PORT OF TACOMA

TACOMA, WASHINGTON

LOWER WAPATO CREEK HABITAT PROJECT PHASES II & III - PLANTING, IRRIGATION, FENCING AND LANDSCAPE MAINTENANCE

PROJECT NO. 101449.01

CONTRACT NO. 071490

Thais Howard, PE

Director, Engineering

David Myers

Project Manager

END OF SECTION 00 01 01

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The undersigned Engineer of Record hereby certifies that the Technical Specifications for the following portions of this project were written by me, or under my direct supervision, and that I am duly registered under the laws of the State of Washington, and hereby affix my Professional Seal and signature.

Those Sections prepared under my direct supervision and being certified by my seal and signature below are as follows:

SEAL & SIGNATURE	SECTION(S)
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END OF SECTION

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END OF SECTION 00 01 10

PART 1 - GENERAL

1.01 SUMMARY

A. Contract Drawings: The following drawings are a part of the Contract Documents:

Sheet Designation	Drawing Title
G1.00	Cover Sheet
L1.00	Layout Plan
LI4.00	Irrigation Plan
LI4.10	Irrigation Details
LP5.00	Full Site Planting Plan
LP5.10	Zone A Planting Enlargement
LP5.11	Zone B Planting Enlargement
LP5.12	Zone C Planting Enlargement
LP5.13	Zone D Planting Enlargement
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LOWER WAPATO CREEK HABITAT PROJECT PHASES II & III - PLANTING, IRRIGATION, FENCING AND LANDSCAPE MAINTENANCE

PROJECT NO. 101449.01 | CONTRACT NO. 071490

Scope of Work: The Work required for this 18.5 acre Habitat Project includes the following:

1. The installation of approximately 4,000 LF of perimeter smooth wire fencing.
2. The installation, management and eventual removal of an irrigation system.
3. The initial planting of:
   a. 7,600 bare root or live stake trees
   b. 24,900 bare root or live stake shrubs
   c. 115,200 10 CU. IN. emergent plugs
   These materials will be purchased separately by the Port
4. The replacement planting of approximately:
   a. 1,100 bare root or live stake trees
   b. 3,750 bare root or live stake shrubs
   c. 17,300 10 CU. IN. emergent plugs
   These materials will be purchased separately by the Port
5. The management of invasive weeds and other plants during the Contract period by means of spraying, hand pulling or other means.
6. The overseeding of bare areas with native seed mixes provided by the Port.
7. General site maintenance

Bid Estimate: Estimated cost range is $1,400,000 to $1,600,000, plus Washington State Sales Tax (WSST).

In accordance with RCW 39.04.320, fifteen (15) percent apprenticeship participation is required for certain projects estimated to cost one million ($1,000,000) dollars or more. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530, by phone (360) 902-5320, or e-mail at Apprentice@lni.wa.gov, to obtain information on available apprenticeship programs.

Sealed Bid Date/ Time/Location: Bids will be received at the Front Reception Desk, Port Administration Office, One Sitcum Plaza, Tacoma, Washington 98421 until **2:00 P.M. on July 14, 2022**, at which time they will be publicly opened and read aloud and the apparent low bid will be determined.

Pre-Bid Conference and Site Tour:	No pre-bid Conference or site visit is scheduled for this project as the area is available for public viewing anytime without a Port escort.
Bid Security:	Each Bid must be accompanied by a Bid security in an amount equal to five (5) percent of the Base Bid in a form allowed by the Instructions to Bidders.
Contact Information:	Any questions to the Port may be emailed to procurement@portoftacoma.com. No oral responses will be binding by the Port. Questions will not be accepted after seven (7) days prior to the Bid Date.
Bidding Documents:	Plans, Specifications, Addenda, and Plan Holders List for this Project are available on-line through The Port of Tacoma's Website portoftacoma.com. Click on "Contracts," "Procurement," and then the Procurement Number 071490. Bidders must subscribe to the Holder's List on the right hand side of the screen in order to receive automatic email notification of future addenda and to be placed on the Holder's List. Contact procurement@portoftacoma.com with questions. Holder' s Lists will be updated regularly. Additional Instructions available in Section 00 21 00 - Instructions to Bidders.
Public Works Training Requirements:	Effective July 1, 2019, all businesses are required to have training before bidding on public works projects and prevailing wage under RCW 39.04.359 and RCW 39.12, or is on the list of exempt businesses maintained by the Department of Labor and Industries. The bidder must designate a person or persons to be trained on these requirements. The training will be provided by the Department of Labor and Industries or by a training provider whose curriculum is approved by the Department of Labor and Industries. Please refer to Labor and Industries' web site (https://www.lni.wa.gov/TradesLicensing/PrevWage/Contractors/Training.asp?utm_medium=email&utm_source=govdelivery) for more information and training dates, requirements, and exemptions. Failure to attend this training could result in a determination of "not responsible" and the bidder not being awarded a public works contract.

END OF SECTION 00 11 13

PART 1 - SUMMARY

1.01 DEFINITIONS

All definitions set forth in the Agreement, the General Conditions of the Contract for Construction, and in other Contract Documents are applicable to the Bidding Documents.

A. "Addenda" are written or graphic instruments issued prior to the execution of the Contract which modify or interpret the Bidding Documents by additions, deletions, clarifications, or corrections. The contents of an Addendum are issued in no particular order and therefore should be carefully and completely reviewed.

B. An “Apprentice” is a worker for whom an apprenticeship agreement has been registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-05).

C. "Award" means the formal decision by the Port of Tacoma (“Port”) notifying a Responsible Bidder with the lowest responsive Bid of the Port’s acceptance of their Bid and intent to enter into a Contract with the Bidder.

D. The “Award Requirements” include the statutory requirements as a condition precedent to Award.

E. The “Base Bid” is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents as the base to which Work may be added or from which Work may be deleted for sums stated in Alternate Bids.

F. A “Bid” is a complete and properly signed proposal to do the Work, submitted in accordance with the Bidding Documents, for the sums therein stipulated and supported by any data called for by the Bidding Documents.

G. The “Bid Date” is the day and hour specified in the Bidding Documents, as may be changed through an Addendum, by which Bidders are required to submit Bids to the Port.

H. The “Bid Form” is the form(s) included with the Bidding Documents, with Specification Section 00 41 00, through which a Bidder submits a Bid.

I. A “Bidder” is a person or entity who submits a Bid.

J. The “Bidding Documents” include the Advertisement or Invitation to Bid, Instructions to Bidders, the Bid Form, any other sample bidding and contract forms, including those provided by reference, the Bid security, and the proposed Contract Documents, including any Addenda issued prior to the Bid Date.

K. The “Contract Documents” proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

L. The “Schedule of Unit Prices” is a separate schedule on the Bid Form for Unit Pricing as an all-inclusive price per unit of measurement for materials, equipment, or services as described in the Bidding Documents or in the proposed Contract Documents for the optional use of the Port. Quantities are not predictions of amounts anticipated. The Port may, but is not obligated to, accept a Schedule of Unit Price if it accepts the Base Bid. The Schedule of Unit Prices are not factored into the evaluation of determining the low bid amount and are not included as part of the bid award amount.

M. A “Sub-Bidder” is a person or entity of any tier who submits a bid or proposal to or through the Bidder for materials, equipment or labor for a portion of the Work.

1.02 BIDDER'S REPRESENTATIONS

By making its Bid, each Bidder represents that:

A. BIDDING DOCUMENTS. The Bidder has read and understands the Bidding Documents, and its Bid is made in accordance with them.

B. PRE-BID MEETING. The Bidder has attended pre-Bid meeting(s) required by the Bidding Documents. Attendance at a mandatory meeting or training session means that, in the sole opinion of the Port, a Project representative of a Bidder has attended all or substantially all of such meeting or session.

C. BASIS. Its Bid is based upon the materials, systems, services, and equipment required by the Bidding Documents, and is made without exception.

D. EXAMINATION. The Bidder has carefully examined and understands the Bidding Documents, the Contract Documents including, but not limited to, any liquidated damages, insurance provisions, and the Project site, including any existing buildings, it has familiarized itself with the local conditions under which the Work is to be performed, has correlated its observations with the requirements of the proposed Contract Documents, and it has satisfied itself as to the nature, location, character, quality, and quantity of the Work, the labor, materials, equipment, goods, supplies, work, services, and other items to be furnished, and all other requirements of the Contract Documents. The Bidder has also satisfied itself as to the conditions and other matters that may be encountered at the Project site or that may affect performance of the Work or the cost or difficulty thereof, including, but not limited to, those conditions and matters affecting transportation, access, disposal, handling and storage of materials, equipment and other items; availability and quality of labor, water, electric power, and utilities; availability and condition of roads; climatic conditions and seasons; physical conditions at the Project site and the surrounding locality; topography and ground surface conditions; and equipment and facilities needed preliminary to, and at all times during, the performance of the Work. The failure of the Bidder to fully acquaint itself with any applicable condition or matter shall not in any way relieve the Bidder from the responsibility for performing the Work in accordance with, and for the Contract Sum and within the Contract Time provided for in, the Contract Documents.

E. PROJECT MANUAL. The Bidder has checked its copies of the Project Manual (if any) with the table of contents bound therein to ensure the Project Manual is complete.

F. SEPARATE WORK. The Bidder has examined and coordinated all Drawings, Contract Documents, and Specifications with any other contracts to be awarded separately from, but in connection with, the Work being Bid upon, so that the Bidder is fully informed as to conditions affecting the Work under the Contract being Bid upon.

G. LICENSE REQUIREMENTS. The Bidders and Sub-Bidders are registered and hold all licenses required by the laws of Washington, including a certificate of registration in compliance with RCW 18.27, for the performance of the Work specified in the Contract Documents.

H. CERTIFICATION. The Bidder verifies under penalty of perjury that the Bidder has not have been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries or through a civil judgment entered by a court of limited or general jurisdiction to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW within the three (3) year period immediately preceding the Bid Date.

I. NO EXCEPTIONS. Bids must be based upon the materials, systems, and equipment described and required by the Bidding Documents, without exception.

1.03 BIDDING DOCUMENTS

A. COPIES

1. Bidders may obtain complete sets of the Bidding Documents from The Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts" then "Procurement."

2. Complete Sets. Bidders shall use complete sets of Bidding Documents in preparing Bids and are solely responsible for obtaining updated information. The Port does not assume any responsibility for errors or misinterpretations resulting from the use of incomplete and/or superseded sets of Bidding Documents.

3. Conditions. The Port makes copies of the Bidding Documents available only for the purpose of obtaining Bids on the Work and does not confer a license or grant permission for any other use.

4. Legible Documents. To the extent any Drawings, Specifications, or other Bidding Documents are not legible, it is the Bidder's responsibility to obtain legible documents.

B. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

1. Format. The Contract Documents are divided into parts, divisions, and sections for convenient organization and reference. Generally, there has been no attempt to divide the Specification sections into Work performed by the various building trades, any Work by separate contractors, or any Work required for separate facilities in, or phases of the Project.

2. Duty to Notify. Bidders shall promptly notify the Port in writing of any ambiguity, inconsistency, or error that they may discover upon examination of the Bidding Documents or of the site and local conditions.

3. Products and Installation. All Bidders shall thoroughly familiarize themselves with specified products and installation procedures and submit to the Port any objections (in writing) no later than seven (7) days prior to the Bid Date. The submittal of the Bid constitutes acceptance of products and procedures specified as sufficient, adequate, and satisfactory for completion of the Contract.

4. Written Request. Bidders requiring clarification or interpretation of the Bidding Documents shall make a written email request to procurement@portoftacoma.com at least seven (7) days prior to the Bid Date.

5. Request to Modify Responsibility Criteria. No later than seven (7) days prior to the Bid Date, a potential Bidder may request in writing that the Port modify the Responsibility Criteria. The Port will evaluate the information submitted by the potential Bidder and respond before the Bid Date. If the evaluation results in a change of the Criteria, the Port will issue an Addendum identifying the new Criteria.

6. Addenda. The Bidder shall not rely on oral information provided at any pre-Bid meetings or during site visits. Verbal statements made by representatives of the Port are for informational purposes only. Any interpretation, correction, or change of the Bidding Documents will be made solely by written Addendum. Interpretations, corrections, or changes of the Bidding Documents made in any manner other than by written Addendum, including but not limited to, oral statements will not be binding, and Bidders shall not rely upon such statements, interpretations, corrections, or changes. The Port is not responsible for explanations or interpretations of the Bidding Documents other than in a written Addendum.

7. Site Visits. Any site visits are provided as a courtesy to potential Bidders to assist them in becoming familiar with the Project site conditions. However, only the Bidding Documents, including any issued Addenda, may be relied upon by Bidders.
8. Singular References. Reference in the singular to an article, device, or piece of equipment shall include as many of such articles, devices, or pieces as are indicated in the Contract Documents or as are required to complete the installation.
9. Utilities and Runs. The Bidder should assume that the exact locations of any underground or hidden utilities, underground fuel tanks, and plumbing and electrical runs may be somewhat different from any location indicated in the surveys or Contract Documents.

C. SUBSTITUTIONS

1. For substitutions during bidding, refer to Section 00 26 00 – Substitution Procedures.

D. ADDENDA

1. Distribution. All Addenda will be written and will be made available on the Port's website or any other source specified by the Port for the Project.
2. Copies. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. Verification and Acknowledgment of Receipt. Prior to submitting a Bid, each Bidder shall ascertain that it has received all Addenda issued. Each Bidder shall acknowledge its receipt and consideration of all Addenda in its Bid.

1.04 BIDDING PROCEDURE

A. FORM AND STYLE OF BIDS

1. Form. Bids (including required attachments) shall be submitted on forms identical to the Bid Form included with the Bidding Documents. No oral, email, or telephonic responses or modifications will be considered.
2. Entries on the Bid Form. All blanks on the Bid Form shall be filled in by typewriter, printer, or manually in ink.
3. Figures. All sums shall be expressed in figures, not words. Portions of the Bid Form may require the addition or multiplication of component bids to a total or the identification of component amounts within a total. In case of discrepancy between unit prices listed and their sum(s), the unit prices listed shall govern (rather than the sum).
4. Initial Changes. Any interlineation, alteration, or erasure shall be initialed by an authorized representative of the Bidder.
5. Bid Breakdown. The Bid Form may contain, for the Port’s accounting purposes only, a breakdown of some or all of the components included in the Base Bid.
    a. For lump-sum Bids, the total Contract Sum shall be submitted.
    b. For unit-price Bids, a price shall be submitted for each item of the Work, an extension thereof, and, if requested, the total Contract Sum.
6. Schedule of Unit Prices. All Unit Prices under this schedule shall be bid. The Port reserves the right, but is not obligated, to reject any Bid on which all requested Schedule of Unit Prices are not Bid.
7. No Conditions. The Bidder shall make no conditions or stipulations on the Bid Form, nor qualify its Bid in any manner.

8. Identity of Bidder. The Bidder shall include in the specified location on the Bid Form, the legal name of the Bidder and, if requested, a description of the Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity. The Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. The Port verifies signature authority on the Labor and Industries website https://fortress.wa.gov/lni/bbip/Search.aspx under the contractor registration business owner information. If the business owner information is not current, the Bidder shall show proof of authority to sign at the request of the Port. A Bid submitted by an agent shall have a current power of attorney attached certifying the agent's authority to bind the Bidder
9. Bid Amounts Do Not Include Sales Tax. The Work to be performed constitutes a "retail sale" as this term is defined in RCW 82.04.050. Thus, the Base Bid amount shall include in the sum stated all taxes imposed by law, EXCEPT WASHINGTON STATE AND LOCAL SALES TAX due on the Base Bid. The engaged Contractor will pay retail sales tax on all consumables used during the performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Base Bid price and in any other prices set forth on the Bid Form. The Port will pay state and local retail sales tax due on each progress payment and final payment to the engaged Contractor for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local government.

B. POTENTIAL LISTING OF SUB-BIDDERS (SUBCONTRACTORS)

1. Procedure. On projects equal to or greater than $1,000,000, the Bid Form includes a requirement that certain Sub-Bidders be listed, in which case the Bidder must complete the required list. In these circumstances, and regardless of the anticipated cost of the Project, the Bidder must name the Sub-Bidder or Sub-Bidders with whom the Bidder, if awarded the Contract, will subcontract directly (i.e., not lower-tier Sub-Bidders) for performance of the Work of:
    a. HVAC (heating, ventilation, and air conditioning) Work;
    b. Plumbing Work as described in RCW 18.106;
    c. Electrical Work as described in RCW 19.28; and
    d. Any other categories of Work listed on the Sub-Bidder listing form and/or Bid Form.
2. Self-Performance. If the Bidder intends to self-perform any of these categories of Work, it must name itself for each such category of Work.
3. Multiple Entries. The Bidder shall not list more than one (1) entity for a particular category of Work identified, unless a Sub-Bidder will vary based on an Alternate Bid, in which case the Bidder shall identify the Sub-Bidder to be used for the Alternate and the affected portion of the Work.
4. Failure to Submit. In accordance with RCW 39.30.060, failure of a Bidder to submit, as part of the Bid, the names of such proposed HVAC, plumbing, and electrical Sub-Bidders, or to name itself to perform such Work, or the naming of two (2) or more Sub-Bidders to perform the same Work, shall render the Bidder's Bid non-responsive and; therefore, void.
5. Requirement to Subcontract. The Bidder, if Awarded the Contract, will subcontract with the listed Sub-Bidders for performance of the portion of the Work designated on the Bid Form, subject to the provisions of the Contract for Construction and RCW 39.30.060. The Bidder shall not substitute a listed Sub-Bidder in furtherance of bid shopping or bid peddling.

6. Sub-Bidder Qualification. Listed Sub-Bidders may be required to provide evidence of their qualifications, including a statement of experience and references, prior to Award, or at any time during the Contract Time. Such information shall be provided within twenty-four (24) hours of request. This evidence shall demonstrate that the Sub-Bidder meets or exceeds all requirements for experience, qualifications, manufacturer's certifications, or any other requirements specified in any of the technical sections of the Contract Documents for which the Sub-Bidder proposes to perform Work.

7. Replacement. If a listed Sub-Bidder fails to provide adequate evidence of qualifications, is unable to comply with any bonding requirements of the Bidding Documents or with other requirements of the Contract or Bidding Documents, is not properly licensed, or fails to meet the Responsibility Criteria of the Bidding Documents, the Port may require the Bidder to replace the Sub-Bidder with another subcontractor reasonably acceptable to the Port at no change in the Contract Sum or Contract Time.

8. Sub-Bidder Standards. Sub-Bidders shall meet contractual and technical qualification standards, and provide specialized certification, licensing, and/or payment and performance bonding, if required.

9. MWBE, Veteran-owned, and small business participation encouraged. The Port's policy is to encourage the Contractor to solicit and document participation, and to provide and promote the maximum lawful, practicable opportunity for increased participation, by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE), Veteran-owned businesses (defined in RCW 43.60.010, and Small, Mini and Micro business enterprises (defined in RCW 39.26.010).

C. BID SECURITY

1. Purpose and Procedure. Each Bid shall be accompanied by Bid security payable to the Port in the form required by the Bidding Documents and equal to five (5) percent of the Base Bid only (i.e., not including any Alternates or Unit Prices). The Bid security constitutes a pledge by the Bidder to the Port that the Bidder will enter into the Contract with the Port in the form provided, in a timely manner, and on the terms stated in its Bid, and will furnish in a timely manner, the payment and performance bonds, certificates of insurance, and all other documents required in the Contract Documents. Should the Bidder fail or refuse to enter into the Contract or fail to furnish such documents, the amount of the Bid security shall be forfeited to the Port as liquidated damages, not as a penalty. By submitting a Bid, each Bidder represents and agrees that the Bid security, if forfeited, is a reasonable prediction on the Bid Date of future damages to the Port. Failure of the Bidder to provide Bid Security as required shall render the bid non-responsive.

2. Form. The Bid security shall be in the form of a certified or bank cashier's check payable to the Port or a Bid bond executed by a bonding company reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, possess an A.M. Best rating of "A-," Fiscal Size Category (FSC) six (6) or better, and be authorized by the U.S. Department of the Treasury. The Bid security shall be signed by the person or persons legally authorized to bind the Bidder. Bid bonds shall be submitted using the form included with the Bidding Documents.

3. Retaining Bid Security. The Port will have the right to retain the Bid security of Bidders to whom an Award is being considered until the earliest of either: (a) mutual execution of the Contract, and the Port's receipt of payment and performance bonds, (b) the specified time has elapsed so that Bids may be withdrawn, or (c) when all Bids have been rejected.

4. Return of Bid Security. Within sixty (60) days after the Bid Date, the Port will release or return Bid securities to Bidders whose Bids are not to be further considered in awarding the Contract. Bid securities of the three apparent low Bidders will be held until the Contract has been finally executed, after which all un-forfeited Bid securities will be returned. Bid security may be returned in the form provided or by separate payment.

D. SUBMISSION OF BIDS

1. Procedure. The Bid, the Bid security, and other documents required to be submitted with the Bid, shall be enclosed in a sealed envelope identified with the Project name and number and the Bidder's name and address. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face of the mailing envelope.

   a. If a Bid is mailed, it shall be addressed to the Port of Tacoma, Contracts Department, 1 Sitcum Plaza, Tacoma, WA 98421.

   b. If a Bid is delivered, it shall be delivered to the Front Reception Desk, Port of Tacoma, 1 Sitcum Plaza, Tacoma, WA 98421.

   c. The time stamp clock at the Front Reception Desk at 1 Sitcum Plaza is the Port's official clock.

2. Deposit. Bids shall be deposited at the designated location prior to the Bid Date indicated in the Advertisement or Invitation to Bid, or any extension thereof made by Addendum. Bids received after the Bid Date and time specified shall be returned without consideration at the discretion of the Port, or rejected at the time of receipt.

3. Delivery. The Bidder assumes full responsibility for timely delivery at the location designated for receipt of Bids.

4. Form. Oral, facsimile, telephonic, electronic, or email Bids are invalid and will not be considered.

E. MODIFICATION OR WITHDRAWAL OF BID

1. After the Bid Date. A Bid may not be modified, withdrawn, or canceled by the Bidder during a ninety (90) day period following the Bid Date, and each Bidder so agrees by virtue of submitting its Bid.

2. Before the Bid Date. Prior to the Bid Date, any Bid submitted may be modified or withdrawn only by notice to the party receiving Bids at the place designated for receipt of Bids. The notice shall be in writing, with the signature of the Bidder, and shall be worded so as not to reveal the amount of the original Bid. Email notice will not be accepted. It shall be the Bidder's sole responsibility to verify that the notice has been received by the Port in time to be withdrawn before the Bid opening.

3. Resubmittal. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids, provided that they are then fully in conformance with these Instructions to Bidders.

4. Bid Security with Resubmission. Bid security shall be in an amount sufficient for the Bid as modified or resubmitted.

F. COMMUNICATIONS

1. Communications from a Bidder related to these Instructions to Bidders must be in writing to procurement@portoftacoma.com. Communications, including but not limited to, notices and requests by Sub-Bidders shall be made through the Bidder and not directly by a Sub-Bidder to the Port.

1.05 CONSIDERATION OF BIDS

A. OPENING OF BIDS. Unless stated otherwise in the Advertisement or Invitation to Bid or an Addendum, the properly identified Bids received on time will be opened publicly and will be read aloud. An abstract of the Base Bids and any Alternate Bids will promptly (and generally within twenty-four (24) hours) be made available to Bidders and other interested parties.

B. REJECTION OF BIDS. The Port shall have the right, but not the obligation, to reject any or all Bids for any reason, or for no reason, to reject a Bid not accompanied by the required Bid security, or to reject a Bid which is in any way incomplete or irregular.

C. BIDDING MISTAKES. The Port will not be obligated to consider notice of claimed Bid mistakes received more than twenty-four (24) hours after the Bid Date. In accordance with Washington law, a low Bidder that claims error and fails to enter into the Contract is prohibited from Bidding on the Project if a subsequent call for Bids is made for the Project.

D. ACCEPTANCE OF BID (AWARD)

1. Intent to Accept. The Port intends, but is not bound, to Award a Contract to the Responsible Bidder with the lowest responsive Bid, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents and does not exceed the funds available. The Port has the right to waive any informality or irregularity in any Bid(s) received and to accept the Bid which, in its judgment, is in its own best interests.

2. Requirements for Award. Before the Award, the lowest responsive Bidder must be deemed Responsible by the Port and must satisfy all Award Requirements.

E. BID PROTEST PROCEDURES

1. Procedure. A Bidder protesting, for any reason, the Bidding Documents, a Bidding procedure, the Port's objection to a Bidder or a person or entity proposed by the Bidder, including but not limited to, a finding of non-Responsibility, the Award of the Contract or any other aspect arising from, or relating in any way to, the Bidding, shall cause a written protest to be filed with the Port within two (2) business days of the event giving rise to the protest. (Intermediate Saturdays, Sundays, and legal holidays are not counted as business days.) The written protest shall include the name of the protesting Bidder, the bid solicitation number and title under which the protest is submitted, a detailed description of the specific factual and legal grounds for the protest, copies of all supporting documents, evidence that the apparent low bidder has been given notice of the protest, and the specific relief requested. The written protest shall be sent by email to procurement@portoftacoma.com.

2. Consideration. Upon receipt of the written protest, the Port will consider the protest. The Port may, within three (3) business days of the Port's receipt of the protest, provide any other affected Bidder(s) the opportunity to respond in writing to the protest. If the protest is not resolved by mutual agreement of the protesting Bidder and the Port, the Contracts Director of the Port, or his or her designee, will review the issues and promptly furnish a final and binding written decision to the protesting Bidder, and any other affected Bidder(s), within six (6) business days of the Port's receipt of the protest. (If more than one (1) protest is filed, the Port's decision will be provided within six (6) business days of the Port's receipt of the last protest.) If no reply is received from the Port during the six (6) business-day period, the protest will be deemed rejected.

3. Waiver. Failure to comply with these protest procedures will render a protest waived.

4. Condition Precedent. Timely and proper compliance with, and exhaustion of, these protest procedures shall be a condition precedent to any otherwise permissible judicial consideration of a protest.

1.06 POST BID INFORMATION

A. THE LOWEST RESPONSIVE BIDDER SHALL:

1. Responsibility Detail Form. Within 24 hours of the Low Responsive Bidder Selection Notification, the apparent low Bidder shall submit to the Port the Responsibility Detail Form and other required documents (Section 00 45 13) executed by an authorized company officer. As requested from the Port, the low responsive Bidder shall provide written confirmation that the person signing the Bid on behalf of the Bidder was duly authorized at the time of bid, a detailed breakdown of the Bid in a form acceptable to the Port, and other information required by the Port.

2. The apparent low Bidder shall submit to the Port upon request:

   a. Additional information regarding the use of the Bidder's own forces and the use of subcontractors and suppliers;

   b. The names of the persons or entities (including a designation of the Work to be performed with the Bidder’s own forces, and the names of those who are to furnish materials or equipment fabricated to a special design) proposed for each of the principal portions of the Work (i.e., either a listed Sub-Bidder or a Sub-Bidder performing Work valued at least ten (10) percent of the Base Bid), consistent with the listing required with the Bid; and

   c. The proprietary names and the suppliers of the principal items or systems of materials and equipment proposed for the Work.

3. Failure to provide any of the above information in a timely manner will constitute an event of breach permitting forfeiture of the Bid security.

4. Bidder Responsibility. The Bidder will be required to establish, to the satisfaction of the Port, the reliability and responsibility of itself and the persons or entities proposed to furnish and perform the Work described in the Bidding Documents. If requested, the Bidder shall meet with the Port to discuss the Bid, including any pricing, the Bid components, and any assumptions made by the Bidder.

5. Sub-Bidder Responsibility. The Responsibility of the Bidder may be judged in part by the Responsibility of Sub-Bidders. Bidders must verify the Responsibility Criteria for each first-tier Sub-Bidder. A Sub-Bidder of any tier that hires other Sub-Bidders must verify Responsibility Criteria for each of its lower-tier Sub-Bidders. The verification shall include a representation that each Sub-Bidder, at the time of subcontract execution, is Responsible and possesses required licenses.

6. Objection. Prior to an Award of the Contract, the Port will notify the Bidder in writing if the Port, after due investigation, has reasonable objection to the Bidder or a person or entity proposed by the Bidder. Upon receiving such objection, the Bidder may, at Bidder’s option: (a) withdraw their Bid, (b) submit an acceptable substitute person or entity with no change in the Contract Time and no adjustment in the Base Bid or any Alternate Bid, even if there is a cost to the Bidder occasioned by such substitution, or (c) file a protest in accordance with the Bidding Documents.

7. Change. Persons and entities proposed by the Bidder to whom the Port has made no reasonable objection must be used on the Work for which they were proposed and shall not be changed, except with the written consent of the Port.

8. Right to Terminate. The Bidder's representations concerning its qualifications will be construed as a covenant under the Contract. If a Bidder makes a material misrepresentation on a Qualification Statement, the Port has the right to terminate the Contract for cause and may then pursue any remedies that exist under the Contract or that are otherwise available.

B. INFORMATION FROM OTHER BIDDERS: All other Bidders designated by the Port as under consideration for Award of a Contract shall also provide a properly executed Qualification Statement, if so requested by the Port.

1.07 PERFORMANCE BOND, LABOR AND MATERIAL PAYMENT BOND, AND INSURANCE

A. BOND REQUIREMENTS. Within ten (10) days after the Port's Notice of Award of the Contract, the successful Bidder shall obtain and furnish statutory bonds pursuant to RCW 39.08 covering the faithful performance of the Contract and the payment of all obligations arising thereunder in the form and amount prescribed in the Contract Documents. Bonds shall be written for one hundred (100) percent of the contract award amount, plus Washington State Sales Tax and Change Orders. The cost of such bonds shall be included in the Base Bid.

1. On contracts of one hundred fifty thousand dollars ($150,000) or less, at the option of the Contractor or the General Contractor/Construction Manager as defined in RCW 39.10.210, the Port may, in lieu of the bond, retain ten (10) percent of the contract amount for a period of thirty days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the employment security department, and the department of labor and industries and settlement of any liens filed under RCW 60.28, whichever is later. The recovery of unpaid wages and benefits must be the first priority for any actions filed against retainage held by a state agency or authorized local government.

2. On contracts of one hundred fifty thousand dollars ($150,000) or less, the Port may accept a full payment and performance bond from an individual surety or sureties.

B. TIME OF DELIVERY AND FORM OF BONDS. The successful Bidder shall deliver an original copy of the required bonds to the Port, 1 Sitcum Plaza, Tacoma, WA 98421, within the time specified in the Contract Documents.

C. INSURANCE. The successful Bidder shall deliver a certificate of insurance from the Bidder's insurance company that meets or exceeds all requirements of the Contract Documents.

D. GOVERNMENTAL REQUIREMENTS. Notwithstanding anything in the Bidding or Contract Documents to the contrary, the Bidder shall provide all bonding, insurance, and permit documentation as required by governmental authorities having jurisdiction for any portions of the Project.

1.08 FORM OF AGREEMENT

A. FORM TO BE USED. The Contract for the Work will be written on the form(s) contained in the Bidding Documents, including any General, Supplemental, or Special Conditions, and the other Contract Documents included with the project manual.

B. CONFLICTS. In case of conflict between the provisions of these Instructions and any other Bidding Document, these Instructions shall govern. In case of conflict between the provisions of the Bidding Documents and the Contract Documents, the Contract Documents shall govern.

C. CONTRACT DELIVERY. Within ten (10) days after Notice of Award, the Bidder shall submit a signed Contract to the Port in the form tendered to the Bidder and without modification.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 00 21 00

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PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes administrative and procedural requirements for substitutions.

1.02 DEFINITIONS/CLARIFICATIONS

A. Substitutions. Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.

B. The Contract Documents include performance specifications for products and equipment which meet Project requirements. In those cases where a representative item or manufacturer is named in the specification, it is provided for the sole purpose of identifying a product meeting the required functional performance, and where the words “or equal” are used, a substitution request as further described, is not required.

C. Where non-competitive or sole source products or manufacturers are explicitly specified with the words “or approved equal,” or “Engineer approved equal,” or “as approved by the Engineer” are used, they shall be taken to mean “or approved equal.” In these cases a substitution request as further described in this Section, is required.

1.03 SUBMITTALS

A. Substitution Request Form. Use copy of form located at the end of this Section.

B. Pre-Bid Substitution Requests. Submit one (1) PDF of the Substitution Request Form along with all supporting documentation for consideration of each request. Identify product, fabrication, or installation method to be replaced. Include Drawing numbers and titles. Substitution requests prior to the Bid Date may originate directly from a prime Bidder, or from a prospective Sub-Bidder.

1. Documentation. Show compliance with requirements for substitutions with the following, as applicable:

a. Statement indicating why specified product, fabrication, or installation cannot be provided.

b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.

c. Product Data, including drawings and descriptions of products, fabrication, and installation procedures.

d. Samples, where applicable or requested.

e. Certificates and qualification data, where applicable or requested.

f. Research reports evidencing compliance with building code in effect for the Project.

2. Engineer's Action. Engineer will review substitution requests if received electronically to procurement@portoftacoma.com at least seven (7) days prior to the Bid Date. Substitution requests received after this time will not be reviewed.

a. Forms of Acceptance. Substitution requests will be formally accepted via written addendum prior to the Bid Date. Bidders shall not rely upon approvals made in any other manner.

b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.

c. The Port’s decision of approval or disapproval of a proposed substitution shall be final.

C. Post-Award Substitution Requests must be submitted by the Contractor and not a Subcontractor nor Supplier.

1. Documentation. Show compliance with requirements for substitutions with the following, as applicable:

a. Statement indicating why specified product or fabrication or installation cannot be provided, if applicable.

b. Coordination information, including a list of changes or modifications needed to other parts of the Work that will be necessary to accommodate proposed substitution.

c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Include annotated copy of applicable specification Section. Significant qualities may include, but are not limited to, attributes such as performance, weight, size, durability, visual effect, sustainable design characteristics, warranties, and specific features and requirements indicated. Indicate deviations, if any, from the Work specified. ·

d. Product Data, including drawings and descriptions of products and fabrication and installation procedures.

e. Samples, where applicable or requested.

f. Certificates and qualification data, where applicable or requested.

g. List of similar installations for completed projects with project names and addresses. Also provide names and addresses of the applicable architect, engineer, and owner.

h. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.

i. Research reports evidencing compliance with building code in effect for the Project.

j. Comparison of the approved Baseline Project Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating date of receipt of purchase order, lack of availability, or delays in delivery.

k. Cost information, including a proposal of change, if any, in the Contract Sum.

l. Contractor's certification that proposed substitution complies with requirements in the Contract Documents except as indicated in substitution request, is compatible with related materials, and is appropriate for applications indicated.

m. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

2. Engineer's Action. If necessary, Engineer will request additional information or documentation for evaluation within seven (7) calendar days of receipt of a request for substitution. Engineer will notify Contractor through Port of acceptance or rejection of proposed substitution within fifteen (15) calendar days of receipt of request, or seven (7) calendar days of receipt of additional information or documentation, whichever is later.

a. Forms of Acceptance. Change Order or Minor Change in Work.

b. Use product originally specified if Engineer does not issue a decision on use of a proposed substitution within time allocated.

3. Substitutions for Cause. Submit requests for substitution immediately upon discovery of need for change, but not later than fourteen (14) days prior to date required for preparation and review of related submittals.

   a. Conditions. Engineer will consider Contractor's request for substitution when the following conditions are satisfied:

      1) Requested substitution is consistent with the Contract Documents and will produce indicated results.

      2) Requested substitution will not adversely affect the Baseline Project Schedule.

      3) Requested substitution has received necessary approvals of authorities having jurisdiction.

      4) Requested substitution is compatible with other portions of the Work.

      5) Requested substitution has been coordinated with other portions of the Work.

      6) Requested substitution provides specified warranty.

      7) If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

4. Substitutions for Convenience. Engineer will consider Contractor’s requests for substitution if received within fourteen (14) days after the Notice of Award.

   a. Conditions. Engineer will consider Contractor's request for substitution when the following conditions are satisfied:

      1) Requested substitution offers Port a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities· Port must assume. Port's additional responsibilities may include compensation to Engineer for redesign and evaluation services, increased cost of other construction by Port, and similar considerations.

      2) Requested substitution does not require extensive revisions to the Contract Documents.

      3) Requested substitution is consistent with the Contract Documents and will produce indicated results.

      4) Requested substitution will not adversely affect the Baseline Project Schedule.

      5) Requested substitution has received necessary approvals of authorities having jurisdiction.

      6) Requested substitution is compatible with other portions of the Work.

      7) Requested substitution has been coordinated with other portions of the Work.

      8) Requested substitution provides specified warranty.

9) If requested substitution involves more than one (1) contractor, requested substitution has been coordinated with other portions of the Work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

D. Substitutions will not be considered when:

1. Indicated or implied on shop drawings or product data submittals without formal request submitted in accordance with this Section.

2. Acceptance will require substantial revision of Contract Documents or other items of the Work.

3. Submittal for substitution request does not include point-by-point comparison of proposed substitution with specified product.

1.04 QUALITY ASSURANCE

A. Compatibility of Substitutions: Investigate and document compatibility of proposed substitution with related products and materials.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

PROJECT TITLE: Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance **PROJECT NO.: 101449.01**

SUBMITTED BY: _____ CONTRACT NO.: 071490

PRIME/SUB/SUPPLIER: _____ DATE: _____

Specification Title: _____ Section No.: _____

Description: _____ Paragraph: _____

_____ Page No.: _____

Proposed Substitution: _____

Trade Name: _____ Model No.: _____

Manufacturer: _____

Address: _____ Phone No.: _____

Installer: _____

Address: _____ Phone No.: _____

Differences between proposed substitution and specified product: _____

_____

_____

☐ Point-by-Point comparative data attached - REQUIRED

Reason for not providing specified item: _____

_____

Similar Installation:

Project: _____ A/E: _____

Address: _____

Owner: _____ Date Installed: _____

Proposed substitution affects other parts of Work: ☐ No ☐ Yes; explain _____

Supporting Data Attached:

☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ Other:_____

_____

Applicable to Substitution Requests During Construction:

Proposed to Port for accepting substitution: $_____

Proposed substitution changes Contract Time: ☐ No ☐ Yes [Add] [Deduct] ____ # days.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.

- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay Baseline Project Schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted By: _____

Signed By: _____ Firm: _____

Address: _____

_____

Telephone: _____ Email: _____

Attachments: _____

_____

A/E's REVIEW AND RECOMMENDATION

☐ Approved Substitution

☐ Approved Substitution as Noted

☐ Reject Substitution - Use specified materials.

☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

ENGINEER'S REVIEW AND ACTION

☐ Substitution Approved - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.

☐ Substitution Approved as Noted - Make submittals in accordance with this Specification Section. If during construction, prepare Change Order.

☐ Substitution Rejected - Use specified materials.

☐ Substitution Request received too late - Use specified materials.

Signed by: _____ Date: _____

END OF SECTION 00 26 00

PART 1 - GENERAL

1.01 EXISTING CONDITIONS

A. Certain information relating to existing surface and subsurface conditions and structures is available to Bidders online at www.portoftacoma.com, but will not be part of the Contract Documents, as follows:

1. Site topography and features drawing: Entitled Phase 1 Grading As Built Reference Survey, dated June 16, 2022.

a. This drawing identifies grade elevations and other site features and was prepared by the Phase I contractor as an as built document. It also contains the location of large woody structures located throughout the site and found large wood items that were placed on the site. This drawings is provided for reference only. An electronic version of this file will be provided to the successful Contractor after Award of the Contract.

1.02 AVAILABILITY

A. Reference Documents are available online through the Port of Tacoma's Website www.portoftacoma.com. Click on "Contracts," "Procurement," and then the Procurement Number.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 00 31 00

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PART 1 - GENERAL

1.01 SUMMARY

A. This Section provides the notification required for disclosure of asbestos, lead-containing or other hazardous materials.

1.02 HAZARDOUS MATERIALS NOTICE

A. The Port is reasonably certain that asbestos and lead will not be disturbed by the project. If the Contractor encounters material suspected of containing lead or asbestos which will interfere with the execution of the work, the Contractor shall stop work and notify the Engineer.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 00 31 26

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BIDDER'S NAME: _____

PROJECT TITLE: LOWER WAPATO CREEK HABITAT PROJECT PHASES II & III - PLANTING, IRRIGATION, FENCING AND LANDSCAPE MAINTENANCE

The undersigned Bidder declares that it has read the Contract Documents (including documents provided by reference), understands the conditions under which the Work will be performed, has examined the Project site, and has determined for itself all situations affecting the Work herein Bid upon. Bidder proposes and agrees, if this Bid is accepted, to provide at Bidder's own expense, all labor, machinery, tools, materials, etc., including all Work incidental to, or described or implied as incidental to such items, according to the Contract Documents, and that the Bidder will complete the Work within the time stated, and that Bidder will accept in full the lump sum or unit price(s) set forth below:

ITEM NO.	DESCRIPTION OF ITEM	QTY	UOM	UNIT PRICE	EXTENDED PRICE (QTY. x UNIT PRICE)
1	Mobilization and Demobilization	1	LS		
2	Project Administration	1	LS		
3	Perimeter Fence	1	LS		
4	Irrigation System Installation	1	LS		
5	Irrigation System Management and Maintenance	1	LS		
6	Irrigation System Removal	1	LS		
7	Bare Root Tree and Shrub Planting	28,650	EA		
8	Live Stake Tree and ShrubPlanting	8,700	EA		
9	10 CU. IN. Plug Planting	132,500	EA		
10	Overseeding of Bare Areas	300	HR		
11	Invasive Species Control	2500	HR		
12	Unforseen Conditions Allowance	1	LS	$100,000.00	$100,000.00

TOTAL BID AMOUNT	
10.3% WASHINGTON STATE SALES TAX (WSST) ON BASE BID SUBTOTAL	
BID TOTAL (WITH WSST)	

Note: Show prices in figures only.

Evaluation of Bids. In accordance with the provisions of the Contract Documents, Bids will be evaluated to determine the lowest Base Bid Subtotal offered by a responsible Bidder submitting a responsive Bid.

Schedule of Unit Prices. All prices shall include complete installation without Washington State Sales Tax. The bidder shall propose a price for each item; failure to propose a price for each item may render the bid non-responsive. The Port reserves the right to accept or reject the unit prices proposed.

Trench Excavation Safety Provision. If the bid amount contains work which requires trenching exceeding a depth of four (4) feet, all costs for trench safety shall be included in the Base Bid and indicated below for adequate trench safety systems in compliance with RCW 39.04 and WAC 296-155-650. Bidder shall include a lump sum amount, excluding Washington State Sales Tax. If trench excavation safety provisions do not pertain to the Work, the Bidder should enter “N.A.” or “Not Applicable” in the blank below.

Trench Excavation Safety: _____(Total in Written Figures Only)

Principal Subcontractors/Suppliers. For Bids greater than one million ($1,000,000) dollars, the Bidder shall list below the name of each subcontractor or supplier to whom the Bidder proposes to subcontract the portions of the work listed below, or name itself for the work.

Work to be Performed	**Name of Firm**
HVAC (Heating, Ventilation and Air Conditioning) as described in RCW 39.080	
Plumbing Work as described in RCW 39.080	
Electrical Work as described in RCW 39.080	
Structural Steel Installation as described in RCW 39.080	
Reinforcing Bar Installation as described in RCW 39.080	

Non-Collusion Representation. The Bidder declares under penalty of perjury that the Bid submitted is genuine and not a sham or collusive bid, or made in the interest or on behalf of any person or firm not therein named; and further represents that the Bidder has not directly or indirectly induced or solicited any other bidder to submit a sham bid, or encouraged any other person or corporation to refrain from bidding; and that the Bidder has not in any manner sought by collusion to secure to the Bidder an advantage over any other bidder or bidders.

RCW 39.04.350 Certification. The Bidder represents and certifies, under penalty of perjury, that within the three- (3-) year period immediately preceding the Bid Date, the Bidder has not been determined by a final and binding citation and notice of assessment issued by the Department of Labor and Industries, nor through a civil judgment entered by a court of limited or general jurisdiction, to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, nor 49.52 RCW.

Addenda. Bidder acknowledges receipt and acceptance of all Addenda through No. ____ (Identify Last Addenda By Number)

Bid Security. A certified check, cashier’s check, or other obligation of a bank, or a bid bond in substantially the form set forth in Section 00 43 13, Bid Security Form for at least five (5) percent of the Base Bid Subtotal, shall be submitted with this Bid.

Apprenticeship Requirements. For Bids greater than one million ($1,000,000) dollars, the apprentice labor hours required for this project are fifteen (15) percent of the total labor hours. The Bidder agrees to utilize this level of apprentice participation.

Name of Firm	Date
Signature	By Title
Mailing Address	City, State Zip Code
Telephone Number	Email Address
WA State Contractor's License No.	Employment Security Department No.

Identification of Bidder as a sole proprietor, a partnership, a joint venture, a corporation, or another described form of legal entity

END OF SECTION 00 41 00

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KNOW ALL MEN BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the PORT OF TACOMA as Obligee, in the penal sum of _____ Dollars, for the payment of which the Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigned, jointly and severally, by these present.

The condition of this obligation is such that if the Obligee shall make any award to the Principal for _____, according to the terms of the proposal or bid made by the Principal therefor, and the Principal shall duly make and enter into a contract with the Obligee in accordance with the terms of said proposal or bid and award and shall give bond for the faithful performance thereof, with Surety or Sureties approved by the Obligee; or, if the principal shall, in case of failure to do so, pay and forfeit to the Obligee the penal amount of the deposit specified in the call for bids, then this obligation shall be null and void; otherwise it shall be and remain in full force and effect and the Surety shall forthwith pay and forfeit to the Obligee, as penalty and liquidated damages, the amount of this bond.

SIGNED, SEALED AND DATED THIS _____ DAY OF _____, 20___

BY _____
PRINCIPAL

BY _____
SURETY

_____

_____

_____

AGENT AND ADDRESS

Note: Bidder may submit Surety's bid bond form, provided it is similar in substance, made out in the name of the Port of Tacoma, and that the agent’s name and address appear as specified. Bonds containing riders limiting responsibility for toxic waste or limiting the term of responsibility will be rejected.

END OF SECTION 00 43 13

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THIS IS NOT TO BE SUBMITTED WITH A BID.

THE LOW RESPONSIVE BIDDER SHALL BE REQUIRED TO COMPLETE THIS RESPONSIBILITY DETAIL FORM AS SPECIFIED IN SECTION 00 21 00 - INSTRUCTIONS TO BIDDERS. **THIS COMPLETED RESPONSIBILITY DETAIL FORM SHALL BE SUBMITTED ELECTRONICALLY (PDF) VIA EMAIL TO THE CONTACT(S) IDENTIFIED IN THE LOW RESPONSIVE BIDDER SELECTION NOTIFICATION.**

BIDDER'S COMPANY NAME: _____

For the below Mandatory Bidder Responsibility Criteria, please mark the appropriate choice.

1.01 MANDATORY BIDDER RESPONSIBILITY CRITERIA

A. The Bidder shall meet the following mandatory responsibility criteria as described in RCW 39.04.350(1). The Bidder shall be rejected as not responsible if any answer to questions 1 through 5 is "No" or any answer to questions 6 through 8 is "Yes."

1. Does the Bidder have a Certificate of Registration in compliance with RCW 18.27?

   ☐ Yes ☐ No

2. Does the Bidder have a current Washington State Unified Business Identifier number?

   ☐ Yes ☐ No

3. Does the Bidder have Industrial Insurance Coverage for the Bidder's employees working in Washington State as required in RCW 51?

   ☐ Yes ☐ No

4. Does the Bidder have an Employment Security Department number as required in RCW 50?

   **__Attach__ letter dated within six (6) months of Bid Date.*

   **Request a letter electronically by clicking on the following link https://fortress.wa.gov/esd/twt/pwcinternet/ or by emailing a request to publicworks@esd.wa.gov.*

   ☐ Yes ☐ No

5. Does the Bidder have a Washington State Excise Tax Registration number as required in RCW 82?

   ☐ Yes ☐ No

6. Has the Bidder been disqualified from bidding on any public works project under RCW 39.06.010 or 39.12.065(3)?

   ☐ Yes ☐ No

7. Has the Bidder violated RCW 39.04.370 more than one (1) time as determined by the Washington State Department of Labor and Industries?

   ☐ Yes ☐ No

8. Has the Bidder ever been found to be out of compliance with Apprenticeship Utilization requirements of RCW 39.04.320?

   ☐ Yes ☐ No

9. Has the Bidder ever been found to have willfully violated, as defined in RCW 49.48.082, any provision of Chapters 49.46, 49.48, or 49.52 RCW within the three- (3-) year period immediately preceding the date of this bid solicitation?

   ☐ Yes ☐ No

10. Has the Bidder completed the training required by RCW 39.04.350, or is the Bidder on the list of exempt businesses maintained by the Department of Labor and Industries?

    ☐ Yes ☐ No

If any answer to questions 1 through 5 is "No" or any answer to questions 6 through 8 is "Yes" - **STOP HERE** and contact the Contract Administrator. The Bidder is not responsible for this Work. Otherwise proceed to 1.02. **Provide attached to this completed form documentation to confirm responsibility criteria.**

For remaining criteria below, check or fill-out the appropriate item. Based upon the answer provided by the Bidder, the Port may request additional information or seek further explanation. As needed, provide backup documentation for any explanations listed below.

1.02 CONTRACT AND REGULATORY HISTORY

A. The Port will evaluate whether the Bidder's contract and regulatory history demonstrates an acceptable record of past project performance and consistent responsibility. The Bidder shall answer the following questions. The Bidder may be rejected as not responsible if any answer to questions 1 through 5 below is "Yes."

   1. Has the Bidder had a contract terminated for cause or default in the last five (5) years?

      ☐ Yes, **If YES, explain below.** ☐ No

      _____

   2. Has the Bidder required a Surety to take over all, or a portion of, a project to cure or respond to an asserted default or material breach of contract on the part of the Bidder on any public works project in the last five (5) years?

      ☐ Yes, **If YES, explain below.** ☐ No

      _____

   3. Have the Bidder and major Sub-Bidders been in bankruptcy, reorganization, and/or receivership on any public works project in the last five (5) years?

      ☐ Yes, **If YES, explain below.** ☐ No

      _____

4. Have the Bidder and major Sub-Bidders been disqualified by any state or local agency from being awarded and/or participating on any public works project in the last five (5) years?

   ☐ Yes, **If YES, explain below.** ☐ No

   _____

5. Are the Bidder and major Sub-Bidders currently a party to a formal dispute resolution process with the Port (i.e., a pending mediation, arbitration, or litigation)?

   ☐ Yes, **If YES, explain below.** ☐ No

   _____

1.03 ACCIDENT/INJURY EXPERIENCE

A. The Port will evaluate the Bidder's accident/injury Experience Modification Factor ("EMF") from the Washington State Department of Labor and Industries to assess whether the Bidder has an acceptable safety record preventing personal injuries on projects.

B. List the Bidder's accident/injury EMF for the last five (5) years. An experience factor is calculated annually by the Washington State Department of Labor and Industries.

Year	Effective Year	Experience Factor
1		
2		
3		
4		
5		

If the Bidder has received an EMF of greater than 1.0 for any year, explain the cause(s) of the designation and what remedial steps were taken to correct the EMF. The Bidder may be rejected as not responsible if the Bidder's EMF is greater than 1.0 and sufficient remedial steps have not been implemented.

_____

1.04 WORK PERFORMED BY BIDDER

A. The Bidder shall state the amount of the Work, as an equivalent to the Base Bid, excluding taxes, insurance, and bonding, the Bidder will execute with its own forces.

_____%

1.05 ADDITIONAL CONTRACTOR INFORMATION

A. As part of completing this Responsibility Detail Form, **submit the following information with the completed Responsibility Detail Form:**

   1. Bidder's recent job resume, including a list of similar projects performed and contact information for the similar project owner(s), a brief description of work, start and end dates, and contract amount.

   2. Resumes of Bidder's proposed project manager and job superintendent.

B. The Bidder's failure to provide the required project information may result in a determination of the Bidder being declared non-responsible by the Port.

C. The Bidder shall submit this completed, **SIGNED** Responsibility Detail Form electronically (PDF), with all requested backup documentation, via email to the contact(s) noted on the Low Responsive Bidder Selection Notification.

D. The Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and 39.04.350.

1. Bidder shall verify major subcontractors meet the responsibility criteria required. Fill out one Port of Tacoma Public Works Project Bidder Evaluation Checklist for Subcontractors for each major subcontractor and submit to the Port with this form. Backup documentation is not required to be submitted.

PROJECT: Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance

PROJECT NO.: 101449.01

CONTRACT NO.: 071490

Responsibility Certification Form

The Low responsive Bidder shall complete the Responsibility Detail Form, attach all documentation, and submit to the Port within twenty-four (24) hours following receipt of the Low Responsive Bidder Selection Notification. All forms shall be submitted electronically (PDF) via email to the contact(s) listed on the Selection Notice. Note, the same project may be used to demonstrate experience across multiple categories if applicable.

By completing and signing this Responsibility Detail Form, the Bidder is certifying that the information contained within the Form, the backup documentation, and any additional information requested by the Port is true and complete. The Bidder's failure to disclose the required information or the submittal of false or misleading information may result in the rejection of the Bidder's Bid, revocation of award, or contract termination.

The information provided herein is true and complete.

_____ _____

Signature of Authorized Representative Date

_____

Print Name and Title

PORT OF TACOMA PUBLIC WORKS PROJECT BIDDER EVALUATION CHECKLIST FOR SUBCONTRACTORS

PROJECT TITLE: Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance

BIDDER: _____

CONTRACT AND PROJECT NUMBER: 071490/ 101449.01

This checklist shall be completed by the Bidder and its subcontractors to verify that its subcontractors at each tier meet the responsibility criteria as required by RCW 39.06.020 and RCW 39.04.350.

This checklist should be submitted to the Port of Tacoma Contracts Administrator within twenty-four (24) hours of request.

Document verification information or backup data is not to be submitted to the Port, this information should remain on file with the Contractor and be presented to the Port if requested at a later date.

Item No.	Item	Initials/ Comments
1.	At the time of Bid submittal, have a certificate of registration in compliance with RCW 18.27: Check the L&I site https://fortress.wa.gov/lni/bbip/. Verify that a subcontractor has an electrical contractor license, if required by RCW 19.28, or an elevator contractor license, if required by RCW 70.87.	
2.	While reviewing registration information above, also check contractor's **Employer Liability Certificate** to verify workers' comp (industrial insurance) premium status – current account. Complete a "Submit Contractor Tracking Request" to be notified if the contractor fails to pay workers' comp premiums or renew their contractor registration or if their electrical contractor license is suspended or revoked within one year.	
3.	State excise tax registration number (Department of Revenue). (contractor's Washington State Unified Business Identifier and tax registration number) http://dor.wa.gov/content/doingbusiness/registermybusiness/brd/.	
4.	Not disqualified from bidding on any public works contract under RCW 39.06.010 or RCW 39.12.065(3). Check the Department of Labor and Industries http://www.lni.wa.gov/TradesLicensing/PrevWage/AwardingAgencies/DebarredContractors/.	
5.	Verify subcontractors are registered with the Washington State Employment Security Department (ESD) and have an account number. Request a letter to be sent from the subcontractor electronically by clicking on the following link https://fortress.wa.gov/esd/twt/pwcinternet/ or by emailing a request to publicworks@esd.wa.gov. Include ESD#, UBI#, and business name in the email.	

Item No.	Item	Initials/ Comments
	Certificate of Coverage letter issued/dated within the last six (6) months. Document if subcontractor confirms in writing, under penalty of perjury, that it has no employees and this requirement does not apply.	

END OF SECTION 00 45 13

THIS AGREEMENT is made and entered into by and between the PORT OF TACOMA, a State of Washington municipal corporation, hereinafter designated as the "Port," and:

The "Contractor" is: _____ (Legal Name)

_____ (Address)

_____ (Address 2)

_____ (Phone No.)

The "Project" is: Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance (Title)

101449.01 | 071490 (Project/Contract No.)

1131 Alexander Ave. (Project Address)

Tacoma, WA (Project Address 2)

The "Engineer" is: Thais Howard, PE (Engineer)

Director of Engineering (Title)

thoward@portoftacoma.com (Email)

(253) 888-4718 (Phone No.)

The "Contractor's Representative" is: _____ (Representative)

_____ (Title)

_____ (Email)

_____ (Phone No.)

BACKGROUND AND REPRESENTATIONS:

The Port publicly solicited bids on the Contract Documents. The Contractor submitted a Bid to the Port on the _____ day of _____, 20___ to perform the Work.

The Contractor represents that it has the personnel, experience, qualifications, capabilities, and means to accomplish the Work in strict accordance with the Contract Documents, within the Contract Time and for the Contract Price, and that it and its Subcontractors satisfy the responsibility criteria set forth in the Contract Documents, including any supplemental responsibility criteria.

The Contractor further represents that it has carefully examined, and is fully familiar with, all provisions of the Contract Documents, including any Addenda, that it has fully satisfied itself as to the nature, location, difficulty, character, quality, and quantity of the Work required by the Contract Documents and the conditions and other matters that may be encountered at or near the Project site(s), or that may affect performance of the Work or the cost or difficulty thereof, including all applicable safety and site responsibilities, and that it understands and can satisfy all scheduling and coordination requirements and interim milestones.

AGREEMENT:

The Port and the Contractor agree as follows:

1.0 CONTRACTOR TO FULLY PERFORM THE WORK

The Contractor shall fully execute and complete the entire Work for the Project described in the Contract Documents, except to the extent specifically indicated in the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

2.0 DATE OF COMMENCEMENT

The date of commencement of the Work, which is the date from which the Contract Time is measured, shall be fixed as the date of execution of the Contract.

3.0 CONTRACT

The Contractor shall achieve all interim milestones as set forth in the Contract Documents and Substantial Completion of the entire Work not later than December 31, 2024, subject to adjustments of this Contract Time as provided in the Contract Documents. The Contractor shall achieve Final Completion of the entire Work within 30 calendar days of the date on which Substantial Completion is achieved.

4.0 CONTRACT PRICE

In accordance with the Contractor's Bid dated _____, the Port shall pay the Contractor in current funds for the Contractor's performance of the Contract, the Contract Price of _____ Dollars ($_____), subject to additions and deductions as provided in the Contract Documents. State and local sales tax is not included in the Contract Price, but will be due and paid by the Port with each progress payment.

6.0 INSURANCE AND BONDS

The Contractor shall purchase and maintain insurance and provide bonds as set forth in the Contract Documents.

This Agreement is entered into as of the day and year first written above:

CONTRACTOR	PORT OF TACOMA
By: _____	By: _____
Title: _____	Title: _____
Date: _____	Execution Date: _____

END OF SECTION 00 52 00

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PERFORMANCE BOND # _____

CONTRACTOR (NAME AND ADDRESS)	**SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)**
_____	_____
_____	_____
_____	_____
OWNER (NAME AND ADDRESS)	**AGENT OR BROKER (FOR INFORMATION ONLY)**
PORT OF TACOMA	_____
P.O. BOX 1837	_____
TACOMA, WA 98401-1837	_____

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, in the amount of _____ Dollars ($_____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance, Project No. 101449.01/Contract No. 071490, a copy of which Contract is by reference made a part hereof (the term “Contract” as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, all alterations, additions thereto, deletions therefrom, and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed and issued pursuant to the provisions of RCW 39.08.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise, it shall remain in full force and effect.

FURTHER:

A. Surety hereby waives notice of any alterations, change orders, modifications, or extensions of time made by the Port.

B. Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the Work and/or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety’s obligation hereunder.

C. Whenever Contractor has been declared by the Port to be in default, and the Port has given Surety notice of the Port’s determination of such default, Surety shall promptly (in no event more than fifteen (15) days following receipt of such notice) advise the Port of its intended action to:

   1. Remedy the default within fifteen (15) days following its advice to the Port as set forth above, or

2. Assume within fifteen (15) days, following its advice to the Port as set forth above, completion of the Contract in accordance with the Contract Documents and become entitled to payment of the balance of the Contract Sum, or

3. Pay the Port upon completion of the Contract, in cash, the cost of completion together with all other reasonable costs and expenses incurred by the Port as a result of the Contractor's default, including but not limited to, those reasonable costs and expenses incurred by the Port in its efforts to mitigate its losses, which may include, but are not limited to, attorney's fees and efforts to complete the Work prior to the Surety exercising the options available to it as set forth herein.

D. If the Port shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment, shall pay all costs and attorney's fees incurred by the Port in enforcement of its rights hereunder. Venue for any action arising out of, or in connection with, this bond shall be in Pierce County, Washington.

E. No right or action shall accrue on this bond to, or for the use of, any person or corporation other than the Port of Tacoma.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY	**CONTRACTOR**
_____	_____
Signature	Signature
_____	_____
Printed Name and Title	Printed Name and Title

Power of Attorney attached.

END OF SECTION 00 61 13.13

LABOR AND MATERIAL PAYMENT BOND # _____

CONTRACTOR (NAME AND ADDRESS)	**SURETY (NAME AND PRINCIPLE PLACE OF BUSINESS)**
_____	_____
_____	_____
_____	_____
OWNER (NAME AND ADDRESS)	**AGENT OR BROKER (FOR INFORMATION ONLY)**
PORT OF TACOMA	_____
P.O. BOX 1837	_____
TACOMA, WA 98401-1837	_____

KNOW ALL MEN BY THESE PRESENTS:

That _____ as Principal, hereinafter called Contractor, and _____ as Surety, hereinafter called Surety, are held and firmly bound unto the Port of Tacoma as Obligee, hereinafter called the Port, and all others entitled to recovery hereunder, in the amount of _____ Dollars ($_____) for the payment whereof Contractor and Surety bind themselves, their executors, administrators, legal representatives, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS:

Contractor shall execute an agreement with the Port for Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance, Project No. 101449.01/Contract No. 071490, a copy of which Contract is by reference made a part hereof (the term “Contract” as used herein to include the aforesaid agreement together with all the Contract Documents, addenda, modifications, alterations, additions thereto, deletions therefrom, and any other document or provision incorporated into the Contract) and is hereinafter referred to as the Contract.

This bond is executed pursuant to the provisions of RCW 39.08.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that if Contractor shall promptly make payment to all claimants, as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and shall indemnify and save the Port harmless from all cost and damage by reason of Contractor’s default, then this obligation shall be null and void; otherwise, it shall remain in full force and effect, subject to the following conditions.

A. Surety hereby waives notice of any alterations, change orders, modifications, or extensions of time made by the Port.

B. Surety recognizes that the Contract includes provisions for additions, deletions, and modifications to the Work and/or Contract Time and the amounts payable to the Contractor. Subject to the limitations contained in (A) above, Surety agrees that no such addition, deletion, or modification, or any combination thereof, shall avoid or impair Surety’s obligation hereunder.

C. Surety hereby agrees that every person protected under the provisions of RCW 39.08.010 who has not been paid as provided under the Contract, and pursuant to RCW 39.08.010, less any amounts withheld pursuant to statute, and less retainage withheld pursuant to RCW 60.28, after the expiration of a period of thirty (30) days after the date on which the completion of the Contract in accordance with RCW 39.08, may sue on this bond, prosecute the suit to final judgment as may be due claimant, and have execution thereon including recovery of reasonable costs and attorney's fees as provided by RCW 39.08. The Port shall not be liable for the payment of any costs or expenses of any such suit.

D. No suit or action shall be commenced hereunder by any claimant unless claimant shall have given the written notices to the Port, and where required, the Contractor, in accordance with RCW 39.08.030.

E. The amount of this bond shall be reduced by, and to the extent of, any payment or payments made in good faith hereunder, inclusive of the payment by Surety of claims which may be properly filed in accordance with RCW 39.08 whether or not suit is commenced under and against this bond.

F. If any Claimant shall commence suit and obtain judgment against the Surety for recovery hereunder, then the Surety, in addition to such judgment and attorney fees as provided by RCW 39.08.030, shall also pay such costs and attorney fees as may be incurred by the Port as a result of such suit. Venue for any action arising out of, or in connection with, this bond shall be in Pierce County, Washington.

Signed and Sealed the _____ day of _____, 20____.

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, have an underwriting limitation of not less than the Contract Sum, and be authorized to transact business in the State of Washington.

SURETY	**CONTRACTOR**
_____	_____
Signature	Signature
_____	_____
Printed Name and Title	Printed Name and Title

Power of Attorney attached.

END OF SECTION 00 61 13.16

BOND NO.: _____

PROJECT TITLE: Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance

PROJECT NO.: 101449.01

CONTRACT NO.: 071490

KNOW ALL MEN BY THESE PRESENTS: That we, _____ _____ a corporation existing under and by virtue of the laws of the State of Washington and authorized to do business in the State of Washington, as Principal, and _____, a corporation organized and existing under the laws of the State of _____ and authorized to transact the business of surety in the State of Washington, as Surety, are jointly and severally held and bound unto the PORT OF TACOMA, hereinafter called Port, as Obligee, and are similarly held and bound unto the beneficiaries of the trust fund created by RCW 60.28 as their heirs, executors, administrators, successors, and assigns in the penal sum of _____($_____) plus five (5) percent of any increases in the Contract Price that have occurred or may occur, due to change orders, increases in the quantities, or the addition of any new item of work.

WHEREAS, on the _____ day of _____, the said Principal herein executed Contract No. 071490 with the Port for Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance, Project No. 101449.01.

WHEREAS, said Contract and RCW 60.28 require the Port to withhold from the Principal the sum of five (5) percent from monies earned by the Principal on estimates during the progress of the work, hereinafter referred to as earned retained funds.

WHEREAS, the Principal has requested that the Port accept a bond in lieu of earned retained funds as allowed under RCW 60.28.

NOW THEREFORE, this obligation is such that the Surety, its successors, and assigns are held and bound unto the Port and unto all beneficiaries of the trust fund created by RCW 60.28.011(1) in the aforesaid sum. This bond, including any proceeds therefrom, is subject to all claims and liens and in the same manner and priority as set forth for retained percentages in RCW 60.28. The condition of this obligation is also that if the Principal shall satisfy all payment obligations to persons who may lawfully claim under the trust fund created pursuant to RCW 60.28, to the Port, and indemnify and hold the Port harmless from any and all loss, costs, and damages that the Port may sustain by release of said retainage to Principal, then this obligation shall be null and void, provided the Surety is notified by the Port that the requirements of RCW 60.28.021 have been satisfied and the obligation is duly released by the Port.

IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable under this obligation as Principal. The Surety will not be discharged or released from liability for any act, omission, or defenses of any kind or nature that would not also discharge the Principal.

IT IS HEREBY FURTHER DECLARED AND AGREED that this obligation shall be binding upon and inure to the benefit of the Principal, the Surety, the Port, the beneficiaries of the trust fund created by RCW 60.28 and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, said Principal and said Surety have caused these presents to be duly signed and sealed this _____ day of _____, 20____.

_____

By: _____
Principal

Address: _____

City/ST/Zip: _____

Phone: _____

_____

Surety Name: _____

By: _____
Attorney-In-Fact

Address: _____

City/ST/Zip: _____

Phone: _____

IMPORTANT: Surety companies executing bonds must have an A.M. Best Rating of "A-, FSC (6)" or higher, and be authorized to transact business in the State of Washington.

END OF SECTION 00 61 23

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ARTICLE 1 - THE CONTRACT DOCUMENTS

1.01 GENERAL

A. Contract Documents form the Contract. The Contract Documents are enumerated in the Agreement between the Port and Contractor (“Agreement”). Together, the Contract Documents form the Contract. The Contract represents the entire integrated agreement between the parties and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only in writing and only as set forth in the Contract Documents.

B. Headings only for convenience. The titles or headings of the sections, divisions, parts, articles, paragraphs, and subparagraphs of the Contract Documents are intended only for convenience.

1.02 DEFINITIONS

A. "Contract Documents" proposed for the Work consist of the Agreement, the General Conditions of the Contract (as well as any Supplemental, Special, or other conditions included in the Project Manual), the Drawings, the Specifications, and all Addenda issued prior to, and all modifications issued after, execution of the Contract.

B. “Contractor” means the person or entity contracting to perform the Work under these Contract Documents. The term Contractor includes the Contractor’s authorized representative for purposes of identifying obligations and responsibilities under the Contract Documents, including the ability to receive notice and direction from the Port.

C. "Day" means a calendar day unless otherwise specifically designated.

D. "Drawings” are the graphic and pictorial portions of the Contract Documents showing the design, location, and dimensions of the Work, including plans, elevations, sections, details, and diagrams.

E. "Engineer” is the Port employee generally tasked with administering the Project on the Port’s behalf and the person with overall responsibility for managing, for the Port, the Project scope, budget, and schedule. To the extent empowered, the Engineer may delegate to others at the Port (such as a Project Manager or Inspector) the responsibility for performing delegated responsibilities of the Engineer’s under this Contract.

F. "Port” means the Port of Tacoma. The Port will designate in writing a representative (usually the Engineer) who shall have the authority to act on the Port’s behalf related to the Project. The “Port” does not include staff, maintenance, or safety workers, or other Port employees or consultants that may contact the Contractor or be present at the Project site.

G. “Project” is identified in the Agreement and is the total construction to be performed by or through the Port, of which the Work performed under the Contract Documents may be only a part.

H. "Specifications” are those portions of the Contract Documents that specify the written requirements for materials, equipment, systems, standards, and workmanship for the Work and for the performance of related services.

I. “Subcontractor” means a person or entity that contracts directly with the Contractor to perform any Work under the Contract Documents. “Subcontractor of any tier” includes Subcontractors as well as any other person or entity, including suppliers, that contracts with a Subcontractor or a lower-tier Subcontractor (also referred to as "Sub-subcontractors") to perform any of the Work.

J. "Work" means the construction and services required by the Contract Documents, whether completed or partially completed, and includes all labor, tools, equipment, materials, services, and incidentals necessary to complete all obligations under the Contract Documents. The Work may constitute only a part of the Project, and may interface and need to be coordinated with the work of others.

1.03 INTENT OF THE CONTRACT DOCUMENTS

A. Intent of Contract Documents. The intent of the Contract Documents is to describe the complete Work and to include all items and information necessary for the proper execution and completion of the Work by the Contractor.

B. Contract Documents are complementary. The Contract Documents are complementary, and what is required by one shall be as binding as if required by all; performance by the Contractor is required to the extent consistent with the Contract Documents and reasonably inferable from them as being necessary to produce the indicated results.

C. No third party contract rights. The Contract Documents shall not create a contractual relationship of any kind (1) between the Port and a Subcontractor of any tier (although the Port does not waive any third-party beneficiary rights it may otherwise have as to Subcontractors of any tier), (2) between the Contractor and the Engineer or other Port employees or consultants, or (3) between any persons or entities other than the Port and Contractor.

1.04 CORRELATION OF THE CONTRACT DOCUMENTS

A. Precedence. In the event of a conflict or discrepancy between or among the Contract Documents, the conflict or discrepancy will be resolved by the following order of precedence: with an addendum or Change Order having precedence over an earlier document, and computed dimensions having precedence over scaled dimensions, and large scale drawings take precedence over small scale drawings:

1. The signed Agreement

a. Supplemental Conditions

b. Division 00 General Conditions

c. Division 01 General Requirements of Specifications

d. All other Specifications, including all remaining divisions, material and system schedules and attachments, and Drawings

e. All other sections in Division 00 not specifically identified herein by Section

B. Inconsistency between or among Contract Documents. If there is any inconsistency between the Drawings, schedules, or Specifications, or any attachments, the Contractor will make an inquiry to the Engineer to determine how to proceed, and, unless otherwise directed, the Contractor will provide the better quality or greater quantity of any work or materials, as reasonably interpreted by the Port, at no change in the Contract Sum or Contract Time. Thus, if Work is shown on Drawings, but not contained in Specifications or schedules, or contained in Specifications or schedules, but not shown on the Drawings, the Work as shown or contained will be provided at no change in the Contract Sum or Contract Time, according to Specifications or Drawings to be issued by the Port.

C. Inconsistency with law. In the event of a conflict between the Contract Documents and applicable laws, codes, ordinances, regulations, or orders of governmental authorities having jurisdiction over the Work, or in the event of any conflict between such laws, the most stringent requirements govern.

D. Organization of Contract Documents. The organization of the Specifications and Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of the Work to be performed. The Port assumes no responsibility for the division and proper coordination of Work between particular Subcontractors.

E. Bid quantities are estimates only. Any “bid quantities” set forth in the Contract Documents are estimates only. The Port does not warrant that the actual amount of Work will correspond to any estimates. The basis of payment will be the actual quantities performed in accordance with the Contract Documents.

1.05 OWNERSHIP OF THE CONTRACT DOCUMENTS

A. Port owns all Contract Documents. All Drawings, Specifications, and other Contract Documents furnished to the Contractor are Port property, and the Port retains all intellectual property rights, including copyrights. The Contract Documents are to be used only with respect to the Project.

ARTICLE 2 - PORT OF TACOMA

2.01 AUTHORITY OF THE ENGINEER

A. Engineer will be Port’s representative. The Engineer or the Engineer’s designee will be the Port’s representative during the Project and will administer the Project on the Port’s behalf.

B. Engineer may enforce all obligations. The Engineer has the authority to enforce all requirements imposed on the Contractor by the Contract Documents.

C. Only Engineer is agent of Port. Other than the Engineer, no other Port employee or consultant is an agent of the Port, and none are authorized to agree on behalf of the Port to changes in the Contract Sum or Contract Time, nor to waive provisions of the Contract Documents, nor to direct the Contractor to take actions that change the Contract Sum or Contract Time, nor to accept notice of protests or claims on behalf of the Port.

2.02 ADMINISTRATION OF THE CONTRACT

A. Port will administer Contract. The Port will provide administration of the Contract through the Engineer or the Engineer’s designee. All communications with the Port or its consultants related to the Contract will be through the designated representative.

B. Port not responsible for means and methods. The Port is not responsible for, and will have no control or charge of, the means, methods, techniques, sequences, or procedures of construction, or for safety precautions or programs incidental thereto, because these are the sole responsibility of the Contractor. If the Port makes any suggestion of means, methods, techniques, sequences, or procedures, the Contractor will exercise its independent judgment in deciding whether to adopt the suggestion, except as otherwise provided in the Contract Documents.

C. Port not responsible for acts or omissions of Contractor or Subcontractors. The Port is not responsible for, and will have no control or charge of, the acts or omissions of the Contractor, Subcontractors of any tier, suppliers, or any of their agents or employees, or any other persons performing a portion of the Work.

D. Port not responsible for the Work. The Port is not responsible for the Contractor’s failure to carry out the Work in accordance with the Contract Documents. The presence of the Engineer or others at the Project site at any time does not relieve the Contractor from its responsibility for non-conforming Work.

E. Port will have access to the Work. The Port and its representatives will at all times have access to the Work in progress, and the Contractor will provide proper facilities for such access and for inspection.

2.03 INFORMATION PROVIDED BY THE PORT

A. Port to furnish information with reasonable promptness. The Port shall furnish information and services required of the Port by the Contract Documents with reasonable promptness.

B. Subsurface investigation. The Port may have undertaken a limited investigation of the soil and other subsurface conditions at the Project site for design purposes only. The results of these investigations will be available for the convenience of the Contractor, but they are not Contract Documents. There is no warranty or guarantee, express or implied, that the conditions indicated are representative of those existing at the site or that unforeseen developments may not occur. The Contractor is solely responsible for interpreting the information.

2.04 CONTRACTOR REVIEW OF PROJECT INFORMATION

A. Contractor to familiarize itself with site and conditions of Work. Prior to executing the Contract, the Contractor shall visit the site, become generally familiar with local conditions under which the Work is to be performed, and correlate personal observations with the requirements of the Contract Documents and all information provided with the Bid Documents. By signing the Contract, the Contractor confirms that the Contract Sum is reasonable compensation for the Work; that the Contract Time is adequate; that it has carefully examined the Contract Documents and the Project site; and that it has satisfied itself as to the nature, location, and character of the Work, the labor, materials, equipment, and other items required and all other requirements of the Contract Documents. The Contractor’s failure fully to acquaint itself with any such condition does not relieve the Contractor from the responsibility for performing the Work in accordance with the Contract Documents, within the Contract Time, and for the Contract Sum.

B. Contractor to review Contract Documents. Because the Contract Documents are complementary, the Contractor will, before starting each portion of the Work, carefully study and compare the various Drawings, Specifications, and other Contract Documents, as well as all information furnished by the Port.

C. Contractor to confirm field conditions. Before starting each portion of the Work, the Contractor shall take field measurements of and verify any existing conditions, including all Work in place, and all general reference points; shall observe any conditions at the site affecting the Contractor; and shall carefully compare field measurements, conditions and other information known to the Contractor with the Contract Documents.

2.05 PORT’S RIGHT TO REJECT, STOP, AND/OR CARRY-OUT THE WORK

A. Port may reject Work. The Port has the authority, but not the obligation, to reject work, materials, and equipment that is defective or that otherwise does not conform to the Contract Documents, and to decide questions concerning the Contract Documents. However, the failure to so reject, or the presence of the Port at the site, shall not be construed as assurance that the Work is acceptable or being completed in compliance with the Contract Documents.

B. Port may stop Work. If the Contractor fails to correct Work that does not comply with the requirements of the Contract Documents, or repeatedly or materially fails to properly carry out the Work, the Port may issue an order to stop all or a portion of the Work until the cause for the order has been eliminated. The Port’s right to stop the Work shall not impose a duty on the Port to exercise this right for the benefit of the Contractor or any third party.

C. Port may carry-out Work. If the Contractor fails to perform the Work properly, fails to perform any provision of this Contract, or fails to maintain the Baseline Project Schedule, or if the Port reasonably concludes that the Work will not be completed in the specified manner or within the Contract Time, then the Port may, after three (3) days' written notice to the Contractor and without prejudice to any other remedy the Port may have, perform itself or have performed any or all of the Work and may deduct the cost thereof from any payment then or later due the Contractor.

2.06 SEPARATE CONTRACTORS

A. Port may engage separate contractors or perform work with its own forces. The Port may contract with other contractors ("Separate Contractor") in connection with the Project or perform work with its own forces. The Contractor shall coordinate and cooperate with any Port forces or Separate Contractors, as applicable. The Contractor shall provide reasonable opportunity for the introduction and storage of materials and the execution of work by others.

B. Contractor to inspect work of others. If any part of the Contractor's Work depends on the work of the Port or any Separate Contractor, the Contractor shall inspect and promptly report to the Port, in writing, any defects that impact the Contractor. Failure of the Contractor to so inspect and report defects in writing shall constitute an acceptance by Contractor of the work of the Port or Separate Contractor.

C. Contractor to resolve claims of others. Should the Contractor, or any of its Subcontractors of any tier, cause damage of any kind, including but not limited to delay, to any Separate Contractor, the Contractor shall promptly, and using its best efforts, settle or otherwise resolve the dispute with the Separate Contractor. The Contractor shall also promptly remedy damage caused to completed or partially completed construction.

2.07 OFFICERS AND EMPLOYEES OF THE PORT

A. No personal liability. Officers, employees, and representatives of the Port, including the Commissioners, acting within the scope of their employment, shall not be personally liable to Contractor for any acts or omissions arising out of the Project.

ARTICLE 3 - CONTRACTOR'S RESPONSIBILITIES

3.01 DUTY TO PERFORM THE ENTIRE WORK

A. Contractor must perform entire Work in accordance with Contract Documents. The Contractor shall perform the entire Work required by the Contract in accordance with the Contract Documents. Unless otherwise specifically provided, the Contractor shall provide and pay for all labor, tools, equipment, materials, electricity, power, water, other utilities, transportation, and other facilities necessary for the execution and completion of the Work.

B. Contractor shall be independent contractor. The Contractor shall be, and operate as, an independent contractor in the performance of the Work. The Contractor is not authorized to enter into any agreements or undertakings for, or on behalf of, the Port and is not an agent or employee of the Port.

3.02 OBSERVED ERRORS, INCONSISTENCIES, OMISSIONS, OR VARIANCES IN THE CONTRACT DOCUMENTS

A. Contractor to notify Port of any discrepancy. The Contractor's obligations to review and carefully study the Contract Documents and field conditions are for the purpose of facilitating coordination and construction. If the Contractor at any time observes that the Contract Documents, including Drawings and Specifications, vary from the conditions of the Project site, are in error, or omit any necessary detail, the Contractor shall promptly notify the Engineer in writing through a Request for Information. Any Work done after such observation, until authorized by the Engineer, shall be at Contractor's risk. The Contractor shall also promptly report to the Engineer any observed error, inconsistency, omission, or variance with applicable laws through a Request for Information. If the Contractor fails either to carefully study and compare the Contract Documents, or to promptly report any observed error, inconsistency, omission, or variance, the Contractor shall assume full responsibility and shall bear all costs, liabilities, and damages attributable to the error, inconsistency, omission, or variance.

B. Requests for Information. The Contractor shall submit Requests for Information concerning the Contract Documents by following the procedure and using such form as the Port may require. The Contractor shall minimize Requests for Information by thoroughly studying the Contract Documents and reviewing all Subcontractor requests. The Contractor shall allow adequate time in its planning and scheduling for a response from the Port to a Request for Information.

C. Port may provide information to supplement Drawings and Specifications. Minor items of work or detail that are omitted from the Drawings and Specifications, but inferable from the information presented and normally provided by accepted good practice, shall be provided and/or performed by the Contractor as part of the Contract Sum and within the Contract Time. Similarly, the Engineer may furnish to the Contractor additional Drawings and clarifications, consistent with the Contract Documents, as necessary to detail and illustrate the Work. The Contractor shall conform its Work to such additional Drawings and clarifications at no increase in the Contract Sum or Contract Time.

3.03 SUPERVISION AND RESPONSIBILITY FOR SUBCONTRACTORS

A. Contractor responsible for Work and workers. The Contractor shall have complete control of the means, methods, techniques, sequences, or procedures related to the Work, and for all safety precautions or programs. The Contractor shall have complete control over, and responsibility for, all personnel performing the Work. The Contractor is also responsible for the acts and omissions of the Contractor's principals, employees, and other persons or entities performing portions of the Work for, or on behalf of, the Contractor or any of its Subcontractors of any tier.

B. Contractor to supervise the Work. The Contractor shall continuously supervise and direct the Work using competent and skilled personnel and the Contractor's best skill and attention.

C. Contractor to enforce discipline and good order. The Contractor shall enforce strict discipline and good order among all workers on the Project, and shall not employ any unfit person or anyone not skilled in the work to which they are assigned. Incompetent, careless, or negligent workers shall immediately be removed from the Work. The Port may, but is not obligated to, require the Contractor to remove from the Work, at no change in the Contract Sum or Contract Time, anyone whom the Port considers objectionable.

3.04 MATERIALS AND EQUIPMENT

A. Material and equipment to be new. All materials and equipment to be incorporated into the Work shall be new, unless specifically provided otherwise in the Contract Documents. The Contractor shall, if required in writing by the Port, furnish satisfactory evidence regarding the kind and quality of any materials, identify the source, and warrant compliance with the Contract Documents. The Contractor shall ensure that all materials and equipment are protected, kept dry, and stored under cover in a manner to protect such materials and equipment.

B. Material and equipment shall conform to manufacturer instructions. All materials and equipment shall conform, and shall be applied, installed, used, maintained, and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processor, unless otherwise specifically provided by the Engineer.

3.05 CONTRACTOR WARRANTIES

A. Work will be of good quality and performed in workmanlike manner. In addition to any specific warranties set forth in the Contract Documents, the Contractor warrants that the Work, including all materials and equipment furnished under the Contract, will be of good quality and new, will be performed in a skillful and workmanlike manner, and will conform to the requirements of the Contract Documents. Any Work not conforming to this warranty, including unapproved or unauthorized substitutions, shall be considered defective.

B. Work will be free from defects. The Contractor warrants that the Work will be free from defects for a period of one (1) year from the date of Substantial Completion of the Project.

C. Contractor to collect and deliver warranties to Port. The Contractor shall collect and deliver to the Port any written warranties required by the Contract Documents. These warranties shall be obtained and enforced by the Contractor for the benefit of the Port without the necessity of separate assignment. These warranties shall extend to the Port all rights, claims, benefits, and interests that the Contractor may have under express or implied warranties or guarantees against a Subcontractor of any tier, supplier, or manufacturer for defective or non-conforming Work. Warranty provisions that purport to limit or alter the Port's rights under the Contract Documents, or the laws of the State of Washington, are null and void.

D. General requirements. The Contractor is not relieved of its general warranty obligations by the specification of a particular product or procedure in the Contract Documents. Warranties in the Contract Documents shall survive completion, acceptance, and final payment.

3.06 REQUIRED WAGES

A. Contractor will pay required wages. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project. See Specification Section 00 73 46.

B. The Contractor shall defend (at Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct or indirect, and including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses of litigation, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or Chapter 51 RCW ("Industrial Insurance").

3.07 STATE AND LOCAL TAXES

A. Contractor will pay taxes on consumables. The Contractor will pay the retail sales tax on all consumables used during performance of the Work and on all items that are not incorporated into the final Work; this tax shall be included in the Contract Sum.

B. Port will pay taxes on the Contract Sum. The Port will pay state and local retail sales tax on the Contract Sum with each progress payment, and on final payment, for transmittal by the Contractor to the Washington State Department of Revenue or to the applicable local taxing authority. Rule 170: WAC 458-20-170.

C. Direct all tax questions to the Department of Revenue. The Contractor should direct all questions concerning taxes on any portion of the Work to the State of Washington Department of Revenue or to the local taxing authority.

D. State Sales Tax - Rule 171: WAC 458-20-171. For work performed related to building, repairing, or improving streets, roads, etc., which are owned by a municipal corporation, or political subdivision of the state, or by the United States, and which are used, primarily, for foot or vehicular traffic, the Contractor shall include Washington State Retail Sales Taxes in the various schedule prices, or other contract amounts, including those that the Contractor pays on the purchase of materials, equipment, or supplies used or consumed in doing the Work.

1. The bid form will indicate which bid items are subject to Rule 171. Any such identification by the Port is not binding upon the Department of Revenue.

3.08 PERMITS, LICENSES, FEES, AND ROYALTIES

A. Contractor to provide and pay for permits unless otherwise specified. Unless otherwise specified, the Contractor shall procure and pay for all permits, licenses, and governmental inspection fees necessary or incidental to the performance of the Work. All costs related to these permits, licenses, and inspections shall be included in the Contract Sum. Any action taken by the Port to assist the Contractor in obtaining permits or licenses shall not relieve the Contractor of its sole responsibility to obtain and pay for permits, licenses, and inspections as part of the Contract Sum.

B. Contractor’s obligations when permit must be in Port’s name. When applicable law or agency requires a permit to be issued to a public agency, the Port will support the Contractor’s request for the permit and accept the permit in the Port’s name, if:

1. The Contractor takes all necessary steps required for the permit to be issued;

2. The permit applies to Work performed in connection with the Project; and

3. The Contractor agrees in writing to abide by all requirements of the permit and to defend and hold harmless the Port from any liability in connection with the permit.

C. Contractor to pay royalties. The Contractor shall pay all royalties and license fees required for the Work unless otherwise specified in the Contract Documents.

3.09 SAFETY

A. Contractor solely responsible for safety. The Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work and the performance of the Contract.

B. Port not responsible for safety. The Port may identify safety concerns to the Contractor; however, no action or inaction of the Port or any third party relating to safety will: (1) relieve the Contractor of its sole and complete responsibility for safety and sole liability for any consequences, (2) impose any obligation on the Port or a third party to inspect or review the Contractor’s safety program or precautions, (3) impose any continuing obligation on the Port or a third party to ensure the Contractor performs the Work safely, or (4) affect the Contractor’s responsibility for the protection of property, workers, and the general public.

C. Contractor to maintain a safe Work site. The Project site may be occupied during performance of the Work. The safety of these site occupants is of paramount importance to the Port. The Contractor shall maintain the Work site and perform the Work in a safe manner and in accordance with the Washington Industrial Safety and Health Act (WISHA) and all other applicable safety laws, rules, and regulations. This requirement shall apply continuously and not be limited to working hours.

D. Contractor to protect Work site and adjacent property until Final Completion. The Contractor shall continuously protect the Work and adjacent property from damage. At all times until Final Completion, the Contractor shall be responsible for, and protect from damage, weather, deterioration, theft, and vandalism, the Work and all materials, equipment, tools, and other items incorporated or to be incorporated in the Work, and shall repair any damage, injury, or loss.

3.10 CORRECTION OF WORK

A. Contractor to correct defective Work. The Contractor shall, at no cost to the Port, promptly correct Work that is defective or that otherwise fails to conform to the requirements of the Contract Documents. Such Work shall be corrected, whether before or after Substantial Completion, and even if it was previously inspected or observed by the Port.

B. One-year correction period. The Contractor shall correct all defects in the Work appearing within one (1) year of Substantial Completion or within any longer period prescribed by law or by the Contract Documents. The Contractor shall initiate remedial action within fourteen (14) days of receipt of notice from the Port and shall complete remedial work within a reasonable time. Work corrected by the Contractor shall be subject to the provisions of this Section 3.10 for an additional one-year period following the Port's acceptance of the corrected Work.

C. Contractor responsible for defects and failures to correct. The Contractor shall be responsible for any expenses incurred by the Port resulting from defects in the Work. If the Contractor refuses or neglects to correct the defects, or does not timely accomplish corrections, the Port may correct the Work and charge the Contractor the cost of the corrections. If damage or loss of service may result from a delay in correction, the corrections may be made by the Port and reimbursed by the Contractor.

D. Port may accept defective work. The Port may, at its sole option, elect to retain defective or nonconforming Work. In such a case, the Port shall reduce the Contract Sum by a reasonable amount to account for the defect or non-conformance.

E. No period of limitation established. Nothing contained in this Section 3.10 establishes a period of limitation with respect to any obligations under the Contract Documents or law. The establishment of the one (1) year correction period relates only to the specific obligation of the Contractor to correct defective or non-conforming Work.

3.11 UNCOVERING OF WORK

A. Contractor to uncover work covered prior to inspection. If any portion of the Work is covered prior to inspection and approval, the Contractor shall, at its expense, uncover or remove the Work for inspection by the Port or others, and replace the Work to the standard required by the Contract Documents.

B. Contractor to uncover work at Port's request. After initial inspection and observation, the Port may order a reexamination of Work, and the Work must be uncovered by the Contractor. If the uncovered Work complies with the Contract Documents, the Port shall pay the cost of reexamination and replacement. If the Work is found not to comply with the Contract Documents, the Contractor shall pay the cost of replacement, unless the Contractor demonstrates that it did not cause the defect in the Work.

3.12 RELOCATION OF UTILITIES

A. Contractor should assume underground utilities are in approximate locations. The Contractor should assume that the locations of any underground or hidden utilities, underground tanks, and plumbing or electrical runs indicated in surveys or the Contract Documents are shown in approximate locations. The accuracy of this information is not guaranteed by the Port and shall be verified by the Contractor. The Contractor shall comply with RCW 19.122.030 and utilize a utility locator service to locate utilities on Port property. The Contractor shall bear the risk of loss if any of its Work directly or indirectly damages or interrupts any utility service or causes or contributes to damages of any nature.

B. Utility relocation or removal. Where relocation or removal of utilities is necessary or required, it shall be performed at the Contractor's sole expense, unless the Contract Documents specify otherwise. If a utility owner is identified as being responsible for relocating or removing utilities, the work will be accomplished at the utility owner's convenience, either during, or in advance of, construction. Unless otherwise specified, it shall be the Contractor's sole responsibility to coordinate, schedule, and pay for work performed by a utility owner.

C. Contractor to notify Port of unknown utilities. If the Contractor discovers the presence of any unknown utilities, it shall immediately notify the Engineer in writing.

3.13 LABOR

A. Contractor responsible for labor peace. The Contractor is responsible for labor peace relating to the Work and shall cooperate in maintaining Project-wide labor harmony. The Contractor shall use its best efforts as an experienced contractor to adopt and implement policies and practices designed to avoid work stoppages, slowdowns, disputes, or strikes.

B. Contractor to minimize impact of labor disputes. The Contractor will take all necessary steps to prevent labor disputes from disrupting or otherwise interfering with access to Port property. If a labor dispute disrupts the progress of the Work or interferes with access, the Contractor shall promptly and expeditiously take all necessary action to eliminate or minimize the disruption or interference.

3.14 INDEMNIFICATION

A. Duty to defend, indemnify, and hold harmless. To the fullest extent permitted by law and subject to this Section 3.14, the Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port and the Northwest Seaport Alliance, including their respective Commissions, officers, managers, and employees, the Engineer, any consultants, and the agents and employees, successors and assigns of any of them (the "Indemnified Parties") from and against claims, damages, lawsuits, losses (including loss of use), disbursements, liabilities, obligations, fines, penalties, costs, and expenses, whether direct and indirect or consequential, including but not limited to, consultants' fees, and attorneys' fees incurred on such claims and in proving the right to indemnification ("Claims"), arising out of, or resulting from, the acts or omissions of the Contractor, a Subcontractor of any tier, their agents, and anyone directly or indirectly employed by any of them or anyone for whose acts they may be liable (individually and collectively, the "Indemnitor").

B. Duty to defend, indemnify, and hold harmless for sole negligence. The Contractor will fully defend, indemnify, and hold harmless the Indemnified Parties for the sole negligence or willful misconduct of the Indemnitor.

C. Duty to defend, indemnify, and hold harmless for concurrent negligence. Where Claims arise from the concurrent negligence of (1) the Port; and (2) the Indemnitor, the Contractor's obligations to indemnify and defend the Indemnified Parties under this Section 3.14 shall be effective only to the extent of the Indemnitor's negligence.

D. Duty to indemnify not limited by workers' compensation or similar employee benefit acts. In claims against any of the Indemnified Parties by an employee of the Contractor, a Subcontractor of any tier, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under this Section 3.14 shall not be limited by a limitation on amount or type of damages, compensation, or benefits payable under workers' compensation acts, disability benefit acts, or other employee benefit acts. After mutual negotiation of the parties, the Contractor waives immunity as to the Indemnified Parties under Title 51 RCW, "Industrial Insurance."

E. Intellectual property indemnification. The Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Indemnified Parties harmless for Claims for infringement by the Contractor of copyrights or patent rights arising out of, or relating to, the Project.

F. Labor peace indemnification. If the Contractor fails to satisfy its labor peace obligations under the Contract, the Contractor will be liable for and shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Indemnified Parties for Claims brought against the Port by third parties (including but not limited to lessees, tenants, contractors, customers, licensees, and invitees of the Port) for injunctive relief or monetary loss.

G. Cyber risk indemnification. Contractor shall defend, indemnify, and hold harmless the Indemnified Parties from and against any liability, expense, fines, penalties, cost, demand, or other obligation, resulting from or out of any cyber-related risk that includes theft, loss or misuse of data, release of private information as result of a network breach, penetration, compromise, or loss of IT systems control.

H. Joinder. The Contractor agrees to being added by the Port as a party to any arbitration or litigation with third parties in which the Port alleges indemnification or seeks contribution from the Indemnitor. The Contractor shall cause each of its Subcontractors of any tier to similarly stipulate in their subcontracts; in the event any does not, the Contractor shall be liable in place of such Subcontractor(s) of any tier.

I. Other. To the extent that any portion of this Section 3.14 is stricken by a court or arbitrator for any reason, all remaining provisions shall retain their vitality and effect. The obligations of the Contractor under this Section 3.14 shall not be construed to negate, abridge, or otherwise reduce any other right or obligations of indemnity which would otherwise exist. To the extent the wording of this Section 3.14 would reduce or eliminate an available insurance coverage, it shall be considered modified to the extent necessary so that the insurance coverage is not affected. This Section 3.14 shall survive completion, acceptance, final payment, and termination of the Contract.

3.15 WAIVER OF CONSEQUENTIAL DAMAGES

A. Mutual waiver of consequential damages. The Contractor and Port waive claims against each other for consequential damages arising out of, or relating to, this Contract. This mutual waiver includes, but is not limited to: (1) damages incurred by the Port for rental expenses, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons, and (2) damages incurred by the Contractor for principal and home office overhead and expenses including, but not limited to, the compensation of personnel stationed there, for losses of financing, business, and reputation, for losses on other projects, for loss of profit, and for interest or financing costs. This mutual waiver includes, but is not limited to, all consequential damages due to either party's termination.

B. Limitation. Nothing contained in this Section 3.15; however, shall be deemed to preclude an award of liquidated damages, when applicable, in accordance with the requirements of the Contract Documents, to preclude damages specified in the Agreement, or to affect the Contractor's obligation to indemnify the Port for direct, indirect, or consequential damages alleged by a third party.

ARTICLE 4 - SUBCONTRACTORS AND SUPPLIERS

4.01 RESPONSIBILITY FOR ACTIONS OF SUBCONTRACTORS AND SUPPLIERS.

A. Contractor responsible for Subcontractors. The Contractor is fully responsible to the Port for the acts and omissions of its Subcontractors of any tier and all persons either directly or indirectly employed by the Contractor or its Subcontractors.

4.02 AWARD OF CONTRACTS TO SUBCONTRACTORS AND SUPPLIERS

A. Contractor to provide proposed Subcontractor information. The Contractor, within ten (10) days after the Port's notice of award of the Contract, shall provide the Engineer with the names of the persons or entities proposed to perform each of the principal portions of the Work (i.e., either a Subcontractor listed in a bid or proposal or a Subcontractor performing Work valued at least ten percent (10%) of the Contract Sum) and the proprietary names, and the suppliers of, the principal items or systems of materials and equipment proposed for the Work. No progress payment will become due until after this information has been furnished.

B. Port to respond promptly with objections. The Port may respond promptly to the Contractor in writing stating: (1) whether the Port has reasonable objection to any proposed person or entity, or (2) whether the Port requires additional time for review. If the Port makes a reasonable objection, the Contractor shall replace the Subcontractor with no increase to the Contract Sum or Contract Time. Such a replacement shall not relieve the Contractor of its responsibility for the performance of the Work and compliance with all of the requirements of the Contract within the Contract Sum and Contract Time.

C. Reasonable objection defined. "Reasonable objection" as used in this Section 4.02 includes, but is not limited to: (1) a proposed Subcontractor of any tier different from the entity listed with the bid, (2) lack of "responsibility" of the proposed Subcontractor, as defined by Washington law and the Bidding Documents, or lack of qualification or responsibility of the proposed Subcontractor based on the Contract or Bidding Documents, or (3) failure of the Subcontractor to perform satisfactorily in the Port's opinion (such as causing a material delay or submitting a claim that the Port considers inappropriate) on one or more projects for the Port within five (5) years of the bid date.

D. No substitution allowed without permission. The Contractor shall not substitute a Subcontractor, person, or organization without the Engineer's written consent.

4.03 SUBCONTRACTOR AND SUPPLIER RELATIONS

A. Contractor to schedule, supervise, and coordinate Subcontractors. The Contractor shall schedule, supervise, and coordinate the operations of all Subcontractors of any tier, including suppliers. The Contractor shall ensure that appropriate Subcontractors coordinate the Work of lower-tier Subcontractors.

B. Subcontractors to be bound to Contract Documents. By appropriate agreement, the Contractor shall require each Subcontractor and supplier to be bound to the terms of the Contract Documents and to assume toward the Contractor, to the extent of their Work, all of the obligations that the Contractor assumes toward the Port under the Contract Documents. Each subcontract shall preserve and protect the rights of the Port and shall allow to the Subcontractor, unless specifically provided in the subcontract, the benefit of all rights, remedies, and redress against the Contractor that the Contractor, by the Contract Documents, has against the Port. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with lower-tier Subcontractors.

C. Contractor to correct deficiencies in Subcontractor performance. When a portion of the Work subcontracted by the Contractor is not being prosecuted in accordance with the Contract Documents, or if such subcontracted Work is otherwise being performed in an unsatisfactory manner in the Port's opinion, the Contractor shall, on its own initiative or upon the written request of the Port, take immediate steps to correct the deficiency or remove the non-performing party from the Project. The Contractor shall replace inadequately performing Subcontractors upon request of the Port at no change in the Contract Sum or Contract Time.

D. Contractor to provide subcontracts. Upon request, the Contractor will provide the Port copies of written agreements between the Contractor and any Subcontractor.

ARTICLE 5 - WORKFORCE AND NON-DISCRIMINATION REQUIREMENTS

5.01 COMPLIANCE WITH NON-DISCRIMINATION LAWS

A. Contractor to comply with non-discrimination laws. The Contractor shall fully comply with all applicable laws, regulations, and ordinances pertaining to non-discrimination.

5.02 MWBE, VETERAN-OWNED, AND SMALL BUSINESS ENTERPRISE PARTICIPATION.

A. In accordance with the legislative findings and policies set forth in RCW 39.19, the Port encourages participation in all of its contracts by MWBE firms certified by the Office of Minority and Women's Business Enterprises (OMWBE). Participation may be either on a direct basis in response to this invitation or as a subcontractor to a Bidder. However, unless required by federal statutes, regulations, grants, or contract terms referenced in the Contract Documents, no preference will be included in the evaluation of Bids, no minimum level of MWBE participation shall be required as a condition for receiving an award, and Bids will not be rejected or considered non-responsive on that basis. Any affirmative action requirements set forth in federal regulations or statutes included or referenced in the Contract Documents will apply.

The Port encourages participation in all of its contracts by Veteran-owned businesses (defined in RCW 43.60.010) and located at http://www.dva.wa.gov/program/certified-veteran--and-servicemember-owned-businesses and Small, Mini, and Micro businesses (defined in RCW 39.26.010)

5.03 APPRENTICESHIP PARTICIPATION

A. In accordance with RCW 39.04.320, fifteen (15) percent Apprenticeship Participation is required for all projects estimated to cost one million ($1,000,000) dollars or more.

B. Apprentice participation, under this contract, may be counted towards the required percentage (%) only if the apprentices are from an apprenticeship program registered and approved by the Washington State Apprenticeship and Training Council (RCW 49.04 and WAC 296-05).

C. Bidders may contact the Department of Labor and Industries, Specialty Compliance Services Division, Apprenticeship Section, P.O. Box 44530, Olympia, WA 98504-4530 by phone at (360) 902-5320, or e-mail at Apprentice@lni.wa.gov, to obtain information on available apprenticeship programs.

D. For each project that has apprentice requirements, the contractor shall submit a "Statement of Apprentice and Journeyman Participation" on forms provided by the Port of Tacoma, with every request for project payment. The Contractor shall submit consolidated and cumulative data collected by the Contractor and collected from all subcontractors by the Contractor. The data to be collected and submitted includes the following:

1. Contractor name and address
2. Contract number
3. Project name
4. Contract value
5. Reporting period "Beginning Date" through "End Date"
6. Name and registration number of each apprentice by contractor
7. Total number of apprentices and labor hours worked by them, categorized by trade or craft.
8. Total number of journeymen and labor hours worked by them, categorized by trade or craft
9. Cumulative combined total of apprentice and journeymen labor hours
10. Total percentage of apprentice hours worked

E. No changes to the required percentage (%) of apprentice participation shall be allowed without written approval of the Port. In any request for the change, the Contractor shall clearly demonstrate a good faith effort to comply with the requirements for apprentice participation.

