewhere

The provisions and intent of the Contract, including the General Conditions and Specific Requirements, apply to this work as if specified in this section. Work related to this section is described in:

- A. Section 01 33 00 – Submittal Procedures
- B. Section 01 45 00 – Quality Control

1.03 REFERENCES

- A. ASTM International (ASTM):
 - 1. A123..... Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
 - 2. A153..... Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - 3. A536..... Specification for Ductile Iron Castings.
 - 4. B26/B26M Specification for Aluminum Alloy Sand Castings.
 - 5. C478 Specification for Precast Reinforced Concrete Manhole Sections
 - 6. C858 Specification for Underground Precast Concrete Utility Structures
 - 7. C923 Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals
 - 8. C1433 Specification for Precast Reinforced Concrete Monolithic Box Sections for Culverts, Storm Drains, and Sewers

- B. American Concrete Institute (ACI):
 - 1. 318 Building Code Requirements for Specifications
Concrete and Commentary.
- C. Precast/Prestressed Concrete Institute (PCI):
 - 1. PCI MNL-116 Manual for Quality control for Plants and Production
of Structural Precast and Prestressed Concrete
Products

1.04 SUBMITTALS

- A. Furnish submittals in accordance with Section 01 33 00.
- B. Product Data: Submit manufacturers' product data for standard manufactured precast concrete structures and for metal gratings and covers and other, related miscellaneous metal items. Include component construction, features, configurations, and dimensions as applicable.
- C. Shop Drawings: Submit Fabrication Shop Drawings for approval showing the following:
 - 1. Detailed drawings of panels, members, and components of precast structures, showing dimensions and sections of each.
 - 2. Quantities, dimensions, and locations of sleeves, anchors, brackets, inserts, ringlets, reinforcing steel, lift devices, accessories, and methods of securing same in forms.
 - 3. Casting, consolidating, and finishing procedures.
 - 4. Manufacturer structural design calculations, stamped by licensed civil engineer in the State of Washington.
 - 5. Drawings indicating structure locations, elevations, piping sizes, and elevations of penetrations.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Transport, handle, and store precast concrete units and steel standpipe in a manner that will prevent damage to the members.
- B. Store each unit in a manner that will prevent cracking, distortion, warping, straining and other physical damage, and in a manner to keep marking visible.
- C. Lift and support each unit only at designated lifting points and supporting points as shown on Shop Drawings.

PART 2 – PRODUCTS

2.01 PRECAST CONCRETE

A. Materials:

1. Cement: Comply with applicable requirements of Section 03 30 00.
2. Reinforcing Steel: Comply with applicable requirements of Section 03 30 00.
3. Grout – Cementitious Grout: See Section 03 30 00.
4. Anchors, Lift Devices, and Accessories: Provide concrete inserts, reglets, anchors, brackets, and fasteners as indicated or required for fabrication and installation work. All items shall be zinc-coated or galvanized in accordance with ASTM A153 or ASTM A123, as applicable.

B. Fabrication:

1. Requirements and Standards: Fabrication of the precast units shall follow the applicable provisions of PCI MNL-116 and applicable requirements of ACI 318.
2. Finishes: For those items not exposed to public view, provide “smooth form finish” as specified in Section 03 30 00. For exposed concrete items, provide finish matching approved control sample.
3. Markings: Provide permanent markings in precast units to identify pick-up points and orientation in the structure, conforming to the markings indicated on shop drawings.
4. Openings: Where practical, the Manufacturer shall only provide for those openings as shown on the contract drawings. Other openings, inserts, and fittings shall be located, furnished, and installed by the trade requiring same after the precast/prestressed products have been erected.

C. PRECAST CONCRETE STRUCTURES

1. General: The Contractor may provide precast concrete structures, that conform to the general configuration, capacities, and inverts indicated.
2. Fabrication Standards: Comply with ASTM C478, ASTM C1433, and ASTM C858, as applicable, and applicable manufacturers’ standards. Resilient connectors shall comply with ASTM C923.
3. Materials: Provide fine and coarse aggregates conforming to ASTM C33, in size commensurate with structure and reinforcement clearances.
4. Portland Cement Concrete: Class 4000 minimum in accordance with Section 03 30 00. Concrete may be polymer or latex modified to achieve higher strengths and denser concrete. Concrete shall not deteriorate

from chemical attack of sanitary waste. Concrete for electrical utility structures shall be Class 3000.

