



June 26, 2025

BCC Agenda Date/Item: _____

Board of County Commissioners
Acting as the governing body of Water Environment Services
Clackamas County

Approval of a Contract with Suulutaaq for construction of the 3-Creeks Floodplain Enhancement Project. Contract Value is \$1,607,901.86 for 2 years. Funding is through WES Surface Water Construction Funds. No County General Funds are involved.

Previous Board Action/Review	N/A		
Performance Clackamas	1. This project supports the WES Strategic Plan goal to strategically plan and execute capital projects to meet the growth, reliability, and regulatory needs of our service area at the lowest-life cycle cost. 2. This project supports the County's Strategic Plan of building a strong infrastructure that delivers services to customers and honors, utilizes, promotes and invest in our natural resources.		
Counsel Review	Yes	Procurement Review	Yes
Contact Person	Jeff Stallard	Contact Phone	503-742-4694

EXECUTIVE SUMMARY: The 3-Creeks Protected Area is an approximately 80-acre regional natural area marked by the confluence of Mt. Scott, Phillips, and Dean Creeks in the urbanized area of Clackamas County. It includes a large flood control facility, wetlands, uplands, open space areas, and related facilities. WES has worked with a consultant team to design a plan that restores the creek and floodplain within the natural area. The goals of the project are to help protect downstream areas from flooding during the wet season, to enhance seasonal stream and floodplain habitat for aquatic species, and to improve habitat and water quality. Construction services include, but are not limited to excavation, grading, temporary water management, construction of log jams and riffle structures, planting, and construction/maintenance/restoration of temporary construction and permanent access roads.

WES has completed design plans, permitting, specifications, hydraulic and hydrologic modeling, engineer's estimate, and bidding for the project. Construction is anticipated for the summer in 2025, followed by planting in fall and winter.

RECOMMENDATION: Staff recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment

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Services, approve Contract #1347 with Suulutaaq, Inc. for construction of the 3-Creeks Floodplain Enhancement Project.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read "Greg Geist", with a long horizontal flourish extending to the right.

Greg Geist
Director, WES



**WATER ENVIRONMENT SERVICES
PUBLIC IMPROVEMENT CONTRACT**
Contract #1347

This Public Improvement Contract (the "Contract") is made by and between Water Environment Services, an intergovernmental entity formed pursuant to ORS Chapter 190 ("Owner"), and **Suulutaaq, Inc.** (the "Contractor"), both collectively the "Parties". This Contract shall become effective on the date this Contract has been signed by all the Parties and shall expire upon completion the completion of all obligations under the terms of this Contract unless terminated earlier by the Parties.

All capitalized terms in this Contract shall have the meanings identified in the Clackamas County General Conditions for Public Improvement Contracts (11/21/2024) ("General Conditions") referenced within the Instructions to Bidders.

Project Name: BID# 2025-29 Three Creeks Floodplain Enhancement Project

1. Contract Price, Contract Documents and Work.

The Contractor hereby agrees to perform all Work described in, and reasonably inferred from, the Contract Documents. In consideration of the Contractor performing the Work in accordance with the terms of the Contract, the Owner agrees to pay the Contractor an amount not to exceed **One Million Six Hundred Seven Thousand Nine Hundred One Dollars and Eighty-Six Cents (\$1,607,901.86)** (the "Contract Price"). Payment will be made in accordance with the terms and conditions provided in the Contract Documents. The Contract Price is the amount contemplated by the Base Bid, as indicated in the accepted Bid.

The following documents are incorporated by reference in this Contract and made a part hereof:

- Notice of Contract Opportunity
- Supplemental Instructions to Bidders
- Bid Form
- Clackamas County General Conditions
- Prevailing Wage Rates
- Plans, Specifications and Drawings
- Instructions to Bidders
- Bid Bond
- Performance Bond and Payment Bond
- Supplemental General Conditions
- Payroll and Certified Statement Form
- Addenda 1, 2

2. Representatives.

Contractor has named Michael Borke as its Authorized Representative to act on its behalf. Owner designates, or shall designate, its Authorized Representative as indicted below (check one):

☒ Unless otherwise specified in the Contract Documents, the Owner designates Gail Shaloum as its Authorized Representative in the administration of this Contract. The above-named individual shall be the initial point of contact for matters related to Contract performance, payment, authorization, and to carry out the responsibilities of the Owner.

☐ Name of Owner's Authorized Representative shall be submitted by Owner in a separate writing.

3. Key Persons.

The Contractor's personnel identified below shall be considered Key Persons and shall not be replaced during the project without the written permission of Owner, which shall not be unreasonably withheld. If the Contractor intends to substitute personnel, a request must be given to Owner at least 30 days prior to the intended time of substitution. When replacements have been approved by Owner, the Contractor shall provide a transition period of at least 10 working days during which the original and replacement personnel shall be working on the project concurrently. Once a replacement for any of these staff members is authorized, further

replacement shall not occur without the written permission of Owner. The Contractor's project staff shall consist of the following personnel:

Project Executive: Michael Borke shall be the Contractor's project executive, and will provide oversight and guidance throughout the project term.

Project Manager: Brian McCavghey shall be the Contractor's project manager and will participate in all meetings throughout the project term.

Job Superintendent: Scott Mcbeth shall be the Contractor's on-site job superintendent throughout the project term.

Project Engineer: Landon Donaca shall be the Contractor's project engineer, providing assistance to the project manager, and subcontractor and supplier coordination throughout the project term.

4. Contract Dates.

The Contractor agrees to complete the Work in accordance with the following key dates:

COMMENCEMENT DATE: Upon Issuance of Notice to Proceed

SUBSTANTIAL COMPLETION DATE: March 15, 2026

FINAL COMPLETION DATE: June 30, 2026

Time is of the essence for this Contract. It is imperative that the Work in this Contract reach Substantial Completion and Final Completion by the above specified dates.

5. Reserved.

6. Change Order Authorization.

Throughout the performance of the Work under this Agreement, the Owner's Authorized Representative is hereby granted the authority to verbally authorize change orders in the field for an amount up to \$10,000. As soon as possible following the authorization, the Owner's Authorized Representative shall complete the change order form provided by Clackamas County Procurement ("Procurement"), obtain the signature of Owner's Director or other authorized signatory, and submit the form to Procurement for processing. As soon as the Director signs off on the change order form, the Authorized Representative may then authorize another change order in the future for up to \$10,000 following the same procedure above. Each change order should include the cumulative cost of the entire change and may not be artificially broken up into multiple change orders to fall under the dollar threshold listed above. The authority granted to the Authorized Representative is limited by the Director's authorization to amend the Agreement under Clackamas County's Local Contract Review Board Rules and is subject to the discretion of the Director, who may suspend or restrict the Authorized Representative ability to authorize change orders at any time for any reason.

7. Insurance Certificates.

In accordance with Section G.3.5 of the General Conditions, Contractor shall furnish proof of the required insurance naming Clackamas County and Water Environment Services as additional insureds. Insurance certificates may be returned with the signed Contract or may emailed to Procurement@clackamas.us.

8. Tax Compliance.

The Contractor shall comply with all federal, state and local laws, regulation, executive orders and ordinances applicable to this Contract. Contractor represents and warrants that it has complied, and will continue to comply throughout the duration of this Contract and any extensions, with all tax laws of this state or any political subdivision of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318. Any violation of this section shall constitute a material breach of this Contract and shall entitle Owner to terminate this Contract, to pursue and recover any and all damages that arise from the

breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract or applicable law.

9. Confidential Information.

Contractor acknowledges that it and its employees or agents may, in the course of performing their responsibilities under this Contract, be exposed to or acquire information that is confidential to Owner. Any and all information of any form obtained by Contractor or its employees or agents in the performance of this Contract shall be deemed confidential information of Owner ("Confidential Information"). Contractor agrees to hold Confidential Information in strict confidence, using at least the same degree of care that Contractor uses in maintaining the confidentiality of its own confidential information, and not to copy, reproduce, sell, assign, license, market, transfer or otherwise dispose of, give, or disclose Confidential Information to third parties or use Confidential Information for any purpose unless specifically authorized in writing under this Contract.

10. Counterparts.

This Contract may be executed in several counterparts, all of which when taken together shall constitute an agreement binding on all Parties, notwithstanding that all Parties are not signatories to the same counterpart. Each copy of the Contract so executed shall constitute an original.

11. Integration.

All provisions of state law required to be part of this Contract, whether listed in the General or Special Conditions or otherwise, are hereby integrated and adopted herein. Contractor acknowledges the obligations thereunder and that failure to comply with such terms is a material breach of this Contract.

The Contract Documents constitute the entire agreement between the parties. There are no other understandings, agreements or representations, oral or written, not specified herein regarding this Contract. Contractor, by the signature below of its authorized representative, hereby acknowledges that it has read this Contract, understands it, and agrees to be bound by its terms and conditions.

12. Compliance with Applicable Law.

Contractor shall comply with all federal, state, county, and local laws, ordinances, and regulations applicable to the Work to be done under this Contract including, but not limited to, compliance with the prohibitions set forth in ORS 652.220, compliance of which is a material element of this Contract and failure to comply is a material breach that entitles County to exercise any rights and remedies available under this Contract including, but not limited to, termination for default.

13. Responsibility for Taxes.

Contractor is solely responsible for payment of any federal, state, or local taxes required as a result of the Contract or the Work including, but not limited, to payment of the corporate activity tax imposed under enrolled HB 3427 (2019 Oregon regular legislative session). Contractor may not include its federal, state, or local tax obligations as part of the cost to perform the Work.

Signature page to follow

In witness whereof, Owner executes this Contract and the Contractor does execute the same as of the day and year first above written.

Contractor DATA:

Suulutaag, Inc.
5250 High Banks Road, Suite 650
Springfield, Oregon 97478

Contractor CCB # 198563 Expiration Date: 2/13/2027
Oregon Business Registry # 848375-91 Entity Type: FBC

State of Formation: Alaska

Payment information will be reported to the IRS under the name and taxpayer ID# provided by the Contractor. Information must be provided prior to contract approval. Information not matching IRS records could subject Contractor to 28 percent backup withholding.

Suulutaag, Inc.

Water Environment Services

Signature

Date

Chair

Date

Name / Title Printed

Recording Secretary

APPROVED AS TO FORM

County Counsel

6/9/2025

Date



CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY

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CLACKAMAS COUNTY
NOTICE OF PUBLIC IMPROVEMENT CONTRACT OPPORTUNITY

INVITATION TO BID #2025-29
Three Creeks Floodplain Enhancement Project
March 27, 2025

Clackamas County ("County") on behalf of Water Environment Services through their Board of County Commissioners is accepting sealed bids for the **Three Creeks Floodplain Enhancement Project** until **April 29, 2025, 2:00 PM**, Pacific Time, ("Bid Closing") at the following location:

Bidding Documents can be downloaded from the state of Oregon procurement website ("OregonBuys") at the following address: <https://oregonbuys.gov/bsa/view/login/login.xhtml>, Document No.S-C01010-00013358.