ARTICLE 6 - CONTRACT TIME AND COMPLETION

6.01 CONTRACT TIME

A. Contract Time is measured from Contract execution. Unless otherwise provided in the Agreement, the Contract Time is the period of time, including authorized adjustments, specified in the Contract Documents from the date the Contract is executed to the date Substantial Completion of the Work is achieved.

B. Commencement of the Work. The Contractor shall begin Work in accordance with the notice of award and the notice to proceed and shall complete all Work within the Contract Time. When the Contractor’s signed Agreement, required insurance certificate with endorsements, bonds, and other submittals required by the notice of award have been accepted by the Port, the Port will execute the Contract and, following receipt of other required pre-work submittals, will issue a notice to proceed to allow the Contractor to mobilize and commence physical Work at the Project site, as further described in these contract documents. No Work at the Project site may commence until the Port issues a notice to proceed.

C. Contractor shall achieve specified completion dates. The Contractor shall achieve Substantial Completion within the Contract Time and shall achieve Final Completion within the time period thereafter stated in the Contract Documents.

D. Time is of the essence. Time limits stated in the Contract Documents, including any interim milestones, are of the essence of the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

6.02 PROGRESS AND COMPLETION

A. Contractor to maintain schedule. The Contractor's sequence and method of operations, application of effort, and work force shall at all times be created and implemented to ensure the orderly, expeditious, and timely completion of the Work and performance of the Contract. The Contractor shall furnish sufficient forces and shall work such hours, including extra shifts, overtime operations, and weekend and holiday work as may be necessary to ensure completion of the Work within the Contract Time and the approved Baseline Project Schedule.

B. Contractor to take necessary steps to meet schedule. If the Contractor fails substantially to perform in a timely manner in accordance with the Contract Documents and, through the fault of the Contractor or Subcontractor(s) of any tier, fails to meet the Baseline Project Schedule, the Contractor shall take such steps as may be necessary to immediately improve its progress by increasing the number of workers, shifts, overtime operations, or days of work, or by other means and methods, all without additional cost to the Port. If the Contractor believes that any action or inaction of the Port constitutes acceleration, the Contractor shall immediately notify the Port in writing and shall not accelerate the Work until the Port either directs the acceleration in writing or denies the constructive acceleration.

C. Liquidated damages not exclusive. Any provisions in the Contract Documents for liquidated damages shall not preclude other damages due to breaches of Contract of the Contractor.

6.03 SUBSTANTIAL COMPLETION

A. Substantial Completion defined. Substantial Completion is the stage in the progress of the Work, or portion or phase thereof, when the Work or designated portion is sufficiently complete in accordance with the Contract Documents so that the Port can fully occupy or utilize the Work, or the designated portion thereof, for its intended use, all requirements in the Contract Documents for Substantial Completion have been achieved, and all required documentation has been properly submitted to the Port in accordance with the Contract Documents. All Work, other than incidental corrective or punch list Work and final cleaning, must be completed. The fact that the Port may occupy the Work or a designated portion thereof does not indicate that Substantial Completion has occurred or that the Work is acceptable in whole or in part.

B. Work not Substantially Complete unless Final Completion attainable. The Work is not Substantially Complete unless the Port reasonably judges that the Work can achieve Final Completion within the period of time specified in the Contract Documents.

C. Notice of Substantial Completion. When the Work or designated portion has achieved Substantial Completion, the Port will provide a notice to establish the date of Substantial Completion. The notice shall establish responsibilities of the Port and Contractor for security, maintenance, heat, utilities, damage to the Work, and insurance, and shall fix the time within which the Contractor shall finish all remaining Work. If the notice of Substantial Completion does not so state, all responsibility for the foregoing items shall remain with the Contractor until Final Completion.

6.04 COMPLETION OF PUNCH LIST

A. Contractor shall complete punch list items prior to Final Completion. The Contractor shall cause punch list items to be completed prior to Final Completion. If, after Substantial Completion, the Contractor does not expeditiously proceed to correct punch list items or if the Port considers that the punch list items, are unlikely to be completed prior to the date established for Final Completion (or such other period of time as is specified in the Contract Documents), the Port may, upon seven (7) days' written notice to the Contractor, take over and perform some or all of the punch list items. The Port may also take over and complete any portion of the Work at any time following Substantial Completion and deduct the actual cost of performing the Work (including direct and indirect costs) from the Contract Sum. The Port's rights under this Section 6.04 are not obligations and shall not relieve the Contractor of its responsibilities under any other provisions of the Contract Documents.

6.05 FINAL COMPLETION

A. Final Completion. Upon receipt of written notice from the Contractor that all punch list items and other Contract requirements are completed, the Contractor will notify the Port, and the Port will perform a final inspection. If the Port determines that some or all of the punch list items have not been addressed, the Contractor shall be responsible to the Port for all costs, including re-inspection fees, for any subsequent reviews to determine completion of the punch list. When the Port determines that all punch list items have been satisfactorily addressed, that the Work is acceptable under the Contract Documents, and that the Work has fully been performed, the Port will promptly notify the Contractor of Final Completion.

B. Contractor responsible for costs if Final Completion is not timely achieved. In addition to any liquidated damages, the Contractor is liable for, and the Port may deduct from any amounts due the Contractor, all costs incurred by the Port for services performed after the contractual date of Final Completion, whether or not those services would have been performed prior to that date had Final Completion been timely achieved.

C. Final Completion submittals. The Port is not obligated to accept the Project as complete until the Contractor has submitted all required submittals to the Port.

D. Contractor responsible for the Work until Final Completion. The Contractor shall assume the sole risk of loss and responsibility for all Work under the Contract, and all materials to be incorporated in the Work, whether in storage or at the Project site, until Final Completion. Damage from any cause to either permanent or temporary Work, utilities, materials, equipment, existing structures, the site, or other property owned by the Port or others, shall be repaired by the Contractor to the reasonable satisfaction of the Port at no change in the Contract Sum.

6.06 FINAL ACCEPTANCE

A. Final Acceptance. Final Acceptance is the formal action of the Port accepting the Project as complete. Public notification of Final Acceptance will be posted on the Port's external website (http://www.portoftacoma.com/final-acceptance).

B. Final Acceptance not an acceptance of defective Work. Final Acceptance shall not constitute acceptance by the Port of unauthorized or defective Work, and the Port shall not be prevented from requiring the Contractor to remove, replace, repair, or dispose of unauthorized or defective Work or recovering damages due to the same.

C. Completion of Work under RCW 60.28. Pursuant to RCW 60.28, "Lien for Labor, Materials, Taxes on Public Works," completion of the Contract Work shall occur upon Final Acceptance.

6.07 PORT'S RIGHT TO USE THE PREMISES

A. Port has right to use and occupy Work. The Port reserves the right to occupy or use any part of the Work before or after Substantial Completion of some or all of the Work without relieving the Contractor of any of its obligations under the Contract. Such occupancy or use shall not constitute acceptance by the Port of any of the Work, and shall not cause any insurance to be canceled or lapse.

B. No compensation due if Port elects to use and occupy Work. No additional compensation shall be due to the Contractor as a result of the Port's use or occupancy of the Work or a designated portion.

ARTICLE 7 - PAYMENT

7.01 ALL PAYMENTS SUBJECT TO APPLICABLE LAWS AND SCHEDULE OF VALUES

A. Payment of the Contract Sum. The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the Port to the Contractor for performance of the Work under the Contract Documents. Payments made to the Contractor are subject to all laws applicable to the Port and the Contractor. Payment of the Contract Sum constitutes full compensation to the Contractor for performance of the Work, including all risk, loss, damages, or expense of whatever character arising out of the nature or prosecution of the Work. The Port is not obligated to pay for extra work or materials furnished without prior written approval of the Port.

B. Schedule of Values. All payments will be based upon an approved Schedule of Values. Prior to submitting its first Application for Payment, the Contractor shall submit a Schedule of Values to the Port allocating the entire Contract Sum to the various portions of the Work. The Schedule of Values shall be prepared in such form, and supported by such data to substantiate its accuracy, as the Port may require. This schedule, unless objected to by the Port, shall be used as a basis for reviewing the Contractor's applications for payment.

7.02 APPLICATIONS FOR PAYMENT

A. Applications for Payment. Progress payments will be made monthly for Work duly certified, approved by the Engineer, and performed (based on the Schedule of Values and actual quantities of Work performed) during the calendar month preceding the Application for Payment. These amounts are paid in trust to the Contractor for distribution to Subcontractors to the extent, and in accordance with, the approved Application for Payment.

7.03 PROGRESS PAYMENTS

A. Progress payments. Following receipt of a complete Application for Payment, the Engineer will either authorize payment or indicate in writing to the Contractor the specific reasons why the payment request is being denied, in whole or in part, and the remedial action the Contractor must take to receive the withheld amount. After a complete Application for Payment has been received and approved by the Port, payment will be made within thirty (30) days. Any payments made by, or through, or following receipt of, payment from third parties will be made in accordance with the third party's policies and procedures.

B. Port may withhold payment. The Port may withhold payment in whole or in part as provided in the Contract Documents or to the extent reasonably necessary to protect the Port from loss or potential loss for which the Contractor is responsible, including loss resulting from the Contractor's acts and omissions.

7.04 PAYMENT BY CONTRACTOR TO SUBCONTRACTORS

A. Payment to Subcontractors. With each Application for Payment, the Contractor shall provide a list of Subcontractors to be paid by the Contractor. No payment request shall include amounts the Contractor does not intend to pay to a Subcontractor because of a dispute or other reason. If, however, after submitting an Application for Payment, but before paying a Subcontractor, the Contractor discovers that part or all of a payment otherwise due to the Subcontractor is subject to withholding from the Subcontractor under the subcontract (such as for unsatisfactory performance or non-payment of lower-tier Subcontractors), the Contractor may withhold the amount as allowed under the subcontract, but it shall give the Subcontractor and the Port written notice of the remedial actions that must be taken and pay the Subcontractor within eight (8) working days after the Subcontractor satisfactorily completes the remedial action identified in the notice.

B. Payment certification to be provided upon request. The Contractor shall provide, with each Application for Payment, a certification signed by Contractor attesting that all payments by the Contractor to Subcontractors from the last Application for Payment were made within ten (10) days of the Contractor's receipt of payment. The certification will also attest that the Contractor will make payment to Subcontractors for the current Application for Payment within ten (10) days of receipt of payment from the Port.

7.05 FINAL PAYMENT

A. Final payment. Final applications for payment are due within seven (7) days following Final Completion. Final payment of the unpaid balance of the Contract Sum, except retainage, will be made following Final Completion and within thirty (30) days of the Contractor's submission of an approved final Application for Payment.

B. Releases required for final payment. The final payment shall not become due until the Contractor delivers to the Port a complete release of all liens arising out of the Contract, as well as an affidavit stating that, to the best of Contractor's knowledge, its release includes all labor and materials for which a lien could be filed. If a Subcontractor of any tier refuses to furnish a release or waiver required by the Port, the Port may (a) retain in the fund, account, or escrow funds in such amount as to defray the cost of foreclosing the liens of such claims and to pay attorneys' fees, the total of which shall be no less than 150% of the claimed amount, or (b) accept a bond from the Contractor, satisfactory to the Port, to indemnify the Port against the lien. If any such lien remains unsatisfied after all payments from the retainage are made, the Contractor shall refund to the Port all moneys that the Port may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

C. Contractor to hold Port harmless from liens. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold harmless the Port from any liens, claims, demands, lawsuits, losses, damages, disbursements, liabilities, obligations, fines, penalties, costs, and expenses, whether direct or indirect, including but not limited to, attorneys' fees and consultants' fees and other costs and expenses, except to the extent a lien has been filed because of the failure of the Port to make a contractually required payment.

7.06 RETAINAGE

A. Retainage to be withheld. In accordance with RCW 60.28, a sum equal to five percent (5%) of each approved Application for Payment shall be retained. Prior to submitting its first Application for Payment, the Contractor shall exercise one of the options listed below:

1. Retained percentages will be retained by the Port in a fund; or

2. Deposited by the Port in an interest-bearing account or escrow account in a bank, mutual savings bank, or savings and loan association designated by the Contractor, not subject to withdrawal until after the final acceptance of said improvement or work as completed, or until agreed to by both parties; provided that interest on such account shall be paid to the Contractor. Contractor to complete and submit Port provided Retainage Escrow Agreement (Section 00 61 23.13); or

3. If the Contractor provides a bond in place of retainage, it shall be in an amount equal to 5% of the Contract Sum plus Change Orders. The retainage bond shall be based on the form furnished in Section 00 61 23 or otherwise acceptable to the Port and duly completed and signed by a licensed surety or sureties registered with the Washington State Insurance Commissioner and on the currently authorized insurance list published by the Washington State Insurance Commissioner. The surety or sureties must be rated at least "A-, FSC(6)" or higher by A.M. Best Rating Guide and be authorized by the Federal Department of the Treasury. Attorneys-in-fact who sign the retainage bond must file with each bond a certified and effective Power of Attorney statement.

B. Contractor may withhold retainage from Subcontractors. The Contractor or a Subcontractor may withhold not more than five percent (5%) retainage from the monies earned by any Subcontractor or lower-tier Subcontractor, provided that the Contractor pays interest to the Subcontractor at the same interest rate it receives from its reserved funds. If requested by the Port, the Contractor shall specify the amount of retainage and interest due a Subcontractor.

C. Release of retainage. Retainage will be withheld and applied by the Port in a manner required by RCW 60.28 and released in accordance with the Contract Documents and statutory requirements. Release of the retainage will be processed in the ordinary course of business within sixty (60) days following Final Acceptance of the Work by the Port provided that no notice of lien has been given as provided in RCW 60.28, that no claims have been brought to the attention of the Port, that the Port has no claims under this Contract, and that release of retention has been duly authorized by the State. The following items must also be obtained prior to release of retainage: pursuant to RCW 60.28, a certificate from the Department of Revenue; pursuant to RCW 50.24, a certificate from the Department of Employment Security; and appropriate information from the Department of Labor and Industries including approved affidavits of wages paid for the Contractor and each subcontractor.

7.07 DISPUTED AMOUNTS

A. Disputed amounts. If the Contractor believes it is entitled to payment for Work performed during the prior calendar month in addition to the agreed-upon amount, the Contractor may submit to the Port, along with the approved Application for Payment, a separate written payment request specifying the exact additional amount claimed to be due, the category in the Schedule of Values to which the payment would apply, the specific Work for which additional payment is sought, and an explanation of why the Contractor believes additional payment is due.

7.08 EFFECT OF PAYMENT

A. Payment does not relieve Contractor of obligations. Payment to the Contractor of progress payments or final payment does not relieve the Contractor from its responsibility for the Work or its responsibility to repair, replace, or otherwise make good defective Work, materials, or equipment. Likewise, the making of a payment does not constitute a waiver of the Port’s right to reject defective or non-conforming Work, materials, or equipment (even though they are covered by the payment), nor is it a waiver of any other rights of the Port.

B. Acceptance of final payment waives claims. Acceptance of final payment by the Contractor, a Subcontractor of any tier, or a supplier shall constitute a waiver of claims except those previously made in writing and identified as unsettled in Contractor's final Application for Payment.

C. Execution of Change Order waives claims. The execution of a Change Order shall constitute a waiver of claims by the Contractor arising out of the Work to be performed or deleted pursuant to the Change Order, except as specifically described in the Change Order.

7.09 LIENS

A. Contractor to discharge liens. The Contractor shall promptly pay (and secure the discharge of any liens asserted by) all persons properly furnishing labor, equipment, materials, or other items in connection with the performance of the Work including, but not limited to, any Subcontractors of any tier.

ARTICLE 8 - CHANGES IN THE WORK

8.01 CHANGES IN THE WORK

A. Changes in the Work authorized. Without invalidating the Contract and without notice to the Contractor's surety, the Port may authorize changes in the Work after execution of the Contract, including changes in the Contract Sum or Contract Time. Changes shall occur solely by Change Order, Unilateral Change Directive, or Minor Change in Work. All changes in the Work are effective immediately, and the Contractor shall proceed promptly to perform the change, unless otherwise provided in the Change Order or Directive.

B. Changes in the Work Defined.

1. A Change Order is a written instrument signed by the Port and Contractor stating their agreement to a change in the Work and the adjustment, if any, in the Contract Sum and/or Contract Time.

2. A Unilateral Change Directive is a written instrument issued by the Port to transmit new or revised Drawings, issue additions or modifications to the Contract, furnish other direction and documents adjustment, if any, to the Contract Sum and/or Contract Time. A Unilateral Change Directive is signed only by the Port, without requiring the consent or signature of the Contractor.

3. A Minor Change in the Work is a written order from the Port directing a change that does not involve an adjustment to the Contract Sum or the Contract Time.

C. Request for Proposal: At any time, the Port may issue a Proposal Request directing the Contractor to propose a change to the Contract Sum and/or Contract Time, if any, based on a proposed change in the Work. The Contractor shall submit a responsive Change Order proposal as soon as possible, and no later than fourteen (14) days after receipt, in which the Contractor specifies in good faith the extent to which the Contract Sum and/or Contract Time would change. All cost components shall be limited to the manner described in Section 8.02(B). If the Contractor fails to timely respond to a Proposal Request, the Port may issue the change as a Unilateral Change Directive.

1. Fixed price method is default for Contractor Change Order proposal. When the Port has requested that the Contractor submit a Change Order proposal, the Port may specify the basis on which the Contract Sum will be adjusted by the Contractor. The Engineer's preference, unless otherwise indicated, is for changes in the Work to be priced using Lump Sums or Unit Prices or on a time and material (Force Account) basis if unit pricing or lump sums cannot be negotiated or determined. In all instances, however, proposed changes shall include a not-to-exceed price for the change and shall be itemized for evaluation purposes in accordance with Section 8.02(B), as requested by the Engineer.
2. The Port may accept or reject the Contractor's Change Order proposal, request further documentation, or negotiate acceptable terms with the Contractor. If The Port and Contractor reach agreement on the terms of any change in the Work, including any adjustment in the Contract Sum or Contract Time, such agreement shall be incorporated in a Change Order.
3. The Change Order shall constitute full payment and final settlement of all claims for time and for direct, indirect, and consequential costs, including costs of delays, inconvenience, disruption of schedule, or loss of efficiency or productivity, related to any Work either covered or affected by the Change Order, or related to the events giving rise to the request for equitable adjustment. The Port may reject a proposal, in which case the Port may either not effectuate the change or issue a Unilateral Change Directive. The Port will not make payment to the Contractor for any work until that work has been incorporated into an executed Change Order.

D. Unforeseen Conditions: If the Contractor encounters conditions at the site that are: (1) subsurface or otherwise concealed physical conditions that differ materially from those indicated in the Contract Documents or any soils reports made available by the Port to the Contractor, or (2) unknown physical conditions of an unusual nature that differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Contract Documents, the Contractor shall immediately provide oral notice to the Engineer before conditions are disturbed, followed within 24 hours by an initial written notice. The Contractor shall submit a detailed proposal no later than seven (7) days following discovery of differing site conditions. The Engineer will promptly investigate these conditions and, if the Engineer determines that they differ materially and cause an increase or decrease in the Contractor's cost or time required for performance of any part of the Work, will establish a change in the Contract Sum or Contract Time, or both, consistent with the requirements of the Contract Documents. If the Contractor disputes the Engineer's determination, the Contractor may proceed as provided in the dispute resolution procedure (Article 11). No increase to the Contract Sum or the Contract Time shall be allowed if the Contractor does not comply with the contractual requirements or if the Contractor knew, or reasonably should have known, of the concealed conditions prior to executing the Contract.

E. Proceed Immediately: Pending agreement on the terms of the Change Order or upon determination of a differing site condition as defined in 8.01(D), the Engineer may direct Contractor to proceed immediately with the change in the Work. Contractor shall not proceed with any change in the Work until it has obtained the Engineer's written approval and documentation of the following:

1. The scope of work
2. An agreed upon maximum not-to-exceed amount
3. The method of final cost determination
4. Estimated time to complete the changed work

5. As a change in the Work is performed, unless the parties have signed a written Change Order to establish the cost of the change, the Contractor shall maintain an itemized accounting of all costs related to the change based on the categories in Section 8.02(B) and provide such data to the Port upon request. This includes, without limitation, invoices, including freight and express bills, and other support for all material, equipment, Subcontractor, and other charges related to the change and, for material furnished from the Contractor's own inventory, a sworn affidavit certifying the actual cost of such material. Failure to provide data to the Port within seven (7) days of a request constitutes a waiver of any claim. The Port may furnish any material or equipment to the Contractor that it deems advisable, and the Contractor shall have no claim for any costs or fee on such material or equipment.

F. Procedure for Unilateral Change Directive. Whether or not the Port has rejected a Contractor's proposal, the Port may issue a Unilateral Change Directive and the Contractor shall promptly proceed with the specified Work. If the Contractor disagrees with a Unilateral Change Directive, the Contractor shall advise the Port in writing through a Change Order proposal within seven (7) days of receipt. The Contractor's Change Order proposal shall reasonably specify the reasons for any disagreement and the adjustment it proposes. Without this timely Change Order proposal, the Contractor shall conclusively be deemed to have accepted the Port's proposal.

G. Payment pending final determination of Force Account work. Pending final determination of the total cost of Force Account Work, and provided that the Work to be performed under Force Account is complete and any reservations of rights have been signed by the Port, the Contractor may request payment for amounts not in dispute in the next Application for Payment accompanied by documentation indicating the parties' agreement. Work done on a Force Account basis must be approved in writing on a daily basis by the Engineer or the Engineer's designee and invoices shall be submitted with an Application for Payment within sixty (60) days of performance of the Work.

8.02 CHANGES IN THE CONTRACT SUM

A. Port to Decide How Changes are Measured. The Port may elect, in its sole discretion, how changes in the Work will be measured for payment. Change in the Work may be priced on a lump sum basis, through Unit Prices, as Force Account, or by another method documented in the executed Change Order, Unilateral Change Directive, or Minor Change in the Work.

B. Determination of Cost of Change. The total cost of any change in the Work, including a claim under Article 11, shall not exceed the prevailing cost for the Work in the locality of the Project. In all circumstances, the change in the Work shall be limited to the reasonable, actual cost of the following components:

1. Direct labor costs: These are the actual labor costs determined by the number of additional craft hours at their normal hourly rate necessary to perform a change in the Work. The hourly cost of labor will be based upon the following:

a. Basic wages and fringe benefits: The hourly wage (without markup or labor burden) and fringe benefits paid by the Contractor as established by the Washington Department of Labor and Industries or contributed to labor trust funds as itemized fringe benefits, whichever is applicable, not to exceed that specified in the applicable "Intent to Pay Prevailing Wage," for the laborers, apprentices, journeymen, and foremen performing or directly supervising the change in the Work on site. These wages do not include the cost of Contractor's project manager or superintendent or above, and the premium portion of overtime wages is not included unless pre-approved in writing by the Port. Costs paid or incurred by the Contractor for vacations, per diem, subsistence, housing, travel, bonuses, stock options, or discretionary payments to employees are not separately reimbursable. The Contractor shall provide to the Port copies of payroll records, including certified payroll statements for itself and Subcontractors of any tier, upon the Port's request.

b. Workers' insurance: Direct contributions to the State of Washington as industrial insurance; medical aid; and supplemental pension by class and rates established by the Washington Department of Labor and Industries.

c. Federal insurance: Direct contributions required by the Federal Insurance Compensation Act (FICA); Federal Unemployment Tax Act (FUTA); and State Unemployment Compensation Act (SUCA).

2. Direct material costs: This is an itemization, including material invoices, of the quantity and actual cost of additional materials necessary to perform the change in the Work. The cost will be the net cost after all discounts or rebates, freight costs, express charges, or special delivery costs, when applicable. No lump sum costs will be allowed unless approved in advance by the Port.

3. Construction equipment usage costs: This is an itemization of the actual length of time that construction equipment necessary and appropriate for the Work is used solely on the changed Work times the applicable rental cost as established by the lower of the local prevailing rates published in www.equipmentwatch.com, as modified by the AGC/WSDOT agreement, or the actual rate paid to an unrelated third party. If more than one rate is applicable, the lowest available rate will be utilized. Rates and quantities of equipment rented that exceed the local fair market rental costs shall be subject to the Port's prior written approval. Total rental charges for equipment or tools shall not exceed 75% of the fair market purchase value of the equipment or the tool. Actual, reasonable mobilization costs are permitted if the equipment is brought to the site solely for the change in the Work. Mobilization and standby costs shall not be charged for equipment already present on the site.

   The rates in effect at the time of the performance of the changed Work are the maximum rates allowable for equipment of modern design, and in good working condition, and include full compensation for furnishing all fuel, oil, lubrication, repairs, maintenance, and insurance. No gas surcharges are payable. Equipment not of modern design and/or not in good working condition will have lower rates. Hourly, weekly, and/or monthly rates, as appropriate, will be applied to yield the lowest total cost.

4. Subcontractor costs: These are payments the Contractor makes to Subcontractors for changed Work performed by Subcontractors. The Subcontractors' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02 and, among other things, shall not include consultant costs, attorneys' fees, or claim preparation expenses.

5. Service provider costs: These are payments the Contractor makes to service providers for changed Work performed by service providers. The service providers' cost of changed Work shall be determined in the same manner as prescribed in this Section 8.02.

6. Markup: This is the maximum total amount for overhead, profit, and other costs, including office, home office and site overhead (including purchasing, project manager, superintendent, project engineer, estimator, and their vehicles and clerical assistants), taxes (except for sales tax on the Contract Sum), warranty, safety costs, printing and copying, layout and control, quality control/assurance, small or hand tools (a tool that costs $500 or less and is normally furnished by the performing contractor), preparation of as-built drawings, impact on unchanged Work, Change Order and/or claim preparation, and delay and impact costs of any kind (cumulative, ripple, or otherwise), added to the total cost to the Port of any Change Order work. No markup shall be due, however, for direct settlements of Subcontractor claims by the Port after Substantial Completion. The markup shall be limited in all cases to the following schedule:

   a. Direct labor costs -- 20% markup on the direct cost of labor for the party (Contractor or Subcontractor) providing labor related to the change in the Work;

   b. Direct material costs -- 20% markup on the direct cost of material for the party (Contractor or Subcontractor) providing material related to the change in the Work;

   c. Construction equipment usage costs -- 10% markup on the direct cost of equipment for the party (Contractor or Subcontractor) providing equipment related to the change in the Work;

   d. Contractor markup on Subcontractor costs -- 10% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by Subcontractors (and for Subcontractors, for a change in the Work performed by lower-tier Subcontractors); and

   e. Service provider costs -- 5% markup for the Contractor on the direct cost (excluding markup) of a change in the Work performed by service providers.

   The total summed markup of the Contractor and all Subcontractors of any tier shall not exceed 30% of the direct costs of the change in the Work. If the markup would otherwise exceed 30%, the Contractor shall proportionately reduce the markup for the Contractor and all Subcontractors of any tier.

7. Cost of change in insurance or bond premium. This is defined as:

   a. Contractor's liability insurance: The actual cost (expressed as a percentage submitted with the certificate of insurance provided under the Contract Documents and subject to audit) of the Contractor's liability insurance arising directly from the changed Work; and

   b. Public works bond: The actual cost (expressed as a percentage submitted under the Contract Documents and subject to audit) of the Contractor's performance and payment bond arising directly from the changed Work.

   Upon request, the Contractor shall provide the Port with supporting documentation from its insurer or surety of any associated cost incurred. The cost of the insurance or bond premium together shall not exceed 2.0% of the cost of the changed Work.

8. Unit Prices. If Unit Prices are specified in the Contract Documents or established by agreement of the parties for certain Work, the Port may apply them to the changed Work. Unit Prices shall include pre-agreed rates for material quantities and shall include reimbursement for all direct and indirect costs of the Work, including overhead, profit, bond, and insurance costs arising out of, or related to, the Unit Priced item. Quantities must be supported by field measurement statements signed by the Port, and the Port shall have access as necessary for quantity measurement. The Port shall not be responsible for not-to-exceed limit(s) without its prior written approval.

8.03 CHANGES IN THE CONTRACT TIME

A. Extension of the Contract Time. If the Contractor is delayed at any time in the commencement or progress of the Work by events for which the Port is responsible, by unanticipated abnormal weather (subject to Section 8.03(E) below), or by other causes not the fault or responsibility of the Contractor that the Port determines may justify a delay in the Contract Time, then the Contract Time shall be extended by Change Order for such reasonable time as the Port may determine. In no event, however, shall the Contractor be entitled to any extension of time absent proof of: (1) delay to an activity on the critical path of the Project, or (2) delay transforming an activity to the critical path, so as to actually delay the anticipated date of Substantial Completion.

B. Allocation of responsibility for delay not caused by Port or Contractor. If a delay was not caused by the Port, the Contractor, or anyone acting on behalf of any of them, the Contractor is entitled only to an increase in the Contract Time but not an increase in the Contract Sum.

C. Allocation of responsibility for delay caused by Port. If a delay was caused by the Port or someone acting on behalf of the Port and affected the critical path, the Contractor shall be entitled to a change in the Contract Time and Contract Sum in accordance with Section 8.02. The Contractor shall not recover damages, an equitable adjustment, or an increase in the Contract Sum or Contract Time from the Port; however, where the Contractor could reasonably have avoided the delay. The Port is not obligated directly or indirectly for damages for any delay suffered by a Subcontractor of any tier that does not increase the Contract Time.

D. Allocation of responsibility for delay caused by Contractor. If a delay was caused by the Contractor, a Subcontractor of any tier, or anyone acting on behalf of any of them, the Contractor is not entitled to an increase in the Contract Time or in the Contract Sum.

E. Adverse weather. If adverse weather is identified as the basis for a claim for additional time, the claim shall be documented by data substantiating that weather conditions were abnormal for the period of time, could not reasonably have been anticipated and had an adverse effect on the critical path of construction, and that the Work was on schedule (or not behind schedule through the fault of the Contractor) at the time the adverse weather conditions occurred. Neither the Contract Time nor the Contract Sum will be adjusted for normal inclement weather. For a claim based on adverse weather, the Contractor shall be eligible only for a change in the Contract Time (but not a change in the Contract Sum) if the Contractor can substantiate that there was significantly greater than normal inclement weather considering the full term of the Contract Time.

F. Damages for delay. In the event the Contractor (including any Subcontractors of any tier) is held to be entitled to damages from the Port for delay beyond the amount permitted in Section 8.02(B), the total combined damages to the Contractor and any Subcontractors of any tier for each day of delay shall be limited to the reasonable, actual costs of the delay for which the Port is wholly responsible. The limitation on damages set forth in this Section does not apply to any damages arising exclusively from delay to which the Contractor is entitled to recover under Section 8.03(F).

G. Limitation on damages. The Contractor shall not be entitled to damages arising out of loss of efficiency; morale, fatigue, attitude, or labor rhythm; constructive acceleration; home office overhead; expectant under run; trade stacking; reassignment of workers; rescheduling of Work, concurrent operations; dilution of supervision; learning curve; beneficial or joint occupancy; logistics; ripple; season change; extended or increased overhead or general conditions; profit upon damages for delay; impact damages including cumulative impacts; or similar damages. Any effect that such alleged costs may have upon the Contractor or its Subcontractors of any tier is fully compensated through the markup on Change Orders paid through Section 8.02(B).

8.04 RESERVATION OF RIGHTS

A. Reservations of rights void unless signed by Port. Reservations of rights will be deemed waived and are void unless any reserved rights are described in detail and are signed by the Contractor and the Port.

B. Procedure for unsigned reservations of rights. If the Contractor adds a reservation of rights not signed by the Port to any Change Order, Unilateral Change Directive, Change Order proposal, Application for Payment, or any other document, all amounts and all Work therein shall be considered disputed and not payable until costs are re-negotiated or the reservation is withdrawn or changed in a manner satisfactory to, and signed by, the Port. If the Port makes payment based on a document that contains a reservation of rights not signed by the Port, and if the Contractor cashes such payment, then the reservation of rights shall be deemed waived, withdrawn, and of no effect.

8.05 UNIT PRICES

A. Adjustment to Unit Prices. If Unit Prices are stated in the Contract Documents or subsequently agreed upon, and if quantities originally contemplated are materially changed (less than eighty percent (80%) or more than one hundred and twenty percent (120%) of the quantity estimated) so that application of a Unit Price would be substantially unfair, the applicable Unit Price but not the Contract Time, shall be adjusted if the Port prospectively approves a Change Order revising the Unit Price.

B. Procedure to change Unit Prices. The Contractor or Port may request a Change Order revising a Unit Price by submitting information to support the change. A proposed change to a Unit Price will be evaluated by the Port based on the change in cost resulting solely from the change in quantity, any change in production rate or method as compared to the original plan, and the share, if any, of fixed expenses properly chargeable to the item. If the Port and Contractor agree on the change, a Change Order will be executed. If the parties cannot agree, the Contractor shall comply with the dispute resolution procedures (Article 11).

ARTICLE 9 - SUSPENSION AND TERMINATION OF CONTRACT

9.01 PORT'S RIGHT TO SUSPEND WORK

A. Port may suspend the Work. The Port may at any time suspend the Work, or any part thereof, by giving notice to the Contractor. The Work shall be resumed by the Contractor as soon as possible, but no later than fourteen (14) days after the date fixed in a notice to resume the Work. The Port shall reimburse the Contractor for appropriate and reasonable expenses consistent with Section 8.02 incurred by the Contractor as a result of the suspension, except where a suspension is the result of the Contractor repeatedly or materially failing to carry out or correct the Work in accordance with the Contract Documents, and the Contractor shall take all necessary steps to minimize expenses.

B. Contractor obligations. During any suspension of Work, the Contractor shall take every precaution to prevent damage to, or deterioration of, the Work. The Contractor shall be responsible for all damage or deterioration to the Work during the period of suspension and shall, at its sole expense, correct or restore the Work to a condition acceptable to the Port prior to resuming Work.

9.02 TERMINATION OF CONTRACT FOR CAUSE BY THE PORT

A. Port may terminate for cause. If the Contractor is adjudged bankrupt or makes a general assignment for the benefit of the Contractor's creditors, if a receiver is appointed due to the Contractor's insolvency, or if the Contractor, in the opinion of the Port, persistently or materially refuses or fails to supply enough properly skilled workmen or materials for proper completion of the Contract, fails to make prompt payment to Subcontractors or suppliers for material or labor, disregards laws, ordinances, or the instructions of the Port, fails to prosecute the Work continuously with promptness and diligence, or otherwise materially violates any provision of the Contract, then the Port, without prejudice to any other right or remedy, may terminate the Contractor after giving the Contractor seven (7) days' written notice (during which period the Contractor shall have the right to cure).

B. Procedure following termination for cause. Following a termination for cause, the Port may take possession of the Project site and all materials and equipment, and utilize such materials and equipment to finish the Work. The Port may also exclude the Contractor from the Project site(s). If the Port elects to complete all or a portion of the Work, it may do so as it sees fit. The Port shall not be required to accept the lowest bid for completion of the Work and may choose to complete all or a portion of the Work using its own work force. If the Port elects to complete all or a portion of the Work, the Contractor shall not be entitled to any further payment until the Work is finished. If the expense of finishing the Work, including compensation for additional managerial and administrative services of the Port, exceeds the unpaid balance of the Contract Sum, the excess shall be paid by the Contractor.

C. Port's remedies following termination for cause. The Port may exercise any rights, claims, or demands that the Contractor may have against third persons in connection with the Contract, and for this purpose the Contractor assigns and transfers to the Port all such rights, claims, and demands.

D. Inadequate termination for cause converted to termination for convenience. If, after the Contractor has been terminated for cause, it is determined that inadequate "cause" for such termination exists, then the termination shall be considered a termination for convenience pursuant to Section 9.03.

9.03 TERMINATION OF CONTRACT FOR CONVENIENCE BY THE PORT

A. Port may terminate for convenience. The Port may, at any time (without prejudice to any right or remedy of the Port), terminate all, or any portion of, the Contract for the Port's convenience and without cause. The Contractor shall be entitled to receive payment consistent with the Contract Documents only for Work properly executed through the date of termination, and costs necessarily incurred by reason of the termination (such as the cost of settling and paying claims arising out of the termination under subcontracts or orders), along with a fee of one percent (1%) of the Contract Sum not yet earned on the whole or part of the Work. The total amount to be paid to the Contractor shall not exceed the Contract Sum as reduced by the amount of payments otherwise made. The Port shall have title to all Work performed through the date of termination.

9.04 TERMINATION OF CONTRACT BY THE CONTRACTOR

A. Contractor may terminate for cause. The Contractor may terminate the Contract if the Work is stopped for a period of sixty (60) consecutive days through no act or fault of the Contractor or a Subcontractor of any tier, for either of the following reasons:

1. Issuance of an order of a court or other public authority having jurisdiction that requires all Work to be stopped; or

2. An act of government, such as a declaration of national emergency, that requires all Work to be stopped.

B. Procedure for Contractor termination. If one of the reasons described in Section 9.04A exists, the Contractor may, upon seven (7) days' written notice to the Port (during which period the Port has the opportunity to cure), terminate the Contract and recover from the Port payment for Work executed through the date of termination in accordance with the Contract Documents and for proven loss with respect to materials, equipment, tools, and construction equipment and machinery, including reasonable overhead and profit on Work executed and direct costs incurred by reason of such termination. The total recovery of the Contractor shall not exceed the unpaid balance of the Contract Sum.

C. Contractor may stop the Work for failure of Port to pay undisputed amounts. The Contractor may stop Work under the Contract if the Port does not pay undisputed amounts due and owing to the Contractor within fifteen (15) days of the date established in the Contract Documents. If the Port fails to pay undisputed amounts, the Contractor may, upon fifteen (15) additional days' written notice to the Port, during which the Port can cure, stop the Work until payment of the amount owing has been received. The Contract Time shall be extended appropriately, and the Contract Sum shall be increased by the amount of the Contractor's reasonable costs of shut-down, delay, and start-up.

9.05 SUBCONTRACT ASSIGNMENT UPON TERMINATION

A. Subcontracts assigned upon termination. Each subcontract is hereby assigned by the Contractor to the Port provided that:

1. The Port requests that the subcontract be assigned.

2. The assignment is effective only after termination by the Port and only for those subcontracts that the Port accepts in writing.

3. The assignment is subject to the prior rights of the surety, if any, under any bond issued in accordance with the Contract Documents.

When the Port accepts the assignment of a subcontract, the Port assumes the Contractor's rights and obligations under the subcontract, but only for events and payment obligations that arise after the date of the assignment.

ARTICLE 10 - BONDS

10.01 CONTRACTOR PERFORMANCE AND PAYMENT BONDS

A. Contractor to furnish performance and payment bonds. Within ten (10) days following its receipt of a notice of award, and as part of the Contract Sum, the Contractor shall secure and furnish duly executed performance and payment bonds using the forms furnished by the Port. The bonds shall be executed by a surety (or sureties) reasonably acceptable to the Port, admitted and licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC (6)" or better and be authorized by the U.S. Department of the Treasury. Pursuant to RCW 39.08, the bonds shall be in an amount equal to the Contract Sum, and shall be conditioned only upon the faithful performance of the Contract by the Contractor within the Contract Time and upon the payment by the Contractor of all taxes, fees, and penalties to the State of Washington and all laborers, Subcontractors, and suppliers, and others who supply provisions, equipment, or supplies for the performance of the Work covered by this Contract. The bonds shall be signed by the person or persons legally authorized to bind the Contractor.

B. On contracts of one hundred fifty thousand dollars or less, at the option of the contractor as defined in RCW 39.10.210, the Port may, in lieu of the bond, retain ten percent of the contract amount for a period of thirty days after date of final acceptance, or until receipt of all necessary releases from the department of revenue, the Employment Security Department, and the Department of Labor and Industries and settlement of any liens filed under chapter 60.28 RCW, whichever is later. The recovery of unpaid wages and benefits must be the first priority for any actions filed against retainage held by a state agency or authorized local government.

   For contracts of one hundred fifty thousand dollars or less, the Port may accept a full payment and performance bond from an individual surety or sureties.

C. Port may notify surety. If the Port makes or receives a claim against the Contractor, the Port may, but is not obligated to, notify the Contractor's surety of the nature and amount of the claim. If the claim relates to a possibility of a Contractor’s default, the Port may, but is not obligated to, notify the surety and request the surety’s assistance in resolving the controversy.

ARTICLE 11 - DISPUTE RESOLUTION

11.01 NOTICE OF PROTEST AND CLAIM

A. Dispute resolution procedure mandatory. All claims, direct or indirect, arising out of, or relating to, the Contract Documents or the breach thereof, shall be decided exclusively by the following alternative dispute resolution procedure, unless the parties mutually agree otherwise. If the Port and Contractor agree to a partnering process to assist in the resolution of disputes, the partnering process shall occur prior to, and not be in place of, the mandatory dispute resolution procedures set forth below.

B. Notice of protest defined. Except for claims requiring notice before proceeding with the affected Work as otherwise described in the Contract Documents, the Contractor shall provide immediate oral notice of protest to the Engineer prior to performing any disputed Work and shall submit a written notice of protest to the Port within seven (7) days of the occurrence of the event giving rise to the protest that includes a clear description of the event(s). The protest shall identify any point of disagreement, those portions of the Contract Documents believed to be applicable, and an estimate of quantities and costs involved. When a protest relates to cost, the Contractor shall keep full and complete records and shall permit the Port to have access to those records at any time as requested by the Port.

C. Claim defined. A claim is a demand by one of the parties seeking adjustment or interpretation of the Contract terms, payment of money, extension of time, or other relief with respect to the terms of the Contract Documents. The term “claim” also includes all disputes and matters in question between the Port and Contractor arising out of, or relating to, the Contract Documents. Claims must be initiated in writing and include a detailed factual statement and clear description of the claim providing all necessary dates, locations, and items of Work, the date or dates on which the events occurred that give rise to the claim, the names of employees or representatives knowledgeable about the claim, the specific provisions of the Contract Documents that support the claim, any documents or oral communications that support the claim, any proposed change in the Contract Sum (showing all components and calculations) and/or Contract Time (showing cause and analysis of the resultant delay in the critical path), and all other data supporting the claim. Claims shall also be submitted with a statement certifying, under penalty of perjury, that the claim as submitted is made in good faith, that the supporting cost and pricing data are true and accurate to the best of Contractor’s knowledge and belief, that the claim is fully supported, and that the amount requested accurately reflects the adjustment in the Contract Sum or Contract Time for which Contractor believes the Port is liable. A claim shall be deemed to include all changes, direct and indirect, in cost and in time to which the Contractor and Subcontractors of any tier are entitled and may not contain reservations of rights without the Port’s written approval; any unapproved reservations of rights shall be without effect.

D. Claim procedure. The Contractor shall submit a written claim within thirty (30) days of providing written notice of protest. The Contractor may delay submitting supporting data by an additional thirty (30) days if it notifies the Port in its claim that substantial data must be assembled. Any claim of a Subcontractor of any tier may be brought only through, and after review by and concurrence of, the Contractor.

E. Failure to comply with notice of protest and claim requirements waives claims. Any notice of protest by the Contractor and any claim of the Contractor, whether under the Contract or otherwise, must be made pursuant to, and in strict accordance with, the applicable provisions of the Contract. Failure to properly and timely submit a notice of protest or to timely submit a claim shall waive the claim. No act, omission, or knowledge, actual or constructive, of the Port shall waive the requirement for timely written notice of protest and a timely written claim, unless the Port and the Contractor sign an explicit, unequivocal written waiver approved by the Port. The Contractor expressly acknowledges and agrees that the Contractor’s failure to timely submit required notices of protest and/or timely submit claims has a substantial impact upon, and prejudices, the Port. For the purpose of calculating time periods, an “event giving rise to a claim,” among other things, is not a Request for Information, but rather is a response that the Contractor believes would change the Contract Sum and/or Contract Time.

F. False claims. The Contractor shall not make any fraudulent misrepresentations, concealments, errors, omissions, or inducements to the Port in the formation or performance of the Contract. If the Contractor or a Subcontractor of any tier submits a false or frivolous claim to the Port, which for purposes of this Section 11.01(F) is defined as a claim based in whole or in part on a materially incorrect fact, statement, representation, assertion, or record, the Port shall be entitled to collect from the Contractor by offset or otherwise (without prejudice to any right or remedy of the Port) any and all costs and expenses, including investigation and consultant costs, incurred by the Port in investigating, responding to, and defending against the false or frivolous claim.

G. Compliance with lien and retainage statutes required. If a claim relates to, or is the subject of, a lien or retainage claim, the party asserting the claim may proceed in accordance with applicable law to comply with the notice and filing deadlines prior to resolution of the claim by mediation or by litigation.

H. Performance required pending claim resolution. Pending final resolution of a claim, the Contractor shall continue to perform the Contract and maintain the Baseline Project Schedule, and the Port shall continue to make payments of undisputed amounts due in accordance with the Contract Documents.

11.02 MEDIATION

A. Claims must be subject to mediation. At any time following the Port's receipt of a written claim, the Port may require that an officer of the Contractor and the Port's designee (all with authority to settle) meet, confer, and attempt to resolve a claim. If the claim is not resolved during this meeting, the claim shall be subject to mandatory mediation as a condition precedent to the initiation of litigation. This requirement can be waived only by an explicit, written waiver signed by the Port and the Contractor.

B. Mediation procedure. A request for mediation shall be filed in writing with the other party to the Contract, and the parties shall promptly attempt to agree upon a mediator. If the parties have not reached agreement within thirty (30) days of the request, either party may file the request with the American Arbitration Association, or such other alternative dispute resolution service to which the parties mutually agree, with a copy to the other party, and the mediation shall be administered by the American Arbitration Association (or other agreed service). The parties to the mediation shall share the mediator's fee and any filing fees equally. The mediation shall be held in Pierce County, Washington, unless another location is mutually agreed upon. Agreements reached in mediation shall be enforceable as settlement agreements in any court having jurisdiction thereof. Unless the Port and the Contractor mutually agree in writing otherwise, all claims shall be considered at a mediation session that shall occur prior to Final Completion.

11.03 LITIGATION

A. Claims not resolved by mediation are subject to litigation. Claims not resolved through mediation shall be resolved by litigation, unless the parties mutually agree otherwise. The venue for any litigation shall be Pierce County, Washington. The Contractor may bring no litigation on claims, unless such claims have been properly raised and considered in the procedures of this Article 11. The Contractor must demonstrate in any litigation that it complied with all requirements of this Article.

B. Litigation must be commenced promptly. All unresolved claims of the Contractor shall be waived and released, unless the Contractor has complied with the requirements of the Contract Documents, and litigation is served and filed within 180 days of the date of Substantial Completion approved in writing by the Port or termination of the Contract. The pendency of mediation (the time period between receipt by the non-requesting party of a written mediation request and the date of mediation) shall toll these deadlines until the earlier of the mediator providing written notice to the parties of impasse, or thirty (30) days after the date of the mediation session.

C. Port not responsible for attorneys' fees. Neither the Contractor nor a Subcontractor of any tier, whether claiming under a bond or lien statute or otherwise, shall be entitled to attorneys' fees directly or indirectly from the Port (but may recover attorneys' fees from the bond or statutory retainage fund itself to the extent allowable under law).

D. Port may join Contractor in dispute. The Port may join the Contractor as a party to any litigation or arbitration involving the alleged fault, responsibility, or breach of contract of the Contractor or Subcontractor of any tier.

ARTICLE 12 - MISCELLANEOUS

12.01 GENERAL

A. Rights and remedies are cumulative. The rights and remedies of the Port set forth in the Contract Documents are cumulative, and in addition to and not in limitation of, any rights and remedies otherwise available to the Port. The pursuit of any remedy by the Port shall not be construed to bar the Port from the pursuit of any other remedy in the event of similar, different, or subsequent breaches of this Contract. All such rights of the Port shall survive completion of the Project or termination of the Contractor.

B. Reserved rights do not give rise to duty. The rights reserved or possessed by the Port to take any action shall not give rise to a duty for the Port to exercise any such right.

12.02 WAIVER

A. Waiver must be in writing and authorized by Port. Waiver of any provisions of the Contract Documents must be in writing and authorized by the Port. No other waiver is valid on behalf of the Port.

B. Inaction or delay not a waiver. No action, delay in acting, or failure to act by the Port shall constitute a waiver of any right or remedy of the Port, or constitute an approval or acquiescence of any breach or defect in the Work, nor shall any delay or failure of the Port to act waive or otherwise prejudice the right of the Port to enforce a right or remedy at any subsequent time.

C. Claim negotiation not a waiver. The fact that the Port and the Contractor may consider, discuss, or negotiate a claim that has or may have been defective or untimely under the Contract, shall not constitute a waiver of the provisions of the Contract Documents, unless the Port and the Contractor sign an explicit, unequivocal waiver.

12.03 GOVERNING LAW

A. Washington law governs. This Contract and the rights and duties of the parties hereunder shall be governed by the internal laws of the State of Washington, without regard to its conflict of law principles.

12.04 COMPLIANCE WITH LAW

A. Contractor to comply with applicable laws. The Contractor shall at all times comply with all applicable Federal, State and local laws, ordinances, and regulations. This compliance shall include, but is not limited to, the payment of all applicable taxes, royalties, license fees, penalties, and duties.

B. Contractor to provide required notices. The Contractor shall give notices required by all applicable Federal, State and local laws, ordinances, and regulations bearing on the Work.

C. Contractor to confine operations at site to permitted areas. The Contractor shall confine operations at the Project site to areas permitted by applicable laws, ordinances, permits, rules and regulations, and lawful orders of public authorities and the Contract Documents.

12.05 ASSIGNMENT

A. Assignment. The Port and Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party and to the partners, successors, assigns, and legal representatives of such other party. The Contractor may not assign, transfer, or novate all or any portion of the Contract, including but not limited to, any claim or right to the Contract Sum, without the Port's prior written consent. If the Contractor attempts to make an assignment, transfer, or novation without the Port's consent, the assignment shall be of no effect, and Contractor shall nevertheless remain legally responsible for all obligations under the Contract. The Contractor also shall not assign or transfer, to any third party, any claims it may have against the Port arising under the Contract or otherwise related to the Project.

12.06 TIME LIMIT ON CAUSES OF ACTION

A. Time limit on causes of action. The Port and Contractor shall commence all causes of action, whether in contract, tort, breach of warranty, or otherwise, against the other arising out of, or related to, the Contract in accordance with the requirements of the dispute resolution procedure set forth in Article 11 of these General Conditions, within the time period specified by applicable law, and within the time limits identified in the Contract Documents. The Contractor waives all claims and causes of action not commenced in accordance with this Section 12.06.

12.07 SERVICE OF NOTICE

A. Notice. Written notice under the Contract Documents by either the Contractor or Port may be served on the other party by personal service, electronic or facsimile transmission, or delivery service to the last address provided in writing to the other party. For the purpose of measuring time, notice shall be deemed to be received by the other party on the next business day following the sender's electronic or facsimile transmittal or delivery by delivery service.

12.08 RECORDS

A. Contractor and Subcontractors to maintain records and cooperate with Port audit. The Contractor and Subcontractors of any tier shall maintain books, ledgers, records, documents, estimates, bids, correspondence, logs, schedules, emails, and other tangible and electronic data and evidence relating or pertaining to costs and/or performance of the Contract ("records") to such extent, and in such detail, as will properly reflect and fully support compliance with the Contract Documents and with all costs, charges, and other amounts of whatever nature. The Contractor shall preserve these records for a period of six (6) years following the date of Final Acceptance under the Contract. Within seven (7) days of the Port's request, both during the Project and for six (6) years following Final Acceptance, the Contractor and Subcontractors of any tier shall make available, at their office during normal business hours, all records for inspection, audit, and reproduction (including electronic reproduction) by the Port or its representatives; failure to fully comply with this requirement shall constitute a material breach of contract and a waiver of all claims by the Contractor and Subcontractors of any tier.

B. Rights under RCW 42.56. The Contractor agrees, on behalf of itself and Subcontractors of any tier, that any rights under Chapter 42.56 RCW will commence at Final Acceptance, and that the invocation of such rights at any time by the Contractor or a Subcontractor of any tier, or their respective representatives, shall initiate an equivalent right to disclosures from the Contractor and Subcontractors of any tier for the benefit of the Port.

12.09 STATUTES

A. Contractor to comply with Washington statutes. The Contractor shall abide by the provisions of all applicable statutes, regulations, and other laws. Although a number of statutes are referenced in the Contract Documents, these references are not meant to be, and are not, a complete list.

1. Pursuant to RCW 39.06, “Registration, Licensing of Contractors,” the Contractor shall be registered and licensed as required by the laws of the State of Washington, including but not limited to RCW 18.27, “Registration of Contractors,” and shall satisfy all State of Washington bonding and insurance requirements. The Contractor shall also have a current state Unified Business Identifier number; have industrial insurance coverage for the Contractor’s employees working in Washington as required by Title 51 RCW; have an Employment Security Department number as required by Title 50 RCW; have a state excise tax registration number as required in Title 82 RCW; and not be disqualified from bidding on any public works contract under RCW 39.06.010 (unregistered or unlicensed contractors) or RCW 39.12.065(3) (prevailing wage violations).
2. The Contractor shall comply with all applicable provisions of RCW 49.28, “Hours of Labor.”
3. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 49.60, “Discrimination.”
4. The Contractor shall comply with pertinent statutory provisions relating to public works of RCW 70.92, “Provisions in Buildings for Aged and Handicapped Persons,” and the Americans with Disabilities Act.
5. Pursuant to RCW 50.24, “Contributions by Employers,” in general, and RCW 50.24.130 in particular, the Contractor shall pay contributions for wages for personal services performed under this Contract or arrange for an acceptable bond.
6. The Contractor shall comply with pertinent provisions of RCW 49.17, “Washington Industrial Safety and Health Act,” and Chapter 296-155 WAC, “Safety Standards for Construction Work.”
7. Pursuant to RCW 49.70, “Worker and Community Right to Know Act,” and WAC 296-62-054 et seq., the Contractor shall provide to the Port, and have copies available at the Project site, a workplace survey or material safety data sheets for all “hazardous” chemicals under the control or use of Contractor or any Subcontractor of any tier.
8. All products and materials incorporated into the Project as part of the Work shall be certified as “asbestos-free” and “lead-free” by United States standards, and shall also be free of all hazardous materials or substances. At the completion of the Project, the Contractor shall submit certifications of asbestos-free and of lead-free materials certifying that all materials and products incorporated into the Work meet the requirements of this Section, and shall also certify that materials and products incorporated into the Work are free of hazardous materials and substances.

END OF SECTION 00 72 00

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes requirements for the Contractor's insurance.

1.02 SUBMITTAL REQUIREMENTS

A. Evidence of the required insurance within ten (10) days of the issued Notice of Award to the Contractor.

B. Updated evidence of insurance as required until final completion.

1.03 COMMERCIAL GENERAL LIABILITY (CGL) INSURANCE

A. The Contractor shall secure and maintain until Final Completion, at its sole cost and expense, the following insurance in carriers reasonably acceptable to the Port, licensed in the State of Washington, registered with the Washington State Insurance Commissioner, and possessing an A.M. Best rating of "A-, FSC six (6)" or better.

B. The Port of Tacoma (Port) will be included as additional insureds for both ongoing and completed operations by endorsement to the policy using ISO Form CG 20 10 11 85 or forms CG 20 10 04 13 and CG 20 37 04 13 (or equivalent coverage endorsements). The inclusion of the Port as additional insureds shall not create premium liability for the Port.

Also, by endorsement to the policy, there shall be:

1. An express waiver of subrogation in favor of the Port;
2. A cross liabilities clause; and
3. An endorsement stating that the Contractor's policy is primary and not contributory with any insurance carried by the Port.

C. If the Contractor, Supplier, or Subcontractors will perform any work requiring the use of a licensed professional, per RCW 18, the Contractor shall provide evidence to the Port of professional liability insurance in amounts not less than $1,000,000.

D. This insurance shall cover all of the Contractor's operations, of whatever nature, connected in any way with the Contract, including any operations performed by the Contractor's Subcontractors of any tier. **It is the obligation of the Contractor to ensure that all Subcontractors (at whatever level) carry a similar program that provides the identified types of coverage, limits of liability, inclusion of the Port as additional insured(s), waiver of subrogation and cross liabilities clause.** The Port reserves the right to reject any insurance policy as to company, form, or substance. Contractor's failure to provide, or the Port's acceptance of, the Contractor's certificate of insurance does not waive the Contractor's obligation to comply with the insurance requirements of the Contract as specifically described below:

1. Commercial General Liability Insurance on an Occurrence Form Basis including, but not limited to:
    a. Bodily Injury Liability;
    b. Property Damage Liability;
    c. Contractual Liability;
    d. Products - Completed Operations Liability;
    e. Personal Injury Liability;

Alternatively, a Commercial General Liability (CGL) policy is acceptable if all of the above coverages are incorporated in the policy and there are no marine exclusions that will remove coverage for either vessels or work done by or above or around the water.

2. Comprehensive Automobile Liability including, but not limited to:
    a. Bodily Injury Liability;
    b. Property Damage Liability;
    c. Personal Injury Liability;
    d. Owned and Non-Owned Automobile Liability; and
    e. Hired and Borrowed Automobile Liability.
3. Contractor's Pollution Liability (CPL) covering claims for bodily injury, property damage and cleanup costs, and environmental damages from pollution conditions arising from the performance of covered operations.
    a. If the Work involves remediation or abatement of regulated waste to include, but not limited to asbestos containing materials, lead containing products, mercury, PCB, underground storage tanks, or other hazardous materials or substances, the CPL policy shall not exclude such coverage, or a specific policy covering such exposure shall be required from the Contractor and all Subcontractors performing such Work.
    b. If the Work involves transporting regulated materials or substances or waste, a separate policy or endorsement to the CPL policy specifically providing coverage for liability and cleanup arising from an upset or collision during transportation of hazardous materials or substances shall be required from the Contractor and all Subcontractors performing such Work.
    c. It is preferred that CPL insurance shall be on a true occurrence form without a sunset clause. However, if CPL insurance is provided on a Claims Made basis, the policy shall have a retroactive date prior to the start of this project, and this insurance shall be kept in force for at least three years after the final completion of this project. Alternatively, the contractor, at its option, may provide evidence of extended reporting period of not less than three (3) years in its place. The Contractor shall be responsible for providing the Port with certificates of insurance each year evidencing this coverage.
    d. The Port shall be named as an additional insured(s) on the CPL policy.
4. Technology Professional Liability Errors and Omissions Insurance appropriate to the Consultant's profession and work hereunder, with limits not less than $2,000,000 per occurrence. Coverage shall be sufficiently broad to respond to the duties and obligations as is undertaken by the Vendor in this agreement and shall include, but not be limited to, claims involving infringement of intellectual property, copyright, trademark, invasion of privacy violations, information theft, release of private information, extortion and network security. The policy shall provide coverage for breach response costs as well as regulatory fines and penalties as well as credit monitoring expenses with limits sufficient to respond to these obligations.

    The policy shall include, or be endorsed to include, **property damage liability coverage** for damage to, alteration of, loss of, or destruction of electronic data and/or information "property" of the Agency in the care, custody, or control of the Vendor.

E. Except where indicated above, the limits of all insurance required to be provided by the Contractor shall be not less than $2,000,000 for each occurrence. If the coverage is aggregated, the coverage shall be no less than two times the per occurrence or per claim limit. However, coverage in the amounts of these minimum limits shall not be construed as to relieve the Contractor from liability in excess of such limits. Any additional insured endorsement shall NOT be limited to the amounts specified by this Contract, unless expressly waived in writing by the Port.

F. Contractor shall certify that its operations are covered by the Washington State Worker's Compensation Fund. The Contractor shall provide its Account Number or, if self-insured, its Certificate of Qualification Number. The Contractor shall also provide evidence of Stop-Gap Employers' Liability Insurance.

G. The Contractor shall furnish, within ten (10) days following issuance of the Notice of Award, a certificate of insurance satisfactory to the Port evidencing that insurance in the types and minimum amounts required by the Contract Documents has been secured. The Certificate of Insurance shall be signed by an authorized representative of the insurer together with a copy of the endorsement, which shows that the Port are named as additional insured(s).

H. Contractor shall provide at least forty-five (45) days prior written notice to the Port of any termination or material change, or ten (10) day's-notice in the case of non-payment of premium(s).

I. If the Contractor is required to make corrections to the Work after Final Completion, the Contractor shall obtain at its own expense, prior to the commencement of any corrective work, insurance coverage as required by the Contract Documents, which coverage shall be maintained until the corrections to the Work have been completed and accepted by the Port.

1.04 BUILDER'S RISK INSURANCE

A. Until Final Completion of the Work, the construction Work is at the risk of the Contractor and no partial payment shall constitute acceptance of the Work or relieve the Contractor of responsibility of completing the Work under the Contract.

B. To the extent the Work provided under this Contract does not include the construction, rehabilitation or repair of any dam, road or bridge, and whenever the estimated cost of the Work is less than $25,000,000, the Port and Contractor acknowledge that the Port will purchase, or has purchased, from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (including Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This property insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Without further endorsement, the coverage afforded by this insurance includes the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor. All tools and equipment not intended as part of the construction or installation (including but not limited to Contractor's equipment and tools) will NOT be covered by the policy.

To the extent the Work provided under this Contract involves any dam, roadway or bridge, the value of which exceeds $250,000, or whenever the estimated cost of the Work is equal to or greater than $25,000,000, Contractor will purchase from a company or companies lawfully authorized and admitted to do business in Washington, property insurance written on a Builder's Risk "all-risk" (excluding Earthquake and Flood with applicable sub-limits) or equivalent policy form to cover the course of construction in the amount of the full insurable value thereof. This Builder's Risk insurance shall be maintained, unless otherwise provided in the Contract Documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final payment has been made or until no person or entity other than the Port has an insurable interest in the property, whichever is later. Contractor shall provide evidence satisfactory to the Port confirming the coverage afforded by this insurance shall include the interests of the Port, the Contractor, and Subcontractors of any tier on the Project. Coverage for materials intended to be installed in the facility will be covered by the Builder's Risk policy purchased by the Contractor. Losses up to the deductible amount, and payment of any deductible amount, shall be the responsibility of the Contractor.

In all instances, the Contractor shall obtain property insurance for all Contractor-owned equipment and tools and, in the event of loss, payment of any deductible amount shall be the responsibility of the Contractor.

PART 2 - PRODUCTS - NOT USED

PART 3 - PRODUCTS - NOT USED

END OF SECTION 00 73 16

PART 1 - GENERAL

1.01 PREVAILING AND OTHER REQUIRED WAGES

A. The Contractor shall pay (and shall ensure that all Subcontractors of any tier pay) all prevailing wages and other wages (such as Davis-Bacon Act wages) applicable to the Project.

B. Pursuant to RCW 39.12, “Prevailing Wages on Public Works,” no worker, laborer, or mechanic employed in the performance of any part of the Work shall be paid less than the “prevailing rate of wage” in effect as of the date that bids are due.

1. Based on the Bid Date, the applicable effective date for prevailing wages for this Project is July, 2022.

C. The State of Washington prevailing wage rates applicable for this public works Project, which is located in Pierce County, may be found at the following website address of the Department of Labor and Industries:

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

D. The schedule of the prevailing wage rates is made a part of the Contract Documents by reference as though fully set forth herein, and a printed copy of the applicable prevailing wage rates are also available for viewing at the Port Administration Building, located at 1 Sitcum Plaza, Tacoma, WA 98421 (253-383-5841). Upon request to the Procurement Department at procurement@portoftacoma.com, the Port will email or mail a hard copy of the applicable Journey Level prevailing wages for this Project.

E. Questions relating to prevailing wage data should be addressed to the Industrial Statistician.

Mailing Address: Washington State Department of Labor and Industries
Prevailing Wage Office
P.O. Box 44540
Olympia, WA 98504

Telephone: (360) 902-5335

Facsimile: (360) 902-5300

1. If there is any discrepancy between the provided schedule of prevailing wage rates and the published rates applicable under WAC 296-127-011, the applicable published rates shall apply with no increase in the Contract Sum. It is the Contractor’s responsibility to ensure that the correct prevailing wage rates are paid.

F. Statement to Pay Prevailing Wages

1. Prior to any payment being made by the Port under this Contract, the Contractor, and each Subcontractor of any tier, shall file a Statement of Intent to Pay Prevailing Wages with the Department of Labor and Industries for approval.

2. The statement shall include the hourly wage rate to be paid to each classification of workers entitled to prevailing wages, which shall not be less than the prevailing rate of wage, and the estimated number of workers in each classification employed on the Project by the Contractor or a Subcontractor of any tier, as well as the Contractor’s contractor registration number and other information required by the Department of Labor and Industries.

3. The statement, and any supplemental statements, shall be filed in accordance with the requirements of the Department of Labor and Industries. No progress payment shall be made until the Port receives such certified statement.

G. The Contractor shall post, in a location readily visible to workers, at the Project site: (i) a copy of the Statement of Intent to Pay Prevailing Wages approved by the Industrial Statistician of the Department of Labor and Industries and (ii) the address and telephone number of the Industrial Statistician of the Department of Labor and Industries to whom a complaint or inquiry concerning prevailing wages may be directed.

H. If a State of Washington prevailing wage rate conflicts with another applicable wage rate (such as Davis-Bacon Act wage rate) for the same labor classification, the higher of the two shall govern.

I. Pursuant to RCW 39.12.060, if any dispute arises concerning the appropriate prevailing wage rate for work of a similar nature, and the dispute cannot be adjusted by the parties in interest, including labor and management representatives, the matter shall be referred for arbitration to the Director of the Department of Labor and Industries, and his or her decision shall be final and conclusive and binding on all parties involved in the dispute.

J. Immediately following the end of all Work completed under this Contract, the Contractor and each Subcontractor of any tier, shall file an approved Affidavit of Wages Paid with the Department of Labor and Industries.

K. The Contractor shall defend (at the Contractor's sole cost, with legal counsel approved by Port), indemnify, and hold the Port harmless from all liabilities, obligations, claims, demands, damages, disbursements, lawsuits, losses, fines, penalties, costs, and expenses, whether direct, indirect, including, but not limited to, attorneys' fees and consultants' fees and other costs and expenses, from any violation or alleged violation by the Contractor or any Subcontractor of any tier of RCW 39.12 ("Prevailing Wages on Public Works") or RCW Title 51 ("Industrial Insurance"), including, but not limited to, RCW 51.12.050.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 00 73 46

PART 1 - GENERAL

1.01 REQUIREMENTS APPLICABLE PORT-WIDE

A. The Contractor shall submit, prior to the start of Work, a list of emergency contact numbers for itself and its Subcontractors, Suppliers, and manufacturer representatives. Each person on the Project site shall have a valid identification card that is tamper proof with laminated photo identification, such as one (1) of the following:

1. State-issued Driver’s license (also required if driving a vehicle)
2. Card issued by a governmental agency
3. Passport
4. Pacific Maritime Association card
5. Labor organization identification card

B. Identification cards shall be visible while on the Project site or easily displayed when requested.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 00 73 63

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PART 1 - GENERAL

1.01 SCOPE

A. The accompanying Drawings and Specifications show and describe the location and type of Work to be performed under this project. Work is more specifically defined on the drawings listed in Section 00 01 15.

1. The Work under this contract is to provide, furnish and install all labor, materials and equipment required to complete the work, installed, tested, and ready for use, and as described in these documents.

2. The Lower Wapato Creek Habitat Project Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance consists of:

a. The installation of approximately 4,000 LF of perimeter fence consisting of black vinyl coated steel posts and black vinyl coated smooth wire fencing as defined on the Drawings.

b. The installation, management of, and eventual removal of an irrigation system.

c. The installation of:

1) 7,600 bare root or live stake trees

2) 24,900 bare root or live stake shrubs

3) 115,200 10 CU. IN. emergent plugs

d. The replacement planting during the maintenance period of approximately:

1) 1,100 bare root or live stake trees

2) 3,750 bare root or live stake shrubs

3) 17,300 10 CU. IN emergent plugs

e. The management of invasive weeds and other plants during the Contract period by spraying, hand pulling or other means.

f. The overseeding of bare areas with native seed.

g. General site maintenance including debris collection and removal.

1.02 LOCATION

A. The work is located at:

1131 Alexander Ave

1.03 PORT PROVIDED MATERIALS

A. Port of Tacoma will furnish the Contractor with the following material:

1. [_____]

B. Reference Section 01 64 00 - Owner Provided Materials for coordination.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 01 10 00

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PART 1 - GENERAL

1.01 SUMMARY

A. This Section specifies work sequence and constraints.

B. The purpose of the milestones, sequence and limitations of construction are to ensure that the Contractor understands the requirements and limitations on its work by the specific characteristics of the Contract, schedules and conducts work in a manner consistent with achieving these purposes, and complies with the construction schedule, the specific sequence, constraints, milestones and limitations of work specified.

C. Sequence of construction. Plan the sequence of construction to accommodate all the requirements of the specifications. The Contract Price shall include all specified requirements as described in this Section.

1. The irrigation system installation is considered a first priority in the sequence of construction.

2. Perimeter fence installation is considered a second priority in the sequence of construction.

3. Planting, emergents - fall of 2022, live stakes and bare root materials - winter of 2023 thru spring of 2023, is considered a third priority.

4. Overseeding bare areas will occur fall of 2022.

5. Invasive control will be ongoing beginning at Notice to Proceed thru Substantial Completion. The Port Maintenance team has implemented a spraying routine to curtail invasive growth until the Project begins.

6. Site and Irrigation System Maintenance will be ongoing beginning at Notice to Proceed thru Substantial Completion.

1.02 CONTRACTOR ACCESS AND USE OF PREMISES

A. Activity Regulations

1. Ensure Contractor personnel deployed to the project become familiar with and follow all regulations or restrictions established by the Engineer.

B. Work Site Regulations

1. Keep within the limits of work and assigned avenues of ingress and egress. Do not enter any areas outside the designated work location unless previously approved by the Engineer. The Contractor must comply with the following conditions:

a. Restore all common areas to a clean and useable condition after the Contractor ceases daily work.

b. Be responsible for control and security of Contractor-owned equipment and materials at the work site. Report to Port Security (phone (253) 383-9472) any missing/lost/stolen property.

c. Ensure all materials, tools and equipment will be removed from the site or secured within the designated laydown area at the end of each shift.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION 01 14 00

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PART 1 - GENERAL

1.01 SUMMARY

A. Procedures for preparation and submittal of applications for progress payments.

1.02 PAYMENT PROCEDURES

A. Monthly pay estimates shall clearly identify the work performed for the given time period based on the approved Schedule of Values.

1. At the Pre-construction meeting, the Engineer and the Contractor shall agree upon a date each month when payment applications shall be submitted.

B. For each pay estimate the Contractor shall submit the following:

1. Completed Contractor invoice and updated Schedule of Values tracking sheet as required by Division 01 or as established by the Engineer.

2. Baseline Project Schedule and narrative updated as required by Section 01 32 16 of the Project Manual.

3. Completed “Amounts Paid to Subcontracts and Suppliers” showing total contract amount, amount paid this estimate, total paid to date, and balance owing.

4. Completed “Conditional Release and Waiver of Liens and Claims.”

5. An estimated cashflow statement projecting the Contractor’s monthly billings on the project shall be submitted with each payment application.

C. Prior to submitting a payment application, the Contractor and Engineer shall meet each month to review the work accomplished to determine the actual quantities including labor, materials and equipment charges to be billed.

1. Prior to the payment application meeting, the Contractor shall submit to the Engineer all measurement documentation as referenced in these contract documents; to include all measurement by weight, volume or field.

2. For all change work being done on a force account basis, the Contractor shall submit prior to meeting with Engineer all Force Account back-up documentation as required to process the payment application where Force Account work is being billed. The Engineer and the Contractor shall review the documentation at the payment application meeting to verify quantities and review the work accomplished.

3. The Contractor shall bring a copy of all documentation to the pay application meeting with the Engineer.

4. The Contractor shall submit the updated baseline project schedule for review prior to submitting the payment application to ensure the payment processing is not held up due to necessary schedule revisions.

D. Following the Engineers’ review, the Contractor shall submit the agreed upon pay estimate electronically, with complete supporting documentation, using e-Builder®.

1.03 PAYMENT PRICING

A. Pricing for the various lump sum or unit prices in the Bid Form, as further specified herein, shall include all compensation to be received by the Contractor for furnishing all tools, equipment, supplies, and manufactured articles, and for all labor, operations, and incidentals appurtenant to the items of work being described, as necessary to complete the various items of the work in accordance with the requirements of the Contract Documents.

B. Pricing also includes all costs of compliance with the regulations of public agencies having jurisdiction, including safety and health requirements of the Occupational Safety and Health Administration of the U.S. Department of Labor (OSHA).

C. No separate payment will be made for any item that is not specifically set forth in the Bid Form, and all costs therefore shall be included in the prices named in the Bid Form for the various appurtenant items of work.

D. All other work not specifically mentioned in the measurement and payment sections identified below shall be considered incidental to the work performed and merged into the various unit and lump sum prices bid. Payment for work under one item will not be paid for under any other item.

E. The Port of Tacoma reserves the right to make changes should unforeseen conditions necessitate such changes. Where work is on a unit price basis, the actual quantities occasioned by such changes shall govern the compensation.

1.04 LUMP SUM MEASUREMENT

A. Lump sum measurement will be for the entire item, unit of Work, structure, or combination thereof, as specified and as indicated in the Contractor's submitted bid.

1. If the Contractor requests progress payments for lump sum items, such progress payments will be made in accordance with an approved Schedule of Values. The quantity for payment for completed work shall be an estimated percentage of the lump sum amount, agreed to between the Engineer and Contractor, payable in monthly progress payments in increments proportional to the work performed in amounts as agreed between the Engineer and the Contractor.

1.05 MEASUREMENT OF QUANTITIES FOR UNIT PRICES

A. Measurement Standards:

1. All Work to be paid for at a contract price per unit measurement, as indicated in the Contractor's submitted bid, will be measured by the Engineer in accordance with United States Standard Measures.

B. Measurement by Quantity:

1. Method of quantity measurement will be by the number of plants installed as shown on the Contract Drawings or as specified.

2. The Contractor shall track the total quantity of plants delivered and the quantity of plants installed on a weekly basis to support monthly pay applications. The Engineer will verify all quantities of Plants installed by the Contractor on a unit-price basis, for progress payment purposes.

C. Measurement by Hour:

1. Method of hourly payment will be tracked on daily sheets prepared by the Contractor. Daily sheets shall be signed by the Engineer no later than the following day that work was performed.

2. The Engineer will verify all hours of Work performed by the Contractor on a hourly basis, for progress payment purposes.

1.06 REJECTED, EXCESS, OR WASTED MATERIALS

A. Quantities of material wasted or disposed of in a manner not called for under the Contract; rejected loads of material, including material rejected after it has been placed by reasons of the failure of the Contractor to conform to the provisions of the Contract; material not unloaded from the transporting vehicle; material placed outside the lines indicated on the Contract Drawings or established by the Engineer; or material remaining on hand after completion of the Work, will not be paid for, and such quantities shall not be included in the final total quantities. No additional compensation will be permitted for loading, hauling, and disposing of rejected material.

1.07 MEASUREMENT AND PAYMENT

A. Item #1: Mobilization and Demobilization

1. Payment for Mobilization and Demobilization shall be for preparatory work and operations performed by the Contractor including, but not limited to, those necessary for the movement of its personnel, equipment, supplies and incidentals to and from the project site; temporary facilities and controls; for the establishment and removal of its offices, buildings and other facilities necessary for work on the project; for other work and operations which it must perform or costs it must incur before beginning production work on the various items on the project site, and for removal of personnel, equipment, supplies, offices, building facilities, sheds, fencing, and other incidentals from the site.

2. Mobilization and Demobilization shall be paid at the lump sum price listed in the Contractor's submitted bid. Incremental payment shall be made for each location as follows:

a. 40% after completion of the installation of the irrigation system.

b. 40% after completion of installation of the perimeter fencing and Phase II planting.

c. 20% after completion of all work on the project has been completed, including removal of the irrigation system, clean-up and acceptance of the project by the Port.

B. Item #2: Project Administration

1. Item Description: The Work of this item includes all administrative costs associated with administering and supervising the project including, but not limited to supervision of personnel, coordination of all work activities, coordination of subcontractors and/or suppliers, preparation and transmittal of submittals, permit acquisitions, for premiums on bonds and insurance for the project, and project overhead.

2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

C. Item #3: Perimeter Fence

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete the installation of the perimeter fence as shown in the Contract Documents.

2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

D. Item #4: Irrigation System Installation

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete the installation of the irrigation system as shown in the Contract documents. This shall include the following items:

   a. All piping, heads, supports, controllers, meters, backflow preventors and double check assemblies as indicated.

   b. Iinitial system startup, operation and adjustment.

2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

E. Item #5: Irrigation System Management and Maintenance

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete the managment and maintenance of the irrigation system as shown in the Contract documents. This shall include the following:

   a. Repair of broken, damaged or non functioning items.

   b. Adjustment of zones as required to increase or decrease quantity of water or timing intervals.

   c. Winterizations and spring startups.

2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

F. Item #6: Irrigation System Removal

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete the removal of the irrigation system as shown in the Contract documents. This shall include the following:

   a. Complete removal of all piping, heads, controllers, supports and all other system components.

   b. Removal of the meters, meter boxes shall remain in place. All connections shall be capped as required by the City of Fife.

   c. Removal of double check and backflow devices and boxes including the restoration of the disturbed areas.

2. Measurement: This item will be measured based on a percentage complete for the overall lump sum amount.

3. Payment: This item will be paid for at the Contract lump sum price as specified in the Contractor's submitted bid, in accordance with the approved Schedule of Values.

G. Item #7: Bare Root Tree and Shrub Planting

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete the installation of the Port provided bare root plant stock as shown in the Contract Documents.
2. Measurement: This item will be measured based on quantity of plants installed.
3. The total quantity of plants indicated on the bid form includes the total number of plants to be initially installed and assumes a mortality of 15% for replanting in the fall of 2023 and 2024.
4. Payment: This item will be paid based on the actual number of plants installed for the period being billed.

H. Item #8: Live Stake Tree and Shrub Planting

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete the installation of the Port provided live stakes as shown in the Contract Documents.
2. Measurement: This item will be measured based on quantity of stakes installed.
3. The total quantity of stakes indicated on the bid form includes the total number of stakes to be initially installed and assumes a mortality of 15% for replanting in the fall of 2023 and 2024.
4. Payment: This item will be paid based on the actual number of stakes installed for the period being billed.

I. Item #9: 10 CU. IN. Plug Planting

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete the installation of the Port provided emergent plugs as shown in the Contract Documents.
2. Measurement: This item will be measured based on quantity of plugs installed.
3. The total quantity of plugs indicated on the bid form includes the total number of plugs to be initially installed and assumes a mortality of 15% for replanting in the fall of 2023 and 2024.
4. Payment: This item will be paid based on the actual number of plugs installed for the period being billed.

J. Item #10: Overseeding of Bare Areas

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete the overseeding of bare areas of the site where previous seed applications have not sufficiently developed. The Port will provide the seed mix to the contractor for installation in areas identified by the Engineer.
2. Measurement: The Contractor shall track the number of hours on daily sheets for the Engineer's review and approval for work completed on this item.
3. Payment: This item will be paid based on the total number of hours worked on this item for the period being billed.

K. Item #11: Invasive Species Control

1. Item Description: The Work of this item includes all materials, supplies, equipment and labor necessary to complete invasive species control on the site. Invasive species shall include all noxious weeds as indicated by the Pierce County Noxious Weed Control Board and will include the following partial list of plants:
    a. Reed Canary Grass
    b. English Ivy
    c. Blackberry (non-native)
    d. Scotchbroom
    e. Japanese Knotweed
    f. Thistle(s)
    g. Poison Hemlock
    h. Tansy Ragwort
    i. Yellow Flag Iris
    j. Misc others
2. Measurement: The Contractor shall track the number of hours on daily sheets for the Engineer's review and approval for work completed on this item.
3. Payment: This item will be paid based on the total number of hours worked on this item for the period being billed.

L. Item #12: Unforeseen Conditions Allowance

1. Item Description: This allowance will be for UNFORESEEN CONDITIONS for work unidentified at the time of bid and will be paid preferably as a negotiated unit price(s) or lump sum(s). If unit prices or lump sums cannot be established, work shall be paid on a time and materials basis per Section 00 72 00 General Conditions Article 8.0. Work under this bid item shall be accomplished upon written direction from the Engineer as Minor Change in Work. This entire bid item may not be used.
2. Measurement: This item will be measured based upon the method agreed upon for each Minor Change issued.
3. Payment: This item will be paid for at the price agreed upon for each Change in Work issued by the Engineer in accordance with procedures noted in Section 01 26 00 - Change Management Procedures.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXEUCTION - NOT USED

END OF SECTION 01 20 00

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for handling and processing Contract modifications.

1.02 SUBMITTALS

A. The Contractor shall submit for approval the following documentation to the Port for force account change orders:

1. List of Labor Rates

a. For the Contractor and each subcontractor, a list of labor rates for each trade applicable to the scope of work to be performed. These submitted rates shall be broken down to include the base wage, fringes, FICA, SUTA, FUTA, industrial insurance, and medical aid premiums as stated in the General Conditions. The rates shall not contain any travel time, safety, loss efficiency factors, overhead, or profit. Rates shall be submitted for straight time, overtime, and double time in a form acceptable to the Engineer. Contractor shall provide proof of all labor rate costs as required by the Engineer, including the submission of a copy of the most current Workers Compensation Rate Notice from Labor & Industries and a copy of the Unemployment Insurance Tax Rate notice from the Employment Security Department.

1) If labor rates change during the course of the project or additional labor rates become required to complete the work, the Contractor shall submit new rates for approval.

2. List of Equipment.

a. Submit for the Contractor and each subcontractor, a list of equipment and rates applicable to the scope of work to be performed. The equipment rates shall conform to the rates shown on Equipment Watch. A separate page from equipment watch detailing the hourly rate shall be submitted as backup documentation for each piece of equipment.

1) If the list of equipment and/or equipment rates changes during the course of the project or additional equipment becomes required to complete the work, the Contractor shall submit a new list and rates for approval.

1.03 METHOD TO CALCULATE ADJUSTMENTS TO CONTRACT PRICE

A. One of the following methods shall be used:

1. Unit Price Method;

2. Firm Fixed Price Method (Lump Sum); or,

3. Time and Materials Method (Force Account).

B. The Port preferred methods are firm fixed price or unit prices.

1.04 MINOR CHANGES IN THE WORK

A. Engineer will issue a written directive authorizing minor changes in the Work, not involving adjustment to the Contract Sum or the Contract Time.

1.05 PROPOSAL REQUESTS

A. Port-Initiated Proposal Requests: The Engineer will issue a detailed description of proposed changes in the Work that may require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.

1. Work Change Proposal Requests issued by Engineer are not instructions either to stop work in progress or to execute the proposed change.

2. Contractor shall submit a written proposal within the time specified in the General Conditions. The proposal shall represent the Contractor’s offer to perform the requested work, and the pricing set forth within the proposal shall represent full, complete, and final compensation for the proposed change and any impacts to any other Contract Work, including any adjustments in the Contract Time.

a. Include a breakdown of the changed work in sufficient detail that permits the Engineer to substantiate the costs.

1) Generally, the cost breakdown should be divided into the time and materials categories listed in the General Conditions under Article 8.02.B for either Lump Sum Proposals or Force Account Proposals.

2) For Unit Price Proposals, include the quantity and description of all work involved in the unit pricing being proposed, along with a not to exceed total cost.

b. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

B. Contractor-Initiated Proposals: If latent or differing site conditions require modifications to the Contract, the Contractor may initiate a claim by submitting a request for a change to the Engineer.

1. Notify the Engineer immediately upon finding differing conditions prior to disturbing the site.

2. Provide follow-up written notification and differing site conditions proposal within the time frames set forth in the General Conditions.

3. Provide the differing site condition change proposal in the same or similar manner as described above under 1.05.A.

4. Comply with requirements in Section 00 26 00 Substitution Procedures if the proposed change requires substitution of one product or system for product or system specified.

5. Proposal Request Form: Use form acceptable to Engineer.

1.06 PROCEEDING WITH CHANGED WORK

A. The Engineer may issue a directive instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order per the General Conditions, Article 8.01.E.

1. The directive will contain a description of change in the Work and a not-to-exceed amount. It will designate the method to be followed to determine the change in the Contract Sum or the Contract Time.

1.07 CHANGE ORDER PROCEDURES

A. Issuance of Change Order

1. On approval of the Contractor's proposal, and following successful negotiations, the Engineer will issue a Change Order for signature by the Contractor and execution by the Engineer.
    a. The Contractor shall sign and return the Change Order to the Engineer within **four (4) days** following receipt of the Change Order from the Engineer. If the Contractor fails to return the signed Change Order within the allotted time, the Engineer may issue a Unilateral Change Directive.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 01 26 00

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PART 1 - GENERAL

1.01 SUMMARY

A. This section includes specifications for preparation, format, and submittal of Schedule of Values.

B. The Schedule of Values will establish unit prices for individual items of work.

C. The Schedule of Values will be the basis for payment of contract work.

1.02 PREPARATION

A. To facilitate monthly pay requests, develop the Schedule of Values based on the Contractor's submitted Bid Items. The Schedule of Values shall be used to provide an allocation of the Work for measurement and payment to a level of detail to ensure accurate payment for the Work accomplished. The Schedule of Values is based on unit priced bid items and a breakdown of each lump-sum bid item. The total dollars for the Schedule of Values shall total the bid amount.

B. Obtain the agreement of the Engineer on the Schedule of Values. No payment will be made prior to an agreed upon Schedule of Values.

C. Include an updated version of the Schedule of Values as changes occur. Update the Schedule of Values to include:

1. Dollars earned and percent complete for the current progress payment period,
2. Dollars earned and percent complete to-date, excluding the current progress payment period,
3. Total dollars earned and percent complete to-date,
4. Total dollars remaining, and
5. Changes resulting from Change Orders.

D. The total value of the line items in the Schedule of Values plus any approved Change Orders shall be equal to the current approved contract price.

E. The value of stored material shall be identified in the Schedule of Values with both a material-purchase activity and a separate corresponding installation activity in the Construction Schedule(s).

F. Include as exhibits, drawings or sketches as necessary, to better define the limits of pay items that are in close proximity and that have no clear boundary in the Contract Drawings.

1.03 SUBMITTAL

A. Submit preliminary Schedule of Values within 10 days of the effective date of the Notice to Proceed.

B. Submit corrected Schedule of Values within 10 days upon receipt of reviewed Schedule of Values.

C. At the Engineer's request, submit documentation substantiating the cost allocations for line items within the Schedule of Values.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 SCHEDULE OF VALUES

A. Submit the Schedule of Values in a form acceptable to the Engineer.

B. Provide updated Schedule of Values as required by the Engineer and as indicated in the Contract Documents.

END OF SECTION 01 29 73

PART 1 - GENERAL

1.01 SCOPE

A. The purpose of this section is to provide the framework for communication between the Port and the Contractor by defining the types and timing of administrative tasks, including meetings and other items related to communications.

1.02 NOTICE TO PROCEED

A. Contract execution will be made per the requirements of the Contract Documents. Once the contract has been executed and all pre-work submittals have been received, the Engineer will issue a Notice to Proceed (NTP).

1. In certain instances, the Engineer may issue to the Contractor a Limited NTP for specified elements of the work described in these Contract Documents.

B. The Contractor shall submit all pre-work submittals within 10 days of contract execution.

1. No contract time extension shall be granted for any delays in issuance of the NTP by the Engineer due to the Contractor's failure to provide acceptable submittals required by the Contract Documents.

1.03 COORDINATION

A. The Contractor shall coordinate all its activities through the Engineer.

B. The Contractor shall coordinate construction operations as required to execute the Work efficiently, to obtain the best results where installation of one part of the Work depends on other portions.

1.04 PROJECT MEETINGS

A. Pre-Construction Meeting

1. After execution of the contract, but prior to commencement of any work at the site, a mandatory one time meeting will be scheduled by the Engineer to discuss and develop a mutual understanding relative to the administration of the safety program, preparation of the Schedule of Values, change orders, RFI’s, submittals, scheduling prosecution of the work. Major subcontractors who will engage in the work shall attend.

2. Suggested Agenda: The agenda will include items of significance to the project.

3. Location of the Pre-Construction Meeting will be held at the Port of Tacoma Administration Building located at One Sitcum Plaza.

B. Weekly Progress Meetings – Progress meetings include the Contractor, Engineer, consultants and others affected by decisions made.

1. The Engineer will arrange meetings, prepare standard agenda with copies for participants, preside at meetings, record minutes and distribute copies within ten working days to the Contractor, meeting participants, and others affected by decisions made.

a. The Engineer will approve submitted meeting minutes in writing within 10 working days.

2. Attendance is required for the Contractor's job superintendent, major subcontractors and suppliers, Engineer, and representatives of the Port as appropriate to the agenda topics for each meeting.

3. Standard Agenda

a. Review minutes of previous meeting
b. Review of work progress
c. Field observations, problems, and decisions
d. Identification of problems that impede planned progress
e. Maintenance of Progress Schedule (3 weeks ahead; 1 week back)
f. Corrective measures to regain projected schedules
g. Planned progress during succeeding work period
h. Coordination of projected progress
i. Maintenance of quality and work standards
j. Effect of proposed changes on progress schedule and coordination
k. Demonstration that the project record drawings are up-to-date
l. Other business relating to the work

C. Cost Meeting

1. A separate cost meeting may be set up by the Engineer to discuss RFI's (or any other issues) that may cause scope, schedule or monetary changes to the contracts in more detail then necessary at the progress meeting. The Engineer will arrange, host and provide an agenda for cost meetings. Attendees would include the Engineer, Contractor's job superintendent and others as invited.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 01 30 00

PART 1 - GENERAL

1.01 SUMMARY

A. The Port and Contractor shall use the Port Contract Management application (e-Builder®) for electronic information exchange throughout the duration of the Contract, as later described.

1. e-Builder® is a web-based application accessed via the web.

2. The Contractor will receive up to two separate user accounts for access to e-Builder®.

3. The joint use of this system is to facilitate and coordinate the electronic exchange of Requests for Information, Submittals, Change Order Proposals, Pay Applications, and project specific correspondence.

1.02 USER ACCESS LIMITATIONS

A. Contractor’s access to e-Builder® is granted and controlled by the Engineer.

1. The users assigned by the Contractor to use e-Builder® shall be competent and experienced with the practices commonly employed in the industry for electronically submitting requests for information, submittals, product data, shop drawings and related items as required by the contract and the methods commonly used for project correspondence transmission and filing.

2. Any users assigned by the Contractor whom the Engineer determines is incapable of performing the prescribed tasks in an accurate, competent and efficient manner will be removed upon request from the Engineer. The qualifications and identity of a replacement user shall be submitted within 24 hours for consideration by the Engineer. Once accepted by the Engineer, the user account will be modified accordingly.

1.03 CONTRACTOR TECHNOLOGY REQUIREMENTS

A. The Contractor is responsible for providing and maintaining web enabled devices capable of running the desktop version of the e-Builder® website effectively.

1.04 CONTRACTOR SOFTWARE REQUIREMENTS

A. The Contractor is responsible for providing and maintaining the following:

1. An office suite that is Microsoft Office 2013 compatible for generation and manipulation of correspondence.

2. A program capable of editing, annotating and manipulating Adobe pdf files for inserting the Contractor’s review stamp, clouding and adding notation to the files as necessary for review by the Engineer.

1.05 CONTRACTOR RESPONSIBILITY

A. Provide all the equipment, internet connections, software, personnel and expertise required to support the use of e-Builder® as described in the Contract documents.

1.06 PORT RESPONSIBILITY

A. Provide the Contractor with the following:

1. All forms necessary for application to obtain permissions to access e-Builder® as described above.

2. Information, basic user guides and requirements on methods for using e-Builder®.

3. Instruction for the Contractor's staff utilizing e-Builder®.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 UTILIZATION OF E-BUILDER®

A. The Contractor shall provide required information in a timely manner that also supports the project schedule and meets the requirements of the Contract.

B. The Contractor shall provide and maintain competent and qualified personnel to perform the various tasks required to support the work within e-Builder®.

C. The Port will not be liable for any delays associated from the usage of e-Builder® including, but not limited to: slow response time, Port maintenance and off-line periods, connectivity problems or loss of information. Under no circumstances shall the usage of e-Builder® software be grounds for a time extension or cost adjustment to the contract.

END OF SECTION 01 31 23

PART 1 GENERAL

1.01 SUMMARY

A. This section includes the requirements to provide a preliminary schedule and construction progress schedule, bar chart type.

1.02 SUBMITTALS

A. Within 10 days following execution of the contract, submit a baseline project schedule defining planned operations.

B. If the baseline project schedule requires revision after review, submit revised baseline project schedule within 10 days.

C. Within 20 days after review of baseline project schedule, submit draft of proposed complete baseline project schedule for review.

D. Submit updated progress schedule monthly to the Engineer with each pay application as required in Section 01 20 00 Price and Payment Procedures.

1.03 QUALITY ASSURANCE

A. Scheduler: Contractor's personnel or Consultant specializing in Critical Path Method (CPM) scheduling with one year’s minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

1.04 SCHEDULE FORMAT

A. The baseline project schedule shall be produced using the CPM format.

B. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.

C. Sheet Size: Multiples of 11 x 17 (280 x 432 mm).

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 BASELINE SCHEDULE

A. Prepare baseline project schedule in the form of a horizontal bar chart.

B. The baseline project schedule shall include all the activities listed in the Schedule of Values and be directly related to items listed in the Bid Form. The Contractor is encouraged to add sufficient activities to facilitate a clear understanding of the means and methods planned for the various work items.

C. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction and critical path. At a minimum it shall include and show the following:

1. A time scale showing the elementary work items needed to complete the work;

2. Estimated time durations for each activity, defined as any single identifiable work step within the project;

3. A graphical network diagram showing the logical sequence of activities, their precedence relationships, and estimated float or leeway available for each;

4. The different categories of work as distinguished by crew requirements, equipment requirements, and construction materials; and
5. The different areas of responsibility, such as distinctly separate or subcontracted work, and identifiable subdivisions of work.

D. It shall be maintained and updated as necessary to accurately reflect past progress and the most probable future progress.

E. Activities shown shall include submittals, milestones, and sufficient task breakdown for major components of work.

F. Identify work of separate stages and other logically grouped activities.

G. Provide sub-schedules to define critical portions of the entire schedule.

H. Provide separate schedule of submittal dates for shop drawings, product data, samples, owner-furnished products, products identified, and dates reviewed submittals will be required from the Engineer. Indicate decision dates for selection of finishes.

3.02 PROGRESS SCHEDULE

A. From the regularly-maintained baseline project schedule, progress schedules showing a three-week look-ahead, one-week look-back, shall be submitted and distributed at the weekly progress meetings. The progress schedule shall represent a practical plan to complete the work shown within the contract work window presented. At a minimum, the presentation, typically a Gantt-style chart, shall convey the task durations, a logical work sequence, task interdependencies, and identify important or critical constraints.

B. Submittal and distribution of progress schedules will be understood to be the Contractor’s representation that the scheduled work meets the requirements of the contract documents and that the work will be executed in the manner and sequence presented, and over the durations indicated.

C. The scheduling, coordination, and execution of construction in accordance with the contract documents are the responsibility of the Contractor. The Contractor shall involve, coordinate, and resolve scheduling with all subcontractors, material suppliers, or others affected in development of the progress schedules.

D. The progress schedule shall be used for coordination purposes for inspection and testing purposes as well as validation of work progress against the baseline schedule.

3.03 UPDATING SCHEDULE

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity.

C. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

D. Indicate changes required to maintain Date of Substantial Completion.

E. Submit reports required to support recommended changes.

F. Contractor shall submit an updated progress schedule with each pay application and include a written narrative describing the overall progress of the work. The narrative shall include the following key aspects:

1. Progress in the last period.

2. Critical Path progress and schedule concerns.
3. Changes to schedule logic or sequencing of the work.

END OF SECTION 01 32 16

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PART 1 - GENERAL

1.01 SUMMARY

A. This section includes the requirements to provide a submittal log and project submittals.

1.02 SUBMITTAL LOG

A. Contractor shall, within 14 days of contract execution prepare and submit for Engineer approval a detailed log of all the submittals required under this Contract, along with any other submittals identified by the Port or Contractor. The log shall include, but not be limited to, schedules, required construction Work plans, equipment and material cut sheets, shop drawings, project record documents, test results, survey records, record drawings, results of QC testing, and all other items for which a submittal is required. The submittal log shall be organized by CSI Specification Division, and Section number and include the following information:

1. Item Description
2. Category
3. Specification Section information of the applicable section
4. After the submittal log is reviewed and approved by the Engineer, it shall become the basis for the submittal of all items by Contractor.

1.03 COMPLIANCE

A. Failure to comply with these requirements shall be deemed as the Contractor's agreement to furnish the exact materials specified or materials selected by the Engineer based on these specifications.

1.04 SHOP DRAWINGS AND MANUFACTURERS' LITERATURE

A. The Port will not accept shop drawings that prohibit the Port from making copies for its own use.

B. Shop drawings shall be prepared accurately and to a scale sufficiently large to indicate all pertinent features of the products and the method of fabrication, connection, erection, or assembly with respect to the Work.

C. All drawings submitted to the Engineer for approval shall be drawn to scale as ANSI D.

D. Required electronic formats for these drawings are as follows:

1. AutoCad DWG
2. PDF - Formatted to print to half-scale using 11x17 paper

E. Catalog cuts or brochures shall show the type, size, ratings, style, color, manufacturer, and catalog number of each item and be complete enough to provide for positive and rapid identification in the field. General catalogs or partial lists will not be accepted. Manufacturers' original electronic files are required for submitting.

1.05 SUBMITTAL REVIEW

A. After review of each of Contractor's submittals, the submittal will be returned to Contractor with a form indicating one or more of the following:

1. No Exceptions Taken - Means, accepted subject to its compatibility with future submittals and additional partial submittals for portions of the work not covered in this submittal. But it does not constitute approval or deletion of specified or required items not shown in the partial submittal.

2. Make Corrections Noted - Same as Item 1, except that minor corrections as noted shall be made by Contractor.
3. Reviewed - Submittal has been reviewed by the Port, does not constitute approval, and the Contractor is responsible for requirements in submittal.
4. Review as Noted - Submittal has to be reviewed by the Port with comments as noted.
5. Revise and Resubmit - Means, rejected because of major inconsistencies or errors. Resolve or correct before next submittal.
6. Rejected - Means, submitted material does not conform to the Contract Documents in a major respect (e.g., wrong material, size, capacity, model, etc.).

B. Submittals marked "No Exceptions Taken," "Make Corrections Noted," or “Reviewed as Noted” authorizes Contractor to proceed with construction covered by those data sheets or shop drawings with corrections, if any, incorporated.

C. When submittals or prints of shop drawings have been marked "Revise and Resubmit" or "Rejected," Contractor shall make the necessary corrections and submit required copies. Every revision shall be shown by number, date, and subject in a revision block, and each revised shop drawing shall have its latest revision numbers and items clearly indicated by clouding around the revised areas on the shop drawing.

D. Submittals authorized by the Engineer do not in any case supersede the Contract Documents. The approval by the Engineer shall not relieve the Contractor from responsibility to conform to the Drawings or Specifications, or correct details when in error, or ensure the proper fit of parts when installed. A favorable review by the Port of shop drawings, method of work, or information regarding material and equipment Contractor proposes to furnish shall not relieve Contractor of its responsibility for errors therein and shall not be regarded as assumption of risk or liability by the Port or its officers, employees, or representatives. Contractor shall have no claim under the Contract on account of failure or partial failure, or inefficiency or insufficiency of any plan or method of work, or material and equipment so accepted. Favorable review means that the Port has no objection to Contractor using, upon its own full responsibility, the plan or method of work proposed, or furnishing the material and equipment proposed.

E. It is considered reasonable that the Contractor’s submittals shall be complete and acceptable by at least the second submission of each submittal. The Port reserves the right to deduct monies from payments due Contractor to cover additional costs for review beyond the second submission.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PREPARATION OF SUBMITTALS

A. The Contractor shall submit all shop drawings, catalog cuts, brochures and physical samples using e-Builder® (a web based construction management software). All post-document-generated notations such as notes, arrows, stamps, clouding, or other items, are required to be shown directly on the submittal document. **Each submittal shall be accompanied by a transmittal developed within the e-Builder® software.**

B. A separate submittal shall be prepared for each product or procedure and shall be further identified by referencing the Specification Section and paragraph number and each submittal shall be numbered consecutively.

C. Product submittals that cannot be accomplished electronically shall be submitted electronically without attachments, marked as being hand delivered, and accompanied by a printed version of a transmittal.

D. Shop and detail drawings shall be submitted in related packages. All equipment or material details which are interdependent, or are related in any way, must be submitted indicating the complete installation. Submittals shall not be altered once marked “No Exceptions Taken” Revisions shall be clearly marked and dated. Major revisions must be submitted for approval.

E. The Contractor shall thoroughly review all shop and detail drawings, prior to submittal, to assure coordination with other parts of the work.

F. Components or materials which require shop drawings and which arrive at the job site prior to approval of shop drawings shall be considered as not being made for this project and shall be subject to rejection and removal from the premises.

G. All submittal packages including, but not limited to, product data sheets, mix designs, shop drawings and other required information for submittal must be submitted, reviewed and approved before the relevant scheduled task may commence. It is the responsibility of the Contractor to provide the submittal information which may drive a task on the construction schedule to submit items well enough in advance as to provide adequate time for review and comment from the Engineer without adversely impacting the construction schedule.

H. When completing the e-Builder® submittal form, a Date Due field is required to be completed. This field is intended to inform the Port of the urgency of the submittal. Failure of the Port to return the submittal by the date provided by the Contractor will not be considered grounds for a contract time extension.

3.02 PRE-WORK SUBMITTALS

A. Prior to issuance of Notice to Proceed, the following submittals must be submitted and returned to the Contractor as No Exceptions Taken, Make Corrections Noted, Reviewed, or Reviewed as Noted.