5. Reinforcement: Formed steel wire, galvanized finish, wire diameter as indicated on contract drawings and specified in Section 03 20 00.
6. Grout: As specified in Section 03 30 00.
7. Precast Covers: Precast covers shall have the utility identification, such as "Irrigation Valve," stamped into the cover.
8. Quality Control: In accordance with Section 01 45 00, the Contractor shall perform such inspections and tests as required to verify compliance with these Technical Specifications.

2.02 METAL COVERS, GRATES, AND INLETS

A. Ferrous Coverings

1. Metal used in manufacture of castings shall conform to ASTM A48, Class 35B for Gray Iron, or ASTM A536, Grade 65-45-12 for Ductile Iron.
2. Castings shall be of uniform quality, free from blowholes, shrinkage, distortion or other defects. Castings shall be smooth and cleaned by shotblasting.
3. Minimum tensile strength shall be 35,000 psi.
4. Castings shall be manufactured true to pattern; components parts shall fit together in a satisfactory manner. Round frames and covers shall have continuously machined bearing surfaces to prevent rocking and rattling.
5. Where castings will be subjected to loads of HL-93 or greater, as indicated, provide ductile iron castings.

- B. Aluminum Castings: Where required to reduce weights of larger covers for ease of handling such covers may be manufactured of aluminum castings conforming to ASTM B26/B26M Alloy No. 713.0. Minimum tensile strength shall be 32,000 psi.

- C. Manhole Covers: Provide cast, manufactured manhole covers and frames with heavy-duty solid cover (lid) or vented cover (lid) as indicated. Covers shall be embossed or engraved with non-slip diamond or square cross-hatched pattern. Provide covers with embossed or engraved word identification, as indicated or appropriate, for the enclosed or underground utility.

D. Grates

1. Cast Ferrous Grates: Grates for area drains and catch basins shall be heavy-duty, bicycle safe inlet grates and frames of size and configuration

indicated. Grates in roadways and parking areas shall withstand HL-93 loadings when proof-tested in accordance with AASHTO, LRFD.

2. Bar-Type Steel Grates: Bar-type steel gratings will be permitted only in areas where vehicular traffic will not be encountered.

- E. Manhole Steps: Provide polypropylene coated steel manhole steps with cross-hatched treads and with anchor configuration appropriate for cast-in-place concrete or precast concrete as indicated. Provide steps for installation 12 inches on center in vertical alignment.

2.03 PRECAST MANUFACTURERS

- A. Materials, equipment, and accessories specified in this section shall be products of:
 1. H2 Precast.
 2. Oldcastle Precast.
 3. Wilbert Precast.

PART 3 – Execution

3.01 General

- A. Possible Settlement: If subgrade is encountered that may require removal to prevent structure settlement, notify Engineer. Engineer will determine depth of over excavation and means of stabilizing subgrade prior to structure installation.
- B. Place 6-inch minimum thickness of imported crushed aggregate material on undisturbed earth or modified subgrade; thoroughly compact with a mechanical vibrating or power tamper. Meet requirements of Article Excavation and Backfill.

3.02 Excavation And Backfill

- A. Remove and keep water clear from excavation during construction.
- B. Excavation: As specified in Section 31 23 00, Excavation.
- C. Backfill: As specified in Section 31 23 00, Trench Backfill.

3.03 Installation

- A. Base:
 1. Place on prepared subgrade.
 2. Properly locate, ensure firm bearing throughout, and plumb section.

3.04 Pipe Connection To Headwall

- A. Install products in accordance with manufacturer's instructions. Grout pipe connections and extend pipe 12" from the interior face of wall.