Prospective Bidders will need to sign in to download the information and that information will be accumulated for a Plan Holder's List. Prospective Bidders are responsible for obtaining any Addenda from Website listed above.

Submitting Proposals: Bid Locker

Proposals will only be accepted electronically thru a secure online bid submission service, **Bid Locker**. *Email submissions to Clackamas County email addresses will no longer be accepted.*

- A. Completed proposal documents must arrive electronically via Bid Locker located at <https://bidlocker.us/a/clackamascountry/BidLocker>.
- B. Bid Locker will electronically document the date and time of all submissions. Completed documents must arrive by the deadline indicated in Section 1 or as modified by Addendum. **LATE PROPOSALS WILL NOT BE ACCEPTED.**
- C. Proposers must register and create a profile for their business with Bid Locker in order to submit for this project. It is free to register for Bid Locker.
- D. Proposers with further questions concerning Bid Locker may review the Vendor's Guide located at <https://www.clackamas.us/how-to-bid-on-county-projects>.

Engineers Estimate: \$2,353,000.00

Contact Information

Procurement Process and Technical Questions: Tralee Whitley at Twhitley@clackamas.us.

A **Mandatory Pre-Bid Conference** will be conducted on **April 21, 2025 at 10:00 AM**. Bidders shall meet with County representatives at **SE Harmony Rd, approximately 550 feet east of SE Linwood Ave, Clackamas OR, 97015** for that purpose. Attendance will be documented through a sign-in sheet prepared by the County representative. Prime bidders who arrive more than ten (10) minutes after the start time of the meeting (as stated in the solicitation and by the County's watch) or after the discussion portion of the meeting (whichever comes first) shall not be permitted to sign in and will not be permitted to submit a bid on the project.

Bids will be opened and publicly read aloud at the above Delivery address after the Bid Closing. Bid results will also be posted to the OregonBuys listing shortly after the opening.

Qualifications

To be eligible for award under this Invitation to Bid, the contractors team must meet minimum qualifications of prior examples of work within the following two (2) major project components: (1)

Construction of in-stream log and riffle structures in conformance with SLOPES V Restoration or comparable environmental protection regulations; and (2) Restoration and revegetation to create wetland and upland habitats.

Prevailing Wage

Prevailing Wage Rates requirements apply to this Project because the maximum compensation for all Owner-contracted Work is more than \$50,000. Contractor and all subcontractors shall comply with the provisions of ORS 279C.800 through 279C.870, relative to Prevailing Wage Rates. The Bureau of Labor and Industries (BOLI) wage rates and requirements set forth in the following BOLI booklet (and any listed amendments to that booklet), which are incorporated herein by reference, apply to the Work authorized under this Agreement:

PREVAILING WAGE RATES for Public Works Contracts in Oregon, January 5, 2025, which can be downloaded at the following web address:, which can be downloaded at the following web address:

http://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx

The Work will take place in Clackamas County, Oregon.

Clackamas County encourages bids from Minority, Women, and Emerging Small Businesses.



CLACKAMAS COUNTY PUBLIC IMPROVEMENT CONTRACT

INSTRUCTIONS TO BIDDERS

Clackamas County Local Contract Review Board Rules ("LCRB Rules") govern this procurement process. LCRB Rules may be found at: <http://www.clackamas.us/code/documents/appendixc.pdf>. The Instructions to Bidders is applicable to the procurement process for Clackamas County, or any component unit thereof identified on the Notice of Public Improvement Contract Opportunity, herein after referred to as the "Owner."

Article 1. Scope of Work

The work contemplated under this contract with the Owner, includes all labor, materials, transportation, equipment and services necessary for, and reasonably incidental to, the completion of all construction work in connection with the project described in the Project Manual which includes, but is not necessarily limited to, the Notice of Public Improvement Contract Opportunity, Instructions to Bidders, Supplemental Instructions to Bidders, Bid Form, Bid Bond, Public Improvement Contract Form, Performance Bond, Payment Bond, and Plans, Specifications and Drawings.

Article 2. Examination of Site and Conditions

Before making a Bid, the Bidder shall examine the site of the work and ascertain all the physical conditions in relation thereto. The Bidder shall also make a careful examination of the Project Manual including the plans, specifications, and drawings and other contract documents, and shall be fully informed as to the quality and quantity of materials and the sources of supply of the materials. Failure to take these steps will not release the successful Bidder from entering into the contract nor excuse the Bidder from performing the work in strict accordance with the terms of the contract at the price established by the Bid.

The Owner will not be responsible for any loss or for any unanticipated costs, which may be suffered by the successful Bidder, as a result of such

Bidder's failure to be fully informed in advance with regard to all conditions pertaining to the work and the character of the work required, including site conditions. No statement made by an elected official, officer, agent, or employee of the Owner in relation to the physical or other conditions pertaining to the site of the work will be binding on the Owner, unless covered by the Project Manual or an Addendum.

Article 3. Interpretation of Project Manual and Approval of Materials Equal to Those Provided in the Specifications

If any Bidder contemplating submitting a Bid for the proposed contract is in doubt as to the true meaning of any part of the plans, specifications or forms of contract documents, or detects discrepancies or omissions, such Bidder may submit to the Architect (read "Engineer" throughout in lieu of Architect as appropriate) a written request for an interpretation thereof at least ten (10) calendar days prior to the date set for the Bid Closing.

When a prospective Bidder seeks approval of a particular manufacturer's material, process or item of equal value, utility or merit other than that designated by the Architect in the Project Manual, the Bidder may submit to the Architect a written request for approval of such substitute at least ten (10) calendar days prior to the date set for the Bid Closing. The prospective Bidder submitting the request will be responsible for its prompt delivery.

Requests of approval for a substitution from that specified shall be accompanied by samples, records of performance, certified copies of tests by impartial and recognized laboratories, and such other information as the Architect may request.

To establish a basis of quality, certain processes, types of machinery and equipment or kinds of materials may be specified in the Project Manual either by description of process or by designating a

manufacturer by name and referring to a brand or product designation or by specifying a kind of material. Whenever a process is designated or a manufacturer's name, brand or item designation is given, or whenever a process or material covered by patent is designated or described, it shall be understood that the words "or approved equal" follow such name, designation or description, whether in fact they do so or not.

Any interpretation of the Project Manual or approval of manufacturer's material will be made only by an Addendum duly issued. All Addenda will be posted to the OregonBuys listing and will become a part of the Project Manual. The Owner will not be responsible for any other explanation or interpretation of the Project Manual nor for any other approval of a particular manufacturer's process or item for any Bidder.

When the Architect approves a substitution by Addendum, it is with the understanding that the Contractor guarantees the substituted article or material to be equal or better than the one specified.

Article 4. Security to Be Furnished by Each Bidder

Each Bid must be accompanied by either 1) a cashier's check or a certified check drawn on a bank authorized to do business in the State of Oregon, or 2) a Bid bond described hereinafter, executed in favor of the Owner, for an amount equal to ten percent (10%) of the total amount Bid as a guarantee that, if awarded the contract, the Bidder will execute the contract and provide a performance bond and payment bond as required. The successful Bidder's check or Bid bond will be retained until the Bidder has entered into a contract satisfactory to Owner and furnished a one hundred percent (100%) performance bond and one hundred percent (100%) payment bond. The Owner reserves the right to hold the Bid security as described in Article 10 hereof. Should the successful Bidder fail to execute and deliver the contract as provided for in Article 12 hereof, including a satisfactory performance bond and payment bond within twenty (20) calendar days after the Bid has been accepted by the Owner, then the contract award made to such Bidder may be considered canceled and the Bid security may be

forfeited as liquidated damages at the option of the Owner. The date of the acceptance of the Bid and the award of the contract as contemplated by the Project Manual shall mean the date of acceptance specified in the Notice of Intent to Award.

Article 5. Execution of Bid Bond

Should the Bidder elect to utilize a Bid bond as described in Article 4 in order to satisfy the Bid security requirements, such form must be completed in the following manner:

- A. Bid bonds must be executed on the County forms, which will be provided to all prospective Bidders by the Owner.
- B. The Bid bond shall be executed on behalf of a bonding company licensed to do business in the State of Oregon.
- C. In the case of a sole individual, the bond need only be executed as principal by the sole individual. In the case of a partnership, the bond must be executed by at least one of the partners. In the case of a corporation, the bond must be executed by stating the official name of the corporation under which is placed the signature of an officer authorized to sign on behalf of the corporation followed by such person's official capacity, such as president, etc. The corporation seal should then be affixed to the bond.
- D. The name of the surety must be stated in the execution over the signature of its duly authorized attorney-in-fact and accompanied by the seal of the surety corporation.

Article 6. Execution of the Bid Form

Each Bid shall be made in accordance with: (i) the sample Bid Form accompanying these instructions; (ii) the appropriate signatures for a sole individual, partnership, corporation or limited liability corporation shall be added as noted in Article 5C above; (iii) numbers pertaining to base Bids shall be stated both in writing and in figures; and (iv) the Bidder's address shall be typed or printed.

The Bid Form relates to Bids on a specific Project

Manual. Only the amounts and information asked for on the Bid Form furnished will be considered as the Bid. Each Bidder shall Bid upon the work exactly as specified and provided in the Bid Form. The Bidder shall include in the Bid a sum to cover the cost of all items contemplated by the Contract. The Bidder shall Bid upon all alternates that may be indicated on the Bid Form. When Bidding on an alternate for which there is no charge, the Bidder shall write the words "No Charge" in the space provided on the Bid Form. If one or more alternates are shown on the Bid Form, the Bidder shall indicate whether each is "add" or "deduct."

Article 7. Prohibition of Alterations to Bid

Bids that are incomplete, or contain ambiguities or have differing conditions required by the Bidder, including requested changes or exceptions to the Public Improvement Contract form or other portions of the Project Manual, may be rejected in Owner's sole and absolute discretion.

Article 8. Submission of Bid

Each Bid shall be sealed in an envelope, properly addressed to the Owner, showing on the outside of the envelope the name of the Bidder and the name of the project. Bids will be received at the time and place stated in the Notice of Public Improvement Contract Opportunity.

Article 9. Bid Closing and Opening of Bids

All Bids must be received by the Owner at the place and time set for the Bid Closing. Any Bids received after the scheduled Bid Closing time for receipt of Bids will be rejected.

At the time of opening and reading of Bids, each Bid received will be publicly opened and read aloud, irrespective of any irregularities or informalities in such Bids.