1. Per 00 72 00 and 01 32 16, Baseline Project Schedule
2. Per 00 73 63, Emergency Contact Numbers
3. Per 01 35 29, Health and Safety Plan (HASP)
4. Per 01 35 29, Spill Prevention and Countermeasures Plan (SPCC)
5. Per 01 35 47, List of equipment and written certification

3.03 MAINTENANCE OF SUBMITTAL LOG

A. Prepare and submit for Port review a detailed submittal log conforming to the requirements of paragraph 1.02 of this section. When approved by the Engineer, use the submittal log to track the transmittal of submittals to the Engineer, the receipt of submittal comments from the Engineer, and all subsequent action with respect to each submittal. Provide an updated copy of the submittal log to the Engineer during each weekly progress meeting, unless otherwise approved by the Engineer.

END OF SECTION 01 33 00

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PART 1 - GENERAL

1.01 SUMMARY

A. The work includes the requirements for health and safety provisions necessary for all work at the site for this project. The work also includes compliance with all laws, regulations and ordinances with respect to safety, noise, dust, fire and police action, civil disobedience, security or traffic.

B. The Contractor shall monitor site conditions for indications of identified and other potentially hazardous, dangerous, and/or regulated materials (suspicious material). Indicators of suspicious material include, but are not limited to, refuse, oily sheen or coloring on soil or water, or oily or chemical odors. If suspicious materials are encountered, the Contractor shall stop all work in that area and notify the Engineer immediately.

1.02 SUBMITTALS

A. Prior to Notice to Proceed, the Contractor shall provide a site specific Health and Safety Plan (HASP), which meets all the requirements of local, state and federal laws, rules and regulations. The HASP shall address all requirements for general health and safety and shall include, but not be limited to:

1. Description of work to be performed and anticipated chemical and/or physical hazards associated with the work;
2. Map of the site(s) illustrating the location of the anticipated hazards;
3. Hazardous material inventory and safety data sheets (SDSs) for all chemicals which will be brought on site;
4. Signage appropriate to warn site personnel and visitors of anticipated site hazards;
5. Personal protective equipment and clothing including head, eyes, foot, skin;
6. Procedures which will be used for:
    a. Suspicious materials and/or unidentified materials,
7. Site housekeeping procedures and personal hygiene practices;
8. Administrative controls;
9. Emergency plan including locations of and route to nearest hospital;
10. Name and qualification of person preparing the HASP and person designated to implement and enforce the HASP;
11. Truck loading and unloading procedures;
12. Lighting and sanitation; and
13. Signatory page for site personnel to acknowledge receipt, understanding, and agreement to comply with the HASP.

B. Prior to the start of any Work, the Contractor shall provide a site specific Spill Prevention, Control and Countermeasures (SPCC) Plan, which meets all the requirements of local, state and federal laws, rules and regulations.

C. Contractor may submit the HASP and SPCC Plan as one comprehensive document or may submit the plans as separate documents.

D. The Contractor shall include in the HASP recent requirements associated with the State's COVID-19 Job Site Requirements as noted at in the Appendix or online at https://www.governor.wa.gov/sites/default/files/Phase%201%20Construction%20COVID-19%20Safety%20Requirements%20%28final%29.pdf.

1.03 POTENTIAL PHYSICAL AND OTHER HAZARDS

A. The Work of the Contractor is described elsewhere in these specifications. Precautions to prevent all anticipated physical and other hazards, including equipment shall be addressed in the HASP.

B. Specific aspects of construction resulting in physical hazards anticipated for this project include, but are not limited to the following:

1. Work adjacent to water, presenting hazards of falling into water, hypothermia from exposure to the elements, and drowning;

2. Major hazards associated with work impacts including moving construction vehicles and trucks, noise, thermal stress, contact with unguarded machines, strains from heavy lifting, and reduced visibility and communications difficulties in work area; and

3. Operation of equipment, including excavators, loaders, and related equipment, presenting hazards of entrapment, ensnarement, and being struck by moving parts.

C. Other anticipated physical hazards:

1. Heat stress, such as that potentially caused by impermeable clothing (may reduce the cooling ability of the body due to evaporation reduction);

2. Cold stress, such as that potentially caused during times when temperatures are low, winds are high, especially when precipitation occurs during these conditions;

3. Biological hazards, such as mold, insect stings, or bites, poisonous plants (i.e., poison oak, sumac, etc.); and

4. Trips and falls.

PART 2 - PRODUCTS

2.01 SAFETY SIGNAGE

A. The Contractor shall provide signage at strategic locations within the project site to alert jobsite workers and visitors of the remediation work, associated hazards, and required precautions.

2.02 PRODUCTS SPECIFIED FOR HEALTH AND SAFETY

A. Provide the equipment and supplies necessary to support the work as described in the site-specific HASP. Equipment and supplies may include, but are not limited to:

1. All chemicals to be used on site;

2. A hazardous materials inventory and SDSs for the chemicals brought on site;

3. Fencing and barriers;

4. Warning signs and labels;

5. Fire extinguishers;

6. Personal protective equipment (hard hats, foot gear, skin and eye);

7. First aid equipment;

8. Spill response and spill prevention equipment; and
9. Field documentation logs/supplies.

PART 3 - EXECUTION

3.01 WORK AREA PREPARATION

A. Contractor shall comply with health and safety rules, regulations, ordinances promulgated by the local, state, and federal government, the various construction permits, and other sections of the Contract Documents. Such compliance shall include, but not be specifically limited to: any and all protective devices, equipment and clothing; guards; restraints; locks; latches; switches; and other safety provisions that may be required or necessitated by state and federal safety regulations. The Contractor shall determine the specific requirements for safety provisions and shall have inspections and reports by the appropriate safety authorities to be conducted to ensure compliance with the intent of the regulations.

B. All Contractor employees expected to work at the jobsite or individuals entering the jobsite shall read the Contractor HASP before they enter the jobsite, and will sign a statement provided by the Contractor that they have read and understand the HASP. A copy of the Contractor’s HASP shall be readily available at the site at all times the work is being performed.

C. Contractor shall perform whatever work is necessary for safety and be solely and completely responsible for conditions of the job site, including safety of all persons (including employees of the Engineer, Engineer’s Representative, and Contractor) and property during the Contract period. This requirement applies continuously and is not limited to normal working hours.

D. The Engineer’s review of the Contractor's performance does not include an opinion regarding the adequacy of, or approval of, the Contractor's safety supervisor, the site-specific HASP, safety program or safety measures taken in, on, or near the job site.

E. Accidents causing death, injury, or damage must be reported immediately to the Engineer and the Port Security Department in person or by telephone or messenger. In addition, promptly report in writing to the Engineer all accidents whatsoever arising out of, or in connection with, the performance of the work whether on, or adjacent to, the site, giving full details and statements of witnesses.

F. If a claim is made by anyone against the Contractor or any subcontractor on account of any accident, the Contractor shall promptly report the facts in writing within 24 hours after occurrence, to the Engineer, giving full details of the claim.

3.02 SITE SAFETY AND HEALTH OFFICER

A. Contractor shall provide a person designated as the Site Safety and Health Officer, who is thoroughly trained in rescue procedures, has a minimum current 40-hour HAZWOPER certification (minimum), and trained to use all necessary safety equipment. The person must be available and/or present at all times while work is being performed.

B. The Site Safety and Health Officer shall be empowered with the delegated authority to order any person or worker on the project site to follow the safety rules. Failure to observe these rules is sufficient cause for removal of the person or worker(s) from this project.

C. The Site Safety and Health Officer is responsible for determining the extent to which any safety equipment must be utilized, depending on conditions encountered at the site.

3.03 SPILL PREVENTION AND CONTROL

A. The Contractor shall be responsible for prevention, containment and cleanup of spilling petroleum and other chemicals/hazardous materials used in the Contractor's operations. All such prevention, containment and cleanup costs shall be borne by the Contractor.

B. The Contractor is advised that discharge of oil, fuel, other petroleum, or any chemicals/hazardous materials from equipment or facilities into state waters or onto adjacent land is not permitted under state water quality regulations.

C. In the event of a discharge of oil, fuel or chemicals/hazardous materials into waters, or onto land with a potential for entry into waters, containment and cleanup efforts shall begin immediately and be completed as soon as possible, taking precedence over normal work. Cleanup shall include proper disposal of all spilled material and used cleanup materials.

D. The Contractor shall, at a minimum, take the following measures regarding spill prevention, containment and cleanup:

1. Fuel hoses, lubrication equipment, hydraulically operated equipment, oil drums and other equipment and facilities shall be inspected regularly for drips, leaks or signs of damage, and shall be maintained and stored properly to prevent spills. Proper security shall be maintained to discourage vandalism.

2. All land-based chemical, oil and products' storage tanks shall be diked, contained and/or located so as to prevent spills from escaping into the water. Dikes and containment area surfaces shall be lined with impervious material to prevent chemicals or oil from seeping through the ground and dikes.

3. All visible floating sheen shall be immediately contained with booms, dikes or other appropriate means and removed from the water prior to discharge into state waters. All visible spills on land shall be immediately contained using dikes, straw bales or other appropriate means and removed using sand, sawdust or other absorbent material, which shall be properly disposed of by the Contractor. Waste materials shall be temporarily stored in drums or other leak-proof containers after cleanup and during transport to disposal. Waste materials shall be disposed offsite in accordance with applicable local, state and federal regulations.

4. **In the event of any oil or product discharges into public waters, or onto land with a potential for entry into public waters, the Contractor shall immediately notify the Port Security at their listed 24-hour response number:**

    a. **Port Security: 253-383-9472**

E. The Contractor shall maintain the following materials (as a minimum) at each of the project sites:

1. Oil-absorbent booms: 100 feet;

2. Oil-absorbent pads or bulk material, adequate for coverage of 200 square feet of surface area;

3. Oil-skimming system; and

4. Oil dry-all, gloves, and plastic bags.

END OF SECTION 01 35 29

PART 1 - GENERAL

1.01 SUMMARY

A. The Work includes the requirements to provide air and noise control measures until Final Completion of the Work.

1.02 SUBMITTALS

A. Prior to Notice to Proceed, the Contractor shall submit a list of equipment to be used on the project and written certification that all equipment on the list and any additional equipment, including Contractor's, subcontractors or supplier's equipment, shall meet the requirements of 3.01 below.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION

3.01 AIR POLLUTION CONTROL

A. The Contractor shall meet or exceed EPA Tier 2 off-road diesel engine emission standards for off-road equipment >= 25hp and meet or exceed EPA 1994 on-road diesel engine emission standards for on-road equipment except as follows:

1. Equipment being used in an emergency or public safety capacity

B. The Contractor shall not discharge smoke, dust, and other hazardous materials into the atmosphere that violate local, state or federal regulations.

C. No vehicles can idle for more than 5 consecutive minutes, except as follows:

1. Idling is required to bring or maintain the equipment to operating temperature;
2. Engine idling is necessary to accomplish work for which the equipment was designed (i.e. operating a crane); or
3. Idling vehicles being used in an emergency or public safety capacity.

D. The Contractor shall minimize nuisance dust by cleaning, sweeping, vacuum sweeping, sprinkling with water, or other means. Equipment for this operation shall be on the job site or available at all times.

3.02 NOISE CONTROL

A. The Contractor shall comply with all local controls and noise level rules, regulations and ordinances which apply to work performed pursuant to the Contract.

B. All internal combustion engines used on the job shall be equipped with a muffler of a type recommended by the manufacturer.

END OF SECTION 01 35 47

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PART 1 – GENERAL

1.01 SUMMARY

A. The Work shall consist of the procedures to be followed in the event that cultural and/or historical resources are inadvertently discovered during the projects activities.

B. The project is located in an area previously inventoried for cultural and historical resources; however it is possible that additional, previously unidentified archaeological resources and/or skeletal remains could be inadvertently discovered during project activities. In the event that prehistoric, historic-era archaeological materials or skeletal remains are discovered, the appropriate protection measures and protocols described in this section must be followed.

1.02 REFERENCES

A. The rules, requirements, and regulations that apply to this Work include, but are not necessarily limited to the following:

1. Puyallup Tribe of Indians Development & Construction Permit Application - INADVERTENT DISCOVERY PLAN, as attached to this section.

PART 2 – PRODUCTS – NOT USED.

PART 3 – EXECUTION

3.01 PROTOCOLS FOR DISCOVERY OF ARCHAEOLOGICAL RESOURCES

A. In the event that archaeological resources are encountered within the project, the following actions will be taken:

1. All ground disturbing and construction activity at the specific location will stop and the area will be protected via temporary fencing or other appropriate measures.
2. The Contractor’s work supervisor will be notified immediately.
3. Contact the PORT’s Engineer and Environmental Project Manager immediately.
4. A work stoppage zone, as determined by the Archaeologist and PORT, will be established.
5. The PORT’s Environmental Project Manager will contact the appropriate agencies where the discovery is located as well as the Washington State Department of Archaeology and Historic Preservation (DAHP) the Puyallup Tribe (TRIBE) and the U.S. Army Corps of Engineers (Corp).
6. The Work Stoppage Zone will remain protected until further decisions can be made regarding the area.
7. The Contractor will be allowed to continue ground disturbing and other construction activities outside of the established work stoppage zone.

3.02 PROTOCOLS FOR DISCOVERY OF HUMAN REMAINS

A. In the event of that human remains are encountered within the project, the following actions, consistent with RCWs 68.50.645, 27.44.055 and 68.60.055 will be taken:

1. All ground disturbing and construction activity at the specific location will stop and the area will be protected via temporary fencing or other appropriate measures. The remains will not be touched, moved or further disturbed.
2. The Contractor’s work supervisor will be notified immediately.
3. Contact the Port’s Engineer and Environmental Project Manager immediately.

4. The Environmental Project Manager will notify the county medical examiner / coroner and local law enforcement.
5. A Work Stoppage Zone will be determined and remain protected until further decisions can be made regarding the area.
6. The Contractor will be allowed to continue ground disturbing and other construction activities outside of the established work stoppage zone.

3.03 PROTOCOLS FOR CONFIDENTIALITY

A. In the event of that human remains or cultural resources are discovered within the project area, the Port and the Contractor shall keep and maintain all information regarding any discovery confidential.
   1. At no time shall the Contractor contact the media, any third party or otherwise share information regarding the discovery with any member of the public.
   2. If the Contractor is contacted by the media or the public regarding any discovery, they shall refrain from comment, and contact the Port's Environmental Project Manager immediately.

END OF SECTION

INADVERTENT DISCOVERY PLAN

(Cultural Resources Investigation Information methods/Results) In the event that cultural resources are encountered during construction-related activities, this document serves as the plan for dealing with the inadvertent discoveries of human remains, artifacts, sites, or any other cultural resources during the project.

- **Lower Wapato Creek Habitat Project, Port of Tacoma**
- **Attachment A provides a project summary and contacts**

Instructions: Please insert responsible official in blanks.

This plan will provide the Puyallup Tribe of Indians (PTOI) employees, Port of Tacoma (Port) and any involved contractors and their employees with the appropriate protocols and procedures so they can:

- Utilize as guidance for treatment, Chapter 27.44 Indian Graves and Records, Chapter 27.53 Archaeological Sites and Resources, and Chapter 68.60 Section 68.60.050 Protection of Historic Graves of the Revised Code of Washington (RCW);
- Describe to regulatory and review agencies the procedures the PTOI and Port of Tacoma will follow to prepare for and deal with inadvertent discoveries; and,
- Understand and follow the procedures and protocols established in this document should an inadvertent discovery occur.

Procedures for the Discovery of Cultural Resources

1. If any PTOI or Port employee, contractors or subcontractors suspects the inadvertent discovery of a cultural resource, all ground disturbing, construction or other activities around the immediate area of the discovery shall cease. A cultural resource may include an archaeological or historical resource.

An **archaeological resource** is defined in RCW 27.53.040 as:
All sites, objects, structures, artifacts, implements, and locations of prehistoric or archaeological interest, whether previously recorded or still unrecognized, including, but not limited to, those pertaining to prehistoric and historic American Indian or aboriginal burials, campsites, dwellings, and 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 that are located in, on, or under the surface of any

lands or waters owned by or under the possession, custody, or control of the state of Washington or any county, city, or political subdivision of the state are hereby declared to be archaeological resources.

A **historical resource** is defined in RCW 27.53.030 (11):
. . .mean[ing] those properties which are listed in or eligible for listing in the Washington State Register of Historic Places (Washington Heritage Register [WHR]) (RCW 27.34.220) or the National Register of Historic Places (NRHP) as defined in the National Historic Preservation Act of 1966 (Title 1, Sec. 101, Public Law 89-665; 80 Stat. 915; 16 U.S.C. Sec. 470) as now or hereafter amended.
Cultural resources may qualify for the WHR and/or the NRHP listing if they are intact, aged at least 50 years old, and at least one of the following:

- Are associated with events that have made a significant contribution to the broad patterns of our history; or
- Are associated with the lives of persons significant in our past; or
  Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.

2. Upon discovery of a cultural resource, Port of Tacoma shall secure the area with a perimeter of not less than thirty (30) feet until all procedures are completed and the parties agree that activities can resume. If such a perimeter would materially impact agency functions mandated by law, related to health, safety or environmental concerns, then the secured area shall be of a size and extent practicable to provide maximum protection to the resource under the circumstances. Work in the immediate area will not resume until all procedures are completed and the parties agree that activities can resume.

3. The qualified archaeologist, in coordination with the Department of Archaeology and Historic Preservation (DAHP), will evaluate all inadvertently discovered cultural resources that may be considered eligible for listing in the National Register of Historic Places (NRHP) and recommend whether the cultural resource is eligible for listing in the NRHP. If the discovery is considered eligible, the DAHP and the concerned Indian Tribe(s) will consult to determine appropriate treatment, including but not limited to, photography, mapping, sampling, etc.

4. Port of Tacoma shall ensure that its appropriate personnel, contractors and permittees follow procedures stipulated in this Agreement and treat all human remains, cultural items and potential historic properties with respect.

Human Remains and Associated Funerary Objects

5. If human remains are found, Port of Tacoma shall immediately notify Tribal Police who will contact the tribal archaeologist, the Tacoma Police Department, and/or the County Coroner to determine whether the remains are Native American and to eliminate the

site as a crime scene. Any potential or actual human remains and/or associated funerary objects shall remain in place, unwashed, un-cleaned and without analysis, with minimal disturbance and left in the original location until the remains can be determined to not be of significant cultural value by a professional archaeologist qualified to identify human skeletal remains.

6. If the human skeletal remains are determined to be Native American, PTOI will notify the DAHP and the concerned Indian Tribe(s). PTOI shall continue to maintain the remains and any associated funerary objects in place, unwashed, unexamined and undisturbed until the concerned Indian Tribe(s), the DAHP determine an appropriate treatment. All parties shall give due consideration to and honor, to the extent possible, requests by the Tribe to leave the remains and/or other cultural items undisturbed and in place. Should the Tribe request to conduct ceremonies or other traditional activities with respect to the remains at the site where the remains were found, PTOI will accommodate such requests to the maximum and practical extent possible.

7. If human remains, funerary objects and/or artifacts are inadvertently collected during any archaeological investigation and identified as Native American in the field or in the laboratory, COT will notify and return the remains, objects and/or artifacts to concerned Indian Tribe(s) within twenty–four (24) hours of the identification, to the extent possible. Such human remains, funerary objects and/or artifacts shall remain unwashed and without further analysis.

Confidentiality of Information

8. All involved parties shall make its best efforts to ensure that its appropriate personnel, contractors, and permittees keep the discovery of all inadvertent discoveries confidential, including but not limited to, refraining from contacting the media or any third party or otherwise sharing information regarding the discovery with any member of the public. Prior to any release, COT, concerned Tribe(s), and the DAHP, shall concur on the amount of information, if any, to be released to the public, any third party, and the media and the procedures for such a release, to the extent permitted by law.

CONTACT INFORMATION (Agencies, Companies, Departments)

See Attachment A.

Signature of Applicant: _____

Mark Rettmann
Environmental Project Manager
Port of Tacoma

Attachment A - Project Summary & Contact Information
For
Inadvertent Discovery Plan

Lower Wapato Creek Habitat Project
Tacoma, Washington
June 10, 2022

The Port of Tacoma (Port) is constructing the Lower Wapato Creek Habitat Project (Project) as a permittee-responsible advanced mitigation site. Phase 1 construction of the Project occurred in 2021 through early 2022 and included site grading, new creek channel establishment, LWM installation, bridge construction, utility work, seeding, and site stabilization. Phase 1 ground disturbing work was monitored for cultural resources at the direction of the Puyallup Tribe of Indians'(PTOI) Historic Department staff. Phase 2 work will predominantly consist of installing plants, fence, and irrigation. Phase 3 work includes maintenance of the site (plants, irrigation) for approximately two years. The approximate 18.5 acre site is located at 1131 E. Alexander Ave., Tacoma, Pierce County, Washington and is referred to as Port Parcel 14.

Through coordination with the PTOI staff, the Port of Tacoma has designed the Project and developed this Inadvertent Discovery Plan for use during Phase 2 and Phase 3 Project activities.

In general, the Project includes re-establishment of wetlands, re-establishment of tidal mudflats, and stream and buffer restoration accomplished through excavation and grading of fill and native soils. The Project also includes replacing two undersized 60-inch diameter culverts with a 50-foot-wide single span bridge at 12th Street East.

Approximately 713 linear feet (~0.55 acre) of the existing Wapato Creek channel along 12th Street East will be filled. A new meandering 1,875 linear foot channel (~2.29 acres) would be constructed, with 350 linear feet of the existing channel retained as off-channel habitat (mudflat/shallow stream habitat). The proposed sinuous Wapato Creek channel also includes placement of streambed substrate and large woody material (LWM) in high energy areas to provide refuge and stream stability. The Project installs additional LWM in the re-established floodplain and wetland areas. The Project includes a total of 230 pieces of LWM.

Contacts

Upon any discovery, immediately contact Port of Tacoma and the Puyallup Tribe and secure the area.

Port of Tacoma
P.O. Box 1837, Tacoma, WA 98401
Primary Contact: Mark Rettmann, Environmental Project Manager, 253-592-6716 (desk & mobile); mrettmann@portoftacoma.com
Alternate Contact: Dave Myers, Engineering Project Manager, 253-428-8612 or mobile: 253-405-5593; dmyers@portoftacoma.com

Puyallup Tribe
Attention: Tribal Chairman, 3009 Portland Ave, Tacoma, Washington 98404
Lead Representative: Bill Sterud, Chairman, 253-370-6935
Primary Contact: Brandon Reynon, Archaeologist/Historic Preservation Department, 253-573-7986 or mobile: 253-225-4807; brandon.reynon@PuyallupTribe-nsn.gov
Alternate Contact: Jennifer Keating, Land Use Planner, 253-382-6073 or mobile: 253-549-5397; jennifer.m.keating@puyalluptribe-nsn.gov

Washington Department of Archaeology and Historic Preservation
PO Box 48343, Olympia, Washington 98504-8343
Lead Representative: Allyson Brooks, State Historic Preservation Officer, 360-480-6922

U.S. Army Corps of Engineers, Seattle District
Primary Contacts (regular business hours/days):
Cultural Resources Program Manager, Lance Lundquist, 206-764-6909
Regulatory Branch, Section Chief, Jacalen Printz, 206-764-6901

Non-business hours/days:
Regulatory Branch Chief, Muffy Walker, 206-200-9954

Tacoma Police Department
3701 South Pine Street, Tacoma, WA 98409
Lead Representative: Avery Moore, Chief of Police, 253-287-4455

Pierce County Medical Examiner's Office
3619 Pacific Avenue, Tacoma, Washington 98418
Lead Representative: Karen Cline-Parhamovich, DO, Chief Medical Examiner, 253-798-6494

City of Tacoma Historic Preservation Office
747 Market Street
Tacoma, WA 98402-3793
Primary Contact: Reuben McKnight, Historic Preservation Officer, 253-591-5220
Susan Johnson, Historic Preservation Coordinator, 253-281-7445

Port Consultant Contacts

Willamette Cultural Resources Associates, LTD
655 S. Orcas St., Ste. 220
Seattle, Washington 98108
Office: 206-397-1487
Project Manager: Austin Jenkins (austin@willamettecra.com; mobile: 360-241-6900)
Monitor/Archaeologist: Scott Pierson (scott@willamettecra.com; mobile: 360-448-1307)

GeoEngineers, Inc.
1101 Fawcett Ave, Suite 200
Tacoma, Washington 98402
Primary Contact: Joe Callaghan (jcallaghan@geoengineers.com; 253-383-4940 or mobile: 360-265-0162)

PART 1 - GENERAL

1.01 PERMITS, CODES, AND REGULATIONS

A. The following permits/approvals have been applied for (or are on file) and incorporated into the Contract (See Appendix A):

1. Corps of Engineers (Corps) Section 10 and 404 Permit
2. City of Tacoma (COT) Critical Area Permit
3. COT Minor Modification to Critical Area Permit
4. Washington Department of Fish and Wildlife (WDFW) Hydraulic Project Approval

B. Conform with the requirements of listed permits and additional or other applicable permits, codes, and regulations as may govern the Work.

C. Obtain and pay fees for licenses, permits, inspections, and approvals required by laws ordinances, and rules of appropriate governing or approving agencies necessary for proper completion of Work (other than those listed under item 1.01.A above.

D. Conform with current applicable codes, regulations and standards, which is the minimum standard of quality for material and workmanship. Provide labor, materials, and equipment necessary for compliance with code requirements or interpretations, although not specifically detailed in Drawings or Specifications. Be familiar with applicable codes and standards prior to bidding.

E. Process through Engineer, request to extend, modify, revise, or renew any of the permits (listed in 1.01.A above). Furnish requests in writing and include a narrative description and adequate Drawings to clearly describe and depict proposed action. Do not contact regulatory agency with requests for permit extensions, modifications, revisions, or renewals without the prior written consent of the Engineer.

1.02 VARIATIONS WITH CODES, REGULATIONS AND STANDARDS

A. Nothing in the Drawings and specifications permits Work not conforming to codes, permits, or regulations. Promptly submit written notice to the Engineer of observed variations or discrepancies between the Contract Documents and governing codes and regulations.

B. Appropriate modifications to the Contract Documents will be made by Change Order to incorporate changes to Work resulting from code and/or regulatory requirements. Contractor assumes responsibility for Work contrary to such requirements if Work proceeds without notice.

C. Contractor is not relieved from complying with requirements of Contract Documents which may exceed, but not conflict with requirements of governing codes.

1.03 COORDINATION WITH REGULATORY AGENCIES

A. Coordinate Work with appropriate governing or regulating authorities and agencies.

B. Provide advance notification to proper officials of Project schedule and schedule revisions throughout Project duration, in order to allow proper scheduling of inspection visits at proper stages of Work completion.

C. Regulation coordination is in addition to inspections conducted by Engineer. Notify Engineer at least 48 hours in advance of scheduled inspections involving outside regulating officials, to allow Engineer to be present for inspections.

1.04 COORDINATION WITH WASHINGTON DEPARTMENT OF FISH AND WILDLIFE

A. Notify the Port at least 14 days prior to start of construction.

PART 2 - PRODUCTS - NOT USED

PART 3 – EXECUTION - NOT USED

END OF SECTION 01 41 00

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes requirements relating to referenced standards.

1.02 QUALITY ASSURANCE

A. For products or workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard of date of issue specified in this section, except where a specific date is established by applicable code.

C. Should specified reference standards conflict with Contract Documents, request clarification from the Engineer before proceeding.

D. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of the Engineer shall be altered by the Contract Documents by mention or inference otherwise in any reference document.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 01 42 19

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PART 1 - GENERAL

1.01 QUALITY CONTROL FOR COMPLIANCE:

A. The Contractor shall perform such detailed examination, inspection, quality control and assurance of the Work as to ensure that the Work is progressing and is being completed in strict accordance with the Contract Documents. The Contractor shall plan and lay out all Work in advance of operations so as to coordinate all Work without delay or revision. The Contractor shall be responsible for inspection of portions of the Work already performed to determine that such portions are in proper condition to receive subsequent Work. Under no conditions shall a portion of Work proceed prior to preparatory work having been satisfactorily completed. The Contractor shall ensure that the responsible Subcontractor has carefully examined all preparatory work and has notified the Contractor (who shall promptly notify the Port in writing) of any defects or imperfections in preparatory work that will, in any way, affect completion of the Work.

1.02 QUALITY ASSURANCE - 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. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Perform Work by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop Drawings or as instructed by the manufacturer.

G. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, or disfigurement.

1.03 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. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.

C. Adjust Products to appropriate dimensions; position before securing Products in place.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 01 45 00

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PART 1 - GENERAL

1.01 SUMMARY

A. This section includes requirements relating to the following:

1. Temporary utilities,
2. Temporary telecommunications services,
3. Temporary sanitary facilities,
4. Temporary Controls: Barriers, enclosures, and fencing, and
5. Field offices, if applicable.

1.02 TEMPORARY UTILITIES

A. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for construction purposes, if applicable. Contractor is responsible for getting required permits and meters from the City of Tacoma or Fife, as needed.

B. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TELECOMMUNICATIONS SERVICES

A. Provide, maintain, and pay for telecommunications services to field office, if applicable, at time of project mobilization. It is the Contractor’s responsibility to be able to receive phone calls and emails at the job site.

1.04 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Maintain daily in clean and sanitary condition.

C. At end of construction, return facilities to same or better condition as originally found.

1.05 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for Port's use of site, and to protect existing facilities and adjacent properties from damage from construction operations and demolition.

B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.06 FENCING

A. Construction: Contractor's option.

B. Provide 6 ft. (1.8 m) high fence around construction activities if applicable; equip with vehicular gates with locks.

1.07 FIELD OFFICES

A. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table: Contractor's optioin.

B. Provide space for Project meetings, with table and chairs to accommodate 6 persons.

1.08 TREE AND VEGETATION PROTECTION

A. The Contractor shall carefully protect existing trees and vegetation noted to remain from damage by construction activities.

B. If a tree or vegetation designated for protection is damaged or destroyed in the course of the Work, the Contractor shall replace it with new comparable in species as required by the Engineer. Where it is necessary to replace trees or vegetation damaged by construction, the Contractor shall bear all expenses associated with replacement and establishment of the replacement vegetation.

C. The contractor shall provide any necessary irrigation and other care necessary to warrant the replacement vegetation for two growing seasons (April through September) following replacement.

1.09 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

A. Remove temporary utilities, equipment, facilities, materials, prior to final inspection.

B. Remove underground installations.

C. Repair damage caused by installation or use of temporary work.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION 01 50 00

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes requirements relating to the following:

1. Parking
2. Construction parking controls
3. Maintenance
4. Mud from site vehicles

PART 2 - PRODUCTS

2.01 SIGNS, SIGNALS, AND DEVICES

A. Post Mounted Traffic Control and Informational Signs, as specified.

B. Traffic Cones and Drums,: As approved by local jurisdictions.

PART 3 - EXECUTION

3.01 ACCESS TO SITE

A. Provide unimpeded access for emergency vehicles. Maintain 20 foot (6 m) width driveways with turning space between and around combustible materials.

B. Provide and maintain access to fire hydrants free of obstructions.

3.02 PARKING

A. All Contractor's employee cars and work vehicles will be parked on-site as designated by the Engineer or within adjacent City street Right of Ways.

B. Arrange for temporary parking areas to accommodate need of construction personnel if necessary.

C. When site space is not adequate, provide additional off-site parking.

3.03 CONSTRUCTION PARKING CONTROL

A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Port operations.

3.04 MAINTENANCE

A. Maintain traffic and parking areas in a sound condition free of excavated material, construction equipment, Products, mud, snow, and ice.

B. Maintain existing paved areas used for construction. Promptly repair breaks, potholes, low areas, standing water, and other deficiencies, to maintain paving and drainage in original, or specified, condition.

3.05 REMOVAL, REPAIR

A. Repair existing facilities damaged by use, to original condition.

B. Repair damage caused by installation.

3.06 PUBLIC STREET AND ONSITE ROADWAY CLEANING

A. The Contractor shall be responsible for preventing dirt and dust escaping from trucks and other vehicles operating on or departing the project site by sweeping, covering dusty loads, washing truck tires, and all other reasonable methods.

B. When trucks and other equipment are operating on paved public streets and site roadways/paved surfaces, the Contractor will be required to clean said streets, roadways, and other paved surfaces at least daily, and at other times if required by the Engineer.

C. In the event that the above requirements are violated and no action is taken by the Contractor after notification of infraction by the Engineer, the Port reserves the right to have the streets, roadways, and other paved surfaces in question cleaned by others and have the expense of the operation charged to the Contractor.

END OF SECTION 01 55 00

PART 1 – GENERAL

1.01 SUMMARY

A. The Work shall consist of planning, installing, inspecting, maintaining and removing Temporary Erosion and Sediment Control (TESC) Best Management Practices (BMPs) to prevent pollution of air and water; and to control, respond to, and dispose of eroded sediment and turbid water during the term of the Contract.

B. These TESC requirements shall apply to all areas associated with the Work, including but not limited to the following:

1. Work areas;
2. Equipment and material storage areas;
3. Staging areas;
4. Stockpiles; and
5. Discharge points within or adjacent to the work areas that are impacted by stormwater runoff from the site.

C. Acceptance of TESC plans does not constitute an approval of permanent Work or drainage design (e.g., size and location of roads, pipes, restrictors, channels, retention facilities, utilities, etc.).

D. Contractor shall read and conform to all requirements set forth in Washington Department of Ecology's (Ecology) Phase I Municipal Stormwater Permit (MS4) for projects less than one acre.

1.02 REFERENCES

A. The rules, requirements, and regulations that apply to this Work include, but are not necessarily limited to the following:

1. Washington Department of Ecology, "Stormwater Management Manual for Western Washington," current version.
2. Washington Department of Ecology Phase I Municipal Stormwater Permit (MS4), current version.
3. Washington State Department of Transportation, current version, Standard Specification M41-10, Division 8-01 Erosion Control and Water Pollution Control.
4. Pierce County Stormwater and Site Development Manual, current version (if applicable).

1.03 SUBMITTALS

A. Prior to the start of any construction activities, a Construction Stormwater Pollution Prevention Plan (SWPPP), as required by the MS4.

1. Contractor shall comply with a Contractor provided project SWPPP.
2. Contractor shall be responsible for updating the project SWPPP during construction to reflect the required changes to BMPs and personnel, as needed, to comply with the MS4 at no additional cost to the Port.

B. A copy of all Contractor site inspection logs at a time interval (e.g., weekly, monthly) specified by the Engineer.

C. Water Management Plan/Temporary Dewatering Plan.

1.04 AUTHORITY OF ENGINEER

A. The Engineer has the authority to limit the surface area of erodible earth material exposed by clearing and grubbing, excavation, borrow and fill operations, as determined by analysis of project conditions; and to direct the Contractor to provide immediate permanent or temporary pollution control measures to minimize impacts to adjacent streams or other watercourses, lakes, ponds, and other areas of water impoundment.

B. In the event that areas adjacent to the work area are suffering degradation due to erosion, sediment deposit, water flows, or other causes, the Engineer may stop construction activities until the Contractor rectifies the situation.

PART 2 – PRODUCTS - NOT USED

PART 3 – EXECUTION

3.01 GENERAL

A. The Port is subject to a Phase I Municipal Stormwater Permit (MS4). The Contractor shall be responsible for compliance with the Department of Ecology Western Washington Stormwater Management Manual, Volume II, Construction Stormwater Pollution Prevention for the duration of the project.

B. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply as determined by the Engineer.

C. No project discharge of water shall be allowed that exceeds the regulated pollutant levels in Ecology's NPDES permit associated with the Project.

D. Contractor shall be solely responsible for all BMP modifications and upgrades to comply with the MS4 and the requirements of this Section, at no additional cost to the Port.

E. Contractor shall be solely responsible for any damages and fines incurred because of Contractor, subcontractor, or supplier actions in implementing the requirements of this Section.

F. The Contractor shall be solely responsible for schedule impacts incurred because of Contractor, subcontractor, or supplier actions in implementing the requirements of this Section.

3.02 TEMPORARY EROSION AND SEDIMENT CONTROL DEVELOPMENT

A. Contractor shall prepare and submit a site-specific SWPPP prior to initiating ground disturbing activities.

1. The SWPPP describes construction activities and sequencing, and the proposed Temporary and Permanent Erosion and Sediment Control measures. If there are any changes to BMPs or personnel on the site, Contractor must update the SWPPP and be prepared to submit the SWPPP to the Port and Ecology upon request.

2. The SWPPP shall consist of planning, installing, inspecting, maintaining, and removing TESC BMPs per Volume II of the Stormwater Management Manual for Western Washington (current version) or equivalent. The BMPs shown in the Drawings are the minimum required to prevent pollution of air and water, to control peak volumetric flow rates and velocity of stormwater, and to control, respond to, and dispose of eroded sediment and turbid water during the term of the Contract.

3. A SWPPP template is available to the Contractor for this purpose, see Appendix B. The template was prepared by the Port to meet part of the National Pollution Discharge Elimination System (NPDES) stormwater permit requirements for the project. Contractor may use the applicable Port template to prepare the project SWPPP or prepare their own SWPPP. If the Contractor elects to prepare their own SWPPP, it must meet or exceed the control measures required by Ecology (reference Ecology's Stormwater Management Manual for Western Washington, current version).

4. If Contractor chooses to write a SWPPP separate from the Port-provided SWPPP, it must comply with all of the requirements set forth by the CSGP.

B. Contractor shall develop project-specific TESC BMPs and incorporate them into the SWPPP.Contractor shall address the following issues as part of developing and implementing the BMPs:

1. TESC BMPs must meet the requirements in Ecology's Volume II of the Stormwater Management Manual for Western Washington (current version) or equivalent.

2. TESC notes and details shown in the Drawings and the information in this Section form a basis of the minimum requirements for a TESC Plan. Contractor shall develop a TESC Plan specific to the construction schedule and proposed means and methods prior to commencing construction activities for the duration of the Project.

C. Contractor shall inspect the existing system and report to the Engineer the levels of existing material prior to installation of TESC BMPs.

3.03 TEMPORARY EROSION AND SEDIMENT CONTROL IMPLEMENTATION

A. Contractor is responsible for implementing and updating the SWPPP including TESC BMPs.

1. Contractor shall inspect the TESC measures daily and maintain these measures to ensure continued proper functioning for the duration of the Project.

2. Contractor will be responsible for documenting TESC site inspections on a weekly basis in areas of active construction and on a monthly basis in areas that have undergone stabilization. Contractor shall keep records of the inspections on site.

3. During the construction period the Contractor shall, at no additional cost to the Port, upgrade and/or maintain TESC measures as needed, based on Contractor means and methods, work sequencing, and changing site conditions (e.g., changes to impervious surface coverage, proximity of work to storm conveyance systems, storm events, etc.). Contractor shall modify these measures for changing site conditions and update the SWPPP to document all modifications made.

B. Contractor shall clean all stormwater components affected by construction debris prior to Work completion, per TESC BMPs for catch basin maintenance. The cleaning process shall not flush sediment-laden water into a downstream system.

C. Contractor shall ensure that water. Water used for dust suppression shall not be applied at such a rate or in a location that it will generate runoff from the site.

D. Areas of exposed soils, including embankments, which will not be disturbed for two days during the wet season (October 1 through April 30) or seven days during the dry season (May 1 through September 30), shall immediately be stabilized by the Contractor with an Ecology-approved TESC measure (e.g., seeding, mulching, plastic covering, etc.).

E. TESC measures in an inactive area shall be inspected and maintained by the Contractor until the area is permanently stabilized.

F. In the event that additional temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the Work as scheduled or as ordered by the Engineer, such work shall be performed by the Contractor at its own expense.

G. Contractor shall remove all TESC facilities, install permanent site surfacing improvements and permanent BMPs with minimal disturbance, and shall clean stormwater facilities prior to Work completion.

END OF SECTION 01 57 13

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes the requirements to provide product data under the applicable specification section.

1.02 SUBMITTALS

A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.

1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 - PRODUCTS

2.01 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

2.02 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

PART 3 - EXECUTION

3.01 TRANSPORTATION AND HANDLING

A. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

B. Transport and handle products in accordance with manufacturer's instructions.

C. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

D. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

E. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

F. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.02 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

   1. The Port will provide laydown space for the Contractor's use located at Port Parcel 88 North, located at 1635 Marine View Drive (approximately 1 mile from the site). This site is secured and fenced.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

G. Prevent contact with material that may cause corrosion, discoloration, or staining.

H. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

I. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION 01 60 00

PART 1 - GENERAL

1.01 SCOPE

A. The purpose of this section is to provide the framework for transferring Port provided materials to the Contractor in a safe, timely and effective manner.

1.02 SUBMITTALS

A. Submit an inspection report or log to the Engineer of the inspection performed on the materials before acceptance by the Contractor. Flag any materials identified as being in unsatisfactory condition before moving or relocating it from the Location Area described below. Document unsatisfactory conditions photographically, using digital media.

1.03 COORDINATION

A. The emergent plugs will be available on or around October 15, 2022. The live stakes and bare root plants will be available on or around January 15, 2023. The Native seed mixes will be available on or around October 15, 2022.

1.04 LOCATION

A. The materials will be delivered to 1635 Marine View Drive, Tacoma, WA .

PART 2 - PRODUCTS

2.01 ITEMS

A. Assume all items are in satisfactory condition unless otherwise indicated. Report in writing to the Engineer equipment found to be in unsatisfactory condition.

No.	Description	Quantity	Manufacturer/Supplier
1	Bare root and live stake trees	7,600	Fourth Corner Nurseries
2	Bare root and live stake shrubs	24,900	Fourth Corner Nurseries
3	10 CU. IN. emergent plugs	115,200	Fourth Corner Nurseries
4	Native Seed Mixes, Salt water wetland Fresh water wetland Forested upland	 +/- 12 pounds +/- 5 pounds +/- 50 pounds	Inside Passage

PART 3 - EXECUTION

3.01 REMOVAL OF PLANT MATERIALS FROM STORAGE LOCATION

A. Protect, transport and install where indicated within the Contract Documents.

3.02 PROTECTION

A. Plant Materials

1. Properly store plant materials to prevent them from drying out, being frozen, having excess exposure to sunlight or any other environmental items that may cause damage or death to the materials.

2. Water plant materials as necessary while in the staging area.

B. Native seed materials

1. The Port will take delivery of and store seed materials, in a cool dry space, at the Port Administration building until such time as the Contractor is ready for their use.

3.03 RELOCATION

A. Transport materials from the staging area to the site in a manner that prevents damage to the plants. Install plant material in accordance with the Contract Documents.

3.04 FIELD QUALITY CONTROL

A. Plant Material Inspection

1. Examine plant material upon delivery with Port representatives present for visual defects.

END OF SECTION 01 64 00

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes field engineering and land surveying services by Contractor.

1. The Ports surveyor of record is Sitts and Hill Engineering. This Contract may not use them for their needs.

2. The Phase 1 surveyor of record was Mtn 2 Coast. This Contract may use them for their needs.

1.02 DESCRIPTION OF SERVICES

A. Specific services listed in this section are in addition to, and do not supersede, general Execution and Closeout Requirements.

B. Sole responsibility for establishing all locations, dimensions and levels of items of work.

C. Sole responsibility for provision of all materials required to establish and maintain benchmarks and control points, including batter boards, grade stakes, and other items.

D. Keeping a transit, theodolite, or TST (total station theodolite with electronic distance measurement device); leveling instrument; and related implements such as survey rods and other measurement devices, at the project site at all times.

E. Provision of facilities and assistance necessary for the Engineer to check lines and grade points placed by Contractor.

F. Preparation and maintenance of daily reports of activity on the work. Submission of reports containing key progress indicators and job conditions to the Engineer.

1. Materials installed as part of the work.

2. Location of areas in which construction was performed.

3. Work performed, including field quality control measures and testing.

4. Weather conditions.

5. Instructions received from the Port, if any.

G. Preparation and maintenance of professional-quality, accurate, well organized, legible notes of all measurements and calculations made while surveying and laying out the work.

1.03 QUALITY ASSURANCE

A. Use adequate number of skilled and thoroughly-trained workers to perform the work of this section in a timely and comprehensive manner.

B. Minimum accuracy for required work is as follows:

1. Grade: Horizontal Tolerance: Plus or minus 0.5 feet (152 mm), Vertical Tolerance: Plus or minus 0.05 feet (15 mm).

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 FIELD ENGINEERING

A. Maintain files, drawings, specifications, and record documents.

B. Coordinate field engineering services with Contractor's subcontractors, installers, and suppliers as appropriate.

C. Prepare layout and coordination drawings for construction operations.

D. Check and coordinate the work for conflicts and interferences, and immediately advise the Port of all discrepancies of which Contractor is aware.

E. Cooperate as required with the Port in observing the work and performing field inspections.

F. Review and coordinate work on a regular basis with shop drawings and Contractor's other submittals.

G. Check the location, line and grade of every major element as the work progresses. Notify the Port when deviations from required lines or grades exceed allowable tolerances. Include in such notifications a thorough explanation of the problem, and a proposed plan and schedule for remedying the deviation. Do not proceed with remedial work without Port's concurrence of the remediation plan.

3.02 LAND SURVEYING

A. General: Follow standards for geospatial positioning accuracy.

1. FGDC-STD-007.1as amended by Authority Having Jurisdiction.

2. FGDC-STD-007.2as amended by Authority Having Jurisdiction.

3. FGDC-STD-007.4as amended by Authority Having Jurisdiction.

B. Coordinate survey data with the State Plane Coordinate System of the State in which the Project is located.

C. Contractor is responsible for the restoration of all property corners and control monuments damaged or destroyed by construction-related activities. Any disturbed monuments must be replaced at Contractor's expense by a surveyor licensed in the State in which the Project is located, and approved by the Engineer.

1. Temporarily suspend work at such points and for such reasonable times as the Port may require for resetting monuments. The Contractor will not be entitled to any additional compensation or extension of time.

3.03 CONSTRUCTION SURVEYING

A. General: Perform surveying as applicable to specific items necessary for proper execution of work.

1. Alignment Staking: Provide alignment stakes at 50 foot (15.24 m) intervals on tangent, and at 25 foot (7.62 m) intervals on curves.

2. Slope Staking: Provide slope staking at 50 foot (15.24 m) intervals on tangent, and at 25 foot (7.62 m) intervals on curves. Re-stake at every ten-foot difference in elevation.

B. Record Log: Maintain a log of layout control work. Record any deviations from required lines and levels. Include beginning and ending dates and times of surveys, weather conditions, name and duty of each survey party member, and types of instruments and tapes used.

C. Accuracy:

1. Establish Contractor's temporary survey references points for Contractor's use to at least second-order accuracy (e.g., 1:10000). Set construction staking used as a guide for the work to at least third-order accuracy (e.g., 1:5000). Provide the absolute margin for error specified below on the basis established by such orders.
    a. Horizontal and vertical accuracy of layout staking: Plus or minus 0.2 feet.
    b. Include an error analysis sufficient to demonstrate required accuracy in survey calculations.
2. Port reserves the right to check the Contractor's survey, measurements, and calculations. The requirement for accuracy will not be waived, whether this right is exercised or not.

3.04 RECORDS

A. Maintain at the Site a complete and accurate log of control and survey work as it progresses.
    1. Organize and record survey data in accordance with recognized professional surveying standards, Laws and Regulations, and prevailing standards of practice in the State in which the Project is located. Record Contractor's surveyor's original field notes, computations, and other surveying data in Contractor-furnished hard-bound field books. Contractor is solely responsible for completeness and accuracy of survey work, and completeness and accuracy of survey records, including field books. Survey records,(including field books) may be rejected by Port due to failure to organize and maintain survey records in a manner that allows reasonable and independent verification of calculations, and/or allows identification of elevations, dimensions, and grades of the work.
    2. Illegible notes or data, and erasures on any page of field books, are unacceptable. Do not submit copied notes or data. Corrections by ruling or lining out errors will be unacceptable unless initialed by the surveyor. Violation of these requirements may require re-surveying the data questioned by Architect.

END OF SECTION 01 71 23

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PART 1 - GENERAL

1.01 SUMMARY

A. This section includes information for progress and final cleaning and restoration of damaged work prior to final inspection.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION

3.01 PROGRESS CLEAN-UP

A. The Contractor shall clean the project site and work areas daily. Enforce requirements strictly. Dispose of materials lawfully.

1. Comply with all requirements for removal of combustible waste materials and debris.
2. Do not hold waste materials more than seven days during normal weather or three days if the temperature is expected to rise above 80 deg F.
3. Containerize unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
    a. Use containers intended for holding waste materials for the type of material to be stored.

B. Site: Maintain Project site free from waste materials and debris including that which may come in with the tide or downstream or deposited on site by passers by.

C. Waste Disposal: Do not bury or burn waste materials on-site. Do not wash waste materials down sewers or into waterways.

D. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

3.02 REPAIR OF WORK

A. Complete repair and restoration operations before requesting inspection for determination of Substantial Completion.

B. Repair or remove and replace defective construction. Repairing includes replacing defective parts, refinishing damaged surface, touching up with matching materials, and properly adjusting operating equipment. Where damaged or worn items cannot be repaired or restored, provide replacements. Remove and replace operating components that cannot be repaired. Restore damaged construction and permanent facilities used during construction to specified condition.

1. Touch up and otherwise repair and restore marred or exposed finishes and surfaces. Replace finishes and surfaces that already show evidence of repair or restoration.

END OF SECTION 01 74 13

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PART 1 - GENERAL

1.01 SUMMARY

A. Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Substantial Completion procedures
2. Final completion procedures
3. As-Built Drawings

1.02 ACTION SUBMITTALS

A. Contractor’s List of Incomplete Items: Initial submittal at Substantial Completion.

1.03 PROJECT SUBMITTALS

A. Record Drawings

1. Miscellaneous Record Submittals: See other Specification Sections for miscellaneous recordkeeping requirements and submittals in connection with various construction activities.

1.04 SUBSTANTIAL COMPLETION PROCEDURES

A. Contractor's List of Incomplete Items (Punch list): Prepare and submit a list of items to be completed and corrected.

B. Submit a written request for inspection to determine Substantial Completion a minimum of 10 days prior to the date the work will be completed and ready for final inspection. On receipt of request, Engineer will either proceed with inspection or notify Contractor of unfulfilled requirements. Engineer will prepare the Notice of Substantial Completion after inspection or will notify Contractor of items, either on the Contractor’s list or additional items identified by the Engineer, that must be completed or corrected before notice will be issued.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.
2. Results of completed inspection will form the basis of requirements for final completion.

1.05 PUNCH LIST (LIST OF INCOMPLETE ITEMS)

A. Organization of List: Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of Construction.

1. Organize list of spaces in sequential order.
2. Organize items applying to each space by major elements.

1.06 FINAL COMPLETION PROCEDURES

A. Submittals Prior to Final Completion: Before requesting final inspection for determining final completion, complete and submit the following:

1. Submittal of all remaining items, including as-built documents, final completion construction photographic documentation, surveys, and similar final record information and all other submittals defined in the Contract Documents.

2. List of Incomplete Items: Submit copy of Engineer's Substantial Completion inspection list of items to be completed or corrected (Punch List). Copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

B. Inspection: Submit a written request for final inspection to determine acceptance a minimum of 10 days prior to date the work will be complete and ready for final inspection and tests. On receipt of request, the Engineer will either proceed with inspection or notify contractor of unfulfilled requirements.

1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected.

C. Execution of all Change Orders.

1.07 FINAL ACCEPTANCE PROCEDURES

A. Submittals Prior to Final Acceptance:

1. Receipt and approval of application for final payment; due within seven (7) days of receipt of Final Completion by the Engineer;

2. Contractor's signed waiver and release of claims on the Engineer provided form;

3. Contractor's submittal of list of all suppliers and subcontractors and the total amounts paid to each on the Engineer provided form; and

4. Contractor's submittal of a list of all subcontractors and suppliers requiring Affidavits of Wages paid on the Contract and certify that each of companies will submit an approved Affidavit of Wages paid to the Port within 30 days.

B. The Engineer will issue the Final Acceptance Memo upon receipt of the required submittals.

PART 2 - PRODUCTS

2.01 AS-BUILT DRAWINGS

A. Project As-Built Drawings: Maintain one set of marked-up paper copies of the Contract Drawings and Shop Drawings, incorporating new and revised drawings as modifications are issued.

B. Project As-Built Drawings shall be compiled by the Contractor and submitted to the Engineer for translation to the Record Drawings on a monthly basis.

1. The Project As-Built Drawings will be submitted on paper full-sized (ANSI D) copy.

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

a. Additions – Red

b. Deletions – Green

c. Comments – Blue

d. Dimensions – Graphite

3. Project As-Built Drawings must be complete and accepted by the Engineer before Final Completion is issued.

4. As-Built Drawings shall be in accordance with horizontal and vertical control as shown on the drawings.

PART 3 – EXECUTION

3.01 MAINTENANCE OF AS-BUILT DRAWINGS

A. The Contractor shall maintain at the Project site, in good order for ready reference by the Engineer, one complete copy of the Contract Documents, including Addenda, Change Orders, other documents issued by the Port, a current Progress Schedule, and approved Submittals. The Contractor shall also generate and keep on site all documents and reports required by applicable permits.

B. The Contractor's As-Built Drawings shall be updated to record all changes made during construction. The location of all existing or new underground piping, valves and utilities, and obstructions located during the Work shall be appropriately marked until the Contractor incorporates the actual field dimensions and coordinates into the as-built drawings. The as-built drawings shall be updated at least weekly and before elements of the Work are covered or hidden from view. After the completion of the Work, the as-built drawings shall be provided to the Port.

END OF SECTION 01 77 00

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PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The extent and location of fence work is indicated on the drawings. The work includes the requirements for furnishing and installing all items and components of a completed fence system in conformance with these specifications and the dimensions and sections indicated on the drawings or as established by the Engineer.

1.02 SUBMITTALS

A. Product Data: Material descriptions, construction details, dimensions of individual components and profiles, and finishes for the following:

1. Fence, gateposts, and fittings.
2. Wire Fence, reinforcements and attachments.
3. Concrete mix for post foundations.

B. Qualification Data: For firms and persons specified in "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

1.03 JOB CONDITIONS

A. Clearing of existing vegetation shall only occur if necessary to install fence. Vegetation resulting from clearing activities shall be disposed of.

PART 2 - PRODUCTS

2.01 WIRE FENCE

A. In-line Posts: 2-3/8 –inch outside diameter, Schedule 40, galvanized and powder coated.

B. Terminal posts, Pull Posts and Corner Posts: 3.5" O. D. –inch outside diameter, Schedule 40, galvanized and powder coated.

C. All post finials shall be standard moisture proof, heavily galvanized, powdercoated coated, malleable iron securely fastened to posts.

D. Wire: 9 gauge galvanized, vinyl coated tension wire.

E. Eye Bolts: 5/8" Galvanized and powder coated

F. Turnbuckles: 5/8" x 6" Galvanized and powdercoated.

G. Color: Black.

2.02 GATE

A. Pipe gate: 20-gauge steel tubing frame and rails 1-5/8” diameter.

B. Provide lockable latch to secure gate in closed position.

C. Basis of Design: 6’ Behlen 6-rail Utility Gate or approved equal.

D. Quantity: Four (4).

E. Color: Black.

2.03 OTHER MATERIALS

A. Concrete used in anchorage of posts shall be 3000 psi 28-day test, standard ready-mixed concrete from an approved plant.

PART 3 - EXECUTION

3.01 GENERAL

A. The location and alignment of the fence corners and gates shall be staked by the Contractor in accordance with the contract documents and approved by the Engineer prior to any fence installation. The Contractor shall locate all intermediate line posts.

3.02 INSTALLATION

A. Fencing and appurtenances shall be erected and installed by an organization regularly engaged in this business, employing labor skilled in this type of work to provide a complete security fencing system.

B. Posts shall be installed vertically in the concrete with a minimum depth of embedment indicated on the drawings and at the spacing specified for the type of posts approved for the project. In unpaved areas, the concrete shall be struck off above the surrounding grade. The top of the concrete shall be trowelled smooth, with a slight slope away from the posts as shown on the Contract Drawings.

C. Drill holes in posts to accommodate wire.

D. Stretch wire taught and secure to terminal posts, corner posts and pull posts. A pull post, corner post or terminal post shall be placed at 100'.

E. All terminal posts pull posts and corner posts shall have turnbuckles and lock nuts on each side of the post.

F. Provide post finials.

3.03 CLEAN UP

A. Minor damage to finish of wire and fence appurtenances shall be repaired by thorough cleaning of the damaged surfaces and the application of black paint in strict accordance with the manufacturer's recommendations.

B. Upon completion of the fence, the Contractor shall clean the fence of all soiled places and repair marred or abraided areas.

END OF SECTION 32 31 13

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Furnish all labor, materials, supplies, equipment, tools and transportation, and perform all operations in connection with and reasonably incidental to the complete installation of the irrigation system, and guarantee/warranty as shown on the drawings, the installation details, and as specified herein. Items of work specifically included are:

1. Procurement of all applicable licenses, permits, and fees.

2. New conventional temporary irrigation system.

1.02 WORK NOT INCLUDED

A. Items of work specifically excluded or covered under other sections are:

1. Excavation, installation, and backfill of backflow vault and other devices.

1.03 SUBMITTALS

A. Materials List: Include pipe, fittings, mainline components, water emission components, control system components. Quantities of materials need not be included.

B. Manufacturers' Data: Submit manufacturer's catalog cuts, specifications, and operating instructions for equipment shown on the materials.

1.04 RULES AND REGULATIONS

A. Work and materials shall be in accordance with the latest edition of the National Electric Code; the Uniform Plumbing Code as published by the Western Plumbing Officials Association, and applicable laws and regulations of the governing authorities.

B. When the contract documents call for materials or construction of a better quality or larger size than required by the above-mentioned rules and regulations, provide the quality and size required by the contract documents.

1.05 TESTING

A. Notify the Engineer five working days in advance of testing.

B. Pipelines jointed with rubber gaskets or threaded connections may be subjected to a pressure test at any time after partial completion of backfill. Pipelines jointed with solvent-welded PVC joints shall be allowed to cure at least 24 hours before testing.

C. Subsections of mainline pipe may be tested independently, provided they are separated from sections not to be tested by gate, or similar, valves and approval of the Engineer.

D. Furnish clean, clear water, pumps, labor, fittings and equipment necessary to conduct test or retests.

E. Verification of Existing Static Pressure:

1. Prior to start of work, test existing static pressure at irrigation point of connection. Notify Engineer immediately if minimum pressure is not achieved.

F. Hydrostatic Pressure Test:

1. Notify the Engineer in writing at least three (3) workdays prior to all system test and inspections. Inspection and reports must be made for all tests.

2. The entire irrigation mainline and lateral system shall be tested at one time.

3. Thoroughly flush piping before testing and installation of sprinklers.
4. Test all exposed mainline piping, valves, joints and fittings at 150 psi for one hour prior to inspection by Engineer. If pressure loss occurs, inspect the entire system, make watertight and retest until no pressure loss occurs for a thirty-minute testing period.
5. Lateral lines shall be tested at 100 psi for 30 minutes with not more than 5 psi loss.
6. Pressure test must show no pressure loss greater than allowed above for the specified period and be approved by the Engineer before backfill of trenches will be allowed.

G. Coverage Test:

1. Activate each remote control valve in sequence. The Engineer will visually observe water application patterns and dripper line layout.
2. Adjust or move system components to correct coverage deficiencies. Repeat the test until the system passes test.
3. Use remote control or provide adequate personnel and appropriate communication to operate the irrigation controller.

H. Cement or caulking to seal leaks is prohibited.

1.06 REVIEWS/TRAINING

A. Layout Review:

1. Notify Engineer five working days in advance of review. Static pressure at water supply and nearby mainline must be verified prior to review.
2. Stake each sprinkler location, remote control valve assembly, gate valve, and all other irrigation system assemblies. Revise layout as directed by Engineer. Layout review may be repeated at discretion of Engineer.
3. Where the irrigation system must be modified due to discrepancies between the irrigation plans and actual site conditions, the layout shall be modified per the direction of the Engineer.
4. Layout review shall occur prior to installation of irrigation system unless otherwise directed by Engineer.

1.07 WARRANTY AND REPLACEMENT

A. The purpose of this warranty is to ensure that the system remains free from defects resulting from construction, and that Engineer receives irrigation materials of prime quality, installed and maintained in a thorough and careful manner.

B. For the entire Landscaping Period (See 32 93 00 Planting) contractor shall warranty irrigation materials, equipment, and workmanship against defects. Fill and repair depressions. Restore landscape or structural features damaged by the settlement of irrigation trenches or excavations. Repair damage to the premises caused by a defective item. Make repairs within three days of notification from the Engineer.

C. Contract documents govern replacements the same as new work. Make replacements at no cost in contract price.

D. Guarantee/warranty applies to originally installed materials and equipment and replacements made during the Landscaping Period.

PART 2 MATERIALS

2.01 PLASTIC PIPE

A. PVC pipe (mainline) upstream of the control valves shall be Schedule 40 and conform to all requirements of ASTM D1785-86.

B. PVC pipe (lateral lines) downstream of the control valves shall be Schedule 40 and conform to all requirements of ASTM D1785-86.

C. All PVC pipe shall be marked with the manufacturer's name, class of pipe and NSF seal. Pipe shall bear no evidence of interior or exterior extrusion marks. Pipe walls shall be uniform, smooth and glossy. Pipe may be pre-belled or with individual solvent-weld couplings.

D. All PVC fittings shall be of the solvent weld type except where risers, valves, etc., require threaded transition fittings. All fittings shall conform to the requirements of ASTM D2466-78. All threaded PVC fittings and nipples shall be Schedule 80.

E. All PVC pipe must be delivered in at least twenty-foot (20') lengths.

F. All PVC pipes and fittings for swing joints shall conform to all requirements of ASTM D3139.

G. Use Teflon tape on all threaded fittings. Do not use Teflon tape at final threaded fitting at sprinkler heads.

H. Primer color shall be purple and glue color shall be grey.

2.02 BATTERY OPERATED IRRIGATION CONTROLLER

A. Controller: General Conditions

1. Station outputs shall be 2 or 4 individual stations.
2. The enclosure shall be plastic for outdoor use, mounted to a DC solenoid.
3. Display shall be high resolution digital LCD.
4. Controller shall have buttons to select values and function.
5. Controller shall be powered by 9V alkaline batteries.
6. Each station output shall supply .05 mA 11 VDC for solenoid activation.
7. Valves attached to the controller shall have only DC latching solenoids.

B. Controller to be per Irrigation Plans.

2.03 POP-UP SPRINKLER HEADS

A. All heads shall have a built-in pressure-regulating device. The device shall regulate nozzle pressure to the design pressure. The pressure-regulating device shall be an internal part of the pop-up stem.

B. The heads shall have matched precipitation rate nozzles with adjusting screws.

C. All heads shall have screens under the nozzles.

D. When noted on schedule, the heads shall be equipped with check valves to prevent low head drainage. The check valves shall hold back pressures equivalent to 10 feet of head.

E. The heads shall be of types, manufacture and sizes shown on the drawings.

2.04 AUTOMATIC VALVES

A. Valves shall be electrically operated, actuated by a solenoid. The solenoid coil is to be sealed in an "Epoxy" material so it is completely waterproof.

B. Operation shall be normally closed solenoid control capable of operating within minimum flow requirements.

C. Diaphragm operated of one-piece construction. The diaphragm is to be fully pressure balanced in both the open and closed positions.

D. Solenoid to be mounted directly on the valve or bonnet. All parts and tubing downstream of the entrance must be of larger size to permit passage of foreign particles.

E. A flow adjustment stem with cross handle shall be provided that limits the travel of the valve plug from full closed to full open, allowing manual closure or flow regulation. A manual control is to be provided for operation with or without the control wiring installed.

F. Construction is to be so that all operating parts are accessible and removable from the top by removing the bonnet without having to disconnect the valve body from the pipeline. The valve must be capable of being operated in any position.

G. Remote Control Valves for sprinkler irrigation zones shall be the type and size shown on the drawings.

H. Remote Control Valves for drip irrigation zones shall be those shown on the drawings.

I. Master Valve - Refer to Plans.

2.05 QUICK COUPLING VALVES

A. Shall be one inch (1"), all brass, one or two-piece bodies, with locking brass tops.

B. Quick coupler valve for use of compressed air for winterizing shall be 1" all brass, two piece bodies with locking brass tops.

C. Quick Coupling Valves shall be as shown on Drawings.

2.06 MANUAL CONTROL VALVES

A. Isolation Valves shall be as shown on Drawings

B. Isolation Valves shall be sized to the pipe.

2.07 VALVE BOXES

A. Automatic and manual control valves shall be enclosed in a 12" x 18" valve box of polyolefin and fibrous material (preferably recycled material) with a latch lock cover. The bottom section is to be slotted so as to extend below the pipe. Extensions shall be added as required to meet grades per Details. The box cover shall be branded in 2-inch high letters and numbers, controller and valve identification numbers. Automatic control valves shall read ACV, master valve boxes shall read MV, gate valves shall read GV, etc. Black color body and lid.

B. Individual ball valves, quick coupler valves, line flush valves and check valves shall be enclosed in a 10" round valve box of polyolefin and fibrous material with a latch lock and cover. Black color body and lid.

C. Valve boxes shall be of the type, manufacture and size shown on the drawings and/or the following:

1. Ametek or Carson 10-inch diameter round box (quick couplers), black color body and lid.

2. Ametek 12-inch Standard Box or Carson 1419B with bolt down locking lid and extensions as required (for master valve only) black color body and lid.
3. Carson 1730 Super Jumbo with bolt down locking lid and extensions as required (for backflow device) black color body and lid.

2.08 RISERS

A. Riser: 3’ length PVC Sch. 40 plastic pipe
B. Staking: 4’ length #4 steel rebar stakes.
C. Ties: Plastic zip ties

2.09 OTHER SUPPLIES

A. Electrical tape shall be black plastic, three-quarters inch (3/4") wide and a minimum of 0.007 inches thick and the all-weather type.
B. Teflon tape shall be used for all threaded connections. Tape shall be set back a minimum of one-quarter inch (1/4") into the pipe threading. Do not use Teflon tape on final threaded sprinkler head connections or nozzles.
C. Pressure gages for the pressure reducing valve assembly shall be liquid-filled Ashcroft 1009 AL with one-quarter inch (1/4") gage cock attached or approved equal.

PART 3 EXECUTION

3.01 INSPECTIONS AND REVIEWS

A. Site Inspections:
1. Verify site conditions, including review of the operation of the existing irrigation zones impacted by construction work under this contract, and meet with facilities staff to determine any irregularities affecting work of this section. Report irregularities to the Engineer prior to beginning work.
2. Beginning work of this section implies acceptance of existing conditions.
B. Irrigation System Layout Review: Irrigation system layout review will occur after the layout has been completed. Notify the Engineer five working days in advance of review.
C. Verify locations of underground utilities at Point of Connection.

3.02 LAYOUT OF WORK:

A. Stake out the irrigation system. Items staked include existing irrigation lines and components impacted by this construction contract, and new work: sprinklers, pipe, control valves, and isolation valves.

3.03 POINT OF CONNECTION

A. General: Obtain two (2) irrigation meters from city of Fife under the Port of Tacoma’s name. Install meters within existing meter vaults. Connect new mainlines to meters.

3.04 EXCAVATION, TRENCHING, AND BACKFILLING:

A. All pipe, valves, risers, and heads to be installed at-grade, with the exception of backflow prevention devices and master valves.
B. Excavate to permit the Point of Connection pipes and equipment to be laid at the intended elevations and to permit workspace for installing connections and fittings.

C. Backfill only after lines have been reviewed and tested. Lines may be partially backfilled, leaving all joints exposed for testing.

D. Excavated material is generally satisfactory for backfill. Backfill shall be free from rubbish, vegetable matter, frozen materials, and stones larger than two inches in maximum dimension. Remove material not suitable for backfill. Backfill placed next to pipe shall be free of sharp objects that may damage the pipe. Backfill and compact in 6” lifts.

E. Dress backfilled areas to original grade, and re-seed or restore plantings as required to match surrounding conditions.

3.05 ASSEMBLING PIPE AND FITTINGS

A. General:

1. Keep pipe free from dirt and pipe scale. Cut pipe ends square and debur. Clean pipe ends.

2. Keep ends of assembled pipe capped. Remove caps only when necessary to continue assembly.

B. Mainline Pipe and Fittings:

1. Use only strap-type friction wrenches for threaded plastic pipe.

2. PVC Solvent Weld Pipe:

a. Use primer and solvent cement. Join pipe in a manner recommended by the manufacturer and in accordance with accepted industry practices.

b. Cure for 30 minutes before handling and 24 hours before allowing water in pipe.

C. Lateral Pipe and Fittings:

1. Use only strap-type friction wrenches for threaded plastic pipe.

2. PVC Solvent Weld Pipe:

a. Use primer and solvent cement. Join pipe in the manner recommended by manufacturer and in accordance with accepted industry practices.

b. Cure for 30 minutes before handling and 24 hours before allowing water in pipe.

D. Brass Pipe and Fittings:

1. Install pipe in accordance with local plumbing code.

2. Apply Teflon-type tape to the male threads only.

3.06 INSTALLATION OF MAINLINE COMPONENTS

A. Point-of-Connection (P.O.C.): As indicated on the drawings.

B. Isolation Gate Valve Assembly: Install where indicated on the drawings.

C. Quick Coupling Valve Assembly: Install where indicated on the drawings.

3.07 INSTALLATION OF SPRINKLER AND IRRIGATION COMPONENTS

A. Remote Control Valve (RCV):

1. Flush mainline before installation of RCV assembly.

2. Install where indicated on the drawings. Wire connectors and waterproof sealant shall be used to connect control wires to remote control valve wires. Install connectors and sealant per the manufacturer's recommendations.
3. Adjust RCV to regulate the downstream operating pressure.

B. Sprinkler Assembly:

1. Flush lateral pipe before installing sprinkler assembly.
2. Install per the installation details at locations shown on the drawings.
3. Set sprinklers securely on risers perpendicular to the finish grade.
4. Supply appropriate nozzle or adjust arc of coverage of each for best performance.
5. Adjust the radius of throw of each sprinkler for best performance.

3.08 INSTALLATION OF BATTERY OPERATED CONTROL SYSTEM COMPONENTS

A. Battery Control Units: Install per details

B. Remote Control Valves: Install per details and manufacturer’s instructions.

3.09 CLEANUP

A. Upon completion of work, remove from the site all machinery, tools, excess materials, and rubbish. Sweep and wash pavement, and leave site in a spotless condition.

3.10 IRRIGATION SYSTEM REMOVAL

A. Irrigation system to be removed following the second growing season. Anticipated date to begin demolition is starting October 15, 2024. Remove system within thirty (30) days.

B. Leave meter vault in place. Cap meter set per city of Fife requirements.

END OF SECTION 32 80 00

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PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Soil Specifications and amendments for on-grade applications.

B. References: The following Specifications and standards of the organizations and documents listed in this paragraph form a part of the Specification to the extent required by the references thereto. In the event that the requirements of the following referenced standards and Specification conflict with this Specification section the requirements of this Specification shall prevail. In the event that the requirements of any of the following referenced standards and Specifications conflict with each other the more stringent requirement shall prevail.

1. ASTM: American Society of Testing Materials cited section numbers.

2. U.S. Department of Agriculture, Natural Resources Conservation Service, 2003. National Soil Survey Handbook, title 430-VI. Available Online.

3. US Composting Council www.compostingcouncil.org and http://compostingcouncil.org/admin/wp-content/plugins/wp-pdfupload/pdf/191/LandscapeArch_Specs.pdf.

4. Methods of Soil Analysis, as published by the Soil Science Society of America (http://www.soils.org/).

5. Up by Roots: healthy soils and trees in the built environment. 2008. J. Urban. International Society of Arboriculture, Champaign, IL.

1.02 SUBMITTALS

A. Product data and certificates: For each type of manufactured product, submit within14 days of Notice to Proceed data and certificates that the product meets the Specification requirements, signed by the product manufacturer.

B. Notice to Proceed samples of each product and material identified below to the Engineer for approval. Label samples to indicate product, characteristics, and locations in the work. Samples will be reviewed for appearance only.

1.03 OBSERVATION OF THE WORK

A. The Engineer may observe the work at any time. Random samples may be collected to confirm compliance with the Specifications. Rejected materials shall be immediately removed from the site and replaced at the Contractor's expense. The cost of testing materials not meeting Specifications shall be paid by the Contractor.

B. The Engineer shall be informed of the progress of the work so the work may be observed at the following key times in the construction process. The Engineer shall be afforded sufficient time to schedule visit to the site. Failure of the Engineer to make field observations shall not relieve the Contractor from meeting all the requirements of this Specification.

1.04 QUALITY ASSURANCE

A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of plants.

1. Experience: Submit statement and outline of qualifications showing five years' experience in landscape installation and a minimum of five projects that are similar in scale and complexity in addition to requirements in Division 01 Section "Quality Requirements."

B. All delivered and installed planting soil shall conform to the approved submittal's sample color, texture, and approved test analysis.

1. The Engineer may request samples of the delivered or installed soil be tested, at the cost of the Contractor, for analysis to confirm the planting soil conforms to the approved material.

2. Testing results shall be within 10% plus or minus of the values measured in the approved planting soil mixes.

3. Any planting soil that fails to meet the above criteria, if requested by the Engineer, shall be removed and new soil installed.

1.05 SITE CONDITIONS

A. It is the responsibility of the Contractor to be aware of all surface and subsurface conditions, and to notify the Engineer, in writing, of any circumstances that would negatively impact the health of plantings. Do not proceed with work until unsatisfactory conditions have been corrected.

1. Prepare soil only when topsoil is not saturated, muddy, or frozen.

2. Should subsurface drainage or soil conditions be encountered which would be detrimental to growth or survival of plant and/or seed material, the Contractor shall notify the Engineer in writing, stating the conditions and submit a proposal covering cost of corrections. If the Contractor fails to notify the Engineer of such conditions, they shall remain responsible for plant and/or seed material.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Weather: Do not mix, deliver, place or grade soils when frozen or with moisture above field capacity.

B. Protect soil and soil stockpiles, including the stockpiles at the soil blender's yard, from wind, rain and washing that can erode soil or separate fines and coarse material, and contamination by chemicals, dust and debris that may be detrimental to plants or soil drainage. Cover stockpiles with plastic sheeting or fabric at the end of each workday.

C. All manufactured packaged products and material shall be delivered to the site in unopened containers and stored in a dry enclosed space suitable for the material and meeting all environmental regulations. Biological additives shall be protected from extreme cold and heat. All products shall be freshly manufactured and dated for the year in which the products are to be used.

D. Deliver all chemical amendments in original, unopened containers with original labels intact and legible, which state the guaranteed chemical analysis. Store all chemicals in a weather protected enclosure.

E. Bulk material: Coordinate delivery and storage with Engineer and confine materials to neat piles in areas acceptable to Engineer.

PART 2 - PRODUCTS

2.01 IMPORTED PLANTING SOIL

A. For all planting areas: "Bioretention Mix", as available from Walrath Soil Products, (253) 606-4101, or approved equal.

1. A Mix of Utility Sand and Medium Compost. The approximate Mix ratio shall be:

Mix Component	% by moist volume
Utility Sand	60-70%
Medium Compost	30-40%

2. Final tested organic matter between 4.0 and 7.0% (by dry weight).
3. Conductivity in mmhs/cm <2
4. pH shall be 6.0-7.5
5. CEC shall be 5-10 meq/100g
6. Soluble salt content shall be less than 3.0 mmhos/cm.
7. At the time of final grading, collect representative soil samples and submit for soil testing. If deficiencies from the specification are noted, propose an amendment strategy to correct for any documented deficiencies. Add fertilizer per the amendment strategy only with approval from Engineer.

2.02 MEDIUM COMPOST

A. Composted material must be in compliance with WA Department of Ecology's specifications, which appear in WAC Chapter 173-350 Section 220; plus the following additional requirements:
   1. The carbon to nitrogen ratio of the compost shall be below 35:1
   2. The compost shall have an organic matter content of 35% to 65% as determined by "loss on ignition" test method.

B. Compost feedstocks shall be:

   98% landscape waste (Type I)

   2% food waste (Type III)

C. Compost shall meet the following particle size distribution:

Sieve	Percent Passing
1 inch (25.0mm)	99-100
5/8 inch (15.9mm)	90-100
1/4 inch (6.3mm)	40-90

D. pH shall be between 5.5 and 8.0.

E. Manufactured inert material shall be less than 1% percent by dry weight.

F. Organic matter content shall be between 45 and 65 percent by dry weight.

G. Soluble salt content less than 6.0 mmhos/cm.

H. Maturity shall be over 80% per TMECC 05.05-A, "Germination and Vigor."

I. Stability shall be 7 or below per TMECC method 05.08-B.

J. Yard waste shall be from a permitted composting facility.

2.03 UTILITY SAND

A. Clean, washed, sand, free of toxic materials
   1. Coarse concrete sand, ASTM C-33 Fine Aggregate, with a Fines Modulus Index of 2.8 and 3.2.

2. Coarse Sands shall be clean, sharp, natural Coarse Sands free of limestone, shale and slate particles. Manufactured Coarse Sand shall not be permitted.
3. pH shall be lower than 7.0.
4. Provide Coarse Sand with the following particle size distribution:

Sieve	Percent Passing
3/8 inch (9.5 mm)	100
No 4 (4.75 mm)	95-100
No 10 (2.36 mm)	75-90
No 40 (0.30 mm)	25-40
N0 100 (0.15 mm)	4-10
No 200 (0.75 mm)	2-5

B. Efforts should be made to use aggregate with gradation meeting Coefficient of Uniformity equal to 4 or above; and Coefficient of Curve of 1 to 3.

2.04 SOIL AMENDMENT

A. Mycorrhizal Amendment: Mycorrhizal Landscape Inoculant root bio stimulant with concentrated blend of Endo and Ecto Mycorrhizal Fungi and beneficial bacteria.

B. Available from: BioOrganics 1-888-332-7676

PART - 3 EXECUTION

3.01 SITE EXAMINATION

A. Prior to installation of planting soil, examine site to confirm that existing conditions are satisfactory for the work of this section to proceed.

1. Confirm that surface of all areas to be filled with planting soil are free of construction debris, refuse, compressible or biodegradable materials, soil crusting films of silt or clay that reduces or stops drainage from the planting soil into the subsoil; and/or standing water. Remove unsuitable material from the site.
2. Confirm that no adverse drainage conditions are present.
3. Confirm that no conditions are present which are detrimental to plant growth.

B. If unsatisfactory conditions are encountered, notify the Engineer immediately to determine corrective action before proceeding.

3.02 COORDINATION WITH PROJECT WORK

A. The Contractor shall coordinate with all other work that may impact the completion of the work.

3.03 GRADE AND ELEVATION CONTROL

A. Provide grade and elevation control during installation of planting soil. Utilize grade stakes, surveying equipment, and other means and methods to assure that grades and contours conform to the grades indicated on the Contract Documents.

3.04 SITE PREPARATION

A. Protect adjacent walks and roads from damage or staining by the soil. Use 1/2 inch plywood and or plastic sheeting as directed to cover existing concrete and other items as directed during the progress of the work.

1. At the end of each working day, clean up any soil or dirt spilled on any paved surface.

2. Any damage to the paving or site features or work shall be repaired at the Contractor's expense.

3.05 SOIL MOISTURE

A. Volumetric soil moisture level, in both the planting soil and the root balls of all plants, prior to, during and after planting shall be above permanent wilt point and below field capacity for each type of soil texture within the following ranges.

Soil texture	Permanent wilting point	Field capacity
Sand, Loamy sand, Sandy loam	5-8%	12-18%
Loam, Sandy clay, Sandy clay loam	14-25%	27-36%
Clay loam, Silt loam	11-22%	31-36%
Silty clay, Silty clay loam	22-27%	38-41%

B. If moisture is too low, the planting holes shall be filled with water and allowed to drain before starting any planting operations. If the moisture is too high, suspend planting operations until the soil moisture drains to below field capacity.

3.06 INSTALLATION OF SOIL AMENDMENT

A. Application of mycorrhizae inoculant. Apply to individual tree and shrub planting holes at rate specified by manufacturer.

3.07 INSTALLATION OF CHEMICAL ADDITIVES

A. In the event the soil test requires chemical amendment to the planting soil, Contractor to propose amendment strategy suitable for a marine habitat for review and approval by the Port.

3.08 CLEAN-UP

A. During installation, keep the site free of trash, pavements reasonably clean and work area in an orderly condition at the end of each day. Remove trash and debris in containers from the site no less than once a week.

1. Immediately clean up any spilled or tracked soil, fuel, oil, trash or debris deposited by the Contractor from all surfaces within the project or on public right of ways and neighboring property.

B. Once installation is complete, wash all soil from pavements and other structures. Ensure that all tags and flagging tape are removed from the site.

1. Make all repairs to grades, ruts, and damage to the work or other work at the site.

2. Remove and dispose of all excess planting soil, subsoil, jute mesh, plants, packaging, and other material brought to the site by the Contractor.

3.09 PLANTING SOIL PROTECTION

A. The Contractor shall protect installed planting soil from damage including contamination and over compaction due to other soil installation, planting operations, and operations by other Contractors or trespassers. Maintain protection during installation until acceptance. Utilize fencing and matting as required or directed to protect the installed soil. Treat, repair or replace damaged planting soil immediately.

3.10 PROTECTION DURING CONSTRUCTION

A. The Contractor shall protect planting and related work and other site work from damage due to planting operations, operations by other Contractors or trespassers.

1. Maintain protection during installation until the date of plant acceptance. Treat, repair or replace damaged work immediately.
2. Provide temporary erosion control as needed to stop soil erosion until the site is stabilized with mulch or plantings.

B. Damage done by the Contractor, or any of their sub-contractors to existing or installed plants, or any other parts of the work or existing features to remain, including large existing trees, soil, paving, utilities, other finished work and surfaces including those on adjacent property, shall be cleaned, repaired or replaced by the Contractor at no expense to the Port. The Engineer shall determine when such cleaning, replacement or repair is satisfactory. Damage to existing trees shall be assessed by a certified arborist.

END OF SECTION 32 91 15

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. The provisions herein shall apply to seedbed preparation and application of seed by hand broadcast seeding, and weed control.

1.02 REFERENCES

A. Whitson, Tom D., et. al. 2001. Weeds of the West. 9th ed. Laramie: University of Wyoming. ISBN: 0-941570-13-4.

B. Herbicides Approved for Use on WSDOT Rights of Way (www.wsdot.wa.gov/maintenance/roadside/herbicide_use.htm)

1.03 SUBMITTALS

A. Weed Control Plan: Proposed weed control plan during planting operations and the Maintenance Period. The Weed Control Plan shall be submitted to the Engineer for review and approval a minimum of 14 days prior after Notice to Proceed. The Weed Control Plan submittal shall include a narrative describing weed control including hand, mechanical and chemical methods, timing, application of herbicides and pesticides including type, rate, use and timing, mowing, and noxious weed control. The Weed Control Plan shall indicate how to identify different weeds at each stage in their life cycle. Target weeds to be removed shall be identified and listed. The Weed Control Plan submittal shall include hand-marked Contract Drawing sheets that show locations and weed species and describe specific control methods and the corresponding schedule for each location. The Weed Control Plan shall be updated monthly. Weed control Work shall not commence until the Weed Control Plan has been approved in writing by the Engineer.

B. Product Data and Certifications: Submit manufacturer's or supplier's product data for the following items Herbicides and Pesticides:

1. Product Data for Herbicides and Pesticides: Submit proof of applicators' State of Washington license and that herbicide and/or pesticide is registered in the State of Washington. Provide manufacturer's literature, including Material Safety Data Sheets and toxicity levels, for each pesticide and herbicide proposed for use during construction and the Maintenance Period. The Contractor shall furnish the Engineer with a copy of the current product label for each herbicide, pesticide, and spray adjuvant to be used. This information shall be submitted with the Weed Control Plan.

1.04 QUALITY ASSURANCE

A. Qualifications

1. Pesticide and Herbicide Applicator: The applicator shall be licensed by the state of Washington as a Commercial Applicator or Commercial Operator.

1.05 DELIVERY, STORAGE AND HANDLING

A. Seed containers:

1. Seed to be provided to Contractor by Port.

2. Other Material Delivery: Deliver pesticides, herbicides, and other materials in original sealed, labeled, and undamaged containers.

B. Storage:

1. Protect packaged materials from deterioration during storage. Keep herbicides and pesticides in dry storage away from other landscape materials and surface waters.

1.06 AMBIENT CONDITIONS

A. Do not seed when ambient temperature is below 38 degrees F without approval of the Engineer.

B. Do not seed when ground is snow covered.

C. Do not seed when wind velocities exceed 5mph.

1.07 WEED CONTROL

A. Mandate: Noxious Weed Control is mandated by state weed control law, Chapter 17.10 RCW. Assistance and weed lists are available from the Pierce County Noxious Weed Control Board.

B. Weed Lists: The Contractor shall be responsible for being current on all Washington State and Pierce County noxious weed lists and provide these to the Engineer as requested.

C. Weeds: Weeds include the following:

1. Noxious Weeds: The Contractor shall identify and control all Pierce County and Washington State Noxious Weeds identified by the Pierce County Noxious Weed Control Board.

2. Weeds of Concern: The Contractor shall identify and control all weeds of concern including non-regulated weeds in Pierce County identified by the Pierce County Noxious Weed Control Board and any weed occurring in the “Weeds of the West” publication.

D. Weed Control: The Contractor shall identify and control all weeds within the seeding zones shown on the Contract Drawings. Only hand tools and chemical methods shall be used to remove weeds within the dripline of existing trees to remain and “Tree Retention Areas” as shown on the Contract Drawings. Prior to drafting the Weed Control Plan, the Contractor shall meet on site with the Engineer to discuss weeds on site and the methods for controlling the weed species. Methods for controlling each weed species shall be proposed in the Weed Control Plan. Mechanical or chemical weed control methods shall be in accordance with recommendations of the Pierce County Noxious Weed Control Boards.

E. All seeding zones on the project site as shown on the Contract Drawings shall be maintained in a weed-free condition during construction. No greater than 5% cover of weeds in any 100 square foot area shall be allowed.

F. Any damaged or dead native plants resulting from Contractor weed control efforts shall be replaced immediately at the Contractor’s expense.

G. At no time during construction shall weeds be allowed to reach the seed stage. Should weeds reach the seed stage in violation of this Specification, the Contractor shall physically remove and bag the seed heads. All physically removed vegetation and seed heads shall be disposed of offsite at the Contractor’s expense.

PART 2 - PRODUCTS

2.01 SEED

A. All seed provided by Port.

B. Seed Mixes:

UPLAND SEED MIX

ACHILLEA MILLEFOLIUM / WHITE YARROW
ELYMUS GLAUCUS / BLUE WILDRYE
ERIGERON SPECIOSUS / SHOWY FLEABANE
LUPINUS POLYPHYLLUS / BIGLEAF LUPINE
LUPINUS BICOLOR / TWO COLOR LUPINE
HORDEUM BRACHYANTHERUM / MEADOW BARLEY
TRITICUM AESTIVUM / STERILE WHEAT GRASS
(REGREEN ™ OR EQUAL)
POA SECUNDA / SANDBERG'S BLUEGRASS
ARTEMISIA SUKSDORFII / COAST MUGWORT
ANAPHALIS MARGARITACEA / WEST. PEARLY EVERLAST.
ERIOPHYLLYM LANATUM / OREGON SUNSHINE
LUPINUS LITTORALIS / SEASHORE LUPINE
FRAGARIA CHILOENSIS / BEACH STRAWBERRY
AMBROSIA CHAMISSONIS / SILVER BURR RAGWEED
GRINDELIA INTEGRIFOLIA / PUGET SOUND GUMWEED
ARGENTINA EGEDII / PACIFIC SILVERWEED
PRUNELLA VULGARIS VAR. LANCEOLATA / SELF HEAL
SIDALCEA HENDERSONII / HEND. CHECKERMALLOW
ASTER SUBSPICATUS / DOUGLAS'S ASTER
DESCHAMPSIA CESPITOSA / TUFTED HAIRGRASS
PLECTRITIS CONGESTA / SHORTSPUR SEABLUSH

FRESHWATER WETLAND SEED MIX

BROMUS CARINATUS / CALIFORNIA BROME GRASS
ELYMUS GLAUCUS / BLUE WILDRYE
POA SECUNDA / SANDBERG'S BLUEGRASS
GLYCERIA OCCIDENTALIS / WESTERN MANNA GRASS
DECHAMPSIA CAESPITOSA / TUFTED HAIR GRASS
ELEOCHARIS PALUSTRIS / COMMON SPIKE RUSH
CAREX OBNUPTA / SLOUGH SEDGE

SALT MARSH SEED MIX

CAREX LYNGBYEI / LYNDBY'S SEDGE
CAREX OBNUPTA / SLOUGH SEDGE
CAREX STIPATA / AWLFRUITED SEDGE
ELEOCHARIS PALUSTRIS / COMMON SPIKE RUSH
JUNCUS ACUMINATUS / TAPERED RUSH
JUNCUS ARTICUS / MOUNTAIN RUSH
JUNCUS ENSIFOLIUS / DAGGERLEAF RUSH
SCHOENOPLECTUS ACUTUS / HARDSTEM BULRUSH
SCHOENOPLECTUS AMERICANUS / CHAIRMAKERS BULRUSH
BOLBOSCHOENUS MARITIMUS / COSMOPOLITAN BULRUSH
GRINDELIA INTEGRIFOLIA / PUGET SOUND GUMWEED
ARGENTINA EGEDII / PACIFIC SILVERWEED
SIDALCEA HENDERSONII / HEND. CHECKERMALLOW
SYMPHYOTRICHUM SUBSPICATUM / DOUGLAS'S ASTER
LATHYRUS JAPONICUS VAR.'MARITIMUS' / BEACH PEA
LATHYRUS LITTORALIS / SILKY BEACH PEA
PLECTRITIS CONGESTA / SHORTSPUR SEABLUSH

2.02 SEED CARRIER

A. Seed carrier shall be inert material, such as rice hulls, sawdust, perlite, or vermiculite, as recommended by seed supplier. Carrier to be moistened and mixed with seed at a ratio of not less than two parts seed carrier to one part seed.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine areas to be seeded for compliance with requirements and other conditions affecting performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, sandblast media, or acid has been deposited in soil within a planting area.

B. Proceed with seeding only after unsatisfactory conditions have been corrected.

3.02 SEEDING

A. Sow seed using hand broadcasting methods. Do not broadcast seed when wind velocity exceeds 5 mph.

1. Before sowing, mix seed with dampened seed carrier at a ratio of not less than two parts seed carrier to one part seed.

2. Do not use wet seed or seed that is moldy or otherwise damaged.

B. Sow seed at rate recommended by seed supplier.

C. After seeding, lightly irrigate area seeded.

3.03 WEED CONTROL

A. Weed control, debris removal; and application of appropriate insecticides and fungicides as may be necessary to maintain plants free of insects and disease.

1. Insect Pest Control: If insect pests are damaging planted vegetation, prepare for review and approval by the Engineer a strategy to treat and eliminate pests. These strategies could include insecticidal soap or horticultural spray. Implement immediately after approval.

2. Pesticides and Herbicides: Apply pesticides, herbicides, and other chemical products and biological control agents in accordance with label recommendations, the Washington State Department of Ecology regulations, Pierce County critical area regulations, and Washington State Department of Agriculture laws and regulations. Only those herbicides listed in the table “Herbicides Approved for Use on WSDOT Rights of Way may be used (www.wsdot.wa.gov/maintenance/roadside/herbicide_use.htm) and shall be approved by the Engineer. The Contractor shall ensure confinement of the chemicals within the areas designated in the Weed Control Plan. The use of spray chemical pesticides and herbicides shall require the use of anti-drift and activating agents and a spray pattern indicator unless otherwise allowed by the Engineer. Coordinate applications with Engineer's operations and others in proximity to the Work. Notify the Engineer before each application is performed. All applications of herbicides and pesticides shall be posted on the project site in accordance with Washington State Department of Agriculture regulations for 24 hours after application.

3. Weed Control: The Contractor is responsible for control and removal of all Weeds within the project limits during construction and the Maintenance Period. A combination of chemical and mechanical control is allowed subject to approval by the Engineer. Removal shall include above ground shoots and underground roots. Pulled weeds shall be disposed off-site at an appropriate location at the Contractor's expense.

3.04 CLEANUP AND PROTECTION

A. Promptly remove soil and debris created by seeding work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.

B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic.

C. Protect from wildlife predation and disturbance. Replace damaged plantings caused by wildlife predation and disturbance with new seed up until Substantial Completion.

3.05 SITE QUALITY CONTROL

A. Inspection: Seeding and weed control efforts will be inspected regularly by the Engineer during construction.

END OF SECTION 32 92 00

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PART 1 GENERAL

1.01 DESCRIPTION OF WORK

A. The provisions herein shall apply to furnishing and installing bare root trees and shrubs, live stake cuttings; and container grown emergents within planting zones shown on the Contract Drawings. This work also includes a Landscaping Period for a period of 2 years that begins following Partial Substantial Completion of project areas and includes maintenance activities within planting zones including weed and pest control, watering, mulching, reseeding, disposal of waste materials, and warranty of plant and other landscape materials.

1.02 REFERENCES

A. American National Standards Institute (ANSI): ANSI Z60.1 - American Standard for Nursery Stock

B. Hitchcock, C.L., and A. Cronquist. 1973. Flora of the Pacific Northwest. University of Washington Press, Seattle, WA.

1.03 SUBMITTALS

A. Planting Schedule: Proposed planting schedule, indicating dates corresponding to specific areas of the site that will be planted including references to Contract Drawings. Contractor shall submit the planting schedule to the Engineer a minimum of 14 days prior to planting.

B. Landscaping Schedule: Proposed landscaping schedule, indicating dates joint inspections and maintenance activities after obtaining Partial Substantial Completion. Contractor shall submit landscaping schedule within 14 days after Engineer grants Partial Substantial Completion.

C. Qualification Data: For landscape installer. Submit within 14 days of Notice to Proceed.

D. Watering Plan: Proposed watering plan during Landscaping Period including dates and prescribed methods of watering in accordance with this specification. Contractor shall submit watering plan within 14 days of Notice to Proceed.

1.04 QUALITY ASSURANCE

A. Qualifications:

1. Installer: Company specializing in installing and planting native plants with a minimum of 3 years documented experience as represented by a list of at least 5 completed past projects and names, addresses, and telephone numbers of 3 client references. The company shall provide a supervisor with a minimum of 5 years of experience.

B. The Engineer: It is required that the Engineer be provided an opportunity to observe the work specified herein. The Contractor shall request observance at least 48 hours in advance of the time such Work is conducted. Observance is required for the following portions of the work:

1. After planting hole locations have been identified on the site. At this point strategy for distribution of plant species shall be discussed by Engineer.

2. After plants are placed in their planting holes and holes are backfilled; and

3. When planting has been completed.

1.05 SEQUENCING AND SCHEDULING

A. Planting Seasons:

1. Planting Season: Install emergent plant materials from October 15 through December 15. Install bare root trees and shrubs and live stake cutting from Jan 15 to March 15.

2. No work shall be done when the ground is frozen, snow covered, too wet, or in an otherwise unsuitable condition for planting.
3. Special conditions may exist that warrant a variance in the specified planting dates or conditions. Submit a written request to the Engineer stating the special conditions and proposed variance.

1.06 STORAGE AND HANDLING

A. Delivery:
   1. Plant Material Staging: Prior to planting, temporarily stage all plant materials for each planting zone as shown on the Contract Drawings. Notify the Engineer when plants for each planting zone are staged. The Engineer shall verify correct quantity per planting zone prior to layout of plants within the planting zone.

B. Storage:
   1. Store plants not installed on the day of arrival at the project site as follows:
      a. Shade and protect plants from the wind when stored outside.
      b. Keep plants in a moist condition until planted, by watering root systems.
      c. Store live stake cuttings in water on the site, using a garbage can or within edges of surface waters on site buried under 6 inches of water, or other approved means. Live stake cuttings shall be soaked in water for 24 hours prior to planting. Cuttings that have already developed roots shall not be used.
      d. Bare root plants shall be kept in a cool, dark place prior to plating. The bare roots shall be kept moist prior to planting. Planting of bare roots shall take place within 48 hours after delivery.
      e. Temporarily store plants in moistened peat moss, compost, or soil prior to planting.

C. Handling: Exercise care in handling, loading, unloading, and storing of plant materials. Plant materials damaged in any way shall be discarded and replaced with undamaged materials at the Contractor's expense.
   1. Cover plants and tie back branches as necessary.
   2. Protect bark from chafing with burlap bags.
   3. Do not drag plant material along the ground.
   4. Plants shall be protected at all times against drying, sun, wind, heat, freezing, and similar detrimental conditions both during shipment and during related handling. When transported in closed vehicles, plants shall receive adequate ventilation to prevent sweating. When transported in open vehicles, plants shall be protected by tarpaulins or other suitable cover material. Provide adequate protection so that stems and trunks are not scarred in transport and branches are not broken.
   5. Protect bark, branches, and root systems from sun scald, drying, sweating, whipping, and other handling and tying damage.
   6. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape.
   7. Do not drop plants or carry plants by shoots, stems, foliage or trunks.
   8. Handle planting stock by the root ball only.

1.07 SITE CONDITIONS

A. Planting shall not begin until installation of the irrigation system and fence have been completed and accepted by the Engineer.

B. Disposal of Waste Materials:

1. Remove all plastic labels, materials, and containers from the project site after plants are in place. Recycle or properly dispose of containers and other waste materials.

1.08 LANDSCAPING PERIOD

A. General: The Landscaping Period shall consist of providing adequate and proper care for all plant materials, planting zones, and seeding zones within the project limits to ensure the resumption of growth of the transplanted material and seeded areas. The Landscaping Period shall begin following the initial planting effort which concludes on March 15, 2023. At the end of the planting season, the Contractor shall submit to the Engineer Contract Drawings that clearly show the boundaries of planted areas that have been approved such that these areas can be tracked during Landscaping Period.

B. Landscaping Period: March 15, 2023 through December 31, 2024.

C. Responsibility: The Contractor is responsible for maintenance of the site throughout the Landscaping Period. See Maintenance section of this specification.

D. All automatic temporary irrigation systems shall be operated fully automatic during the Landscaping Period and until Substantial Completion of the Contract. Payment for water is the responsibility of the Port during the Landscaping Period.

E. The Contractor shall meet monthly with the Engineer for the purpose of joint inspection of the planting zones on a mutually agreed upon schedule. At a minimum, joint inspections shall occur monthly between March and October of each year during the Landscaping Period. During the joint site inspections, the Contractor shall record a punch list of all observed unsatisfactory conditions identified by the Contractor and Engineer requiring maintenance. The Contractor shall correct all unsatisfactory conditions to the Engineer within a 10-day period immediately following the inspection. If plant replacement is required, the Port will procure plants for Contractor to install. The Contractor shall, within the 10-day period, submit a plan and schedule for the plant replacement to occur immediately at the beginning of the planting season as specified. Failure to comply with corrective steps as outlined by the Engineer shall constitute justification for the Engineer to take corrective steps and to deduct all costs thereof from any monies due to the Contractor.

F. During the Landscaping Period, the Contractor shall perform all Work necessary for the continued healthy and vigorous growth of all plant materials as directed by the Engineer. At the end of the Landscaping Period, plants that do not show normal growth shall be replaced.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.01 PREPARATION

A. Plant Layout: Place trees and shrubs as shown on the Contract Drawings for review by the Engineer prior to planting.

B. Engineer Inspection: The Engineer will reserve the right to adjust the locations of landscape elements during the installation period as appropriate to the job.

C. Experienced Workers: Planting shall be performed only by experienced workers familiar with planting procedures for native plants under the supervision of a qualified supervisor.

3.02 INSTALLATION

A. Watering During Planting: Flood holes with sufficient water to settle soil backfill, eliminate air pockets and thoroughly dampen root ball. Allow water to drain completely. Dependent on soil moisture level during installation, this requirement may be waived for some plantings at the discretion of the Engineer only. Water all plants within 24 hours of initial planting.

B. Install plants as shown on the Contract Drawings.

C. For installation of live stake cuttings, a pilot hole shall be first created if soil conditions are two firm to insert live stakes with ease.

3.03 MAINTENANCE

A. Maintain plantings, including seeded areas, throughout the Landscaping Period. All maintenance costs shall be at the expense of the Contractor.

B. Maintenance shall include cultivating; weed control; watering; mulching; reseeding; trash and debris removal; and application of appropriate insecticides and fungicides as may be necessary to maintain plants free of insects and disease.

1. Reset settled plants to proper grade and position. Restore adjacent material and remove dead material.

2. Correct defective work as soon as possible after deficiencies become apparent and weather, site access as relates to water levels, and season permit.

3. Plant Replacement: The Port will procure and provide all replacement plants needed by the contractor.

4. Watering: Plants shall be watered by the Contractor as needed to keep them in a healthy growing condition during construction and the Landscaping Period. The Contractor shall be responsible for the watering patterns and timing, and for the source of water. All plants shall receive a minimum of 1-inch of water per week from May 1 to July 15 and a minimum of 2 inches of water per week from July 16 to October 1. In lieu of watering during these time frames, the Contractor may submit evidence that the site received the minimum required water based on local rainfall data from the USGS Tacoma Narrows rain gauge. Cost of water shall be the Port’s expense.

5. Reseeding: All plant zones and seeding zones as shown on the Contract Drawings shall already have been satisfactorily seeded in accordance with 32 92 00 – Turf and Grasses prior to this project. Any areas that do not meet the requirements of Satisfactory Seeded Areas shall be reseeded with fertilizer and mulch with the same seed mixtures as originally applied which also includes eroded areas any bare earth areas exposed during weed control efforts.

6. Clean-up: Conduct cleanup at the site at the beginning of each summer during the Landscaping Period and prior to the end of the Landscaping Period. Remove all litter and man-made materials from within the planting zones, unless approved by the Engineer to support thin stems or prevent damage caused by herbivores.

7. Native plants shall remain that were not planted and have colonized on the site. Native plants shall include those identified in the “Flora of the Pacific Northwest” publication.