END OF SECTION

APPENDIX A – 33-SBC-1004 CONTRACT DWGS

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APPENDIX B – 33-SBC-1004 WAGE RATES

This project shall be subject to both state (RCW 39.12 and WAC 296-127) and federal (Davis-Bacon and Related Acts) hourly minimum rates for wages and fringe benefits with the higher of the two rates governing as the prevailing wage rate.

The state prevailing rates and benefit key code are available on the Washington State Department of Labor and Industries website for the following:

Kittitas County – Journey Level Rates – Effective September 4, 2020

At:

<https://fortress.wa.gov/lni/wagelookup/prvWagelookup.aspx>

The federal wage decision WA20200049 for Heavy construction in Kittitas County, Washington State is attached as found on the following websites as:

WA74 last revised July 10, 2020

At:

<https://beta.sam.gov/wage-determination/WA20200049/3#document>

The rate schedules are also available for viewing at the Kittitas Reclamation District offices located at:

315 North Water Street
Ellensburg, Washington
(509) 925-6158

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"General Decision Number: WA20200049 07/10/2020

Superseded General Decision Number: WA20190049

State: Washington

Construction Type: Heavy
including water and sewer line construction

County: Kittitas County in Washington.

HEAVY CONSTRUCTION PROJECTS (including sewer/water
construction).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.80 for calendar year 2020 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, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.80 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 calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/03/2020
1	03/13/2020
2	07/03/2020
3	07/10/2020

CARP0059-011 06/01/2018

	Rates	Fringes
CARPENTER (Including Formwork)		
EAST OF 120TH MERIDIAN.....	\$ 33.40	16.40
MILLWRIGHT		
EAST OF 120TH MERIDIAN.....	\$ 45.42	18.83

(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

CARP0770-002 06/01/2019

	Rates	Fringes
CARPENTER (Including Formwork)		
WEST OF 120TH MERIDIAN.....	\$ 45.92	16.52
MILLWRIGHT		
WEST OF 120TH MERIDIAN.....	\$ 47.42	16.52

(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
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Seattle	Olympia	Bellingham
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(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

ELEC0077-001 02/01/2018

Rates	Fringes
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Line Construction:

LINEMEN.....\$ 51.73 1%+17.50

ELEC0112-014 06/01/2019

Rates

Fringes

ELECTRICIAN.....\$ 46.05 21.06

* ENGI0302-007 06/01/2020

Rates

Fringes

Power equipment operators:

Group 1A.....\$ 48.41 22.47

Group 1AA.....\$ 49.13 22.47

Group 1AAA.....\$ 49.83 22.47

Group 1.....\$ 47.70 22.47

Group 2.....\$ 47.08 22.47

Group 3.....\$ 46.55 22.47

Group 4.....\$ 43.54 22.47

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); 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; 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

IRON0086-013 07/01/2019

	Rates	Fringes
IRONWORKER.....	\$ 33.59	29.26

LAB00348-001 06/01/2020

ZONE 1:

	Rates	Fringes
LABORER		
GROUP 2.....	\$ 27.17	12.44
GROUP 3.....	\$ 29.74	12.44
GROUP 4.....	\$ 30.46	12.44
GROUP 5.....	\$ 30.99	12.44

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 2: Flagger

GROUP 3: General or Common Laborer; Chipping Guns (Under 30
lbs)

GROUP 4: Pipe Layer; Chipping Guns (Over 30 lbs)

GROUP 5: Mason Tender-Brick; Mason Tender-Cement/Concrete;
Grade Checker

PAIN0005-010 04/15/2013

	Rates	Fringes
Painters: (Brush, Roller and Spray).....	\$ 15.58	10.23

SUWA2009-040 08/07/2009

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER...	\$ 17.21	0.00
LABORER: Landscape.....	\$ 14.67	0.00
OPERATOR: Drill.....	\$ 28.15	8.20
PIPEFITTER.....	\$ 25.98	3.98
TRUCK DRIVER: Dump Truck.....	\$ 19.67	0.00

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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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 www.dol.gov/whd/govcontracts.

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 Regional Office for the area in which the survey was conducted because those Regional Offices have 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 DECISION"