Generally, Bid results will be posted to the Oregonbuys Website within a couple hours of the opening.

Article 10. Acceptance or Rejection of Bids by Owner

Unless all Bids are rejected, the Owner will award a contract based on the lowest responsive Bid from a responsible Bidder. If that Bidder does not execute the contract, it will be awarded to the next lowest responsible Bidder or Bidders in succession.

The Owner reserves the right to reject all Bids and to waive minor informalities. The procedures for contract awards shall be in compliance with the provisions of the LCRB Rules in effect at that time.

The Owner reserves the right to hold the Bid and Bid security of the three lowest Bidders for a period of thirty (30) calendar days from and after the time of Bid opening pending award of the contract. Following award of the contract the Bid security of the three lowest Bidders may be held twenty (20) calendar days pending execution of the contract. All other Bids will be rejected and Bid security will be returned.

In determining the lowest Bidder, the Owner reserves the right to take into consideration any or all authorized base Bids as well as alternates or combinations indicated in the Bid Form.

If no Bid has been accepted within thirty (30) calendar days after the opening of the Bids, each of the three lowest Bidders may withdraw the Bid submitted and request the return of the Bid security.

Article 11. Withdrawal of Bid

At any time prior to the Bid Closing, a Bidder may withdraw its Bid. This will not preclude the submission of another Bid by such Bidder prior to the time set for the Bid Closing.

After the time set for the Bid Closing, no Bidder will be permitted to withdraw its Bid within the time frames specified in Article 10 for award and execution, except as provided for in that Article.

Article 12. Execution of Contract, Performance Bond and Payment Bond

The Owner will provide the successful Bidder with contract forms within seven (7) calendar days after

the completion of the award protest period. The Bidder is required to execute the contract forms as provided, including a performance bond and a payment bond from a surety company licensed to do surety business in the State of Oregon, within seven (7) calendar days after receipt of the contract forms. The contract forms shall be delivered to the Owner in the number called for and to the location as instructed by the Owner.

Article 13. Recyclable Products

Contractors will use recyclable products to the maximum extent economically feasible in the performance of the Contract.

Article 14. Clarification or Protest of the Solicitation Document or Specifications

Any request for clarification or protest of the solicitation document or specifications must be submitted in the manner provided for in the applicable section of the LCRB Rules to the Procurement Representative referenced in the Notice of Public Improvement Contract Opportunity.

A protest of the Solicitation Document must be received within seven (7) business days of the issuance of the Bid or within three (3) business days of issuance of an addendum.

Requests for clarification may be submitted no less than five (5) business days prior to the Bid Closing Date.

Article 15. Protest of Intent to Award

Owner will name the apparent successful Bidder in a "Notice of Intent to Award" letter. Identification of the apparent successful Bidder is procedural only and creates no right in the named Bidder to the award of the contract. Competing Bidders will be notified by publication of the Notice of Intent to Award on the OregonBuys Website of the selection of the apparent successful Bidder(s) and Bidders shall be given seven (7) calendar days from the date on the "Notice of Intent to Award" letter to review the file at the Procurement Division office and file a written protest of award, pursuant to C-049-0450. Any

award protest must be in writing and must be delivered by email, hand delivery, or mail to the Procurement Division Director at: Procurement Division, 2051 Kaen Road, Oregon City, OR 97045.

Article 16. Disclosure of First-Tier Subcontractors

Within two (2) working hours after the Bid Closing, all Bidders shall submit to the County a disclosure form identifying any first-tier subcontractors (those entities that would be contracting directly with the prime contractor) that will be furnishing labor and materials on the contract, if awarded, whose subcontract value would be equal to or greater than: (a) Five percent (5%) of the total contract price, but at least \$15,000; or (b) \$350,000, regardless of the percentage of the total contract price.

Disclosures may be submitted with the Bid or may be hand delivered to the Bid Closing address or emailed to the Contract Information Analyst listed on the Notice of Contract Opportunity.



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT**

SUPPLEMENTAL INSTRUCTIONS TO BIDDERS

Project Name: # 2025-29 Three Creeks Floodplain Enhancement Project

The following modify the Clackamas County “Instructions to Bidders” for this Project. Where a portion of the Instructions to Bidders has been modified by these Supplemental Instructions to Bidders, the unaltered portions shall remain in effect.

- 1. Bidder Qualifications:** To be eligible for award under this Invitation to Bid, bidders must submit examples of prior work within the following two (2) major project components: (1) Construction of in-stream log and riffle structures in conformance with SLOPES V Restoration or comparable environmental protection regulations; and (2) Restoration and revegetation to create wetland and upland habitats. Examples must be provided on company letterhead and contain information as described within the Minimum Contractor Qualifications.
- 2. A Mandatory Pre-Bid Conference** will be conducted on **April 21, 2025 at 10:00 AM**. Bidders shall meet with County representatives at **SE Harmony Rd, approximately 550 feet east of SE Linwood Ave, Clackamas OR, 97015** for that purpose. Attendance will be documented through a sign-in sheet prepared by the County representative. Prime bidders who arrive more than ten (10) minutes after the start time of the meeting (as stated in the solicitation and by the County’s watch) or after the discussion portion of the meeting (whichever comes first) shall not be permitted to sign in and will not be permitted to submit a bid on the project.
- 3. Electronic Submissions:** The County is requiring all bids for this project be electronically submitted. Complete Bids (including all attachments) will only be accepted electronically thru a secure online bid submission service, Bid Locker. Email submissions to Clackamas County email addresses will no longer be accepted. <https://bidlocker.us/a/clackamascounty/BidLocker>.

Bids will be publicly read aloud via the computer application, Zoom. Bidders will be allowed to video conference or listen by phone to the bid results. The projects Zoom meeting can be accessed via the information below:

ZOOM LINKS.

Join Zoom Meeting

<https://clackamascounty.zoom.us/j/87120367582>

Meeting ID: 871 2036 7582

One tap mobile

+16694449171,,87120367582# US
+16699006833,,87120367582# US (San Jose)

Dial by your location

- +1 669 444 9171 US
- +1 669 900 6833 US (San Jose)
- +1 719 359 4580 US
- +1 253 205 0468 US
- +1 253 215 8782 US (Tacoma)
- +1 346 248 7799 US (Houston)
- +1 408 638 0968 US (San Jose)
- +1 386 347 5053 US
- +1 507 473 4847 US
- +1 564 217 2000 US
- +1 646 876 9923 US (New York)
- +1 646 931 3860 US
- +1 689 278 1000 US
- +1 301 715 8592 US (Washington DC)
- +1 305 224 1968 US
- +1 309 205 3325 US
- +1 312 626 6799 US (Chicago)
- +1 360 209 5623 US

Meeting ID: 871 2036 7582

Find your local number: <https://clackamascounty.zoom.us/j/87120367582>

****The Apparent Low bid results will be posted to the projects OregonBuys listing as soon as possible following the bid opening.**

- 4. Good Faith Effort:** Clackamas County encourages participation in contracts by Historically Underrepresented Businesses. “Historically Underrepresented Businesses” are State of Oregon-certified and self-identified minority, women and emerging small business as well as firms that are certified federally or by another state or entity with substantially similar requirements as the State of Oregon.

Bidders must perform Good Faith Effort (defined below) and submit **Form 1 and Form 2** for the Bidders Bid to be considered responsive. **Form 1 and Form 2** must be submitted within **two (2) hours** after the Closing Date and Time. Form 1 and Form 2 may be submitted to either the Contact Information Analyst listed on Notice of Contract Opportunity or via the <https://bidlocker.us/a/clackamascounty/BidLocker> listing.

“Good Faith Effort” is a requirement of a prime contractor to reach out to at least three Historically Underrepresented Business Subcontractors for each division of work that will be subcontracted out and to complete the required forms. If fewer than three Historically Underrepresented Business Subcontractors are reasonably available for a particular division of work, the Bidder must specifically note the

reason for there being fewer than three contacts. The outreach should be performed with sufficient time to give the subcontractors at least 5 calendar days to respond to the opportunity. Form 3, which documents the actual amount of subcontractors on the project, must be submitted with the project final pay application. Compliance with the Good Faith Effort and submission of Forms 1, 2 and 3 is a contractual requirement for final payment.

The sufficiency of the documentation or the performance of Good Faith Effort shall be in the sole and absolute determination of Clackamas County. Only those Bidders that Clackamas County has determined have not sufficiently performed Good Faith Effort shall have protest rights of the determination for such Bidder. No Bidder shall have protest rights of the sufficiency of any other Bidder completing Good Faith Effort.

**CLACKAMAS COUNTY
GOOD FAITH EFFORT
SUBCONTRACTOR AND SELF-PERFORMED WORK LIST
(FORM 1)**

Prime Contractor Name: SULLIVAN INC
Project Name: # 2025-29 Three Creeks Floodplain Enhancement Project

Total Contract Amount:
1,607,901.86

PRIME SELF-PERFORMING: Identify below ALL GFE Divisions of Work (DOW) to be self-performed. Good Faith Efforts are otherwise required.

DOW BIDDER WILL SELF-PERFORM (GFE not required)

<u>Temp Protection And Direction Traffic</u>	<u>Clearing & Grubbing</u>
<u>Temp Water Management All Zones</u>	<u>Aggregate Base Signs Record Drawings</u>
<u>700 GRAN COIL</u>	<u>GENERAL EXCAVATION</u>
<u>Pollution Control - Turbidity Monitor</u>	<u>LOG JAM, RIFFLE, CASCADE POST</u>

PRIME CONTRACTOR SHALL DISCLOSE AND LIST ALL SUBCONTRACTORS, including those Minority-owned, Woman-owned, and Emerging Small Businesses ("M/W/ESB") that you intend to use on the project. Delivery via bid locker <https://bidlocker.us/a/clackamascounty/BidLocker> within 2 hours of the BID/Quote Closing Date/Time.