8. Insect Pest Control: If insect pests are damaging planted vegetation, prepare for review and approval by the Engineer a strategy to treat and eliminate pests. These strategies could include insecticidal soap or horticultural spray. Implement immediately after approval.
9. Pesticides and Herbicides: Apply pesticides, herbicides, and other chemical products and biological control agents in accordance with label recommendations, the Washington State Department of Ecology regulations, Pierce County critical area regulations, and Washington State Department of Agriculture laws and regulations. Only those herbicides listed in the table “Herbicides Approved for Use on WSDOT Rights of Way may be used (www.wsdot.wa.gov/maintenance/roadside/herbicide_use.htm) and shall be approved by the Engineer. The Contractor shall ensure confinement of the chemicals within the areas designated in the Weed Control Plan. The use of spray chemical pesticides and herbicides shall require the use of anti-drift and activating agents and a spray pattern indicator unless otherwise allowed by the Engineer. Coordinate applications with Engineer's operations and others in proximity to the Work. Notify the Engineer before each application is performed. All applications of herbicides and pesticides shall be posted on the project site in accordance with Washington State Department of Agriculture regulations for 24 hours after application.
10. Weed Control: The Contractor is responsible for control and removal of all Weeds within the project limits during construction and throughout the Landscaping Period. A combination of chemical and mechanical control is allowed subject to approval by the Engineer. Removal shall include above ground shoots and underground roots. Pulled weeds shall be disposed off-site at an appropriate location at the Contractor's expense. For additional requirements on weed control, see section 32 92 00 – Turf and Grasses.
11. Increased Duration: Failure to comply with maintenance measures in this section or to comply with corrective steps outlined by the Engineer shall increase the duration of the Landscaping Period and shall result in a suspension of the Landscaping time period. Any such suspension of time will not be lifted until all unsatisfactory conditions have been corrected to the satisfaction of the Engineer.
12. Disposal: Remove surplus soil and waste material, including excess subsoil; unsuitable soil; trash, litter, and debris; weeds and seed heads; distressed, diseased, and dead plants; and legally dispose of them.

END OF SECTION 32 93 00

PORT OF TACOMA

LOWER WAPATO CREEK HABITAT PROJECT

Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance

PROJECT NO. 101449.01

CONTRACT NO. 071490

APPENDIX A

PERMITS

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, SEATTLE DISTRICT
P.O. BOX 3755
SEATTLE, WASHINGTON 98124-3755

Regulatory Branch May 5, 2021

Mr. Mark Rettman
Port of Tacoma
Post Office Box 1837
Tacoma, Washington 98401

Reference: NWS-2020-457-WRD
Tacoma, Port of

Dear Mr. Rettman:

Enclosed is a Department of the Army permit which authorizes performance of the work described in your referenced application. You are cautioned that any change in the location or plans of the work will require submittal of revised plans to this office for approval prior to accomplishment. Deviation from the approved plans may result in imposition of criminal or civil penalties.

While you have proposed the actions described above as advance mitigation for future impacts to aquatic resources at the project site, approval of the work does not constitute the Corps acceptance of this area as mitigation for future impacts on the site. Use of the advance mitigation area for future impacts will be evaluated at the time an application is received for the proposed work.

Your attention is drawn to General Condition 1 of the permit which specifies the expiration date for completion of the work. Upon completing the authorized work, please fill out and return the enclosed *Certificate of Compliance with Department of the Army Permit* form. We are interested in your experience with our Regulatory Program and encourage you to complete a customer service survey form.

This form and information about our program is available on our website at: www.nws.usace.army.mil select “Regulatory Branch, Permit Information” and then “Contact Us.” If you have any questions please contact Mr. Jason Sweeney at Jason.t.sweeney@usace.army.mil.

Sincerely,

Kristina G. Tong

for Michelle Walker, Chief
Regulatory Branch

Enclosures

DEPARTMENT OF THE ARMY PERMIT

Permittee: Tacoma, Port of

Post Office Box 1837
Tacoma, Washington 98401

Permit No: NWS-2020-457-WRD

Issuing Office: Seattle District

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the U.S. Army Corps of Engineers (Corps) having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The proposed work includes re-establishment of wetlands, re-establishment of tidal mudflats, and stream restoration for the construction of an advance mitigation site. (in accordance with the plans and drawings dated January 7, 2021 attached hereto which are incorporated in and made a part of this permit). The purpose of the project is to improve aquatic resources and provide potential advance mitigation for future impacts contingent on Corps approval.

Project Location: In wetlands, Wapato Creek and tidal areas at Fife and Tacoma, Pierce County, Washington.

Permit Conditions:

General Conditions:

1. The time limit for completing the work authorized ends on May 5, 2024. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least 1 month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in accordance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification to this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

7. After a detailed and careful review of all the conditions contained in this permit, the permittee acknowledges that, although said conditions were required by the Corps, nonetheless the permittee agreed to

those conditions voluntarily to facilitate issuance of the permit; the permittee will comply fully with all the terms of all the permit conditions.

Special Conditions:

a. You shall provide a copy of the permit transmittal letter, permit form, and permit drawings to all contractors involved in the authorized work.

b. If future operations by the United States require the removal, relocation, or other alteration of the work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, you will be required, upon due notice from the U. S Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

c. You must implement and abide by the Endangered Species Act (ESA) requirements and/or agreements set forth in the No Effect Memo, dated May 5, 2020, in its entirety. The U.S. Army Corps of Engineers (Corps) made a determination of No Effect for all species and critical habitat based on this document. Failure to comply with the commitments made in this document, as revised below, constitutes non-compliance with the ESA and your Corps permit. The No Effect Memo is hereby modified as follows: In 2021, in water work can occur starting on July 8, 2021.

d. You shall adhere to the Puyallup Tribe of Indians Inadvertent Discovery Plan dated February 11, 2021, in its entirety.

e. By accepting this permit, you agree to accept such potential liability for response costs, response activity and natural resource damages as you would have under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 et seq. (CERCLA) or the Model Toxics Control Act, R.C.W. 70.105 (MTCA) absent the issuance of this permit. Further, you agree that this permit does not provide you with any defense from liability under the CERCLA or the MTCA. Additionally, you shall be financially responsible for any incremental response costs attributable under CERCLA or MTCA to your activities under this permit.

f. Permittee shall comply with the conditions specified in the Washington State Department of Ecology coastal zone management consistency determination dated March 29, 2021.

g. You shall implement and abide by the advance mitigation plan, *Final Advance Mitigation Plan – Lower Wapato Creek Habitat Project* dated March 2021. Release of mitigation credits is dependent on approval from the U.S. Army Corps of Engineers, Regulatory Branch. Advance mitigation construction must be completed before the release of mitigation credits.

h. An as-built construction report and as-built drawings of the restoration areas shall be submitted upon completion of advance mitigation construction. This report must be submitted to the U.S. Army Corps of Engineers, Seattle District, Regulatory Branch for review and approval and must prominently display the reference number NWS-2020-457-WRD.

i. You must implement and adbide by the Water Quality Monitoring Plan dated March 4, 2021.

Further Information:

1. Congressional Authorities. You have been authorized to undertake the activity described above pursuant to:

☒ Section 10 of the Rivers and Harbor Act of 1899 (33 United States Code (U.S.C.) 403).

☒ Section 404 of the Clean Water Act (33 U.S.C. 1344).

☐ Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorization required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal project.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of the permit.

b. The information provided by you in support of your application proves to have been false, incomplete, or inaccurate (See 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 Code of Federal Regulations (CFR), Part 325.7 or enforcement procedures such as those contained in 33 CFR, Parts 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you to comply with the terms and conditions of your permit and for

the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR, Part 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. General condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

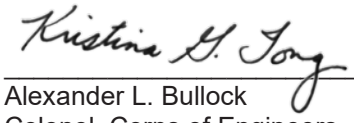
Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.



May 5, 2021

Port of Tacoma (DATE)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.



May 5, 2021

Alexander L. Bullock (DATE)
Colonel, Corps of Engineers
District Engineer

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

(TRANSFEREE) (DATE)

US Army Corps of Engineers ®
Seattle District

CERTIFICATE OF COMPLIANCE WITH DEPARTMENT OF THE ARMY PERMIT

Permit Number: NWS-2020-457-WRD

Name of Permittee: Port of Tacoma

Date of Issuance: May 5, 2021

Upon completion of the activity authorized by this permit, please check the applicable boxes below, date and sign this certification, and return it to the following email or mailing address:

NWS.Compliance@usace.army.mil OR

Department of the Army
U.S. Army Corps of Engineers
Seattle District, Regulatory Branch
Post Office Box 3755
Seattle, Washington 98124-3755

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with the terms and conditions of your authorization, your permit may be subject to suspension, modification, or revocation.

☐	The work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of this permit. Date work complete: _____ ☐ Photographs and as-built drawings of the authorized work (OPTIONAL, unless required as a Special Condition of the permit).

☐	If applicable, the mitigation required (e.g., construction and plantings) in the above-referenced permit has been completed in accordance with the terms and conditions of this permit (not including future monitoring). Date work complete: _____ ☐ N/A ☐ Photographs and as-built drawings of the mitigation (OPTIONAL, unless required as a Special Condition of the permit).

☐	Provide phone number/email for scheduling site visits (must have legal authority to grant property access). Printed Name: _____ Phone Number: _____ Email: _____

Printed Name: _____

Signature: _____

Date: _____

MEMORANDUM

DATE: May 5, 2020

TO: Jason Sweeney, Project Manager, Biologist U.S. Army Corps of Engineers

FROM: Mark Rettmann, Environmental Project Manager II, Port of Tacoma

SUBJECT: **Lower Wapato Creek Habitat Project, No Effect Determination on Multiple ESA-Listed Species**

INTRODUCTION

This memorandum addresses the potential effects of the proposed Parcel 14 Lower Wapato Creek Habitat Project (Project) located in Fife and Tacoma, Washington on fish and wildlife species listed as threatened or endangered under the Federal and State Endangered Species Acts (ESA). Section 7 of the Federal ESA assures that, through consultation (or conferencing for proposed species) with U.S. Fish and Wildlife Services (USFWS) and National Marine Fisheries Service (NMFS), actions do not jeopardize the continued existence of any threatened, endangered or proposed species, or result in the destruction or adverse modification of critical habitat. The Project also requires federal permits from the U.S. Army Corps of Engineers (USACE), state permits from Washington Department of Fish and Wildlife (WDFW) and Washington Department of Ecology (Ecology) (if applicable), and local approval from the Cities of Fife and Tacoma (CoF and CoT, respectively).

The Port of Tacoma (Port) proposes to conduct estuarine habitat restoration actions at the 18.52-acre Project site as advance permittee-responsible compensatory mitigation for future unavoidable wetland impacts on Port property and for future unavoidable non-ESA fish habitat impacts on Wapato Creek downstream of the Project site. Advance mitigation credit generated by the Project will be documented and approved through an Advance Mitigation Plan (AMP) prepared for this Project in accordance with the *2012 Interagency Regulatory Guide for Advance Permittee-Responsible Mitigation* (Ecology 2012). The Project includes relocating approximately 1,040 linear feet (LF) of the existing degraded Wapato Creek channel into a new meandering creek channel (approximately 1,875 LF) through restored floodplain habitat, including re-establishment of high-quality estuarine channel, mudflat, emergent wetland, forested wetland and forested riparian buffer habitat. The Project also includes replacement of an existing partial fish passage barrier (culverts) with a bridge at the 12th Street East crossing. The excess materials excavated for the Project will be transported and placed/stockpiled at the Disposal site located on an adjacent Port property.

The Port of Tacoma has recently, (October 28, 2019), completed a similar "No Effect" determination for the Port's Parcel 15 project (Portac Property, Corps project # NWS-2019-946-WRD). The Parcel 15 project included replacement of an undersized culvert with a single span

bridge approximately 1,300 feet downstream of the proposed Project site. This Project will use similar construction equipment and activities identified in the Parcel 15 No Effect memo and conclusions that no ESA listed species utilize Wapato Creek. The USACE recently concurred with this "No Effect" determination and issued Nationwide Permits 3 and 15 (NWS-2019-946-WRD) based on this analysis. Our analysis of effects on listed species for this Project is based on the previous "No Effect" determination, since the status of listed species in the vicinity of Wapato Creek have not changed.

LOCATION

The Project consists of five parcels (Project/habitat site: No. 0320017003, 03200130055, 0320013157, 0320013158, and Disposal site: 0320011117) and 12th Street East right-of-way (ROW) in Fife and Tacoma, Washington in Township 20 North, Range 3 East, Section 1, Willamette Meridian. The site is bordered to the north by State Route (SR) 509 and Port industrial property, to the east by the Prologis Park Tacoma industrial warehouse facility, to the west by East Alexander Avenue and Progress Rail Services and to the south by 12th Street East, the Omega Morgan industrial facility, and Tribal Trust properties including private residences. The Project study area includes the Project site, the downstream portion of Wapato Creek and an approximate 1,000-foot-radius past the outlet of Wapato Creek into the Blair Waterway.

METHODS

The findings presented in this memorandum are based on searches of USFWS, NMFS and WDFW databases, as well as other applicable information sources to identify ESA-listed species and critical habitat that may be impacted by the proposed Project (USFWS 2020a, USFWS 2020b, NMFS 2020, WDFW 2020a, WDFW 2020b).

PROJECT DESCRIPTION

The Port proposes the Lower Wapato Creek Habitat Project as an advance permittee-responsible mitigation site which will increase ecological functions, values, and areal extent of Cowardin Classes of Wetland and Deepwater Habitats including; Riverine tidal streambed cobble-gravel/mud (Wapato Creek), estuarine intertidal unconsolidated mud (intertidal mudflats), estuarine intertidal emergent persistent wetlands (estuarine emergent wetlands) and Palustrine forested evergreen/deciduous wetlands (forested wetlands) in the lower Wapato Creek watershed. The re-establishment of these habitat types will be completed in advance of other potential wetland impacts as defined in the Project's Advance Mitigation Plan (AMP). The Project design includes two primary habitat elements: (1) fish passage improvement through replacement of two Wapato Creek culverts at the 12th Street East crossing; and (2) re-establishment of wetland and fish habitat through relocation of Wapato Creek and constructing a diverse complex of associated floodplain and wetland habitats historically present in the Commencement Bay intertidal mudflats.

The fish passage improvement element includes the replacement of twin undersized 60-inch-diameter culverts with an approximately 50-foot-wide single span bridge at the 12th Street East crossing to provide unimpeded fish passage to the upper reaches of Wapato Creek. The proposed bridge will also improve flood conveyance and reduce the impacts of habitat fragmentation caused

by the constriction perpetuated by the existing culverts. This will create an aquatic and riparian fish and wildlife corridor that extends from upstream of the Project, through the habitat site and into the downstream Wapato Creek corridor. Correcting fish passage barriers is an important step in the recovery of anadromous fish species.

The re-establishment of wetland and fish habitat will be achieved through a variety of design elements that will provide habitat diversity, complexity and interspersion. The Project proposes to increase the length of Wapato Creek from 1,040 lineal feet (LF) to approximately 1,875 LF (with an additional 350 LF of retained off-channel habitat in the existing Wapato Creek channel) by meandering the creek channel within a re-established broad floodplain corridor that includes an interconnected mosaic of forested wetlands, intertidal mudflats and estuarine emergent wetlands. These zones are protected by a forested upland buffer that surrounds the Project site. The design includes creation of sinuous edge habitat, as well as intermixed hummock and wetland habitat that is essential to re-establishing habitat interspersion and complexity in lower Wapato Creek. These habitat features have been designed to function as an interconnected ecosystem unit that provides key habitat functions for all life stages of avian, wildlife and fish species especially anadromous salmonids. Intertidal stream channels, mudflats, estuarine emergent wetlands, as well as freshwater forested wetlands and forested riparian habitats provide essential fish and wildlife functions such as forage opportunities, refuge, osmoregulation, flood protection and food web interconnections. These habitats also work together to provide key ecosystem services such as flood attenuation, water quality functions, sediment sorting and biodiversity. The design has focused on re-establishment of critical habitat functions and features as close to historic, pre-disturbance locations and conditions as possible within this highly developed urban/industrial location.

In order to re-establish this functioning ecosystem complex, approximately 713 LF of the existing straightened and simplified Wapato Creek channel will be filled along 12th Street East and the remaining portions of Wapato Creek, that connects to the proposed channel confluence will be retained as aquatic habitat. From the tie-in point of the proposed re-established channel, the remaining existing channel segment will be a backwater slough that transitions into intertidal mudflat and estuarine emergent wetland habitat to the south. The existing 12th Street Ditch will also be reconfigured into a vegetated filter strip swale.

The proposal includes a total of 10.02 acres of wetland/aquatic resource re-establishment including 5.51 acres of palustrine forested wetland (PFO) to provide shade and organic input, 2.35 acres of estuarine emergent wetland (EEM) to improve water quality and increase forage habitat, 2.10 acres of tidal stream channel/ mudflats re-establishment to increase epibenthic and prey production for higher level species as well as 7.34 total acres of forested upland (UPL) riparian buffer enhancement to filter pollutants and provide screening from adjacent developed areas. The proposed sinuous Wapato Creek channel will also include streambed substrate and large woody material (LWM) in high energy areas to provide opportunity for juvenile salmonid refuge from predators and high flows and provide initial stability as the site becomes established. Additional LWM, (including standing snags) will be installed in the re-established floodplain and wetland areas to provide surface roughening features, flood flow dispersion, amphibian habitat as well as increased insect production and instant allochthonous organic input.

The Project site is currently dominated by invasive species that inhibit the growth and diversity of vegetation species. These invasive species will be removed and wetland and upland areas will be densely planted with a diverse palate of native grass, emergent soft-stemmed vegetation, shrub and tree species. Forested wetlands and riparian buffer will be planted with a diverse assemblage of native woody coniferous and deciduous tree and shrub species to create a diverse multi-canopy dense riparian habitat and a source of long-term LWM recruitment. The configuration of the proposed forested wetland, hummock and riparian buffer areas will maximize habitat interspersion and complexity, preserve existing trees as much as possible, and provide significant forested cover over much of the site. This interspersion of habitat types will also provide shade to reduce water temperatures in Wapato Creek, filter pollutants, increase sources of allochthonous inputs and provide screening from surrounding developed areas.

The re-established habitats listed above are designed to function as synergistic components of a single, naturally functioning, re-established ecosystem providing substantial habitat functional lift. The different habitat types, including the tidal stream channel and mudflats, are designed as individual components of a larger mosaic of locally important aquatic resource habitats. The mosaic is designed to allow natural dynamic physical processes to adjust the habitat types over time based on changing climate and creek conditions. The Project site is not intended to be static and guarantee specific amounts of specific types of habitat. Rather, the site will be dynamic and designed to adapt and mature into a natural, self-sustaining wetland and stream complex with 10.02 acres of wetland/aquatic resource re-establishment and 7.34 total acres of riparian buffer. This re-establishment will be achieved through design and implementing the proposed construction, site protection, monitoring, maintenance and stewardship that will provide increased potential for successful development of a larger sustainable ecosystem in an area that otherwise is devoid of wetlands and has limited opportunities for functioning fish and wildlife habitat. The Project will generate advance mitigation credits for wetlands and non-Endangered Species Act (non-ESA) fish habitat as detailed in the AMP. The Project is anticipated to generate 10.02 Acre-Credits of wetland mitigation credit and non-ESA fish habitat credit for future unavoidable impacts to Wapato Creek from one or more crossings totaling 60 feet in width, parallel to flow, downstream of the Project. The final mitigation credit generated by the Project will be as detailed in the final AMP approved by the permitting agencies.

The Project also includes relocation of TPU poles, relocating utilities for the bridge replacement, the placement of excess excavated soils on adjacent Port property (i.e., within the corridor of the future SR 509 to SR 167 connection) and other ancillary project activities.

The proposed Project is designed to avoid and minimize adverse impacts to the aquatic environment to the greatest extent practicable. Best Management Practices (BMPs) include, but may not be limited to:

- Work below high tide line (HTL)/ordinary high water (OHW) will occur during the USACE and WDFW-approved in-water marine waters work window when juvenile salmonids are unlikely to be present.
- Work will occur in-the-dry during periods of low-flow/low-tide to the greatest extent practicable.

- Washington State Department of Transportation (WSDOT) Fish exclusion protocols will be implemented prior to in-water work.
- In-water work will occur in isolation of natural stream flow (e.g., cofferdams, etc.) to avoid and minimize turbidity and sedimentation within Wapato Creek.
- The contractor will be required to prepare and implement an erosion and sediment control (ESC) plan and a spill prevention, control and countermeasures (SPCC) plan prior to start of work activities.
- All stockpile and excavation areas will be protected from the release of sediment.
- Washed streambed material will be used, and uncured concrete will not be allowed to come into contact with Wapato Creek.
- Garbage and other deleterious debris will be removed from the shoreline where slope repairs are made.

EXISTING CONDITIONS

The Project site is located approximately 0.46 miles upstream of the outlet into the Blair Waterway in Commencement Bay. Wapato Creek enters the site through twin, 60-inch-diameter culverts flowing north under 12th Street East. The creek immediately turns 90 degrees to the west and flows along 12th Street East as a channelized roadside drainage. As the creek approaches East Alexander Avenue, it makes another 90-degree turn to the north and again flows straight to the north offsite under SR 509. The creek is tidally influenced throughout the Project site.

Historically, the proposed restoration area was a tidally influenced wetland or mudflats. The wetland was converted to agricultural use in the first half of the 20th Century (GeoEngineers 2010). In the mid 1960's, the site was legally filled with dredge material from the expansion of the Blair and Hylebos waterways, and the Wapato Creek channel was rerouted to its present location and configuration (GeoEngineers 2010).

Existing vegetation at the site includes several existing forested areas, primarily composed of black cottonwood (*Populus balsamifera*) with several Pacific madrone (Arbutus menziesii) and quaking aspen (Populus tremuloides) and grasses and Himalayan blackberry (Rubus armeniacus) in the understory. The remaining portions of the site are dominated by invasive species including reed canarygrass (*Phalaris arundinacea*), Himalayan blackberry (*Rubus armeniacus*), scotch broom (*Cytisus scoparius*), English Ivy (Hedera helix), and poison hemlock (*Conium maculatum*).

Several small, low functioning, isolated wetlands are located in the northern and eastern portions of the site, which were determined to be non-jurisdictional by the USACE in 2008, 2013, and 2020, and Ecology in 2011, and 2020. The City of Tacoma (City) also indicated that the onsite wetlands are by definition, artificial wetlands in 2009/2013 and will make a final jurisdictional determination during 2020 permitting actions. Vegetation observed in these features includes reed canarygrass, soft rush (*Juncus effusus*), red top (*Agrostis gigantea*), Baltic rush (*Juncus balticus*) and hardhack (*Spirea douglasii*).

Hydrogeology of the Project site was evaluated in 2010 to monitor surface and groundwater levels and aid in the development of the proposed restoration plan. Surface water elevations of Wapato Creek range from approximately +9 to +15 feet MLLW (Port of Tacoma Tidal Datum), with

maximum daily fluctuations of approximately 6 feet. The highest water levels occur during winter high tides. Groundwater levels are highest on the eastern side of the site (ranging from approximately +12 to +18 feet MLLW) and lower in the center of the site, just east of Wapato Creek (ranging from approximately +10 to +12.5 feet MLLW). Groundwater exhibits significant seasonal fluctuations, but very little fluctuation with tidal variation in Wapato Creek (no more than 0.15 feet in any location). Salinity testing, conducted by GeoEngineers in 2020, identified tidal influence up to the existing 12th Street East culverts. The salinities were high, (>20 parts-per-thousand [ppt]) >24 inches below the water surface elevation, approximately 40 feet downstream of the 12th Street East crossing outfall during a +13 feet MLLW high tide at approximately 7:00 am on March 11, 2020 (GeoEngineers 2020). The following table (Table 1) identifies salinities measured at that location.

Table 1. Salinity Readings Below Existing 12th Street East Culverts

Water Depth (feet)	Salinity (ppt)
0.5	0.3
1	0.42
1.5	0.8
1.8	2.2
2	25.09
3	28.28

Wapato Creek is on Ecology's 303(d) list under Category 5 for dissolved oxygen and bacteria, Category 2 for benzene, and Category 4C for instream flow (Ecology 2020). Wapato Creek is listed on the WDFW and Department of Natural Resources (DNR) Stream Classification mapping system as Type F, fish-bearing stream (WDFW 2020b, DNR 2020).

SPECIES AND HABITAT PRESENT

Several federal and state ESA-listed fish, wildlife and plants have the potential to occur within Pierce County and/or the Project study area (USFWS 2020a; USFWS 2020b; WDFW 2020a). Table2 presents several species listed within Pierce County that either have no documented occurrences within the Project study area, or no suitable habitat exists. Based on the lack of documented occurrences and suitable habitat for these species, the Project will have **No Effect** on them and they are not addressed further in this memorandum.

Table 2. ESA-Listed Species with Potential to Occur in Pierce County

Common Name	Scientific Name	ESU or DPS[1]	ESA Federal Status	ESA State Status	Critical Habitat
Canada Lynx	*Lynx canadensis*	N/A	Threatened	Threatened	Designated
Golden Paintbrush	*Castilleja levisecta*	N/A	Threatened	Endangered	Not designated or proposed

Common Name	Scientific Name	ESU or DPS[1]	ESA Federal Status	ESA State Status	Critical Habitat
Gray Wolf	*Canis lupis*	N/A	Endangered	Endangered	Not designated or proposed
Grizzly Bear	*Ursus arctos horribilis*	N/A	Threatened	Endangered	Proposed
Northern Spotted Owl	*Strix occidentalis caurina*	N/A	Threatened	Threatened	Designated
Oregon Spotted Frog	*Rana pretiosa*	N/A	Threatened	Endangered	Proposed
Pacific Eulachon	*Thaleichthys pacificus*	Southern DPS	Threatened	Candidate	Designated
Roy Prairie, Olympia, Tenino, and Yelm Pocket Gophers	*Thomomys mazama* ssp.	N/A	Threatened	Threatened	Designated
Streaked Horned Lark	*Eremophila alpestris strigata*	N/A	Threatened	Endangered	Designated
Taylor's Checkerspot	*Euphydryas editha taylori*	N/A	Endangered	Endangered	Designated
Water Howellia	*Howellia aquatilis*	N/A	Threatened	Threatened	Not designated or proposed
Yellow-Billed Cuckoo	*Coccyzus americanus*	Western U.S. DPS	Threatened	Candidate	Proposed

[1]ESU: Evolutionarily Significant Unit; DPS: Distinct Population Segment

Table3 presents the listing status of ESA-listed species that have a potential to occur in the proximity of the Project study area, followed by a brief discussion of each species.

Table 3. ESA-Listed Species with a Potential to Occur in the PCT Culvert Repairs Project Study Area

Common Name	Scientific Name	ESU or DPS[1]	ESA Federal Status	ESA State Status	Critical Habitat
Bocaccio	*Sebastes paucispinis*	Puget Sound/ Georgia Basin DPS	Endangered	Candidate	Designated
Bull trout	*Salvelinus confluentus*	Puget Sound DPS	Threatened	Candidate	Designated
Canary Rockfish	*Sebastes pinniger*	Puget Sound/ Georgia Basin DPS	Threatened	Candidate	Designated
Chinook Salmon	*Oncorhynchus tshawytscha*	Puget Sound ESU	Threatened	Candidate	Designated
Humpback Whale	*Megaptera novaeangliae*	N/A	Endangered	Endangered	Proposed
Marbled Murrelet	*Brachyramphus marmoratus*	N/A	Threatened	Threatened	Designated
Southern Resident Killer Whale (Orca)	*Orcinus orca*	Southern Resident DPS	Endangered	Endangered	Designated
Steelhead	*Oncorhynchus mykiss*	Puget Sound DPS	Threatened	Candidate	Designated
Yelloweye Rockfish	*Sebastes ruberrimus*	Puget Sound/ Georgia Basin DPS	Threatened	Candidate	Designated

[1]ESU: Evolutionarily Significant Unit; DPS: Distinct Population Segment

Fish

The USFWS and NMFS Threatened and Endangered Lists indicate there are five federally-listed Endangered or Threatened fish that could occur in the proximity of the Project study area: Chinook salmon, bull trout, steelhead, bocaccio and yelloweye rockfish.

Chinook Salmon

The Puget Sound ESU of Chinook salmon includes all naturally spawning populations of Chinook salmon from rivers and streams flowing into Puget Sound (70 FR 52630). Puget Sound ESU Chinook salmon are listed as threatened by NMFS under the ESA and has designated critical habitat (70 FR 52685). The Project study area is located in marine nearshore areas of the Blair Waterway and tidally-influenced Wapato Creek which has little suitable habitat for adults and out-migrating juveniles in this ESU. Puget Sound ESU Chinook salmon have been documented in the Hylebos Waterway and Commencement Bay, but not the Blair Waterway within the Project study area or Wapato Creek (WDFW 2017b). Neither the Blair Waterway nor Wapato Creek provide suitable spawning habitat for Chinook salmon within the Project study area, as the waterways are in a tidally-influenced marine/estuarine environment.

Adult Chinook salmon may temporarily hold within the waters of Commencement Bay but are not likely to be present within the Blair Waterway with the exception of incidental use. Similarly, juvenile Chinook salmon could potentially rear within the waters of Commencement Bay but are not likely to be present within the Blair Waterway with the exception of incidental use. There have

been no documented occurrences of adult or juvenile Chinook salmon in Wapato Creek and they are not expected to be present within the Project study area.

Steelhead

The Puget Sound DPS steelhead is an anadromous trout with a complex life history, involving repeated spawning and reversals of freshwater to ocean phases (71 FR 15667). Puget Sound DPS steelhead are listed as threatened by NMFS and final rule on Puget Sound DPS steelhead critical habitat was issued in February 2016 (81 FR 9251). Similar to Chinook salmon, the Project study area has little suitable habitat for migrating adults and out-migrating juveniles in this DPS. Puget Sound DPS steelhead have been documented in the Blair Waterway and Wapato Creek (WDFW 2020b); however, NMFS is not aware of documented use of Puget Sound DPS steelhead within Wapato Creek within at least the past 20 years and does not consider Wapato Creek to provide suitable habitat for steelhead (Fisher personal communication April 16, 2013).

Bull Trout

The Puget Sound DPS of bull trout includes all naturally spawning populations in the Puget Sound Basin, including streams that flow into Puget Sound. Puget Sound DPS bull trout are listed as threatened by USFWS and critical habitat has been designated, including nearshore marine habitat within Puget Sound (70 FR 56212-56311). Sparse suitable habitat and water quality issues within the Project study area may deter the presence of bull trout in the vicinity of the proposed work, and there are no documented occurrences of Puget Sound DPS bull trout in Blair Waterway or Wapato Creek (WDFW 2017b).

Bocaccio and Yelloweye Rockfish

NMFS published a final determination in 2010 to list the Puget Sound/Georgia Basin DPSs of bocaccio as endangered, and yelloweye rockfish as threatened (75 FR 22276), and critical habitat for both species was finalized in 2014 (79 FR 68041).

Adult bocaccio and yelloweye rockfish are not expected to occur within the Project study area, as water depths are too shallow, and substrates consist of silty sand and sandy silt. Nearshore habitat is largely lacking any eelgrass, kelp, or other aquatic vegetation that would be preferred by juvenile or larval bocaccio, and high shipping activity and water quality conditions limit the habitat suitability within the Project study area. Juvenile or larval yelloweye rockfish are not likely to be present within the waterways as they do not frequently use nearshore habitat. Typically, they settle quickly to shallow, high relief areas and then move to deep-water habitat, and are most frequently found in association with floating kelp beds, which are not present within the Project study area (Love et al. 1991).

Marine Mammals

Two marine mammals that could potentially occur within the Project study area are listed as endangered by National Oceanic and Atmospheric Association (NOAA) under the ESA: humpback whale and Southern Resident killer whale.

Humpback Whale

Humpback whales inhabit waters over continental shelves, along their edges, and around some oceanic islands (City of Seattle 2007). While humpback whales are occasionally sighted in south

Puget Sound, they are rarely present within Commencement Bay, and have never been documented in the Blair Waterway. Humpback whales were listed as endangered in 1970 (35 FR 18319), and critical habitat was proposed in October 2019; however, proposed critical habitat is located off the Washington Coast, and not within the Puget Sound area (50 CFR 226).

Southern Resident Killer Whale (Orca)

The Southern Resident killer whale population is the only known resident to occur in the United States and is comprised of three pods: J, K and L pods. They are highly social, living within matriarchal societies and Southern Resident killer whales are currently comprised of approximately 73 whales between the three pods (CWR 2019; NMFS 2019). Southern Resident killer whales were listed as endangered by NMFS in 2005, with their own DPS (therefore, "species") under the ESA (70 FR 69903). Critical habitat was designated in 2006 (71 FR 69054). Southern Resident killer whales are most commonly observed in Commencement Bay between October and January; however, they typically do not occur in inner Commencement Bay. The Blair Waterway does not provide suitable habitat, and they are not expected to occur within the Project study area.

Wildlife

One bird species listed as threatened under the ESA could potentially be present within the Project study area: marbled murrelet.

Marbled Murrelet

The marbled murrelet is a small sea bird that feeds primarily on fish and invertebrates in nearshore marine waters (City of Seattle 2007). The marbled murrelet was listed as threatened in California, Oregon and Washington under the ESA in 1992 (57 FR 45328), and critical habitat was designated in 1996 (61 FR 26256). There is no mature forested habitat which is a nesting requirement for the marbled murrelet, and WDFW PHS data have no documented habitat or nesting sites within the Project study area. Due to the lack of nesting habitat nearby, marbled murrelets to do not frequently forage in Commencement Bay, and the Blair Waterway does not provide suitable foraging habitat due to shipping activity.

POTENTIAL IMPACTS TO LISTED SPECIES AND FINDINGS OF EFFECT

Analysis of effects of the proposed Project on federal and state ESA-listed Chinook salmon, steelhead, bull trout, bocaccio, yelloweye rockfish, humpback whale, Southern Resident killer whale and marbled murrelet is based on a review of existing sensitive species database information, Project plans and proposed activities, and survey of the Project study area. The analysis is presented in this memorandum may not be valid if the Project scope changes and/or if the listing status of species changes during the course of the Project.

Fish

The proposed Project is outside the documented range of – or the Project study area lacks suitable habitat for – two of the five fish species with the potential to occur within the Project study area (bocaccio and yelloweye rockfish). Limited suitable migrating habitat for Chinook salmon, bull trout and steelhead is present within the Project study area; however, work will occur during the

approved in-water work window which greatly diminishes the likelihood that these species will be present within Commencement Bay and not within the Blair Waterway. There is no current record of any of the listed salmonids utilizing Wapato Creek. Additionally, the Project study area is an area where these fish species generally do not utilize. Actions associated with the Project will be temporary, and during the time of year when migrating ESA-listed fish are not anticipated to be in Commencement Bay, the Blair Waterway or Wapato Creek. Therefore, **No Effect** is expected on ESA-listed fish species.

Marine Mammals

The proposed Project is outside any documented occurrences of humpback whale or Southern Resident killer whale. The Blair Waterway does not have suitable habitat for either species, and the Southern Resident killer whale's primary food source (Chinook salmon) will not be impacted by the proposed Project. Actions associated with the Project will be temporary and BMPs will be implemented to avoid and minimize any impacts to water resources. Humpback whales and Southern Resident killer whales are not expected to be present within the Blair Waterway at any time. Therefore, **No Effect** is expected on ESA-listed marine mammals.

Wildlife

The proposed Project is outside the area where marbled murrelets may be expected during foraging activities, and no suitable nesting habitat is located near the Project study area. Actions associated with the Project will be temporary and BMPs will be implemented to avoid and minimize any impacts to water resources. Marbled murrelets are not expected to be present within the Blair Waterway at any time. Therefore, **No Effect** is expected on ESA-listed wildlife.

REFERENCES

35 FR 18319. 1970. Title 50: Wildlife and Fisheries. Park 17. Conservation of Endangered Species and Other Fish or Wildlife, List of Endangered Fish or Wildlife. December 2, 1970.

50 CFR 226. Title 50: Wildlife and Fisheries. United States Fish and Wildlife Service.

57 FR 45328. 1992. 50 CFR Part 17. United States Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for the Washington, Oregon, and California Population of the Marbled Murrelet. Federal Register, Vol. 57, No. 191.

61 FR 26256. 2011. 50 CFR Park 17. United States Fish and Wildlife Service. Endangered and Threatened Wildlife and Plants; Revised Critical Habitat for the Marbled Murrelet. Federal Register Vol. 76, No. 193.

70 FR 52629-52685. 2005. 50 CFR Park 226. Endangered and Threatened Species; Designation of Critical Habitat for 12 Evolutionarily Significant Units of West Coase Salmon and Steelhead in Washington, Oregon, and Idaho; Final Rule. National Oceanic and Atmospheric Administration. Federal Register Vol. 70, No. 170.

70 FR 56212-56311. 2005. 50 CFR Part 17. United States Fish and Wildlife Service. Endangered and Threatened and Wildlife and Plants; Designation of Critical Habitat for Bull Trout. Federal Register, Vol. 70, No. 185.

70 FR 69903. 2005. 50 CFR Par 224. Endangered and Threatened Wildlife and Plants: Endangered status for Southern Resident Killer Whales. National Oceanic and Atmospheric Administration. Federal Register Vol. 70, No. 222.

71 FR 15667-15680. 2006. 50 CFR Part 223. National Oceanic and Atmospheric Administration. Listing Endangered and Threatened Species and Designating Critical Habitat: 12-Month Finding on Petition to List Puget Sound Steelhead as an Endangered or Threatened Species under the Endangered Species Act. Federal Register, Vol. 771, No. 60.

71 FR 69054. 2006. 50 CFR Part 226. Endangered and Threatened Species; Designation of Critical Habitat for Southern Resident Killer Whale. National Oceanic and Atmospheric Administration. Federal Register Vol. 71, No. 229.

75 FR 22276. 2010. 50 CFR Part 226. Endangered and Threatened Wildlife and Plants: Threatened Status for the Puget Sound/Georgia Basin Distinct Population Segments of Yelloweye and Canary Rockfish and Endangered Status for the Puget Sound/Georgia Basin Distinct Population Segment of Bocaccio Rockfish. National Oceanic and Atmospheric Administration. Federal Register Vol. 75, No. 81.

79 FR 68041. 2014. 50 CFR Part 226. Endangered and Threatened Species; Designation of Critical Habitat for the Puget Sound/Georgia Basin Distinct Population Segments of Yelloweye Rockfish, Canary Rockfish and Bocaccio. National Oceanic and Atmospheric Administration. Federal Register vol. 79, No. 219.

81 FR 9251- 9325. 50 CFR Parts 223 and 226. Endangered and Threatened Species; Designation of Critical Habitat for Lower Columbia River Coho Salmon and Puget Sound Steelhead; Final Rule. Federal Register, Vol. 81, No. 36. 2016.

Center for Whale Research (CWR). 2019. Southern Resident Killer Whale Population as of July 1, 2019. Retrieved from: https://www.whaleresearch.com/orca-population. Accessed October 25, 2019.

City of Seattle. 2007. Seattle Biological Evaluation. Seattle, WA. May 1, 2007.

GeoEngineers. 2010. Site Investigation: Port of Tacoma Parcel 14, Tacoma, WA. Prepared for Grette Associates LLC and Port of Tacoma.

GeoEngineers. 2020. Draft Lower Wapato Creek Habitat Project Salinity Measurements and Salt Tolerant Vegetation Survey. Memorandum to Mark Rettmann. Dated April 3, 2020. Tacoma, Washington.

Love, M.S., M. Carr, and L. Haldorson. 1991. The ecology of substrate-associated juveniles of the genus *Sebastes*. Env. Bio. Fish. 79:533-545.

National Marine Fisheries Service (NMFS) West Coast Region. 2020. Species Lists. Retrieved from: https://www.fisheries.noaa.gov/species-directory/threatened-

endangered?title=&species_category=any&species_status=any&regions=1000001126&items_per_page=25&sort= Accessed March 31, 2020.

The Watershed Company. 2013. Advance Mitigation Plan – Permit Draft, Lower Wapato Combined Habitat Project. Prepared for Port of Tacoma.

U.S. Fish and Wildlife Service (USFWS). 2020a. Critical Habitat for Threatened and Endangered Species [USFWS]. Retrieved from: http://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77. Accessed March 31, 2020.

USFWS. 2020b. Environmental Conservation Online System, Species by County Report. Retrieved from: http://ecos.fws.gov/tess_public/reports/species-by-current-range-county?fips=53053. Accessed March 31, 2020.

Washington Department of Ecology (Ecology). 2012. Interagency Regulatory Guide, Advance Permittee-Responsible Mitigation. Ecology Publication No. 12-06-015. December 2012.

Ecology. 2020. Washington State Water Quality Atlas. Retrieved from: https://fortress.wa.gov/ecy/waterqualityatlas/map.aspx. Accessed March 31, 2020.

Washington Department of Fish and Wildlife (WDFW). 2020a. PHS Statewide List and Distribution by County. Retrieved from: https://wdfw.wa.gov/sites/default/files/publications/00165/2020_distribution_by_county.xlsx. Accessed March 31, 2020.

WDFW. 2020b. WDFW Salmonscape Database. Retrieved from: http://apps.wdfw.wa.gov/salmonscape/map.html. Accessed March 31, 2020.

Washington Department of Natural Resources (DNR). 2020. Forest Practices Application Mapping Tool (Stream Typing). Retrieved from: https://fpamt.dnr.wa.gov/default.aspx#. Accessed March 31, 2020.

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March 29, 2021

Port of Tacoma
ATTN: Mark Rettmann
PO Box 1837
Tacoma, WA 98401-1837

RE: Coastal Zone Consistency for Corps Reference No. NWS-2020-457-WRD, Lower Wapato Habitat Project, Tacoma, Pierce County, Washington

Dear Mark Rettmann:

On September 16, 2020, The Department of Ecology (Ecology) received a Certification of Consistency with the Washington State Coastal Zone Management Program (CZMP) for the above project. On March 2, 2021, Ecology and the Port of Tacoma sent a letter to the Corps of Engineers agreeing to stay the CZM review period until April 30, 2021.

This determination is for the Lower Wapato Habitat Project which is an advance permittee-responsible mitigation site to compensate for future impacts downstream and within Wapato Creek, and future wetland impacts on Port of Tacoma property. The proposed work includes re-establishment of wetlands, re-establishment of tidal mudflats, and stream restoration.

This project is located at 1131 East Alexander Avenue, Tacoma, Pierce County, Washington; SW Section 01, Township 20 North, Range 03 East; WRIA 10, Puyallup-White Watershed.

Pursuant to Section 307(c)(3) of the Coastal Zone Management Act of 1972 as amended, Ecology concurs with the Port of Tacoma's determination that the proposed work is consistent with Washington's CZMP.

If you have any questions regarding Ecology's consistency decision please contact Lori Kingsbury at Lori.kingsbury@ecy.wa.gov.

YOUR RIGHT TO APPEAL

You have a right to appeal this decision to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of this decision. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this decision:

- File your appeal and a copy of this decision with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this decision on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503 **Pollution Control Hearings Board** 1111 Israel RD SW, Suite 301 Tumwater, WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 **Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

Sincerely,

Perry J Lund, Section Manager
Shorelands and Environmental Assistance Program
Southwest Regional Office

e-cc: Jason Sweeney, U.S. Army Corps of Engineers
Linda Storm, EPA
Char Naylor, Puyallup Tribe
Loree Randall, Ecology
Patricia Johnson, Ecology
Zach Meyer, Ecology
Lori Kingsbury, Ecology
ecyrefedpermits@ecy.wa.gov

PUYALLUP TRIBE OF INDIANS

In the Matter Granting a
Water Quality Certification
To: Port of Tacoma
In Accordance with the Water Quality Standards
for Surface Waters of the Puyallup Tribe

Reference No. NWS-2020-457
Wapato Advanced Mitigation Project
Tacoma, Pierce County, WA

ATTN: Mr. Mark Rettmann
Port of Tacoma
P.O. Box 1837
Tacoma, WA 98401-1837

On July 1, 2020, the Puyallup Tribe received a Port of Tacoma's Clean Water Act (CWA) Section 401, 33 U.S.C. § 1341, water quality certification request for NWS-2020-457, the Lower Wapato Creek Advance Mitigation Project, individual CWA Section 404 permit. This request was made to the Puyallup Tribe of Indians for the above-referenced project pursuant to the provisions of the Water Quality Standards for Surface Waters of the Puyallup Tribe. The request for certification was made available for public review and comment by inclusion in Corps Public Notice pertaining to NWS-2020-457.

The Tribe received the request for 401 certification along with a Joint Aquatic Resources Permit Application (JARPA) on July 1, 2020. This application package included project engineering design drawings and a Draft Advance Mitigation Plan both dated June 1, 2020. On July 20, 2020, the U.S. Army Corps of Engineers (Corps), Puyallup Tribe, the EPA and the Port of Tacoma met to review the project proposal. On August 11, 2020 the Corps and EPA issued a joint public notice for a 30-day comment period which closed on September 10, 2020. On January 27, 2021 updated 90% engineering designs, updated JARPA dated January 7, 2021, and the Final Revised Advance Mitigation Project Site plan dated January 25, 2021, were provided by the Port. This certification is for the final project design, including the Final Advance Mitigation Project Plan, as updated and revised in March 2021. The Port has also developed a Water Quality Monitoring and Protection Plan for the Lower Wapato Creek Habitat Project, as revised in March 2021. This certification is based on and relies upon information contained in the aforementioned documents.

This Certification applies to point source discharges from the Lower Wapato Advance Mitigation Project into waters of the Puyallup Tribe that occur within tribal trust and tribal owned lands, including Parcels 0320013158 and Parcel 03210017003, located within the Puyallup Tribe of Indians reservation boundary, in Washington State. For clarification purposes with regard to lands under the Tribe's 401 authority for this project, refer to the property map attached herein. The Lower Wapato Advance Mitigation Project is located at 1131 East Alexander Avenue, Tacoma, Washington, (SW ¼ Section 01, Township 20 N, Range 03 E; Latitude 47.246431 N, Longitude -122.371509 W)

Upon review of the documents described above, the Puyallup Tribe of Indians is granting certification under section 401 of the Clean Water Act that there is reasonable assurance that the proposed activity and resulting discharges are in compliance with applicable provisions of Sections 301, 302, 303, 306, and 307 of the Clean Water Act and our tribal water quality requirements, including Puyallup Tribal Code Chapter 10.08 (Water Quality Standards for Surface Waters of the Puyallup Tribe).

Project Description

The proposed project is to develop a permittee-responsible advanced mitigation site on 18.52 acres, to provide advanced mitigation credits to compensate for future wetland and stream impacts within Wapato Creek on Port of Tacoma properties.

The proposed work includes re-establishment of wetlands, re-establishment of tidal mudflats, and stream restoration. Two undersized 60-inch diameter culverts will be replaced with a 50-foot wide single span bridge at 12th street east. This will result in the discharge of 70 cubic yards of fill material for the structural fill, and 270 cubic yards of streambed material. Up to 9,200 cubic yards of fill material would be discharged into 713 linear feet (0.55 acre) of the existing straightened Wapato Creek channel. A new meandering 1,875 linear foot channel (2.29 acres) would be constructed, with 350 linear feet of the existing channel retained as off-channel rearing habitat for juvenile salmonids and other functions it will provide. Up to 126 cubic yards of fill material would be placed in the remaining 350 linear feet of straightened Wapato Creek to raise the stream bed and create mudflat and shallower stream habitat. The proposed sinuous Wapato Creek channel will also include placement of 7,100 cubic yards of streambed substrate (gravel), and large woody material (LWM) will be placed in high energy areas to provide juvenile salmonid refuge as well as stream stability. Additional LWM will be installed in the re-established floodplain and wetland areas. A total of 201 pieces of LWM will be installed.

The proposal includes a total of 10.02 acres of wetland/aquatic resource re-establishment, including 5.51 acres of palustrine forested wetland (PFO), 2.35 acres of estuarine emergent wetland (EEM), and 2.10 acres of tidal stream channel/mudflats. An additional 7.34 acres of forested upland buffer would be established or enhanced. The existing 12th street ditch would also be reconfigured into a vegetated filter strip swale which will involve the discharge of 2,533 cubic yards of fill material over 11,400 square feet (0.26 acres).

The Port has requested authorization to initiate in-water work on July 8, 2021, one-week prior to the July 15th start of the marine in-water work window [July 15 through February 14 (Corps) and July 15 through February 15 (WDFW)] requested in the June 2020 JARPA. This change, if approved, will provide additional time for construction to occur during the dry season and avoid more time during the wet season. The Tribe has concurred with this request via email from Char Naylor to Mark Rettmann on January 7th, 2021.

The requisite information necessary to ensure water quality requirements are met are detailed in the above referenced documents, including the Advanced Mitigation Plan and JARPA update memo dated January 7, 2021. A stormwater pollution prevention plan will also be required under the Construction General Stormwater Permit which will further detail best management practices

to control site runoff and prevent unpermitted discharges. Best management measures are further detailed in the 90% engineering plans to prevent turbidity-laden water generated during dewatering activities to be released to Wapato Creek. Importantly, monitoring to prevent downstream turbidity in Wapato Creek will also occur as part of the bypass/diversion planning efforts.

The proposed work is expected to be constructed over a two year period per the January 25, 2021 Lower Wapato Creek Advance Mitigation Project plan. During the first year the site would be re-graded, the new creek channel established, LWM installed, the culverts replaced with a bridge, and the site stabilized with native upland and wetland seed mixes and erosion control blankets. The excavated material would be stock-piled offsite at uplands located on an adjacent Port of Tacoma property (parcel 0320011117) for re-use by the Washington Department of Transportation. In the second year the majority of the plantings would be installed.

General Information

The general information provided in this section does not constitute a certification condition(s).

The Port of Tacoma is responsible for obtaining all other permits, licenses, and certifications that may be required by federal, state, or tribal authorities, including fulfilling any requirements for an EPA general CWA Section 402 stormwater permit notice of intent for authorization under EPA's Construction Stormwater General Permit. The Port of Tacoma is also responsible for implementing all the requirements of the Water Quality Monitoring and Protection Plan for the Lower Wapato Creek Habitat Project, as revised in March 2021. Lastly, the Port of Tacoma is also responsible for providing all final project plans, including the revised Advanced Mitigation Plan, March 2021, pertaining to this project to the Tribe.

This certification should be retained in your files with the applicable Corps permit as documentation of the Puyallup Tribe's certification for the above-referenced project. This certification is specifically associated with your Corps CWA Section 404 permit NWS-2020-457 authorization and expires when that permit expires.

The Port of Tacoma shall notify the Tribe if spills or unauthorized discharges occur during the project construction. Copies of this certification should be kept on the job site and made readily available for reference.

If you have any questions regarding this certification, please contact Char Naylor, Water Quality Manager, by calling 253-405-7815, or by email char.naylor@puyalluptribe-nsn.gov.

Sincerely,



Char Naylor, Manager
Water Quality

Cc:

Mr. Jason Sweeney, Project Manager, Seattle District, U.S. Army Corps of Engineers,
Jason.T.Sweeney@usace.army.mil
Ms. Linda Storm, Senior Aquatic Ecologist
Storm.Linda@epa.gov
Mr. Russ Ladley, Fisheries Program Manager, Puyallup Tribe of Indians,
Russ.Ladley@PuyallupTribe-nsn.gov

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 155
Seattle, WA 98101-3123

WATER
DIVISION

March 19, 2021

Mr. Mark Rettmann
Port of Tacoma
P.O. Box 1837
Tacoma, WA 98401-1837

Dear Mr. Rettmann:

The U.S. Environmental Protection Agency (EPA) has reviewed the Port of Tacoma's Clean Water Act (CWA) Section 401, 33 U.S.C. § 1341, water quality certification request for NWS-2020-457-WRD, Lower Wapato Creek Advance Mitigation Project, for an individual CWA Section 404 permit. EPA received the request for CWA Section 401 certification along with a Joint Aquatic Resource Permit Application (JARPA) on July 1, 2020. That application package included project engineering design drawings and a Draft Advance Mitigation Plan both dated June 1, 2020. On July 20, 2020, the U.S. Army Corps of Engineers (Corps), EPA, the Puyallup Tribe of Indians (PTOI), and the Port of Tacoma (POT) met to go over the project proposal. On August 11, 2020, the Corps and EPA issued a joint public notice for a 30-day comment period which closed on September 10, 2020. On January 27, 2021, the POT provided EPA with updated 90% engineering designs, an updated JARPA dated January 7, 2021, and a Revised Advance Mitigation Project Plan dated January 25, 2021. Subsequently, POT provided a Final Revised Advance Mitigation Project Plan dated March 2021. This certification is for the final project design, including the Final Revised Advance Mitigation Project Plan, as updated and revised. This certification is based on and relies upon information contained in the aforementioned documents.

The Corps did not inform EPA of a specific deadline by which to provide the CWA Section 401 certification decision.

This Certification applies to any potential point source discharges from the Lower Wapato Advance Mitigation Project into waters of the United States that occur on parcel numbers: 0320013157, 0320013158, 0320017003, and upland disposal site 0320011117, located within the PTOI's reservation boundary, in the City of Fife and the City of Tacoma, Washington within Township 20 North, Range 03 East, Section 01, Willamette Meridian; Latitude 47.246431º N, Longitude -122.371509º W.

CWA Section 401(a)(1) requires applicants for Federal permits and licenses that may result in discharges into waters of the United States to obtain certification that potential discharges will comply with applicable provisions of the CWA, including Sections 301, 302, 303, 306 and 307. Where no state agency or tribe has authority to give such certification, EPA is the certifying authority. In this case, the PTOI treatment in a manner as a state authority does not apply to POT lands within the reservation boundary and EPA is making the certification decision for discharges that may result from this proposed project.

EPA has determined that any discharge from the proposed project will comply with the requirements of CWA Section 401(a)(1) and CWA Section 401(d). Therefore, EPA grants CWA Section 401 certification with no conditions. This Certification applies to any potential point source discharges from NWS-2020-457-WRD that would occur in waters of the United States within the Puyallup Tribe of Indians Reservation provided the project is implemented as specified in the referenced application, plans and specifications.

Project Description

The proposed project is to develop a permittee-responsible advance mitigation site on 18.52 acres to provide advance mitigation credits to compensate for future wetland and stream impacts within Wapato Creek on POT properties.

The proposed work includes re-establishment of wetlands, re-establishment of tidal mudflats, and stream restoration. Two undersized 60-inch diameter culverts would be replaced with a 50-foot wide single span bridge at 12th Street East. This would result in the discharge of 70 cubic yards of fill material for the structural fill and 270 cubic yards of streambed material. Up to 9,200 cubic yards of fill material would be discharged into 713 linear feet (0.55 acre) of the existing straightened Wapato Creek channel. A new meandering 1,875 linear foot channel (2.29 acres) would be constructed, with 350 linear feet of the existing channel retained as off-channel rearing habitat for juvenile salmonids and other functions. Up to 126 cubic yards of fill material would be placed in the remaining 350 linear feet of straightened Wapato Creek to raise the stream bed and create mudflat and shallower stream habitat. The proposed sinuous Wapato Creek channel would also include placement of 7,100 cubic yards of streambed substrate (gravel), and large woody material (LWM) would be placed in high energy areas to provide juvenile salmonid refuge as well as stream stability. Additional LWM would be installed in the re-established floodplain and wetland areas. A total of 201 pieces of LWM would be installed.

The proposal includes a total of 10.02 acres of wetland/aquatic resource re-establishment, including 5.51 acres of palustrine forested wetland (PFO), 2.35 acres of estuarine emergent wetland (EEM), and 2.10 acres of tidal stream channel/mudflats. An additional 7.34 acres of forested upland buffer would be established or enhanced. The existing 12th Street ditch would also be reconfigured into a vegetated filter strip swale which will involve the discharge of 2,533 cubic yards of fill material over 11,400 square feet (0.26 acres).

The POT has requested authorization to initiate in-water work on July 8, 2021, one-week prior to the July 15th start of the marine in-water work window. This change, if approved, would provide additional time for construction to occur during the dry season and would avoid more construction during the wet season. EPA understands that the PTOI concurred with the proposed earlier start work date on January 7, 2021. EPA has no objection to this earlier start work date.

The requisite information necessary to ensure water quality requirements are met are detailed in the above referenced documents, including the Final Revised Advance Mitigation Plan dated March 2021 and JARPA update memo dated January 7, 2021. A stormwater pollution prevention plan will also be provided under the Construction General Stormwater Permit which will further detail best management practices to control site runoff and prevent unpermitted discharges. Best management practices are further detailed in the 90% engineering design plans to prevent turbidity-laden water from being released to Wapato Creek during dewatering activities. Importantly, monitoring to prevent downstream turbidity in Wapato Creek will also occur as part of the bypass/diversion aspects of the project as specified in the POT's March 2021 Water Quality Monitoring and Protection Plan for the Lower Wapato Creek Habitat Project.

The proposed work is expected to be constructed over a two year period per the March 2021 Final Revised Advance Mitigation Plan. During the first year the site would be re-graded, the new creek channel established, LWM installed, the culverts replaced with a bridge, and the site stabilized with native upland and wetland seed mixes and erosion control blankets. The excavated material would be stock-piled offsite at uplands located on an adjacent POT property (parcel 0320011117) for re-use by the Washington Department of Transportation. In the second year the majority of the plantings would be installed.

General Information
The general information provided in this section does not constitute a certification condition(s).

The POT is responsible for obtaining all other permits, licenses, and certifications that may be required by federal, state, or tribal authorities, including fulfilling any requirements for an EPA general CWA Section 402 stormwater permit notice of intent for authorization under EPA's Construction Stormwater General Permit.[1] The POT is also responsible for implementing all the requirements of the Water Quality Monitoring and Protection Plan for the Lower Wapato Creek Habitat Project, as revised in March 2021. Lastly, the POT is also responsible for providing all final project plans pertaining to this project to EPA.

This certification should be retained in your files with the applicable Corps permit as documentation of EPA certification for the above-referenced project. This certification is specifically associated with your Corps CWA Section 404 permit NWS-2020-457-WRD authorization and expires when that permit expires.

The POT shall notify EPA Region 10 if spills or unauthorized discharges occur during the project construction. Copies of this certification should be kept on the job site and made readily available for reference.

If you have any questions regarding this certification, please contact Ms. Linda Storm, Aquatic Ecologist, by calling 206-437-2293, or by email storm.linda@epa.gov.

Sincerely,

David Croxton, Manager
Wetlands and Oceans Section

cc: Mr. Jason Sweeney, Project Manager, Seattle District, U.S. Army Corps of Engineers, Jason.T.Sweeney@usace.army.mil

Ms. Char Naylor, Water Quality Program, Puyallup Tribe of Indians, Char.Naylor@PuyallupTribe-nsn.gov

Mr. Russ Ladley, Fisheries Program Manager, Puyallup Tribe of Indians, Russ.Ladley@PuyallupTribe-nsn.gov

[1] https://www.epa.gov/npdes/stormwater-discharges-construction-activities

BINDING EDGE

PORT OF TACOMA

LOWER WAPATO CREEK HABITAT PROJECT
MASTER ID #101449.01
CONTRACT #071447

PORT COMMISSIONERS:

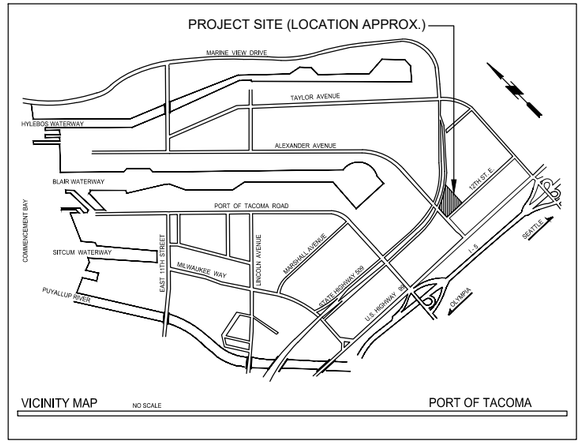
JOHN MCCARTHY
DON MEYER
DICK MARZANO
DEANNA KELLER
KRISTIN ANG

PORT STAFF:

ERIC JOHNSON
Executive Director

THAIS HOWARD, PE
Director of Engineering

DAVID R. MYERS, NCARB, CSI
Engineering Project Manager



CONSULTANT:

MOTT MACDONALD
1601 5TH AVENUE
SEATTLE, WA 98101
(425) 778-6243

PROJECT MANAGER: JOHN DAWSON, P.E.

DRAWING LIST		
SHEET DESIGNATION	**SHEET #**	**SHEET TITLE**
GENERAL		
G1.0	1	COVER SHEET
G2.0	2	GENERAL NOTES
G3.O	3	EXISTING SITE PLAN
G4.0	4	PHOTOS 1
G4.1	5	PHOTOS 2
G5.0	6	PROPOSED OVERALL SITE PLAN
G5.1	7	DISPOSAL SITE CROSS SECTIONS
G6.0	8	TESC AND DEMOLITION PLAN 1
G6.1	9	TESC AND DEMOLITION PLAN 2
G6.2	10	TESC AND DEMOLITION NOTES AND DETAILS
G7.0	11	SITE ACCESS AND FLOW DIVERSION PLAN
CIVIL		
C1.0	12	OVERALL GRADING PLAN
C1.1	13	GRADING PLAN 1
C1.2	14	GRADING PLAN 2
C1.3	15	GRADING PLAN 3
C2.0	16	GRADING SECTIONS 1
C2.1	17	GRADING SECTIONS 2
C3.0	18	STREAM CROSS SECTIONS 1
C3.1	19	STREAM CROSS SECTIONS 2 - BRIDGE CROSSING
C4.0	20	STREAM PROFILE 1
C4.1	21	STREAM PROFILE 2
C4.2	22	STREAM PROFILE 3
C4.3	23	STREAM PROFILE 4 - BRIDGE CROSSING
C5.0	24	LARGE WOODY MATERIAL DETAILS 1
C5.1	25	LARGE WOODY MATERIAL DETAILS 2
C6.0	26	CIVIL / ROADWAY PLAN 1
C6.1	27	CIVIL / ROADWAY PLAN 2
C6.2	28	CIVIL / ROADWAY PLAN 3
C7.0	29	ROADWAY GRADING 1
C7.1	30	ACCESS GRADING

DRAWING LIST		
SHEET DESIGNATION	**SHEET #**	**SHEET TITLE**
STRUCTURAL		
S1.1	31	BRIDGE GENERAL NOTES
S1.2	32	BRIDGE LAYOUT
S2.1	33	FOUNDATION PLAN
S2.2	34	TYPICAL PILE DETAILS
S2.3	35	ABUTMENT DETAILS
S2.4	36	WINGWALL DETAILS
S3.1	37	TYPICAL SECTION
S3.2	38	FRAMING PLAN AND CAMBER DIAPHRAGM
S3.3	39	GIRDER DETAILS 1 OF 2
S3.4	40	GIRDER DETAILS 2 OF 2
S4.1	41	APPROACH SLAB DETAILS 1 OF 3
S4.2	42	APPROACH SLAB DETAILS 2 OF 3
S4.3	43	APPROACH SLAB DETAILS 3 OF 3
S4.4	44	TRAFFIC BARRIER DETAILS 1 OF 3
S4.5	45	TRAFFIC BARRIER DETAILS 2 OF 3
S4.6	46	TRAFFIC BARRIER DETAILS 3 OF 3
S4.7	47	FENCE DETAILS
S5.1	48	BAR BENDING DIAGRAM
LANDSCAPING		
L1.0	49	SOILS PLAN
L2.0	50	LANDSCAPING PLAN
FOR INFORMATION ONLY		
115 KV TRANSMISSION LINE TEMPORARY PLAN AND PROFILE		
115 KV TRANSMISSION LINE FUTURE PLAN AND PROFILE		

90% DESIGN
FOR AGENCY REVIEW

Port of Tacoma
P.O. BOX 1837 TACOMA, WA 98401 (253)383-5841
MOTT MACDONALD
1601 5th Avenue
Suite 800
Seattle, Washington 98101
T +1 (425) 778 6243

MARK: | REVISION: | BY: | APPR: | DATE:

JARPA UPDATE
FOR AGENCY REVIEW

APPROVED:

DIRECTOR ENG. DATE | CHECKED BY DATE
PRINTED BY: MOR69830 Dec 10, 2020 | PROJ. ENGR DATE
PORT ADDRESS: 1 SITCOM PLAZA
TACOMA, WA 98421

LOWER WAPATO CREEK HABITAT PROJECT
COVER SHEET

6656
G1.0
1 OF 50

CONT/CONS: 071447 | TOWNSHIP: 20N | RANGE: 3E | SECTION: 1
M. ID: 101449.01 | DAT-HRZ: WA83-SF | VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE: 90% Design | PARCEL: 14 | DRAWING SCALE: AS NOTED

THIS DRAWING IS THE PROPERTY OF THE PORT OF TACOMA AND SHALL NOT BE USED ON OTHER WORK, DISCLOSED, COPIED, IN WHOLE OR IN PART, WITHOUT WRITTEN PERMISSION

PORT OF TACOMA FILE: C:\pwworking\hmm\ports_harbors\mor69830\dms48094\Wapato Creek Habitat - Cover

BINDING EDGE

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO THESE PLANS AND SPECIFICATIONS, ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE PROJECT PERMITS AND ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS PERTAINING TO DEMOLITION AND DISPOSAL.
2. CONTRACTOR SHALL PROVIDE THE ENGINEER WITH A DETAILED WORK PLAN, INCLUDING, DEMOLITION PRIOR TO COMMENCING WORK, SEE SPECIFICATIONS.
3. THE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE SCOPE OF WORK, UNLESS OTHERWISE SHOWN THEY DO NOT INDICATE THE METHOD OF WORK. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND HE SHALL BE SOLELY RESPONSIBLE FOR ALL MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.
4. THE CONTRACTOR SHALL KEEP ALL STREETS, AND VEHICULAR TRAFFIC AREAS CLEAN.
5. CONTRACTOR IS RESPONSIBLE FOR ANY TRAFFIC CONTROLS REQUIRED DURING THE DURATION OF THE PROJECT, SEE SPECIFICATIONS.
6. THE CONTRACTOR SHALL INSTALL AND MAINTAIN PERIMETER FENCING AS REQUIRED TO MAINTAIN SECURITY OF SITES.
7. CONTRACTOR SHALL PROTECT-IN-PLACE ALL STRUCTURES, UTILITIES AND OBJECTS NOT CALLED OUT AS BEING DEMOLISHED ON THE PLANS. ANY DAMAGE TO ITEMS NOT BEING DEMOLISHED SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
8. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO STRICTLY CONTAIN THE WORK WITHIN THE LIMITS SHOWN ON THE PLANS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY DAMAGE TO UTILITIES, OTHER FACILITIES, OR EQUIPMENT DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE PROMPTLY REPAIRED AT HIS EXPENSE. THIS INCLUDES ITEMS OUTSIDE THE WORK AREA THAT ARE DAMAGED BY CONSTRUCTION ACTIVITIES DURING EXECUTION OF THIS CONTRACT.
9. ALL LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN HEREIN HAVE BEEN ESTABLISHED BY FIELD OBSERVATIONS OR OBTAINED FROM REVIEW OF AVAILABLE RECORDS AND SHOULD, THEREFORE, BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID OTHER UTILITIES NOT SHOWN HEREIN WHICH MAY BE AFFECTED BY THE IMPLEMENTATIONS OF THIS PLAN. THE CONTRACTOR SHALL BRING ANY CONFLICTS BETWEEN EXISTING UTILITIES AND NEW WORK TO THE ENGINEERS ATTENTION. UTILITY LOCATE PHONE NUMBER 1-800-424-5555.
10. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS.
11. PRIOR TO COMMENCING DEMOLITION ACTIVITIES CONTRACTOR SHALL IMPLEMENT TEMPORARY EROSION AND SEDIMENTATION CONTROLS. NO DEMOLITION MATERIALS OR DEBRIS SHALL BE ALLOWED TO ENTER THE WATERWAY, SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

PROJECT DATUM AND SURVEY INFORMATION

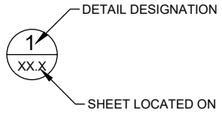
1. DATUM REFERENCE DATA TAKEN FROM SURVEY DATA COLLECTED BY SITTS AND HILL. SURVEY DATA CAN ONLY BE CONSIDERED REPRESENTATIVE OF THE CONDITIONS AT THE TIME OF THE SURVEY.
2. HORIZONTAL DATUM: NAD83 WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE, US SURVEY FEET.
3. VERTICAL DATUM: PORT OF TACOMA BENCHMARK: 2-1/2 INCH BRASS DISK ON THE SOUTHEAST CORNER OF MILWAUKEE WAY AND N FRONTAGE RD. BENCHMARK NO. 846 ELEVATION=15.26'.
4. ALL ELEVATIONS ARE REFERENCED TO MLLW (PORT OF TACOMA TIDAL DATUM).
5. WATER LEVELS SHOWN ARE ONLY FOR REFERENCE AND MAY NOT REPRESENT CONDITIONS DURING CONSTRUCTION.

EXISTING MONUMENTS

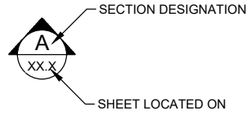
ID	NORTHING	EASTING	ELEVATION	DESCRIPTION
TBM A	705778.99	1178025.67	13.82	REBAR & CONTROL CAP
TBM B	705754.87	1178587.59	13.72	MAGNETIC NAIL
TBM C	705759.46	1177773.43	24.48	REBAR & CONTROL CAP
TBM D	703585.29	1176681.35	20.97	REBAR & CONTROL CAP

SEE DRAWING G-5 FOR BENCHMARK LOCATIONS

SHEET SYMBOLS



DETAIL



SECTION

WATER LEVEL SUMMARY

1. WATER LEVELS WITHIN THE PROJECT AREA LIMITS VARY BASED ON THE DISCHARGE FROM THE CREEK AND TIDAL WATER LEVELS. WATER LEVELS CAN BE HIGHLY VARIABLE DURING TIME PERIODS OF HIGHER CREEK DISCHARGE. APPROXIMATE TIDE ELEVATIONS ARE PROVIDED IN THE FOLLOWING TABLE.

APPROXIMATE TIDE ELEVATIONS (FT)

MAX HW	15.00
MHHW	11.83
MHW	10.95
MSL	6.87
MLW	2.86
MLLW	0.00

WAPATO CREEK DISCHARGE

1. WAPATO CREEK DISCHARGE VARIES DEPENDING ON THE TIME OF YEAR, PRECIPITATION, AND OTHER FACTORS. THE ESTIMATED 2-YR, 100-YR, AND 500-YR DISCHARGE FOR WAPATO CREEK ARE AS FOLLOWS:

RECURRENCE INTERVAL (YEAR)	DISCHARGE (CFS)
500	540
100	390
2	147

SUGGESTED CONSTRUCTION SEQUENCING

NOTE: THE CONTRACTOR MAY SUBMIT AN ALTERNATIVE SEQUENCING PLAN IN WRITING.

1. SITE PREPARATION AND TESC
   - A. ENSURE COPIES OF ALL PERMITS AND CONDITIONS FROM LOCAL, STATE, AND FEDERAL AGENCIES ARE PRESENT ON-SITE FOR THE DURATION OF THE WORK.
   - B. HOLD A PRE-CONSTRUCTION MEETING WITH THE PORT OF TACOMA, CITY OF TACOMA, CITY OF FIFE, AND OTHER AGENCIES IN ACCORDANCE WITH PERMIT REQUIREMENTS.
   - C. ESTABLISH CLEARING LIMITS, AND INSTALL SILT FENCE, SEDIMENT AND EROSION CONTROL SYSTEMS AND HIGH VISIBILITY FENCING ON PROJECT PERIMETER.
   - D. INSTALL CONSTRUCTION ENTRANCE AND STAGING AREA.
   - E. LOCATE, RELOCATE, OR PROTECT EXISTING UTILITIES WITHIN THE PROJECT AREA.
   - F. CLEAR AND GRUB AREA DESIGNATED FOR EXCAVATION AND CONSTRUCTION.
2. NEW CHANNEL CONSTRUCTION (IN PARALLEL WITH NEW STEEL MONOPOLE CONSTRUCTION AND BRIDGE CONSTRUCTION)
   - A. CONSTRUCT NEW WAPATO CREEK ALIGNMENT THROUGH THE HABITAT AREA, LEAVING BERM OF MATERIAL TO ISOLATE GRADING ACTIVITIES FROM THE EXISTING STREAM CHANNEL.
   - B. LEAVE BERMS AT UPSTREAM AND DOWNSTREAM ENDS OF THE NEW CHANNEL TO PREVENT WATER FROM FLOWING INTO THE GRADED SITE UNTIL READY TO REROUTE WAPATO CREEK INTO THE NEW CHANNEL.
   - C. DISPOSE OF EXCESS EXCAVATED SPOILS ON THE DISPOSAL SITE.
   - D. PUMP ANY TURBID WATER COLLECTING IN THE DEPRESSION DURING CONSTRUCTION TO A TEMPORARY INFILTRATION AREA AS SHOWN. THIS WATER WILL NOT BE DISCHARGED INTO WAPATO CREEK.
3. NEW STEEL MONOPOLE CONSTRUCTION (IN PARALLEL WITH NEW CHANNEL CONSTRUCTION AND BRIDGE CONSTRUCTION)
   - A. ISOLATE POLE REPLACEMENT WORK AREA IN EXISTING WAPATO CREEK ADJACENT TO NEW STEEL MONOPOLE ("STRUCTURE 2" PER POLE PLANS) WITH SUPERSACK COFFER DAMS UPSTREAM AND DOWNSTREAM AND INSTALL TEMPORARY FLOW DIVERSION SYSTEM SUFFICIENT TO CARRY FLOW AND ANY FISH AROUND THE WORK AREA TO A POINT DOWNSTREAM.
   - B. FILL IN LOCALIZED AREA OF WAPATO CREEK AS SHOWN IN PLANS AND AS REQUIRED IN SPECIFICATIONS.
   - C. DRILL AND INSTALL DRILLED SHAFT FOUNDATIONS PER PLANS AND GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
   - D. INSTALL STEEL MONOPOLES AND THEIR APPURTENANCES PER PLANS.
   - E. TRANSFER POWER LINES AND OTHER UTILITY LINES PER PLANS.
   - F. REMOVE EXISTING POWER POLES PER PLANS.

SUGGESTED CONSTRUCTION SEQUENCING (CONTINUED)

4. BRIDGE CONSTRUCTION (IN PARALLEL WITH NEW MONOPOLE CONSTRUCTION AND NEW CHANNEL CONSTRUCTION)
   - A. ISOLATE CULVERT REPLACEMENT WORK AREA WITH SUPERSACK COFFER DAMS UPSTREAM AND DOWNSTREAM OF THE CULVERTS AND INSTALL TEMPORARY FLOW DIVERSION SYSTEM SUFFICIENT TO CARRY FLOW AND ANY FISH AROUND THE WORK AREA TO A POINT DOWNSTREAM.
   - B. PRIOR TO OR DURING DEWATERING OF THE WORK AREA, REMOVE FISH PER WDFW HYDRAULIC PROJECT APPROVAL INSTRUCTIONS USING QUALIFIED PROFESSIONALS.
   - C. EXCAVATE ROADWAY AND ROADWAY EMBANKMENT.
   - D. TEMPORARILY RELOCATE AND SUPPORT UTILITIES TO BE SUPPORTED ON BRIDGE.
   - E. REMOVE AND DISPOSE OF EXISTING CULVERTS.
   - F. INSTALL STEEL PILE FOUNDATIONS PER PLANS AND GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
   - G. FORM, INSTALL REINFORCING STEEL, AND POUR CONCRETE FOR ABUTMENT PILE CAPS, AND WINGWALLS.
   - H. INSTALL STREAMBED MATERIALS UNDER BRIDGE TO THE EXTENT POSSIBLE GIVEN THE FLOW DIVERSION SYSTEM.
   - I. BACKFILL ROADWAY SUBGRADE, ABUTMENTS, AND WINGWALLS.
   - J. SET PRECAST CONCRETE SLAB ELEMENTS FOR BRIDGE.
   - K. FORM, INSTALL REINFORCING STEEL, AND POUR CONCRETE FOR BRIDGE DECK AND END DIAPHRAGMS.
   - L. FORM, INSTALL REINFORCING STEEL, AND POUR CONCRETE FOR APPROACH SLABS.
   - M. CONSTRUCT ROADWAY SUBGRADE AND FINISHED ROADWAY.
   - N. FORM, INSTALL REINFORCING STEEL, AND POUR CONCRETE FOR BRIDGE PARAPETS.
   - O. INSTALL CEDAR FENCE ON CONCRETE PARAPET.
   - P. REROUTE, INSTALL, AND CONNECT UTILITIES SUPPORTED ON BRIDGE.
   - Q. COMPLETE FINAL GRADING AND INSTALLATION OF STREAMBED MATERIAL.
   - R. REMOVE TEMPORARY FLOW BYPASS SYSTEM PER WDFW HPA INSTRUCTIONS.
   - S. REMOVE TESC SYSTEM.
5. LANDSCAPING
6. TRIMMING AND CLEANUP

ABBREVIATIONS

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS	GIR	GIRDER	REINF	REINFORCEMENT
		HDPE	HIGH DENSITY POLYETHYLENE	REQ/REQ'D	REQUIRED
ABUT	ABUTMENT	HMA	HOT-MIX ASPHALT	REV	REVISION
ALUM	ALUMINUM	HORIZ	HORIZONTAL	ROW	RIGHT OF WAY
APPROX	APPROXIMATE	HW	HIGH WATER	RT	RIGHT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	ID	INNER DIAMETER	SD	STORMDRAIN
		IE	INVERT ELEVATION	SDWK	SIDEWALK
B/	BOTTOM	IN	INCH	SE	SOUTHWEST
BM	BENCHMARK	KSI	KIPS PER SQUARE INCH	SHLDR	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	LB/LBS	POUNDS	SQ	SQUARE
B.O.	BOTTOM OF	LOC	LIMIT OF CONSTRUCTION	SIM	SIMILAR
BRG	BEARING	LT	LEFT	SS	STAINLESS STEEL OR SEWER SYSTEM OR SANITARY SEWER
BTM	BOTTOM	MAX	MAXIMUM		
CF	CUBIC FEET	MHW	MEAN HIGH WATER	STA	STATION
CFS	CUBIC FEET PER SECOND	MHHW	MEAN HIGHER HIGH WATER	STD	STANDARD
CIP	CAST-IN-PLACE	MIN	MINIMUM	SW	SOUTHWEST
CJ	CONSTRUCTION JOINT	MSL	MEAN SEA LEVEL	SWDM	SURFACE WATER DESIGN MANUAL
CJP	COMPLETE JOINT PENETRATION	MLW	MEAN LOW WATER	SWPPS	STORMWATER POLLUTION PREVENTION PLANS
CL	CENTERLINE	MLLW	MEAN LOWER LOW WATER		
CLR	CLEAR	N	NORTH/NORTHING	T	THICK
COL	COLUMN	NAD83	NORTH AMERICAN DATUM OF 1983	T/	TOP
CONC	CONCRETE	NE	NORTHEAST	TEMP	TEMPORARY
CONT	CONTINUOUS	NGAS	NATURAL GAS	TESC	TEMPORARY EROSION AND SEDIMENT CONTROL
CP	CONTROL POINT	NO	NUMBER		
CPEP	CORRUGATED POLYETHYLENE PIPE	NTS	NOT TO SCALE	TO	TOP OF
CTR	CENTER	NW	NORTHWEST	TYP	TYPICAL
CU	CUBIC	OC	ON CENTER	UNO	UNLESS NOTED OTHERWISE
Ø/DIA	DIAMETER	OD	OUTER DIAMETER	VC	VERTICAL CURVE
DWG	DRAWING	OHW	ORDINARY HIGH WATER	VERT	VERTICAL
E	EAST/EASTING	OHWM	ORDINARY HIGH WATER MARK	W	WATER LINE
EA	EACH	OPP	OPPOSITE	WP	WORKING POINT
EF	EACH FACE	PAV'T	PAVEMENT	W/	WITH
EL / ELEV	ELEVATION	PC	PRECAST	WS	WATER SURFACE
EOP	EDGE OF PAVEMENT	PG	PERFORMANCE GRADING	WSDOT	WASHINGTON STATE DEPARTMENT OF TRANSPORTATION
EQ	EQUAL	PSI	POUNDS PER SQUARE INCH		
EX	EXISTING	PSF	POUNDS PER SQUARE FOOT	YR	YEAR
EXP	EXPANSION	PVC	POINT OF VERTICAL CURVATURE	@	AT
FT	FEET	PVI	POINT OF VERTICAL INTERSECTION	'	MIN OR FEET
GA	GAUGE	PVT	POINT OF VERTICAL TANGENCY	"	SECONDS OR INCHES
GALV	GALVANIZED	RECT	RECTANGLE	°	DEGREES
		REF	FOR REFERENCE ONLY	%	PERCENT

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LOWER WAPATO CREEK HABITAT PROJECT
GENERAL NOTES

6656
G2.0
2 OF 50

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E
M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

SECTION: 1

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BINDING EDGE

LEGEND

- EXISTING TREES
- TREES TO BE REMOVED
- PHOTO LOCATION
- EXISTING PAVING
- FLOW DIRECTION
- 100-YR FLOOD ZONE AND REGULATORY FLOODWAY LIMIT
- EXISTING CONTOUR
- EXISTING RIGHT-OF-WAY
- ORDINARY HIGH WATER (OHW)
- OVERHEAD POWER LINE
- BURIED POWER LINE
- BURIED TELEPHONE LINE
- APPROX. BURIED CABLE LINE
- BURIED NATURAL GAS LINE
- STORM LINE
- SANITARY SEWER LINE
- ORDINARY HIGH WATER (OHW)
- WATER LINE
- FENCE LINE
- LIMIT OF CONSTRUCTION (LOC)

NOTES

1. HAWK'S NEST TO BE LOCATED PRIOR TO COMMENCING CONSTRUCTION. LOCATION OF HAWK'S NEST TO BE PROTECTED DURING CONSTRUCTION WITH TREE PROTECTION FENCING.
2. EXISTING TREES TO BE REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR.

SR 509
LIMIT OF CONSTRUCTION (LOC)
115 kV
230 kV
100-YR FLOOD ZONE AND REGULARY FLOODWAY LIMIT
WAPATO CREEK
EXISTING POWER POLES (TO BE PROTECTED)
EXISTING HAWKS NEST, SEE NOTE 1
ALEXANDER AVE. EAST
WAPATO CREEK
12TH STREET EAST
TRIBAL TRUST PROPERTY
EXISTING CULVERTS (TO BE REMOVED)
EXISTING VAULTS AND UNDERGROUND UTILITIES (TO BE PROTECTED)
PROLOGIS DEVELOPMENT

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0 60' 120' 240'

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LOWER WAPATO CREEK HABITAT PROJECT

EXISTING SITE PLAN

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M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
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BINDING EDGE



PHOTO 1

PANORAMIC VIEW FROM THE SOUTHEAST CORNER OF THE PROJECT SITE - LOOKING WEST (270° PHOTO)



PHOTO 2

PANORAMIC VIEW - LOOKING NORTH



PHOTO 3

PANORAMIC VIEW - LOOKING EAST

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LOWER WAPATO CREEK HABITAT PROJECT

PHOTOS 1

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4 OF 50

CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M.ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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BINDING EDGE



PHOTO 4

WAPATO CREEK UPSTREAM OF 12TH STREET - LOOKING SOUTH



PHOTO 5

NORTH OF 12TH STREET - LOOKING EAST



PHOTO 6

NORTH OF 12TH STREET - LOOKING WEST



PHOTO 7

WAPATO CREEK - LOOKING SOUTHWEST



PHOTO 8

WAPATO CREEK - LOOKING NORTHWEST



PHOTO 9

PROPOSED ACCESS ROUTE TO DISPOSAL SITE - LOOKING EAST

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LOWER WAPATO CREEK HABITAT PROJECT

PHOTOS 2

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M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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BINDING EDGE

LEGEND

- TEMPORARY BENCHMARK (TBM)
- STAGING AREA
- CONSTRUCTION ENTRANCE
- VEHICLE DIRECTION
- EXISTING DRAINAGE
- OVERHEAD POWER ENVELOPE
- OVERHEAD POWER LINE
- ACCESS ROUTE
- SILT FENCE
- PROPERTY LINE
- LIMIT OF CONSTRUCTION (LOC)

NOTES

1. THE CONTRACTOR MAY PUMP WATER FROM THE DEWATERING OPERATIONS TO THE VEGETATED DRAINAGE SWALE FOR INFILTRATION.
2. THE CONTRACTOR MAY ALSO PUMP TO BAKER TANKS FOR SETTLEMENT.
3. STOCKPILE MOUND WILL BE SEEDED WITH STANDARD WSDOT EROSION CONTROL SEED MIX.
4. OVERHEAD POWER LINES INCLUDE 13.8 KV DISTRIBUTION LINE, 115 KB TRANSMISSION LINE, TPWR HFC FIBER LOOP.
5. ACCESS TO BE COORDINATED WITH PROLOGIS.

TBM C
TBM A
4TH STREET
TBM B
60'
STOCKPILE AREA, SEE NOTE 3
A G5.1
B G5.1
STOCKPILE MOUND 1
STOCKPILE MOUND 2
DRAINAGE DISTRICT 23 DITCH
STOCKPILE AREA ACCESS, APPROXIMATE 1950 FT IN LENGTH
STORM POND
OVERHEAD POWER ENVELOPE
PROLOGIS DEVELOPMENT
OVERHEAD POWER AND COMM LINES, SEE NOTE 4
STABILIZED TEMPORARY ACCESS ROAD, TO BE RESTORED AFTER CONSTRUCTION
EXISTING DRAINAGE SWALE, SEE NOTE 1
SR 509
SILT FENCE, TYP., PERIMETER
APPROX. WIDTH 60'
PROLOGIS DEVELOPMENT
HABITAT AREA
DISPOSAL AREA
WAPATO CREEK
LAYDOWN / OFFICE, SEE NOTE 5
LIMIT OF CONSTRUCTION
BAKER TANK, SEE NOTE 2
TBM D
EQUIPMENT STAGING
PROLOGIS DEVELOPMENT
PROJECT (HABITAT) SITE
PROPOSED CONSTRUCTION ENTRANCE, SEE NOTE 5
ALEXANDER AVE. EAST
12TH STREET EAST

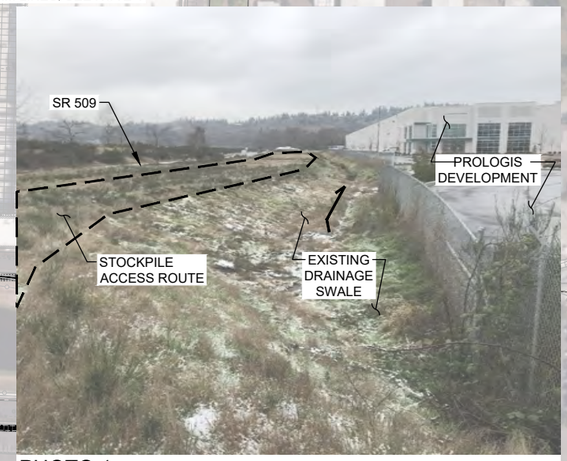


PHOTO 1
STOCKPILE ACCESS ROUTE AND DRAINAGE SWALE - LOOKING EAST

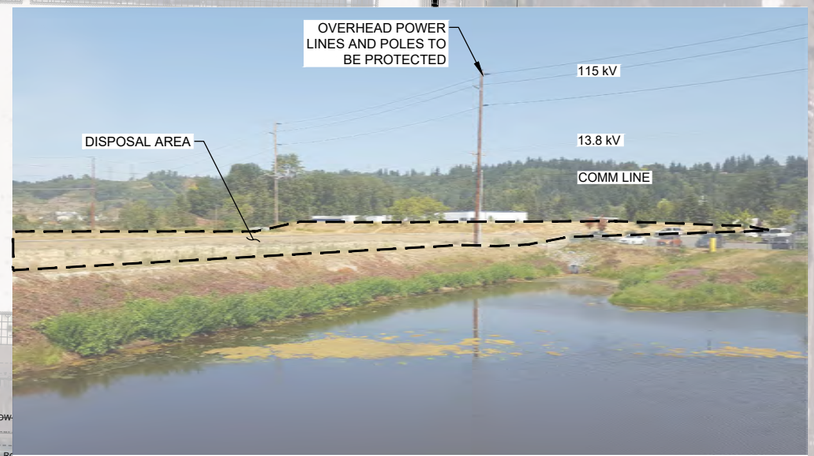


PHOTO 2
DISPOSAL AREA - LOOKING EAST

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0 150' 300' 600'

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LOWER WAPATO CREEK HABITAT PROJECT

PROPOSED OVERALL SITE PLAN

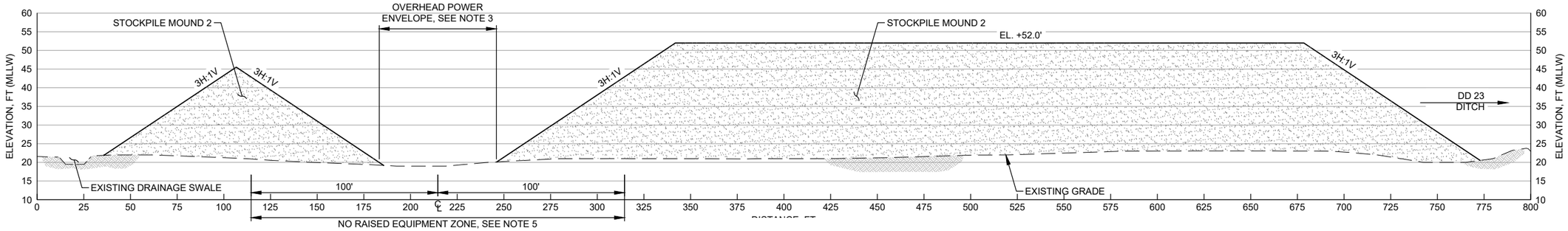
CONT/CONS:	071447
M. ID:	101449.01
PHASE:	90% Design
TOWNSHIP:	20N
RANGE:	3E
SECTION:	1
DAT-HRZ:	WA83-SF
VERT:	MLLW (PORT OF TACOMA TIDAL)
PARCEL:	14
DRAWING SCALE:	AS NOTED

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G5.0
6 OF 50

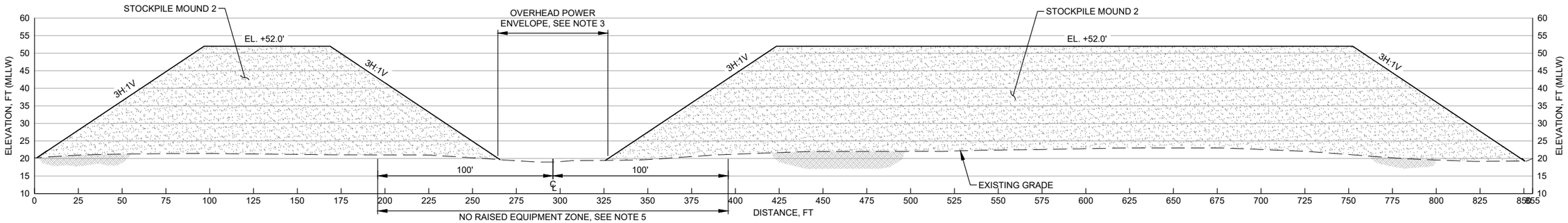
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BINDING EDGE



A STOCKPILE AREA
HORIZONTAL SCALE: 1" = 30', VERTICAL SCALE: 1" = 15'



B STOCKPILE AREA
HORIZONTAL SCALE: 1" = 30', VERTICAL SCALE: 1" = 15'

NOTES

1. EARTH EMBANKMENT SHALL BE CONSTRUCTED TO MEET THE REQUIREMENTS PROVIDED IN THE SPECIFICATIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING UTILITIES DURING CONSTRUCTION.
3. OVERHEAD POWER LINES INCLUDE 13.8 KV DISTRIBUTION LINE, 115 KB TRANSMISSION LINE, TPWR HRC FIBER LOOP.
4. IF HRC FIBER LOOP IS DAMAGED, CONTACT LUMEN. ROB BAIR (253) 393-6384. IF POWER OR TRANSMISSION LINES ARE DAMAGED, CONTACT TPU.
5. LOWER TRUCK BEDS BEFORE ENTERING, LOWER EXCAVATOR BOOMS AND LOADER BUCKETS.

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LOWER WAPATO CREEK HABITAT PROJECT

DISPOSAL SITE CROSS SECTIONS

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7 OF 50

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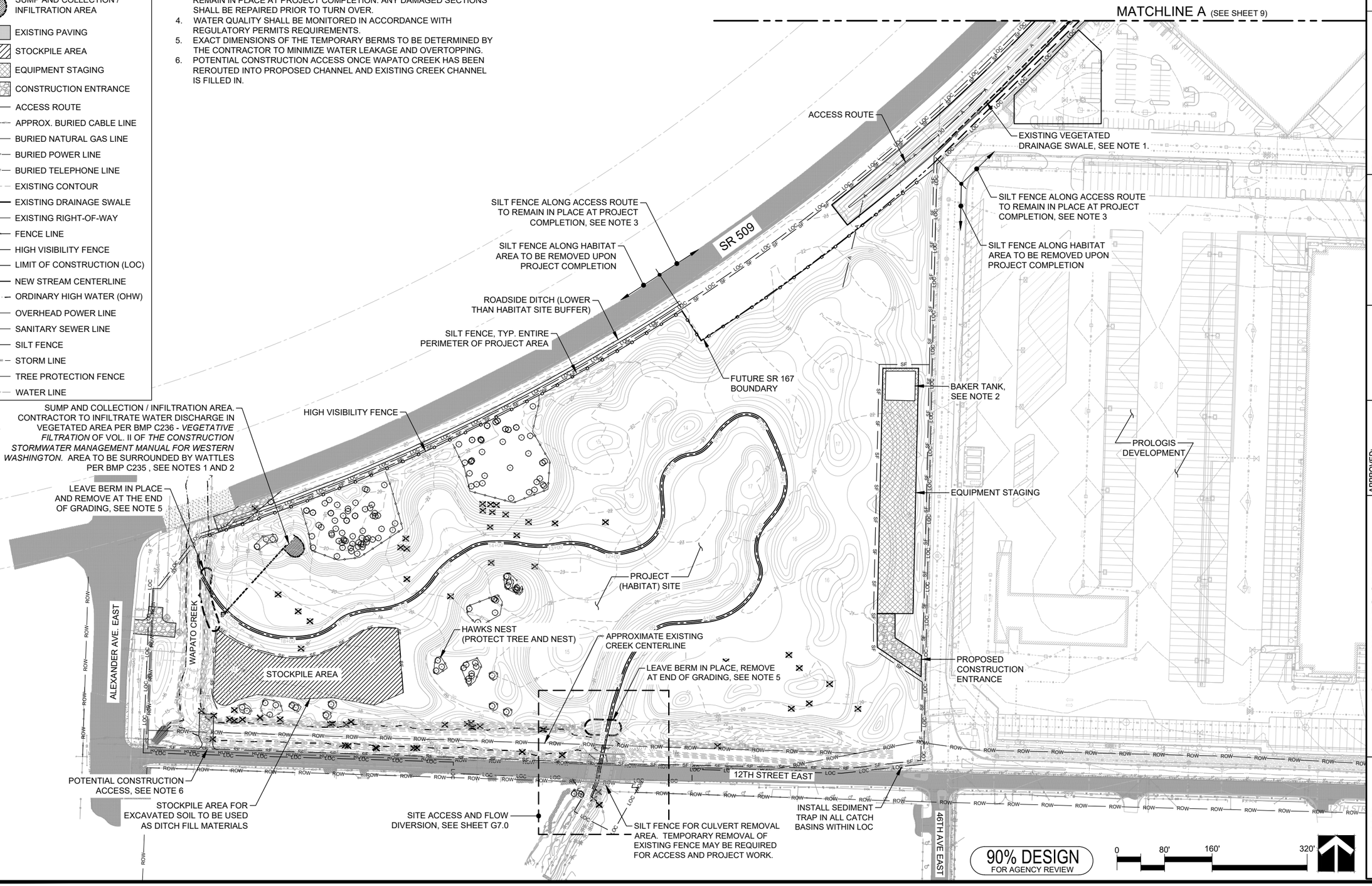
BINDING EDGE

LEGEND

- EXISTING TREES
- TREES TO BE REMOVED
- SUMP AND COLLECTION / INFILTRATION AREA
- EXISTING PAVING
- STOCKPILE AREA
- EQUIPMENT STAGING
- CONSTRUCTION ENTRANCE
- ACCESS ROUTE
- APPROX. BURIED CABLE LINE
- BURIED NATURAL GAS LINE
- BURIED POWER LINE
- BURIED TELEPHONE LINE
- EXISTING CONTOUR
- EXISTING DRAINAGE SWALE
- EXISTING RIGHT-OF-WAY
- FENCE LINE
- HIGH VISIBILITY FENCE
- LIMIT OF CONSTRUCTION (LOC)
- NEW STREAM CENTERLINE
- ORDINARY HIGH WATER (OHW)
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- SILT FENCE
- STORM LINE
- TREE PROTECTION FENCE
- WATER LINE

NOTES

1. ADDITIONAL INFILTRATION MAY BE CONDUCTED IN VEGETATED SWALE ALONG HAUL ROUTE.
2. THE CONTRACTOR MAY ALSO PUMP TO BAKER TANKS FOR SETTLEMENT.
3. SILT FENCE ALONG ACCESS ROUTE AND AROUND DISPOSAL AREA TO REMAIN IN PLACE AT PROJECT COMPLETION. ANY DAMAGED SECTIONS SHALL BE REPAIRED PRIOR TO TURN OVER.
4. WATER QUALITY SHALL BE MONITORED IN ACCORDANCE WITH REGULATORY PERMITS REQUIREMENTS.
5. EXACT DIMENSIONS OF THE TEMPORARY BERMS TO BE DETERMINED BY THE CONTRACTOR TO MINIMIZE WATER LEAKAGE AND OVERTOPPING.
6. POTENTIAL CONSTRUCTION ACCESS ONCE WAPATO CREEK HAS BEEN REROUTED INTO PROPOSED CHANNEL AND EXISTING CREEK CHANNEL IS FILLED IN.



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LOWER WAPATO CREEK HABITAT PROJECT

TESC AND DEMOLITION PLAN 1

6656
G6.0
8 OF 50

CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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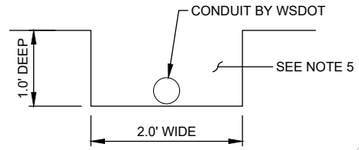
BINDING EDGE

LEGEND

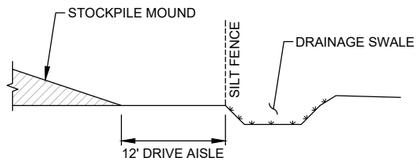
- EXISTING TREES
- EXISTING PAVING
- STOCKPILE AREA
- ACCESS ROUTE
- APPROX. BURIED CABLE LINE
- BURIED NATURAL GAS LINE
- BURIED POWER LINE
- BURIED TELEPHONE LINE
- EXISTING CONTOUR
- EXISTING DRAINAGE SWALE
- EXISTING RIGHT-OF-WAY
- FENCE LINE
- HIGH VISIBILITY FENCE
- LIMIT OF CONSTRUCTION (LOC)
- NEW STREAM CENTERLINE
- ORDINARY HIGH WATER (OHW)
- OVERHEAD POWER LINE
- SANITARY SEWER LINE
- SILT FENCE
- STORM LINE
- WATER LINE

NOTES

1. ADDITIONAL INFILTRATION MAY BE CONDUCTED IN VEGETATED SWALE ALONG HAUL ROUTE.
2. THE CONTRACTOR MAY ALSO PUMP TO BAKER TANKS FOR SETTLEMENT.
3. STOCKPILE MOUNDS TO BE SEEDED WITH STANDARD WSDOT EROSION CONTROL SEED MIX.
4. ALL SILT FENCE SHOWN ON THIS SHEET TO REMAIN IN PLACE AT PROJECT COMPLETION. ANY DAMAGED SECTIONS SHALL BE REPAIRED PRIOR TO TURN OVER.
5. BACKFILL TRENCH WITH EXCAVATED MATERIAL AFTER CONDUIT INSTALLATION BY OTHERS. PROTECT CONDUIT FROM DAMAGE DURING BACKFILL OPERATIONS. REMOVE STONES OVER 3" DIAMETER FROM CONTACT WITH CONDUIT.



1 DETAIL - SETTLEMENT MONITORING TRENCH
N.T.S.



2 DETAIL - DRAINAGE SWALE
N.T.S.

SETTLEMENT MONITORING TRENCH, SEE DETAIL 1
EXISTING DRAINAGE SWALE
STOCKPILE MOUND 1
3H:1V
12' MIN. SETBACK FROM TOP OF SLOPE
STOCKPILE AREA, SEE NOTE 3
EXISTING DRAINAGE SWALES (TO BE PROTECTED)
MONITORING WELLS (TO BE PROTECTED)
STOCKPILE MOUND 2
12' MIN. DRIVE ROAD FROM TOP OF SLOPE, SEE DETAIL 2
SILT FENCE TO BE INSTALLED AT TOP OF SLOPE PRIOR TO STARTING STOCKPILE
EXISTING DRAINAGE SWALE, SEE NOTE 1
SILT FENCE, TYP., PERIMETER
STOCKPILE AREA ACCESS
STABILIZED TEMPORARY ACCESS ROAD, TO BE RESTORED AFTER CONSTRUCTION
SR 509
PROLOGIS DEVELOPMENT
PROLOGIS DEVELOPMENT
MATCHLINE A (SEE SHEET 8)
90% DESIGN FOR AGENCY REVIEW
0 80' 160' 320'

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LOWER WAPATO CREEK HABITAT PROJECT
TESC AND DEMOLITION PLAN 2

CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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G6.1
9 OF 50

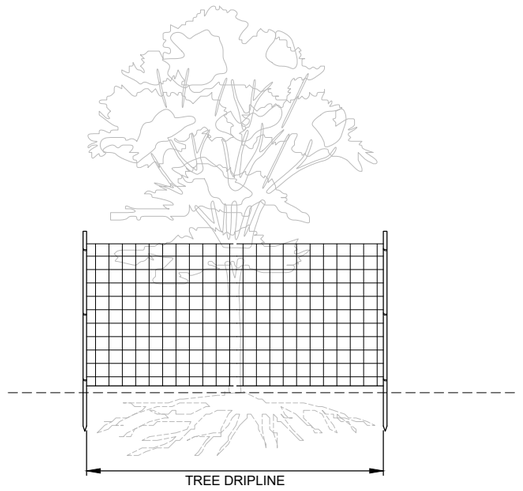
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BINDING EDGE

CITY OF TACOMA
STANDARD TESC NOTES

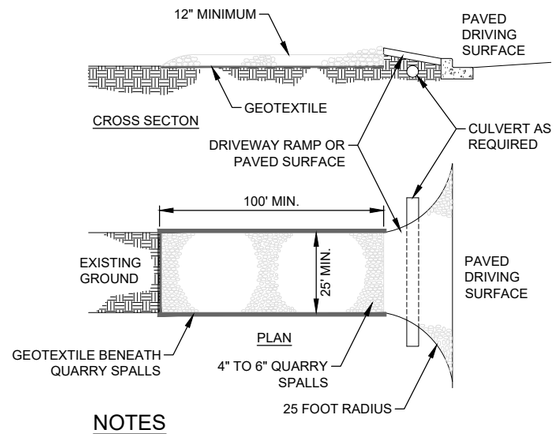
1. THE IMPLEMENTATION OF THESE TESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF TESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED, VEGETATION/LANDSCAPING IS ESTABLISHED AND THE ENTIRE SITE IS STABILIZED.
2. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
3. THE TESC FACILITIES SHOWN ON THIS PLAN SHALL BE CONSTRUCTED PRIOR TO AND/OR IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
4. THE TESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, TESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
5. THE TESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION.
6. THE TESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT OR AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTION.
7. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN SEDIMENT TRAP.
8. ALL CATCH BASINS AND CONVEYANCE LINES SHALL BE CLEANED PRIOR TO PAVING. THE CLEANING OPERATION SHALL NOT FLUSH SEDIMENT-LADEN WATER INTO THE DOWNSTREAM SYSTEM.
9. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES MAY BE REQUIRED TO ENSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.