LIST ALL SUBCONTRACTORS BELOW Use <u>correct legal name</u> of Subcontractor (No Assumed Business Names)	Division of Work (Painting, electrical, landscaping, etc.) List ALL DOW performed by Subcontractors	DOLLAR AMOUNT OF SUBCONTRACT	If Certified or self-reporting MBE/WBE/ESB Subcontractor Check box <input checked="" type="checkbox"/>		
			MBE	WBE	ESB
Name <u>Point Environmental</u> Address <u>914 Molalla Ave Suite 102</u> City/St/Zip <u>OREGON CITY OR 97045</u> Phone# <u>541-207-8441</u> OCCB#	<u>Fish Salvage</u>	<u>49,000</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name <u>Longhorn Geomatics</u> Address <u>10940 SW BARNS RD #109</u> City/St/Zip <u>Portland, OR 97225</u> Phone# <u>503-985-9762</u> OCCB#	<u>Survey</u>	<u>\$15500</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name <u>FOX EROSION CONTROL</u> Address <u>11901 HWY 212</u> City/St/Zip <u>CLACKAMAS, OR 97015</u> Phone# <u>503 654-8816</u> OCCB#	<u>LANDSCAPE & EROSION CONTROL</u>	<u>\$440,000.00</u>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Name Address City/St/Zip Phone# OCCB#			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CLACKAMAS COUNTY
GOOD FAITH EFFORT
M/W/ESB CONTACT / BIDS RECEIVED LOG
(FORM 2)**

Prime Contractor: **SULLIVAN INC**
Project: # 2025-29 Three Creeks Floodplain Enhancement Project

Prime Contractor must contact or endeavor to contact at least 3 M/W/ESB Subcontractors for each Division of Work. Prime Contractor shall record its contacts with M/W/ESB Subcontractors through use of this log (or equivalent) entering all required information. All columns shall be completed where applicable. Additional forms may be copied if needed.

NAME OF M/W/ESB SUBCONTRACTOR	Divisions of Work (Painting, electrical, landscaping, etc.)	Date Solicitation Letter / Fax Sent	PHONE CONTACT		BID ACTIVITY Check Yes or No			REJECTED BIDS (if bid received & not used)		Notes
			Date of Call	Person Receiving Call	Will Bid	Bid Received	Bid Used	Bid Amount	Reason Not Used (Price, Scope or Other. If Other, explain in Notes>>)	
Norwest Landscape & Geotextile	Erosion Control	4/21/25			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	\$ 40,050	Price	
Compass Land Surveys	Survey	4/21/25			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	43250	Price	
Robotics	Survey	4/21/25			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Mosaic Ecology	Landscaping	4/21/25			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	681418	Price	
Anderson Erosion Control	Landscaping	4/21/25			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	955,206	Price	
Terra Cal c Land Survey	Survey	4/21/25			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Fox Erosion Control	Landscaping Erosion	4/21/25			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	681418		



PUBLIC IMPROVEMENT CONTRACT

BID BOND

Project Name: #2025-29 Three Creeks Floodplain Enhancement Project

We, Suulutaag, Inc., as "Principal,"
(Name of Principal)

and Fidelity and Deposit Company of Maryland, an Illinois Corporation,
(Name of Surety)

authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto Water Environment Services ("Obligee") the sum of (\$ 10%)

Ten Percent of the Total Bid Amount dollars.

WHEREAS, the condition of the obligation of this bond is that Principal has submitted its proposal or bid to an agency of the Obligee in response to Obligee's procurement document (No.*) for the project identified above which proposal or bid is made a part of this bond by reference, and Principal is required to furnish bid security in an amount equal to ten (10%) percent of the total amount of the bid pursuant to the procurement document.

NOW, THEREFORE, if the Obligee shall accept the bid of the Principal and the Principal shall enter into a Contract with the Obligee in accordance with the terms of such bid, and give such bond or bonds as may be specified in the bidding or Contract Documents with good and sufficient surety for the faithful performance of such Contract and for the prompt payment of labor and material furnished in the prosecution thereof, or in the event of the failure of the Principal to enter such Contract and give such bond or bonds, if the Principal shall pay to the Obligee the difference not to exceed the penalty hereof between the amount specified in said bid and such larger amount for which the Obligee may in good faith contract with another party to perform the Work covered by said bid, then this obligation shall be null and void, otherwise to remain in full force and effect.

IN WITNESS WHEREOF, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this 1st day of May, 20 25.

Principal: Suulutaag, Inc.

By: [Signature]

Signature

President

Official Capacity

Attest: Race McClary

Corporation Secretary

Surety: Fidelity and Deposit Company of Maryland

By: [Signature]

Signature

Kristy M. Konte, Attorney-in-Fact

Name

1299 Zurich Way, 10th Floor

Address

Schaumburg

City

IL

State

60196

Zip

(847)-605-6000

Phone

N/A

Fax



*No.S-C01010-00013358

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

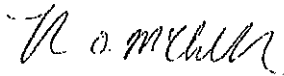
KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by Thomas O. McClellan, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Kelly Michael Layman, Glen Lopez, Kirk C. Leadbetter, James Geerin, Tanya Lee Hutchison, Kristy M. Konte, Chase McGraw, of Anchorage, Alaska its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

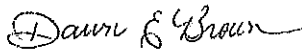
IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 4th day of September, A.D. 2024.



ATTEST:
ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND



By: Thomas O. McClellan
Vice President



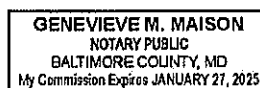
By: Dawn E. Brown
Secretary

**State of Maryland
County of Baltimore**

On this 4th day of September, A.D. 2024, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, Thomas O. McClellan, Vice President and Dawn E. Brown, Secretary of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Genevieve M. Maison



Authenticity of this bond can be confirmed at bondvalidator.zurichua.com or 410-559-8790

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies,
this 1st day of May 2025.



MJ Pethick

Mary Jean Pethick
Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
reportsfclaims@zurichna.com
800-626-4577

Authenticity of this bond can be confirmed at bondvalidator.zurichna.com or 410-559-8790



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT

BID FORM

PROJECT: # 2025-29 Three Creeks Floodplain Enhancement Project

BID CLOSING: April 29, 2025, 2:00 PM, Pacific Time

BID OPENING: April 29, 2025, 2:05 PM, Pacific Time

FROM: Dunlutan, Inc.
Bidder's Name (must be full legal name, not ABN/DBA)

TO: <https://bidlocker.us/a/clackamascounty/BidLocker>

1. Bidder is (check one of the following and insert information requested):

☐ a. An individual; or

☐ b. A partnership registered under the laws of the State of _____; or

☒ c. A corporation organized under the laws of the State of Alaska; or

☐ d. A limited liability corporation organized under the laws
of the State of _____;

and authorized to do business in the State of Oregon hereby proposes to furnish all material and labor and perform all work hereinafter indicated for the above project in strict accordance with the Contract Documents for the Basic Bid as follows:

ONE million six hundred seven thousand nine hundred one and 86/100's
Dollars (\$ 1,607,901.86)

and the Undersigned agrees to be bound by the following documents:

- Notice of Public Improvement Contract Opportunity
- Instructions to Bidders
- Bid Bond
- Public Improvement Contract Form
- Prevailing Wage Rates
- Plans, Specifications and Drawings
- Supplemental Instructions to Bidders
- Bid Form
- Performance Bond and Payment Bond
- Payroll and Certified Statement Form

• ADDENDA numbered 1 through 2, inclusive (fill in blanks)

2. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items of work relating to the following Alternate(s) as designated in the Specifications: N/A

3. The Undersigned proposes to add to or deduct from the Base Bid indicated above the items or work relating to the following Unit Price(s) as designated in the Specifications, for which any adjustments in the Contract amount will be made in accordance with the project specifications: **Provide the attached Bid/Fee Sheet with Bid.**

4. The work shall be completed within the time stipulated and specified in the Contract documents.

5. Accompanying herewith is Bid Security which is equal to ten percent (10%) of the total amount of

the Basic Bid, plus the total sum of Alternatives (if any).

6. The Undersigned agrees, if awarded the Contract, to execute and deliver to Clackamas County, within twenty (20) calendar days after receiving the Contract forms, a Contract Form, and a satisfactory Performance Bond and Payment Bond each in an amount equal to one hundred percent (100%) of the Contract sum, using forms provided by the Owner. The surety requested to issue the Performance Bond and Payment Bond will be:

Fidelity and Deposit Company of Maryland
(name of surety company - not insurance agency)

The Undersigned hereby authorizes said surety company to disclose any information to the Owner concerning the Undersigned's ability to supply a Performance Bond and Payment Bond each in the amount of the Contract.

7. The Undersigned further agrees that the Bid Security accompanying the Bid is left in escrow with Clackamas County; that the amount thereof is the measure of liquidated damages which the Owner will sustain by the failure of the Undersigned to execute and deliver the above-named Contract Form, Performance Bond and Payment Bond, each as published, and that if the Undersigned defaults in either executing the Contract Form or providing the Performance Bond and Payment Bond within twenty (20) calendar days after receiving the Contract forms, then the Bid Security shall become the property of the Owner at the Owner's option; but if the Bid is not accepted within thirty (30) calendar days of the time set for the opening of the Bids, or if the Undersigned executes and timely delivers said Contract Form, Performance Bond and Payment Bond, the Bid Security shall be returned.

8. The Undersigned certifies that: (i) This Bid has been arrived at independently and is being submitted without collusion with and without any agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid designed to limit independent bidding or competition; and (ii) the contents of the Bid have not been communicated by the Undersigned or its employees or agents to any person not an employee or agent of the Undersigned or its surety on any Bond furnished with the Bid and will not be communicated to such person prior to the official opening of the Bid.

9. The undersigned ☒ HAS, ☐ HAS NOT (check one) paid unemployment or income taxes in Oregon within the past 12 months and ☒ DOES, ☐ DOES NOT (check one) a business address in Oregon. The undersigned acknowledges that, if the selected bidder, that the undersigned will have to pay all applicable taxes and register to do business in the State of Oregon before executing the Contract Form.

10. The Undersigned agrees, if awarded a contract, to comply with the provisions of ORS 279C.800 through 279C.870 pertaining to the payment of the prevailing rates of wage.

11. Contractor's CCB registration number is 1985103. As a condition to submitting a bid, a Contractor must be registered with the Oregon Construction Contractors Board in accordance with ORS 701.035 to 701.055, and disclose the registration number. Failure to register and disclose the number will make the bid unresponsive and it will be rejected, unless contrary to federal law.

12. The successful Bidder hereby certifies that all subcontractors who will perform construction work as described in ORS 701.005(2) were registered with the Construction Contractors Board in accordance with ORS 701.035 to 701.055 at the time the subcontractor(s) made a bid to work under the contract.

13. The successful Bidder hereby certifies that, in compliance with the Worker's Compensation Law of the State of Oregon, its Worker's Compensation Insurance provider is Travelers, Policy No. UB-67889244-2420-6, and that Contractor shall submit Certificates of Insurance as required.

14. Contractor's Key Individuals for this project (supply information as applicable):

Project Executive: MICHAEL BORKE
Project Manager: BRIAN MCCAUGHY
Job Superintendent: SCOTT Mc BETH
Project Engineer: LONDON DONACA

Cell Phone: 209-479-5194
Cell Phone: 541-999-9899
Cell Phone: 541-974-7434
Cell Phone: 360-768-8831

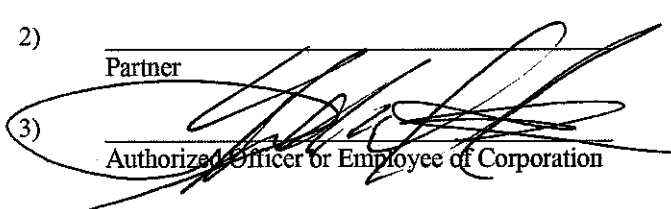
15. The Undersigned certifies that it has not discriminated against minority, women, or emerging small businesses in obtaining any subcontracts for this project.

16. The Undersigned certifies that it has a drug testing program in accordance with ORS 279C.505.

17. ***SPECIAL MINIMUM CONTRACTOR QUALIFICATION***
Bidder must provide evidence that it meets the Special Qualifications as outlined in the attached MINIMUM CONTRACTOR QUALIFICATIONS.

REMINDER: Bidder must submit the below First-Tier Subcontractor Disclosure Form.

By signature below, Contractor agrees to be bound by this Bid.

NAME OF FIRM SUULUTAAQ, INC
ADDRESS 5250 HighBANKS Rd Suite 650
Springfield, OR 97478
TELEPHONE NO 209-479-5194
EMAIL MICHAEL.BORKE@SUULUTAAQ.COM
SIGNATURE 1) _____
Sole Individual
or 2) _____
Partner
or 3) 
Authorized Officer or Employee of Corporation

***** END OF BID *****



CLACKAMAS

**WATER
ENVIRONMENT
SERVICES**

GREGORY L. GEIST | DIRECTOR

Water Quality Protection
Surface Water Management
Wastewater Collection & Treatment

Bid/Fee Sheet

3-Creeks Floodplain Enhancement Project – Water Environment Services

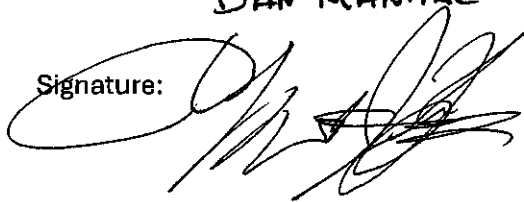
NO.	SPEC SECTION	STD ITEM #	ITEM	QUANT.	UNIT	UNIT COST	AMOUNT
1	210	--	MOBILIZATION	1	LS	55,000	55,000.00
2	221	--	TEMPORARY WORK ZONE TRAFFIC CONTROL, COMPLETE	1	LS	33,000	33,000.00
3	245	--	TEMPORARY WATER MANAGEMENT FACILITY AT STATION 17+80	1	LS	8,500	8,500.00
4	245	--	TEMPORARY WATER MANAGEMENT FACILITY AT STATION 20+40	1	LS	64,000	64,000.00
5	245	--	TEMPORARY WATER MANAGEMENT FACILITY AT STATION 30+30	1	LS	73,000	73,000.00
6	245	--	TEMPORARY WATER MANAGEMENT FACILITY AT STATION 41+45	1	LS	16,000.00	16,000.00
7	245	--	TEMPORARY WATER MANAGEMENT FACILITY AT STATION 43+00	1	LS	11,000.00	11,000.00
8	245	--	TEMPORARY WATER MANAGEMENT FACILITY AT STATION 46+00	1	LS	15,000.00	15,000.00
9	245	--	TEMPORARY WATER MANAGEMENT FACILITY AT STATION 48+85	1	LS	10,000.00	10,000.00
10	245	--	TEMPORARY WATER MANAGEMENT FACILITY AT STATION 51+85	1	LS	10,000.00	10,000.00
11	245	--	FISH SALVAGE	30	DAY	2,000.00	60,000.00
12	245	--	PERMIT FOR FISH SALVAGE	1	LS	525-	525.00
13	245	0280-0113000F	SEDIMENT FENCE	3889	LF	3.10	12,055.90
14	280	--	HIGH VISIBILITY SEDIMENT FENCE	6187	LF	4.55	28,150.85
15	281	--	700 GRAM COIR FIBER SOIL STABILIZATION MATTING	4920	SY	8.30	40,836.00
16	290	0290-0100000A	POLLUTION CONTROL PLAN	1	LS	1,300.00	1,300.00
17	290	0290-0200000A	TURBIDITY MONITORING	1	LS	1,950.00	1,950.00
18	305	--	CONSTRUCTION SURVEY WORK	1	LS	18,500.00	18,500.00
19	320	0320-0100000A	CLEARING AND GRUBBING	3.51	AC	14,000.00	49,140.00

20	320	--	HIGH VISIBILITY FENCE	3404	LF	4.60	15658.40
21	330	0330-0105000K	GENERAL EXCAVATION	1835	CY	88.50	162,397.50
22	640	0641-0102000M	AGGREGATE BASE	526	TON	96.25	50,627.50
23	940	--	SIGNS, STANDARD SHEETING, SHEET ALUMINUM	10	SF	640.00	6,400.00
24	1040	1040-0101000K	TOPSOIL	393	CY	96.00	37,728.00
25	1040	1040-0150000E	DECIDUOUS TREES, #5 CONTAINER	397	EA	65.00	25,805.00
26	1040	1040-0153000E	SHRUBS, #1 CONTAINER	1404	EA	25.00	35,100.00
27	1040	--	HERBACEOUS, 10 CUBIC LITER	12704	EA	5.15	65,425.60
28	1040	1040-0190000K	BARK MULCH	623	CY	103.25	64,324.75
29	1040	1040-0193000K	WOOD CHIP MULCH	1764	CY	90.40	159,415.60
30	1040	--	SOIL PREPARATION	9922	SY	2.60	25,797.20
31	1040	--	SOIL AMENDMENT	827	CY	103.28	85,412.56
32	1092	--	LOG JAM	12	EA	12,400.00	148,800.00
33	1093	--	RIFFLE	7	EA	15,011.00	105,077.00
34	1094	--	CASCADE	3	EA	16,575.00	49,725.00
35	1095	--	POST REINFORCEMENT	6	EA	9,325.00	55,950.00
36	--	--	RECORD DRAWINGS (Minimum Bid \$3,000)	1	LS	6250.00	6250.00
Construction Subtotal							\$
Total							\$ 1,607,901.86

Contractor Name: **SUULUTAAO INC**

Name/Title: **DAN MANHKE GENERAL MANAGER**

Signature:



Date: **4/30/2025**

MINIMUM CONTRACTOR QUALIFICATIONS
#2025-29 Three Creeks Floodplain Enhancement Project

Due to the technical and specialized nature of this project, and the intent of these provisions to obtain a first class product, only Contractors, and Subcontractors experienced as required by this solicitation document are qualified to work on this project.

Each Bidder shall submit examples of project experience that is similar to the work on this project. Examples will be on company letter head, and include complete information demonstrating complete and full qualification as described below.

The Minimum Contractor Qualifications examples shall be submitted with the bid response by 2:00 p.m. on the day of the Bid opening. Failure to provide this information may render a bid non-responsive and may be grounds for rejection of the bid.

The Owner may check references to determine successful completion and may check references regarding Bidder's performance, including but not limited to: (a) quality control; (b) safety record; (c) timeliness of performance; (d) use of skilled personnel; (e) management of subcontractors; (f) availability of and use of appropriate equipment; (g) compliance with contract documents, including permit requirements; and (h) management of submittals process, change orders and closeout.

Following are minimum qualifications to bid items of work for this project:

Experience Constructing Similar Projects

The Bidder shall have successfully completed a minimum of two projects of a similar size and scope with the following project components:

- Construction of in-stream log and riffle structures in conformance with SLOPES V Restoration or comparable environmental protection regulations;
- Large scale restoration and revegetation to create wetland and upland habitats, including irrigation design, contract growing, and plant establishment and monitoring.

Bidder shall submit examples of project experience that demonstrate successful completion of work with the following attributes:

- Project(s) with similar work elements completed in one construction season (except planting and plant establishment).
- Work in an urban environment with site constraints related to traffic control.
- Management of subcontractors, including landscaping and vegetation management.
- Excavation and grading within limited construction access areas located in or adjacent to environmentally sensitive areas including, but not limited to, wetlands, waterways, riparian zones, and floodplains.
- Construction of structures for the purposes of improving aquatic habitat conditions within wetlands, waterways, riparian zones, and floodplains. Work elements must include operating equipment and installing structures within identified ordinary high water lines of a stream, river, or lake.
- Installation and successful operation of a temporary streamflow bypass.

- Successful compliance with the design criteria requirements of SLOPES V Restoration issued by the National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries)
- Construction schedule dictated in part by permit conditions related to environmentally sensitive areas.

1. Has your firm successfully completed large construction of in-stream log and riffle structures in conformance with SLOPES V Restoration or comparable environmental protection regulations?

☒ Yes ☐ No

If yes, please provide the following information on company letterhead:

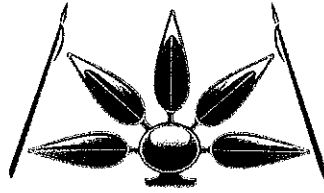
- a. Name of the project and how it meets the similar size and scope requirements;
- b. Initial contract time (planned start and end dates), and final contract time (actual start and end dates);
- c. The initial contract monetary value;
- d. The final contract monetary value;
- e. Name and telephone number of project owner;
- f. Name and telephone number of the owner's project manager or other person who can verify the Bidder's experience.

2. Has your firm successfully completed large scale restoration and revegetation to create wetland and upland habitats, including irrigation design, contract growing, and plant establishment and monitoring?

☒ Yes ☐ No.

If yes, please provide the following information on company letterhead:

- a. Name of the project and how it meets the similar size and scope requirements;
- b. Initial contract time (planned start and end dates), and final contract time (actual start and end dates);
- c. The initial contract monetary value;
- d. The final contract monetary value;
- e. Name and telephone number of project owner;
- f. Name and telephone number of the owner's project manager or other person who can verify the Bidder's experience.