NOTES

1. TREE PROTECTION FENCING SHALL BE MADE OF HIGH VISIBILITY FENCE AT LOCATIONS SHOWN ON THE TESC PLAN. SEE HIGH VISIBILITY FENCE DETAIL FOR INSTALLATION INSTRUCTIONS. AVOID DRIVING STAKES INTO TREE ROOTS. INSTALL TREE PROTECTION AREA SIGNS ON ALL SIDES OF FENCED TREE PROTECTION AREAS.
2. FOR ROOTS OVER 1-IN DIA. THAT ARE DAMAGED DURING CONSTRUCTION, MAKE A CLEAN, STRAIGHT CUT TO REMOVE THE DAMAGED PORTION. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND SHALL BE COVERED WITH SOIL AS SOON AS POSSIBLE.
3. WORK WITHIN PROTECTION FENCE SHALL BE CONDUCTED BY HAND OR WITH SMALL EQUIPMENT TO PROTECT SMALLER TREE CLUSTERS AND INDIVIDUAL TREES. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING.

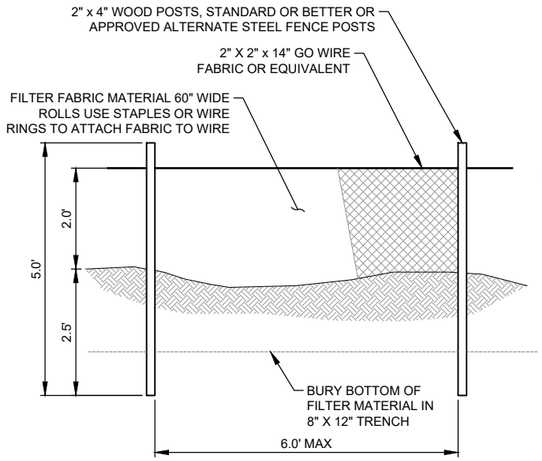
A TREE PROTECTION FENCE
N.T.S.

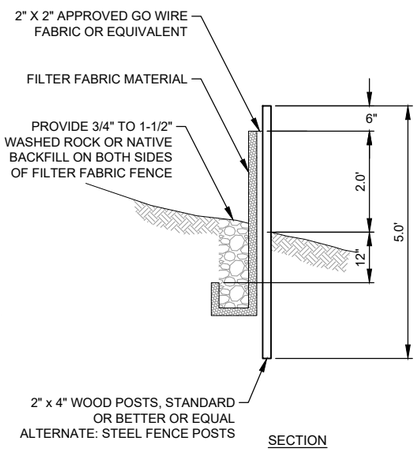


NOTES

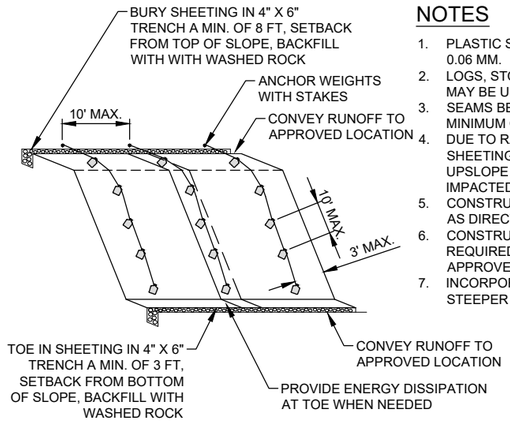
1. PAD SHALL BE REMOVED AND REPLACED WHEN SOIL IS EVIDENT ON THE SURFACE OF THE PAD OR AS DIRECTED BY THE PORT.
2. PAD SHALL BE INSTALLED IN PLANTING STRIP AS APPROPRIATE.
3. PAD THICKNESS SHALL BE INCREASED IF SOIL CONDITIONS DICTATE OR PER THE DIRECTION OF THE PORT.
4. MINIMUM DIMENSIONS MAY BE MODIFIED AS REQUIRED BY SITE CONDITIONS UPON APPROVAL OF THE PORT.
5. PROTECT CONCRETE CURB FROM DAMAGE. CUT, REMOVE AND REPLACE ANY DAMAGED SECTIONS 5' MIN.

B CONSTRUCTION ENTRANCE
N.T.S.





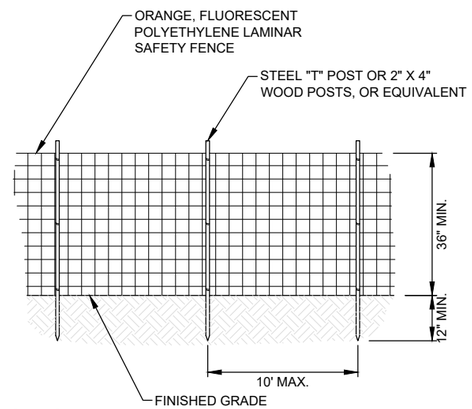
C SILT FENCE
N.T.S.



NOTES

1. PLASTIC SHEETING TO BE MIN. THICKNESS OF 0.06 MM.
2. LOGS, STONES, SANDBAGS, OR EQUIVALENT MAY BE USED TO WEIGHT PLASTIC SHEETING.
3. SEAMS BETWEEN SHEETS MUST OVERLAP A MINIMUM OF 12 IN. AND BE WEIGHTED OR TAPED.
4. DUE TO RAPID RUNOFF CAUSED BY PLASTIC SHEETING, THIS METHOD SHALL NOT BE USED UPSLOPE OF AREAS THAT MIGHT BE ADVERSELY IMPACTED BY CONCENTRATED RUNOFF.
5. CONSTRUCT BERM OR SWALE AT TOP OF SLOPE AS DIRECTED BY THE PORT.
6. CONSTRUCT DITCH AT BASE OF SLOPE AS REQUIRED BY THE PORT, DISCHARGE TO APPROVED LOCATION.
7. INCORPORATE WATTLE WHERE NEEDED FOR STEEPER SLOPE STABILIZATION.

D PLASTIC ON SLOPE (FOR TEMPORARY STOCKPILES)
N.T.S.



NOTES

1. DO NOT NAIL OR STAPLE FENCE TO EXISTING TREES OR UTILITY POLES.
2. ANY DAMAGE TO THE FENCE SHALL BE REPAIRED IMMEDIATELY.

E HIGH VISIBILITY CONSTRUCTION FENCE
N.T.S.

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LOWER WAPATO CREEK HABITAT PROJECT
TESC AND DEMOLITION NOTES AND DETAILS

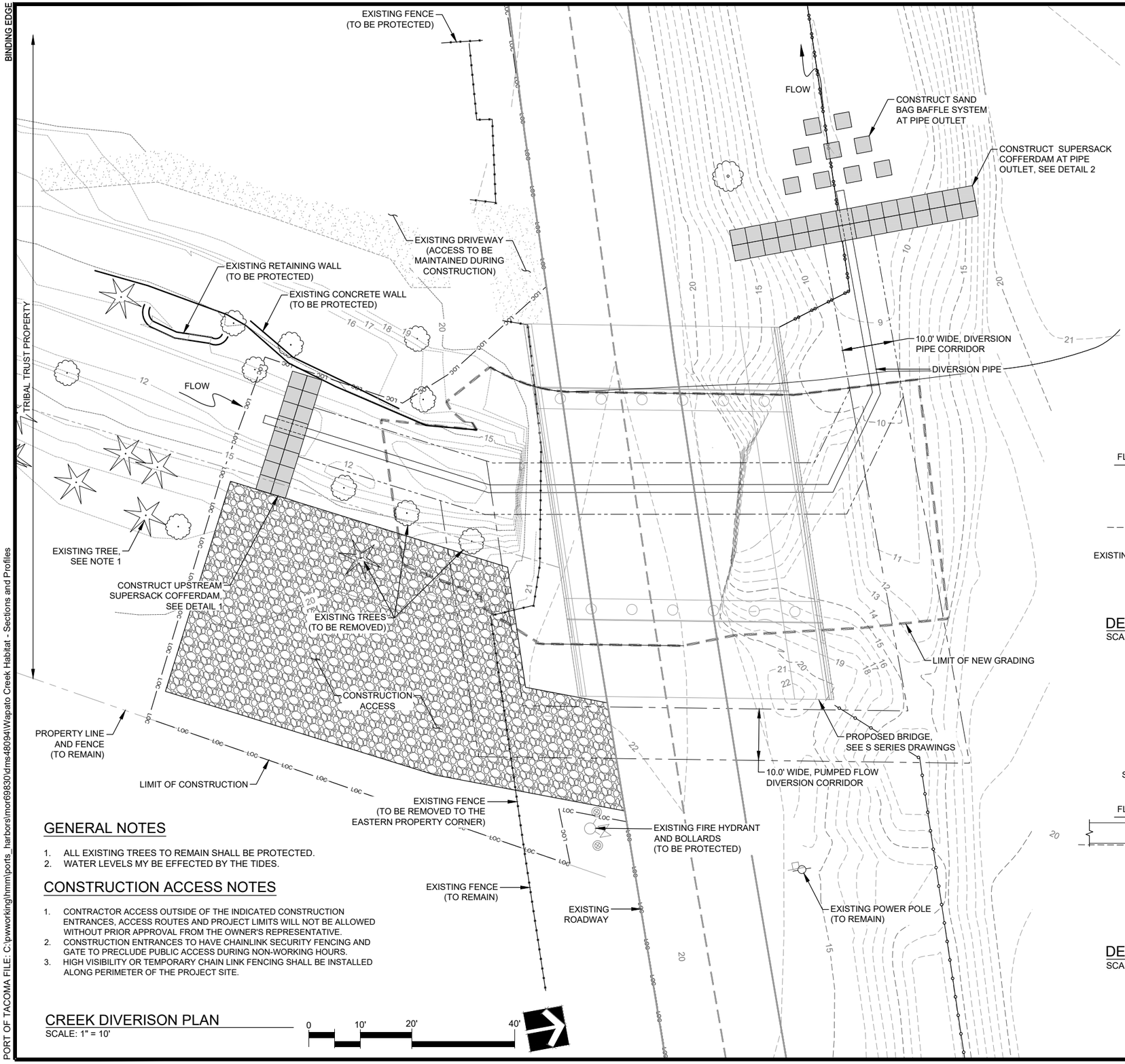
CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E
M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

SECTION: 1

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GENERAL NOTES

1. ALL EXISTING TREES TO REMAIN SHALL BE PROTECTED.
2. WATER LEVELS MY BE EFFECTED BY THE TIDES.

CONSTRUCTION ACCESS NOTES

1. CONTRACTOR ACCESS OUTSIDE OF THE INDICATED CONSTRUCTION ENTRANCES, ACCESS ROUTES AND PROJECT LIMITS WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE OWNER'S REPRESENTATIVE.
2. CONSTRUCTION ENTRANCES TO HAVE CHAINLINK SECURITY FENCING AND GATE TO PRECLUDE PUBLIC ACCESS DURING NON-WORKING HOURS.
3. HIGH VISIBILITY OR TEMPORARY CHAIN LINK FENCING SHALL BE INSTALLED ALONG PERIMETER OF THE PROJECT SITE.

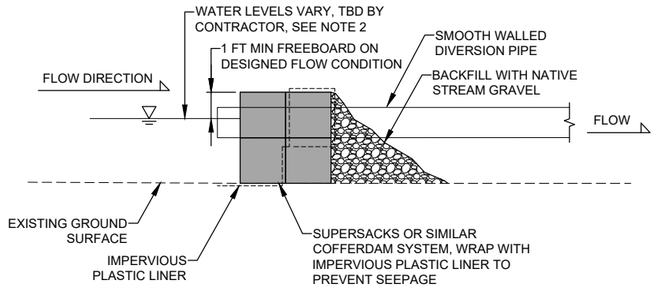
CREEK DIVERISON PLAN

SCALE: 1" = 10'

0 10' 20' 40'

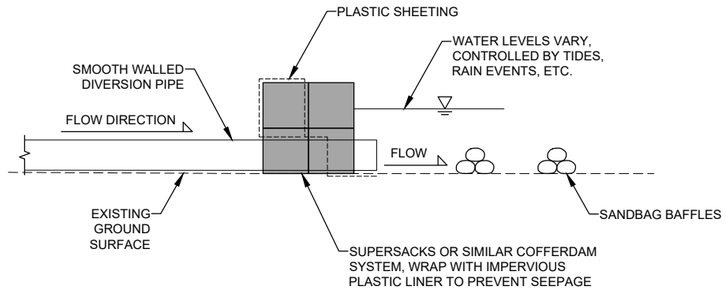
FLOW DIVERSION NOTES

1. THE CONTRACTOR SHALL HAVE A PROFESSIONAL ENGINEER PREPARE A FLOW DIVERSION PLAN, SEE SPECIFICATIONS. FLOW DIVERSION PLAN SHALL INCLUDE A RECOVERY PLAN TO ENSURE SAFE CAPTURE AND RELOCATION OF FISH TRAPPED IN THE WORK ZONE.
2. FLOW DIVERSION SYSTEM SHALL BE DESIGNED FOR, AT A MINIMUM, 2-YR PEAK FLOW CONDITIONS OR THE REQUIREMENTS OF THE HPA, WHICHEVER IS STRICTER.
3. THE PHASING AND DESIGN OF THE FLOW DIVERSION WITH RESPECT TO THE WORK SHALL BE DESIGNED BY THE CONTRACTOR (SEE TECHNICAL SPECIFICATIONS FOR REQUIREMENTS). FLOW DIVERSION IS RECOMMENDED TO OCCUR IN TWO PHASES:
   - PHASE 1 - TEMPORARY FLOW DIVERSION BYPASS PUMP SYSTEM IS USED TO DIVERT FLOW AROUND BRIDGE CONSTRUCTION AREA. COFFERDAMS ARE INSTALLED UPSTREAM AND DOWNSTREAM OF THE BRIDGE CONSTRUCTION AREA TO ISOLATE THE WORK AREA. DEWATER WORK AREA. CULVERTS ARE REMOVED AND A BYPASS PIPE IS INSTALLED TO ALLOW GRAVITY FLOW DIVERSION DURING BRIDGE CONSTRUCTION. LOGISTICS AND TIMING FOR PHASE 2 IS THE RESPONSIBILITY OF THE CONTRACTOR AND PART OF THE FLOW DIVERSION PLAN.
   - PHASE 2 - ONCE BRIDGE CONSTRUCTION IS COMPLETE, CONSTRUCT STREAM CHANNEL WITHIN THE BRIDGE CONSTRUCTION AREA. A TEMPORARY PUMPED FLOW DIVERSION SYSTEM MAY BE NEEDED. ONCE CONSTRUCTION IS COMPLETE, DIVERT FLOW USING A TEMPORARY PUMPED SYSTEM, REMOVE BYPASS PIPE, REMOVE COFFERDAMS, AND RETURN FLOW TO CHANNEL. LOGISTICS AND TIMING FOR PHASE 2 IS THE RESPONSIBILITY OF THE CONTRACTOR AND PART OF THE FLOW DIVERSION PLAN.
4. INSTALLATION OF A DIVERSION PIPE OUTSIDE THE DIVERSION PIPE CORRIDOR WILL NOT BE ALLOWED WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
5. GRADING MAY BE REQUIRED DOWNSTREAM OF THE CULVERTS PRIOR TO INSTALLATION OF THE DIVERSION PIPE.
6. ALL PUMPS REQUIRE SCREENS DESIGNED TO WASHINGTON STATE AND NATIONAL MARINE FISHERIES SERVICE SPECIFICATIONS TO PREVENT HARM TO FISH.
7. PUMPED FLOW DIVERSION IS ONLY PERMITTED ON EAST SIDE OF BRIDGE CONSTRUCTION AREA. EXACT ALIGNMENT TO BE DETERMINED BY THE CONTRACTOR.



DETAIL 1 - UPSTREAM COFFERDAM

SCALE: 1" = 5'



DETAIL 2 - DOWNSTREAM COFFERDAM

SCALE: 1" = 5'

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LOWER WAPATO CREEK HABITAT PROJECT
SITE ACCESS AND FLOW DIVERSION PLAN

CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
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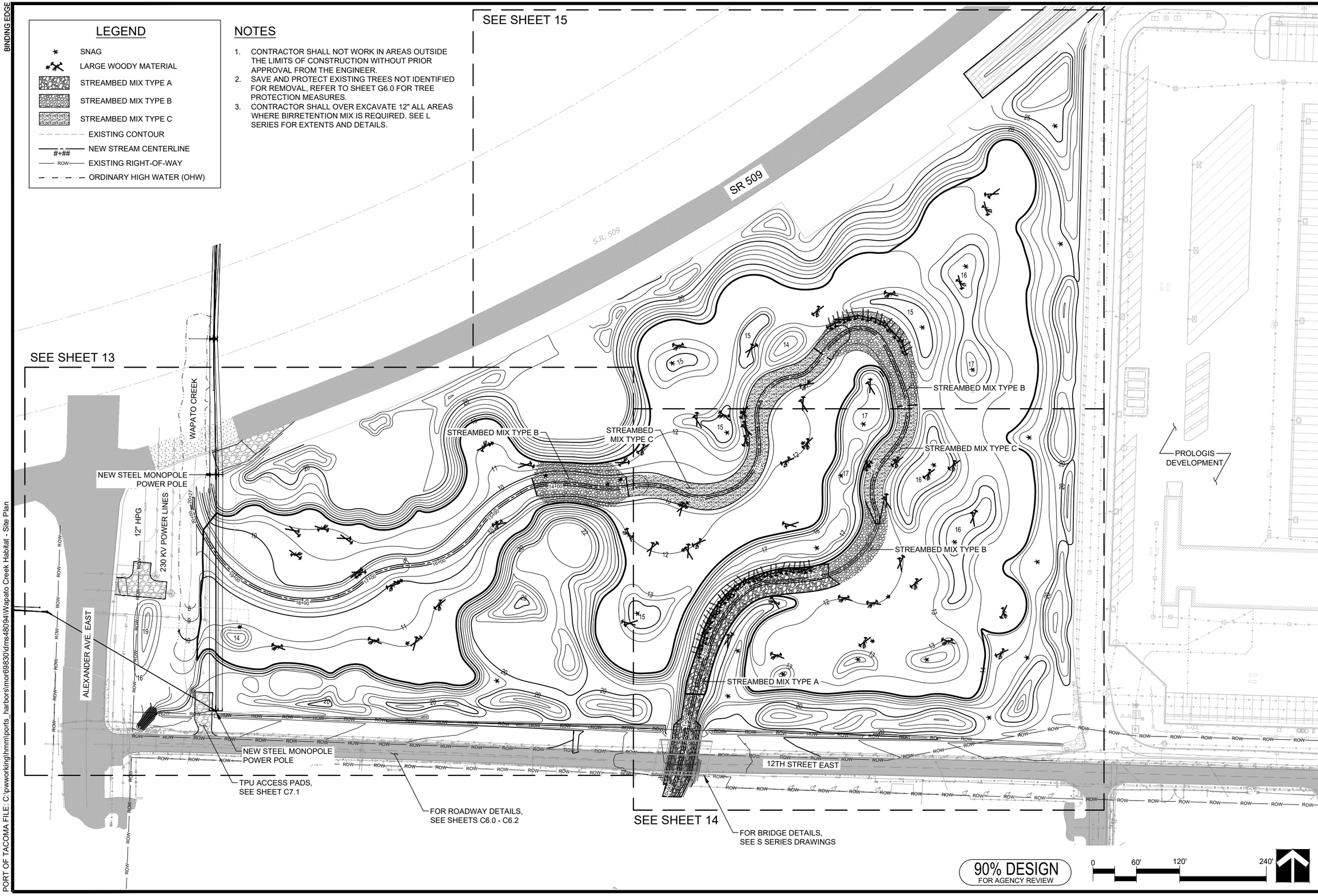
BINDING EDGE

LEGEND

- SNAG
- LARGE WOODY MATERIAL
- STREAMBED MIX TYPE A
- STREAMBED MIX TYPE B
- STREAMBED MIX TYPE C
- EXISTING CONTOUR
- NEW STREAM CENTERLINE (#+##)
- EXISTING RIGHT-OF-WAY (ROW)
- ORDINARY HIGH WATER (OHW)

NOTES

1. CONTRACTOR SHALL NOT WORK IN AREAS OUTSIDE THE LIMITS OF CONSTRUCTION WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
2. SAVE AND PROTECT EXISTING TREES NOT IDENTIFIED FOR REMOVAL, REFER TO SHEET G6.0 FOR TREE PROTECTION MEASURES.
3. CONTRACTOR SHALL OVER EXCAVATE 12" ALL AREAS WHERE BIRRETENTION MIX IS REQUIRED. SEE L SERIES FOR EXTENTS AND DETAILS.



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LOWER WAPATO CREEK HABITAT PROJECT

OVERALL GRADING PLAN

6656
C1.0
12 OF 50

CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
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BINDING EDGE

LEGEND

- SNAG
- LARGE WOODY MATERIAL
- EXISTING PAVING
- STREAMBED MIX TYPE A
- STREAMBED MIX TYPE B
- STREAMBED MIX TYPE C
- EXISTING CONTOUR
- NEW STREAM CENTERLINE (#+##)
- EXISTING RIGHT-OF-WAY (ROW)
- ORDINARY HIGH WATER (OHW)
- OVERHEAD POWER LINE
- BURIED POWER LINE
- BURIED TELEPHONE LINE
- APPROX. BURIED CABLE LINE
- BURIED NATURAL GAS LINE
- STORM LINE
- SANITARY SEWER LINE
- ORDINARY HIGH WATER (OHW)
- WATER LINE
- FENCE LINE

MATCHLINE B (SEE SHEET 15)

SR 509

TPU ACCESS PADS, SEE SHEET C7.1

STREAMBED MIX TYPE B

STREAMBED MIX TYPE C

WAPATO CREEK

A C2.0

B C2.0

C C2.1

I C3.0

ALEXANDER AVE. EAST

12TH STREET EAST

TPU ACCESS PADS, SEE SHEET C7.1

RIPRAP OUTLET PROTECTION DETAIL, SEE SHEET C6.0

MATCHLINE A (SEE SHEET 14)

90% DESIGN FOR AGENCY REVIEW

0 30' 60' 120'

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LOWER WAPATO CREEK HABITAT PROJECT
GRADING PLAN 1

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13 OF 50

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E
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PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

SECTION: 1

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BINDING EDGE

MATCHLINE B (SEE SHEET 15)

MATCHLINE A (SEE SHEET 13)

STREAMBED MIX TYPE C

STREAMBED MIX TYPE B

STREAMBED MIX TYPE A

WAPATO CREEK

G C3.0

F C3.1

E C3.1

D C2.1

LEGEND

- SNAG
- LARGE WOODY MATERIAL
- EXISTING PAVING
- STREAMBED MIX TYPE A
- STREAMBED MIX TYPE B
- STREAMBED MIX TYPE C
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- STORM LINE
- SANITARY SEWER LINE
- ORDINARY HIGH WATER (OHW)
- WATER LINE
- FENCE LINE

90% DESIGN
FOR AGENCY REVIEW

0 30' 60' 120'

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TACOMA, WA 98421

LOWER WAPATO CREEK HABITAT PROJECT

GRADING PLAN 2

CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

6656
C1.2
14 OF 50

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PORT OF TACOMA FILE: C:\pwworking\hmm\ports_harbors\mor69830\dms480941\Wapato Creek Habitat - Site Plan

BINDING EDGE

LEGEND

- SNAG
- LARGE WOODY MATERIAL
- EXISTING PAVING
- STREAMBED MIX TYPE A
- STREAMBED MIX TYPE B
- STREAMBED MIX TYPE C
- EXISTING CONTOUR
- NEW STREAM CENTERLINE
- EXISTING RIGHT-OF-WAY
- ORDINARY HIGH WATER (OHW)
- OVERHEAD POWER LINE
- BURIED POWER LINE
- BURIED TELEPHONE LINE
- APPROX. BURIED CABLE LINE
- BURIED NATURAL GAS LINE
- STORM LINE
- SANITARY SEWER LINE
- ORDINARY HIGH WATER (OHW)
- WATER LINE
- FENCE LINE

S.R. 509

MATCHLINE A (SEE SHEET 13)

MATCHLINE B (SEE SHEET 14)

STREAMBED MIX TYPE C

STREAMBED MIX TYPE B

WAPATO CREEK

H
C3.0

90% DESIGN
FOR AGENCY REVIEW

0 30' 60' 120'

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LOWER WAPATO CREEK HABITAT PROJECT

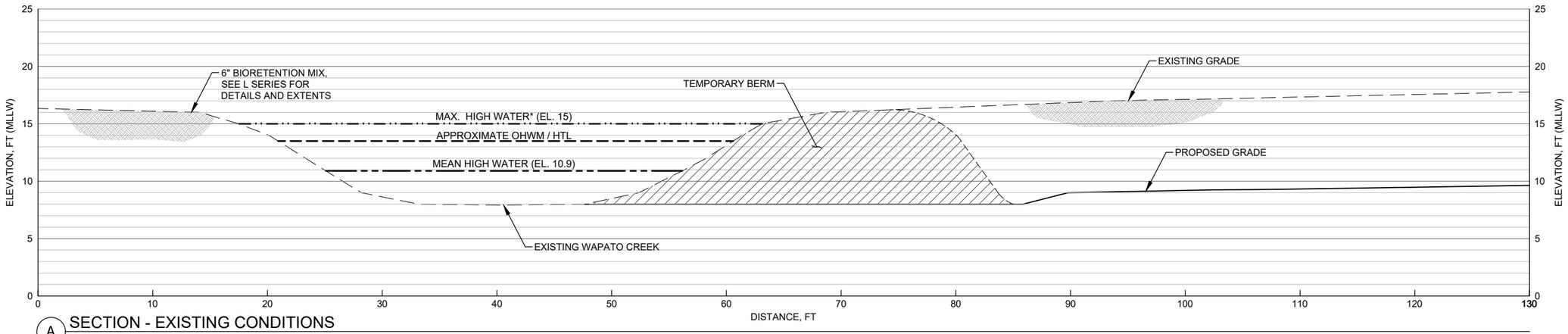
GRADING PLAN 3

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E
M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

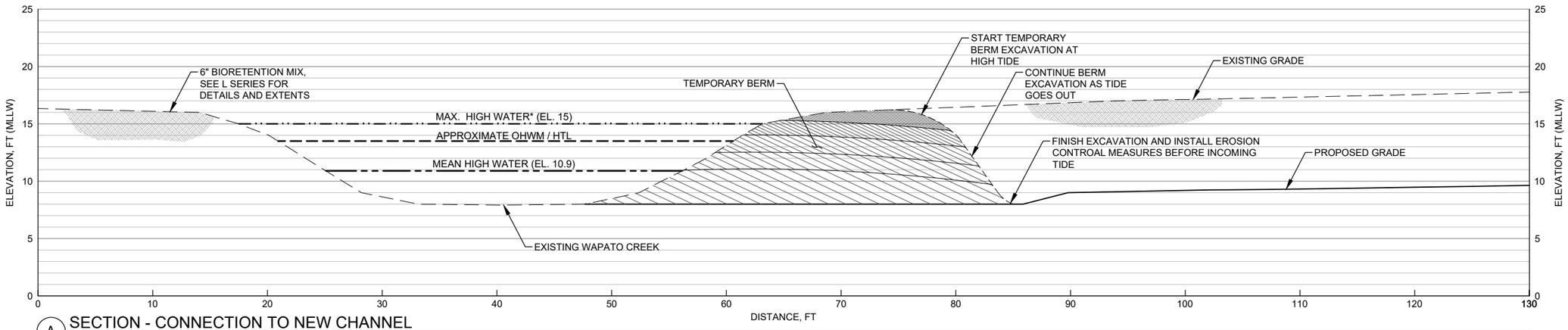
SECTION: 1

6656
C1.3
15 OF 50

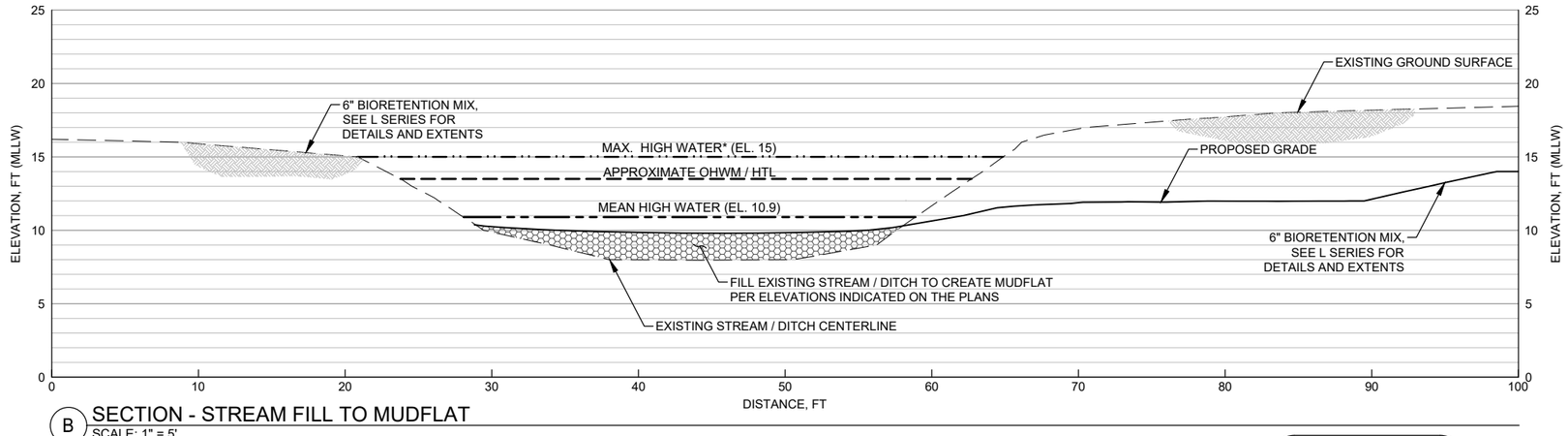
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A SECTION - EXISTING CONDITIONS
SCALE: 1" = 5'



A SECTION - CONNECTION TO NEW CHANNEL
SCALE: 1" = 5'



B SECTION - STREAM FILL TO MUDFLAT
SCALE: 1" = 5'

90% DESIGN
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LOWER WAPATO CREEK HABITAT PROJECT

GRADING SECTIONS 1

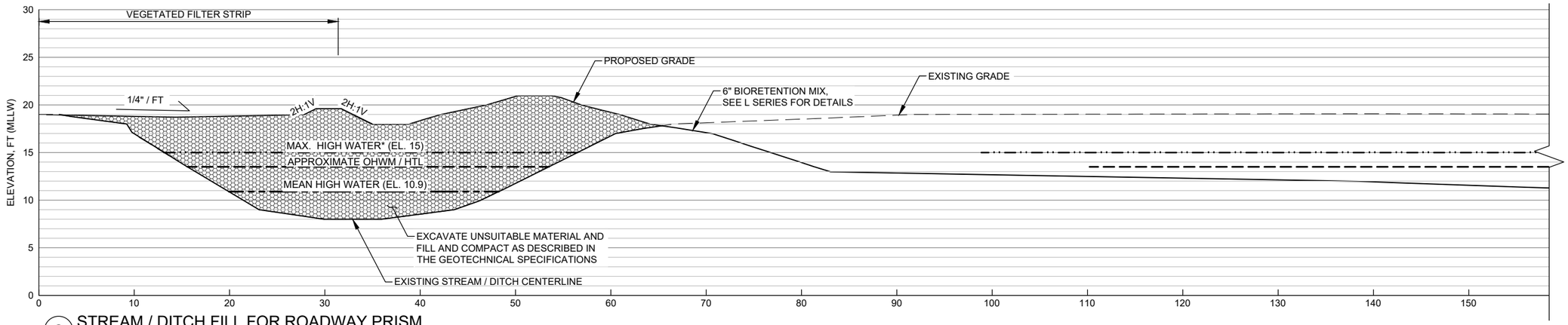
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M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

6656
C2.0
16 OF 50

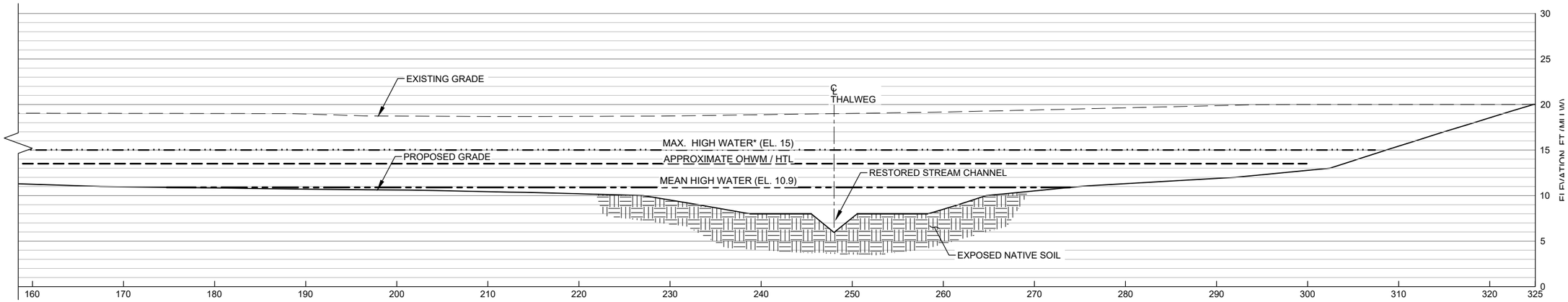
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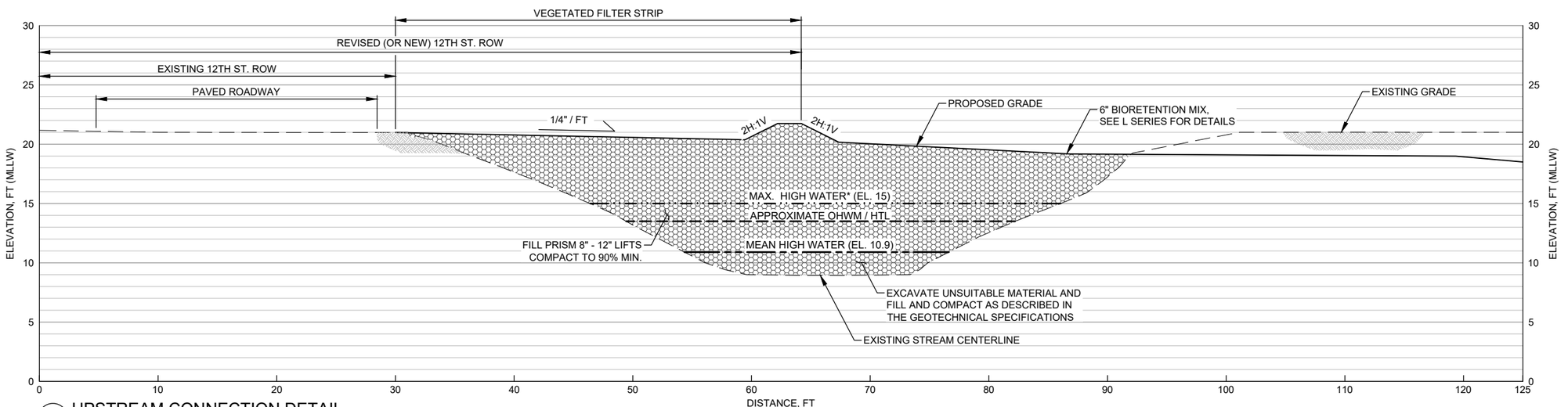
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C STREAM / DITCH FILL FOR ROADWAY PRISM
SCALE: 1" = 6'



C STREAM / DITCH FILL FOR ROADWAY PRISM
SCALE: 1" = 6'



D UPSTREAM CONNECTION DETAIL
SCALE: 1" = 5'

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FOR AGENCY REVIEW

BINDING EDGE

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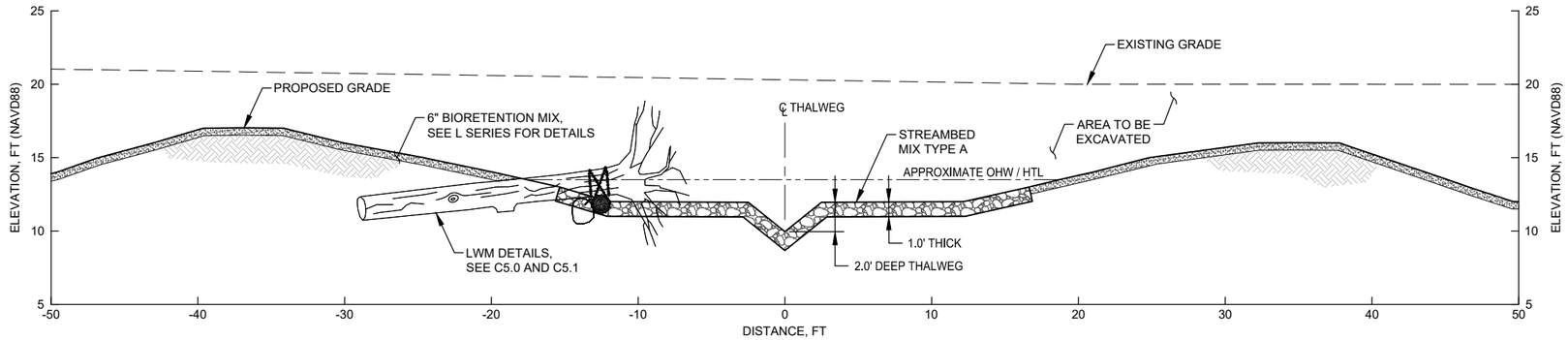
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LOWER WAPATO CREEK
HABITAT PROJECT
GRADING SECTIONS 2

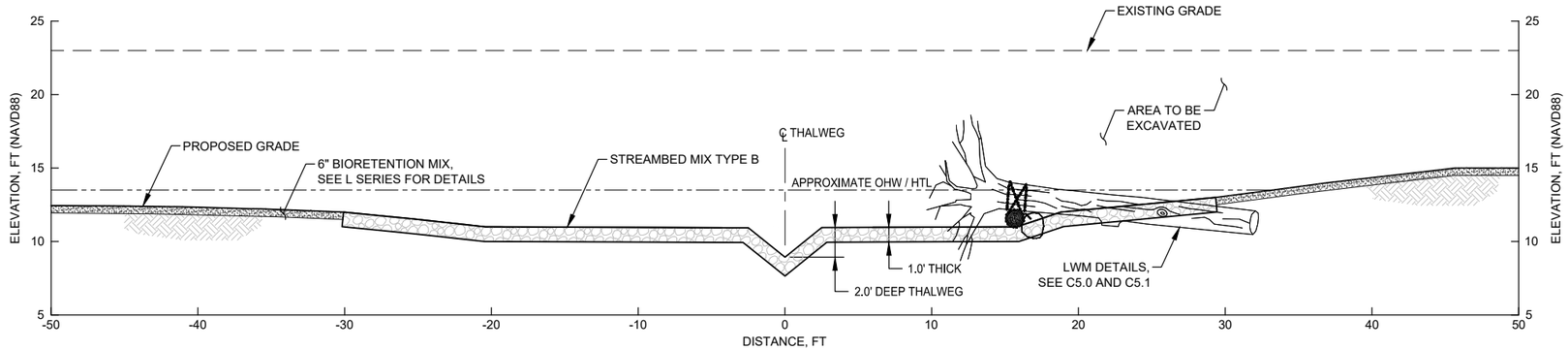
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CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

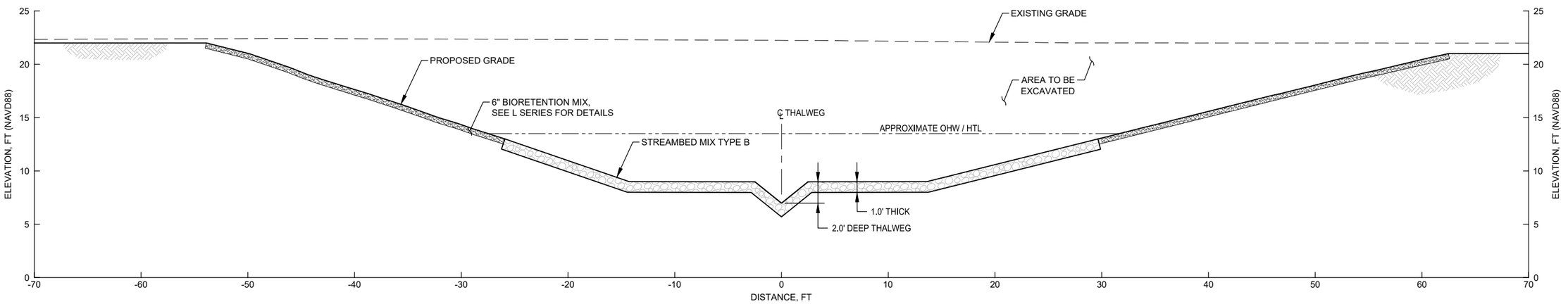
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G SECTION - NEW CHANNEL AT STATION 2+90
SCALE: 1" = 5'



H SECTION - NEW CHANNEL AT STATION 8+00
SCALE: 1" = 5'



I SECTION - NEW CHANNEL AT STATION 13+75
SCALE: 1" = 5'

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FOR AGENCY REVIEW

0 5' 10' 20'

BINDING EDGE

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LOWER WAPATO CREEK HABITAT PROJECT

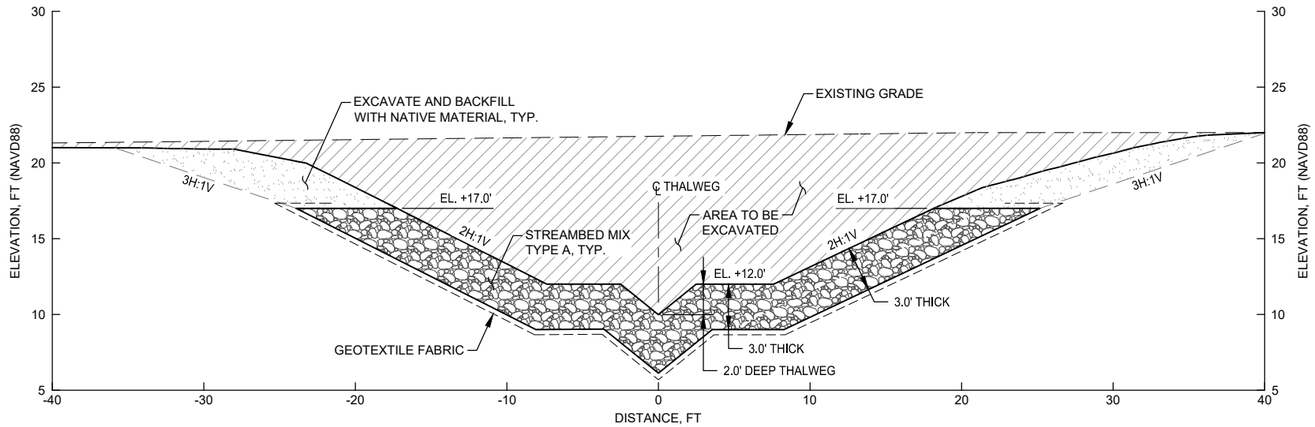
STREAM CROSS SECTIONS 1

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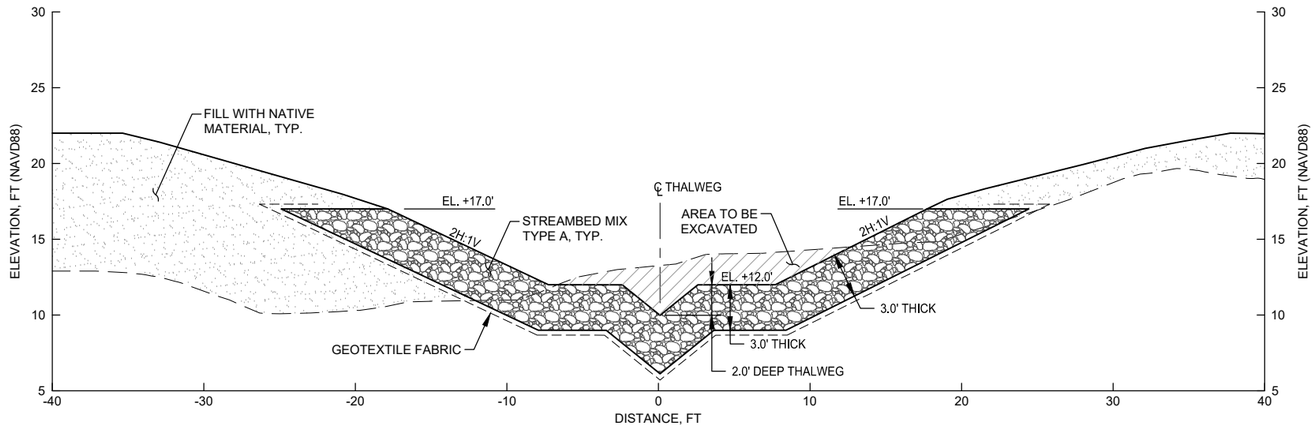
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M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	SECTION: 1

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BINDING EDGE



E SECTION - NEW CHANNEL AT BRIDGE (UPSTREAM)
SCALE: 1" = 5'



F SECTION - NEW CHANNEL AT BRIDGE (DOWNSTREAM)
SCALE: 1" = 5'

90% DESIGN
FOR AGENCY REVIEW

0 5' 10' 20'

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JOHN GARRETT DAWSON — STATE OF WASHINGTON — 53187 — REGISTERED PROFESSIONAL ENGINEER — 2/5/21

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DRAWING SCALE: AS NOTED

LOWER WAPATO CREEK HABITAT PROJECT

STREAM CROSS SECTIONS 2 - BRIDGE CROSSING

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C3.1
19 OF 50

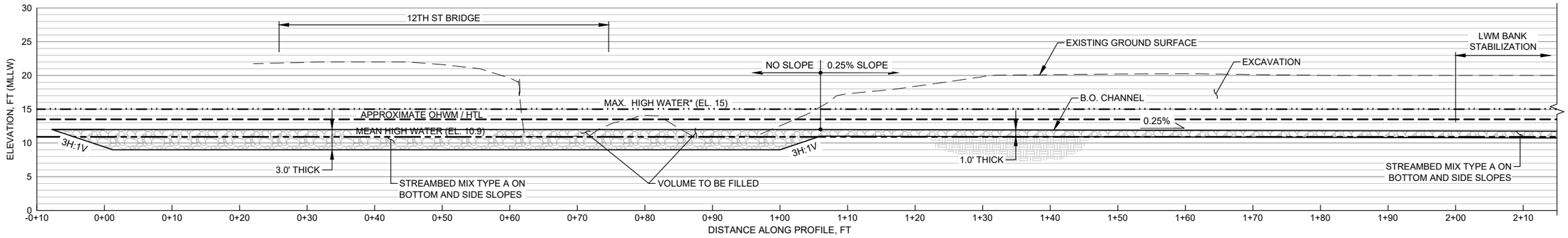
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PHASE: 90% Design

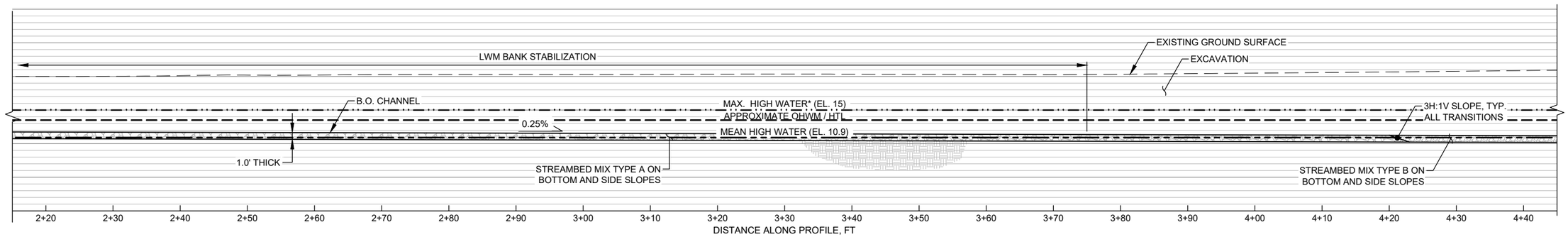
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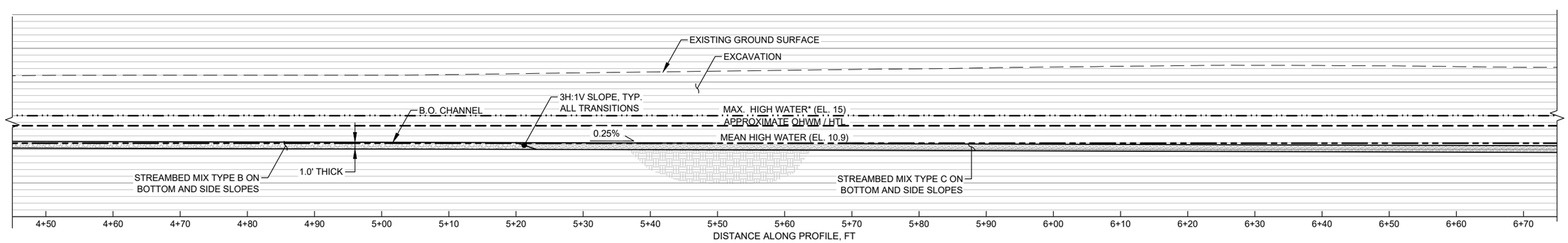
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BINDING EDGE







STREAM PROFILE

SCALE: 1" = 8'

90% DESIGN
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LOWER WAPATO CREEK HABITAT PROJECT

STREAM PROFILE 1

TOWNSHIP: 20N	RANGE: 3E	SECTION: 1	PROJ. ENGR
DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	PRINTED BY: MCR69830 Dec 10, 2020	DATE
PARCEL: 14	DRAWING SCALE: AS NOTED	PORT ADDRESS: 1 SITCOM PLAZA TACOMA, WA 98421	

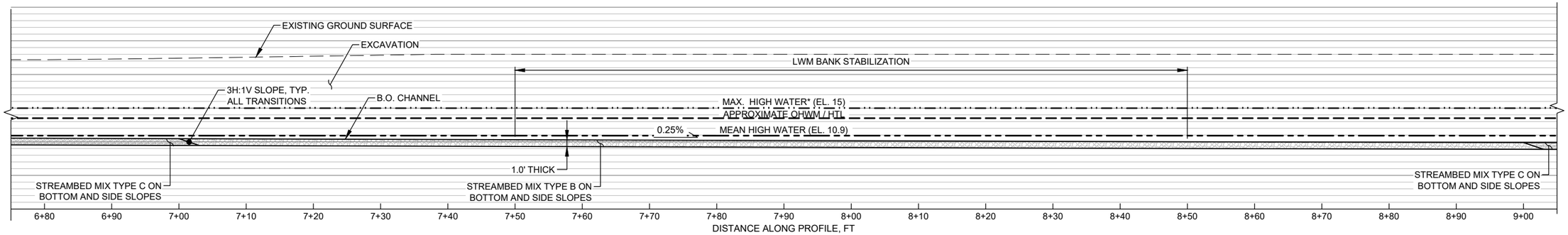
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20 OF 50

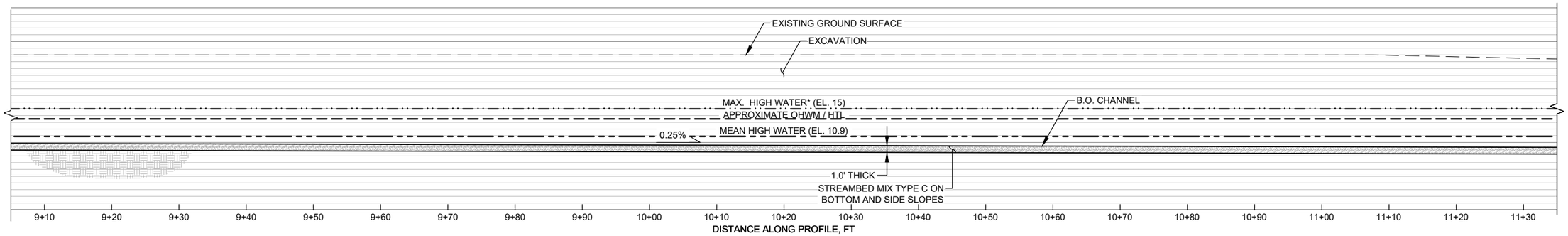
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M. ID:	101449.01
PHASE:	90% Design

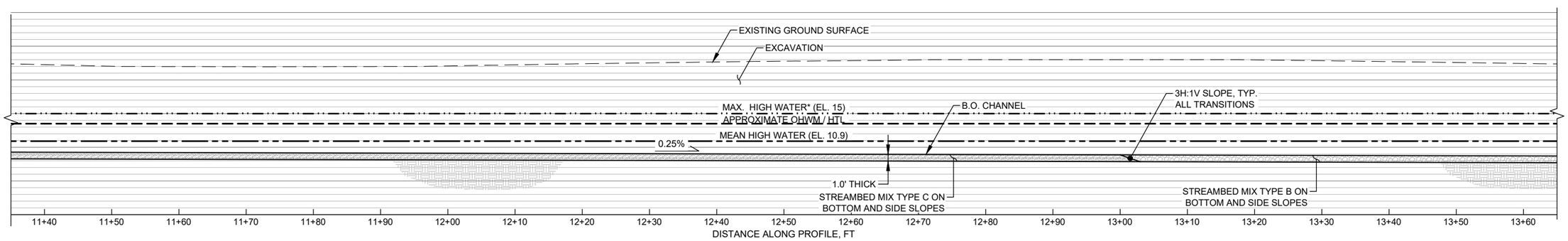
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STREAM PROFILE
SCALE: 1" = 8'

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LOWER WAPATO CREEK HABITAT PROJECT
STREAM PROFILE 2

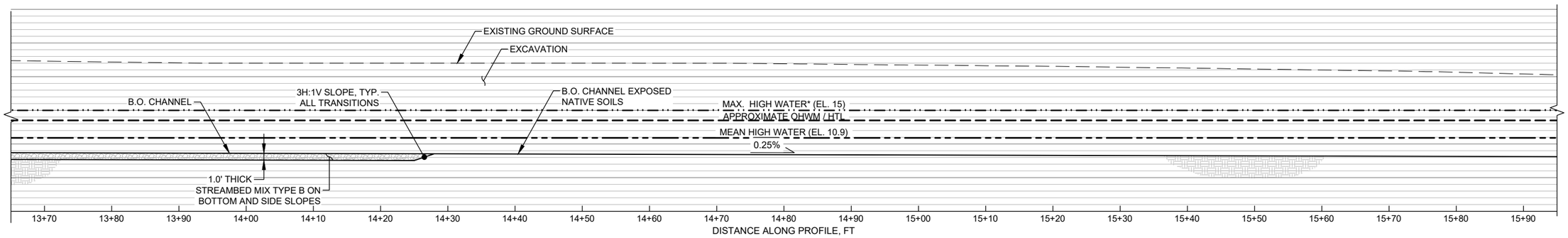
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DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)		PORT ADDRESS: 1 SITCOM PLAZA
PARCEL: 14	DRAWING SCALE: AS NOTED		TACOMA, WA 98421

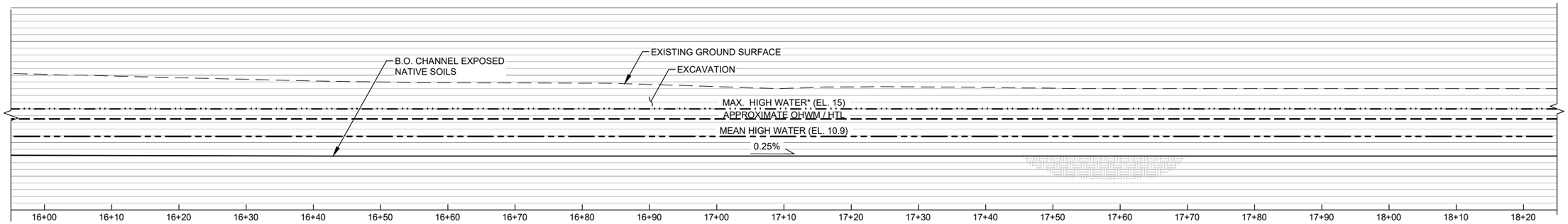
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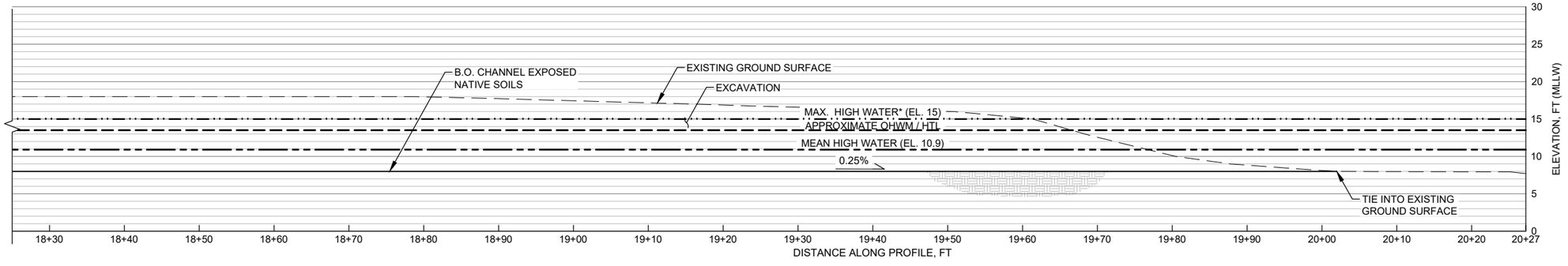
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M. ID: 101449.01
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STREAM PROFILE

SCALE: 1" = 10'

90% DESIGN
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LOWER WAPATO CREEK HABITAT PROJECT

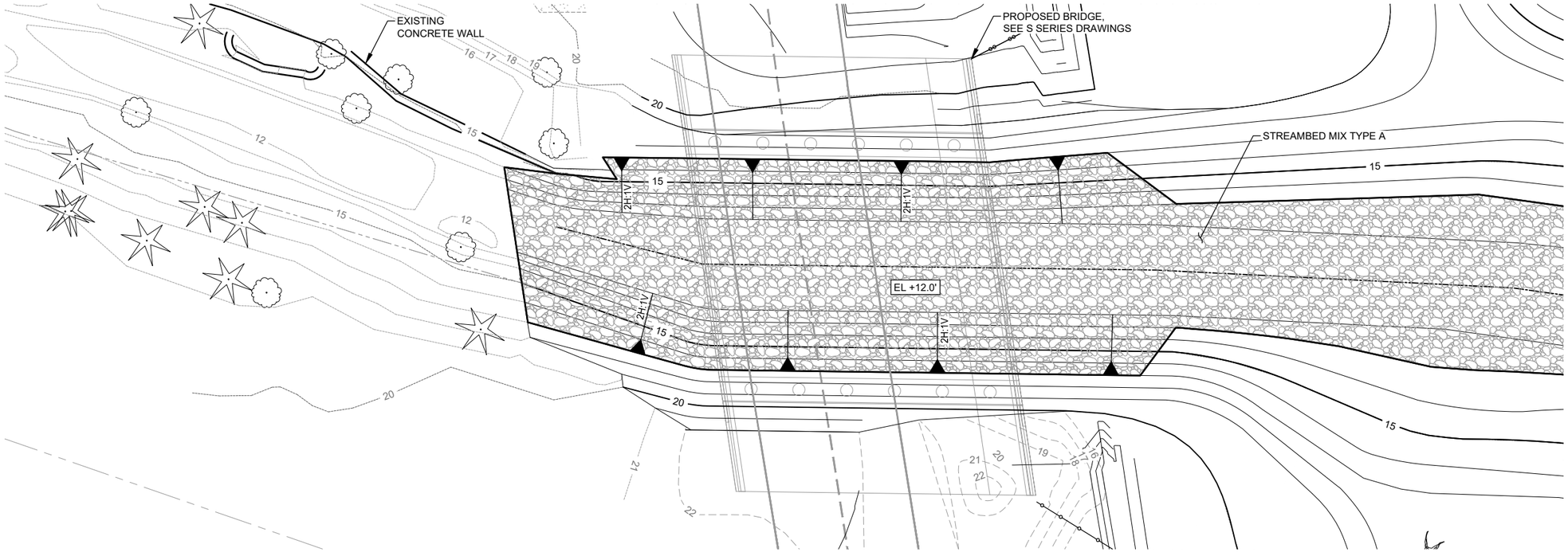
STREAM PROFILE 3

TOWNSHIP: 20N | RANGE: 3E | SECTION: 1
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PARCEL: 14 | DRAWING SCALE: AS NOTED

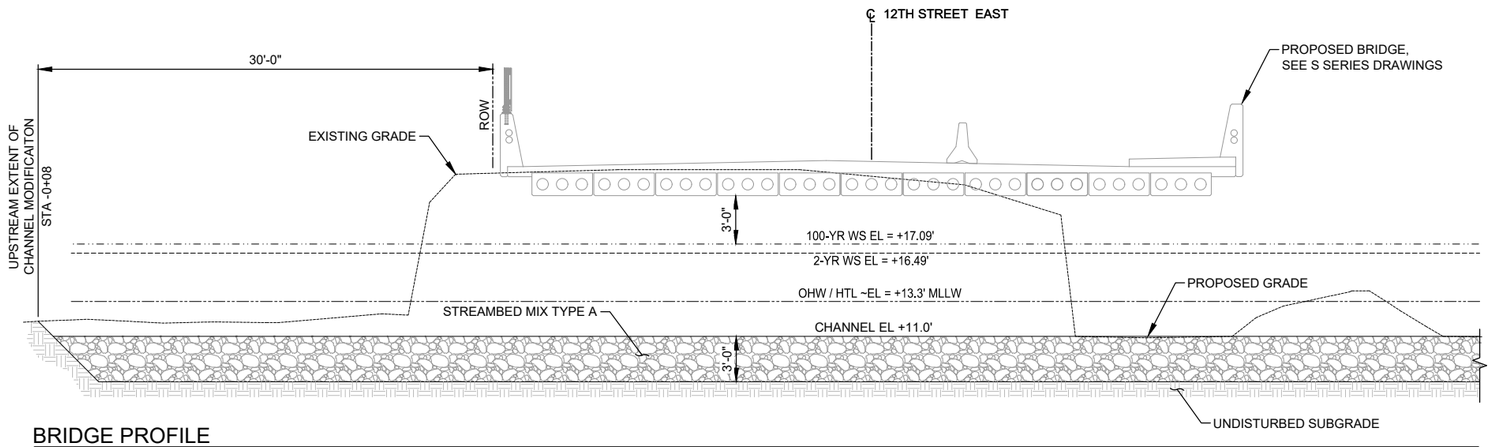
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M. ID: 101449.01
PHASE: 90% Design

6656
C4.2
22 OF 50

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BRIDGE PLAN
SCALE: 1" = 10'



BRIDGE PROFILE
SCALE: 1" = 5'

90% DESIGN
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LOWER WAPATO CREEK HABITAT PROJECT

STREAM PROFILE 4 - BRIDGE CROSSING

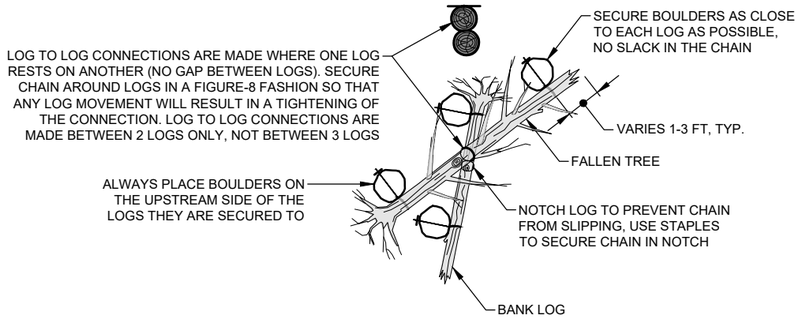
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PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

SECTION: 1

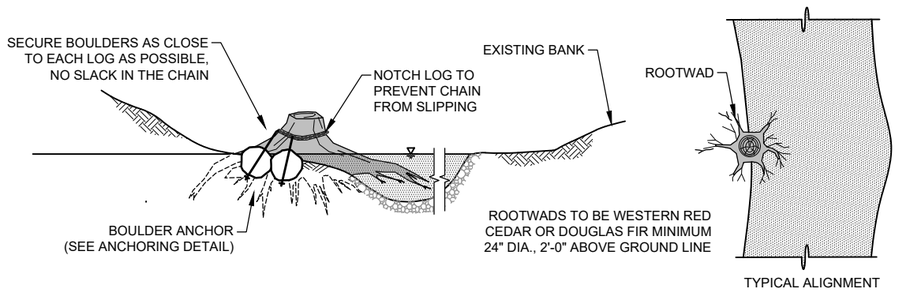
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C4.3
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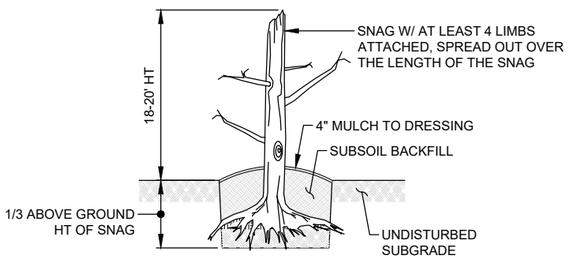
BINDING EDGE



A HABITAT LOG STRUCTURE PLAN VIEW
N.T.S.



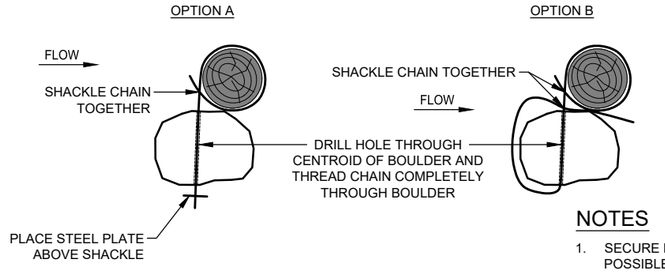
B ROOTWAD
N.T.S.



C SNAG DETAIL
N.T.S.

NOTES

1. UPRIGHT SNAGS ARE TO BE PLACED AT THE LOCATIONS SHOWN ON THE PLAN.
2. ALL SNAGS SHALL BE WESTERN RED CEDAR OR DOUGLAS-FIR TREES WITH A SUBSTANTIAL PORTION OF THEIR LIMBS LEFT INTACT. DO NOT TRIM TOPS, DAMAGED OR BROKEN TOPS ARE PREFERRED. PROVIDE LOGS WITH NUMEROUS UNTRIMMED LIMBS. LOGS USED FOR SNAGS MAY BE PARTIALLY HOLLOW AND CONTAIN CAVITIES AS LONG AS THEY ARE GENERALLY SOUND.
3. SNAGS SHALL BE A MINIMUM OF 24 INCHES IN DIAMETER AT GROUND SURFACE WHEN INSTALLED AND SHALL BE PLACED TO A DEPTH INTO THE GROUND EQUAL TO 1/3RD OF THEIR ABOVE-GROUND HEIGHT.
4. SNAGS WITH SUBSTANTIAL ROOT MASSES ATTACHED MAY BE PLACED TO THE DEPTH INDICATED AND BACKFILLED WITH COMPACTED SOIL ONLY UPON APPROVAL OF EACH SNAG INDIVIDUALLY BY THE ENGINEER.
5. ADDITIONAL LIMBS SHALL BE 2.5' MIN IN LENGTH AND 2" TO 2.5" IN DIAMETER. SEE SPECIFICATIONS FOR ADDITIONAL DETAILS.



D BOULDER ANCHOR
N.T.S.

NOTES

1. SECURE BOULDERS AS CLOSE TO EACH LOG AS POSSIBLE. NO SLACK IN THE CHAIN.
2. ALWAYS PLACE BOULDERS ON THE UPSTREAM SIDE OF THE LOGS THEY ARE SECURED TO.
3. SEE SPECIFICATIONS FOR HARDWARE DESCRIPTIONS.

HABITAT LOG STRUCTURE CONTROL POINTS

STRUCTURE NO.	NORTHING	EASTING

ROOTWAD CONTROL POINTS

STRUCTURE NO.	NORTHING	EASTING

SNAG CONTROL POINTS

STRUCTURE NO.	NORTHING	EASTING

TO BE COMPLETED PRIOR TO FINAL DESIGN

90% DESIGN
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LOWER WAPATO CREEK HABITAT PROJECT

LARGE WOODY MATERIAL DETAILS 1

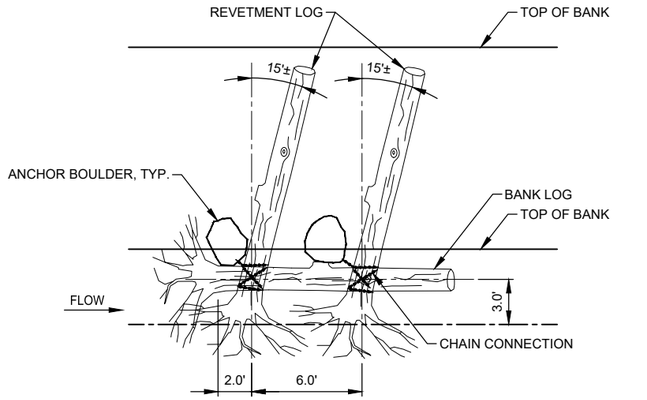
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M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	PORT ADDRESS: 1 SITCOM PLAZA
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	TACOMA, WA 98421

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C5.0
24 OF 50

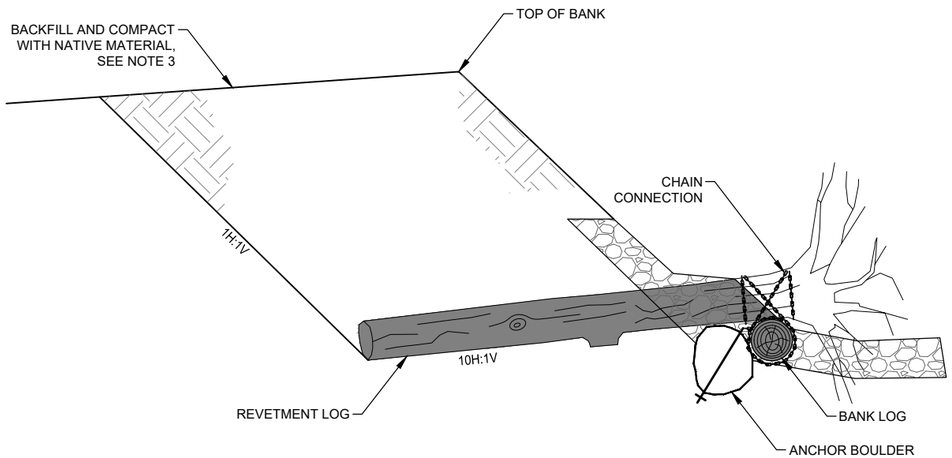
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BINDING EDGE



G TYPICAL BANK STABILIZATION STRUCTURE PLAN
N.T.S.



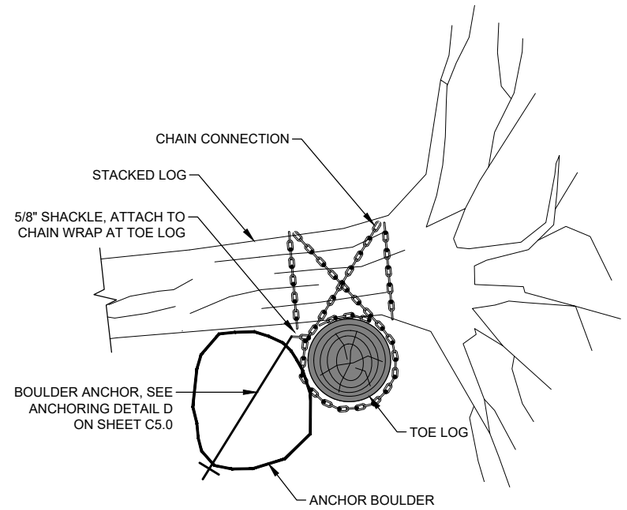
H TYPICAL BANK STABILIZATION STRUCTURE SECTION
N.T.S.

BANK STABILIZATION CONSTRUCTION SEQUENCE

1. EXCAVATE BANK SUFFICIENTLY TO INSTALL STRUCTURE
2. INSTALL BANK LOG
3. INSTALL REVETMENT LOGS, ADJUST EXCAVATION AS NEEDED
4. INSTALL BOULDER ANCHORS AND CHAIN LASHINGS
5. BACKFILL AND COMPACT BANK WITH NATIVE MATERIAL

BANK STABILIZATION CONSTRUCTION NOTES

1. EXCAVATION LIMITS SHOWN ARE APPROXIMATE AND WILL VARY BASED ON CONSTRUCTION MEANS AND METHODS, SUBSURFACE CONDITIONS AND LOCATION OF STRUCTURE. CONTRACTOR SHALL ADJUST EXCAVATION LIMITS AS NECESSARY TO COMPLETE CONSTRUCTION.
2. EXTENTS OF EMBEDDED LOG PORTIONS SHOWN ARE APPROXIMATE AND WILL VARY FOR EACH STRUCTURE. MINIMUM EMBEDMENT OF 2/3 OF THE LENGTH OF THE LOG.
3. BACKFILL IN 6 INCH LIFTS TO ~85% COMPACTION, MINIMUM 3 FT FILL OVER REVETMENT LOGS.



I BOULDER ANCHOR DETAIL
N.T.S.

LOG SCHEDULE		
LOG TYPE	DIA. (IN)	LENGTH (FT)
REVETMENT LOG	16 - 18	20
BANK LOG	12 - 16	20
FALLEN TREE	16 - 18	20

NOTES

1. ALL LARGE WOODY MATERIAL (LWM) TO BE CEDAR, FIR OR ANOTHER APPROVED CONIFEROUS SPECIES WITH ROOTWAD ATTACHED.
2. LOG DIAMETER TO BE MEASURED 8' FROM THE ROOTWAD.
3. LWM SHALL NOT BE TREATED WITH PRESERVATIVES.

BANK STABILIZATION STRUCTURE CONTROL POINTS		
STRUCTURE NO.	NORTHING	EASTING

TO BE COMPLETED PRIOR TO FINAL DESIGN

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LOWER WAPATO CREEK HABITAT PROJECT
LARGE WOODY MATERIAL DETAILS 2

6656
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25 OF 50

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E
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PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

SECTION: 1

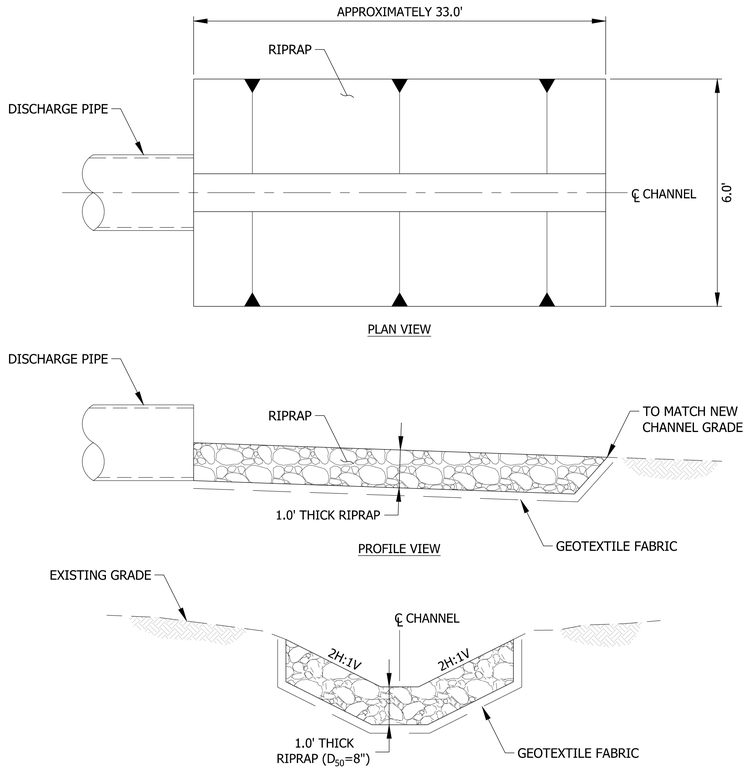
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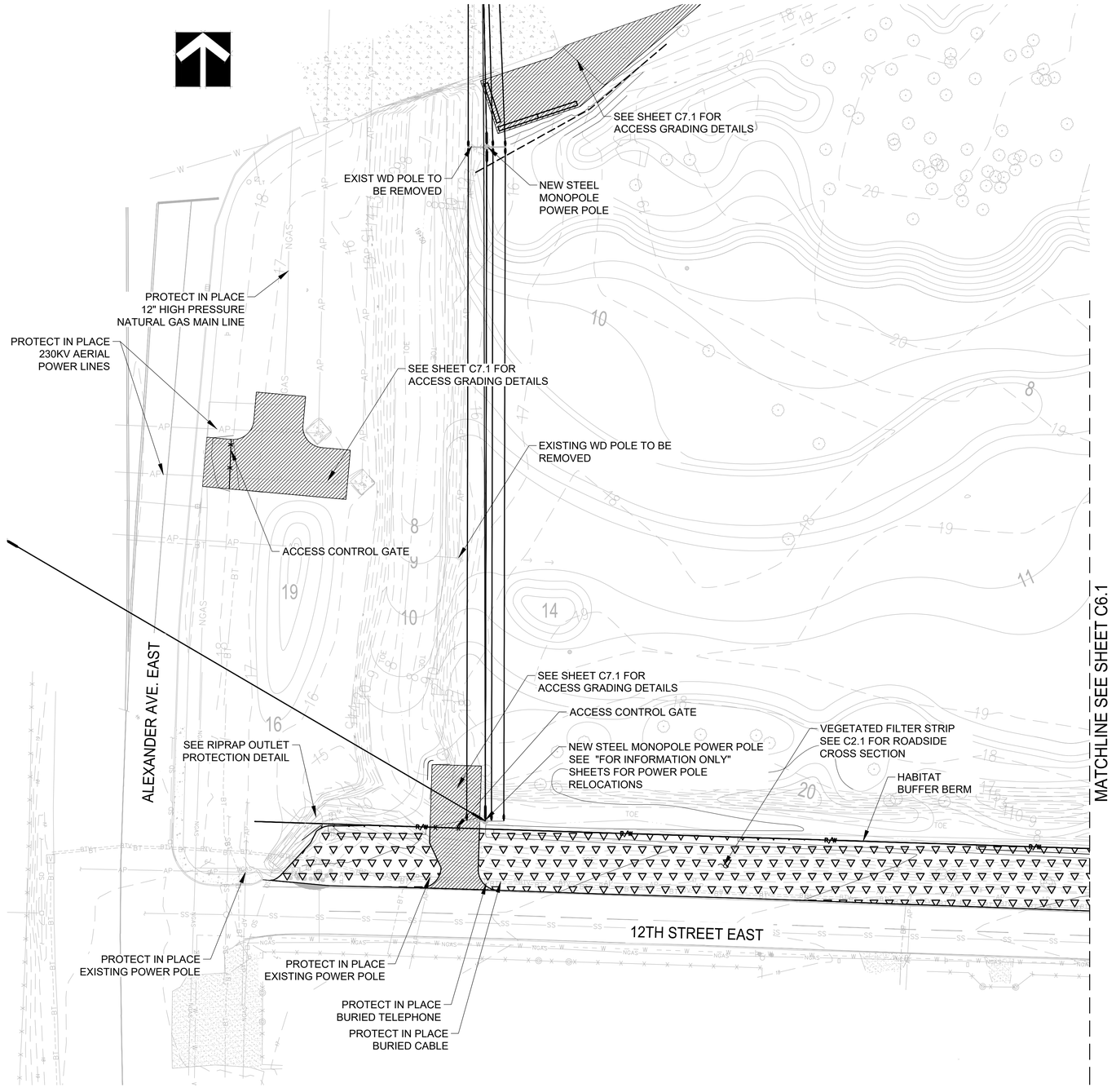
BINDING EDGE

LEGEND

- VEGETATED FILTER STRIP
- UTILITY ACCESS - +/- 2" CRUSHED SURFACING TOP BASE, 12" QUARRY SPALLS, 12" CRUSHED SURFACING BASE COURSE



A RIPRAP OUTLET PROTECTION DETAIL
N.T.S.



SITE PLAN - AREA 1
N.T.S.

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LOWER WAPATO CREEK HABITAT PROJECT
CIVIL / ROADWAY PLAN 1

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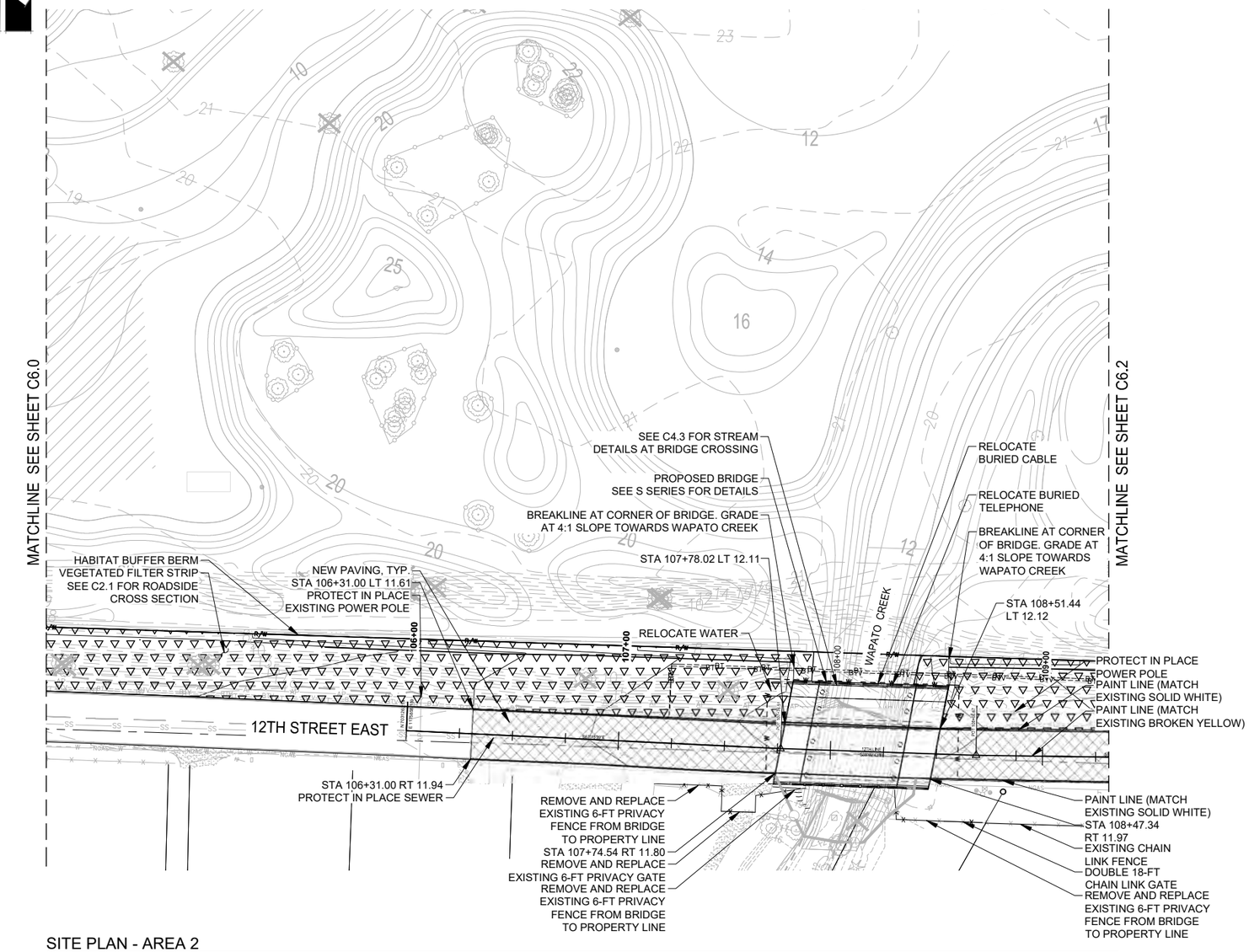
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BINDING EDGE

LEGEND

- NEW ASPHALT PAVEMENT - 6" HMA CL. 1/2 IN. PG, 8" CRUSHED SURFACING BASE COURSE
- VEGETATED FILTER STRIP



SITE PLAN - AREA 2
N.T.S.

NOTES:
1. CONTRACTOR TO COORDINATE WITH PSE FOR NEW GAS LINE DESIGN.
2. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR WATER LINE OVER WAPATO CREEK PER SPECIFICATION.

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LOWER WAPATO CREEK HABITAT PROJECT
CIVIL / ROADWAY PLAN 2

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PHASE:	90% Design	PARCEL: 14	SECTION: 1

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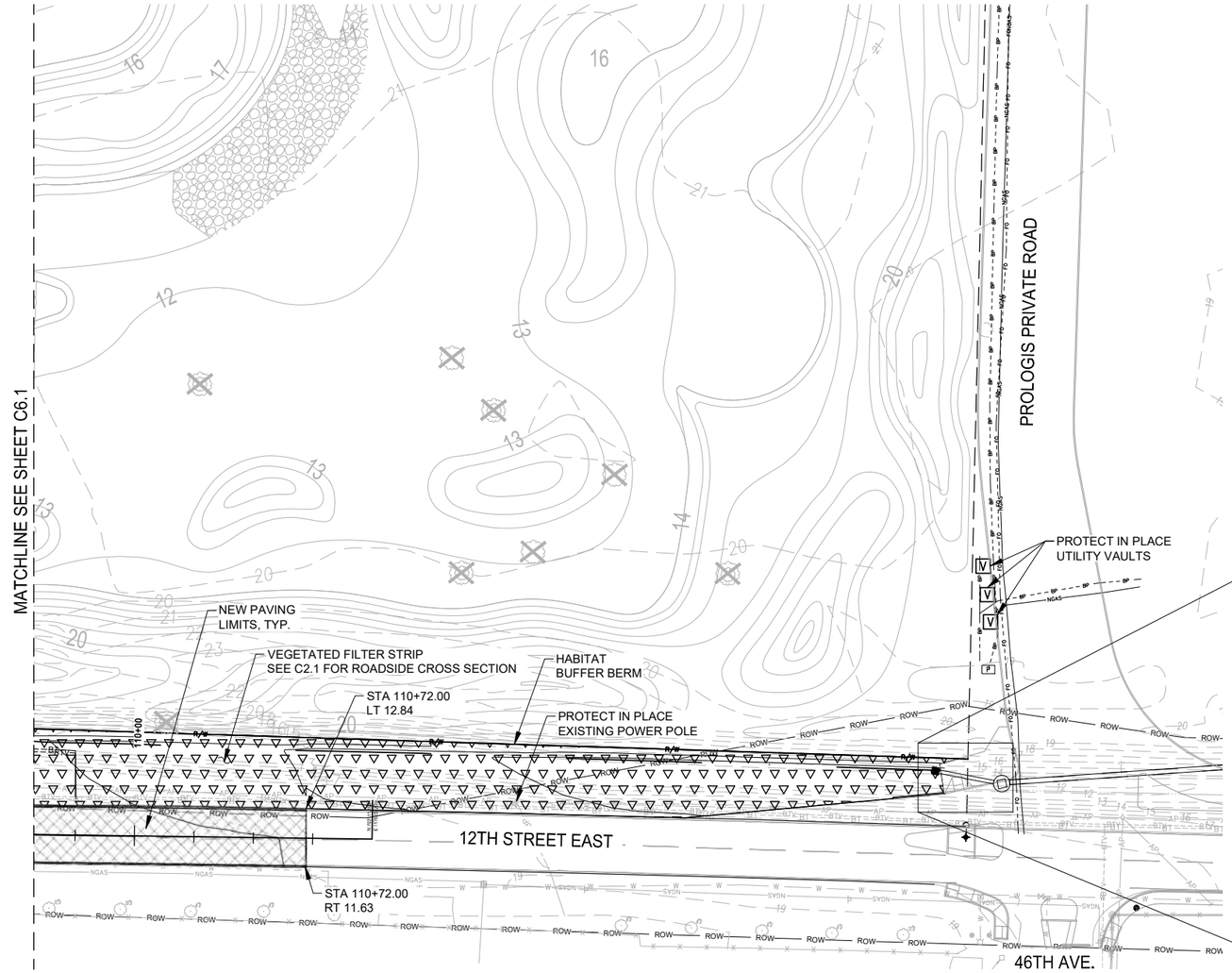
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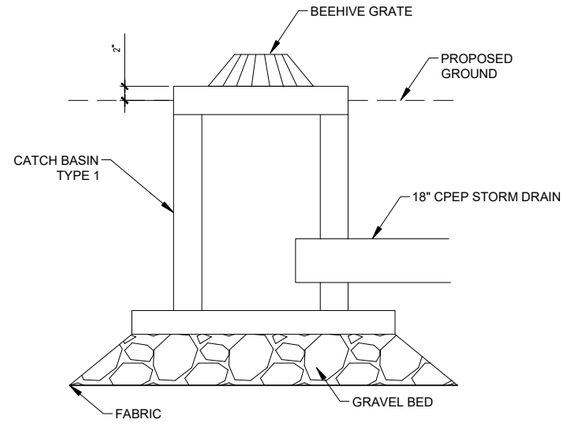
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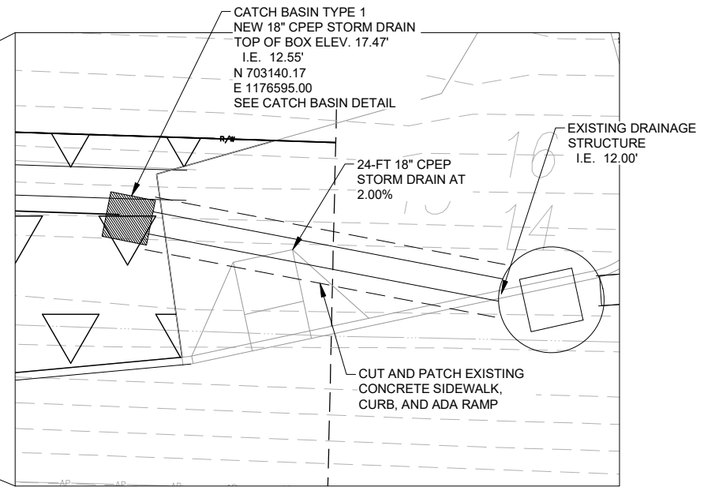
- NEW ASPHALT PAVEMENT - 6" HMA CL. 1/2 IN. PG, 8" CRUSHED SURFACING BASE COURSE
- VEGETATED FILTER STRIP



SITE PLAN - AREA 3
N.T.S.



CATCH BASIN TYPE 1 DETAIL
N.T.S.



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LOWER WAPATO CREEK HABITAT PROJECT
CIVIL / ROADWAY PLAN 3

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28 OF 50

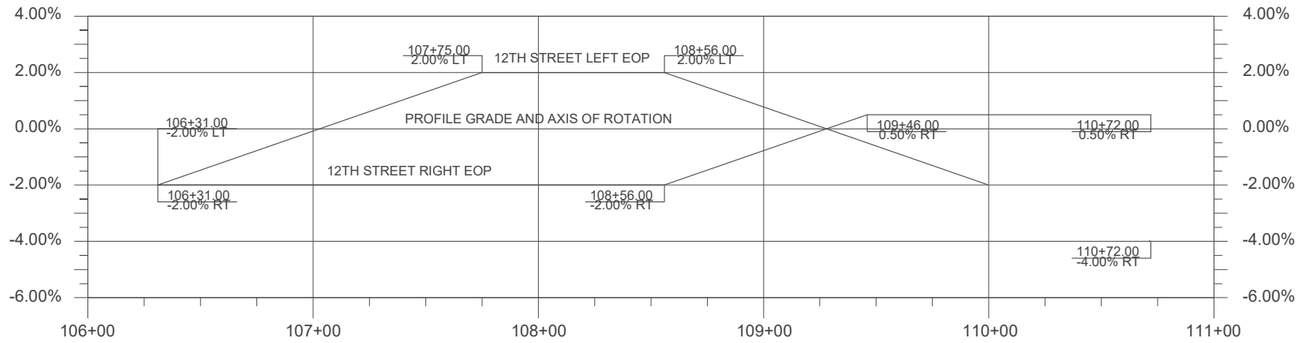
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PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

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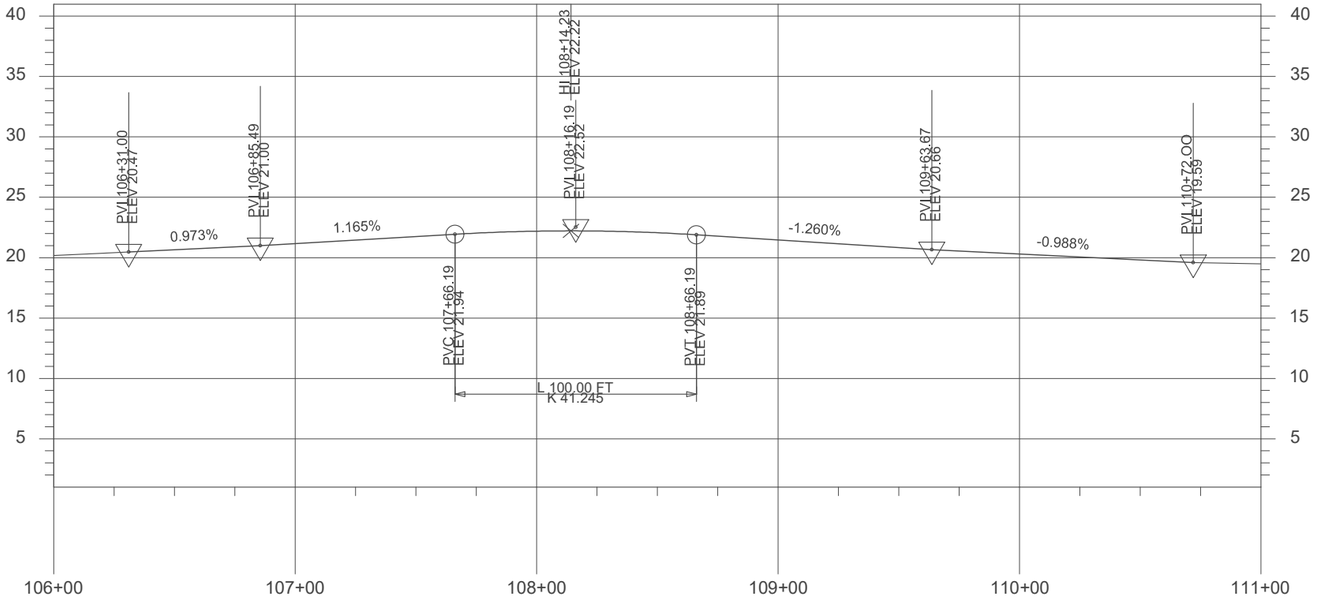
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12TH STREET SUPERELEVATION DIAGRAM



12TH STREET ROADWAY PROFILE

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LOWER WAPATO CREEK HABITAT PROJECT
ROADWAY GRADING 1

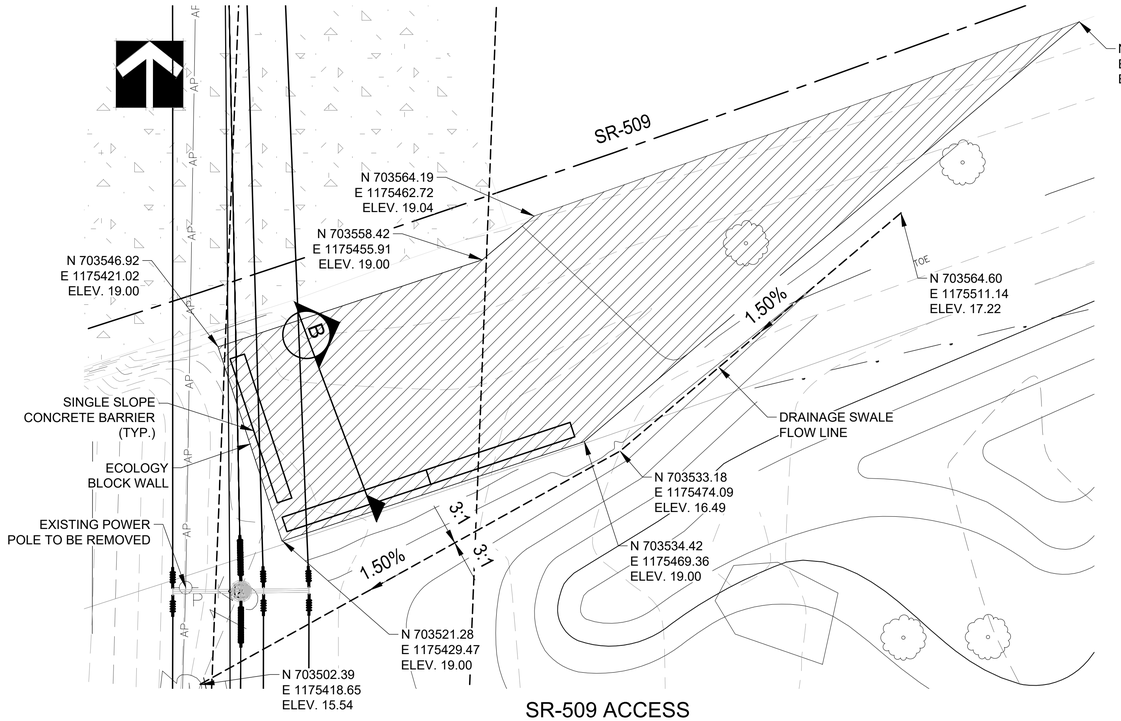
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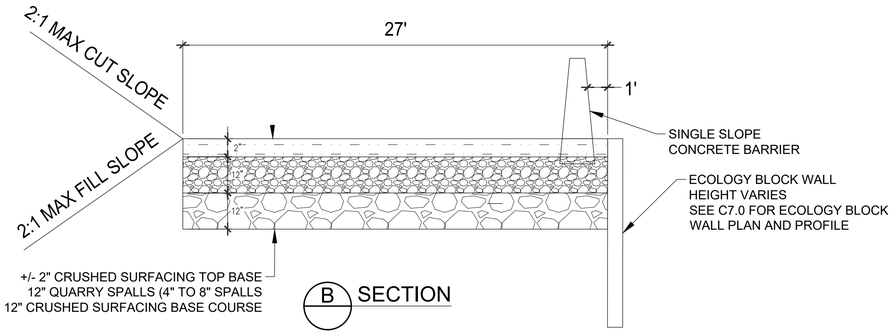
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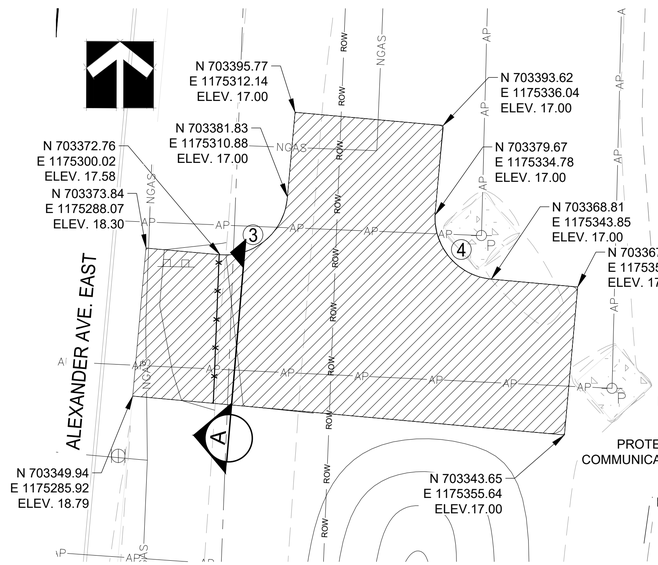
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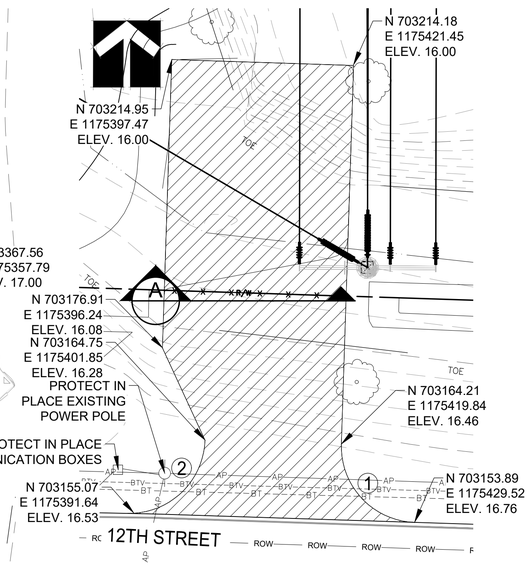


SR-509 ACCESS

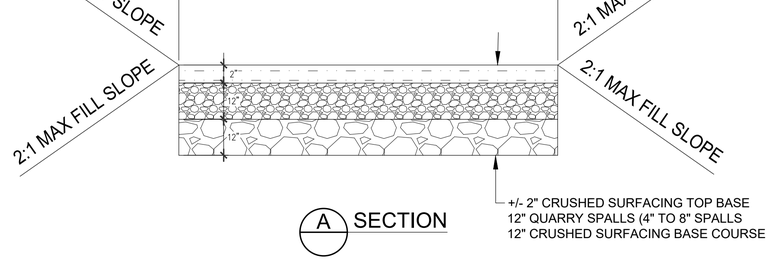




ALEXANDER AVE. ACCESS



12TH STREET ACCESS



UTILITY ACCESS DETAILS
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LOWER WAPATO CREEK
HABITAT PROJECT
ACCESS GRADING

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E
M. ID:	1014491.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

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BRIDGE GENERAL STRUCTURAL DESIGN NOTES

BRIDGE DESIGN SPECIFICATIONS

THE BRIDGE DESIGN IS IN ACCORDANCE WITH THE FOLLOWING DESIGN SPECIFICATIONS:

1. AASHTO LRFD BRIDGE DESIGN SPECIFICATION, 8TH EDITION (2017).
2. WSDOT STANDARD SPECIFICATION LATEST EDITION.
3. WSDOT BRIDGE DESIGN MANUAL.