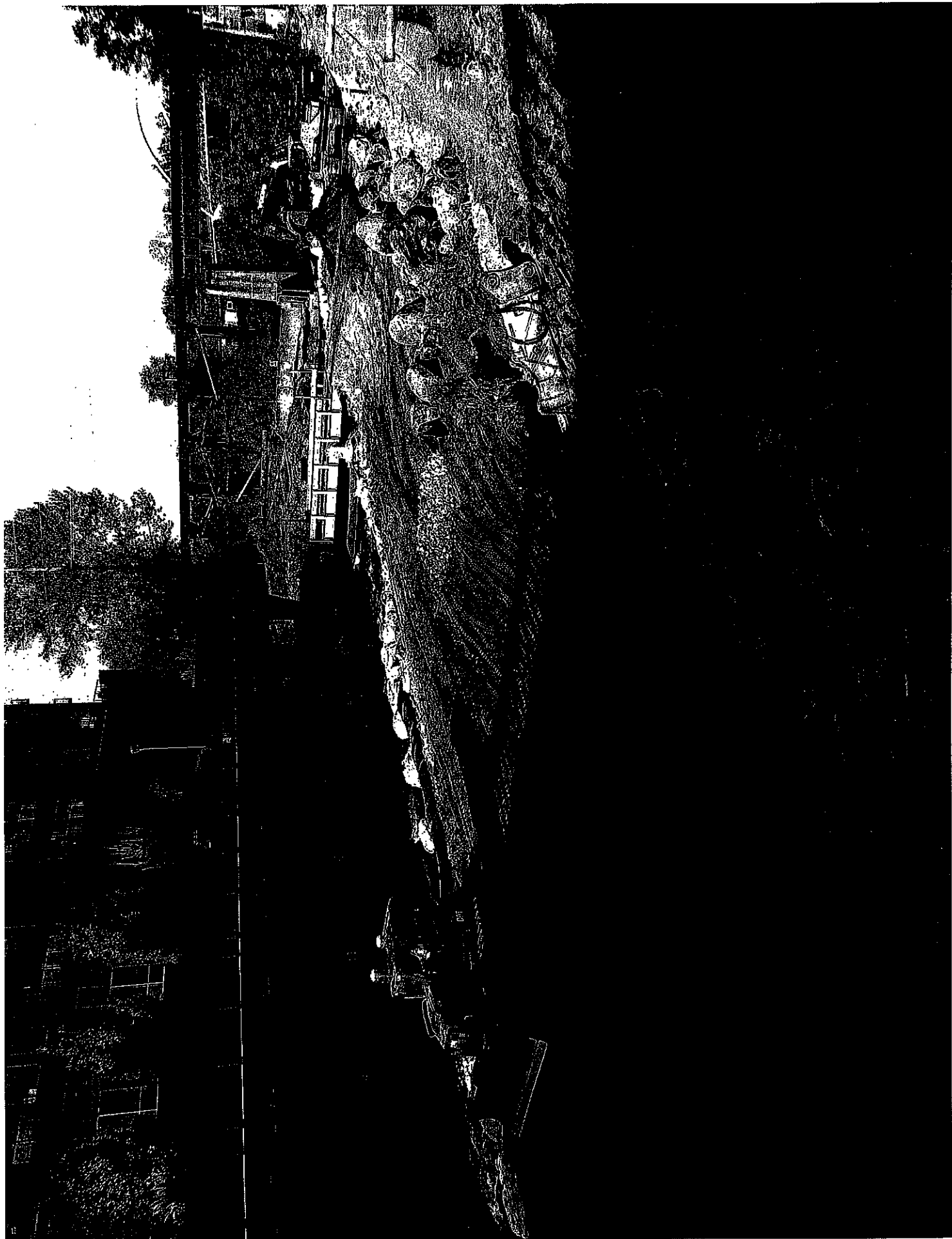
SUULUTAAQ, INC.

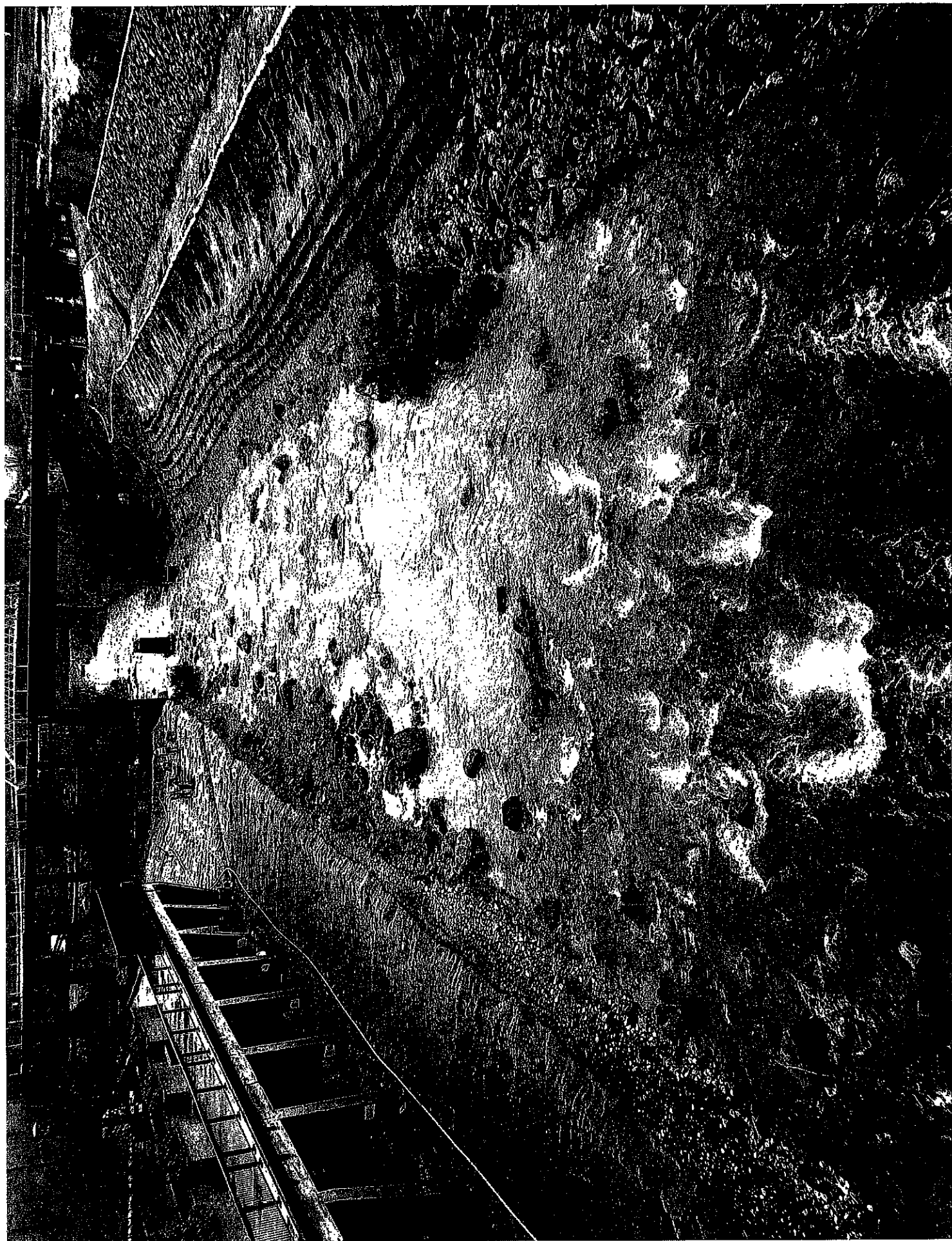
Suulutaaq Inc References:

PROJECT ONE:

- A. PRINGLE CREEK- Stream restoration project- cofferdams and a reroute of the stream- restore stream bed and banks with habitat structures. Put in vegetation along the stream bank and reestablish the stream to its original position. Worked in a very urban environment with site constraints of both vehicle and pedestrian traffic. Utilization of Subcontractors to do the planting of the site. Successful compliance with all regulations and conditions of the permit.
- B. Initial Contract time June 2019- April 2020- Start time July 2019- Jan 2020.
- C. Initial Contract Monetary value: \$1,690,265.00
- D. Final Contract Monetary value: \$1,712,525.00
- E. Julie Titchbourne – 503-588-6211
- F. Kayleen Warner – ODOT 503-986-2710

PICTURES OF THE PROJECT WILL BE INCLUDED IN THIS DOCUMENT







Oregon

Tina Kotek, Governor

Department of Transportation
ODOT Procurement Office - Construction
355 Capitol Street NE, MS#5-1
Salem OR, 97301
Phone: (503) 986-2710

August 07, 2023

SUULUTAAQ INC
JOEL ZENI
PO BOX 627
WALTERVILLE, OR 97489

Your prequalification application has been approved. This prequalification pertains only to the submission of bid proposals and does not cover your financial ability.

Your bids will be considered responsive on ODOT projects on or after: **October 01, 2023**

Your prequalification application is valid through: **September 30, 2025**

Your vendor number is: **CV30015671**

Work Classifications:

(AB)-AGGREGATE BASE

(EART)-EARTHWORK AND DRAINAGE

(MHA)-MISC. HIGHWAY APPURTENANCES

(TTC)-TEMPORARY TRAFFIC CONTROL

(ACP)-ASPHALT CONCRETE PAVING AND OILING

(LS)-LANDSCAPING

(REIN)-BRIDGES AND STRUCTURES

Applicants must update their prequalification application with ODOT when information changes. An addendum change form and instructions are available on our Bid and Award Information website at:

https://www.oregon.gov/ODOT/Business/Procurement/Pages/Bid_Award.aspx

This prequalification application covers Oregon Department of Transportation projects that are advertised on the ODOT Procurement Office - Construction Contract Unit website:

<https://www.oregon.gov/ODOT/Business/Procurement/Pages/NTC.aspx>

This prequalification application does not cover Oregon Department of Transportation projects advertised in OregonBuys which may be posted on our website.

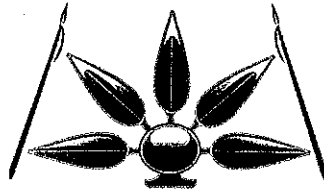
ODOT eBIDS provides free downloading of plans and specifications and related bid documents. You will need to self register as a holder of bidding plans in order for your bid to be responsive for each project for which you submit a bid.

<https://ecmnet.odot.state.or.us/ebids/>

If you wish to appeal any of the conditions of this prequalification you must notify this office in writing in accordance with ORS 279C.445 and ORS 279C.450 within three business days after receipt of this notice.

Kayleen Warner

Oregon Department of Transportation
Procurement Office - Construction Contracts Unit, MS# 5-1
355 Capitol Street NE
Salem, OR 97301-3870
Phone: 503-986-2710
ODOTProcurementOfficeConstruction@odot.oregon.gov



SUULUTAAQ, INC.

Suulutaaq Inc References:

PROJECT TWO:

- A. Hyatt Dam- Spillway restoration project which included bypass of the water around the project site. Establishment of new river channel -placement of plants and river material for the stream. Put in areas of parking for urban use and minimize the impact on the surrounding areas- Utilization of Subcontractors to do the planting and removing of debris from the project. Successful compliance with all regulations and conditions of the permit.
- B. Initial Contract time June 2019- April 2020- Start time July 2019- Jan 2020.
- C. Initial Contract Monetary value: \$4,415,850.00
- D. Final Contract Monetary value: \$4,215,790.00
- E. Connie Jordan – 208-378-5012
- F. Bureau of Reclamation Central Area Office 916-537-7000

PICTURES OF THE PROJECT WILL BE INCLUDED IN THIS DOCUMENT



FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM
PROJECT: #2025-29

BID OPENING: April 29, 2025, 2:00 PM, Pacific Time

Failure to submit this Form by the disclosure deadline will result in a nonresponsive bid.