BRIDGE DESIGN PROCEDURES

1. TRAFFIC BARRIER AND RAILING IS DESIGNED TO MEET THE TEST LEVEL FIVE CRITERIA SET FORTH IN AASHTO LRFD BDS SECTION 13.7.2 AND RELATED SECTIONS.
2. ABUTMENT AND PILE FOUNDATION DESIGN IS IN ACCORDANCE WITH THE FORCE BASED SEISMIC DESIGN PROCEDURES SET FORTH IN THE 2014 AASHTO SEISMIC GUIDE SPECIFICATIONS.

BRIDGE DESIGN GEOTECHNICAL PARAMETERS

1. FOR DETAILED GEOTECHINICAL REPORT SEE GEOTECHNICAL REPORT - DATED NOVEMBER XX, 2020 BY GEOENGINEERS, INC.

BRIDGE GENERAL CONSTRUCTION NOTES

1. CONSTRUCTION SPECIFICATIONS: MATERIALS, CONSTRUCTION AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
2. MATERIALS:
   (A) CONCRETE: SHALL CONFORM TO THE REQUIREMENTS OF SECTION 03 30 00 OF THE PROJECT SPECIFICATION
   - APPROACH SLAB = CLASS 4000A
   - BRIDGE DECK = CLASS 4000D
   - TRAFFIC BARRIER, ABUTMENTS = CLASS 4000
   - CONCRETE-FILLED STEEL TUBES = CLASS 4000P
   - PRECAST PRESTRESSED GIRDERS AT RELEASE = CLASS 6000
   - PRECAST PRESTRESSED GIRDERS AT 28 DAYS = CLASS 7000
   - CONCRETE-FILLED STEEL TUBE REINFORCING: ASTM A706, GRADE 60-WELDABLE
   - ALL OTHER REINFORCING STEEL: ASTM A615, GRADE 60

   (B) PRESTRESSING STRANDS: AASHTO M203 GRADE 270 0.6" DIAMETER LOW RELAXATION 7-WIRE STRAND, Fpu = 270 KSI

   (C) STAGGER ALL CAP SPLICES IN ADJACENT BARS BY ONE LENGTH MINIMUM, NO MORE THAN 50% OF REINFORCING BARS IN ANY LAYER SHALL BE SPLICED AT ONE LOCATION.

   (D) THE PRECAST PRESTRESSED GIRDERS SHALL CONFORM TO SECTION 03 40 00 OF THE PROJECT SPECIFICATIONS. THE TYPE OF LIFTING DEVICE FOR PRECAST MEMBERS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. PRECAST PRESTRESSED GIRDERS SHALL BE LIFTED NEAR REARING POINTS.

   (E) UNLESS OTHERWISE NOTED, CONCRETE COVER SHALL BE AS FOLLOWS:
   - CONCRETE CAST AGAINST AND PERMANENTLY IN CONTACT WITH THE GROUND.....3" CLR
   - CONCRETE IN CONTACT WITH GROUND OR EXPOSED TO WEATHER.....2" CLR

f'c 4000PSI SPLICE TABLE

BAR SIZE	TOP BARS	OTHER STRAIGHT BARS	HOOKED BARS
#3	24"	19"	7"
#4	32"	25"	10"
#5	40"	31"	12"
#6	4 "	37"	15"
#7	70"	54"	17"
#	0"	62"	19"
#9	91"	70"	22"
#10	102"	79"	24"
#11	113"	7"	27"

NOTES

1. LENGTHS ARE BASED CLASS "B", CASE 1 SPLICES (MAX OF 50% OF BARS SPLICED AT ONE LOCATION).
2. TOP BARS ARE DEFINED AS ANY HORIZONTAL BAR PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR.
3. STAGGER ALL LAP SPLICES IN ADJACENT BARS BY ONE LAP LENGTH +1'-0" MINIMUM.
4. NO MORE THAN 50% OF THE REINFORCING BARS IN ANY LAYER SHALL BE SPLICED AT ONE LOCATION.
5. FOR EPOXY COATED BARS, LAP SPLICE AND DEVELOPMENT LENGTHS SHALL BE 1.5 TIMES THE VALUE IDENTIFIED IN THE SCHEDULE OF MINIMUM LAP SPLICE AND DEVELOPMENT LENGTHS SHOWN IN THE f'c = 4000PSI SPLICE TABLE.
6. DEVELOPMENT & SPLICE LENGTHS ARE APPLICABLE FOR TENSION OR COMPRESSION.
7. FOR NON-CONTACT LAP SPLICES THE TRANSVERSE CENTER-TO-CENTER SPACING OF SPLICED BARS SHALL NOT EXCEED THE LESSER OF ONE-FIFTH THE REQUIRED LAP SPLICE LENGTH AND 6IN.

BRIDGE DESIGN LOADS

BRIDGE DESIGN LOADS

1. PERMANENT LOADS:

- DC	CONCRETE WEIGHT	155 PCF
	STRUCTURAL STEEL WEIGHT	490 PCF
- DW	FUTURE HMA OVERLAY WEIGHT	35 PSF (ASSUMED 4" OVERLAY)
- EV	UNIT WEIGHT OF SOIL (TRIANGULAR DISTRIBUTION)	115-125 PCF (SEE PROJECT GEOTECH REPORT)
- EH	ACTIVE PRESSURE (TRIANGULAR DISTRIBUTION)	244 PSF
	H STRUCTURE HEIGHT, FT	55/30 PCF ABOVE/BELOW WATER TABLE
	D = SLOPED SOIL HEIGHT ABOVE BOTTOM OF STRUCTURE	900 PSF (MAX)
	PASSIVE PRESSURE TRIANGULAR DISTRIBUTION)	900 PSF

2. TRANSIENT LOADS:

- LL	HL-93 DESIGN TRUCK AXLE LOAD INCLUDING DESIGN LANE LOAD OF 0.064 KSF
- IM	VEHICULAR DYNAMIC LOAD ALLOWANCE APPLIED TO DESIGN TRUCK = 33%
- LS	LIVE LOAD SURCHARGE APPLIED TO ABUTMENT = 64 PSF
- TU	UNIFORM TEMPERATURE RANGE FROM 0' TO 100' FAHRENHEIT

3. SEISMIC DESIGN LOADS AND PARAMETERS: (2014 AASHTO)

- OPERATIONAL IMPORTANCE I_1	1.0
- SITE CLASS	= E
- SPECTRAL ACCELERATION AT 0.2s (S_S)	0. 9g
- SPECTRAL ACCELERATION AT 1.0s (S_1)	0.301g
- S_{DS}	0.918g
- S_{D1}	0. 41g
- PGA	0.56g
- A_S	0.363g
- SEISMIC EARTH PRESSURE (TRIANGULAR DISTRIBUTION) H STRUCTURE HEIGHT, FT	5 .7H PSF (MAX)
- TOTAL STRUCTURE DEAD WEIGHT	1098k

4. LOAD COMBINATIONS: AASHTO LRFD BDS T3.4.1-1

- SERVICE I	: 1.0 DC + 1.0 DW + 1.0 (LL + IM)
- SERVICE II	: 1.0 DC + 0.8 DW + 1.0 (LL + IM)
- STRENGTH I	: 0.9 / 1.25 DC + 0.65 / 1.5 DW + 1.75 (LL + IM)
- FATIGUE I	: 0.5 DC + 0.5 DW + 1.50 (LL + IM)
- EXTREME EVENT I	: 0.9 / 1.25 DC + 0.65 / 1.5 DW + 0.5 (LL + IM) + 1.0 EQ
- EXTREME EVENT II	: 0.9 / 1.25 DC + 0.65 / 1.5 DW + 0.5 (LL + IM) + 1.0 CT

SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER IBC 2015 CHAPER 17

ITEMS	CONTINUOUS INSPECTION	PERIODIC INSPECTION	COMMENTS
SOILS			
GRADING, EXCAVATION & FILL		X	BY GEOTECHNICAL ENGINEER
GRADING, EXCAVATION & FILL		X	BY GEOTECHNICAL ENGINEER
STEEL PILES - INSTALLATION & TESTING	X		BY GEOTECHNICAL ENGINEER
CONCRETE			
REINFORCING PLACEMENT		X	
REINFORCING WELDING	X		
REINFORCING COUPLING	X	X	REF. NOTE 5
ANCHOR BOLTS & INSERTS		X	
FORMWORK		X	
PREPARATION OF MIX DESIGNS		X	
PREPARATION OF TEST SPECIMENS	X		
CONCRETE PLACEMENT	X		
EMBEDDED STEEL ITEMS		X	
CURING		X	
PRECAST CONCRETE ERECTION		X	
STRUCTURAL STEEL			
SINGLE PASS FILLET WELDS </ 5/16"		X	REF. NOTE 6
PARTIAL/COMPLETE PENETRATION WELD	X		REF. NOTE 7
OTHER WELDING			
WELDING OF ANCHORS AND STUDS		X	REF. NOTE 8
PREFABRICATED CONSTRUCTION			REF. NOTE 4

INSPECTION SCHEDULE NOTES:

1. THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FORMAN APPROVED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO PROJECT SPECIFICATIONS THE STRUCTURAL NOTES AND THE NOTES BELOW. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR AND BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS. INSPECTION AND TESTING REQUIREMENTS FOR SYSTEMS DESIGNED BY OTHERS SHALL BE DEFINED BY THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THEIR DESIGN, EXCEPT THAT THE INSPECTION REQUIREMENTS SHALL NOT BE LESS THAN SPECIFIED IN THIS SCHEDULE.
2. SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR PER IBC 1704.2.5.1 SEE SPECIFICATIONS FOR APPROVAL REQUIREMENTS.
3. CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION. PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE (IBC 1702.1).
4. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. CONTINUOUS INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE. SEE SPECIFICATIONS FOR APPROVED AGENCIES AND SUBMITTAL REQUIREMENTS.
5. CONTINUOUS INSPECTION IS REQUIRED FOR INSTALLATION OF COUPLERS. PERIODIC INSPECTION MAY BE USED FOR VERIFICATION OF COUPLER MATERIALS.
6. ALL WELDS SHALL BE VISUALLY INSPECTED.
7. ALL COMPLETE PENETRATION WELDS SHALL BE TESTED ULTRASONICALLY OR BY USING ANOTHER APPROVED METHOD.
8. WELDED DOWELS AT THE TOP OF PILES SHALL BE PERIODICALLY INSPECTED PRIOR TO INSTALLATION OF CAST-IN-PLACE REINFORCEMENT.

90% DESIGN FOR AGENCY REVIEW

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Suite 800
Seattle, Washington 98101
T +1 (425) 77 6243

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JARPA UPDATE FOR AGENCY REVIEW

CHECKED BY	DATE

DIRECTOR ENG.	DATE

APPROVED:

CONT/CONS.:	071447	TOWNSHIP: 20N	RANGE: 3E
M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

PROJ. ENGR DATE
PRINTED BY: OLI87950 Nov 13, 2020
SECTION: 1
PORT ADDRESS: 1 SITCOM PLAZA
TACOMA, WA 98421

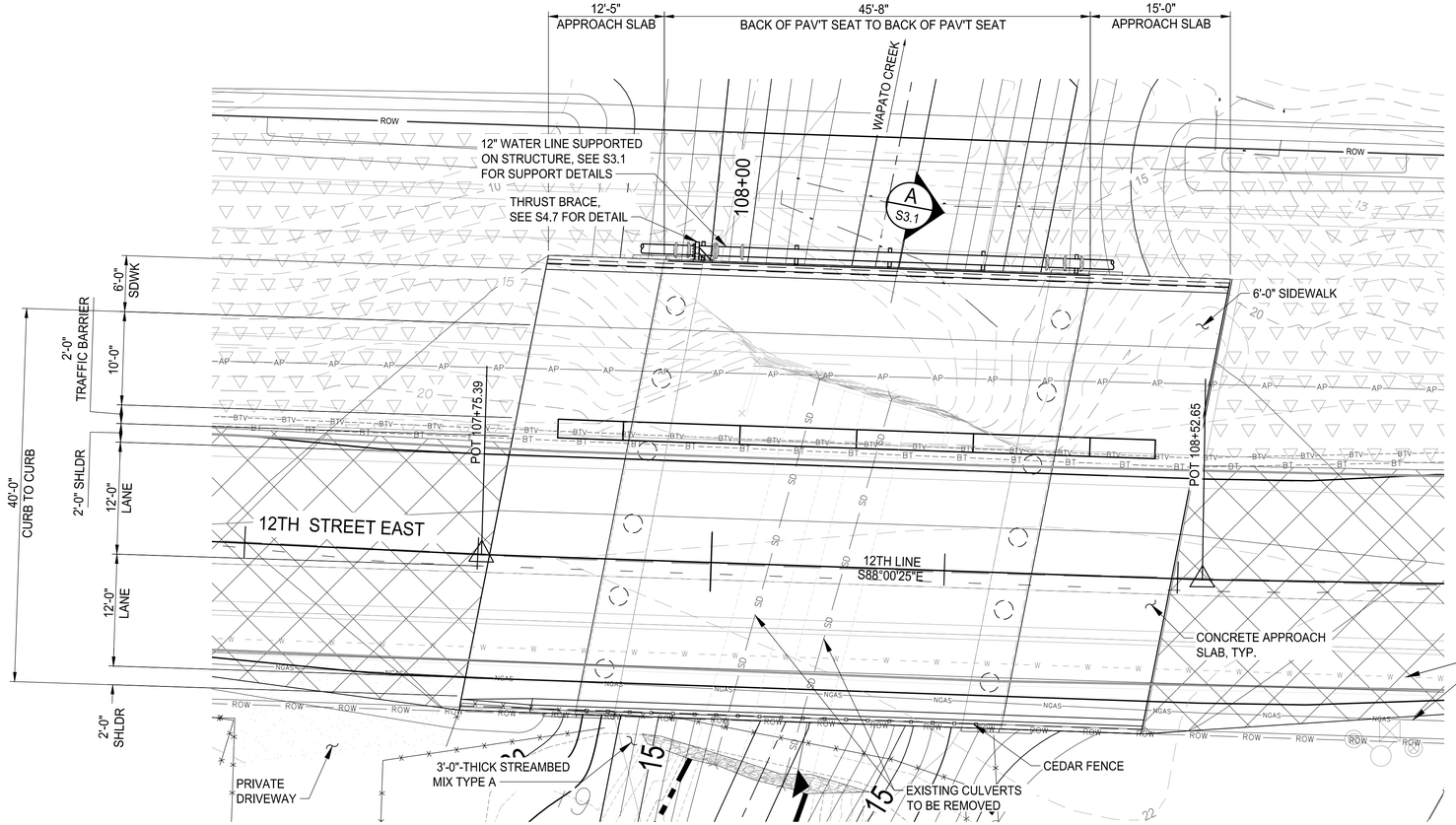
LOWER WAPATO CREEK HABITAT PROJECT
FOUNDATION PLAN

6656
S1.1
31 OF 50

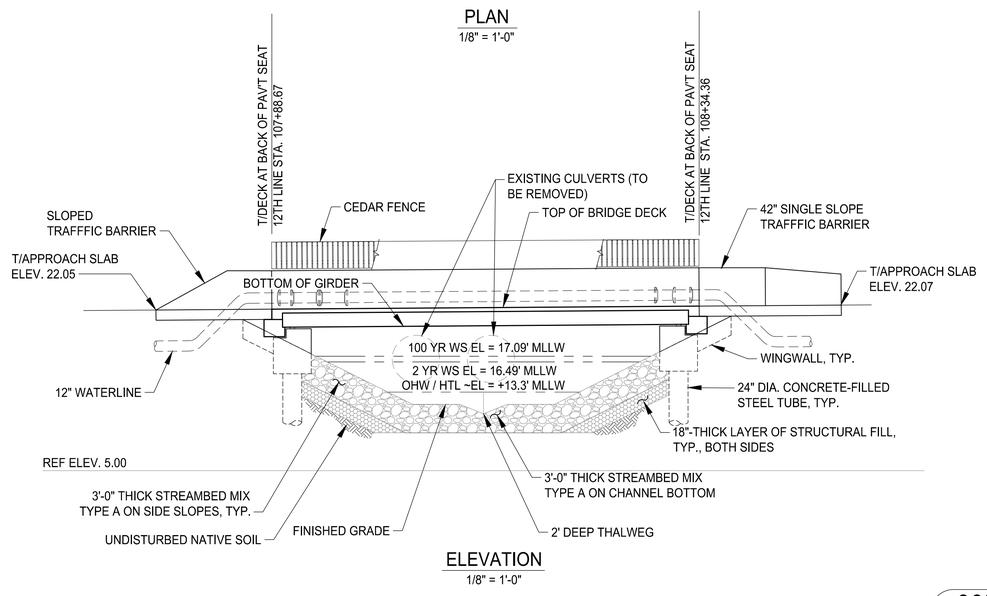
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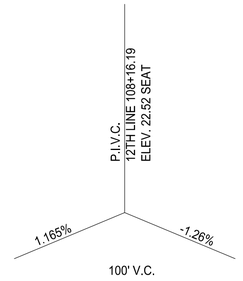
BINDING EDGE



PLAN
1/8" = 1'-0"



ELEVATION
1/8" = 1'-0"



12TH LINE PROFILE

PC GIRDER (18" VOIDED SLAB)
LOADING: HL-93

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LOWER WAPATO CREEK HABITAT PROJECT
BRIDGE LAYOUT

6656
S1.2
32 OF 50

CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
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PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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BINDING EDGE



FOUNDATION PLAN

3/16" = 1'-0"

PILE SCHEDULE				
PILE #	LENGHT (FT)	TIP ELEV. (FT)	TOP OF PILE ELEV. (FT)	REQUIRED GEOTECHNICAL CAPACITY (KIPS)
1	75.00	-59.99	15.01	360
2	75.00	-59.99	15.01	360
3	75.00	-59.99	15.01	360
4	75.00	-59.99	15.01	360
5	75.00	-59.99	15.01	360
6	75.00	-59.99	15.01	360
7	75.00	-59.96	15.04	360
8	75.00	-59.96	15.04	360
9	75.00	-59.96	15.04	360
10	75.00	-59.96	15.04	360
11	75.00	-59.96	15.04	360
12	75.00	-59.96	15.04	360

15.18

15.21

NOTES

1. ALL ELEVATIONS RELATIVE TO MLLW (PORT OF TACOMA TIDAL DATUM).
2. REQUIRED GEOTECHNICAL CAPACITY IS THE MINIMUM REQUIRED ULTIMATE SHAFT CAPACITY. A RESISTANCE FACTOR OF 0.55 IS USED TO DETERMINE NOMINAL GEOTECHNICAL STRENGTH OF PILES.

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DRAWING SCALE: AS NOTED

LOWER WAPATO CREEK HABITAT PROJECT
FOUNDATION PLAN

6656
S2.1
33 OF 50

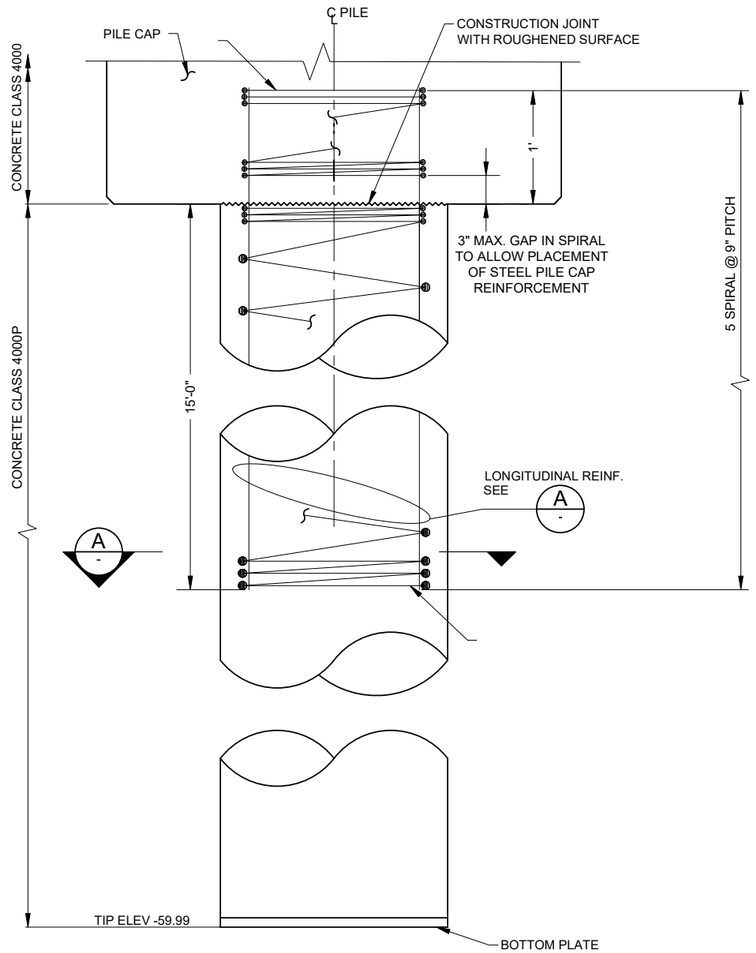
CONT/CONS:	071447
M. ID:	101449.01
PHASE:	90% Design

TOWNSHIP: 20N	RANGE: 3E
SECTION: 1	
VERT: MLLW (PORT OF TACOMA TIDAL)	
DAT-HRZ: WA83-SF	
PARCEL: 14	

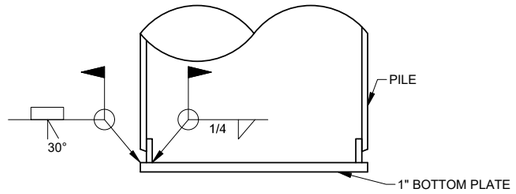
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BINDING EDGE



ELEVATION

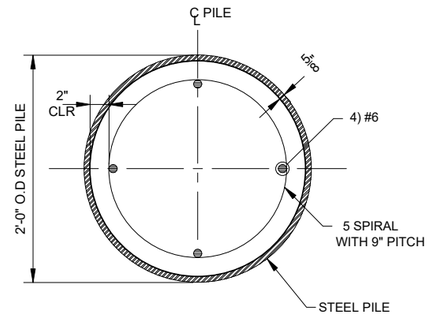


D - BOTTOM PLATE DETAILS
NTS

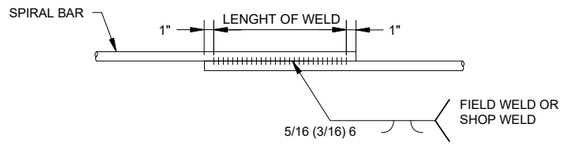
NOTES:

1. SEE "CENTRALIZER DETAIL" THIS SHEET

* SEE SPIRAL TERMINATION DETAIL.



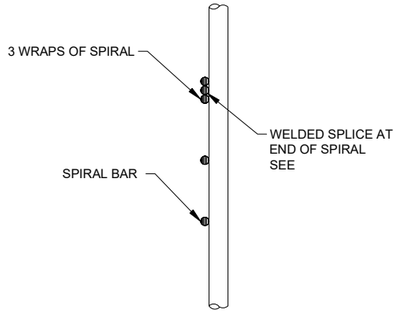
A - DETAIL
1/2" = 1'-0"



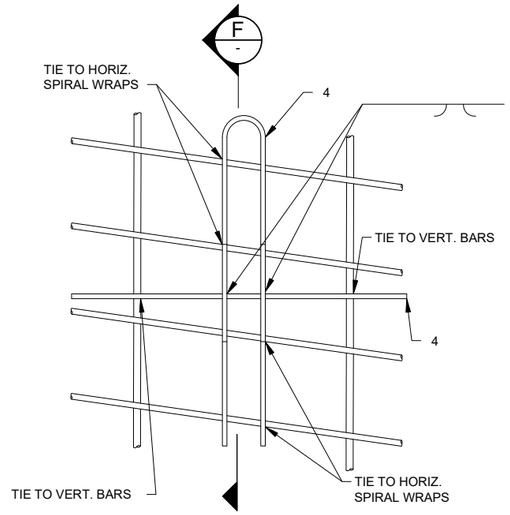
C - WELDED LAP SPLICE DETAIL
NTS

WELDING SHALL MEET THE REQUIREMENTS OF STD. SPEC. 6-02.3(24)E.

PILE SPIRAL OPTIONS



E - SPIRAL TERMINATION DETAIL
NTS



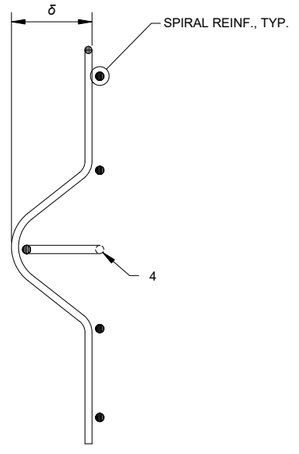
B - CENTRALIZER DETAIL
NTS

EPOXY COAT CENTRALIZER OR PAINT WITH INORGANIC ZINC AFTER FABRICATION

NOTES:
EACH LEG SHOULD BE TIED TO TWO SPIRALS.

SEE SPECIAL PROVISIONS FOR SPACING REQUIREMENTS.

δ - CONCRETE COVER - 1/2"



F - VIEW
NTS

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LOWER WAPATO CREEK HABITAT PROJECT
TYPICAL PILE DETAILS

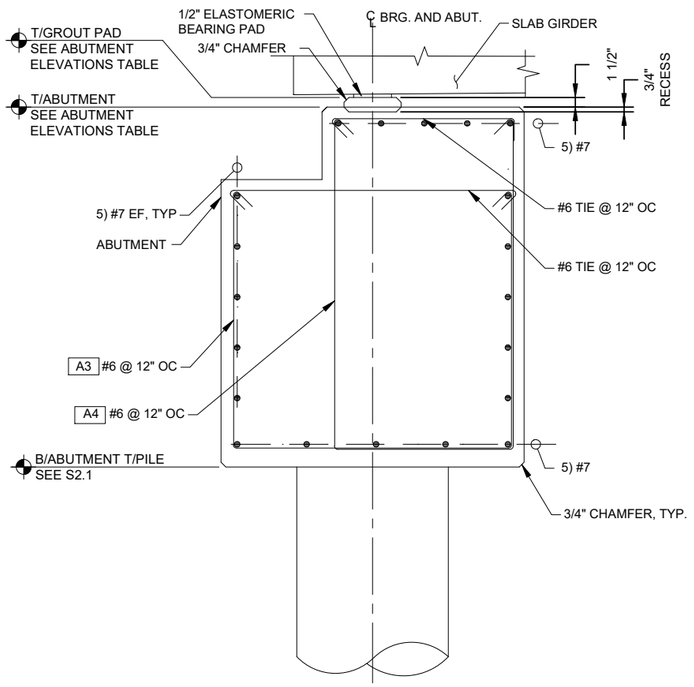
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M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

6656
S2.2
34 OF 50

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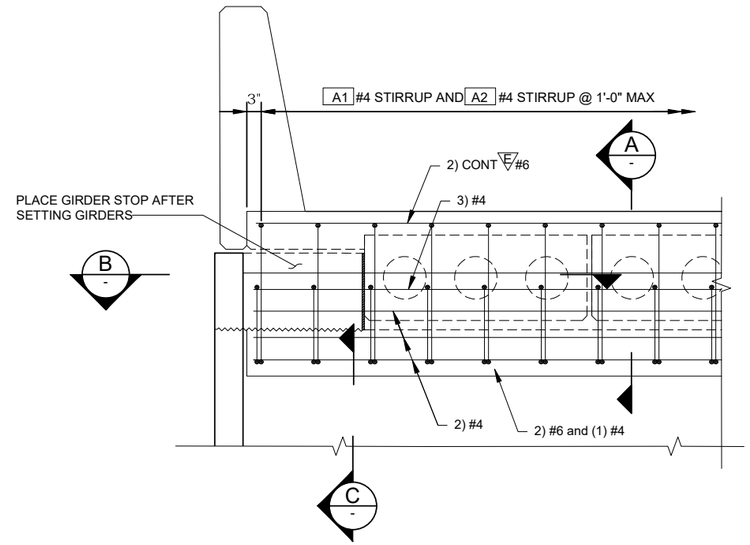
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BINDING EDGE

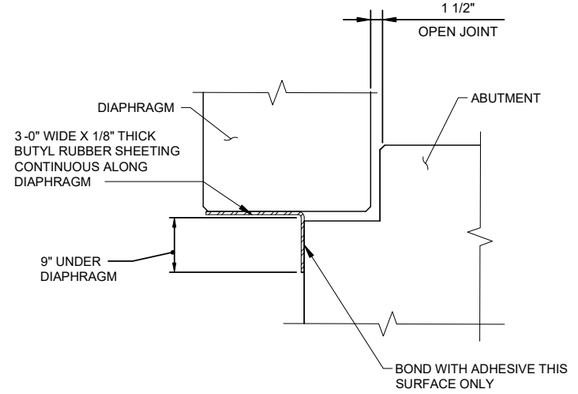


A SECTION S2.1 1" 1'-0"

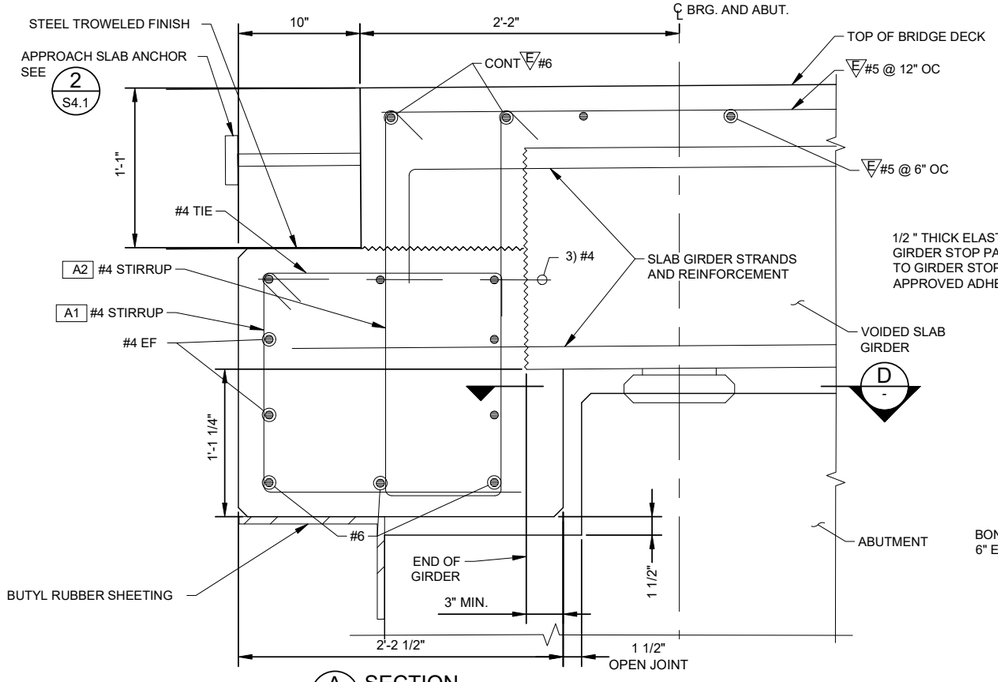
ABUTMENT ELEVATIONS		
LOCATION	ABUTMENT 1	ABUTMENT 2
TOP OF ABUTMENT	19.76	19.79
TOP OF GROUT PAD	19. 9	19.92



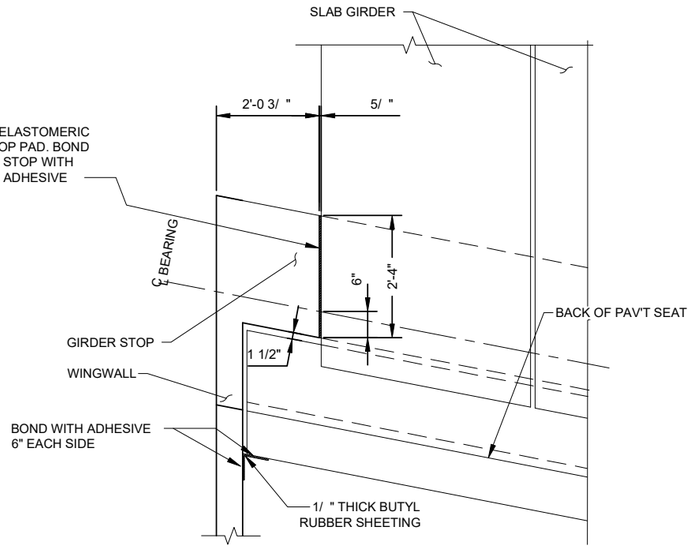
B SECTION S2.4 3/4" 1'-0"



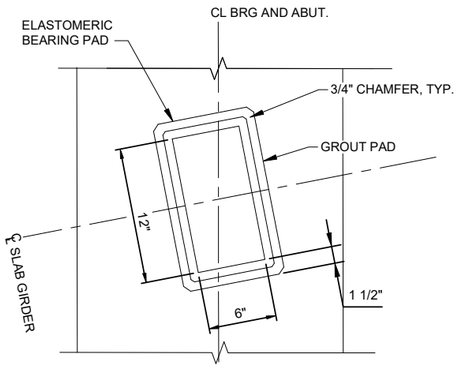
C SECTION - 1" 1'-0"



A SECTION - 3/4" = 1'-0"



B SECTION - 3/4" 1'-0"



D SECTION - 1" 1'-0"

90% DESIGN
FOR AGENCY REVIEW

NOTE:
FULL BEARING OF SLAB UNIT IS REQUIRED AT EACH ELASTOMERIC BEARING.

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LOWER WAPATO CREEK HABITAT PROJECT

ABUTMENT DETAILS

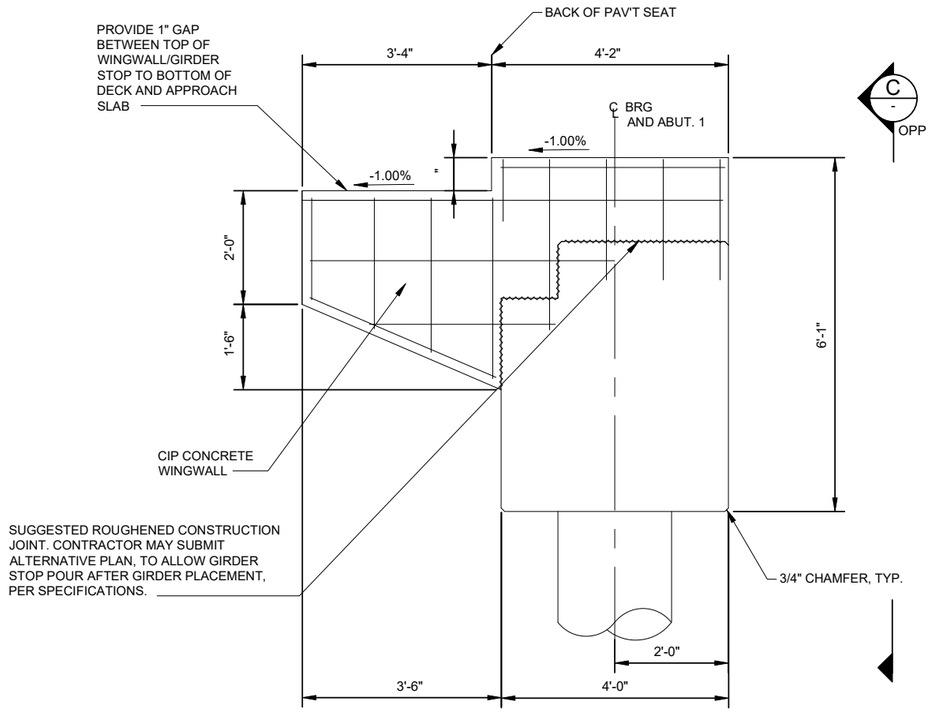
6656
S2.3
35 OF 50

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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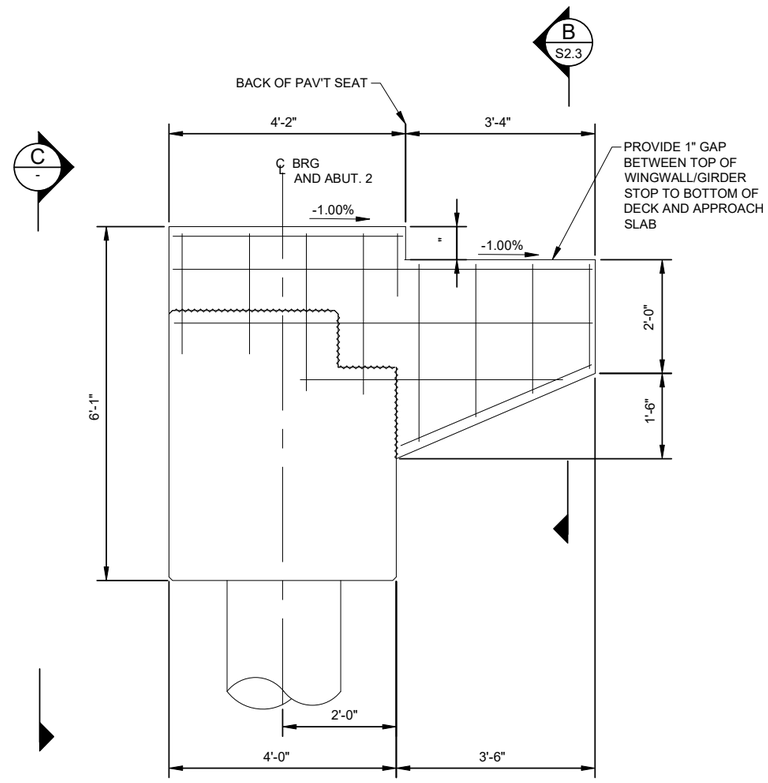
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BINDING EDGE



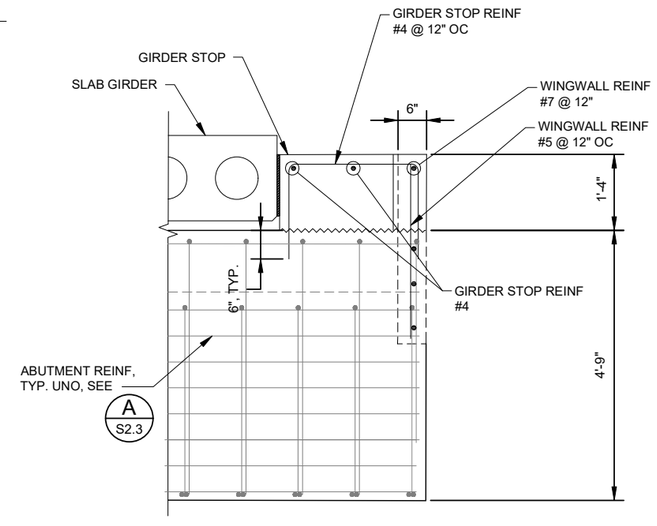
SW WINGWALL ELEVATION
(NW OPP HAND)

A / S2.1 3/4" 1'-0"



SE WINGWALL ELEVATION
(NE OPP HAND)

B / S2.1 3/4" 1'-0"



EAST SECTION
(WEST OPP HAND)

C / - 3/4" 1'-0"

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LOWER WAPATO CREEK HABITAT PROJECT
WINGWALL DETAILS

TOWNSHIP: 20N	RANGE: 3E	SECTION: 1	PROJ. ENGR
DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	PRINTED BY: OLI87950 Nov 13, 2020	
PARCEL: 14	DRAWING SCALE: AS NOTED	PORT ADDRESS: 1 SITCOM PLAZA TACOMA, WA 98421	

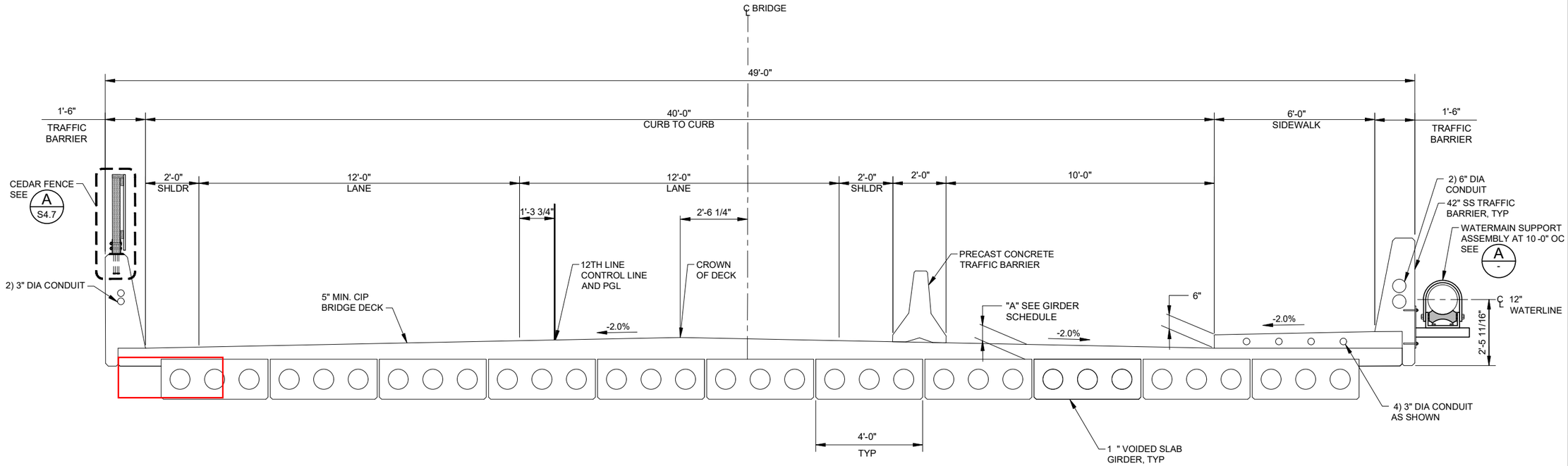
6656
S2.4
36 OF 50

CONT/CONS:	071447
M. ID:	101449.01
PHASE:	90% Design

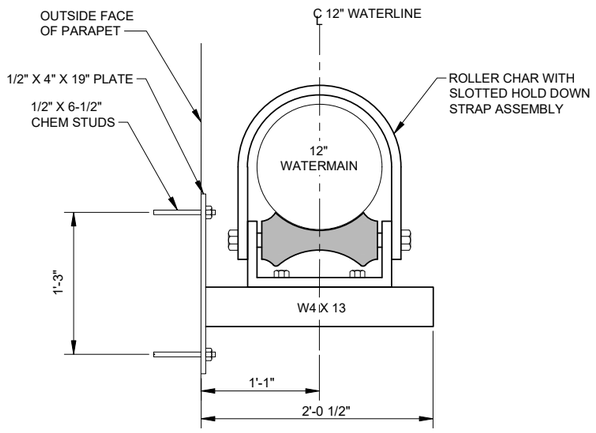
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BINDING EDGE



A S1.2 TYPICAL SECTION
1/2" 1'-0"



A - DETAIL
1 1/2" 1'-0"

NOTE:

DO NOT PIN PRECAST CONCRETE TRAFFIC BARRIER TO BRIDGE DECK.

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FOR AGENCY REVIEW

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1601 5th Avenue
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	TACOMA, WA 98421

LOWER WAPATO CREEK
HABITAT PROJECT
TYPICAL SECTION

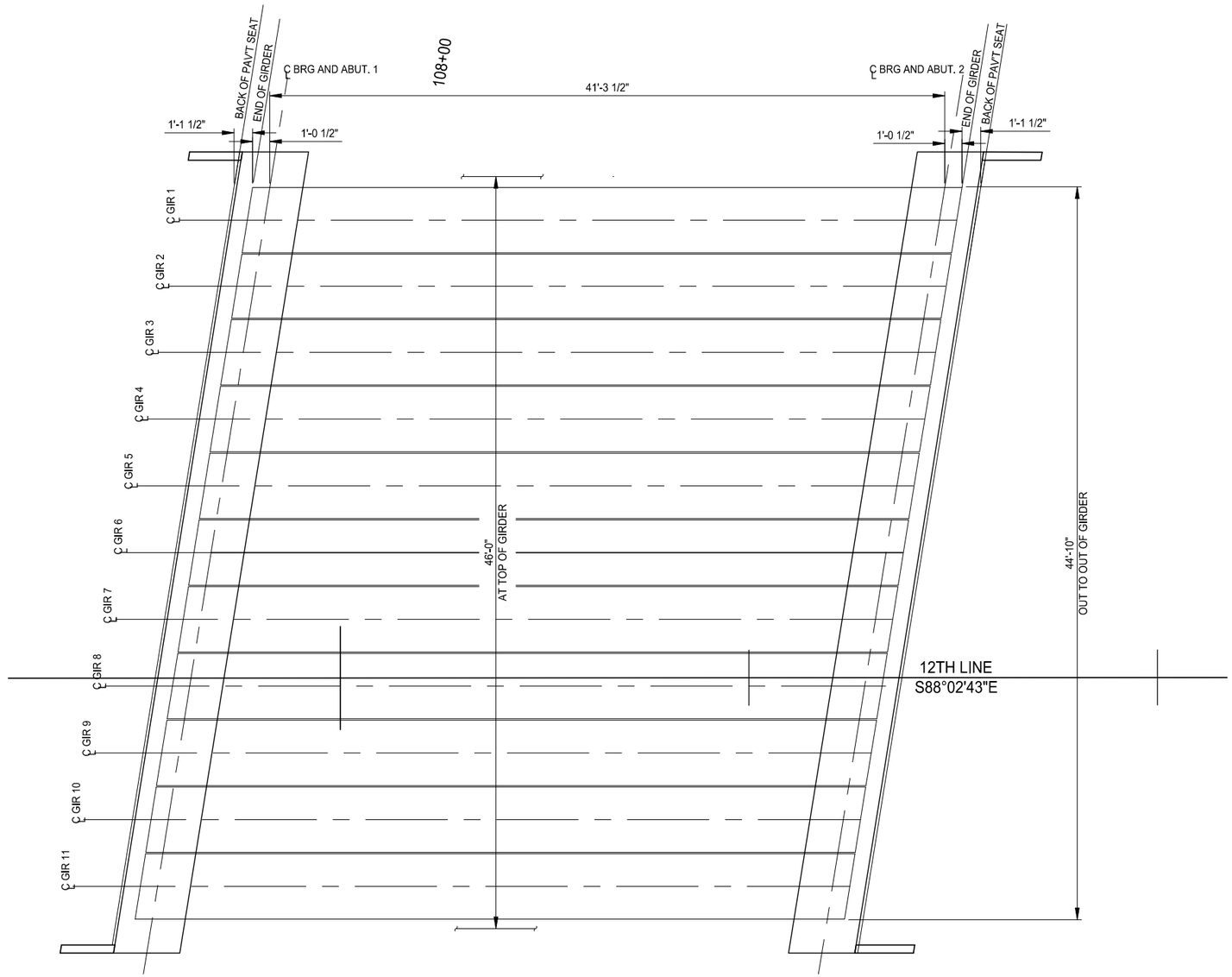
6656
S3.1
37 OF 50

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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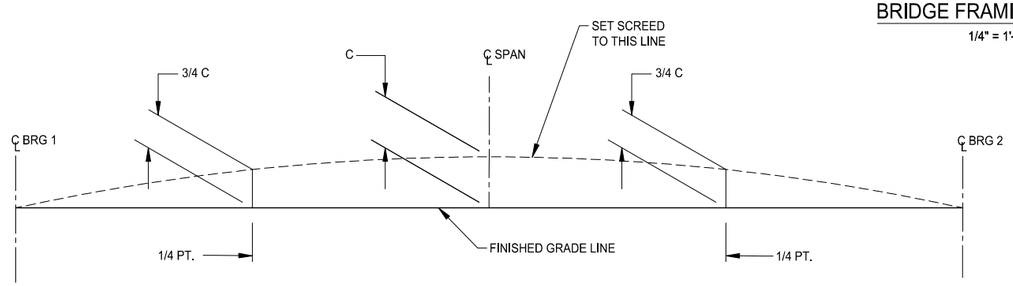
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BINDING EDGE



BRIDGE FRAMING PLAN

1/4" = 1'-0"



SCREED SETTING DIMENSIONS

FOR DIMENSION "C" SEE GIRDER SCHEDULE

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LOWER WAPATO CREEK HABITAT PROJECT

FRAMING PLAN AND CAMBER DIAGRAM

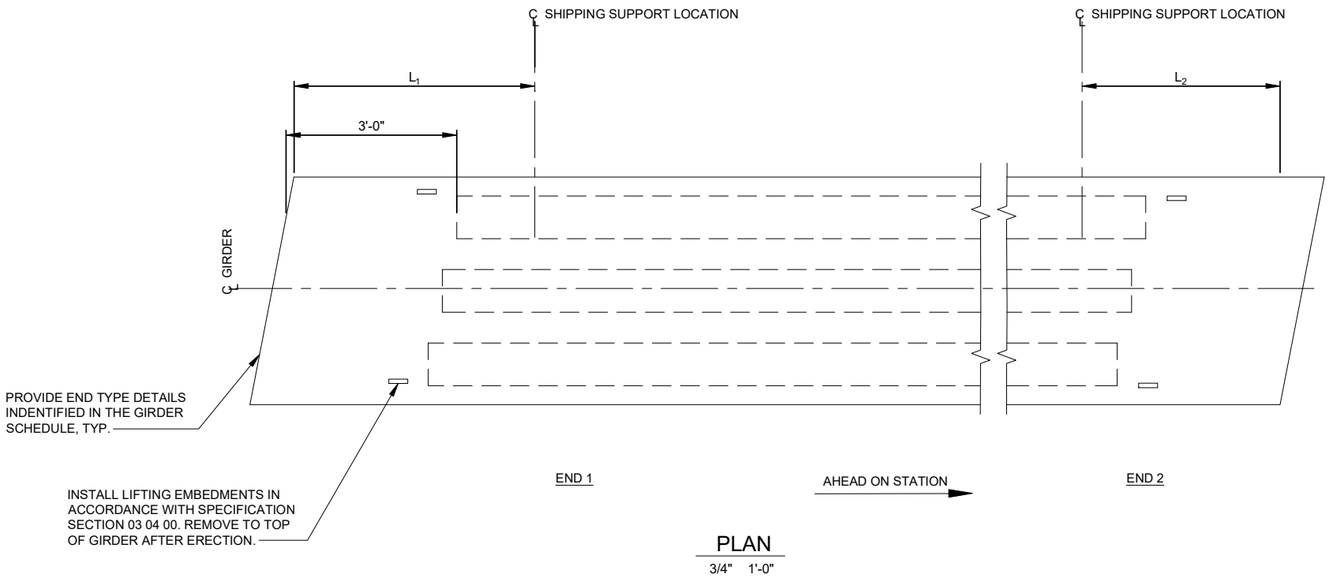
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PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

6656
S3.2
38 OF 50

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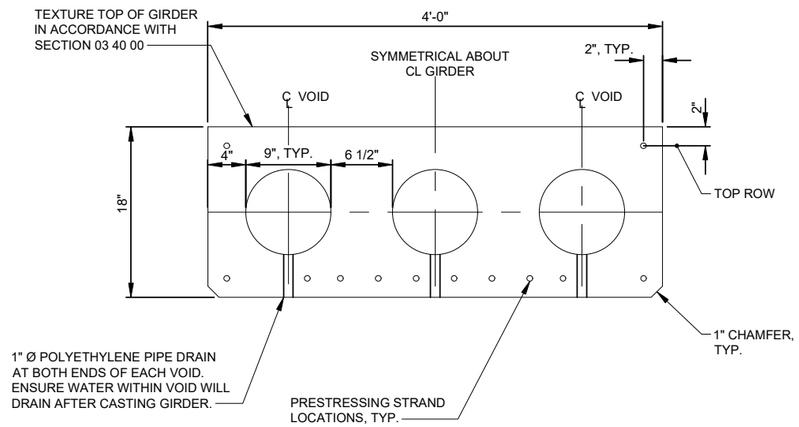
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BINDING EDGE



PLAN

3/4" 1'-0"



A / - TYPICAL GIRDER SECTION

1 1/2" 1'-0"

GIRDER SCHEDULE

SPAN	GIRDER	GIRDER HEIGHT H	GIRDER WIDTH W	PLAN LENGTH (ALONG GIRDER GRADE) SEE GIRDER NOTE 1)	VOIDS		GIRDER END DETAILS		MIN. CONC. COMP. STRENGTH		PRESTRESSING STRANDS (SEE GIRDER NOTES 2-4)								"A" DIMENSION AT CL BEARINGS	DECK SCREED CAMBER C	MIDSPAN VERTICAL DEFLECTION D		TRANSVERSE REINFORCEMENT									LONGITUDINAL REINFORCEMENT				SHIPPING AND HANDLING DETAILS				
											ROW 1			ROW 2			TOP ROW						ZONE 1			ZONE 2			ZONE 3			G1		G2						
					NUMBER	DIAMETER	END 1 TYPE	END 2 TYPE	@ 28- DAYS F'C (KSI)	@ RELEASE F'CI (KSI)	PERMANENT STRANDS	EXTENDED NUMBER AND LENGTH	DEBONDED NUMBER AND LENGTH	PERMANENT STRANDS	EXTENDED NUMBER AND LENGTH	DEBONDED NUMBER AND LENGTH	PERMANENT STRANDS	TEMPORARY STRANDS			LOWER BOUND @ 40 DAYS	UPPER BOUND @ 120 DAYS	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	SPACING	LENGTH	BAR SIZE	NO. OF BARS	BAR SIZE	NO. OF BARS	L	L1	L2	K ø MINIMUM SHIPPING SUPPORT ROTATIONAL SPRING CONSTANT	Wcc MINIMUM SHIPPING SUPPORT CNTR-TO-CNTR WHEEL SPACING
1	1	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	5 1/2"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5'	4	9"	6	4	4	4	4	2	2	2'	40000 KP-IN/RAD	6 -0"
1	2	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	6 1/2"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5	4	6'-9"	6	4	4	4	4	2	2'	2	40000 KP-IN/RAD	
1	3	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	7 1/2"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5'	4	6'-9"	6	4	4	4	4	2	2	2'	40000 KP-IN/RAD	
1	4	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	1/2"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5	4	6'-9"	6	4	4	4	4	2	2'	2	40000 KP-IN/RAD	
1	5	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	9 1/2"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5'	4	6'-9"	6	4	4	4	4	2	2	2'	40000 KP-IN/RAD	
1	6	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	9"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5	4	6'-9"	6	4	4	4	4	2	2'	2	40000 KP-IN/RAD	
1	7	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5'	4	6'-9"	6	4	4	4	4	2	2	2'	40000 KP-IN/RAD	
1		1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	7"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5	4	6'-9"	6	4	4	4	4	2	2'	2	40000 KP-IN/RAD	
1	9	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	6"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5'	4	6'-9"	6	4	4	4	4	2	2	2'	40000 KP-IN/RAD	
1	10	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	5"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5	4	6'-9"	6	4	4	4	4	2	2'	2	40000 KP-IN/RAD	
1	11	1	4	43'-4 1/2"	3	9.0"	A	A	7.0	6.0	10	4 @ 1'-4"	0	0	0	0	2	0	5"	1/4"	3/ "	7/ "	4	3"	1	4	5"	5'	4	6'-9"	6	4	4	4	4	2	2	2'	40000 KP-IN/RAD	

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LOWER WAPATO CREEK HABITAT PROJECT

GIRDER DETAILS

1 OF 2

6656
S3.3
39 OF 50

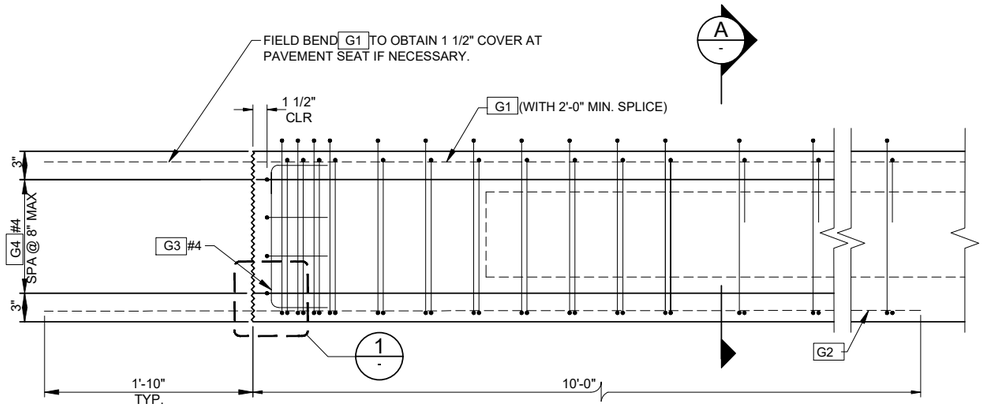
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M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

SECTION: 1

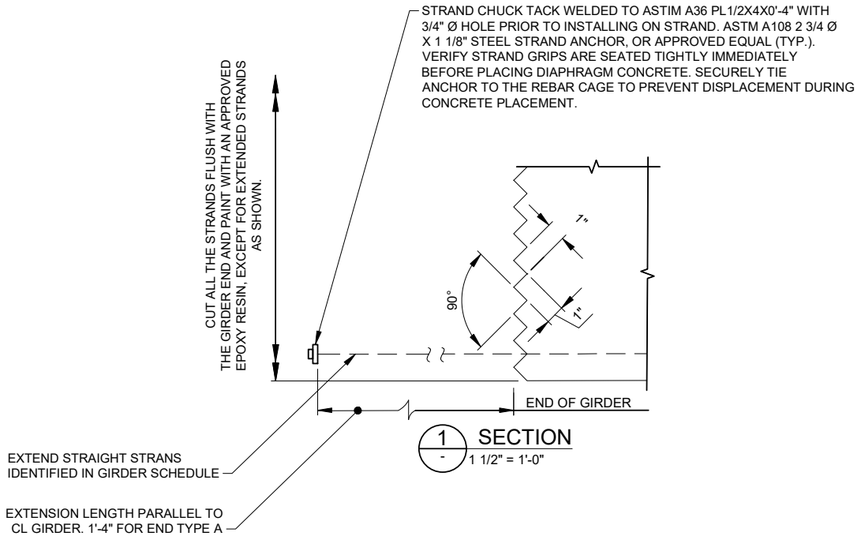
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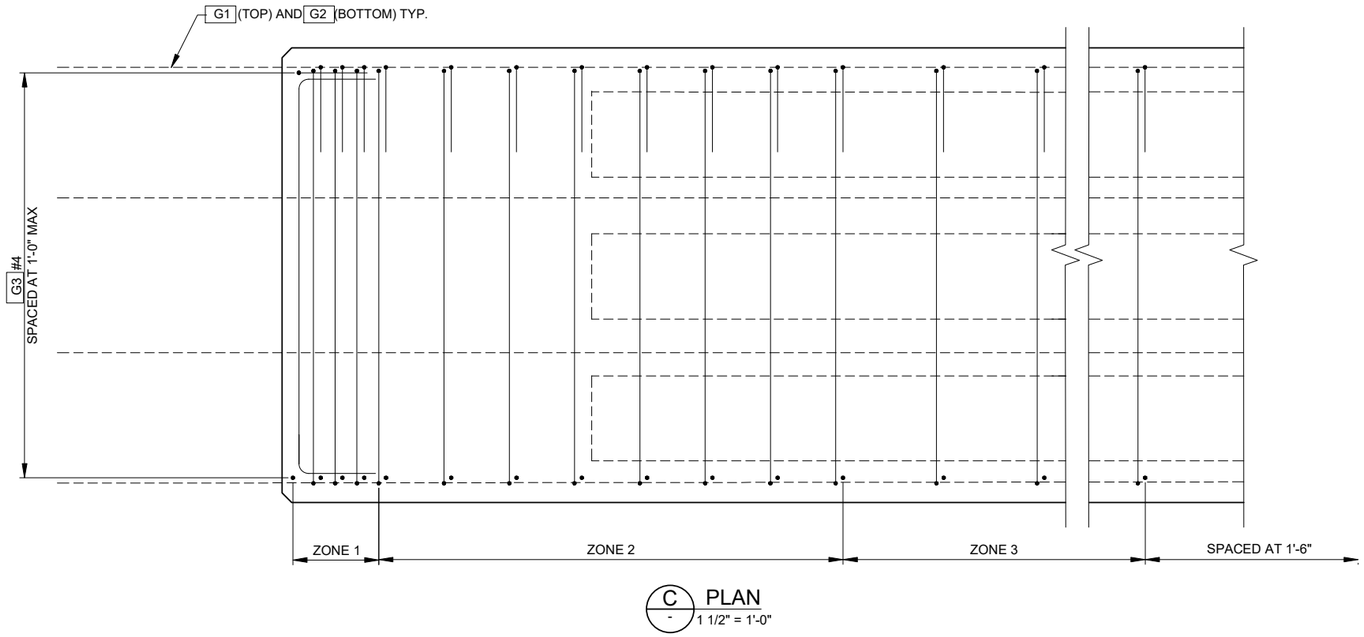
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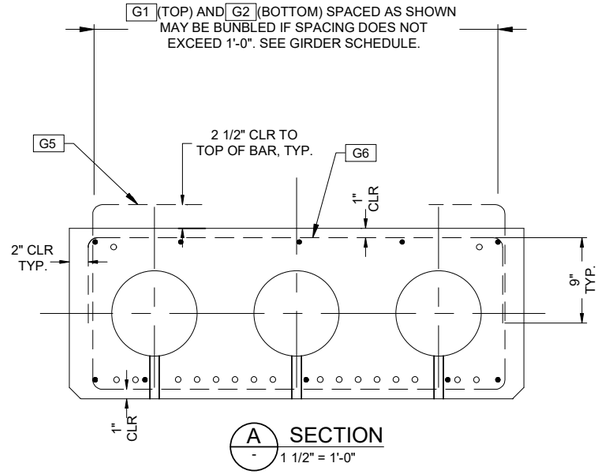
B - ELEVATION
1 1/2" = 1'-0"
(STRANDS NOT SHOWN)



1 - SECTION
1 1/2" = 1'-0"



C - PLAN
1 1/2" = 1'-0"



A - SECTION
1 1/2" = 1'-0"

GIRDER NOTES

1. PLAN LENGTH SHALL BE INCREASED AS NECESSARY TO COMPENSATE FOR SHORTENING DUE TO RESTRESS AND SHRINKAGE.
2. ALL STRANDS SHALL BE 0.6" DIA AASHTO M202 GRADE 270 LOW RELAXATION STRANDS, JACKED TO 202.5 KSI. STANDS SHALL BE SYMMETRICAL ABOUT THE GIRDER CENTERLINE. EXTERIOR STRANDS IN EACH ROW SHALL BE FULLY BONDED.
3. SPACE EXTENDED STRANDS SYMMETRICALLY AND EVENLY ACROSS GIRDER WIDTH. STAGGER EXTENDED STAND LOCATIONS WITH RESPECT TO GIRDERS IN ADJACENT SPANS.
4. DEBONDED STRANDS SHALL BE DEBONDED AT EACH GIRDER END FOR THE INDICATED LENGTH PARALLEL TO THE GIRDER CENTERLINE. DEBONDED STRANDS SHALL NO BE EXTENDED PAST GIRDER ENDS. DEBONDED STRAND SHALL BE SYMMETRICALLY PLACED ABOUT THE GIRDER CENTERLINE. DEBONDED LENGTHS OF PAIRS OF STRANDS THAT ARE SYMMETRICALLY POSITIONED ABOUT THE GIRDER CENTERLINE SHALL BE EQUAL.
5. DEFORMED WELDED WIRE REINFORCEMENT MAY BE SUBSTITUTED FOR MILD REINFORCEMENT IN ACCORDANCE WITH SPECIFICATION SECTION 03 40 00.

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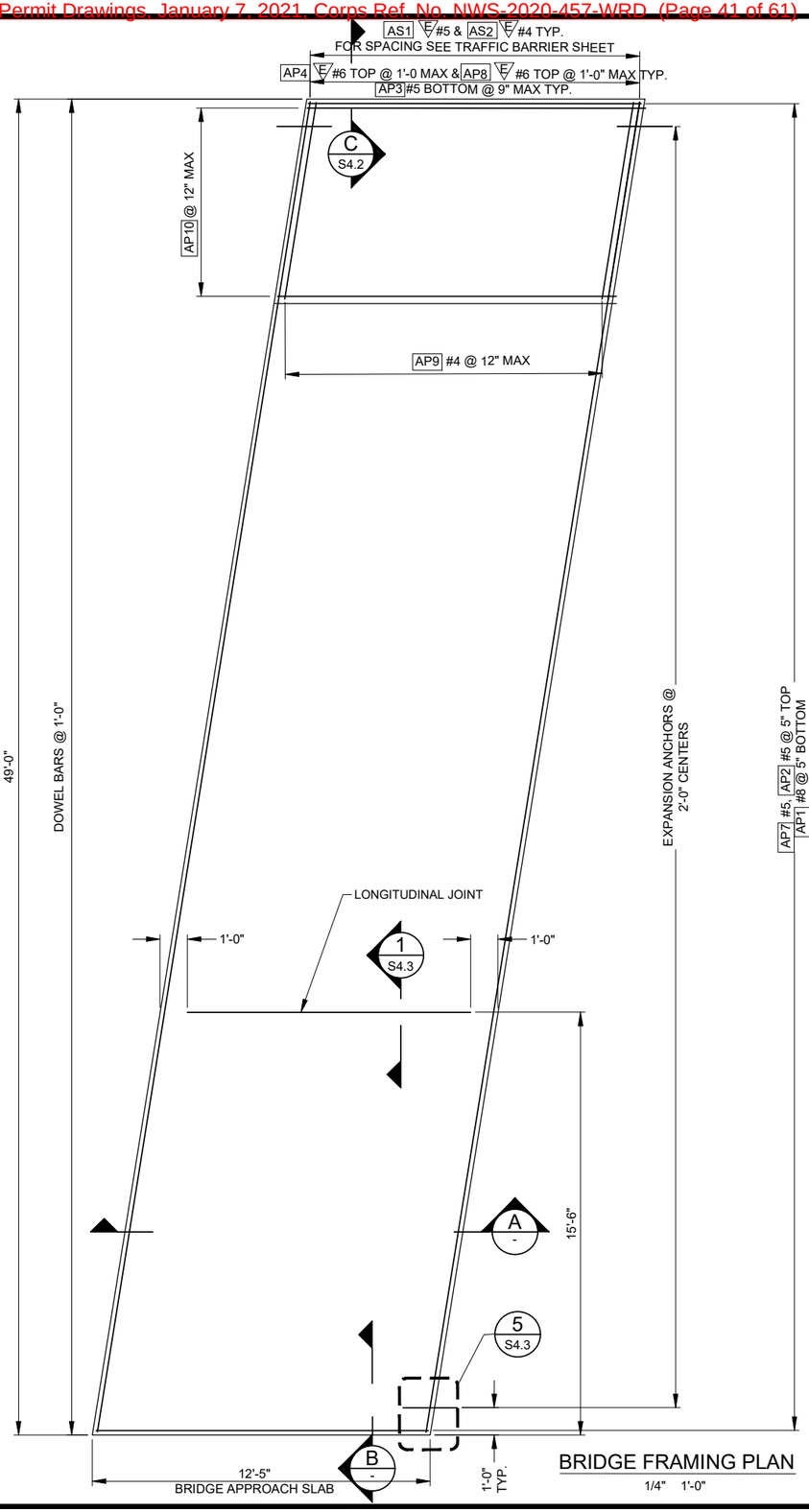
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LOWER WAPATO CREEK HABITAT PROJECT
GIRDER DETAILS
2 OF 2

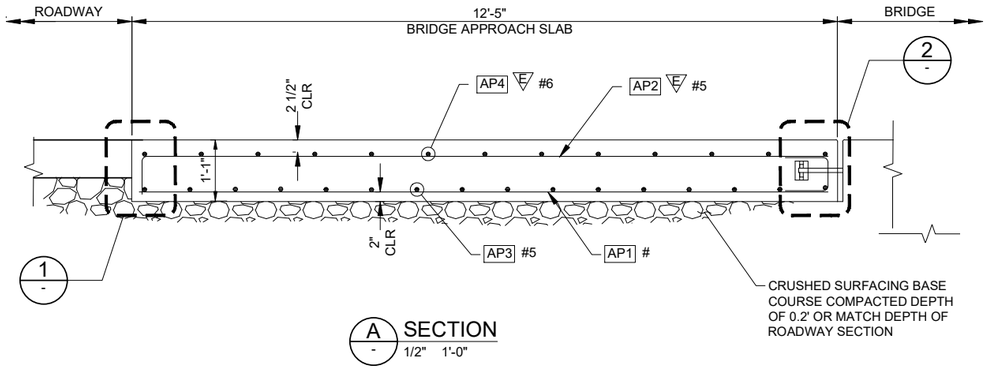
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M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

6656
S3.4
40 OF 50

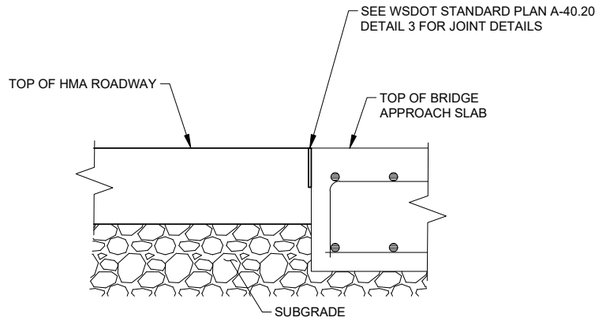
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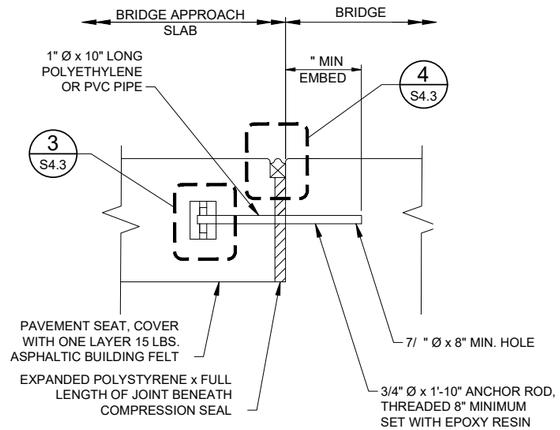
BRIDGE FRAMING PLAN
1/4" 1'-0"



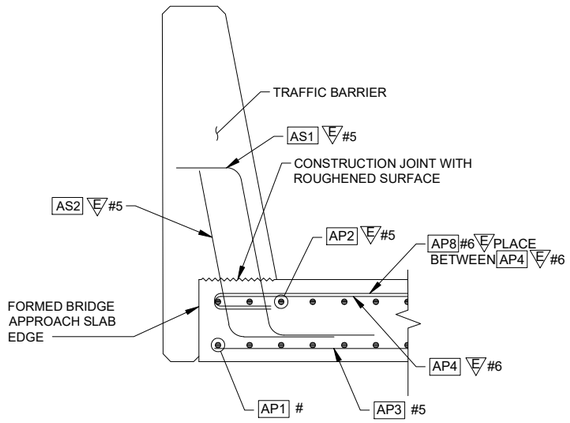
A - SECTION
1/2" 1'-0"



A - HMA ROADWAY JOINT DETAIL
1" 1'-0"



2 - DETAIL
1 1/2" 1'-0"



B SECTION
S4.1, S4.2 3/4" 1'-0"

NOTES

1. ALL EDGES OF BRIDGE APPROACH SLAB SHALL HAVE 1/2" RADIUS EXCEPT AT LONGITUDINAL JOINTS.
2. LONGITUDINAL JOINTS SHALL BE PLACED ON LANE LINES AND SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH SPECIFICATION SECTION 03 30 00. JOINTS MAY BE EITHER A SAWCUT CRACK CONTROL JOINT OR A CONSTRUCTION JOINT. SAWCUT JOINTS SHALL TERMINATE 1'-0" BEFORE REACHING EDGE OF SLAB AND MUST BE SAW CUT AS SOON AS POSSIBLE AFTER PLACEMENT OF CONCRETE. SEE "LONGITUDINAL JOINT DETAIL" ON BRIDGE APPROACH SLAB DETAILS 3 OF 3.
3. THE MINIMUM LAP SPLICE OF #5 IS 2'-0" #5 IS 2'-6", #6 IS 3'-0" AND #8 IS 3'-3". ALL LAP SPLICES SHALL BE STAGGERED SO THAT NO MORE THAN 50% OF REBAR IS SPLICED AT THE SAME LOCATION. LAP SPLICES SHALL BE LOCATED WITHIN THE MIDDLE HALF OF THE BRIDGE APPROACH SLAB. OPTIONAL SPLICES ARE ALLOWED FOR AP4 #6.
4. FOR TRAFFIC BARRIER, INCLUDING ANY BRIDGE APPROACH SLAB BLOCKOUT INFORMATION, SEE TRAFFIC BARRIER SHEETS.

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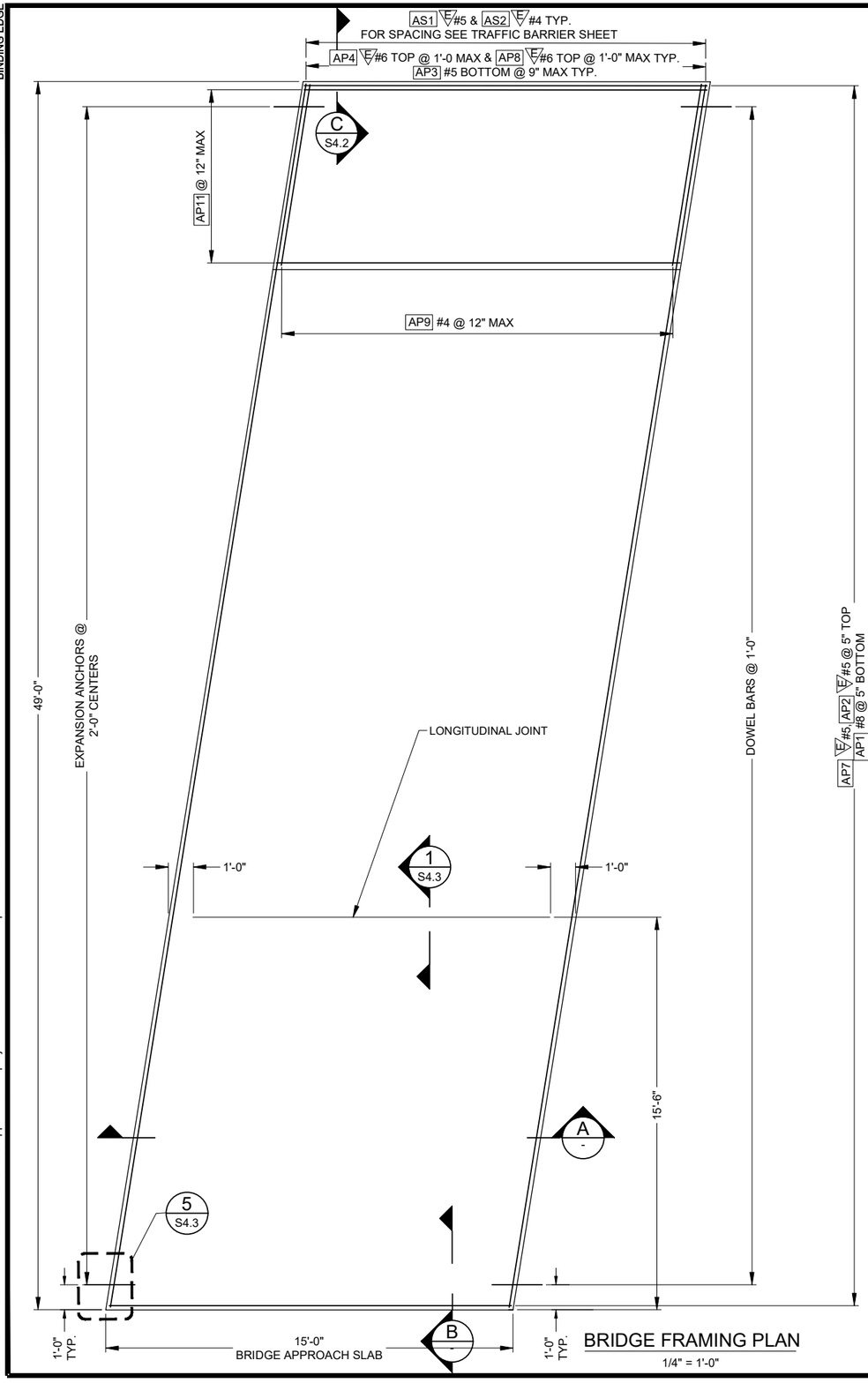
LOWER WAPATO CREEK HABITAT PROJECT
APPROACH SLAB DETAILS
1 of 3

6656
S4.1
41 OF 50

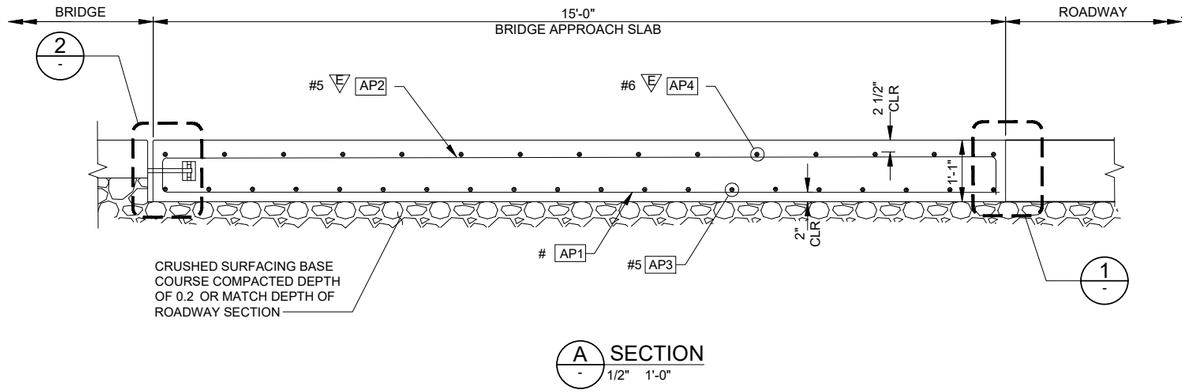
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M.ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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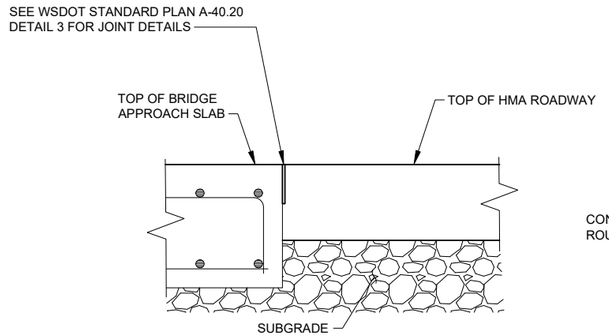
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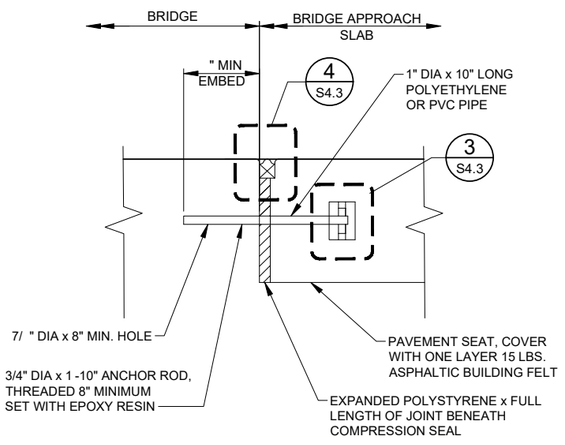
BRIDGE FRAMING PLAN
1/4" = 1'-0"



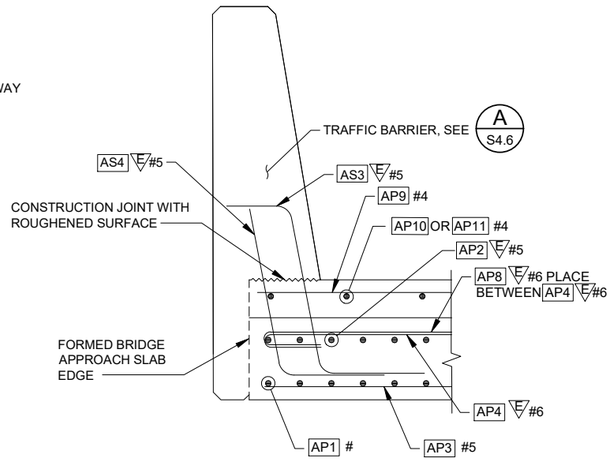
A SECTION
1/2" 1'-0"



A HMA ROADWAY JOINT DETAIL
1" 1'-0"



2 DETAIL
1 1/2" 1'-0"



C SECTION
S4.1, S4.2 3/4" 1'-0"

NOTES

1. ALL EDGES OF BRIDGE APPROACH SLAB SHALL HAVE 1/2" RADIUS EXCEPT AT LONGITUDINAL JOINTS.
2. LONGITUDINAL JOINTS SHALL BE PLACED ON LANE LINES AND SHALL BE CONSTRUCTED AND SEALED IN ACCORDANCE WITH SPECIFICATION SECTION 03 30 00. JOINTS MAY BE EITHER A SAWCUT CRACK CONTROL JOINT OR A CONSTRUCTION JOINT. SAWCUT JOINTS SHALL TERMINATE 1'-0" BEFORE REACHING EDGE OF SLAB AND MUST BE SAW CUT AS SOON AS POSSIBLE AFTER PLACEMENT OF CONCRETE. SEE "LONGITUDINAL JOINT DETAIL" ON BRIDGE APPROACH SLAB DETAILS 3 OF 3.
3. THE MINIMUM LAP SPLICE OF #5 IS 2'-0" #5 IS 2'-6", #6 IS 3 -0" AND #8 IS 3 -3". ALL LAP SPLICES SHALL BE STAGGERED SO THAT NO MORE THAN 50% OF REBAR IS SPLICED AT THE SAME LOCATION. LAP SPLICES SHALL BE LOCATED WITHIN THE MIDDLE HALF OF THE BRIDGE APPROACH SLAB. OPTIONAL SPLICES ARE ALLOWED FOR AP4 #6.
4. FOR TRAFFIC BARRIER, INCLUDING ANY BRIDGE APPROACH SLAB BLOCKOUT INFORMATION, SEE TRAFFIC BARRIER SHEETS.

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DRAWING SCALE: AS NOTED

LOWER WAPATO CREEK HABITAT PROJECT
APPROACH SLAB DETAILS
SHEET 2 OF 3

TOWNSHIP: 20N RANGE: 3E SECTION: 1
VERT: MLLW (PORT OF TACOMA TIDAL)
DAT-HRZ: WA83-SF
PARCEL: 14

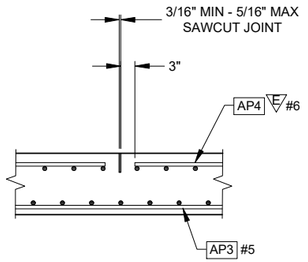
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M. ID: 101449.01
PHASE: 90% Design

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S4.2
42 OF 50

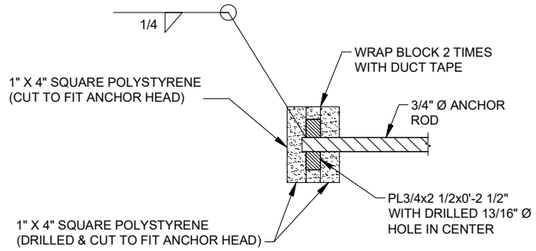
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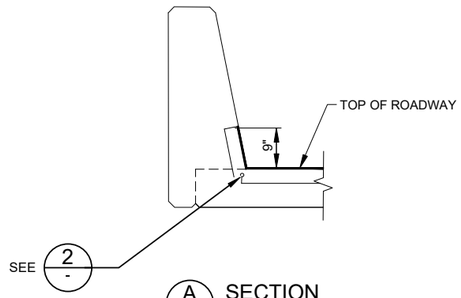
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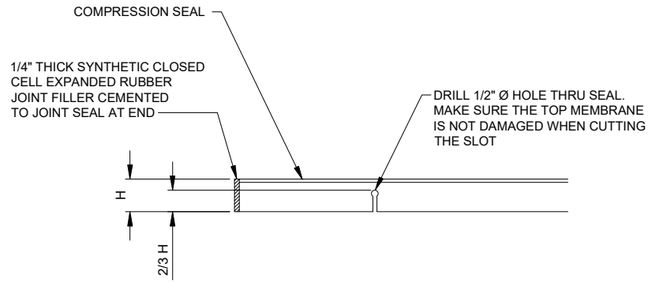
1 LONGITUDINAL JOINT DETAIL
S4.1, S4.2 3/4"=1'-0"



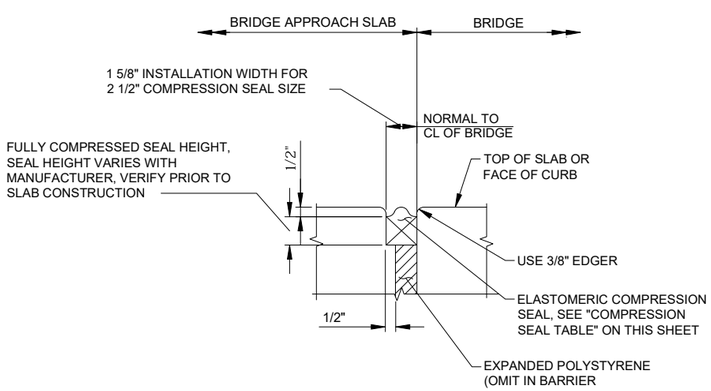
3 DETAIL
S4.1, S4.2 3"=1'-0"



A SECTION
3/4" 1'-0"

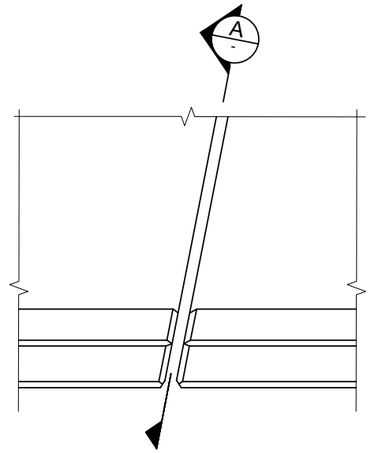


2 SEAL CUTTING DETAIL
NTS



4 DETAIL
S4.1, S4.2 3"=1'-0"

COMPRESSION SEAL TABLE			
D.S. BROWN		WATSON BOWMAN ACME	
SEAL	WIDTH	SEAL	WIDTH
CV-2502	2 1/2"	WA-250	2 1/2"



5 PLAN EXPANSION JOINT
S4.1, S4.2 3/4"=1'-0"

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JARPA UPDATE
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APPROVED:

LOWER WAPATO CREEK
HABITAT PROJECT
APPROACH SLAB DETAILS
3 OF 3

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S4.3
43 of 50

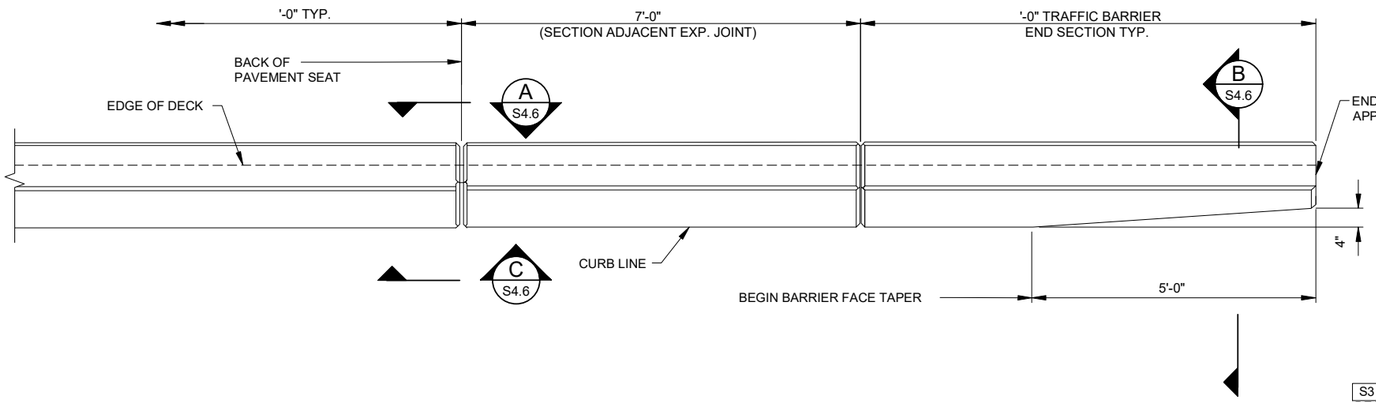
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M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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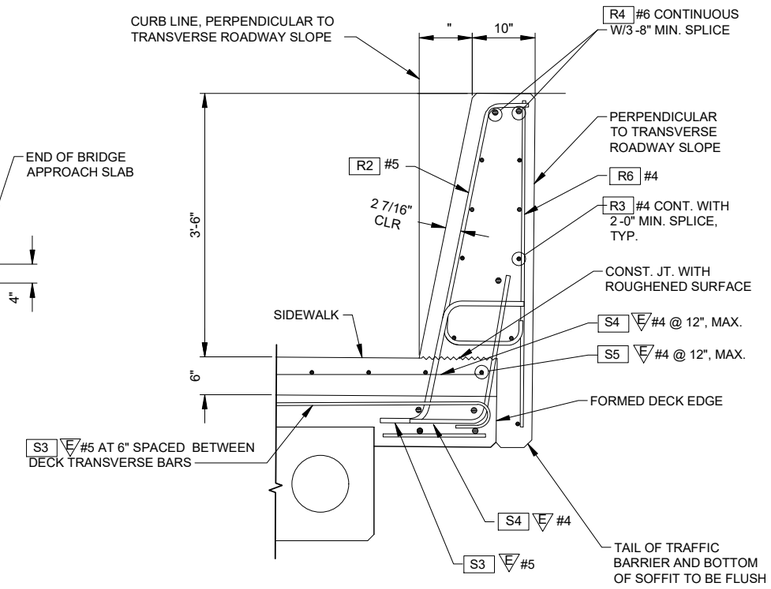
BINDING EDGE



PLAN NE END OF TRAFFIC BARRIER (SE OPP HAND)

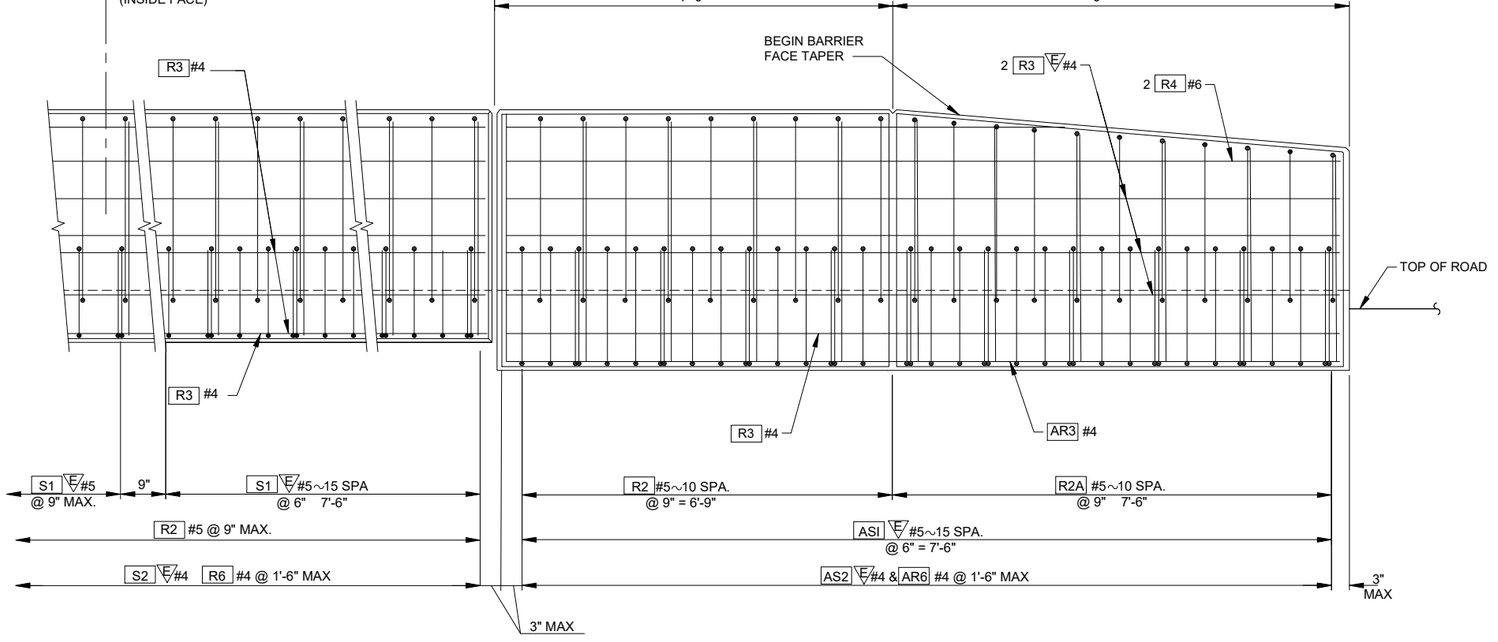
1/4" 1'-0"

BARRIER CONTINUOUS BETWEEN BRIDGE DECK EXPANSION JOINTS.
CONSTRUCTION JOINTS WITH SHEAR KEYS ARE PERMISSIBLE AT DUMMY JOINT LOCATIONS.
FORM JOINTS BETWEEN DUMMY JOINTS SHALL NOT BE PERMITTED.



A NORTH TRAFFIC BARRIER W SIDEWALK

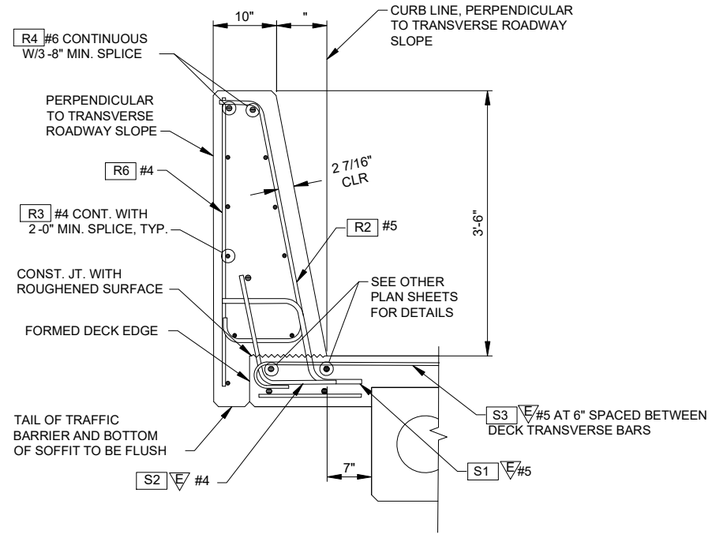
S4.4, S4.5 1" 1'-0"



OUTSIDE ELEVATION NE END OF TRAFFIC BARRIER (SE OPP HAND)

1/4" 1'-0"

(SHOWN WITH BRIDGE APPROACH SLAB)



B SOUTH SECTION TRAFFIC BARRIER

S4.5 1" 1'-0"

(FENCE NOT SHOWN)

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DRAWING SCALE: AS NOTED

LOWER WAPATO CREEK HABITAT PROJECT
TRAFFIC BARRIER DETAILS
1 OF 3

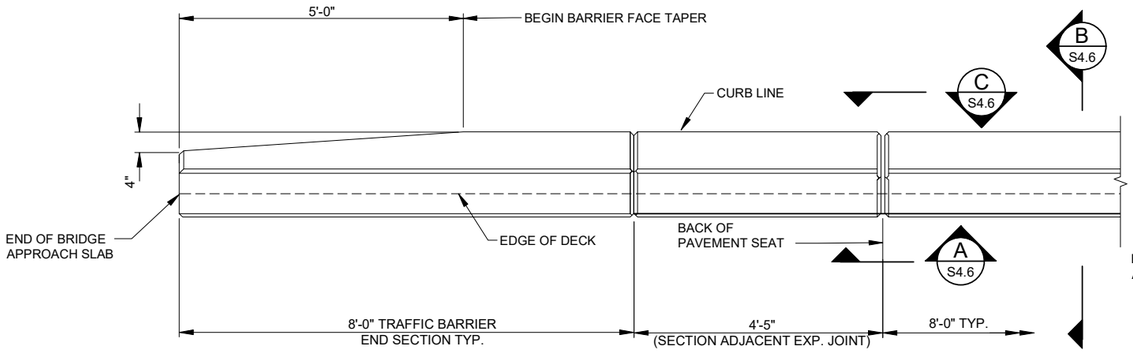
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M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14		

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S4.4
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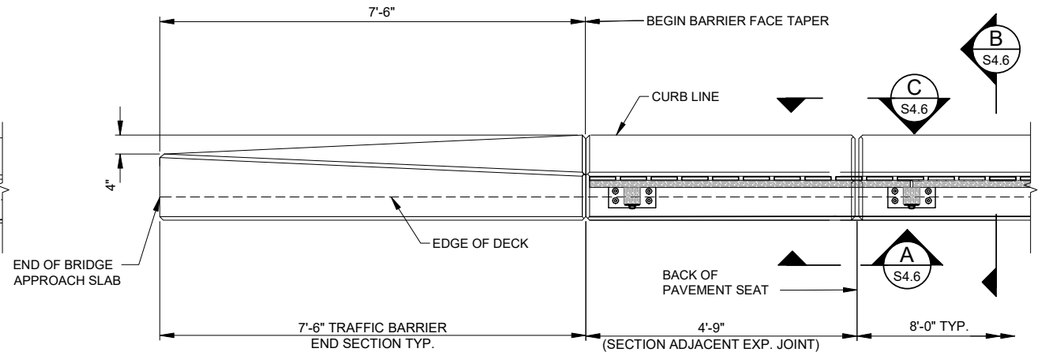
BINDING EDGE



PLAN NW END OF TRAFFIC BARRIER

1/4" = 1'-0"

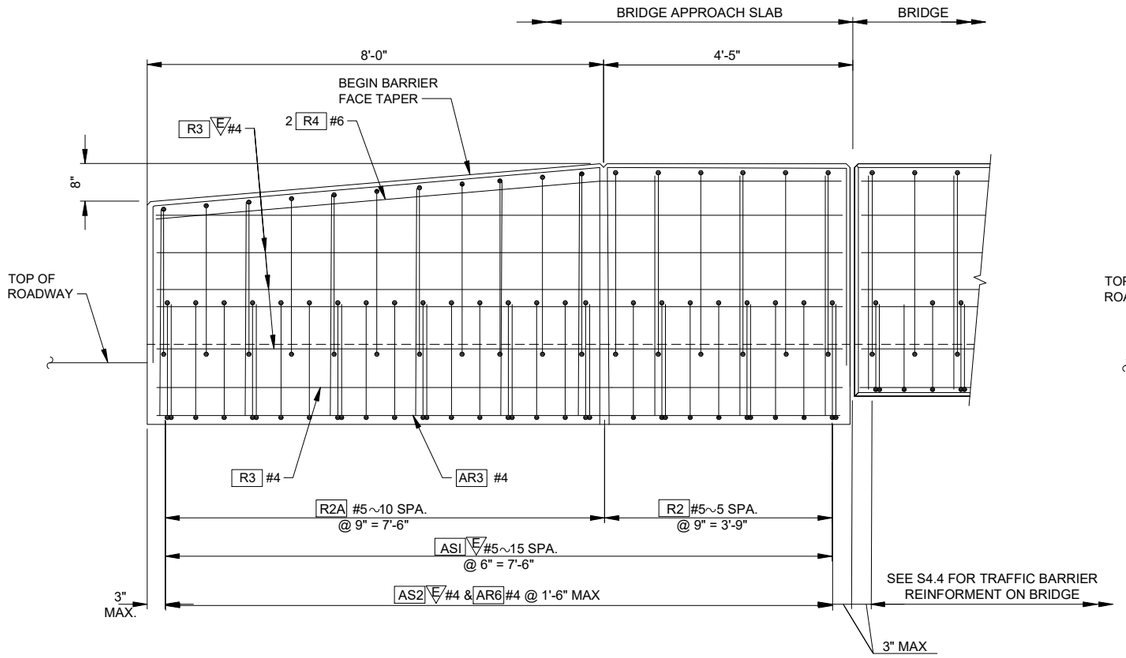
BARRIER CONTINUOUS BETWEEN BRIDGE DECK EXPANSION JOINTS.
CONSTRUCTION JOINTS WITH SHEAR KEYS ARE PERMISSIBLE AT DUMMY JOINT LOCATIONS.
FORM JOINTS BETWEEN DUMMY JOINTS SHALL NOT BE PERMITTED.



PLAN SW END OF TRAFFIC BARRIER

1/4" = 1'-0"

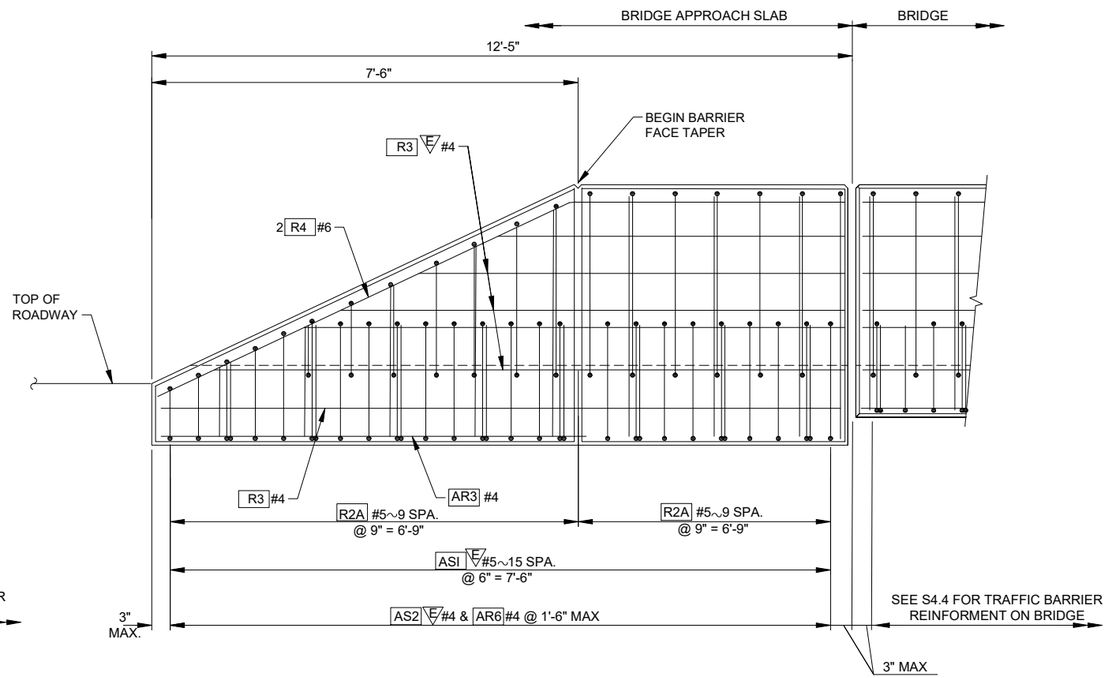
BARRIER CONTINUOUS BETWEEN BRIDGE DECK EXPANSION JOINTS.
CONSTRUCTION JOINTS WITH SHEAR KEYS ARE PERMISSIBLE AT DUMMY JOINT LOCATIONS.
FORM JOINTS BETWEEN DUMMY JOINTS SHALL NOT BE PERMITTED.