INSTRUCTIONS:

This First-Tier Subcontractor Disclosure Form ("Form") must be submitted and received at the location specified in the Notice of Public Improvement Contract Opportunity on the advertised Bid Closing, and within two working hours after the advertised Bid Closing Time.

- A. Completed proposal documents must arrive electronically via Bid Locker located at <https://bidlocker.us/a/clackamascounty/BidLocker>.
- B. Bid Locker will electronically document the date and time of all submissions. Completed documents must arrive by the deadline indicated in Section 1 or as modified by Addendum.
LATE PROPOSALS WILL NOT BE ACCEPTED.
- C. Proposers must register and create a profile for their business with Bid Locker in order to submit for this project. It is free to register for Bid Locker.
- D. Proposers with further questions concerning Bid Locker may review the Vendor's Guide located at <https://www.clackamas.us/how-to-bid-on-county-projects>.

Subcontractor lists may be submitted with the bid in the same envelope or email at the Bid Closing date and time. Subcontractor lists **MUST** be submitted within **two (2) hours** of the Bid Closing date and time.

List below the name of each subcontractor that will be furnishing labor, or labor and materials, for which disclosure is required, the category of work that the subcontractor will be performing, and the dollar value of the subcontract. Enter **"NONE"** if the value of the project bid is less than \$100,000 or there are no subcontractors that need to be disclosed. ATTACH ADDITIONAL SHEETS IF NECESSARY.

	SUBCONTRACTOR NAME	DOLLAR VALUE	CATEGORY OF WORK
1.	Point Environmental	\$49,000.00	FISH SALVAGE
2.	Long Horn Geomatics	\$15,000.00	SURVEY
3.	FOV EROSION CONTROL	\$400,000.00	EROSION CONTROL LANDSCAPE
4.			
5.			
6.			

The above listed first-tier subcontractor(s) are providing labor, or labor and material, with a Dollar Value equal to or greater than:

- a) 5% of the total Contract Price, but at least \$15,000. If the Dollar Value is less than \$15,000 do not list the subcontractor above; or
- b) \$350,000 regardless of the percentage of the total Contract Price.

Firm Name: SULLIVAN INC

Bidder Signature: [Signature] Phone # 209-479-5194



**CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT
SUPPLEMENTAL GENERAL CONDITIONS**

PROJECT: Three Creeks Floodplain Enhancement Project

The following modifies the November 11, 2024 Clackamas County General Conditions for Public Improvement Contracts (“County General Conditions”) for this Contract. Except as modified below, all other terms and conditions of the County General Conditions shall remain in effect.

Change Order Process – WES

The following section is added to **Section D.1 CHANGES IN WORK:**

D.1.7 Change Order Authorization.

Throughout the performance of the Work under this Agreement, the Owner’s Project Manager is hereby granted the authority to verbally authorize change orders in the field for an amount up to \$10,000. As soon as possible following the authorization, the Owner’s Project Manager shall complete the change order form provided by Clackamas County Procurement (“Procurement”), obtain the signature of Owner’s Director or other authorized signatory, and submit the form to Procurement for processing. As soon as the Director signs off on the change order form, the Project Manager may then authorize another change order in the future for up to \$10,000 following the same procedure above. Each change order should include the cumulative cost of the entire change and may not be artificially broken up into multiple change orders to fall under the dollar threshold listed above. The authority granted to the Project Manager is limited by the Director’s authorization to amend the Agreement under Clackamas County’s Local Contract Review Board Rules and is subject to the discretion of the Director, who may suspend or restrict the Project Manager’s ability to authorize change orders at any time for any reason.

Good Faith Effort

As a condition of Contractor being awarded a Contract for this Project, Contractor must complete Good Faith Effort outreach and documentation as described in the Supplemental Instructions to Bidders of the Solicitation Document.

The Contractor may not change who is performing each Division of Work identified in Form 1 of the Good Faith Effort without the express written advance approval of Owner. This includes substituting identified subcontractors, self-performance of a Division of Work that was identified to be performed by a subcontractor, or the Contractor subcontracting a Division of Work that was identified to be self-performed by the Contractor.

Contractor shall be required to submit the completed Form 3 with its final pay application as a condition of final payment.



CLACKAMAS COUNTY GENERAL CONDITIONS FOR PUBLIC IMPROVEMENT CONTRACTS November 21, 2024

INSTRUCTIONS: The attached **Clackamas County General Conditions for Public Improvement Contracts ("County General Conditions")** apply to all designated Public Improvement contracts. Changes to the County General Conditions (including any additions, deletions or substitutions) should only be made by attaching Public Improvement Supplemental General Conditions. The text of these County General Conditions should not otherwise be altered.

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**CLACKAMAS COUNTY GENERAL CONDITIONS
FOR PUBLIC IMPROVEMENT CONTRACTS
("County General Conditions")**

**SECTION A
GENERAL PROVISIONS**

A.1 DEFINITION OF TERMS

In the Contract Documents the following terms shall be as defined below:

APPLICABLE LAWS, means all federal, state and local laws, codes, rules, regulations and ordinances, as amended applicable to the Work, to the Contract, or to the parties individually.

APPROVED BY CONTRACTING AGENCY, for purposes of ORS 279C.570(2), means the date a progress payment is approved by the Clackamas County Treasurer's office.

ARCHITECT/ENGINEER, means the Person appointed by the Owner to make drawings and specifications and, to provide contract administration of the Work contemplated by the Contract to the extent provided herein or by supplemental instruction of Owner (under which Owner may delegate responsibilities to the Architect/Engineer), in accordance with ORS Chapter 671 (Architects) or ORS Chapter 672 (Engineers) and administrative rules adopted thereunder.

AVOIDABLE DELAYS, mean any delays other than Unavoidable Delays, and include delays that otherwise would be considered Unavoidable Delays but that: (a) Could have been avoided by the exercise of care, prudence, foresight, and diligence on the part of the Contractor or its Subcontractors; (b) Affect only a portion of the Work and do not necessarily prevent or delay the prosecution of other parts of the Work nor the completion of the whole Work within the Contract Time; (c) Do not impact activities on the accepted critical path schedule; and (d) Are associated with the reasonable interference of other contractors employed by the Owner that do not necessarily prevent the completion of the whole Work within the Contract Time.

BIDDER, means a bidder in connection with Instructions to Bidders or a proposer in connection with a Request for Proposals, or Solicitation Document. May also be referenced as "Offeror," "Quoter" or "Proposer" based on the type of Solicitation Document.

CHANGE ORDER, means a written order which, when fully executed by the Parties to the Contract, constitutes a change to the Contract Documents. Change Orders shall be issued in accordance with the changes provisions in Section D and, if applicable, establish a Contract Price or Contract Time adjustment. A Change Order shall not be effective until executed by both parties.

CLAIM, means a demand by Contractor pursuant to Section D.3 for review of the denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, submitted in accordance with the requirements and within the time limits established for review of Claims in these County General Conditions.

CONTRACT, means the written agreement between the Owner and the Contractor comprised of the Contract Documents which describe the Work to be done and the obligations between the parties.

CONTRACT DOCUMENTS, means the Contract, County General Conditions, Supplemental General Conditions if any, Plans, Specifications, the accepted Offer, Solicitation Document and addenda thereto, Instructions to Offerors, and Supplemental Instructions to Offerors.

CONTRACT PERIOD, as set forth in the Contract Documents, means the total period of time beginning with the full execution of a Contract

and, if applicable, the issuance of a Notice to Proceed and concluding upon Final Completion.

CONTRACT PRICE, means the total price reflected in the Contract.

CONTRACT TIME, means any incremental period of time allowed under the Contract to complete any portion of the Work as reflected in the Project schedule.

CONTRACTOR, means the Person awarded the Contract for the Work contemplated.

DAYS, are calendar days, including weekdays, weekends and holidays, unless otherwise specified.

DEFECTIVE WORK, means Work that is not completed in accordance with the Specifications or the requirements of the Contract.

DIRECT COSTS, means, unless otherwise provided in the Contract Documents: the cost of materials, including sales tax and the cost of delivery; cost of labor which shall only include the applicable prevailing wage and fringe benefit (if applicable, and if paid to or on behalf of the employee) rate plus a maximum of a twelve percent (12%) markup on the prevailing wage (but not the fringe benefit) to cover Contractor's labor burden including but not limited to social security, Medicare, unemployment insurance, workers' compensation insurance, sick leave pay; substantiated Project cost increases for specific insurance (including, without limitation, Builder's Risk Insurance and Builder's Risk Installation Floater) or bond premiums; rental cost of equipment, and machinery required for execution of the Work; and the additional costs of field personnel directly attributable to the Work; travel expense reimbursement only if specifically authorized and only to the extent allowable under the County Contractor Travel Reimbursement Policy, hereby incorporated by reference.

FINAL COMPLETION, means the final completion of all requirements under the Contract, including Contract Closeout as described in Section K but excluding Warranty Work as described in Section I.2, and the final payment and release of all retainage, if any.

FORCE MAJEURE, means an act, event or occurrence caused by fire, riot, war, acts of God, terrorism, nature, sovereign, or public enemy, strikes, freight embargoes or any other act, event or occurrence that is beyond the control of the party to the Contract who is asserting Force Majeure.

NOTICE TO PROCEED, means the official written notice from the Owner stating that the Contractor is to proceed with the Work defined in the Contract Documents.

OFFER, means a bid in connection with Instructions to Bidders or a proposal in connection with a Request for Proposals, or Solicitation Document to do the work stated in the Solicitation Document at the price quoted. May also be referenced as "Bid," "Quote," or "Proposal" based on the type of Solicitation Document.

OVERHEAD, means those items which may be included in the Contractor's markup (general and administrative expense and profit) and that shall not be charged as Direct Cost of the Work, including without limitation such Overhead expenses as wages or salary of personnel above the level of foreman (i.e., superintendents and project managers), labor rates and fringe benefits above the applicable prevailing wage and fringe benefit (if applicable, and if paid to or on behalf of the employee), Contractor's labor burden for fringe benefit if paid to the employee, expenses of Contractor's offices and supplies at the Project Site (e.g. job trailer) and at Contractor's principal place of business and including expenses of personnel staffing the Project Site office and Contractor's principal place of business, and Commercial General Liability Insurance and Automobile Liability Insurance.