OUTSIDE ELEVATION NE END OF TRAFFIC BARRIER

1/4" = 1'-0"

(SHOWN WITH BRIDGE APPROACH SLAB)



OUTSIDE ELEVATION SW END OF TRAFFIC BARRIER

1/4" = 1'-0"

(SHOWN WITH BRIDGE APPROACH SLAB)

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TACOMA, WA 98421

DRAWING SCALE: AS NOTED

LOWER WAPATO CREEK HABITAT PROJECT

TRAFFIC BARRIER DETAILS

2 OF 3

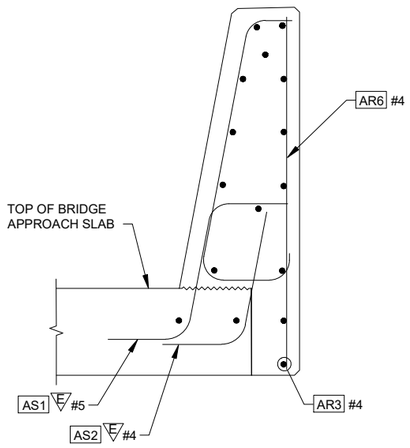
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M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14		

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S4.5
45 of 50

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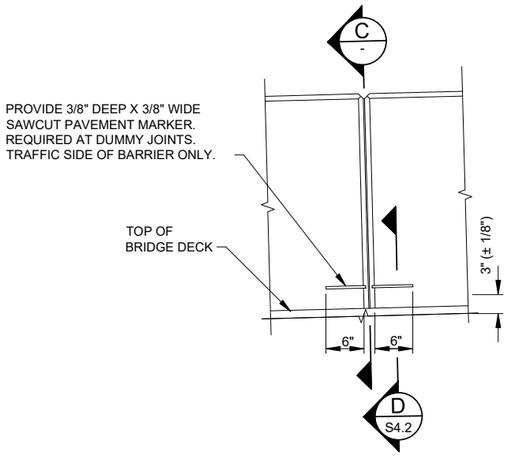
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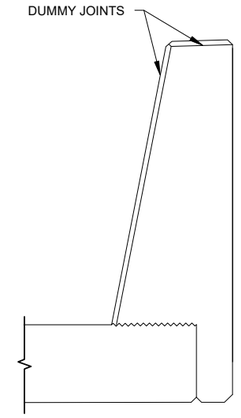


SECTION BRIDGE

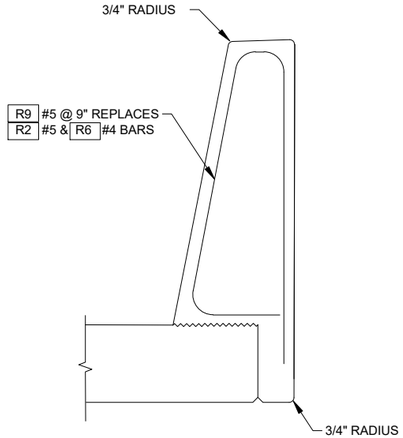
A APPROACH SLAB
S4.4, S4.5 1" = 1'-0"



B VIEW
S4.1 1" = 1'-0"



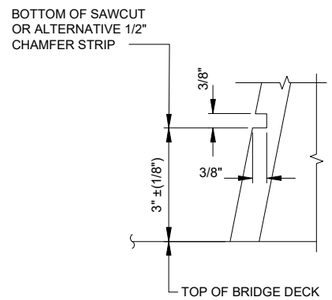
C SECTION
- 1" = 1'-0"



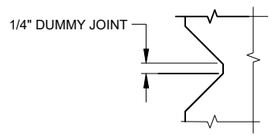
SLIPFORM ALTERNATE
1" = 1'-0"

SEE "TYPICAL SECTION - TRAFFIC BARRIER" FOR ADDITIONAL DETAILS.

THE CONTRACTOR IS ADVISED THAT THE SLIPFORM CONSTRUCTION METHOD IS A PATENTED PROPRIETARY PROCESS FOR BARRIERS.



D SECTION
- 1" = 1'-0"



DUMMY JOINT DETAIL
1" = 1'-0"

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TACOMA, WA 98421
DRAWING SCALE: AS NOTED

LOWER WAPATO CREEK HABITAT PROJECT
TRAFFIC BARRIER DETAILS
3 OF 3

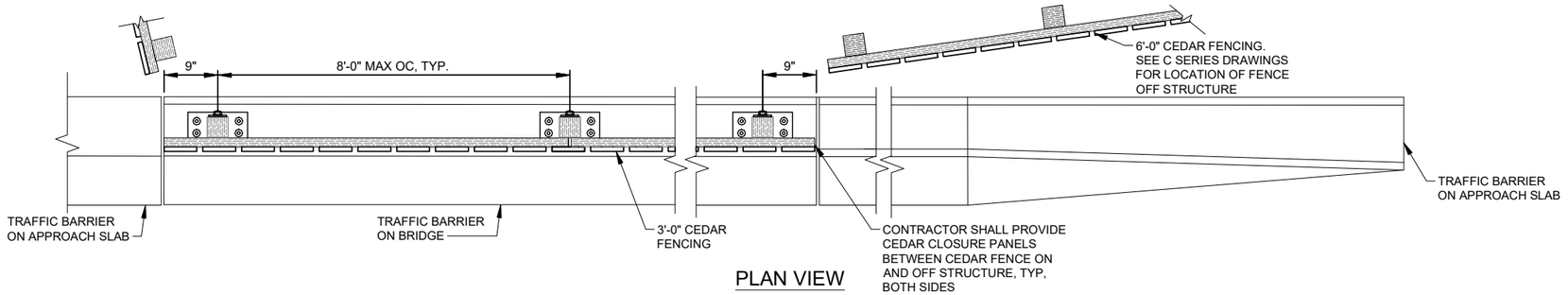
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M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	SECTION: 1

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S4.6
46 OF 50

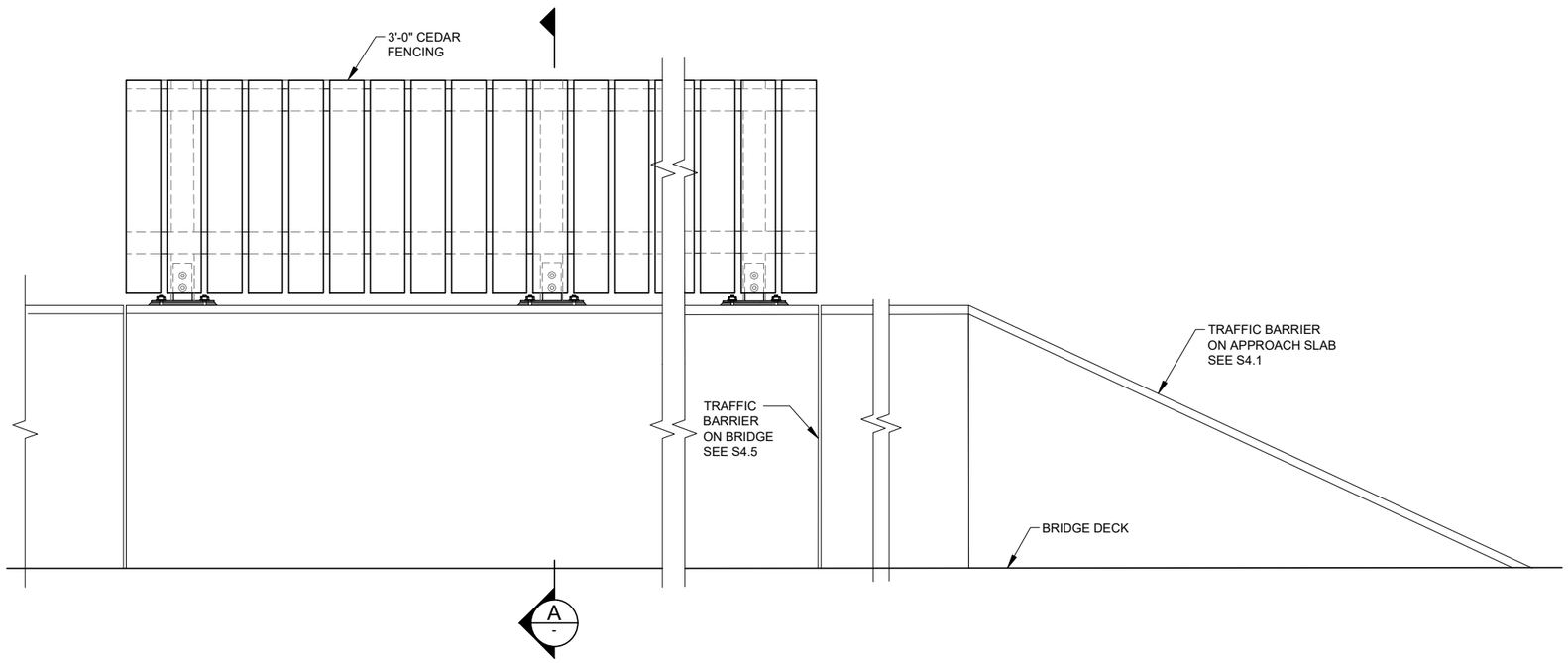
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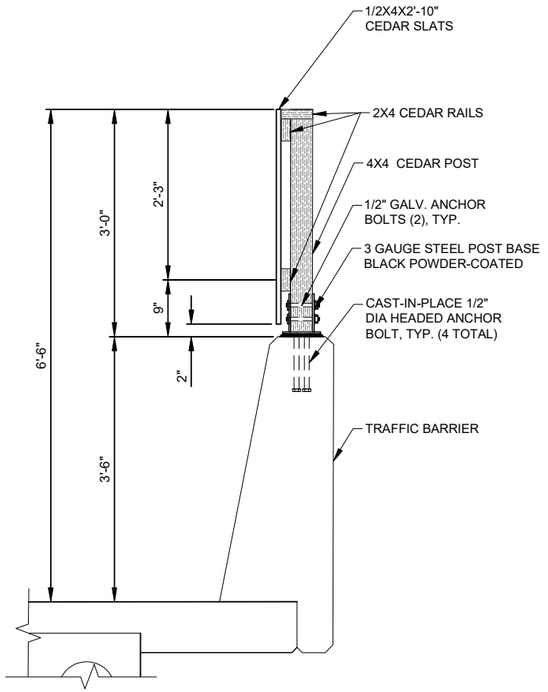


PLAN VIEW



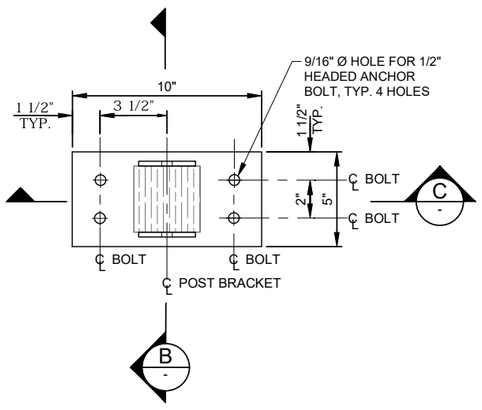
ELEVATION

1/8" = 1'-0"



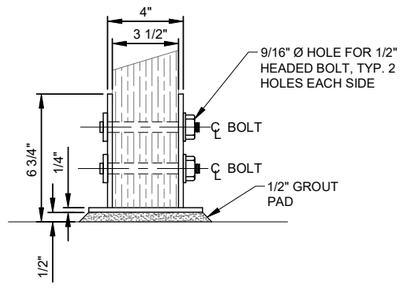
A - SECTION

NTS



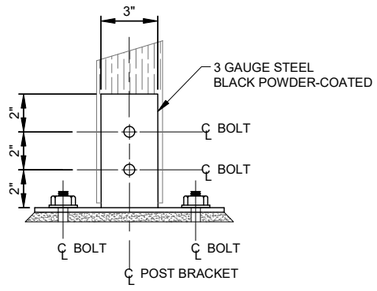
BASE PLATE PLAN

3" = 1'-0"



B - SECTION

3"=1'-0"



C - SECTION

3"=1'-0"

NOTES

1. FENCE POSTS ARE PLUMB.
2. CONTRACTOR IS RESPONSIBLE FOR LOCATION AND PLUMBNESS OF ANCHOR BOLTS.

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LOWER WAPATO CREEK HABITAT PROJECT

FENCE DETAILS

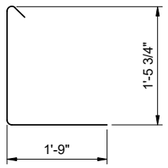
6656
S4.7
47 OF 50

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M.ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

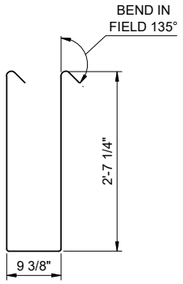
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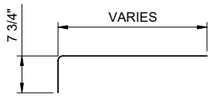
BINDING EDGE



A1 #4 STIRRUP



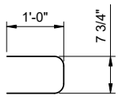
A2 #4 STIRRUP



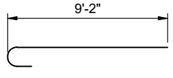
AP2 #5



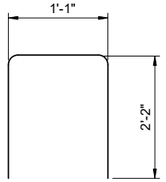
AP4 #6



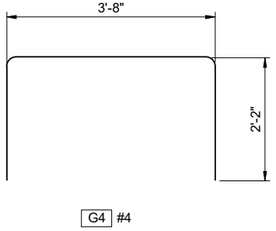
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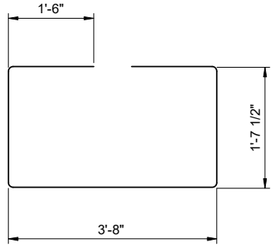
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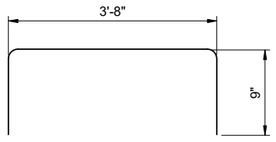
G3 #4



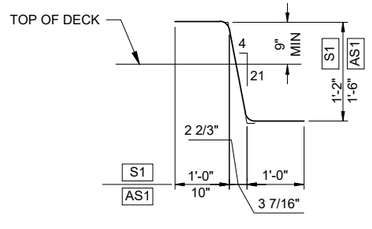
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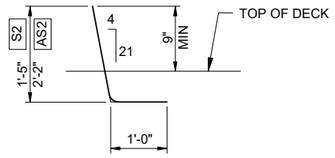
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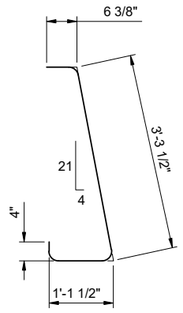
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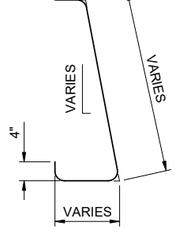
S1 #5 AND AS1



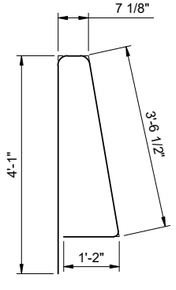
S2 #4 AND AS2 #4



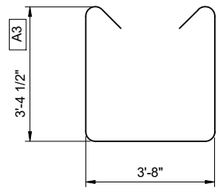
R2 #5



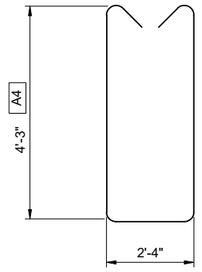
R2A #4



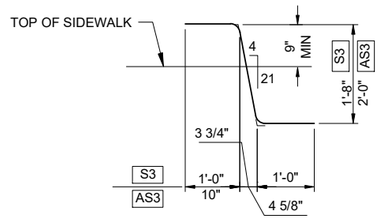
R9 #5



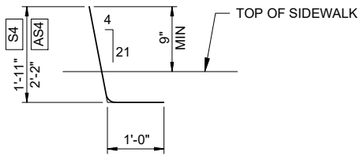
A3 #6



A4 #6



S3 #5 AND AS3



S4 #4 AND AS4 #4

90% DESIGN
FOR AGENCY REVIEW

JARPA UPDATE
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MARK:	REVISION:	BY:	APPR:	DATE:

APPROVED:

DIRECTOR ENG. DATE | CHECKED BY DATE

CONT/CONS: 071447 | TOWNSHIP: 20N | RANGE: 3E | SECTION: 1 | PRINTED BY: OLI87950 Nov 13, 2020

M. ID: 101449.01 | DAT-HRZ: WA83-SF | VERT: MLLW (PORT OF TACOMA TIDAL) | PORT ADDRESS: 1 SITCOM PLAZA

PHASE: 90% Design | PARCEL: 14 | DRAWING SCALE: AS NOTED | TACOMA, WA 98421

LOWER WAPATO CREEK HABITAT PROJECT

BAR BENDING DIAGRAM

6656
S5.1
48 OF 50

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PORT OF TACOMA FILE: C:\users\oli87950\appdata\local\projectwise\workdir\mott-use-pw-10\dms48042\S5.1

BINDING EDGE

SOIL AMENDMENT SECTION

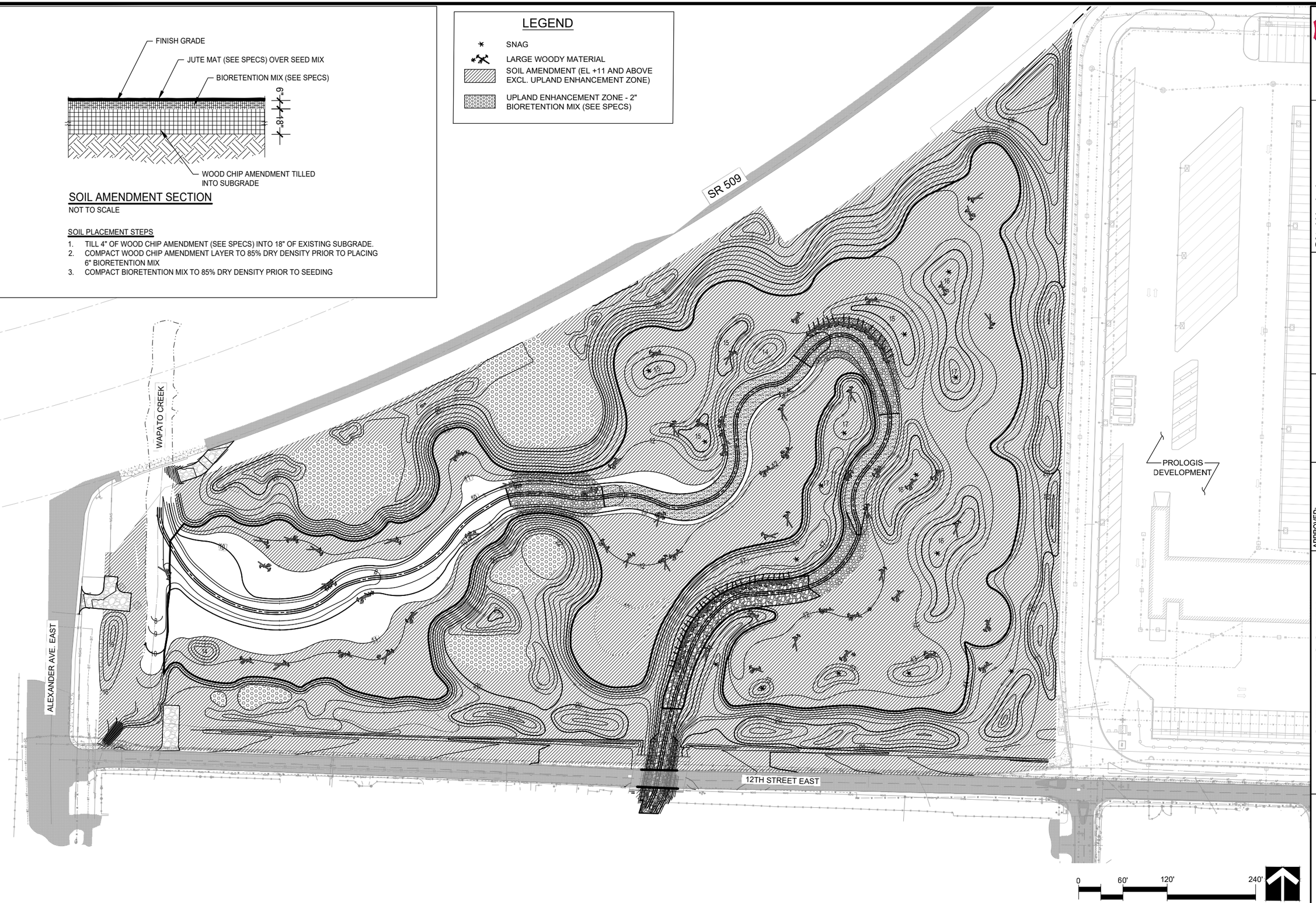
NOT TO SCALE

SOIL PLACEMENT STEPS

1. TILL 4" OF WOOD CHIP AMENDMENT (SEE SPECS) INTO 18" OF EXISTING SUBGRADE.
2. COMPACT WOOD CHIP AMENDMENT LAYER TO 85% DRY DENSITY PRIOR TO PLACING 6" BIORETENTION MIX
3. COMPACT BIORETENTION MIX TO 85% DRY DENSITY PRIOR TO SEEDING

LEGEND

- SNAG
- LARGE WOODY MATERIAL
- SOIL AMENDMENT (EL +11 AND ABOVE EXCL. UPLAND ENHANCEMENT ZONE)
- UPLAND ENHANCEMENT ZONE - 2" BIORETENTION MIX (SEE SPECS)



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DIRECTOR, ENG.	DATE	CHECKED BY	DATE
		DJE	12-11-2020

PRINTED BY: DerrickE Dec 30, 2020
PORT ADDRESS: 1 SITCOM PLAZA
TACOMA, WA 98421

LOWER WAPATO CREEK HABITAT PROJECT

SOILS PLAN

L1.0

50 OF 51

CONT/CONS: 071447	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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BINDING EDGE

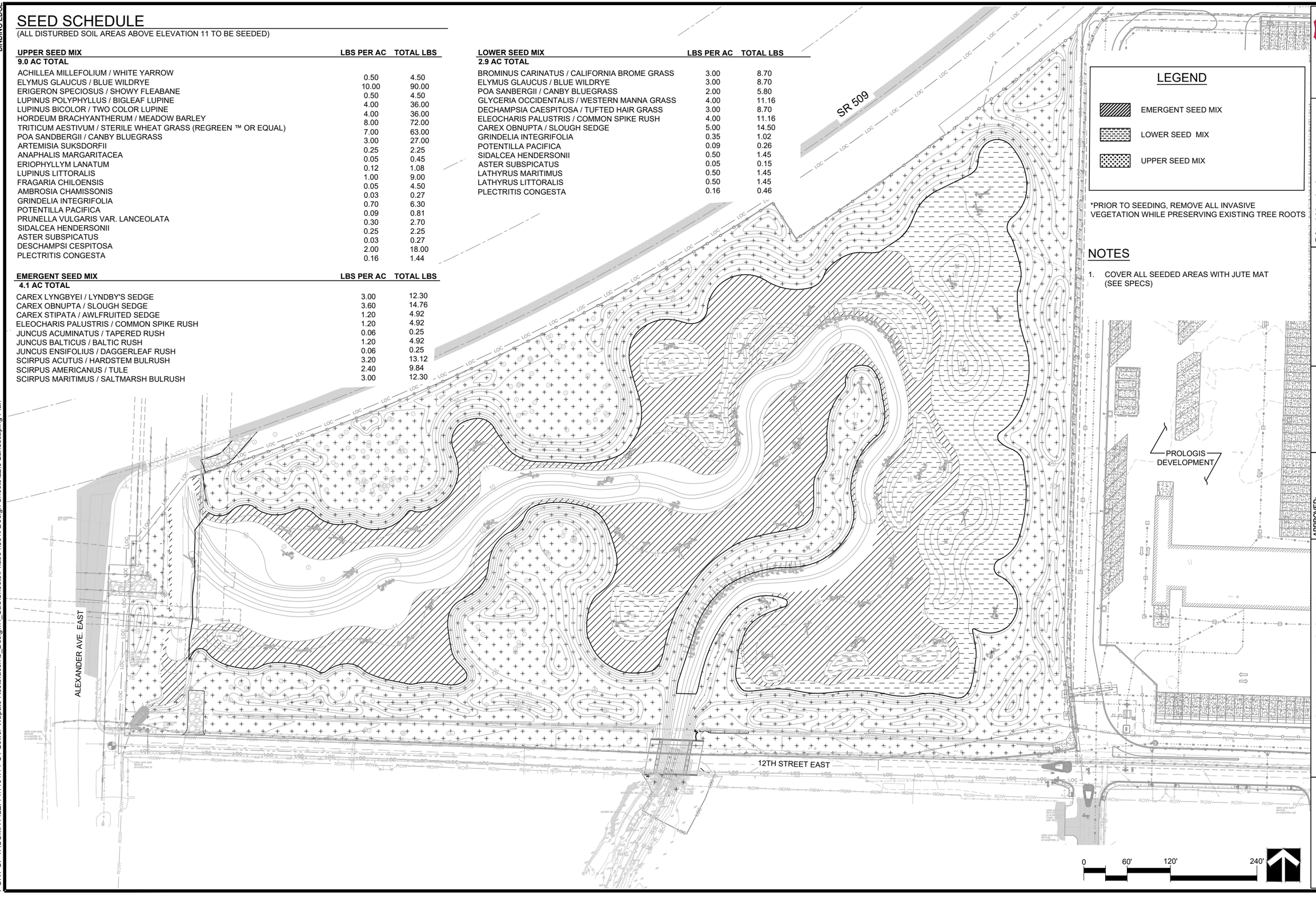
SEED SCHEDULE

(ALL DISTURBED SOIL AREAS ABOVE ELEVATION 11 TO BE SEEDED)

UPPER SEED MIX	LBS PER AC	TOTAL LBS
9.0 AC TOTAL		
ACHILLEA MILLEFOLIUM / WHITE YARROW	0.50	4.50
ELYMUS GLAUCUS / BLUE WILDRYE	10.00	90.00
ERIGERON SPECIOSUS / SHOWY FLEABANE	0.50	4.50
LUPINUS POLYPHYLLUS / BIGLEAF LUPINE	4.00	36.00
LUPINUS BICOLOR / TWO COLOR LUPINE	4.00	36.00
HORDEUM BRACHYANTHERUM / MEADOW BARLEY	8.00	72.00
TRITICUM AESTIVUM / STERILE WHEAT GRASS (REGREEN ™ OR EQUAL)	7.00	63.00
POA SANDBERGII / CANBY BLUEGRASS	3.00	27.00
ARTEMISIA SUKSDORFII	0.25	2.25
ANAPHALIS MARGARITACEA	0.05	0.45
ERIOPHYLLYM LANATUM	0.12	1.08
LUPINUS LITTORALIS	1.00	9.00
FRAGARIA CHILOENSIS	0.05	4.50
AMBROSIA CHAMISSONIS	0.03	0.27
GRINDELIA INTEGRIFOLIA	0.70	6.30
POTENTILLA PACIFICA	0.09	0.81
PRUNELLA VULGARIS VAR. LANCEOLATA	0.30	2.70
SIDALCEA HENDERSONII	0.25	2.25
ASTER SUBSPICATUS	0.03	0.27
DESCHAMPSI CESPITOSA	2.00	18.00
PLECTRITIS CONGESTA	0.16	1.44

EMERGENT SEED MIX	LBS PER AC	TOTAL LBS
4.1 AC TOTAL		
CAREX LYNGBYEI / LYNDBY'S SEDGE	3.00	12.30
CAREX OBNUPTA / SLOUGH SEDGE	3.60	14.76
CAREX STIPATA / AWLFRUITED SEDGE	1.20	4.92
ELEOCHARIS PALUSTRIS / COMMON SPIKE RUSH	1.20	4.92
JUNCUS ACUMINATUS / TAPERED RUSH	0.06	0.25
JUNCUS BALTICUS / BALTIC RUSH	1.20	4.92
JUNCUS ENSIFOLIUS / DAGGERLEAF RUSH	0.06	0.25
SCIRPUS ACUTUS / HARDSTEM BULRUSH	3.20	13.12
SCIRPUS AMERICANUS / TULE	2.40	9.84
SCIRPUS MARITIMUS / SALTMARSH BULRUSH	3.00	12.30

LOWER SEED MIX	LBS PER AC	TOTAL LBS
2.9 AC TOTAL		
BROMINUS CARINATUS / CALIFORNIA BROME GRASS	3.00	8.70
ELYMUS GLAUCUS / BLUE WILDRYE	3.00	8.70
POA SANBERGII / CANBY BLUEGRASS	2.00	5.80
GLYCERIA OCCIDENTALIS / WESTERN MANNA GRASS	4.00	11.16
DECHAMPSIA CAESPITOSA / TUFTED HAIR GRASS	3.00	8.70
ELEOCHARIS PALUSTRIS / COMMON SPIKE RUSH	4.00	11.16
CAREX OBNUPTA / SLOUGH SEDGE	5.00	14.50
GRINDELIA INTEGRIFOLIA	0.35	1.02
POTENTILLA PACIFICA	0.09	0.26
SIDALCEA HENDERSONII	0.50	1.45
ASTER SUBSPICATUS	0.05	0.15
LATHYRUS MARITIMUS	0.50	1.45
LATHYRUS LITTORALIS	0.50	1.45
PLECTRITIS CONGESTA	0.16	0.46



LEGEND

- EMERGENT SEED MIX
- LOWER SEED MIX
- UPPER SEED MIX

*PRIOR TO SEEDING, REMOVE ALL INVASIVE VEGETATION WHILE PRESERVING EXISTING TREE ROOTS

NOTES

1. COVER ALL SEEDED AREAS WITH JUTE MAT (SEE SPECS)

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JARPA UPDATE
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CHECKED BY	DATE
DJE	12-11-2020
PROJ. ENGR	DATE

DIRECTOR ENG.	DATE
PRINTED BY:	DerrickE Dec 14, 2020
PORT ADDRESS:	1 SITCOM PLAZA
	TACOMA, WA 98421

APPROVED:

LOWER WAPATO CREEK HABITAT PROJECT

LANDSCAPING PLAN

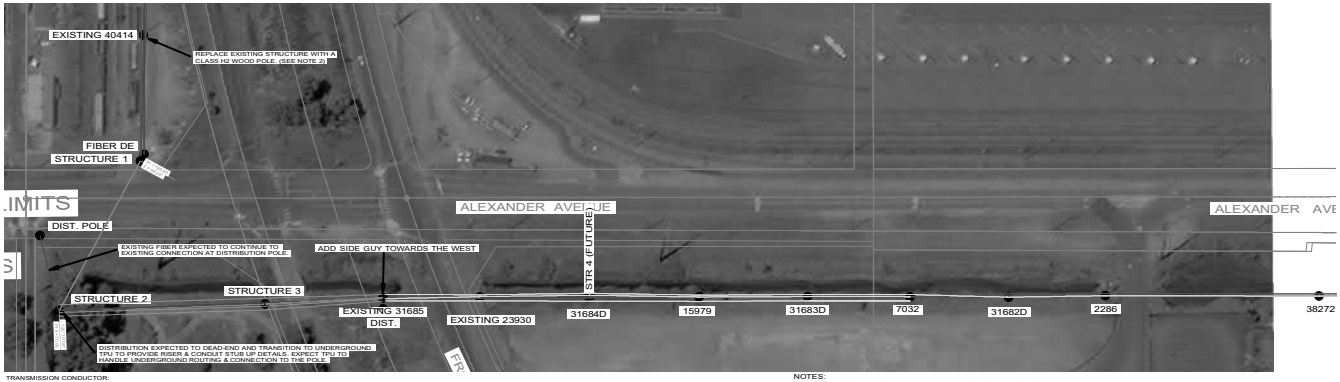
L2.0

51 OF 51

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E
M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:	90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED

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PORT OF TACOMA FILE: P:\1491.1 POT Lower Wapato Restoration\3_Design\4_Cad\Sheets\Phase II\90% Design Sheets\L2.0 Landscaping Plan

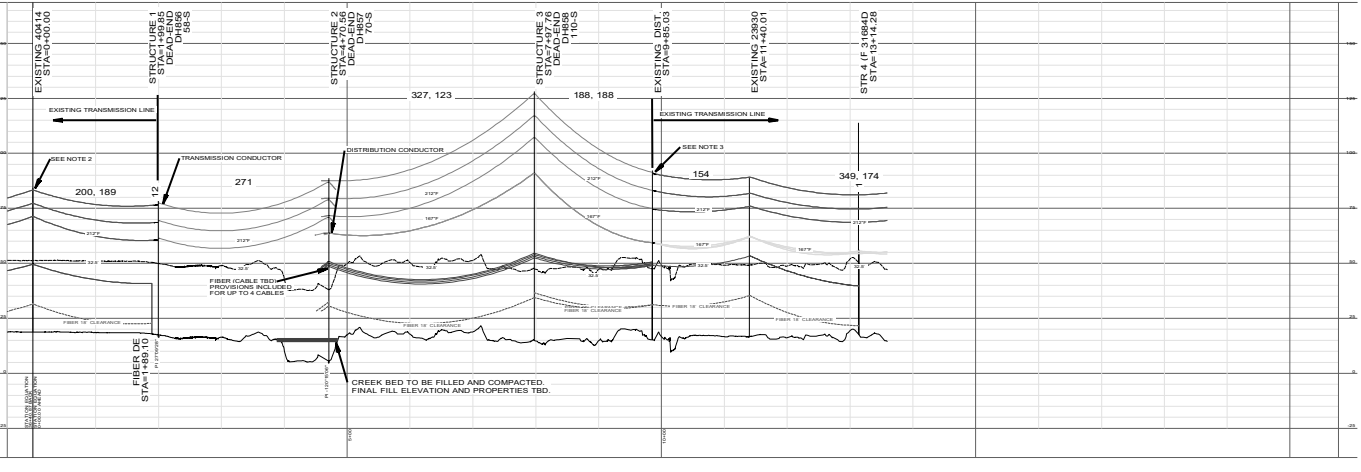


TRANSMISSION CONDUCTOR:
1272 KCMIL 61/0 STRAND "NARCISSUS" AAC
DESIGN TENSION OF 5,500LBS INITIAL @ NESC MEDIUM

DISTRIBUTION CONDUCTOR:
795 KCMIL 37/0 STRAND "ARBUTUS" AAC
DESIGN TENSION OF 3,475LBS INITIAL @ NESC MEDIUM

NOTES:
1) PHASING IS UNKNOWN. MAINTAIN EXISTING PHASING.
2) REPLACE STRUCTURE 40414 WITH A CLASS H2 WOOD POLE.
3) SIDE GUY TO BE ADDED ON WEST SIDE OF STRUCTURE 2. BELOW BOTTOM TRANSMISSION PHASE. ALSO MIDDLE DISTRIBUTION PHASE DEAD-END TO BE MOVED TO THE MIDDLE POSITION ON THE EAST SIDE OF THE POLE.

HORIZ. SCALE 70.0 FT
VERT. SCALE 20.0 FT



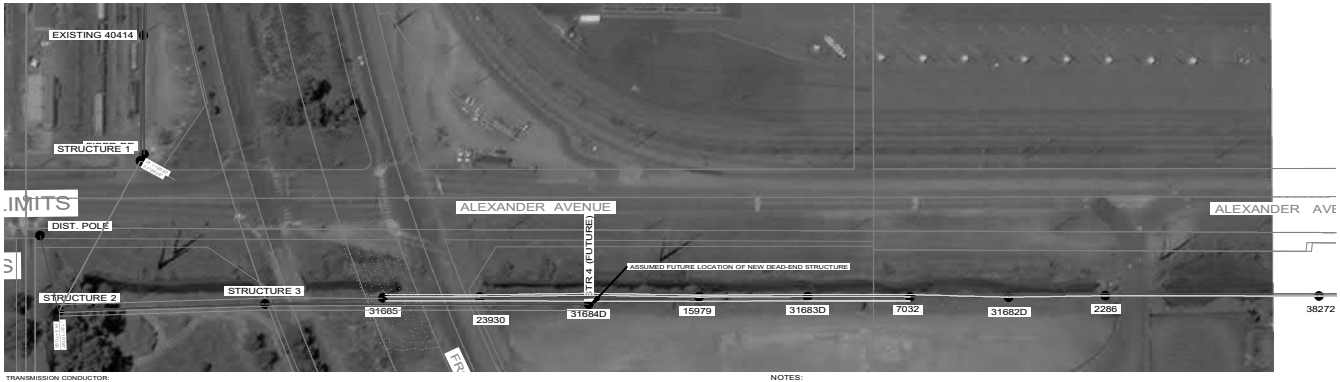
PRELIMINARY - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	ENGINEER	DES./ DR.	CHECKED	APPROVED
A	10/26/20	30% SUBMITTAL	MB	BK	SA	SA
B	10/30/20	REVISED 30% SUBMITTAL	MB	BK	SA	SA
C	11/13/20	90% SUBMITTAL	MB	BK	SA	SA

PROJECT MANAGER: A. BIRGDAL
DESIGN ENG.: B. MEIER
PROJECT ENG.: B. MEIER
APPROVAL ENG.: S. AKERS

PROJECT NO. 20-20-0001
DATE 10/26/2020
DR. N. BAKER
SCALE 1" = 20' H, 1" = 20' V
SHEET 1 OF 1

WAPATO GREEK RELOCATION PROJECT
TRANSMISSION LINE
TEMPORARY PLAN & PROFILE
WASHINGTON
DH853
REVISION C

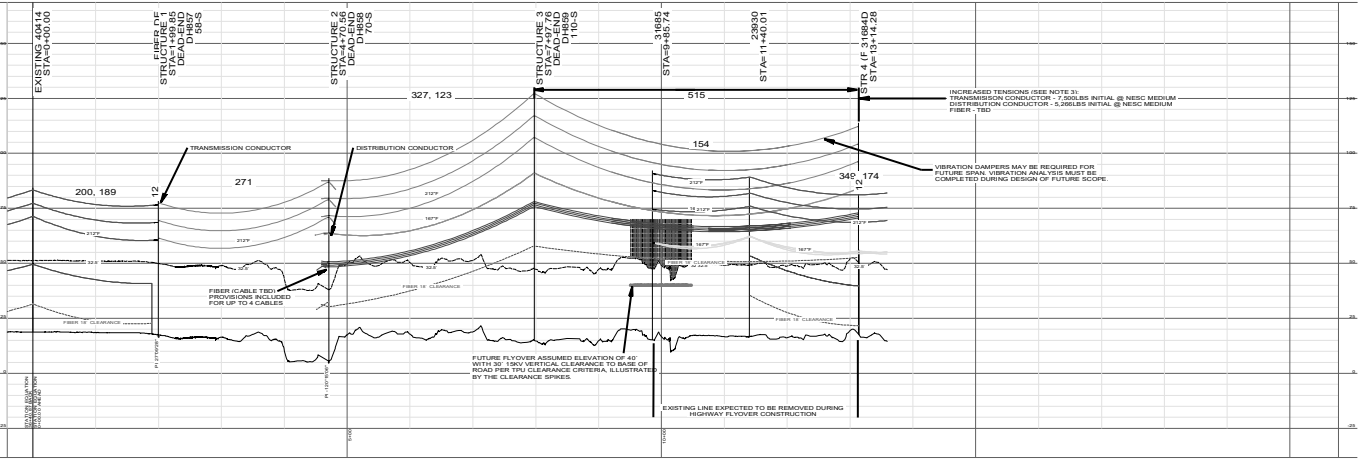


TRANSMISSION CONDUCTOR:
1272 KCMIL 61/0 STRAND "NARCISSUS" AAC
DESIGN TENSION OF 5,500LBS INITIAL @ NESC MEDIUM

DISTRIBUTION CONDUCTOR:
795 KCMIL 37/0 STRAND "ARBUTUS" AAC
DESIGN TENSION OF 3,475LBS INITIAL @ NESC MEDIUM

NOTES:
1) PHASING IS UNKNOWN, MAINTAIN EXISTING PHASING.
2) THIS PROFILE SHEET IS MEANT TO SHOW THE ASSUMED FUTURE SCENARIO AFTER EXISTING STRUCTURE 31685 IS REMOVED AND A FLYOVER ON HIGHWAY 509 IS CONSTRUCTED.
3) TENSIONS INCREASED ABOVE TPU CRITERIA FOR SPECIAL LONGER SPAN. ASSUME THESE TENSIONS ARE ACCEPTABLE FOR THIS WORST CASE SCENARIO AND EXPECT THEM TO BE RE-EVALUATED DURING DESIGN OF FUTURE SCOPE.

HORIZ. SCALE: 70.0 FT
VERT. SCALE: 20.0 FT



PRELIMINARY - NOT FOR CONSTRUCTION

NO.	DATE	REVISIONS	ENGINEER	DES./ DR.	CHECKED	APPROVED
A	10/30/20	30% SUBMITTAL	MB	BK	SA	SA
B	10/06/20	REVISED 30% SUBMITTAL	MB	BK	SA	SA
C	11/13/20	90% SUBMITTAL	MB	BK	SA	SA

PLS CASD DRAWING

PROJECT MANAGER: A. BIRGDAL
DESIGN ENG.: BRYCE ANDERSEN
PROJECT ENG.: BRYCE ANDERSEN
APPROVAL ENG.: S. AKERS

PROJECT: WAPATO CREEK RELOCATION PROJECT
TITLE: PROFILE & CROSSING PLAN
FUTURE PLAN & PROFILE
WASHINGTON

REVIEW: 30/7/2020
DATE: 10/30/2020
DR.: N. DICKEY
SCALE: 1" = 20' H, 1" = 20' V
SHEET: 1 OF 1
JOB NO.: DH864
REVISION: C

BINDING EDGE

PORT OF TACOMA

LOWER WAPATO CREEK HABITAT PROJECT
MASTER ID #101449.01
CONTRACT #071490

PORT COMMISSIONERS:

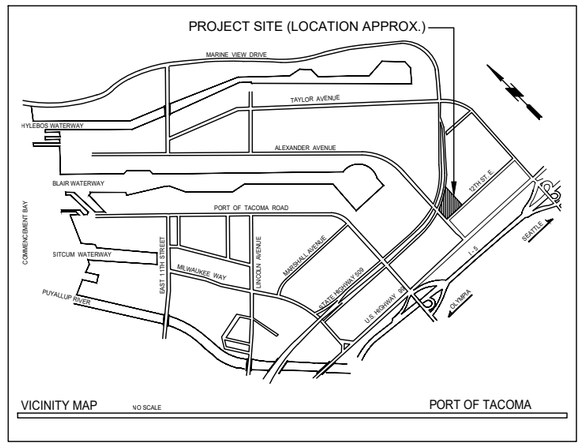
JOHN MCCARTHY
DON MEYER
DICK MARZANO
DEANNA KELLER
KRISTIN ANG

PORT STAFF:

ERIC JOHNSON
Executive Director

THAIS HOWARD, PE
Director of Engineering

DAVID R. MYERS, NCARB, CSI
Engineering Project Manager



CONSULTANT:

SITE WORKSHOP
917 MLK WAY
TACOMA, WA 98405
(253) 844-4131

PROJECT MANAGER: DERRICK EBERLE

DRAWING LIST

SHEET DESIGNATION	SHEET #	SHEET TITLE
LANDSCAPING		
G1.0	1	COVER SHEET
L1.0	2	LAYOUT PLAN
L2.0	3	IRRIGATION PLAN
L3.0	4	PLANTING PLAN
L3.1	5	PLANTING DETAILS
L3.2	6	PLANTING DETAILS
L3.3	7	PLANTING SCHEDULE

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DJE	12-18-2020

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		DerrickE	Dec 18, 2020

PRINTED BY: DerrickE Dec 18, 2020
PORT ADDRESS: 1 SITCOM PLAZA
TACOMA, WA 98421

LOWER WAPATO CREEK
HABITAT PROJECT
COVER SHEET

6657
G1.0

CONT/CONS:	071490	TOWNSHIP: 20N	RANGE: 3E
M. ID:	101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)
PHASE:		PARCEL: 14	DRAWING SCALE: AS NOTED

SECTION: 1

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PORT OF TACOMA FILE: P:\11491.1 POT Lower Wapato Restoration\3_Design\4_Cad\Sheets\Phase II\JARPA Sheets\G1.0 Cover Sheet

BINDING EDGE

LEGEND

- CONTRACTOR STAGING
- SITE PERIMETER FENCE
- DOUBLE SWING GATE (TRUCK ACCESS)
- 5' WIDE PEDESTRIAN GATE
- LIMIT OF CONSTRUCTION
- EXISTING TREE
- WETLAND BOUNDARY

PLANTING ZONES

- UPLAND ZONE
- UPLAND ENHANCEMENT ZONE
- WETLAND PALUSTRINE FORESTED ZONE
- TRANSITIONAL PLANTING ZONE
- WETLAND EMERGENT ZONE

POST CAP

(4) STRANDS 9 GA. VINYL COATED WIRE AT 12" O.C. (THRU 1/4" DIA. HOLES IN POSTS), PROVIDE EYE BOLTS AND TURNBUCKLES W/LOCKNUTS AT TERMINAL CORNER, AND PULL POSTS (BOTH SIDES) (TYP)

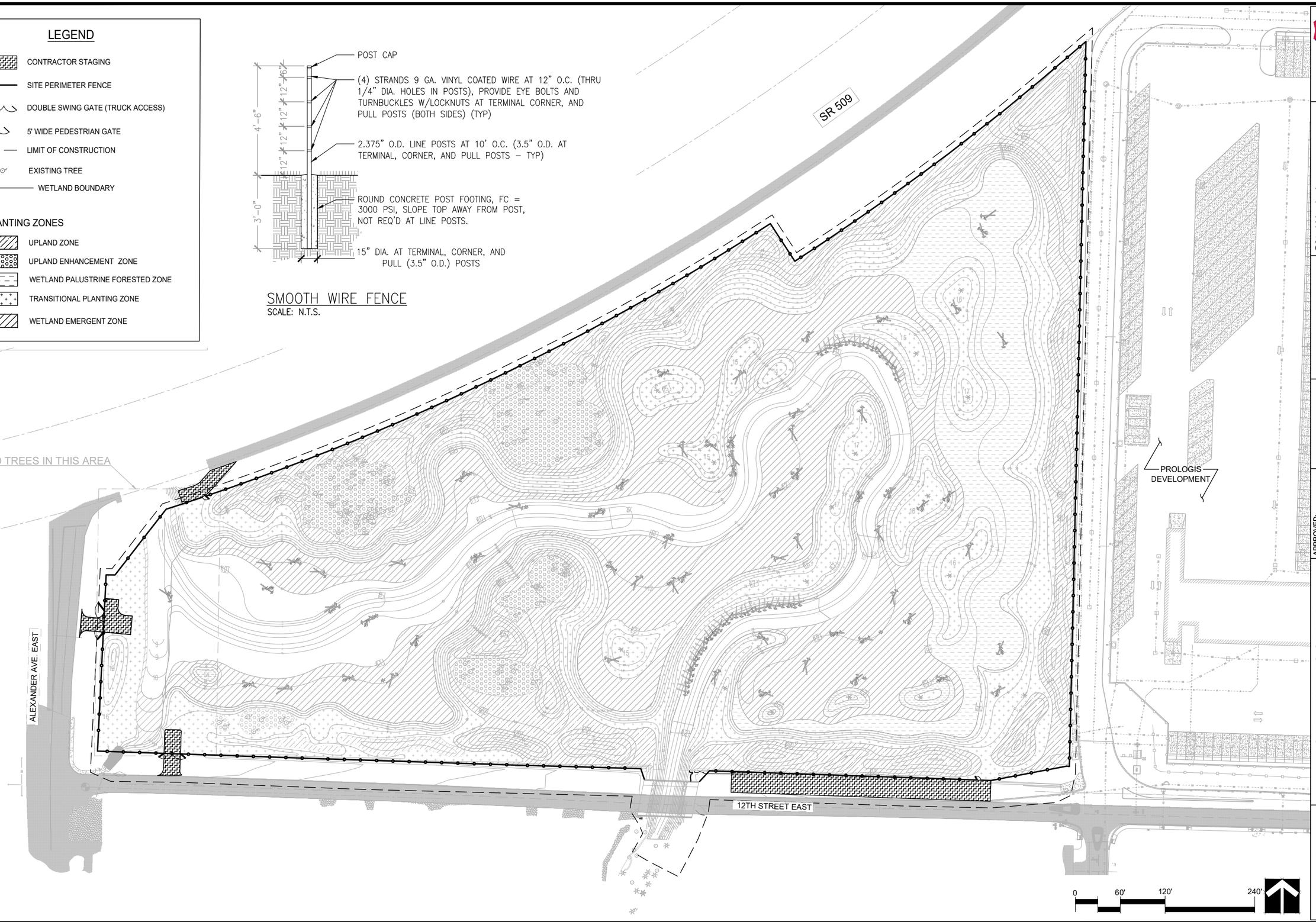
2.375" O.D. LINE POSTS AT 10' O.C. (3.5" O.D. AT TERMINAL, CORNER, AND PULL POSTS – TYP)

ROUND CONCRETE POST FOOTING, FC = 3000 PSI, SLOPE TOP AWAY FROM POST, NOT REQ'D AT LINE POSTS.

15" DIA. AT TERMINAL, CORNER, AND PULL (3.5" O.D.) POSTS

SMOOTH WIRE FENCE

SCALE: N.T.S.



PORT OF TACOMA FILE: P:\1491.1 POT Lower Wapato Restoration\3_Design\4_CadSheets\Phase II\JARPA Sheets\L1.0 LWCHP Layout Plan

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PRINTED BY: DerrickE Dec 18, 2020		
PORT ADDRESS: 1 SITCOM PLAZA		
TACOMA, WA 98421		

LOWER WAPATO CREEK HABITAT PROJECT

LAYOUT PLAN

6657
L1.0
2 OF 7

CONT/CONS: 071490	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE:	PARCEL: 14	DRAWING SCALE: AS NOTED	

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BINDING EDGE

PORT OF TACOMA FILE: P:\1491.1 POT Lower Wapato Restoration\3_Design\4_CadSheets\Phase II\JARPA Sheets\L2.0 LWCHP Irrigation Plan

LEGEND

- CONTRACTOR STAGING
- SITE PERIMETER FENCE
- DOUBLE SWING GATE (TRUCK ACCESS)
- 5' WIDE PEDESTRIAN GATE
- LIMIT OF CONSTRUCTION
- EXISTING TREE
- WETLAND BOUNDARY
- IRRIGATED AREA

SR 509

ALEXANDER AVE. EAST

12TH STREET EAST

PROLOGIS DEVELOPMENT

0 60' 120' 240'

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APPROVED:

DIRECTOR ENG.	DATE

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DJE	12-18-2020

PROJ. ENGR	DATE
DerrickE	Dec 18, 2020

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LOWER WAPATO CREEK HABITAT PROJECT

IRRIGATION PLAN

6657
L2.0
3 OF 7

CONT/CONS: 071490	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE:	PARCEL: 14	DRAWING SCALE: AS NOTED	

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BINDING EDGE

LEGEND

- CONTRACTOR STAGING
- SITE PERIMETER FENCE
- DOUBLE SWING GATE (TRUCK ACCESS)
- 5' WIDE PEDESTRIAN GATE
- LIMIT OF CONSTRUCTION
- EXISTING TREE
- WETLAND BOUNDARY

PLANTING ZONES

- UPLAND ZONE
- UPLAND ENHANCEMENT ZONE
- WETLAND PALUSTRINE FORESTED ZONE
- TRANSITIONAL PLANTING ZONE
- WETLAND EMERGENT ZONE

SR 509

NO TREES IN THIS AREA

ALEXANDER AVE. EAST

12TH STREET EAST

PROLOGIS DEVELOPMENT

0 60' 120' 240'

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3800 Woodland Park Ave N Suite 200
Seattle, Washington 98103
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206.285.3629 fax

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LOWER WAPATO CREEK HABITAT PROJECT

PLANTING PLAN

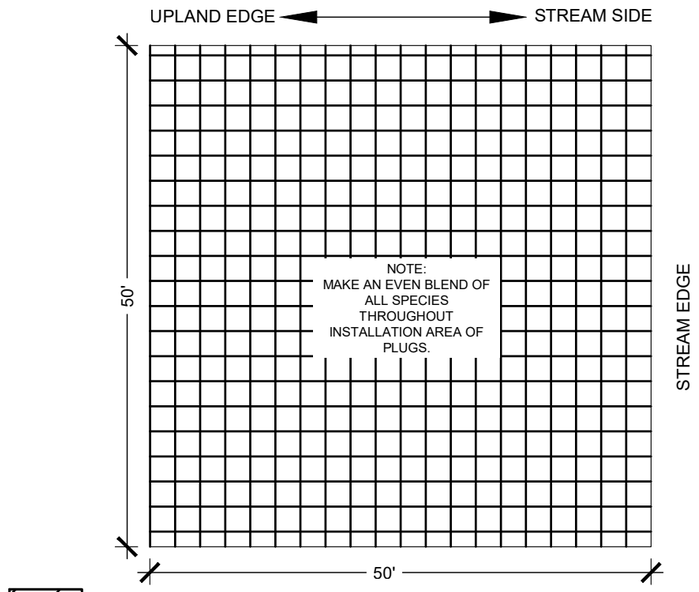
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4 OF 7

CONT/CONS:	071490	TOWNSHIP: 20N	RANGE: 3E
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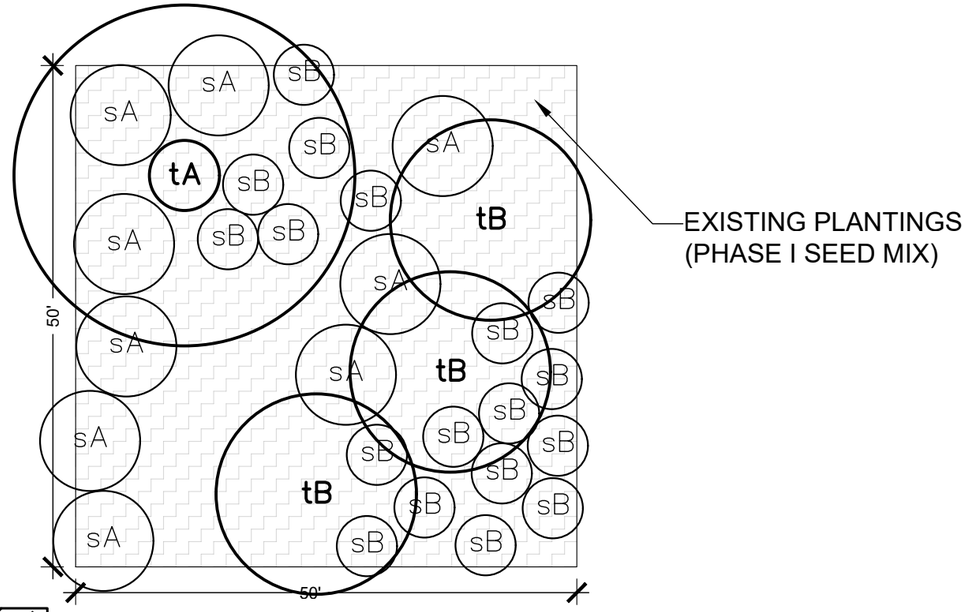
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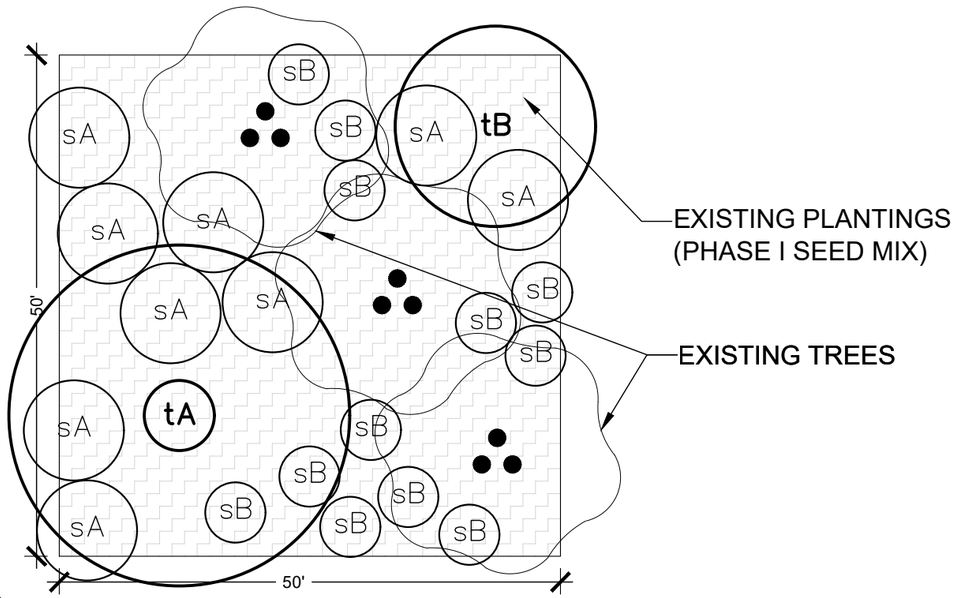
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WETLAND EMERGENT ZONE (ABOVE ELEVATION 11 AND BELOW ELEVATION 13)



UPLAND ZONE



UPLAND ENHANCEMENT ZONE (AREAS WITHIN DENSE EXISTING VEGETATION)

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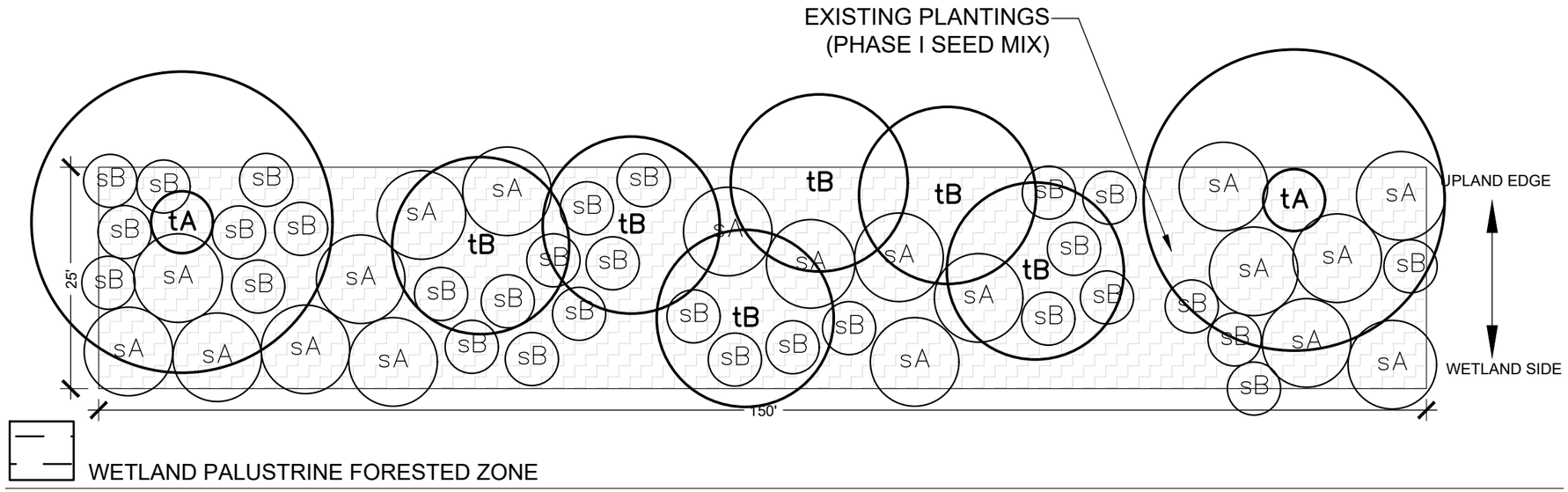
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5 OF 7

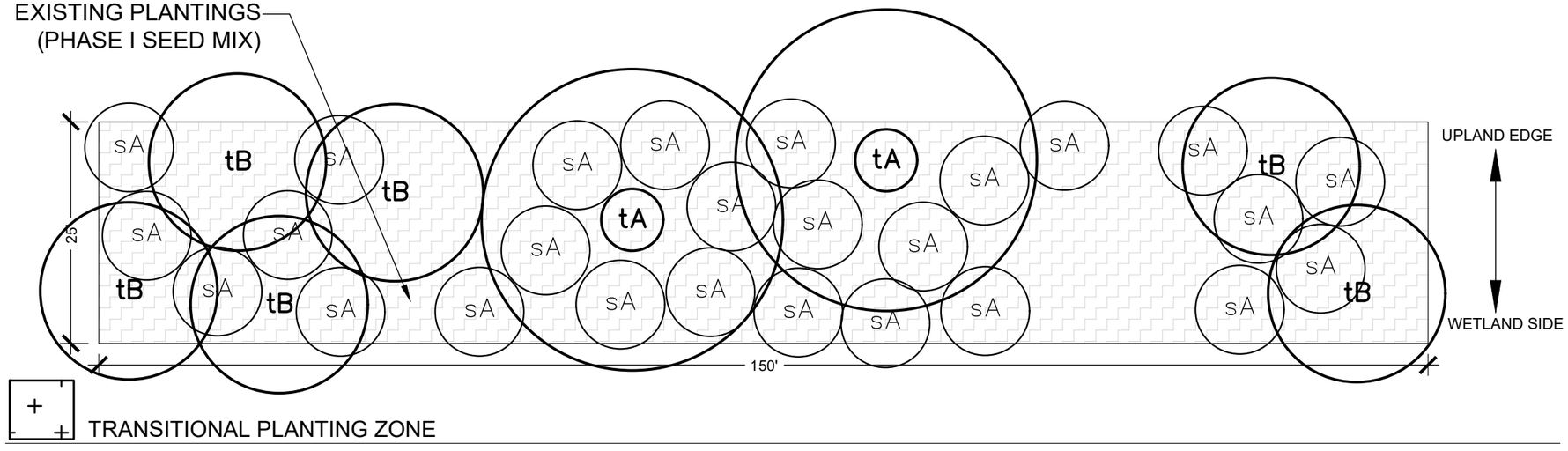
LOWER WAPATO CREEK HABITAT PROJECT
PLANTING DETAILS

CONT/CONS:	071490	TOWNSHIP: 20N	RANGE: 3E
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WETLAND PALUSTRINE FORESTED ZONE



TRANSITIONAL PLANTING ZONE

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LOWER WAPATO CREEK
HABITAT PROJECT
PLANTING DETAILS

6657
L3.2
6 OF 7

CONT/CONS:	071490	TOWNSHIP: 20N	RANGE: 3E
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SCIENTIFIC / COMMON NAME	TYPE	ZONE	QTY	SIZE
tB ALNUS RUBRA RED ALDER	Tree-B	UE, U, T	204	10 CU. IN. PLUG
tB FRAXINUS LATIFOLIA OREGON ASH	Tree-B	T, W	255	10 CU. IN. PLUG
tA PICEA SITCHENSIS SITKA SPRUCE	Tree-A	T, W	70	10 CU. IN. PLUG
tA POPULUS BALSAMIFERA BLACK COTTONWOOD	Tree-A	UE, U	38	10 CU. IN. PLUG
tB PSEUDOTSUGA MENZIESII DOUGLAS-FIR	Tree-B	UE, U	106	10 CU. IN. PLUG
tA THUJA PLICATA WESTERN RED CEDAR	Tree-A	UE,U,T,W	111	10 CU. IN. PLUG

SHRUBS	TYPE	ZONE	QTY	SIZE
sB ACER CIRCINATUM VINE MAPLE	Shrub-B	UE, U	442	10 CU. IN. PLUG
sA CORNUS SERICEA RED TWIG DOGWOOD	Shrub-A	W	94	10 CU. IN. PLUG
sB CORYLUS CORNUTA WESTERN HAZELNUT	Shrub-B	UE, U	442	10 CU. IN. PLUG
sA CRATAEGUS DOUGLASII BLACK HAWTHORN	Shrub-A	T, W	369	10 CU. IN. PLUG
sB LONICERA INVOLUCRATA BLACK TWINBERRY	Shrub-B	W	249	10 CU. IN. PLUG
sB MAHONIA AQUIFOLIUM TALL OREGON GRAPE	Shrub-B	UE, U	444	10 CU. IN. PLUG
sA MALUS FUSCA WESTERN CRABAPPLE	Shrub-A	UE, U	177	10 CU. IN. PLUG
sA PHYSOCARPUS CAPITATUS PACIFIC NINEBARK	Shrub-A	T, W	369	10 CU. IN. PLUG
sA ROSA GYMNOCARPA BALDHIP ROSE	Shrub-A	UE, U	177	10 CU. IN. PLUG
sA ROSA NUTKANA NOOTKA ROSE	Shrub-A	T, W	369	10 CU. IN. PLUG
sA ROSA PISOCARPA PEA-FRUIT ROSE	Shrub-A	UE, U, T	452	10 CU. IN. PLUG
sA SPIRAEA DOUGLASII HARDHACK	Shrub-A	W	95	10 CU. IN. PLUG
sA SYMPHORICARPOS ALBUS SNOWBERRY	Shrub-A	UE, U, T	452	10 CU. IN. PLUG

LIVE CUTTINGS	TYPE	ZONE	QTY	SIZE
sB SALIX HOOKERIANA HOOKER'S WILLOW	Shrub-B	W	1240	FIVE (5) 3/4 - 1 1/2" DIA., 36" MIN. LENGTH
tA SALIX LUCIDA PACIFIC WILLOW	Tree-A	W	80	FIVE (5) 3/4 - 1 1/2" DIA., 36" MIN. LENGTH
sB SALIX SITCHENSIS SITKA WILLOW	Shrub-B	W	1240	FIVE (5) 3/4 - 1 1/2" DIA., 36" MIN. LENGTH
tB SALIX SCOULERIANA SCOULER'S WILLOW	Tree-B	T	530	FIVE (5) 3/4 - 1 1/2" DIA., 36" MIN. LENGTH

EMERGENTS – SPACED 24 INCHES O.C.	ZONE	QTY	SIZE
CAREX LYNGBYEI LYNDBY'S SEDGE	E	6866	10 CU. IN. PLUG
CAREX OBNUPTA SLOUGH SEDGE	E	6866	10 CU. IN. PLUG
CAREX STIPATA AWLFRUITED SEDGE	E	6866	10 CU. IN. PLUG
ELEOCHARIS PALUSTRIE CREEPING SPIKERUSH	E	6866	10 CU. IN. PLUG
JUNCUS ACUMINATUS TAPERED RUSH	E	6866	10 CU. IN. PLUG
JUNCUS ENSIFOLIUS DAGGERLEAF RUSH	E	6866	10 CU. IN. PLUG
SCIRPUS ACUTUS HARDSTEM BULRUSH	E	6866	10 CU. IN. PLUG
SCIRPUS AMERICANUS TULE	E	6866	10 CU. IN. PLUG
SCIRPUS MARITIMUM SALTMARSH BULRUSH	E	6866	10 CU. IN. PLUG

SCHEDULE KEY

ZONES
UE: UPLAND ENHANCEMENT
U: UPLAND
T: TRANSITIONAL
W: WETLAND PALUSTRINE FORESTED
E: WETLAND EMERGENT

Tree-A: SPREADING-TYPE TREE
Tree-B: GROUPING-TYPE TREE
Shrub-A: SPREADING-TYPE SHRUB
Shrub-B: GROUPING-TYPE SHRUB

NOTE: EACH QUANTITY OF LIVE CUTTINGS CONSITS OF FIVE INDIVIDUAL LIVE CUTTINGS SPACED 1' O.C.

NOTE: PLANT LAYOUT, QUANTITY, SIZES, & SPACING SUBJECT TO FURTHER REFINEMENT

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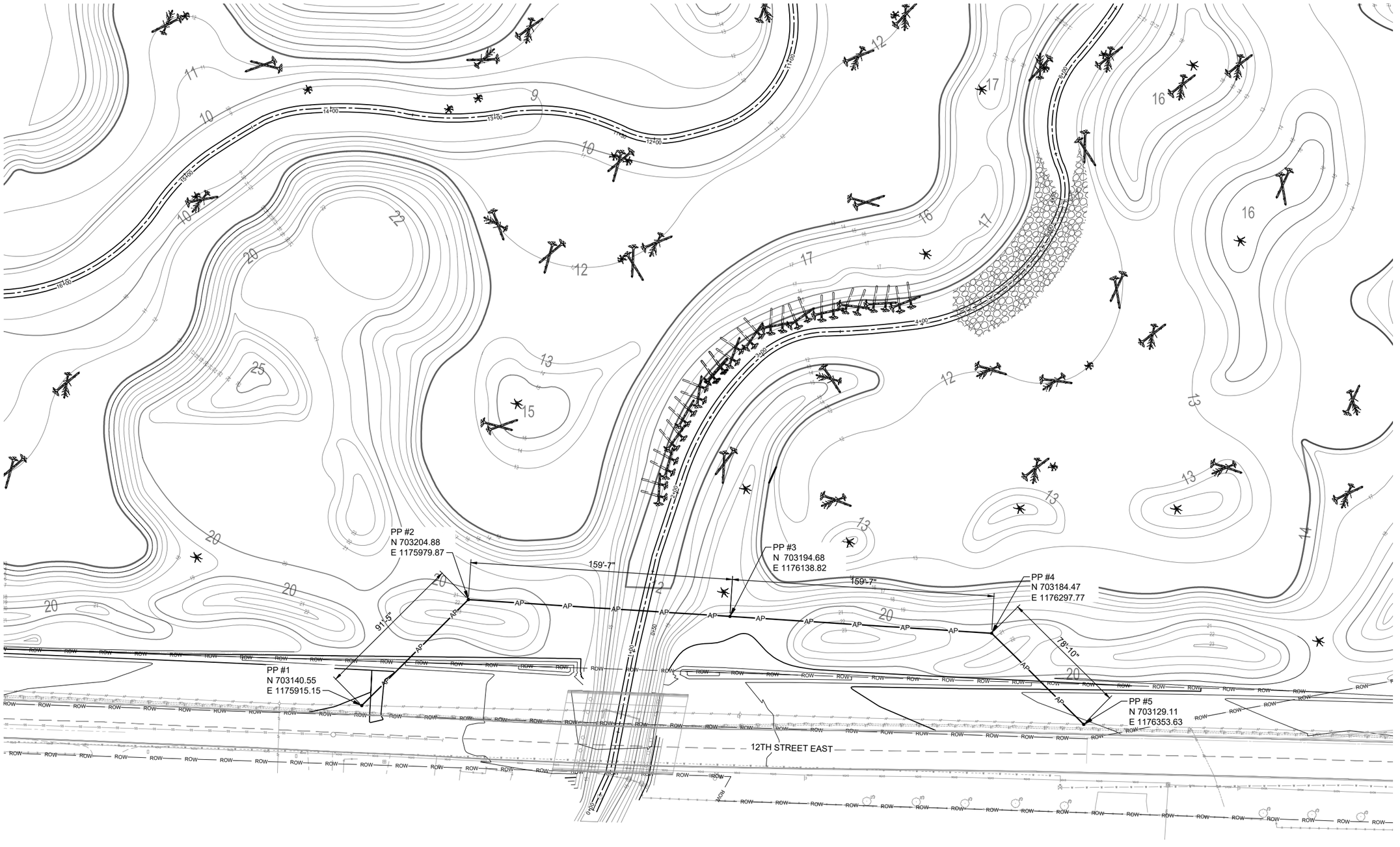
LOWER WAPATO CREEK
HABITAT PROJECT
PLANTING SCHEDULE

CONT/CONS: 071490	TOWNSHIP: 20N	RANGE: 3E	SECTION: 1
M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
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6657
L3.3
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LOWER WAPATO CREEK HABITAT PROJECT

LWCHP SHOOFLY PROPOSED POLE LOCATIONS ON PROPOSED CONTOURS

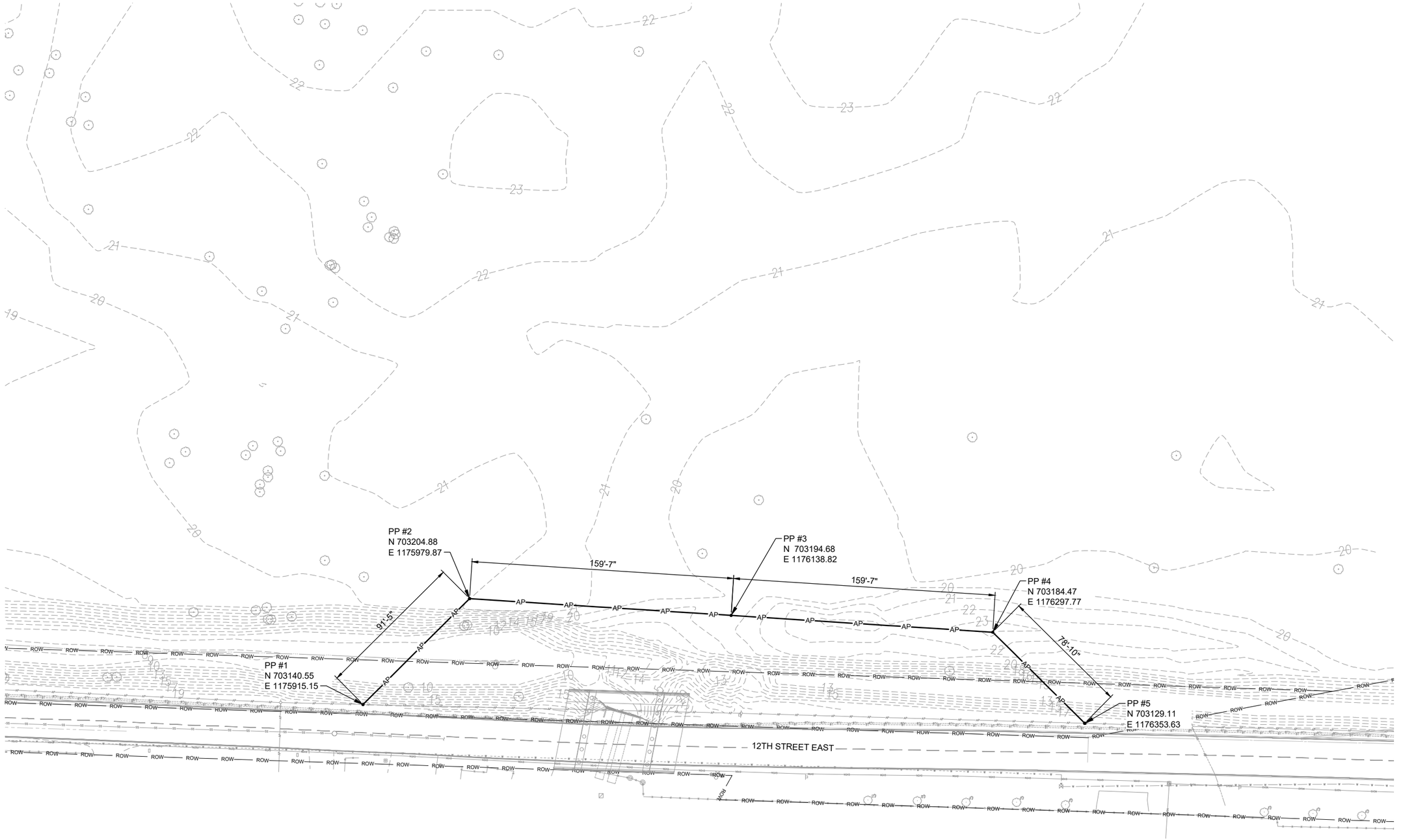
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M. ID: 101449.01	DAT-HRZ: WA83-SF	VERT: MLLW (PORT OF TACOMA TIDAL)	
PHASE: 90% Design	PARCEL: 14	DRAWING SCALE: AS NOTED	

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6656
EX 3.1
1 OF 2

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T +1 (425) 778 6243

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LOWER WAPATO CREEK HABITAT PROJECT

LWCHP SHOOFLY PROPOSED POLE LOCATIONS ON EXISTING CONTOURS

CONT/CONS:	071447	TOWNSHIP: 20N	RANGE: 3E
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SECTION: 1

6656
EX 3.1
2 OF 2

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City of Tacoma
Planning and Development Services
Report and Decision

CRITICAL AREA DEVELOPMENT PERMIT FOR: **File No. LU20-0113**

Port of Tacoma
Mark Rettmann
PO Box 1837
Tacoma, WA 98421

SUMMARY OF REQUEST:

A Critical Area Development Permit for an 18.52-acre habitat improvement project to restore Wapato Creek with a diverse mosaic of interconnected estuary, emergent, and forested wetlands and riparian habitat as advance permittee-responsible compensatory mitigation to mitigate for unavoidable impacts to wetlands and non-Endangered Species Act (ESA)-listed fish (habitat) resulting from future Port projects. The project will serve as an Advance Mitigation Site.

LOCATION:

4400 SR 509 Frontage Road, Parcels 0320013157 and 0320013158

DECISION:

The request for a Critical Area Development Permit is **Approved,** subject to conditions.

Notes:

The reconsideration/appeal period on this decision closes **October 15, 2020**; the decision will be final on **October 16, 2020**, provided no appeals or requests for reconsideration are timely filed as identified in APPEAL PROCEDURES of this Report and Decision.

For additional information concerning this land use permit please contact:

Shirley Schultz, Principal Planner
Planning and Development Services Department
747 Market Street, Room 345, Tacoma, WA 98402
253-345-0879 | shirley.schultz@cityoftacoma.org

SUMMARY OF RECORD

The following exhibits and attachments constitute the administrative record:

Attachments:

A. Site Plans
B. Technical Memorandum from Karla Kluge, Senior Environmental Specialist, September 23, 2020

Exhibits:[1]

A. Joint Aquatic Resources Permit Application (JARPA)
B. Lower Wapato Creek Habitat Project, Critical Area Report prepared by the Port of Tacoma, May 2020
C. SEPA Determination of Non-Significance-encompasses both projects and issued January 3, 2013
D. Draft Advance Mitigation Plan, Lower Wapato Creek Habitat Project prepared by the Port of Tacoma, June 1, 2020. (Note: the draft plan is only draft until it is accepted by all agencies)

FINDINGS

Proposal:

1. The applicant requests a Critical Area Development Permit to allow for the construction of an Advance Permittee-Responsible Mitigation Site at Lower Wapato Creek for future Port of Tacoma impacts. The advance mitigation project is to restore the existing ditched and confined portion of Wapato Creek to a more natural, pre-developed state with a complex and dynamic stream and associated wetland and upland habitats in a tidally influenced area of Wapato Creek for future Port projects that will require mitigation. The Port anticipates a need for stream and/or wetland mitigation areas for future Port-related impacts to wetland and/or streams, and this advance mitigation project will help fulfill those needs.

   The proposal for an Advanced Permittee-Responsible Mitigation Site is consistent with the requirements for a concurrent mitigation plan according to the joint Department of Ecology (ECY), US Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA) guidance document Wetland Mitigation in Washington State Part 2: Developing Mitigation Plans. In addition, the Plan follows the recommendations in the Interagency Regulatory Guide – Advance Permittee-Responsible Mitigation, published by USACE, ECY and WDFW.

2. The site is referred to as the Lower Wapato Creek Habitat Project (LWCHP) and includes 10.02 areas of creditable aquatic resource habitat restoration to be used as advance permittee-responsible compensatory mitigation, or advance mitigation, to mitigated for unavoidable impacts to aquatic resources (wetlands) and fish habitat (downstream of LWCHP on Wapato Creek) with no Endangered Species Act (ESA)-listed species resulting from future Port projects.

[1] All Exhibits are contained within associated file of the Planning and Development Services Department. They are referenced and incorporated herein as though fully set forth. Additional materials are included in the project file for information purposes but are not referenced in this report and decision.

3. The Port proposes to conduct estuarine wetland re-establishment actions at the 18.52-acre Project site as advance permittee-responsible mitigation, in advance of other potential wetland impacts related to future Port projects. The proposed restoration actions are intended to provide large-scale contiguous habitat restoration on a site containing Wapato Creek, an independent creek discharging to Commencement Bay, as opposed to conducting small, disconnected on-site mitigation actions throughout Port of Tacoma property on a project-by-project basis.

   By consolidating small wetland impacts into a larger mitigation site, the Project will provide greater estuarine, wetland, stream and floodplain benefits for Wapato Creek and Commencement Bay by creating diverse estuarine habitat and tidal and non-tidal wetland functions, correcting a partial fish passage barrier at the 12th Street East culverts, improving creek channel, floodplain, mudflat and wetland connectivity, increasing habitat interspersion, and providing contiguous re-forested upland riparian buffer areas to protect aquatic habitat.

4. The project also includes the relocation of TPU poles, relocating utilities for the bridge replacement, the placement of excess excavated soils on adjacent Port property and other ancillary projects activities.

5. The project proposal includes the following:

   - The replacement of twin culverts carrying Wapato Creek under 12th Street East with a full span bridge.
   - The relocation of Wapato Creek from a ditch into a longer, sinuous stream channel.
   - The establishment of permanent access areas for utility maintenance for the Power Poles currently located within the buffer of Wapato Creek.
   - The project is also designed to accommodate the potential widening to the north of 12th Street East to a typical three-lane road footprint that includes sidewalks and bike lanes and accommodates the current preliminary design for the anticipated future connection of SR-509 to SR-167. However, these improvements may not include the expansion of the roadway in favor of retention of the vegetated filter strip, and any increase in road width would be subject to further permitting and review.

Project Site:

1. The site is addressed as 1131 East Alexander Avenue (Port owned) and is located on four adjacent parcels: Parcel No's. 0320017003, 0320013055, 0320013157, 0320013158 and a disposal site 0320011117. The site is alternatively addressed as 4400 SR 509 Frontage Road, with the bulk of the habitat work taking place on parcels 0320013157 and 0320013158.

2. Work on the culvert to be replaced under 12th Street East will be completed on two private properties (parcel numbers 0320013055 and 0320017003. Parcel number 0320013055 is owned by the Puyallup Tribe and is located within the City of Fife. Parcels 0320013157and 0320013158 include the project site habitat restoration area. The Disposal site is located on parcel number 0320011117.

3. The site (1131 East Alexander Avenue, including the disposal site) is located in the "M-2" Heavy Industrial District with a Land Use Intensity of High. The additional parcels identified within the JARPA application form are outside of the City limits and are included within this Technical Memorandum for informational purposes only regarding adjoining properties where associated activities may take place.

4. The surrounding area consists of residential, commercial, and industrial development. Industrial development associated with the Port of Tacoma is located primarily north of

Highway 509. Single-family residences and commercial development are situated south of the parcel on 12th Street East.

5. Historically, the proposed restoration area was a tidally influenced wetland or mudflat area. The wetland was converted to agricultural use in the first half of the 20th Century. The site was legally filled with dredge material from the expansion of the Blair and Hylebos Waterways, and the Wapato Creek channel was rerouted to its present location and configuration.
6. Wapato Creek, a tributary to the Blair Waterway of Commencement Bay, Puget Sound is contained within the identified project site. Wapato Creek enters the LWCHP site through twin, 60-inch-diameter, perched culverts and flows north under 12th street East. The creek immediately turns 90 degrees to the west and flows parallel with 12th Street East as a channelized roadside ditch. As the creek approaches Alexander Avenue East, it turns another 90 degrees to the north and flows parallel to Alexander Avenue north, exiting the project sit at State route 509. Wapato Creek is tidally influenced throughout the LWHCP site. The creek has been constructed into a trapezoidal ditch and in-stream habitat is limited with no structure or stream habitat complexity and is confined, straight, and incised with no accessible floodplain and no connected wetlands.
7. The project site also contains a portion of the "Fife ditch" that is parallel and just north of 12th Street East. The ditch is above ordinary high water elevation of 8.7 feet on this property. It is not connected to the existing Wapato Creek, or to the proposed restored creek or wetlands. There is a "berm" that exists between the creek and the Fife Ditch at the area that crosses under 12th Street.
8. The site is primarily open and vegetated by weedy, herbaceous plants with some shrubs and trees. Invasive plants including reed canarygrass (*Phalaris arundinacea*) and Himalayan blackberry (*Rubus armeniacus*) form dense patches on the site. Native trees, also found in patches on the site include Douglas hawthorne (*Crataegus douglasii*), a few small willows and black cottonwood (*Populus balsamifera*). Salt tolerant vegetation occurs at the low bank elevation, including saltgrass (*Distichlis spicata*) and seaside arrowgrass (*Triglochin maritime*).
9. Salt-tolerant vegetation occurs at low-bank elevation, including saltgrass (*Distichlis spicata*) and seaside arrowgrass (*Triglochin maritima*). The presence of salt-tolerant vegetation in the low-bank elevation and salt-sensitive vegetation (reed canarygrass) at higher bank elevations also indicates that a saltwater wedge forms during high tides, in which denser saltwater is situated below the freshwater originating from upstream.
10. The US Fish and Wildlife Service and the National Marine Fishery Service Threatened and Endangered Lists indicate there are three federally-listed Endangered or Threatened fish that could occur in the Project Area; Chinook salmon, steelhead trout and bull trout. While these species may be present within Commencement Bay, there are no documented occurrences of juvenile Chinook salmon in Wapato Creek or documented use of steelhead within the last 20 years and NMFS does not consider Wapato Creek to provide suitable habitat for steelhead. Similarly, sparse suitable habitat and water quality issues may deter the presence of bull trout in Wapato Creek.
11. The Marbled Murrelet could potentially be present within the Project area; however, the lack of nesting habitat and shipping activity does not provide suitable habitat and foraging areas for the Marbled Murrelet.
12. No jurisdictional wetlands are currently located on the site. The nearest wetland shown on U.S. Fish and Wildlife Service's National Wetland Inventory maps is on the north side of 12th

street East, East of 54th Avenue East and about 4000 feet east of the Wapato Creek crossing of 12th Street East. Several depressional features are located on the eastern portion of the undeveloped area known as Parcel 14 which is immediately north of the mitigation site. These areas currently meet the three-parameter criteria for wetlands; however, these areas were determined to be non-jurisdictional by the US Army Corps of Engineers in 2008, 2013 and 2020 and Washington State Department of Ecology in 2011 and 2020. Under the City of Tacoma code. These areas were formed by differential settlement within and atop legally placed dredge-spoil fill throughout Parcel 14. These areas extend onto the subject property on the northwestern corner and are included in the non-jurisdictional determination. A recent Army Corps of Engineers determination included all similar depressions within its non-jurisdictional determination.

13. Within the proposed restoration area, Wapato Creek is located on the site and is a straight channel that lacks habitat and geomorphic complexity, floodplain connectivity, or associated wetland habitat. The channel enters the parcel through a 5-foot diameter culvert under 12th Street East, which acts as a partial fish barrier, and flows west along the parcel boundary parallel to 12th Street East. The channel turns 90 degrees to the north, and parallels Alexander Avenue before passing under the spanning bridge for Highway 509. Wapato Creek in its present state is a straight channel that lacks habitat and geomorphic complexity, floodplain connectivity, or associated wetland habitat.

14. Wapato Creek is designated as a regulated "Stream of Local Significance" per *TMC* 13.11.420 with a required 150-foot. The existing left bank stream buffer for Wapato Creek along 12th Street East is approximately 10 feet wide. The riparian area is dominated by grasses and invasive species. The stream buffer area along East Alexander Avenue is approximately 70 feet wide and is also dominated by grasses and invasive species, and includes access roads to power poles within 10 feet of Wapato Creek.

15. Wapato Creek is located within designated floodplain area (Zone X) and is a floodway (Zone AE) on the FEMA flood maps. The site contains fill that will be excavated to increase overbank storage. The Project Site will create a substantial increase in the flood storage capacity within the Wapato Creek Base Flood elevation (BFE) and the Puyallup River Overtopping BFE, an increase of 24.33 acre-feet and 72.62 acre-feet, respectively (GeoEngineers 2020).

Details of Proposal

16. The project design includes two primary habitat elements: (1) fish passage improvement through replacement of twin undersized 60-inch-diameter culverts with an approximately 50-foot-wide single span bridge at the 12th Street East crossing to provide unimpeded fish passage to the upper reaches of Wapato Creek; and (2) re-establishment of wetland and fish habitat trough relocation of Wapato creek and construction of a diverse complex of associated floodplain and wetland habits historically present in the Commencement Bay intertidal mudflats.

17. The recommendations for Wapato Creek restoration in the *Commencement Bay Natural Resource Restoration Plan* (Commencement Bay Natural Resource Trustees 1997) include the following target habitat for salmonid migration and spawning, waterfowl and wildlife use, and furbearing mammals:

    - Freshwater channels;
    - Wetlands; and Riparian corridors

18. Wapato Creek will be relocated from a ditch into a longer, sinuous stream channel which will increase the length of Wapato Creek from 1,040 lineal feet to approximately 1,875 lineal feet

with an additional 350 lineal feet of retained off-channel habitat in the existing Wapato Creek by meandering the creek channel within a re-established broad floodplain corridor that includes an interconnected mosaic of forested wetlands, intertidal mudflats and emergent wetlands.

19. The proposal includes a total of 10.02 acres of wetland/aquatic resource re-establishment including 5.51 acres of palustrine forested wetland to provide shade and organic input, 2.35 acres of estuarine emergent wetland to improve water quality and increase forage habitat, 2.10 acres of tidal stream channel/mudflats re-establishment to increase epibenthic and prey production for higher level species as well as 7.34 total acres of forested upland buffer enhancement to filter pollutants and provide screening from adjacent developed areas.
20. The Project will generate advance mitigation credits for wetlands and non-Endangered Species (non-ESA) fish habitat as detailed in the AMP. The Project is anticipated to generate 10.02 Acre-Credits of wetland mitigation credit from one or more crossings totaling 60 feet in width, parallel to flow, downstream of the Project. The final mitigation credit generated by the Project will be detailed in the final AMP approved by the permitting agencies.
21. The stream will include large woody material, pool/riffle sequences, and suitable substrate. The wetland would include a variety of habitat types, as well as downed wood and snags. The stream relocation and extension and wetland restoration will restore the upper tidal reach of Wapato Creek, recreate natural meanders, restore historic floodplain connectivity, restore wetland functions, and create mudflat habitat. The design deliberately avoids routing the stream through an area that would be impacted by future potential development, and plans to provide functioning buffer area bordering all remaining and created habitats.
22. Approximately 713 linear feet of the linear Wapato Creek channel will be filled along 12th Street East and the remaining portions of Wapato Creek that connects to the proposed channel confluence will be retained as aquatic habitat. From the tie-n point of the proposed re-established channel, the remaining existing channel segment will be a backwater slough that transition into intertidal mudflat and estuarine emergent wetland habitat to the south. The existing 12th Street Ditch will all be reconfigured into a vegetated filter strip swale.
23. The project also include relocation of the TPU poles, relocating utilities for the bridge replacement, the placement of excess soils on adjacent Port property and other ancillary project activities.
24. The goal of the LWHCP is to restore ecological functions and processes in and near Wapato Creek with two central goals:

Goals:

- Replace aquatic resource (wetland) acreage and functions that are lost or impacted by future Port Projects
- Offset impacts to fish habitat for non-ESA-listed fish species rom future Port projects that impact Wapato Creek downstream of the LWCHP site.

Objectives:

- Objective 1: Restore Wapato Creek from a straight ditch to a meandering, tidally-influenced channel with a functioning floodplain and in-stream habitat features;
- Objective 2: Re-establish intertidal mudflats and hydrologically connected estuarine emergent and palustrine forested wetlands;
- Objective 3: Establish and preserve a dense forested upland buffer; and
- Objective 4: Improve fish passage at the 12th street East crossing.

25. Estuarine emergent wetlands created under the proposed mitigation plan are expected to meet the Ecology definition of an estuarine wetland system. Estuarine wetlands are highly rated under Special Characteristics, which would result in a Category I or Category II wetland with corresponding required buffers of 100-175 feet.

26. The proposed mitigation site lies within the bounds of three paved roadways (SR509, East Alexander Ave. and 12th Street East or Ward Street). The buffer of the stream and proposed wetland is proposed to be constructed with a reduced buffer due to physical limitations associated with the built infrastructure. The applicant proposes that through buffer reduction, the LWCHP will provide elevated functional lift by increasing the wetland and stream area and allowing a reduction that on average will be approximately 70 feet. The Port argues that the 70-foot enhanced buffer allows the Port to maximize the wetland habitat improvements within the available space, while ensuring that wetland functions are not compromised by the surrounding urban environment.

27. The Port argues that water quality functions will be improved by the enhanced stormwater bio-filtration and the dense plantings. Wildlife habitat functions will be protected and enhanced by leaving existing trees, planting a native diverse and dense planting within the buffer, and building a fence. No reduction in wetland functions will result from reducing the buffer. The Port concludes that the proposed freshwater/intertidal wetland complex will recreate a rate habitat type in Commencement Bay, partially replacing wetland functions lost over the last 150 years by the filling of over 98% of the original wetland marsh that once existed within the area.

28. The applicant has proposed that the creation of the advance mitigation site will offset any temporary impacts to the stream and its current function and that the Lower Wapato Creek Habitat Project will be built as concurrent or advance mitigation for future impacts. The Port is requesting authorization of the physical construction of the mitigation site and the acknowledgement of the proposed mitigation acreage. However, additional approvals are required before and credits area used for future impacts from the Permittee-responsible Advance Mitigation Site.

29. The following table represents the potential credits that may be generated by the advanced mitigation site:

Restoration Action	Habitat Type	Creditable Area (acres)	Non-Creditable Area (acres)	Total Area (acres)
Re-establishment	Wapato Creek Channel/Intertidal Mudflat	2.16	0.02	2.18
	EEM	2.35	-	2.35
	PFO	5.51	-	5.51
Rehabilitation	Wapato Creek Channel/Intertidal Mudflat	-	0.21	0.21
	EEM	-	0.02	0.02
Enhancement	Forested Upland Buffer	-	7.34	7.34
	ROW/Vegetated Filter Strip	-	0.91	0.91
	TOTAL:	10.02	8.50	18.52

Avoidance and Minimization Measures

30. The proposed project is an advance mitigation project specifically designed to positively impact the current critical areas and buffers on site. Due to the nature of the project, impacts to the stream cannot be avoided. However, proposed construction methods and construction work that is sensitive to salmonid work windows will be observed.

Tacoma Municipal Code (TMC) **Critical Areas Preservation Ordnance pertinent code, applicant's arguments and analysis**

31. TMC 13.11.130 Scope and Applicability

a. The provisions of this chapter apply to all lands and waters, all land uses and development activities, and all structures and facilities in the City, whether or not a permit or authorization is required, and shall apply to every person, firm, partnership, corporation, group, governmental agency, or other entity that owns, leases, or administers land within the City. This Chapter specifically applies to any activity which would destroy vegetation; result in a significant change in critical habitat, water temperature, physical, or chemical characteristics; or alter natural contours and/or substantially alter existing patterns of tidal, sediment, or storm water flow on any land which meets the classification standards for any critical area define herein. In addition, this chapter applies to all public or private actions, permits, and approvals in or adjacent to a critical area and its buffer, management area, or geo-setback including, but not limited to the following:

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4. Land Use permits;

32. TMC 13.11.140 Regulated Uses/Activities

Pursuant to the requirements of this chapter, a site review or permit shall be obtained prior to undertaking any of the following activities in or adjacent to Critical Areas and their associated buffer, geo-setback, or management area, unless otherwise covered in Sections 13.11.200 and 13.11.210.

A. Filling, placing, or dumping any soil, loam, peat, sand, gravel, rock, chemical substance, refuse, trash, rubbish, debris, or dredge material:

B. Excavating, dredging, grading or clearing any soil, loam peat, sand, gravel, rock, vegetation, trees, or mineral substance;

C. Discharge of hazardous substances, including, but not limited to heavy metals, pesticides, petroleum products, or secondary effluent;

D. Any act which results in draining, flooding, or disturbing the water level or table;

E. Exterior alteration, construction, demolition, or reconstruction of a building, structure or infrastructure, including driving pilings or placing obstructions;

F. Destroying or altering vegetation through clearing, harvesting, shading, pruning, or planting vegetation that would alter the character of the site; and

G. Any act or use which would destroy natural vegetation; result in significant change in water level, water temperature, physical, or chemical characteristics of the wetland or stream; substantially alter the existing pattern of tidal flow, obstruct the flow of sediment, or alter the natural contours of the site.

33. TMC 13.11.220 Application Types.

A. *This chapter allows three types of Critical Area applications, which result in the issuance of an administratively appealable decision consistent with chapter 13.05. After the appeal period expires, the Director's approved decision becomes the official permit. Programmatic Restoration Projects processed under with the Minor Development Permit or the Development permit may qualify for additional time extensions according to 13.05.070.*

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B. *3. Development Permit. A decision will be issued where the Director determines that avoidance and minimization have not eliminated all impacts and compensatory mitigation will be required as a result of the proposal.*

   i. *The applicant must meet the requirements of one of three legal tests; No Practicable Alternatives, Public Interest or Reasonable Use, and*
   ii. *Demonstrate Mitigation Sequencing, and*
   iii. *Provide mitigation as required in accordance with the Chapter.*

   Mitigation for impacts or loss of wetlands, streams or their buffers does not apply in the traditional sense, with one exception, in that the impacts or loss is temporary while the site is being re-constructed to a more complex, multi-habitat site. The stream relocation will provide a sinuous, extended stream with complex riparian systems that are intended to provide freshwater and estuarine riparian wetland areas. The exception is the designation and gravel surface that will be installed for continued access to the power poles. The disturbance of the stream requires a Critical Area Development Permit as the initial impacts will be extensive and completely change the stream into a complex wetland mosaic and sinuous stream with mudflats, intertidal flow, and a tiered vegetation structure. Innovative Mitigation will be provided that allows a functional wetland and stream buffer at a reduced width; however, functional lift will be realized through the creation of the wetland/stream system.

34. *<u>TMC 13.11.240 Legal Test(s)</u>*

A. No Practicable Alternatives. And alternative is considered practicable if the site is available and the project is capable of being done after taking into consideration cost, existing technology, infrastructure, and logistics in light of overall project purposes. No practicable alternatives need be considered if the applicant can demonstrate all of the following:

1. The project cannot be reasonably accomplished using one or more other sites in the general region that would avoid or result in less adverse impact to the Critical Areas.

The applicant argues that the Project cannot be reasonably accomplished using another site in the general region. The LWHCP site is the last, best place to build a tidally-influenced stream channel and floodplain wetland mosaic in the Wapato Creek watershed. The Project will not result in adverse impacts to the Critical Area; it will provide an immediate net benefit to the Critical Area.

2. The goals of the project cannot be accomplished by a reduction in the size, scope, configuration or density as proposed, r by changing the design of the project in a way that would avoid or result in fewer adverse effects on the Critical Area; and,

The applicant argues that reducing the size, scope or configuration, or changing the design of the Project will reduce the amount of benefit to the Critical Area. The goals of the Project will not result in adverse effects to the critical area; it will provide an

immediate net ecological gain and expand and restore the existing Critical Area (Wapato Creek) and re-establish a floodplain wetland mosaic.

3. In cases where the applicant has rejected alternatives to the project as proposed, due to constraints on the site such as inadequate zoning, infrastructure or parcel size, the applicant has attempted to remove or accommodate such constraints, unless the applicant can demonstrate that such attempt would be futile.

The applicant indicates that attempting to remove or accommodate the site's constraints is futile. Surrounding land use development prohibits the expansion of the proposed advance mitigation site; the Project is limited to the parcel size. The Project has been designed to maximize the amount of aquatic resource restoration actions to provide mitigation credit in advance of future Port development projects with impacts to Critical Areas.

35. *TMC 13.11.250*

A. General permit standards. No regulated activity or use shall be permitted in or adjacent to a Critical area or buffer, management area, or geo-setback without prior approval and without meeting the provisions of this section.

1. The applicant has taken appropriate action to first, avoid adverse impacts, then minimize impacts and finally, compensate or mitigate for unavoidable impacts:

2. The result of the proposed activity is no net loss of Critical Area functions;

3. The existence of plant or wildlife species appearing on the federal or state endangered or threatened species list will not be jeopardized;

4. The proposal will not lead to significant degradation of groundwater or surface water quality; and

5. The proposal complies with the remaining standards of this chapter, which include those pertaining to wetland compensation and the provision of bonds.

6. The alteration is the minimum necessary to allow reasonable use.

36. *TMC 13.11.270.*

M. Innovation Mitigation. The Director may approve innovative mitigation projects that area based on best available science including but not limited to activities such as ***advance mitigation*** *and preferred environmental alternatives. Innovative mitigation proposals must offer an equivalent or better level of protection of critical are functions and values that would be provided by strict application of this chapter. Such mitigation measures proposal must demonstrate special consideration for conservation and protection measures for anadromous fisheries. The following is considered for approval:*

1. Creation or enhancement of a larger system of natural areas and open space is preferable to the preservation of many individual habitat areas.

The applicant indicates that the LWCHP will be approximately 18.5 acres in total and includes the re-establishment /creation of a creek ad floodplain wetland mosaic that provides contiguous habitat instead of small, isolated area that provide little to no habitat connectivity.

2. The applicant demonstrates that long-term protection and management of the habitat area will be provided;

The Port has a history of successfully completing and maintaining habitat/mitigation projects which provide exceptionally high ecological value. Once the LWHCP is complete, the Port will protect and maintain the site in perpetuity. This will be memorialized through the implementation of a restrictive covenant, a conservation easement of a deed restriction.

3. There is clear potential for success of the proposed mitigation at the proposed mitigation site;

The applicant argues that as demonstrated in the AMP, the LWCHP site displays characteristics (hydrophytic vegetation, hydric soils and consistent hydrologic inputs) consistent with the types of habitat the Port is proposing to construct.

4. Mitigation according to TMC 13.11.270.E is not feasible due to site constraints such as parcel size, stream type, wetland category, or excessive costs;

This provision does not apply as the Port is proposing to construct habitat mitigation in advance of Port development projects with the potential to impact aquatic resources.

5. A wetland of a different type is justified based on regional needs or functions and values;

Generally, the aquatic resources that may be impacted by Port development projects area low-functioning (Category III or IV) isolated wetlands with little habitat value. The Port's proposal is to construct intertidal mudflats, and Category I estuarine emergent and palustrine forested wetlands, and a densely vegetated forested upland buffer. Intertidal mudflats, estuarine emergent wetlands and forested wetlands represent now rare wetland types in Wapato Creek, the lower Puyallup River watershed and Commencement Bay.

6. The replacement ratios are not reduced or eliminated; unless reduction results in a preferred environmental alternative; and

The Port is proposing reduced mitigation ratios. The rationale for the reduction in mitigation ratios is provide in the LWCHP AMP.

7. Public entity cooperative preservation agreements such as conservation easements are applied.

Site protection will be implemented after the LWCHP is complete.

37. TMC 13.11.320 Wetland Buffers

Table 3. Buffer Widths for all Wetlands	
Wetland Category	*Buffer Width (feet)*
Category I	*H and M – 200* *L - 175*
Category II	*H and M – 150* *L - 100*
Category III	*H,M,L - 75*
Category IV	*H,M,L - 50*

38. TMC 13.11.330.E. Buffer averaging or Buffer Reduction beyond the minimum standards indicated above (in Table 3) may be allowed to allow a reasonable use of a legal lot of record when all of the following criteria are met:

a. There are no feasible alternatives to the site design that could be accomplished with the standard buffer averaging or buffer reduction provisions above; and,

The applicant provide a response to the No Practicable Alternatives Legal Test that continues to apply here. This is the last, best place to build a tidally-influenced stream channel and floodplain wetland mosaic in the Wapato Creek watershed. The physical limitations of the site due to confining roads and urban development significantly limit the inclusion of potential 200-foot wetland buffers and 150-foot stream buffer for Wapato Creek. Following the restoration, the new stream and wetland buffers will have an average of 70 feet of buffer surrounding the wetland and stream riparian corridor. While the site constrictions do not allow for larger buffers, the "credits" that will be generated will be based on the functional lift of the site overall and not reliant on the buffer distance. The final restored site will support a net gain of stream length and wetland area and functional buffer.

b. *The averaged or reduced buffer will not result in degradation of the wetland's functions and values as demonstrated by a report from a qualified wetland expert, and*

The site is being developed as Permittee-Responsible Advance Mitigation Site as voluntary action by the Port. Considerable analysis and development of a successful project has been employed to provide the maximum functional lift potential of the site to realize credit development and release. The proposal includes projected credit values as a result of the functional increase expected.

c. *The remaining buffer are on site shall be enhanced and/or restored by removing invasive species that do not perform needed functions and replanting with an appropriate plant community, and*

The entire site will be restored and enhanced. All invasive species, including Himalayan Blackberry, Poison Hemlock, reed canarygrass, English Ivy, and Scotch broom will be removed. Excavation of 3-4 feet will remove roots from reed canary grass and the seed bank that exists.

d. *The project shall meet the requirements of one of the three legal test; No Practicable Alternatives, Public Interest, or Reasonable Use.*

The applicant has provided a response for the No Practicable Alternatives Test above.

39. *TMC13.11.420. Stream Buffers*

Streams of Local Significance	*Buffer (feet)*
Wapato Creek	*150*

40. *TMC 13.11.440 Stream Standards.*

A. Type F1, F2, Np, and Ns1 and Ns2 streams may be relocated or placed in culverts provided it can be demonstrated that:

1. There is no other feasible alternative route with less impact on the environment;

The applicant provided a response to the No Practicable Alternatives legal test that explains this site is the last best place to build a tidally-influenced stream channel and floodplain wetland mosaic in the Wapato Creek watershed.

2. Existing location of the stream would prevent a reasonable economic use of the property;

This is not applicable as there is no development proposed for the area other than utility movement to accommodate a habitat restoration project.

3. No significant habitat will be destroyed;

The Project will not result in adverse impacts to the Critical Area; it will provide an immediate net benefit to the Critical Area.

4. The crossing minimizes interruption of downstream movement of wood and gravel;

The entire site design will include the additional large woody debris and will provide space for movement of some smaller wood within the channel.

5. The new channel or culvert is designed and installed to allow passage of fish inhabiting or using the stream and complies with WDFW requirements;

An HPA will be obtained to replace the culvert with a full span bridge that will provide unlimited space for fish access and passage.

6. The channel or culvert also complies with the City of Tacoma current Storm Water Management Manual.

The bridge design will comply with the City of Tacoma building code and current Storm Water Management Manual.

7. The applicant will, at all times, keep the channel or culvert free of debris and sediment to allow free passage of water and fish;

The full span bridge design and required maintenance and monitoring in perpetuity will continue to ensure a channel free of debris and sediment and open to fish passage.

8. Roads in riparian habitat areas or buffers shall not run parallel to the water body;

The LWCHP site has been designed to move an incised, linear stream currently running parallel to a road inland and create meanders for a sinuous, natural stream with various bank elevations, mudflats and associated wetland areas.

9. Crossing, where necessary, shall lonely occur as near to perpendicular with the water body as possible;

The bridge design does cross the road in a perpendicular manner.

10. Road bridges are designed according to Washington Department of Fish and Wildlife Design of Road Culverts for Fish Passage, 2003, and the National Marine Fisheries Service guidelines for Salmonid Passage at Stream Crossing, 2000.

An HPA will be obtained and coordination with the WDFW and National Fisheries Services will occur to ensure compliance for the bridge design.

41. *TMC 13.11.510* FWHCA Classification.

A. Fish and wildlife habitat conservation areas identified by the Washington Department of Wildlife as being of critical importance to the maintenance of fish and wildlife species. These areas may include other critical areas such as geologically hazardous area, stream corridors, wetland and these critical areas' associative buffers.
1. Fish and wildlife Habitat Conservation Areas (FWHCA's). Fish and wildlife habitat areas include:
a. Lands and water containing priority habitats and species including Commencement Bay and all waterways.
(1) Great Blue Herons
(13) Anadromous fish (including Bull Trout)
(16) Streams and riparian areas
(19) Biodiversity areas and Corridors

The site does meet the definition for a Biodiversity Corridor and will be preserved as such following the restoration activities. In addition, fish species have been found within the stream and great blue herons are frequently observed "fishing" at the culvert and stream intersection. There are no endangered species identified within the vicinity of the project site. The Port has prepared a "no effects" Biological Assessment (BA) for the project and previous consultations for Wapato Creek have concluded a "no effect" to listed species.

42. *TMC 13.11.520 Standards*

General Standards.

No development shall be allowed within a fish and wildlife habitat conservation area with which state or federally endangered, threatened or sensitive species have a primary association without approval from the City of Tacoma and/or WDFW,

Preservation of FWHCA's are necessary to improve the likelihood that species will survive and or reproduce. Alteration of FWHCAs may reduce this likelihood. Activities allowed in FWHCAs shall be consistent with the species located there and all applicable state and federal regulations regarding that species. In determining allowable activities for priority habitats and species that are known or that become known, the provision of the Washington State Hydraulic Code and Department of Fish and Wildlife's (WDFW) Management Recommendations for Washington Priority Habitats and Species shall be reviewed. Development in these areas shall be in accordance with the requirements of the underlying zone and any overlapping critical are classification.

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Wetland and Stream. Where a designated FWHCA geographically coincides with a stream or wetland, the appropriate wetland or stream buffer and associated buffer requirements shall apply as described within this Chapter.

Additional information

43. The Permittee-Responsible Advance Mitigation Site is unique in that project impact specifics and impacts, and appropriate mitigation are not identified when constructing an advance mitigation site. The applicant cannot avoid the initial impacts due to the nature of the advance mitigation project. Temporary impacts associated with construction are necessary to create a higher functioning restored system that will provide long lasting environmental benefits for both areas upstream and downstream within the watershed.

44. As part of minimizing future impacts to the permittee-responsible advance mitigation site the utility power pole access shall be formerly designated. Invasive vegetation shall be removed and replaced with native vegetation along a new sinuous stream channel with benched areas and associated wetlands providing for a complex riparian system. The applicant will minimize further impacts to the stream and its buffer through corrective actions, design components, best available science construction practices, and construction timelines associated with avoidance of fish species in the area. In addition, a Conservation Easement or similar protection instrument shall be placed on the site to prevent future impacts in perpetuity.

45. The creation of additional "benched" aquatic areas along the stream will provide additional floodplain storage and as a result of emptying into Commencement Bay, no additional compensatory storage is required. The advanced mitigation site has been designed to retain most of the large trees, including a tree currently occupied by a nesting pair of red-tail hawks.

46. The proposed corrective action will not result in the addition of any new paved surfaces although existing access areas will be graveled to allow consistent use of access areas which will prevent unintended impacts and vegetation destruction to be spread over a larger area.

47. The construction techniques will not have permanent negative impacts. BMP's including appropriate fish windows and site protection including the preservation of significant large trees will be conducted while work is completed at the site. All long-term impacts to the buffer are expected to improve natural functions. An HPA will be obtained from the WA Department of Fish and Wildlife.

48. In addition, the Port of Tacoma shall obtain future permits for projects sites that will utilize the Permittee - Responsible Advance Mitigation Site for any project where mitigation is required and on-site mitigation is not possible or does not provide a preferred environmental alternative.

Environmental Review

49. The Port of Tacoma, acting as Lead Agency for the purposes of SEPA, issued a Determination of Nonsignificance for the project effective January 26, 2013. The Director concurs in this SEPA determination.

Public and Agency Comments:

50. The application was determined to be complete for review on June 15, 2020.

51. Written notice of the application was transmitted to state agencies and for public review on July 14, 2020. The City received no written comments regarding the proposal; a meeting was held with the Puyallup Tribe of Indians, the Port of Tacoma, and the Cities of Fife and Tacoma in September, 2020, to discuss future use of the roadway.

Conclusion of Law as Finding of Fact:

52. Any conclusion of law hereinafter stated which may be deemed a finding of fact herein is hereby adopted as such.

CONCLUSIONS

1. The applicant has met the requirements for issuance of a Critical Area Development Permit as the impacts to create the Lower Wapato Creek Advanced Mitigation Site cannot avoid impacts due to the nature of the restoration and replacement of the limiting culvert with a full span bridge. Further, the proposal meets the requirements of the No Practicable Alternatives Legal Test as this site is the last, best place to build a tidally-influenced stream channel and floodplain wetland mosaic in the Wapato Creek watershed. The required mitigation is being performed through the construction of a more highly functioning stream and wetland complex. Temporary impacts are self-mitigating in that the "development" occurring is restoration and creation of natural, functioning systems where little function exists.

2. The applicant cannot avoid the impacts to the proposed project due to the restorative nature of the Permittee-Responsible Advance Mitigation project. In order to provide the stream and wetland complexities, temporary impacts will occur during construction and restoration of the stream and the creation of an advanced mitigation site that will create estuarine riparian wetland areas along a lengthened sinuous stream, and provide higher functioning stream and riparian areas and wetlands intended to be used for future Port project related impacts.

3. The applicant's proposal will result in improvements to a low functioning stream through the rerouting and lengthening of the stream and replanting or restoring the riparian area to a highly functioning stream and wetland complex. The restored riparian system will support threatened and endangered species while providing no net loss of wetland areas when the Port of Tacoma has an unavoidable impact in future development proposals. The construction impacts will be temporary and the resulting system will be preserved in perpetuity through a Conservation Easement or similar instrument that will prevent impacts in the future.
4. The construction of a Permittee-Responsible Advance Mitigation Site is allowed under the Critical Area code provided that future projects that impact wetlands or streams shall follow the avoidance, minimization and mitigation hierarchy first prior to looking at the site for mitigation where impacts have occurred.
5. Under Innovative Mitigation, the restoration and enhancement of the existing stream will create a larger, more diverse and complex habitat area that will be more sustainable and is part of an existing habitat corridor associated with Wapato Creek. The placement of this Permittee-Responsible Advance Mitigation Site will provide long-term protection and management as the Port of Tacoma will continue to oversee its success. The Port of Tacoma has experience with many complex, large habitat restoration areas such as this and the likelihood of success is high. The selection of this site and the proposed restoration is appropriate and needed within the Puyallup-white watershed area as this area has had a significant reduction (98% over the last 150 years) and the regional needs for this type of function is great.
6. The permittee-responsible advance mitigation site will provide a complex, sinuous stream and wetland habitat area and improve water quality that will benefit Commencement Bay and open up additional habitat for both marine and terrestrial fauna. The proposed project will result in a net gain of wetland area and stream length with a restored buffer that will provide a higher level of all functions including stormwater runoff filtration, habitat diversity and increase area, floodplain connection and expansion and visual aesthetics. The proposed restored stream and wetland with additional buffer plantings will not only replace similar functions as those lost, but will provide a functional lift and the value of the stream and wetland complex will also provide enhanced habitat and an aesthetic value to the areas surrounding the mitigation area.
7. The designation of the utility access and the removal of vegetation and placement of gravel are not contained within the proposed buffer "credit". The utility poles are existing at the site and cannot be moved and thus will continue to require repair and maintenance which would likely continue to cause impacts within the vegetated buffer. Two new power poles will be constructed on or near the site. The designation of the area and restoration of the surrounding buffer will provide protection to the restored buffer area. While the removal of vegetation and gravel are considered impacts, the restoration of the remaining buffer accounts and offsets this impact.
8. Based on the above findings and compliance with construction BMP's, the proposal is consistent with the policies of the *TMC* 13.11 Critical Areas Preservation Ordinance with the following recommended conditions.

DECISION

Based upon the above findings and conclusions, the Critical Area Development Permit is **approved**, subject to the following conditions:

Conditions

1. The applicant shall record Notice on Title per *TMC* Section 13.11.280 for the advance mitigation site prior to approval of any development permits.
2. The Port shall provide documentation with the City of Tacoma and City of Fife that all parties agree on jurisdictional boundaries for the Project prior to construction activities associated with the bridge installation. The City of Tacoma permit staff shall be provided a copy of the agreements prior to issuance of any development permits.
3. The applicant shall conduct the site restoration and mitigation in substantial accordance with all of the following documents:
    - Joint Aquatic Resources Permit Application (JARPA)
    - Lower Wapato Creek Habitat Project, Critical Area Report prepared by the Port of Tacoma, May 2020
    - Civil Plans/Drawings
    - SEPA Determination of Non-Significance-encompasses both projects and issued January 3, 2013
    - Draft Advance Mitigation Plan, Lower Wapato Creek Habitat Project prepared by the Port of Tacoma, June 1, 2020. (Note: the draft plan is only draft until it is accepted by all agencies)
4. The applicant shall attend a preconstruction meeting with the SES and Building Inspector prior to the issuance of any development permits for the site.
5. The applicant shall inform the City SES when the plantings will be installed. The applicant shall have a qualified wetland specialist on site during the plant installation. The applicant shall provide to the City a Year 0, or an “as-built”, of the vegetation on site following planting along with the associated fee. The City understands that the site creation shall be phased to allow for observance and hydrologic monitoring for appropriate placement of vegetation. Thus, the As-Built (Year 0) Monitoring report shall be provided following site stabilization and planting.
6. The applicant shall provide vegetative maintenance and monitoring of the advance mitigation site for a period of 10 years according to the provisions contained in the Draft Lower Wapato Creek Advance Mitigation Plan. Monitoring reports shall be provided in Years 1, 3, 5, 7, and 10. Monitoring reports shall be provided to the City no later than March 1 of the year following formal monitoring.
7. The applicant shall provide a barricade fence and silt fence along the perimeter of the work area to prevent accidental intrusion into the stream and wetland areas prior to conducting site work. Tree protection fencing shall be installed prior to commencement of site work. The applicant shall ensure that once the development is complete and erosion control is no longer needed, the barricade and silt fence are removed.
8. Permanent fencing such as a split rail fence or similar fence shall be constructed along the outside perimeter of the wetland (or stream) buffer and signage shall be attached to the fence to alert the public of the boundary limits of the Critical Area. The applicant shall use the approved sign template of the City of Tacoma and signs shall be placed approximately every 50 feet where large open areas border the wetland and stream. Additional information signage is permitted as indicated in the Advance Mitigation Plan.
9. A copy of the approved HPA shall be provided to the City of Tacoma prior to the issuance of development permits.

Advisory Notes

1. This permit is only applicable to the proposed verification project as described above and based upon the information submitted by the applicant. Modifications to this proposal and future activities or development within the site may be subject to further review and additional permits as required in accordance with the *Tacoma Municipal Code*.
2. The applicant must obtain other approvals prior to construction as required by other local, state and federal agencies including the Army Corps of Engineers, Department of Ecology and the Washington Department of Fish and Wildlife as applicable.

ORDERED this 1st day of October, 2020.



PETER HUFFMAN, DIRECTOR
PLANNING AND DEVELOPMENT SERVICES DEPARTMENT

FULL DECISION TRANSMITTED this 1st day of October, 2020, by electronic mail to:

Mark Rettmann, Port of Tacoma
Andrew Strobel, Puyallup Tribe of Indians
Russ Blount and Steve Friddle, City of Fife

SUMMARY OF DECISION TRANSMITTED by first class mail or electronic mail to the following:

All property owners within 400 feet of the subject site

Tahoma Audubon Society: Emily Kalnicky
Northeast Tacoma Neighborhood Council: Yvonne McCarty
Puyallup Tribe of Indians: Andrew Strobel, Char Naylor, Brandon Reynon, Carolann Hawks, David Duenas, Jeffrey Thomas, Lisa Anderson, Charlene Matheson, Russ Ladley, Jennifer Keating
Citizens for a Healthy Bay: Melissa Malott, Erin Dilworth
Pierce County Office of the Assessor-Treasurer: Darci Brandvold
Port of Tacoma: Tony Warfield - Senior Manager Environmental and Planning Program
U.S. Army Corps of Engineers - COT WRDA Projects (City of Tacoma Facilities): Attn: Regulatory Branch, CENWS-OD-RG ATTN: Dan Krenz
U.S. Army Corps of Engineers (Pierce County West): Attn: Regulatory Branch, CENWS-OD-RG ATTN: Halie Endicott
U.S. Army Corps of Engineers (Pierce County East): Attn: Regulatory Branch, CENWS-OD-RG ATTN: Jenae Churchill
U.S. Fish & Wildlife Service: Attn: Judy Lantor
Washington Department of Ecology: Shorelands & Environmental Assistance Program - Zach Meyer
Washington Department of Fish and Wildlife: Kelly Still
Washington Department of Fish and Wildlife (Commencement Bay): Liz Bockstiegel

NOTE: Pursuant to RCW 36.70B.130, you are hereby notified that affected property owner(s) receiving this notice of decision may request a change in valuation for property tax purposes consistent with Pierce County's procedure for administrative appeal. To

request a change in value for property tax purposes you must file with the Pierce County Board of Equalization on or before July 1st of the assessment year or within 30 days of the date of notice of value from the Assessor-Treasurer's Office. To contact the board, you may call 253-798-7415 or by e-mail at www.co.pierce.wa.us/boe.

RECONSIDERATION AND APPEALS

RECONSIDERATION:

Any person having standing under the ordinance governing this application and feeling that the decision of the Director is based on errors of procedure or fact may make a written request for review by the Director within fourteen (14) days of the issuance of the written order. The fee for reconsideration is $260.00. This request shall set forth the alleged errors, and the Director may, after further review, take such further actions as deemed proper, and may render a revised decision.

A request for RECONSIDERATION of the Director's decision in this matter must be filed in writing, via electronic mail, to the staff contact listed on the first page of this document. Filing of the reconsideration shall not be complete until both the reconsideration request and required filing fee are received. THE FEE SHALL BE REFUNDED SHOULD TO THE REQUESTOR, SHOULD THE REQUESTOR PREVAIL. (Pursuant to Section 2.09.020 of the Tacoma Municipal Code, fees for reconsideration shall be waived for qualifying senior citizens and persons who are permanently handicapped who are eligible for tax exemption because of financial status.)

APPEAL TO HEARING EXAMINER:

Any decision of the Director may be appealed by any aggrieved person or entity as defined in Section 13.05.100 of the Tacoma Municipal Code, within fourteen (14) days of the issuance of this decision, or within seven (7) days of the date of issuance of the Director's decision on a reconsideration, to appeal the decision to the Hearing Examiner.

"The Rules of Procedures for Hearings" may be viewed at:
http://cms.cityoftacoma.org/hex/HEX_RulesofProcedureforHearings_ResolutionNo39843_Adopted10.pdf

An appeal to the Hearing Examiner is initiated by filing a Notice of Appeal accompanied by the required filing fee of **$1,030.00**. Filing of the appeal shall not be complete until both the Notice of Appeal and required filing fee are received. THE FEE SHALL BE REFUNDED TO THE APPELLANT SHOULD THE APPELLANT PREVAIL. (Pursuant to Section 2.09.020 of the Tacoma Municipal Code, fees for appeals shall be waived for qualifying senior citizens and persons who are permanently handicapped who are eligible for tax exemption because of financial status.)

The Notice of Appeal must be submitted in writing, via electronic mail to the staff contact listed on the first page of this document, and shall contain the following:

(1) A brief statement showing how the appellant is aggrieved or adversely affected.

(2) A statement of the grounds for the appeal, explaining why the appellant believes the administrative decision is wrong.

(3) The requested relief, such as reversal or modification of the decision.

(4) The signature, mailing address and telephone number of the appellant and any representative of the appellant.

City of Tacoma
Planning and Development Services

March 24, 2021

Mark Rettmann, Port of Tacoma
P.O. Box 1837
Tacoma, WA 98401-1837

Via Electronic Transmittal: MRettmann@portoftacoma.com

Subject: LU20-0113 Letter to File for Critical Area Development Permit for the Lower Wapato Creek Advance Habitat Project, 4400 SR 509 S Frontage Road Parcel Number 0320013157

Dear Mr. Rettmann,

I reviewed the CAPO Minor Modification Memorandum March 15, 2021, the FINAL Advance Mitigation Plan, Revised March 2021 and the Washington Department of fish and Wildlife HPA describing the changes to the issued Critical Area Development Permit LU20-0113.

I understand that the Port of Tacoma is seeking to revise the following as a result of final engineering and design. Specifically, the request includes the following actions:

1. Revised In-Water Work window from July 8th through February 15th.
   - No changes to permit drawings
2. Revised Wetland contours
   - Proposed wetland surfaces were lowered (from the original +16 feet MLW elevation as shown on the Phase 1 Sheets C1.0 through C1.3. In the eastern portion of the site, wetland elevations were lowered to between +13 and +15 feet MLLW.
3. Revised Large Woody Material types, Details, Anchoring and Locations
   - Current LWM types and locations area shown on the Phase 1 Sheets C1.0 through C1.3, and details are shown n C5.0 and C5.1. The total number of LWM structures including standing snags and rootwads remains 230 pieces (178 LWM, 29 rootwads, 23 standing snags) but the distribution and locations were modified slightly.
4. Revised Bridge Geometry and Foundation
   - The revised bridge geometry and foundation includes a bridge span of 41 feet-3 ½ inches and the width of the bridge foundation is 49 feet-11 ¼ inches. The bridge foundation plan will be 12 vibratory driven 24" diameter concrete filled steel tubes/shafts. Overhead power lines and other utilities will be temporarily and permanently relocated as part of the project.
5. Revisions to Electrical Utilities Design
   - The design has been updated to more specifically show the location of the proposed utility relocation work, including Tacoma Public Utilities (TPU) power poles and associated infrastructure. The locations of the TPU power pole work (five power poles and associated lines and infrastructure) are shown on Phase 1 Sheet C1.0 and C1.1 and on the Phase 1 transmission line plans. Other utility relocations and temporary locations will be conducted as part of the culvert removal and bridge construction work.
6. Revisions to TPU Access Pads

- The geometry of the two originally proposed TPU access pads (at 12th St East and at East Alexander Avenue) have been updated and a third (at SR 509) access pad was added at TPU's request. The access pad locations are shown on Phase 1 Sheet C6.0 and the details are shown on the Phase 1 Sheet C7.1.

7. Revised contours near 12th Street East and East Alexander Avenue for existing Outfall
   - As depicted on Phase 1 Sheets C1.1 and C6.0
8. Revision to Soil amendment and stabilization
   - As depicted on Phase 1 Sheet L1.0
9. Revisions to proposed Seed mixes
   - As depicted on Phase 1 Sheet L2.0
10. Revisions to Proposed Vegetation Communities
    - Reference the JARPA Update Memo and attached Phase 2 sheets and the Advance Mitigation Plan. The planting of the vegetation community will be conducted in Phase 2 (2022) and are not part of SDEV20-0453. Changes since the June 2020 JARPA include changes to species, quantities, planting zones, plant layout, and container stock size.
11. Updated JARPA Quantities
    - Table 3 of the JARPA Update Memo provides the revised areas and volumes for the table contained in Section 8e of the JARPA.
12. Final Advance Mitigation Plan
    - The Advance Mitigation Plan has been revised to incorporate the revisions in the JARPA Update memo and in response to Ecology's comments. The Final Advance Mitigation Plan is dated March 2021.

Under TMC 13.05.130 modification or revisions to issued permits may result in additional review and permitting if the modifications are considered a major modification. The proposed revision is considered "minor" under TMC 13.05.130.B as the project does not result in a change of use; the proposal does not add to the size of the structures (the bridge will actually decrease in size); the conditional requirements are not being changed; the impervious surfaces have not increased by more than 25%; the revision is not likely to cause new significant adverse impacts to the critical areas; and the revision is not part of multiple revisions exceeding the minor modification criteria.

I have also received the Hydraulic Project Approval, dated March 19, 2021 from Elizabeth Bockstiegal of the WA State Department of Fish and Wildlife (WDFW) approving the proposed project.

Therefore, the project revisions comply with a Minor Modification under TMC 13.05.130 and no further review or permitting is required. I also verified that the associated building permit under SDEV20-0453 contains the updated design proposal for the Lower Wapato Creek Habitat Project.

Please retain this letter for your files and I'll upload it to the City's online record for LU20-0113. If you have any questions regarding this letter, please contact me at 253-591-5773.

Sincerely,

Karla Kluge

Karla Kluge
Senior Environmental Specialist

CC: Shirley Schultz, Principal Planner - sschultz@cityoftacoma.org
Washington Department of Fish and Wildlife, Elizabeth Bockstiegel - Elizabeth.Bockstiegel@dfw.wa.gov
US Army Corps of Engineers - Halie.N.Endicott@usace.army.mil
Washington Department of Ecology, Shorelands & Environmental Assistance Program, Zach Meyer - zmey461@ecy.wa.gov

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: March 19, 2021
Project End Date: March 17, 2026

Permit Number: 2021-6-118+01
FPA/Public Notice Number: N/A
Application ID: 22024

PERMITTEE	AUTHORIZED AGENT OR CONTRACTOR
Port of Tacoma ATTENTION: Mark Rettmann PO Box 1837 Tacoma, WA 98401-1837	

Project Name: Lower Wapato Creek Habitat Project (LWCHP)

Project Description: The Port proposes the Lower Wapato Creek Habitat Project as an advance permittee-responsible mitigation site which will increase ecological functions, values, and areal extent of Wetland and Deepwater Habitats including; Wapato Creek, intertidal mudflats, estuarine emergent wetlands and forested wetlands in the lower Wapato Creek watershed. The re-establishment of these habitat types will be completed in advance of other potential wetland impacts as defined in the Project's Advance Mitigation Plan (AMP). The Project design includes two primary habitat elements: (1) fish passage improvement through replacement of two Wapato Creek culverts at the 12th Street East crossing; and (2) re-establishment of wetland and fish habitat through relocation of Wapato Creek and constructing a diverse complex of associated floodplain and wetland habitats historically present in the Commencement Bay intertidal mudflats.
The fish passage improvement element includes the replacement of twin undersized 60-inch-diameter culverts with an approximately 50-foot-wide single span bridge at the 12th Street East crossing to provide unimpeded fish passage to the upper reaches of Wapato Creek. The proposed bridge will also improve flood conveyance and reduce the impacts of habitat fragmentation caused by the constriction perpetuated by the existing culverts. This will create an aquatic and riparian fish and wildlife corridor that extends from upstream of the Project, through the habitat site and into the downstream Wapato Creek corridor.

The re-establishment of wetland and fish habitat will be achieved through a variety of design elements that will provide habitat diversity, complexity and interspersion. The Project proposes to increase the length of Wapato Creek from 1,040 lineal feet (LF) to approximately 1,875 LF (with an additional 350 LF of retained off-channel habitat in the existing Wapato Creek channel. The design includes creation of sinuous edge habitat, as well as intermixed hummock and wetland habitat that is essential to re-establishing habitat interspersion and complexity. These habitat features have been designed to function as an interconnected ecosystem unit that provides key habitat functions for all life stages of avian, wildlife and fish species especially anadromous salmonids. Intertidal stream channels, mudflats, estuarine emergent wetlands, as well as freshwater forested wetlands and forested riparian habitats provide essential fish and wildlife functions such as forage opportunities, refuge, osmoregulation, flood protection and food web interconnections. The design has focused on re-establishment of critical habitat functions and features as close to historic, pre-disturbance locations and conditions as possible within this highly developed urban/industrial location.

PROVISIONS

Washington Department of
Fish & Wildlife
PO Box 43234
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(360) 902-2200

Issued Date: March 19, 2021
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AUTHORIZED WORK TIMES

1. TIMING LIMITATION: To protect fish and shellfish habitats at the job site, work below the ordinary high water line must occur from July 8 through December 31 and January 1 through February 15 of any year.

2. APPROVED PLANS: Work must be accomplished per plans and specifications submitted with the application and approved by the Washington Department of Fish and Wildlife, entitled "JARPA Update Memo (01-07-21c)_new sheet C3.1_with apdx_1of2.pdf", uploaded to APPS on March 4, 2021, "JARPA Update Memo (01-07-21c)_new sheet C3.1_with apdx_2of2.pdf", "20210315_AdvMitPlan_LWCHP_REVISED FINAL (all appendices).pdf", uploaded to APPS on March 15, 2021, except as modified by this Hydraulic Project Approval. You must have a copy of these plans available on site during all phases of the project construction.

ADVANCED MITIGATION PLAN & AGREEMENT

3. This project is advanced mitigation as documented in the Advanced Mitigation Agreement signed on 4 March 2021 by WDFW and on March 2, 2021 by the Port of Tacoma. The document is in APPS and titled "Lower Wapato HPA mitigation WDFW-Port of Tacoma_HPA 22024_Fully executed.pdf".

NOTIFICATION

4. PRE-CONSTRUCTION CONTRACTOR MEETING: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least fourteen business days before starting in-water work each year to arrange a pre-construction contractor meeting onsite. The notification must include the permittee's name, project location, starting date, and the Hydraulic Project Approval permit number.

5. PRE-, DURING, AND POST-CONSTRUCTION NOTIFICATION: You, your agent, or contractor must contact the Washington Department of Fish and Wildlife by e-mail at HPAapplications@dfw.wa.gov; mail to Post Office Box 43234, Olympia, Washington 98504-3234; or fax to (360) 902-2946 at least three business days before starting work, one day before placing streambed sediment in the bridge reach, one day before releasing water to the new channel and again within seven days after completing the in-water work. The notification must include the permittee's name, project location, starting date for work or date the work was completed, and the permit number. The Washington Department of Fish and Wildlife may conduct inspections during and after construction; however, the Washington Department of Fish and Wildlife will notify you or your agent before conducting the inspection.

6. FISH KILL/ WATER QUALITY PROBLEM NOTIFICATION: If a fish kill occurs or fish are observed in distress at the job site, immediately stop all activities causing harm. Immediately notify the Washington Department of Fish and Wildlife of the problem. If the likely cause of the fish kill or fish distress is related to water quality, also notify the Washington Military Department Emergency Management Division at 1-800-258-5990. Activities related to the fish kill or fish distress must not resume until the Washington Department of Fish and Wildlife gives approval. The Washington Department of Fish and Wildlife may require additional measures to mitigate impacts.

STAGING, JOB SITE ACCESS AND EQUIPMENT

7. INVASIVE SPECIES CONTROL: Follow Method 1 for low risk locations (i.e. clean/drain/dry). Thoroughly remove visible dirt and debris from all equipment and gear (including drive mechanisms, wheels, tires, tracks, buckets, and undercarriage) before arriving and leaving the job site to prevent the transport and introduction of invasive species.

8. Establish the staging area (used for activities such as equipment storage, vehicle storage, fueling, servicing, and hazardous material storage) in a location and manner that will prevent contaminants like petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials from entering waters of the state.

9. Retain all natural habitat features larger than twelve inches in diameter including trees, stumps, logs, and large rocks. These natural habitat features may be moved during construction and they may be placed near the pre-project location before leaving the job site as feasible.

10. Clearly mark boundaries to establish the limit of work associated with site access and construction.

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11. Design and locate new temporary access roads to prevent erosion and sediment delivery to waters of the state.

12. Remove soil or debris from the drive mechanisms (wheels, tires, tracks, etc.) and undercarriage of equipment prior to operating the equipment waterward of the ordinary high water line.

13. Check equipment daily for leaks and complete any required repairs in an upland location before using the equipment in or near the water.

14. Use environmentally acceptable lubricants composed of biodegradable base oils such as vegetable oils, synthetic esters, and polyalkylene glycols in equipment operated in or near the water.

15. This Hydraulic Project Approval does not authorize equipment crossings through the wetted stream.

CONSTRUCTION-RELATED SEDIMENT, EROSION AND POLLUTION CONTAINMENT

16. Work in the dry watercourse (when no natural flow is occurring in the channel, or when flow is diverted around the job site).

17. Prevent contaminants from the project, such as petroleum products, hydraulic fluid, fresh concrete, sediments, sediment-laden water, chemicals, or any other toxic or harmful materials, from entering or leaching into waters of the state.

18. Use tarps or other methods to prevent treated wood, sawdust, trimmings, drill shavings and other debris from contacting the bed or waters of the state.

19. Protect all disturbed areas from erosion. Maintain erosion and sediment control until all work and cleanup of the job site is complete.

20. All erosion control materials that will remain onsite must be composed of 100% biodegradable materials.

21. Straw used for erosion and sediment control, must be certified free of noxious weeds and their seeds.

22. Stop all hydraulic project activities except those needed to control erosion and siltation, if flow conditions arise that will result in erosion or siltation of waters of the state.

23. Route construction water (wastewater) from the project to an upland area above the limits of anticipated floodwater. Remove fine sediment and other contaminants before discharging the construction water to waters of the state.

24. Deposit waste material from the project, such as construction debris, silt, excess dirt, or overburden, in an upland area above the limits of anticipated floodwater unless the material is approved by the Washington Department of Fish and Wildlife for reuse in the project.

CONSTRUCTION MATERIALS

25. To prevent leaching, construct forms to contain any wet concrete. Place impervious material over any exposed wet concrete that will come in contact with waters of the state. Forms and impervious materials must remain in place until the concrete is cured.

26. Do not use wood treated with oil-type preservative (creosote, pentachlorophenol) in any hydraulic project. Wood treated with waterborne preservative chemicals (ACZA, ACQ) may be used if the Western Wood Preservers Institute has approved the waterborne chemical for use in the aquatic environment. The manufacturer must follow the Western Wood Preservers Institute guidelines and the best management practices to minimize the preservative migrating from treated wood into aquatic environments. To minimize leaching, wood treated with a preservative by someone other than a manufacturer must follow the field treating guidelines. These guidelines and best management practices are available at www.wwpinstitute.org.

27. Do not stockpile construction material waterward of the ordinary high water line.

28. Use only clean, suitable material as fill material (no trash, debris, car bodies, tires, asphalt, concrete, etc.).

IN-WATER WORK AREA ISOLATION USING A TEMPORARY BYPASS

29. Isolate fish from the work area by using either a total or partial bypass to reroute the stream through a temporary

channel or pipe.

30. Provide fish passage during times of the year when fish are expected to migrate. Adult salmonid upstream migration is expected from September 30 - December 31 of any year, and juvenile salmonid outmigration is expected from January 15 - June 30 of any year.

31. Sequence the work to minimize the duration of dewatering.

32. Use the least-impacting feasible method to temporarily bypass water from the work area. Consider the physical characteristics of the site and the anticipated volume of water flowing through the work area.

33. The hydraulic capacity of the stream bypass must be equal to or greater than the peak flow event expected when the bypass will be operated.

34. Design the temporary bypass to minimize the length of the dewatered stream channel.

35. During all phases of bypass installation and decommissioning, maintain flows downstream of the project site to ensure survival of all downstream fish.

36. Install the temporary bypass before starting other construction work in the wetted perimeter using a bypass method approved by the Washington Department of Fish and Wildlife.

37. Install a cofferdam or similar device at the upstream and downstream end of the bypass to prevent backwater from entering the work area.

38. Return diverted water to the channel immediately downstream of the work area. Dissipate flow energy from the diversion to prevent scour or erosion of the channel and bank.

39. If the diversion inlet is a gravity diversion that provides fish passage, place the diversion outlet where it facilitates gradual and safe reentry of fish into the stream channel.

40. If the bypass is a pumped diversion, once started it must run continuously until it is no longer necessary to bypass flows. This requires back-up pumps on-site and twenty-four-hour monitoring for overnight operation.

41. If the diversion inlet is a pump diversion in a fish-bearing stream, the pump intake structure must have a fish screen installed, operated, and maintained in accordance with RCW 77.57.010 and 77.57.070. Screen the pump intake with one of the following:
a) Perforated plate: 0.094 inch (maximum opening diameter);
b) Profile bar: 0.069 inch (maximum width opening); or
c) Woven wire: 0.087 inch (maximum opening in the narrow direction).
The minimum open area for all types of fish screens is twenty-seven percent. The screened intake facility must have enough surface area to ensure that the velocity through the screen is less than 0.4 feet per second. Maintain fish screens to prevent injury or entrapment of fish.

42. The fish screen must remain in place whenever water is withdrawn from the stream through the pump intake.

43. Remove fish screens on dewatering pumps in the isolated work area only after all fish are safe and excluded from the work area.

44. Isolate pump hose intakes with block nets so that fish cannot get near the intake.

FISH LIFE REMOVAL

45. All persons participating in capture and removal must have training, knowledge, and skills in the safe handling of fish life.

46. If electrofishing is conducted, a person with electrofishing training must be on-site to conduct or direct all electrofishing activities.

47. Place block nets upstream and downstream of the in-water work area before capturing and removing fish life.

48. Capture and safely move fish life from the work area to the nearest suitable free-flowing water.

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49. All persons removing fish life from a job site must follow the protocol entitled "WSDOT Fish Exclusion Protocols and Standards" uploaded to APPS on October 16, 2020.

WATER CROSSING REMOVAL

50. Remove the culvert in the dry or in isolation from the stream flow by using a bypass channel or culvert, or by pumping the stream flow around the work area. The Washington Department of Fish and Wildlife may grant exception if removing the culvert in the flowing stream reduces siltation or turbidity.

BRIDGE

51. The bridge must be a 50 foot long single span bridge as shown in the approved plans.

52. Design and construct the bridge to pass water, ice, large wood, and associated woody material and sediment likely to move under the bridge during the 100-year flood flows.

53. Locate the waterward face of all bridge elements including abutments, piers, pilings, sills, foundations, aprons, wing walls, and approach material landward of the ordinary high water line.

54. Place a minimum of 3 feet deep of clean, rounded, uniformly-graded gravel with a size composition of:

Streambed Mix Type A

Sieve Size	Percent Passing
6-inch	99-100
5-inch	70-90
3-inch	40-75
1.5-inch	25-45
U.S. NO. 4	15-25
U.S. NO. 40	10-15

Streambed Mix Type B

Sieve Size	Percent Passing
4-inch	99-100
3-inch	70-90
2-inch	40-75
1-inch	20-45
U.S. NO. 4	12-22
U.S. NO. 40	5 - 10

Streambed Mix Type C

Sieve Size	Percent Passing
2.5-inch	99-100
2-inch	65-95
1-inch	50-85
U.S. NO. 4	22-44
U.S. NO. 40	16 max
U.S. NO. 200	5 - 9

55. Streambed material must be well-graded and non-porous, to prevent subsurface flow. Create a low-flow channel and a high-flow bench on both sides of the channel. Angular rock is not permitted within the channel.

56. Use material for the approaches that is structurally stable and that will not harm fish life if it erodes into the water.

57. Prevent the existing structure and associated construction materials from entering the stream when removing them.

58. Install and maintain curbs or wheel guards to prevent aggregate or earth-type paving material from entering the stream.

HYDRAULIC PROJECT APPROVAL

Issued Date: March 19, 2021
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CHANNEL RELOCATION AND REALIGNMENT

59. Build 1,875 feet of new channel for Wapato Creek, as shown in the approved plans.

60. The new channel must incorporate habitat components, bed materials, channel morphology, and native or other approved vegetation to provide equal or better habitat compared to that which previously existed in the old channel.

61. The streambed must include a sinuous low-flow channel expected under common conditions in the reach and a high-flow bench on both sides of the channel.

62. During construction, isolate the new channel from the flowing watercourse.

63. Before water is diverted into a permanent new channels, install approved habitat components and bed and bank protection materials to prevent erosion as shown in the approved plan.

64. Use fir, cedar, or other coniferous species to construct log or rootwad fish habitat structures.

65. Place the fish habitat structures in the low flow channel.

66. Place spoils from the new channel in an upland area above the limits of anticipated floodwater.

67. Divert the water into the new channel according to the approved plans.

68. The Habitat Biologist listed below or their representative must inspect and approve the new channel before the stream is diverted into the channel.

69. Diverting the flow into the new channel:
a. With upstream coffer dam and diversion in place, and working outside of the active/flowing channel, remove upstream berm/plug and place stream sediment.
b. During an ebb (outgoing) tide, remove downstream berm plug as the tide recedes and surface water levels drop with fish exclusion/nets in place as necessary.
c. During the same tide cycle as Step #2, with a delayed start from Step #2, remove upstream coffer dam and plug diversion pipe. Leave upstream fish exclusion net in place until the next high tide.
d. At a subsequent low tide, remove downstream diversion coffer dam and remaining exposed pipe in the dry or with necessary fish exclusion/nets in place.

70. Filling the old channel may occur prior to removal of diversion, burying a portion of the diversion pipe in place. Buried pipe will be plugged with CDF/flowable fill and capped with streambank material of sufficient depth to prevent the buried pipe from becoming exposed.

DEMOBILIZATION AND CLEANUP

71. Do not relocate removed or replaced structures within waters of the state. Remove and dispose of these structures in an upland area above the limits of anticipated floodwater.

72. To prevent fish from stranding, backfill trenches, depressions, and holes in the bed that may entrain fish during high water or wave action.

73. To minimize sediment delivery to the stream or stream channel, do not return in-stream flows to the work area until all in-channel work is completed and the bed and banks are stabilized.

74. Replant the job site with the plant species composition and planting densities shown in the approved plans and the Advanced Mitigation Plan, labeled "20210315_AdvMitPlan_LWCHP_REVISED FINAL (all appendices).pdf" in APPS, and uploaded on March 15, 2021.

75. Upon completion of the project, remove all materials or equipment from the site and dispose of all excess spoils and waste materials in an upland area above the limits of anticipated floodwater.

LOCATION #1:	Site Name: Lower Wapato Creek Habitat Project

HYDRAULIC PROJECT APPROVAL

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: March 19, 2021
Project End Date: March 17, 2026

Permit Number: 2021-6-118+01
FPA/Public Notice Number: N/A
Application ID: 22024

	1131 East Alexander Avenue, Tacoma, WA					
WORK START:	March 18, 2021			WORK END:	March 17, 2026	
WRIA		Waterbody:			Tributary to:	
10 - Puyallup - White		Wapato Creek			Port Industrial Waterway	
1/4 SEC:	Section:	Township:	Range:	Latitude:	Longitude:	County:
SW 1/4	01	20 N	03 E	47.246431	-122.371508	Pierce
Location #1 Driving Directions						

From Seattle, take Interstate-5 (I-5) south. Take exit 137 for WA-99 North/54th Avenue East in Fife. Turn right from the offramp onto 54th Avenue East for 0.2 mile. Turn left onto 12th Street East/Marti Street and continue for approximately 0.5 mile. The Project site will be on the right.

The excess materials excavated for the Project will be placed/stockpiled at the Disposal site, tax parcel 0320011117 (JARPA Plan Sheet 4).

APPLY TO ALL HYDRAULIC PROJECT APPROVALS

This Hydraulic Project Approval pertains only to those requirements of the Washington State Hydraulic Code, specifically Chapter 77.55 RCW. Additional authorization from other public agencies may be necessary for this project. The person(s) to whom this Hydraulic Project Approval is issued is responsible for applying for and obtaining any additional authorization from other public agencies (local, state and/or federal) that may be necessary for this project.

This Hydraulic Project Approval shall be available on the job site at all times and all its provisions followed by the person (s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work.

This Hydraulic Project Approval does not authorize trespass.

The person(s) to whom this Hydraulic Project Approval is issued and operator(s) performing the work may be held liable for any loss or damage to fish life or fish habitat that results from failure to comply with the provisions of this Hydraulic Project Approval.

Failure to comply with the provisions of this Hydraulic Project Approval could result in civil action against you, including, but not limited to, a stop work order or notice to comply, and/or a gross misdemeanor criminal charge, possibly punishable by fine and/or imprisonment.

All Hydraulic Project Approvals issued under RCW 77.55.021 are subject to additional restrictions, conditions, or revocation if the Department of Fish and Wildlife determines that changed conditions require such action. The person(s) to whom this Hydraulic Project Approval is issued has the right to appeal those decisions. Procedures for filing appeals are listed below.

HYDRAULIC PROJECT APPROVAL

Issued Date: March 19, 2021
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MINOR MODIFICATIONS TO THIS HPA: You may request approval of minor modifications to the required work timing or to the plans and specifications approved in this HPA unless this is a General HPA. If this is a General HPA you must use the Major Modification process described below. Any approved minor modification will require issuance of a letter documenting the approval. A minor modification to the required work timing means any change to the work start or end dates of the current work season to enable project or work phase completion. Minor modifications will be approved only if spawning or incubating fish are not present within the vicinity of the project. You may request subsequent minor modifications to the required work timing. A minor modification of the plans and specifications means any changes in the materials, characteristics or construction of your project that does not alter the project's impact to fish life or habitat and does not require a change in the provisions of the HPA to mitigate the impacts of the modification. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a minor modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are seeking a minor modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234, or by email to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

MAJOR MODIFICATIONS TO THIS HPA: You may request approval of major modifications to any aspect of your HPA. Any approved change other than a minor modification to your HPA will require issuance of a new HPA. If you originally applied for your HPA through the online Aquatic Protection Permitting System (APPS), you may request a major modification through APPS. A link to APPS is at http://wdfw.wa.gov/licensing/hpa/. If you did not use APPS you must submit a written request that clearly indicates you are requesting a major modification to an existing HPA. Written requests must include the name of the applicant, the name of the authorized agent if one is acting for the applicant, the APP ID number of the HPA, the date issued, the permitting biologist, the requested changes to the HPA, the reason for the requested change, the date of the request, and the requestor's signature. Send your written request by mail to: Washington Department of Fish and Wildlife, PO Box 43234, Olympia, Washington 98504-3234. You may email your request for a major modification to HPAapplications@dfw.wa.gov. You should allow up to 45 days for the department to process your request.

APPEALS INFORMATION

If you wish to appeal the issuance, denial, conditioning, or modification of a Hydraulic Project Approval (HPA), Washington Department of Fish and Wildlife (WDFW) recommends that you first contact the department employee who issued or denied the HPA to discuss your concerns. Such a discussion may resolve your concerns without the need for further appeal action. If you proceed with an appeal, you may request an informal or formal appeal. WDFW encourages you to take advantage of the informal appeal process before initiating a formal appeal. The informal appeal process includes a review by department management of the HPA or denial and often resolves issues faster and with less legal complexity than the formal appeal process. If the informal appeal process does not resolve your concerns, you may advance your appeal to the formal process. You may contact the HPA Appeals Coordinator at (360) 902-2534 for more information.

A. INFORMAL APPEALS: WAC 220-660-460 is the rule describing how to request an informal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete informal appeal procedures. The following information summarizes that rule.

Washington Department of
Fish & Wildlife
PO Box 43234
Olympia, WA 98504-3234
(360) 902-2200

Issued Date: March 19, 2021
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Permit Number: 2021-6-118+01
FPA/Public Notice Number: N/A
Application ID: 22024

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request an informal appeal of that action. You must send your request to WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. WDFW must receive your request within 30 days from the date you receive notice of the decision. If you agree, and you applied for the HPA, resolution of the appeal may be facilitated through an informal conference with the WDFW employee responsible for the decision and a supervisor. If a resolution is not reached through the informal conference, or you are not the person who applied for the HPA, the HPA Appeals Coordinator or designee may conduct an informal hearing or review and recommend a decision to the Director or designee. If you are not satisfied with the results of the informal appeal, you may file a request for a formal appeal.

B. FORMAL APPEALS: WAC 220-660-470 is the rule describing how to request a formal appeal of WDFW actions taken under Chapter 77.55 RCW. Please refer to that rule for complete formal appeal procedures. The following information summarizes that rule.

A person who is aggrieved by the issuance, denial, conditioning, or modification of an HPA may request a formal appeal of that action. You must send your request for a formal appeal to the clerk of the Pollution Control Hearings Boards and serve a copy on WDFW within 30 days from the date you receive notice of the decision. You may serve WDFW by mail to the HPA Appeals Coordinator, Department of Fish and Wildlife, Habitat Program, PO Box 43234, Olympia, Washington 98504-3234; e-mail to HPAapplications@dfw.wa.gov; fax to (360) 902-2946; or hand-delivery to the Natural Resources Building, 1111 Washington St SE, Habitat Program, Fifth floor. The time period for requesting a formal appeal is suspended during consideration of a timely informal appeal. If there has been an informal appeal, you may request a formal appeal within 30 days from the date you receive the Director's or designee's written decision in response to the informal appeal.

C. FAILURE TO APPEAL WITHIN THE REQUIRED TIME PERIODS: If there is no timely request for an appeal, the WDFW action shall be final and unappealable.

Habitat Biologist	elizabeth.bockstiegel@dfw.wa.gov		for Director
Elizabeth Bockstiegel	360-480-2908		WDFW

WSDOT Fish Exclusion Protocols and Standards

Work below the Ordinary High-Water Mark (or Mean Higher High-Water Mark) shall, in general, be conducted in isolation from flowing waters. Exceptions to this general rule or performance measure include: 1) implementation of the work area isolation and fish capture and removal protocols described in this document; 2) placement or removal of small quantities of material (e.g., wood or rock), or structural best management practices (e.g., turbidity curtain), under site conditions where potential exposures and effects to fish life are minimized without isolation from flowing waters[1]; and, 3) work conducted under a declared emergency, under emergency conditions, or where flow conditions prevent safe implementation of work area isolation and fish capture and removal protocols.

Implementation of the work area isolation and fish capture and removal protocols shall be planned and directed by a WSDOT biologist, or qualified biologist under contract to WSDOT, possessing all necessary knowledge, training, and experience (the directing biologist). If electrofishing will or may be used as a means of fish capture, the directing biologist shall have a minimum of 100 hours electrofishing experience in the field using similar equipment, and any individuals operating electrofishing equipment shall have a minimum of 40 hours electrofishing experience under direct supervision. All individuals participating in fish capture and removal operations shall have the training, knowledge, skills, and ability to ensure safe handling of fish, and to ensure the safety of staff conducting the operations.(See Appendix A for requirements)

The directing biologist shall work with Maintenance, Construction, and/or Environmental staff (as appropriate) to plan the staging and sequence for work area isolation, fish capture and removal, and dewatering. This plan should consider the size and channel characteristics of the area to be isolated, the method(s) of dewatering (e.g., diversion with bypass flume or culvert; diversion with sandbag, sheet pile or similar cofferdam; etc.), and what sequence of activities will provide the best conditions for safe capture and removal of fish. Where the area to be isolated is small, depths are shallow, and conditions are conducive to fish capture, it may be possible to isolate the work area and remove all fish life prior to dewatering or flow diversion. Where the area to be isolated is large, depths are not shallow, where flow volumes or velocities are high, and/or conditions are not conducive to easy fish capture, it may be necessary to commence with dewatering or flow diversion staged in conjunction with fish capture and removal. The directing biologist shall use his/her best professional judgment in deciding what sequence of activities is likely to minimize exposure of fish to conditions causing stress or injury (including stranding, exposure to extremes of temperature or reduced dissolved oxygen, risk of injury resulting from electrofishing, etc.).

[1] WSDOT shall make this determination with consultation or input from the regulatory agencies with jurisdiction, including the Washington State Department of Fish and Wildlife (WDFW), U.S. Fish and Wildlife Service (FWS), and NOAA-National Marine Fisheries Service (NMFS) as appropriate; also, this exception shall not permit work that requires in-water excavation or that presents a risk of increased turbidity beyond the immediate work area or for a duration of more than 15 minutes.

The directing biologist shall plan work area isolation, fish capture and removal, and dewatering with consideration for the following: habitat connectivity and fish habitat requirements; the duration and extent of planned in-water work; anticipated flow and temperature conditions over the duration of planned in-water work; and, the risk of exposure to turbidity or other unfavorable conditions during construction. If the area to be isolated includes only a portion of the wetted channel width (e.g., large or deep rivers where diversion from the entirety of the wetted channel is difficult or impossible), or if the bypass flume or culvert will effectively maintain connectivity and fish passage for the duration of construction activities, it may be less important whether the fish are herded (and/or captured and released) upstream or downstream of the isolated work area. However, if the area to be isolated includes the entire wetted channel width, and especially if conditions make it unlikely that connectivity (i.e., upstream/downstream fish passage) can be effectively maintained for the duration of construction activities, then the directing biologist should carefully consider whether to herd fish (and/or capture and release fish) upstream or downstream of the isolated work area.

If conditions upstream of the isolated work area will or may become unfavorable during construction then fish should be herded or released to a downstream location; this situation is probably most common where the waterbody in question is small, where seasonal flows are substantially diminished, and conditions of elevated temperature and/or reduced dissolved oxygen are foreseeable. However, the directing biologist shall also consider whether planned in-water work presents a significant risk of downstream turbidity and sedimentation; fish herded or released to a downstream location may be exposed to these conditions.

If large numbers of fish are to be herded (and/or captured and released), and in order to avoid overcrowding or concentrating fish in areas where their habitat needs cannot be met, it may be appropriate to relocate fish both upstream and downstream of the isolated work area. At locations where habitat connectivity or quality is poor, including along reaches upstream and/or downstream of the isolated work area, the directing biologist should carefully consider whether relocated fish can meet their minimum habitat requirements for the duration of planned in-water work. On rare occasions it may be appropriate to relocate fish at a greater distance upstream and/or downstream (e.g., thousands of feet or miles), so as to ensure fish are not concentrated in areas where their habitat needs cannot be met, or where they may be exposed to unfavorable conditions resulting from construction. On those rare occasions where relocation to a greater distance is deemed necessary, the WSDOT shall provide notice to the agencies with jurisdiction in advance of the operations.

Plans for staging work area isolation, fish capture and removal, and dewatering must comply with WSDOT safety requirements. Safe implementation is a high priority. The directing biologist shall design and adjust the plan as necessary to ensure the safety of all individuals implementing the plan. Under some conditions it may be appropriate to conduct work without isolation from flowing waters, without placement of block nets, fish capture or removal; for a discussion of this topic see page 1.

In order to comply with WSDOT safety requirements, work in or around water outside of daylight hours is not generally permissible. If, under unusual circumstances, the directing biologist identifies work that will or may be necessary outside of daylight hours, he/she shall coordinate and gain approval for this work with appropriate managers (including the WSDOT safety officer and/or supervisors with authority).

Work Area Isolation

The directing biologist shall determine appropriate locations for the placement of block nets, based on site characteristics and a consideration of the type and extent of planned in-water work. Sites that exhibit reduced flow volume or velocity, uniformity of depth, and good accessibility are preferred; sites with heavy vegetation, large cobble or boulders, undercut banks, deep pools, etc. should be avoided due to the difficulty of securing and/or maintaining nets. Sites with a narrow channel cross-section ("constriction") should be avoided if foreseeable flow conditions might overwhelm or dislodge the block nets, posts, or anchors.

Except when planning and intending to herd fish upstream, and upstream block net shall be placed first. With a block net secured to prevent movement of fish into the work area from upstream, a second block net should be used as a seine to herd fish in a downstream direction. Where the area to be isolated includes a culvert(s), deep pools, undercut banks, or other cover attractive to fish (e.g., thick overhanging vegetation, rootwads, logjams, etc.) it may be appropriate to isolate a portion or portions of the work area, rather than attempting to herd fish from the entirety of the work area in a single downstream pass. Fish capture and removal will be most successful if an effort is made to strategically focus and concentrate fish in areas where they can be easily seined and netted. Care shall be taken not to concentrate fish where they are exposed to sources of stress or to leave them concentrated in such areas for a long duration (e.g., more than 30 minutes).

Depending upon site characteristics, and the planned staging and sequence for work area isolation and dewatering, it may or may not be necessary to place a downstream block net. Typically, however, site characteristics and/or the duration of planned in-water work will necessitate placement of a net(s) to prevent movement of fish into the work area from downstream. If groundwater seepage or site drainage has a tendency to re-wet the area, if the area to be isolated is low-gradient or subject to a backwatering influence, or if the area to be isolated is large and considerable effort will be expended in capturing and removing fish life, a downstream block net should be placed. If foreseeable flow conditions over the duration of planned in-water work might enable fish to re-enter the work area from downstream, a downstream block net should be placed.

In most instances where gradual dewatering or flow diversion is staged in conjunction with fish capture and removal, it is appropriate to delay installation of the downstream block net(s) until after fish have been given sufficient time to move downstream by their own choosing. If flows are reduced gradually over the course of several hours, or the length of an entire workday, some (perhaps many) fish will make volitional movements downstream beyond the area to be isolated. Gradual dewatering can be an effective

means by which to reduce the risk of fish stress or injury. Gradual dewatering and the encouragement of volitional movement are particularly important where the area to be isolated is large and may hold many fish. However, where the area to be isolated includes a culvert(s), deep pools, undercut banks, or other cover attractive to fish, some (perhaps many) fish will not choose to move downstream regardless of how gradually flows are reduced. The directing biologist should use his/her best professional judgment in deciding what sequence of activities is likely to minimize fish stress or injury (including stranding).

Where the area to be isolated is small, depths are shallow, and conditions are conducive to fish capture, it may be possible to remove all fish life prior to dewatering, or to implement plans for dewatering staged with fish capture over a relatively short timeframe (e.g., 1-2 hours). Where the area to be isolated is large, depths are not shallow, where flow volumes or velocities are high, and/or conditions are not conducive to easy fish capture, dewatering or flow diversion should be staged in conjunction with fish capture and removal over a longer timeframe (e.g., 3-6 hours). The largest areas and/or most difficult site conditions may warrant or require that plans for dewatering and fish capture proceed over the length of an entire workday, or multiple workdays. Where this is the case, fish should be given sufficient time and a means to move downstream by their own choosing so as to reduce the total number of fish exposed to sources of stress and injury (including fish handling).

The directing biologist shall select block nets that are appropriate for the site and fish species present. Type of material, length, and depth may vary based on site conditions. It may be necessary and appropriate to contact other WSDOT Regions or offices with access to nets (or other materials) suitable for placement under unique or unusual circumstances. Typically block nets will be composed of 9.5 millimeter stretched nylon mesh and should be installed at an angle to the direction of flow (i.e., not directly perpendicular to flow) so as to reduce the risk of impinging fish. Anchor bags filled (or half-filled) with clean, washed gravel are preferred over sandbags, especially for nets and anchors that will or may remain in-place for a long duration (i.e., more than two weeks). Any use or movement of native substrates or other materials found on-site should be incidental and shall not appreciably affect channel bed or bank conditions.

Block nets shall remain in place until work affecting fish habitat in that reach of stream is complete and conditions are suitable for the reintroduction of fish[2]. Block nets require frequent inspection and debris removal. A qualified biologist, or other field staff trained in safe fish handling, shall be assigned the responsibility of inspecting the nets and safely capturing and relocating any impinged fish. The frequency of these inspections shall be determined on a case-by-case basis. However, block nets shall, at a minimum, be

[2] If plans for work area isolation and fish capture and removal include the installation of temporary cofferdams, and once the directing biologist has confirmed fish life have been successfully excluded from the entire area enclosed by the cofferdam(s), it may be appropriate to remove block nets and allow fish to re-enter the previously isolated work area; this approach is particularly relevant and appropriate where many weeks or months of construction are planned for completion within temporary cofferdams (i.e., isolated from flowing waters).

inspected for impinged fish (especially juvenile fish) at least three times daily or when requested by the Engineer. On working days, these inspections shall be performed at the start, middle and end of the work day. On non-working days, these activities shall be performed between 6:00 am and 8:00 am, between 11:00 am and 1:00 pm and between 4:00 pm and 6:00 pm. They may need to be checked more frequently for the first 24 hours after a significant rainfall (or change in flow volume or velocity). In the event fish are found impinged on the net(s), or if weather or flow conditions change significantly, the directing biologist shall reconsider and adjust the frequency of net inspections so as to minimize the risk of impinging and injuring fish.

Field staff shall be assigned the responsibility of frequently checking and maintaining the nets for accumulated debris, general stability, and proper function. The frequency of these inspections shall be determined on a case-by-case basis, dependent upon the site, seasonal, and weather conditions. Block nets must be secured along both banks and the channel bottom to prevent failure as a result of debris accumulation, high flows, and/or flanking. Some locations may require additional block net support (e.g., galvanized hardware cloth, affixed metal fence posts, etc.).

Fish Capture and Removal

If dewatering and/or flow diversion is deemed necessary, this work (including related fish capture and removal operations) shall comply with any provisions contained in the Hydraulic Project Approval (HPA), or applicable General HPA, issued by the WDFW. If the FWS and/or NMFS have provided relevant Terms and Conditions from a Biological Opinion addressing the work (or action), this work shall also comply with those Terms and Conditions.

If pumps are used to temporarily bypass water or to dewater residual pools or cofferdams, pump intakes shall be screened to prevent aquatic life from entering the intake. Fish screens or guards shall comply with Washington State law (RCW 77.57.010 and 77.57.070), with guidelines prescribed by the NMFS[3], and any more stringent requirements contained in the HPA or General HPA issued by the WDFW. If pumps are to be used on a more permanent basis, as the primary or secondary method for diverting flow around the isolated work area, plans for dewatering shall address contingencies (i.e., extremes of flow or weather). These plans shall include ready access to a larger or additional "back-up" pump with appropriately screened intake. If the directing biologist has confirmed that all fish life has been successfully excluded from the area, there is no risk of entraining fish, and adequate plans are in-place to address contingencies (including a routine schedule for inspection), then pumps may be operated without a screened intake.

[3] National Marine Fisheries Service. 2011. Anadromous Salmonid Passage Facility Design. Chapter 11: Fish Screen and Bypass Facilities. NMFS Northwest Region, July 2011, 140 p..

Fish Capture and Removal Methods:

Methods for safe capture and removal of fish from the isolated work area are described below. These methods are given in order of preference. At most locations, a combination of methods will be necessary. In order to avoid and minimize the risk of injury to fish, attempts to seine and/or net fish should always precede the use of electrofishing equipment. Visual observation techniques (e.g. snorkeling, surveying with polarized glasses or Plexiglas bottomed buckets, etc.) may be used to assess the effectiveness of these methods, to identify locations where fish are concentrating, or otherwise adjust methods for greater effectiveness.

If the planned fish capture and removal methods have not been addressed through consultation (or programmatic consultation), if seining and netting are impracticable (i.e., electrofishing is deemed the only viable means of fish capture), and fish listed under the ESA may be present, the directing biologist shall provide notice to the FWS and/or NMFS (as appropriate). This notice shall be provided in advance of the operations, and shall include an explanation of the unique site conditions or circumstances. Work conducted under a declared emergency (or emergency conditions) shall follow established ESA notification protocols.

Where fish listed under the ESA will or may be present, the directing biologist shall insure that fish capture and removal operations adhere to the following minimum performance measures or expectations:

1) Only dip nets and seines composed of soft (non-abrasive) material shall be used.

2) The operations shall not resort to the use of electrofishing equipment unless other less injurious methods have removed most or all of the adult and sub-adult fish (i.e., fish in excess of 300 millimeters); the operations shall conduct a minimum of three complete passes without capture using seines and/or nets.

3) The operations shall confirm success of fish capture and removal before completely dewatering or commencing with other work within the isolated work area; the operations shall conduct a minimum of two complete passes without capture using electrofishing equipment.

4) Fish listed under the ESA shall not be held in containers for more than 10 minutes, unless those containers are dark-colored, lidded, and fitted with a portable aerator.

5) A plan for achieving efficient return to appropriate habitat will be developed before the capture and removal process.

6) Every attempt will be made to release ESA-listed specimens first.

• **Seining** shall be the preferred method for fish capture. Other methods shall be used when seining is not possible, or when/after attempts at seining have proven ineffective. Seines, once pursed, should remain partially in the water while fish are removed with dip nets. Seines with a "bag" minimize handling stress and are preferred. Seines with a bag are also preferred where obstructions make access to the water (or deployment/retrieval of the seine) difficult.

In general, seining will be more effective if fish, especially juvenile fish, are moved (or "flushed") out from under cover. Methods which may increase effectiveness and/or efficiency include conducting seining operations at dawn or dusk (i.e., during low-light conditions), in conjunction with snorkeling, and/or flushing of the cover. In flowing waters and especially where flow volume or velocity is high or moderately-high, seines that employ a heavy lead line and variable mesh size are preferred. Small mesh sizes are more effective across the full range of fish size (and age class), but also increase resistance and can make deployment/retrieval more difficult in flowing waters. Seines which use a small mesh size in the bag (or body), and a larger, less resistant mesh size in the wings may under some conditions be most effective and efficient.

• **Baited Minnow Traps** are typically used before and in conjunction with seining. Traps may be left in the isolated work area overnight. Traps shall be inspected at least four times daily to remove captured fish and thereby minimize predation within the trap. Traps should be checked more frequently if temperatures are in excess of 15 degrees C (59 F).

Predation within the trap may be an unacceptable risk when minnow traps are left in-place overnight; large sculpin and other predators that feed on juvenile fish are typically much more active at night. The directing biologist shall consider the need and plan for work outside daylight hours (i.e., inspection and removal) before leaving minnow traps in-place overnight.

• **Dip Nets** shall be used in conjunction with seining. This method is particularly effective when employed during gradual dewatering or flow diversion. To be most effective and to minimize stress and risk of injury to fish (including stranding), the directing biologist shall coordinate fish capture operations with plans for dewatering or flow diversion. Plans for dewatering and/or flow diversion should proceed at a measured pace (within constraints), to encourage the volitional downstream movement of fish, and reduce the risk of stranding. Plans for dewatering and/or flow diversion shall not proceed unless there are sufficient staff and materials on-site to capture and safely remove fish in a timely manner. Generally, this will require a minimum of two persons (three if electrofishing), but the directing biologist may find that some sites (especially large or complicated sites) warrant or require a more intensive effort (i.e., additional staffing).

Once netted, fish shall remain partially in water until transferred to a bucket, cooler, or holding tank. Dip nets which retain a volume of water ("sanctuary nets") are preferred. However, sanctuary nets may be ineffective where flow volume or velocity is high or moderately-high (i.e., increase resistance lessens ability to net or capture fish). In

addition, where water depths are very shallow and/or fish are concentrated in very small receding pools or coarse substrate, "aquarium" nets may be a better, more effective choice. Use of dip nets in conjunction with snorkeling, flushing of the cover, or around the hours of dawn or dusk (i.e., during low light conditions), can be effective for capturing fish sheltered below cover.

• **Connecting Rod Snakes** may be used to flush fish out of stream crossing structures (i.e., culverts). Connecting rod snakes are composed of wood sections approximately three feet in length. Like other cover attractive to fish, culverts (especially long culverts), can present a challenge to fish capture and removal operations. The directing biologist should plan a strategy for focusing and concentrating fish in areas where they can be easily seined and netted, and should take active steps to prevent fish from evading capture. When first implementing plans for work area isolation, fish capture and removal, and dewatering, it may be appropriate to place block nets immediately upstream and/or downstream of culverts so as to minimize the number of fish that might seek cover within the culvert(s). Once most or all of the fish have been removed from other parts of the work area, the block net placed downstream of the culvert(s) should be removed to encourage volitional downstream movement of fish.

• **Electrofishing** shall be performed only when other methods of fish capture and removal have proven impracticable or ineffective at removing all fish. The directing biologist shall ensure that attempts to seine and/or net fish always precede the use of electrofishing equipment. Larger fish (i.e., adult and sub-adult fish with comparatively longer spine lengths) are more susceptible to electrofishing injury than smaller fish. To minimize the risk of injury (and the number of fish potentially injured), the directing biologist shall confirm that other methods have been effective in removing most or all of the adult and sub-adult fish before resorting to the use of electrofishing equipment; see the related performance measure appearing on page 6. As a general rule or performance measure, electrofishing should not be conducted under conditions that offer poor visibility (i.e., visibility of less than 0.5 meter).

The following performance measures shall apply to the use of electrofishing equipment as a means of fish capture and removal:

1. If the planned fish capture and removal operations have not been addressed through consultation (or programmatic consultation), and fish listed under the ESA may be present, WSDOT shall provide notice to the FWS and/or NMFS prior to the initiation of electrofishing attempts. Upon request, the WSDOT shall permit the FWS, NMFS, and/or their designated representative to observe fish capture and removal operations. Work conducted under a declared emergency (or emergency conditions) shall follow established ESA notification protocols.

2. Electrofishing shall only be conducted when a biologist with at least 100 hours of electrofishing experience is on-site to conduct or direct all related activities. The directing biologist shall be familiar with the principles of electrofishing, including the effects of voltage, pulse width and pulse rate on fish, and associated risk of injury or

mortality. The directing biologist shall have knowledge regarding galvanotaxis, narcosis and tetany, their relationships to injury/mortality rates, and shall have the ability to recognize these responses when exhibited by fish.

3. The directing biologist shall ensure that electrofishing attempts use the minimum voltage, pulse width, and rate settings necessary to create the desired response (galvonotaxis). Water conductivity shall be measured in the field prior to each electrofishing attempt to determine appropriate settings. Electrofishing methods and equipment shall comply with guidelines outlined by the NMFS[4].

4. The initial and maximum settings identified below shall serve as guidelines when electrofishing in waters that may support ESA-listed fish. Only DC or pulsed DC current shall be used. [Note: some newer, late-model electrofishing equipment includes a "set-up" or initialization function; the directing biologist shall have the discretion to use this function as a means to identify proper initial settings.]

Guidelines for initial and maximum settings for backpack electrofishing.[5]

	Initial Settings	**Conductivity (µS/cm)**	**Maximum Settings**
Voltage	100 V	≤300	800 V
		>300	400 V
Pulse Width	500µs		5 ms
Pulse Rate	15 Hz		60 Hz (In general, exceeding 40 Hz will injure more fish)

Each attempt shall begin with low settings for pulse width and pulse rate. If fish present in the area being electrofished do not exhibit a response, the settings shall be gradually increased until the appropriate response is achieved (galvanotaxis). The lowest effective settings for pulse width, pulse rate and voltage shall be used to minimize risks to both personnel and fish. Safe implementation is a high priority. The directing biologist shall ensure the safety of all individuals assisting with electrofishing attempts; this includes planning for and providing all necessary safety equipment and materials (e.g., insulated waders and gloves, first aid/CPR kit, a current safety plan with emergency contacts and phone numbers, etc.). Only individuals that are trained and familiar with the use of electrofishing equipment should provide direct assistance during electrofishing attempts.

5. Electrofishing shall not be conducted where spawning adults or redds with incubating eggs may be exposed to the electrical current. As a general rule or performance measure, waters that support anadromous salmon should not be electrofished from October 15

[4] National Marine Fisheries Service. 2000. Guidelines for electrofishing waters containing salmonids listed under the Endangered Species Act

[5] Adapted from NMFS Backpack Electrofishing Guidelines, June 2000, and WDFW Electrofishing Guidelines for Stream Typing, May 2001

through May 15, and resident waters from November 1 through May 15. If located within waters that may support bull trout, especially waters located within a local bull trout population (i.e., that support spawning and rearing), seasonal limitations on the use of electrofishing equipment may be more restrictive; if you have questions, contact the FWS. If any, more restrictive work windows have been identified through consultation, those windows shall apply. The directing biologist shall ensure that electrofishing attempts are made only during appropriate times of year, and not where spawning adults or redds with incubating eggs may be exposed to the electrical current.

6. An individual shall be stationed at the downstream block net(s) during electrofishing attempts to recover stunned fish in the event they are flushed downstream and/or impinged against the block net(s).

7. The operator shall use caution so as to prevent fish from coming into direct contact with the anode. Under most conditions, the zone of potential fish injury extends approximately 0.5 meter from the anode. Netting shall not be attached to the anode, as this practice presents an increased risk of direct contact and injury. Extra care shall be taken near in-water structures or undercut banks, in shallow waters, or where fish densities are high. Under these conditions fish are more likely to come into close or direct contact with the anode and/or voltage gradients may be intensified. Voltage and other settings shall be readjusted to accommodate changing conditions in the field, including channel depth. When electrofishing areas near undercut banks, overhanging vegetation, large cobble or boulders, or where structures provide cover, fish that avoid capture may be exposed to the electrical current repeatedly. Repeated or prolonged exposures to the electrical current present a higher risk of injury, and therefore galvanotaxis should be used to draw fish out of cover.

8. Electrofishing shall be conducted in a manner that minimizes harm to fish. Once an appropriate fish response (galvanotaxis) is achieved, the isolated work area shall be worked systematically. The number of passes shall be kept to a minimum, but is dependent upon the numbers of fish and site characteristics and shall be at the discretion of the directing biologist. Electrofishing shall not be conducted unless there are sufficient staff and materials on-site, to both minimize the number of passes required and to locate, net, recover, and release fish in a timely manner. Generally, this will require a minimum of three persons, but the directing biologist may find that some sites (especially large or complicated sites) warrant or require a more intensive effort (i.e., additional staffing). Care shall be taken to remove fish from the electrical field immediately and to avoid exposing the same fish repeatedly. Fish shall not be held in dip nets while electrofishing is in progress (i.e., while continuing to capture additional fish). [Note: where flow velocity or turbulence is high or moderately-high (e.g., within riffles) it may be difficult to see and net fish; these fish may evade capture (resulting in repeated exposure), or may become impinged on the downstream block net(s); a “frame” net, or small portable block net approximately 3 feet in width, can be effective under these conditions when held downstream in close proximity to the anode.]

9. The condition of captured fish shall be carefully observed and documented. Dark bands on the body and/or extended recovery times are signs of stress or injury. When such signs are noted, settings for the electrofishing unit may require readjustment. The directing biologist should also review and consider changes to the manner in which the electrofishing attempt is proceeding. If adjustments to the electrofishing attempt do not lessen the frequency (or severity) of observed stress, the directing biologist shall have the authority to postpone fish capture and removal operations[6]. Each fish shall be capable of remaining upright and actively swimming prior to release, and will be completely revived in holding tanks as necessary (*See* Fish Handling, Holding and Release).

10. Electrofishing shall not be conducted when turbidity reduces visibility to less than 0.5 meter, when water conductivity exceeds 350 µS/cm, or when water temperature is above 18°C (64 F) or below 4°C (39 F).

Fish Handling, Holding and Release:

• Fish handling shall be kept to the minimum necessary to remove fish from the isolated work area. Fish capture and removal operations shall be planned and conducted so as to minimize the amount and duration of handling. The operations shall maintain captured fish in water to the maximum extent possible during seining/netting, handling, and transfer for release.

• The directing biologist shall document and maintain accurate records of the operations, including: fish species, number, age/size class estimate, condition at release, and release location. Fish shall not be sampled or anesthetized, unless for valid purposes consistent with the WSDOT's Section 10 scientific collection permits.

• Individuals handling fish shall ensure that their hands are free of harmful and/or deleterious products, including but not limited to sunscreen, lotion, and insect repellent.

- The operations shall ensure that water quality conditions are adequate in the buckets, coolers, or holding tanks used to hold and transfer captured fish. The operations shall use aerators to provide for clean, cold, well-oxygenated water, and/or shall stage capture, temporary holding, and release to minimize the risks associated with prolonged holding. The directing biologist shall ensure that conditions in the holding containers are monitored frequently and operations adjusted appropriately to minimize fish stress. If fish listed under the ESA will or may be held for more than a few minutes prior to release, the directing biologist should consider using dark-colored, lidded containers only. Fish listed under the ESA shall not be held in containers for more than 10 minutes, unless those containers are dark-colored, lidded, and fitted with a portable aerator; small

[6] If the FWS and/or NMFS have provided an Incidental Take Statement from a Biological Opinion addressing the work (or action), the directing biologist shall ensure limits on take have not been exceeded; if the limits on take are exceeded, or if take is approaching these limits, the directing biologist shall postpone fish capture and removal operations and immediately notify the federal agency (or agencies) with jurisdiction.

coolers meeting this description are preferred over buckets. Fish will be held for the shortest time necessary for recovery and release.

• The operations shall provide a healthy environment for captured fish, including low densities in holding containers to avoid effects of overcrowding. Large fish shall be kept separate from smaller fish to avoid predation. The operations shall use water-to-water transfers whenever possible.

• The release site(s) shall be determined by the directing biologist. The directing biologist should consider both site characteristics (e.g., flow, temperature, available refuge and cover, etc.) and the types of fish captured (e.g., out-migrating smolt, kelt, prespawn migrating adult, etc.) when selecting a release site(s). More than one site may be designated to provide for varying needs, and to separate prey-sized fish from larger fish. The directing biologist shall consider habitat connectivity and fish habitat requirements, seasonal flow and temperature conditions, and the duration and extent of planned in-water work when selecting a fish release site(s). If conditions upstream of the isolated work area will or may become unfavorable during construction, then fish should not be released to an upstream location. However, the directing biologist shall also consider whether planned in-water work presents a significant risk of downstream turbidity and sedimentation; fish released to a downstream location may be exposed to these conditions. Site conditions may warrant releasing fish both upstream and downstream, or relocating fish at a greater distance (e.g., thousands of feet or miles), so as to ensure fish are not concentrated in areas where their habitat needs cannot be met. For a fuller discussion of this topic see page 2.

• The directing biologist shall ensure that each fish is capable of remaining upright and has the ability to actively swim upon release.

• Any ESA-listed fish incidentally killed as a result of fish capture and removal operations shall be preserved and delivered to the appropriate authority upon request (see Documentation).

• If the limits on take of ESA-listed species are exceeded (harm or harassment), or if incidental take is approaching and may exceed specified limits, the directing biologist shall postpone fish capture and removal operations and immediately notify the federal agency (or agencies) with jurisdiction. If dewatering or flow diversion is incomplete and still in-progress, WSDOT shall take remedial actions directed at maintaining sufficient quantity and quality of flow and lessening sources of fish stress and/or injury. If conditions contributing to fish stress and/or injury may worsen before the federal agency with jurisdiction can be contacted, WSDOT should attempt to move fish to a suitable location near the capture site while keeping fish in water and reducing stress as much as possible.

Reintroduction of Flow and Fish to the Isolated Work Area

If conducting work in isolation from flowing waters has required placement of a block net(s), fish capture and removal, and temporary dewatering, the directing biologist shall ensure that the block net(s) remain in place until work is complete and conditions are suitable for the reintroduction of fish. Flows shall be gradually reintroduced to the isolated work area, so as to prevent channel bed or bank instability, excessive scour, or turbidity and sedimentation. The directing biologist shall inspect the work area and downstream reach to ensure no fish are stranded or in distress during reintroduction of flows. If conditions causing or contributing to fish stress and/or injury are observed, WSDOT shall take remedial actions directed at lessening these sources of stress. This may include a more gradual reintroduction of flow, so as to reduce resulting turbidity and sedimentation.

All temporary structures and materials (e.g., block nets, posts, and anchors; bypass flume or culvert; sandbag, sheet pile or similar cofferdam; etc) shall be removed at the completion of work. The directing biologist shall document in qualitative terms the final condition of the isolated work area (including temporary bypass). The directing biologist shall identify and document any obvious signs of channel bed or bank instability resulting from the work, and shall report these conditions to the appropriate Maintenance, Construction, and/or Environmental staff for remedy. WSDOT shall document any additional actions taken to correct channel instability, and the final condition of the isolated work area (including temporary bypass).

To avoid and minimize the risk of introducing or spreading nuisance or invasive species, aquatic parasites, or disease, the directing biologist shall ensure that all equipment and materials are cleaned and dried to protocol before transporting them for use at another site or waterbody. Once equipment is fully dried, it should stay dry for at least 48 hours before using in Washington waters. Biologists should avoid the use of felt-soled shoes since they are difficult to decontaminate.

Documentation

- All work area isolation, and fish capture and handling shall be documented in a log book with the following information: project location, date, methods, personnel, water temperature, conductivity, visibility, electrofishing equipment settings, and other comments.

- All fish captured or handled shall be documented: species, number of each species, age/size class estimate, condition at release, and location of release.

- If at any time, fish are observed in distress, a fish kill occurs, or water quality problems develop (including equipment leaks or spills), the directing biologist, if they are a consultant shall immediate notify WSDOT who shall provide immediate notification to the WDFW consistent with any provisions contained in the HPA (or applicable General HPA). Notification shall consist of a phone call or voice mail message directed to the

Area Habitat Biologist identified on the HPA and/or the Washington Military Department Emergency Management Division at (800) 258-5990, as appropriate.

• Any ESA-listed species incidentally killed as a result of fish capture and removal operations shall be documented with the notification provided to the appropriate authority (FWS and/or NMFS) within two working days. If the directing biologist is a consultant, they shall immediately notify WSDOT, who will notify the Services. The consultant shall not independently contact other agencies. Initial notifications shall consist of a phone call or voice mail message. Initial notifications shall be directed to the following: (FWS) the nearest FWS Law Enforcement Office, and the Washington Fish and Wildlife Office at (360) 753-9440; (NMFS) the NMFS Office of Law Enforcement at (800) 853-1964, and the Washington State Habitat Office at (360) 753-9530. Any dead specimens shall be kept whole and preserved on-ice or frozen until WSDOT receives a response and further directions from the appropriate authority; if WSDOT receives no response within 5 working days, the directing biologist shall have the discretion to dispose of specimens. Initial notifications shall be followed by a second notification in writing. All notifications shall provide at a minimum the following: date, time, WSDOT point-of-contact (the directing biologist and/or supervisor), project name (and FWS and/or NMFS tracking number if available), precise location of any incidentally killed or injured and unrecovered fish, number of specimens and species, and cause of death or unrecoverable injury. If the limits on incidental take are exceeded (harm or harassment), the written notification shall also include an explanation of the circumstances causing or contributing to observed levels of take.

• The final condition of the isolated work area (including temporary bypass) shall be documented in qualitative terms, including any obvious signs of channel bed or bank instability resulting from the work. WSDOT shall document any additional actions taken to correct channel instability, and the final condition of the isolated work area (including temporary bypass).

Appendix A

Requirements for Designated Lead Fish Moving Biologist (Directing Biologist)

- Completion of a minimum of a two day electrofishing class.
- Training in fish ecology and identification
- 100 hours of electrofishing experience in the Pacific Northwest, at least 20 hours of which should have been in the last 5 years in the PNW.
- Possession of a current CPR certification
- Possession of a current first aid certification
- Demonstrated understanding of aquatic invasive species and the appropriate decontamination methods necessary to prevent introducing aquatic invasive species into the work area.
- Demonstrated ability to interpret contract plan sheets/specification, contactor schedule and plans prepared by the contractor (e.g. Temporary Steam Diversion Plan and Spill Prevention Control and Countermeasure Plan)
- Ability to move fish per the most current version of the "**WSDOT Fish Exclusion Protocols and Standards"**
- Must develop and deliver on site field training for individuals assisting with fish moving.

Requirements for Trained Personnel

- Possess training, knowledge, skills and ability to ensure safe handling of fish and to ensure the safety of staff conducting the operations.
- Have a current first aid certification.
- Training must be conducted on site by the Designated Lead Fish Moving Biologist prior to initiation of the fish moving and must cover the following:
    - Review of site specific pre- activity safety plan
    - A site specific job site analysis and fish exclusion plan.
    - A discussion of roles, responsibilities, permit requirements, and species expected.
    - Review of electrofishing guidelines and equipment manufactures recommendations.
    - Definitions of basic terminology (galvanotaxis, narcosis, and tetany) and an explanation of how electrofishing attracts fish.
    - A demonstration and discussion of the proper use of electrofishing equipment (including an explanation of how gear can injure fish and how to recognize signs of injury) and the role of each crew member.
    - A demonstration of proper fish handling including proper netting, sorting by size, keeping buckets cool, releasing small and large fish

in different pools, not overcrowding buckets, avoiding sunscreens/ insect repellants etc on hands moving fish.

- A review of common mistakes.
- A discussion of the use of personal floatation devices.
- A discussion of aquatic invasive species and the decontamination methods necessary to prevent introducing aquatic invasives into the work area.

PORT OF TACOMA

LOWER WAPATO CREEK HABITAT PROJECT

Phases II & III - Planting, Irrigation, Fencing and Landscape Maintenance

PROJECT NO. 101449.01

CONTRACT NO. 071490

APPENDIX B

Construction

SWPPP Short Form

CONSTRUCTION SWPPP SHORT FORM

The threshold for using the Port of Tacoma's (Port) short form is a project that proposes to clear or disturb less than one acre of land. Projects falling within this threshold may use this short form instead of preparing a professionally designed Construction Stormwater Pollution Prevention Plan (SWPPP). If project disturbance quantities exceed this threshold, you must prepare of formal Construction SWPPP as part of your submittal package. If your project is within the threshold and includes—or may affect—a critical area, please contact the Port to determine if the SWPPP short form may be used.

CONSTRUCTION STORMWATER POLLUTION PREVENTION PLAN SHORT FORM

Project Name:

Address:

Contact/Owner: Phone:

Erosion Control Supervisor:

Phone: Cell: Pager:

Emergency (After hours) Contact: Phone:

Permit No.:

Parcel No.:

Required Submittals

A Construction SWPPP consists of both a project narrative and a site plan. The project narrative describes existing conditions on the site, the proposed conditions, and how construction site runoff will be managed until final site stabilization is achieved. Any additional relevant information should be included in the project narrative. All Best Management Practices (BMPs) that will be utilized onsite must be included as part of the project narrative and provided (electronically or hard copy) as part of the submittal package. If additional BMPs beyond those included in the Washington Department of Ecology's (Ecology) Western Washington Stormwater Management Manual (Ecology SWMM) or the City of Tacoma's (City) Stormwater Management Manual (City SWMM) are proposed to be used, a narrative and appropriate details describing the BMP (its function, installation method, and maintenance activities) will be required.

The site plan is a drawing which shows the location of the proposed BMPs to control erosion and sedimentation during and after construction activities.

The City's govMe site (*http://www.govme.org*.) may be used to find much of the information needed to complete this form, such as adjacent areas, topography, critical areas, the downstream drainage path, and information concerning onsite features.

PROJECT NARRATIVE

The Construction SWPPP Short Form narrative must be completed at part of the submittal package. Any information described, as part of the narrative, should also be shown on the site plan.

Note: From October 1 through April 30, clearing, grading, and other soil disturbing activities shall only be permitted by special authorization from the Port.

A. Project Description (Check all that apply)

☐ New Structure ☐ Building Addition ☐ Grading/Excavation
☐ Paving ☐ Utilities ☐ Other:

1. Total project area _____ (square feet)
2. Total proposed impervious area _____ (square feet)
3. Total existing impervious area _____ (square feet)
4. Total proposed area to be disturbed _____ (square feet)
5. Total volume of cut/fill _____ (cubic yards)

Additional Project Information:

B. Existing Site Conditions (Check all that apply)

1. Describe the existing vegetation on the site. (Check all that apply)
   ☐ Forest ☐ Pasture/field grass ☐ Pavement ☐ Landscaping ☐ Brush
   ☐ Trees ☐ Other:
2. Describe how surface water (stormwater) drainage flows across/from the site. (Check all that apply)
   ☐ Sheet Flow ☐ Gutter ☐ Catch Basin ☐ Ditch/Swale ☐ Storm Sewer
   ☐ Stream ☐ Other:
3. Describe any unusual site condition(s) or other features of note.
   ☐ Steep Grades ☐ Large depression ☐ Underground tanks ☐ Springs
   ☐ Easements ☐ Existing structures ☐ Existing utilities ☐ Other:

C. Adjacent Areas (Check all that apply)

1. Check any/all adjacent areas that may be affected by site disturbance and fully describe below in item 2:
   ☐ Streams* ☐ Lakes* ☐ Wetlands* ☐ Steep slopes*
   ☐ Residential Areas ☐ Roads ☐ Ditches, pipes, culverts ☐ Other:

   ** If the site is on or adjacent to a critical area (e.g., waterbody), the Port may require additional information, engineering, and other permits to be submitted with this short form.*

2. Describe how and where surface water enters the site from properties located upstream:

3. Describe the downstream drainage path from the site to the receiving body of water (minimum distance of 0.25 mile [1320 feet]). (E.g., water flows from the site into a curb-line, then to a catch basin at the intersection of X and Y streets. A 10-inch pipe system conveys water another 1000 feet to a wetland.) Include information on the condition of the drainage structures.

D. Soils (Check all that apply)

The intent of this section is to identify when additional soils information may be required for applicants using this short form. There are other site-specific issues that may necessitate a soils investigation or more extensive erosion control practices. The Port will determine these situations on a case-by-case basis as part of their review.

1. Does the project propose infiltration? Infiltration systems require prior Port approval.

☐ Yes ☐ No

2. Does the project propose construction on or near steep slopes (15% or greater)?

☐ Yes ☐ No

If infiltration is proposed for the site or steep slopes (15% or greater) have been identified, the Port will require soils information as part of project design. The applicant must contact a soil professional or civil engineer that specializes in soil analysis and perform an in-depth soils investigation. If the Yes box is checked for either question, the Port may not permit the use of this short form.

E. Construction Sequencing/Phasing

1. Construction sequence: the standard construction sequence is as follows:
   - Mark clearing/grading limits.
   - Install initial erosion control Best Management Practices (BMPs) (e.g., construction entrance, silt fence, catch basin inserts, etc.).
   - Clear, grade, and fill project site as outlined in the site plan while implementing and maintaining proper temporary erosion and sediment control BMPs simultaneously.
   - Install permanent erosion protection as described in the specifications (e.g., impervious surfaces, landscaping, etc.).
   - Remove temporary erosion control methods as permitted. Do not remove temporary erosion control until permanent erosion protection is fully established.

   List any changes from the standard construction sequence outlined above:

2. Construction phasing: if construction is going to occur in separate phases, please describe:

F. Construction Schedule

1. Provide a proposed construction schedule (dates construction starts and ends, and dates for any construction phasing.)

   Start Date: **End Date:**

   Interim Phasing Dates:

   Wet Season Construction Activities: Wet season occurs from October 1 to April 30. Please describe construction activities that will occur during this time period.

Note: Additional erosion control methods may be required during periods of increased surface water runoff.

2. **Site plan**

A site plan, to scale, must be included with this checklist that shows the following items:

- ☐ a. Address, Parcel Number, Permit Number, and Street Names
- ☐ b. North Arrow
- ☐ c. Indicate boundaries of existing vegetation (e.g., tree lines, grassy areas, pasture areas, fields, etc.)
- ☐ d. Identify any onsite or adjacent critical areas and associated buffers (e.g., wetlands, steep slopes, streams, etc.).
- ☐ e. Identify any FEMA base flood boundaries and Shoreline Management boundaries.
- ☐ f. Show existing and proposed contours.
- ☐ g. Delineate areas that are to be cleared and/or graded.
- ☐ h. Show all cut and fill slopes, indicating top and bottom of slope catch lines.
- ☐ i. Show locations where upstream run-on enters the site and locations where runoff leaves the site.
- ☐ j. Indicate existing surface water flow direction(s).
- ☐ k. Label final grade contour and indicate proposed surface water flow direction and surface water conveyance systems (e.g., pipes, catch basins, ditches, etc.).
- ☐ l. Show grades, dimensions, and direction of flow in all (existing and proposed) ditches, swales, culverts, and pipes.
- ☐ m. Indicate locations and outlets of any dewatering systems (usually to sediment trap).
- ☐ n. Identify and locate all erosion control methods to be used during and after construction.

ONSITE FIELD VERIFICATION OF ACTUAL CONDITIONS IS REQUIRED.

Figure 1. (see page 5 for Site Plan requirements)

GUIDELINES FOR EROSION CONTROL ELEMENTS

This SWPPP must contain the 12 required elements, as required by Ecology. Check off each element as it is addressed in the SWPPP short form and/or on your site plan.

- ☐ 1. Mark Clearing Limits
- ☐ 2. Establish Construction Access
- ☐ 3. Control Flow Rates
- ☐ 4. Install Sediment Controls
- ☐ 5. Stabilize Soils
- ☐ 6. Protect Slopes
- ☐ 7. Protect Drain Inlets
- ☐ 8. Stabilize Channels and Outlets
- ☐ 9. Control Pollutants
- ☐ 10. Control Dewatering
- ☐ 11. Maintain BMPs
- ☐ 12. Manage the Project

The following is a brief description of each of the 12 required elements of a SWPPP. If an element does not apply to the proposed project site, please describe why the element does not apply. Applicable BMPs are listed with each element and in Table 1. Please note that this list is not a comprehensive list of BMPs available for small construction projects, but erosion and sediment control techniques most pertinent to small construction sites are included here. More detailed information on construction BMPs can be found in Ecology's SWMM Volume II and the City's SWMM Volume II (Ecology 2019; City of Tacoma 2016). Please provide hard copies of the BMPs that will be used for the project and include as part of this Construction SWPPP. BMPs that may be used if needed can be noted as being contingent in the event additional erosion control is needed. Describe any additional BMPs that will be utilized onsite and add them to the SWPPP short form.

For phased construction projects, clearly indicate erosion control methods to be used for each phase of construction.

Element #1 – Mark Clearing Limits

All construction projects must clearly mark any clearing limits, sensitive areas and their buffers prior to beginning any land disturbing activities, including clearing and grading. Clearly mark the limits both in the field and on the site plans. Limits shall be marked in such a way that any trees or vegetation that is to remain will not be harmed.

Applicable BMPs include:

- BMP C101: Preserving Natural Vegetation
- BMP C102: Buffer Zones
- BMP C103: High Visibility Plastic or Metal Fence
- BMP C104: Stake and Wire Fence

☐ The BMP(s) being proposed to meet this element are:

_____

_____

OR

☐ This element is not required for this project because:

_____

_____

_____

_____

Element #2 – Establish Construction Access

All construction projects subject to vehicular traffic shall provide a means of preventing vehicle "tracking" soil from the site onto streets or neighboring properties. Limit vehicle traffic on- and off-site to one route if possible. All access points shall be stabilized with a rock pad construction entrance or other Port-approved BMP. The applicant should consider placing the entrance in the area for future driveway(s), as it may be possible to use the rock as a driveway base material. The entrance(s) must be inspected weekly, at a minimum, to ensure no excess sediment buildup or missing rock.

Applicable BMPs include:

- BMP C105: Stabilized Construction Entrance
- BMP C106: Wheel Wash
- BMP C107: Construction Road/Parking Area Stabilization

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #3 – Control Flow Rates

Protect properties and waterways downstream of the project site from erosion due to increases in volume, velocity, and peak flow of stormwater runoff from the project site.

Permanent infiltration facilities shall not be used for flow control during construction unless specifically approved by the Environmental Department. Sediment traps can provide flow control for small sites by allowing water to pool and allowing sediment to settle out of the water.

Applicable BMPs include:

- BMP C207: Check Dams
- BMP C240: Sediment Trap

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element 4 – Install Sediment Controls

Surface water runoff from disturbed areas must pass through an appropriate sediment removal device prior to leaving a construction site or discharging into a waterbody. Sediment barriers are typically used to slow stormwater sheet flow and allow the sediment to settle out behind the barrier.

Sediment controls must be installed/constructed prior to site grading.

Applicable BMPs include:

- BMP C208: Triangular Silt Dike
- BMP C232: Gravel Filter Berm
- BMP C233: Silt Fence
- BMP C235: Straw Wattles

☐ The BMP(s) being proposed to meet this element are:

_____

_____

OR

☐ This element is not required for this project because:

_____

_____

_____

_____

Element #5 – Stabilize Soils

Stabilize exposed and unworked soils by applying BMPs that protect the soils from raindrop impact, flowing water, and wind.

From October 1 through April 30, no soils shall remain exposed or unworked for more than 2 days. From May 1 to September 30, no soils shall remain exposed or unworked for more than 7 days. This applies to all soils whether at final grade or not.

Applicable BMPs include:

- BMP C120: Temporary and Permanent Seeding
- BMP C121: Mulching
- BMP C122: Nets and Blankets
- BMP C123: Plastic Covering
- BMP C140: Dust Control

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #6 – Protect Slopes

Protect slopes by diverting water at the top of the slope. Reduce slope velocities by minimizing the continuous length of the slope.

Applicable BMPs include:

- BMP C200: Interceptor Dike and Swale
- BMP C204: Pipe Slope Drains
- BMP C207: Check Dams

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #7 – Protect Drain Inlets

All operable storm drain inlets must be protected during construction so that stormwater runoff does not enter the conveyance system without first being filtered or treated to remove sediment. Install catch basin protection on all catch basins within 500 feet downstream of the project.

Applicable BMPs include:

- BMP C220: Storm Drain Inlet Protection

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #8 – Stabilize Channels and Outlets

Stabilize all temporary onsite conveyance channels. Provide stabilization to prevent erosion of outlets, adjacent stream banks, slopes, and downstream reaches at the conveyance system outlets.

Applicable BMPs include:

- BMP C202: Channel Lining
- BMP C209: Outlet Protection

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #9 – Control Pollutants

Handle and dispose of all pollutants, including demolition debris and other solid wastes in a manner that does not cause stormwater contamination. Provide cover and containment for all chemicals, liquid products (including paint), petroleum products, and other materials. Handle all concrete and concrete waste appropriately.

Applicable BMPs include:

- BMP C150: Materials on Hand
- BMP C151: Concrete Handling
- BMP C152: Sawcutting and Surface Pollution Prevention
- BMP C153: Material Delivery, Storage and Containment

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Element #10 – Control Dewatering

Clean, non-turbid dewatering water, such as groundwater, can be discharged to the stormwater system provided the dewatering flow does not cause erosion or flooding of receiving waters. All other dewatering water shall be pumped to a settling container and taken offsite or discharged to the City sewer system. All discharges to the City sewer system require City approval, which may include a Special Approved Discharge (SAD) permit.

Applicable BMPs include:

- BMP C150: Materials on Hand

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

_____

_____

_____

_____

Element #11 – Maintain BMPs

Maintain and repair temporary erosion and sediment control BMPs as needed. Inspect all BMPs at least weekly and after every storm event.

Remove all temporary erosion and sediment control BMPs within 30 days after final site stabilization or if the BMP is no longer needed. Any sediment trapped during construction activities should be removed or stabilized onsite. No sediment shall be discharged into the stormwater drainage system or any natural conveyance system (e.g., streams).

Applicable BMPs include:

- BMP C160: Certified Erosion and Sediment Control Lead

☐ The BMP(s) being proposed to meet this element are:

_____

_____

OR

☐ This element is not required for this project because:

_____

_____

_____

_____

Element #12 – Manage the Project

Phase development projects to prevent soil erosion and the transport of sediment from the project site during construction. Coordinate all work prior initial construction with subcontractors and other utilities to ensure no areas are worked prematurely.\

A designated erosion and sediment control person is required for all construction projects. This person is responsible for ensuring that the project's erosion and sediment control BMPs are appropriate for the site and are functioning properly. They are also responsible for updating the

SWPPP as necessary as site conditions warrant. They must be available 24 hours a day to ensure compliance.

Applicable BMPs include:

- BMP C160: Certified Erosion and Sediment Control Lead
- BMP C162: Scheduling
- BMP C180: Small Project Construction Stormwater Pollution Prevention

☐ The BMP(s) being proposed to meet this element are:

OR

☐ This element is not required for this project because:

Table 1. Applicable BMPs for the 12 Elements of a SWPPP

Element #1 – Mark Clearing Limits		
BMP C101	Preserving Natural Vegetation	
BMP C102	Buffer Zones	
BMP C103	High Visibility Plastic and Wire Fence	
BMP C104	Stake and Wire Fence	
Element #2 – Establish Construction Entrance		
BMP C105	Stabilized Construction Entrance	
BMP C106	Wheel Wash	
BMP C107	Construction Road/Parking Area Stabilization	
Element #3 – Control Flow Rates		
BMP C207	Check Dams	
BMP C240	Sediment Trap	
Element #4 – Install Sediment Controls		
BMP C208	Triangular Silt Trap	
BMP C232	Gravel Filter Berm	
BMP C233	Silt Fence	
BMP C235	Straw Wattles	
Element #5 – Stabilize Soils		
BMP C120	Temporary and Permanent Seeding	
BMP C121	Mulching	
BMP C122	Nets and Blankets	
BMP C123	Plastic Covering	
BMP C140	Dust Control	
Element #6 – Protect Slopes		
BMP C200	Interceptor Dike and Swale	
BMP C204	Pipe Slope Drains	
BMP C207	Check Dams	
Element #7 – Protect Drain Inlets		
BMP C220	Storm Drain Inlet Protection	
Element #8 – Stabilize Channels and Outlets		
BMP C202	Channel Lining	
BMP C209	Outlet Protection	
Element #9 – Control Pollutants		
BMP C150	Materials on Hand	

Element #9 – Control Pollutants, cont.		
BMP C151	Concrete Handling	
BMP C152	Sawcutting and Surfacing Pollution Prevention	
BMP C153	Materials, Delivery, Storage and Containment	
Element #10 – Control Dewatering		
BMP C150	Materials on Hand	
Element #11 – Maintain BMPs		
BMP C160	Certified Erosion and Sediment Control Lead	
Element #12 – Manage the Project		
BMP C160	Certified Erosion and Sediment Control Lead	
BMP C162	Scheduling	
BMP C180	Small Project Construction Stormwater Pollution Prevention	

REFERENCES

City of Tacoma. 2016. Stormwater Management Manual 2016 Edition. Public Works/ Environmental Services, Maintenance Division, Tacoma, Washington.

Washington State Department of Ecology (Ecology). 2019. Stormwater Management Manual for Western Washington. Water Quality Program, Lacey, Washington.