OWNER, means, Clackamas County or any component unit thereof including Clackamas County Development Agency, Clackamas County Service District No. 1, Surface Water Management Agency of Clackamas County, Tri-City Service District, Water Environment Services, North Clackamas Parks and Recreation District, Clackamas County Extension & 4-H Service District, Library Service District of Clackamas County, Enhanced Law Enforcement District, and Clackamas County Service District No. 5. Owner may elect, by written notice to Contractor, to delegate certain duties to more than one agent, including without limitation, to an Architect/Engineer. However, nothing in these County General Conditions is intended to abrogate the separate design professional responsibilities of Architects under ORS Chapter 671 or of Engineers under ORS Chapter 672.

PERSON, means a natural person or entity doing business as a sole proprietorship, a partnership, a joint venture, a corporation, a limited liability company or partnership, a nonprofit, a trust, or any other entity possessing the legal capacity to contract.

PLANS, means the drawings which show the location, type, dimensions, and details of the Work to be done under the Contract.

PRODUCT DATA, means illustrations, standard schedules, performance charts, instructions, brochures, diagrams and other information furnished by the Contractor to illustrate materials or equipment for some portion of the Work.

PROJECT, means the total undertaking to be accomplished for Owner by architects/engineers, contractors, and other others, including planning, study, design, construction, testing, commissioning, start-up, of which the Work to be performed under the Contract Documents is a part.

PROJECT SITE, means the specific real property on which the Work is to be performed, including designated contiguous staging areas, that is identified in the Plans, Specifications and Drawings.

PUNCH LIST, means the list of Work yet to be completed or deficiencies which need to be corrected in order to achieve Final Completion of the Contract.

RECORD DOCUMENT, means the as-built Plans, Specifications, testing and inspection records, product data, samples, manufacturer and distributor/supplier warranties evidencing transfer of ownership to Owner, operational and maintenance manuals, shop drawings, correspondence, certificate(s) of occupancy, and other documents listed in Subsection B.9.1 of these County General Conditions, recording all Services performed.

SAMPLES, means physical examples which illustrate materials, equipment or workmanship and establish standards by which the Work will be judged.

SHOP DRAWINGS, means drawings, diagrams, schedules and other data specially prepared for the Work by the Contractor or a Subcontractor (including any subsubcontractor), manufacturer, supplier, or distributor to illustrate some portion of the Work.

SOLICITATION DOCUMENT, means an Invitation to Bid, Request for Proposals, Request for Quotes, or other written document issued by Owner that outlines the required Specifications necessary to submit an Offer.

SPECIFICATION, means any description of the physical or functional characteristics of the Work, or of the nature of a supply, service or construction item included in the Solicitation Document. Specifications may include a description of any requirement for inspecting, testing or preparing a supply, service or construction item for delivery and the quantities or qualities of materials to be furnished under the Contract. Specifications generally will state the results or products to be obtained and may, on occasion, describe the method and manner of doing the

Work to be performed. Specifications may be incorporated by reference and/or may be attached to the Contract.

SUBCONTRACTOR, means a Person having a direct contract with the Contractor, or another Subcontractor of any tier, to perform one or more items of the Work.

SUBSTANTIAL COMPLETION, means the date when the Owner accepts in writing the construction, alteration or repair constituting the Work or any designated portion thereof as having reached that state of completion when it may be used or occupied for its intended purpose. Substantial Completion of facilities with operating systems occurs only after thirty (30) continuous Days of successful, trouble-free operation of the operating systems as provided in Section K.3.2.

SUBSTITUTIONS, means items that in function, performance, reliability, quality, and general configuration are the same or better than the product(s) specified. Substitutions also means the performance of the Work by a labor force other than what is submitted in the Offer.

SUPPLEMENTAL GENERAL CONDITIONS, means those conditions that remove from, add to, or modify these County General Conditions. Public Improvement Supplemental General Conditions may be included in the Solicitation Document or may be a separate attachment to the Contract.

UNAVOIDABLE DELAYS, mean delays other than Avoidable Delays that are: (a) to the extent caused by any actions of the Owner, or any other employee or agent of the Owner, or by a separate contractor employed by the Owner; (b) to the extent caused by any Project Site conditions which differ materially from the conditions that would normally be expected to exist and inherent to the construction activities defined in the Contract Documents; or (c) to the extent caused by Force Majeure acts, or events or occurrences.

WORK, means the furnishing of all materials, equipment, labor, transportation, services, incidentals, those permits and regulatory approvals not provided by the owner necessary to successfully complete any individual item or the entire Contract and the carrying out of duties and obligations imposed by the Contract Documents for the Project.

A.2 SCOPE OF WORK

The Work contemplated under the Contract includes all labor, materials, transportation, equipment and services for, and incidental to, the completion of all work in connection with the Project described in the Contract Documents. The Contractor shall perform all Work necessary so that the Project can be legally occupied and fully used for the intended use as set forth in the Contract Documents.

A.3 INTERPRETATION OF CONTRACT DOCUMENTS

A.3.1 Unless otherwise specifically defined in the Contract Documents, words which have well-known technical meanings or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings. Contract Documents are intended to be complementary. Whatever is called for in one, is interpreted to be called for in all. However, in the event of conflicts or discrepancies among the Contract Documents, interpretations will be based on the following descending order of precedence:

- (a) The Contract and any amendments thereto, including Change Orders, with those of later date having precedence over those of an earlier date;
- (b) The Supplemental General Conditions;
- (c) County General Conditions;
- (d) Plans and Specifications;
- (e) The Solicitation Document, and any addenda thereto.

A.3.2 In the case of an inconsistency between Plans and Specifications or within either document not clarified by addendum, the better quality or greater quantity of Work shall be provided in accordance with the Owner's interpretation in writing as determined in Owners sole discretion.

A.3.3 If the Contractor finds discrepancies in, or omissions from the Contract Documents, or if the Contractor is in doubt as to their meaning, the Contractor shall at once notify the Owner. Matters concerning and interpretation of requirements of the Contract Documents will be decided by the Owner in the Owner's sole discretion, who may delegate that duty in some instances to the Architect/Engineer. Responses to Contractor's requests for interpretation of Contract Documents will be made in writing by Owner (or the Architect/Engineer) within any time limits agreed upon or otherwise with reasonable promptness. Contractor shall not proceed without direction in writing from the Owner (or Architect/Engineer).

A.3.4 References to standard specifications, manuals, codes of any technical society, organization or association, to the laws or regulations of any governmental authority, whether such reference be specific or by implication, shall mean the latest standard specification, manual, code, laws or regulations in effect in the jurisdiction where the Project Site is located on the first published date of the Solicitation Document, except as may be otherwise specifically stated.

A.4 EXAMINATION OF PLANS, SPECIFICATIONS, AND PROJECT SITE

A.4.1 It is understood that the Contractor, before submitting an Offer, has made a careful examination of the Contract Documents; has become fully informed as to the quality and quantity of materials and the character of the Work required; and has made a careful examination of the location and conditions of the Work and the sources of supply for materials. The Owner will in no case be responsible for any loss or for any unanticipated costs that may be suffered by the Contractor as a result of the Contractor's failure to acquire full information in advance in regard to all conditions pertaining to the Work. No oral agreement or conversation with any officer, agent, or personnel of the Owner, or with the Architect/Engineer either before or after the execution of the Contract, shall affect or modify any of the terms or obligations herein contained. Contractor shall at all times be responsible for all utility locates regardless of the ownership of such utility infrastructure or service.

A.4.2 Should the Plans or Specifications fail to particularly describe the materials, kind of goods, or details of construction of any aspect of the Work, Contractor shall have the duty to make inquiry of the Owner and Architect/Engineer as to what is required prior to performance of the Work. Absent Specifications to the contrary, the materials or processes that would normally be used to produce first quality finished Work shall be considered a part of the Contract requirements.

A.4.3 Any design errors or omissions noted by the Contractor shall be reported promptly to the Owner, including without limitation, any nonconformity with Applicable Laws.

A.4.4 If the Contractor believes that adjustments to cost or Contract Time are involved because of clarifications or instructions issued by the Owner (or Architect/Engineer) in response to the Contractor's notices or requests for information, the Contractor must submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt by Contractor of the clarifications or instructions issued. If the Owner denies Contractor's request for additional compensation, additional Contract Time, or other relief

that Contractor believes results from the clarifications or instructions, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process. If the Contractor fails to perform the obligations of Sections A.4.1 to A.4.3, the Contractor shall pay such costs and damages to the Owner as would have been avoided if the Contractor had performed such obligations.

A.4.5 If the Contractor believes that adjustments to cost or Contract Time are involved because of an Unavoidable Delay caused by differing Project Site conditions, the Contractor shall notify the Owner immediately of differing Project Site conditions before the area has been disturbed. The Owner will investigate the area and make a determination as to whether or not the conditions differ materially from either the conditions stated in the Contract Documents or those which could reasonably be expected in execution of this particular Contract. If Contractor and the Owner agrees that a differing Project Site condition exists, any adjustment to compensation or Contract Time will be determined based on the process set forth in Section D.2.2 for adjustments to or deletions from Work. If the Owner disagrees that a differing Project Site condition exists and denies Contractor's request for additional compensation or Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

A.5 INDEPENDENT CONTRACTOR STATUS

The service or services to be performed under the Contract are those of an independent contractor as defined in ORS 670.600. Contractor represents and warrants that it is not an officer, employee or agent of the Owner as those terms are used in ORS 30.265.

A.6 RETIREMENT SYSTEM STATUS AND TAXES

Contractor represents and warrants that it is not a contributing member of the Public Employees' Retirement System and will be responsible for any federal or state taxes applicable to payment received under the Contract. Contractor will not be eligible for any benefits from these Contract payments of federal Social Security, employment insurance, workers' compensation or the Public Employees' Retirement System, except as a self-employed individual. Unless the Contractor is subject to backup withholding, Owner will not withhold from such payments any amount(s) to cover Contractor's federal or state tax obligations.

A.7 GOVERNMENT EMPLOYMENT STATUS

A.7.1 If this payment is to be charged against federal funds, Contractor represents and warrants that it is not currently employed by the Federal Government. This does not preclude the Contractor from holding another contract with the Federal Government.

SECTION B ADMINISTRATION OF THE CONTRACT

B.1 OWNER'S ADMINISTRATION OF THE CONTRACT

B.1.1 The Owner shall administer the Contract as described in the Contract Documents throughout the term of the Contract, including the one-year period for correction of Work. The Owner will act as provided in the Contract Documents, unless modified in writing in accordance with other provisions of the Contract. In performing these tasks, the Owner may rely on the Architect/Engineer or other agents to perform some or all of these tasks.

B.1.2 The Owner may visit the Project Site at intervals appropriate to the stage of the Contractor's operations (1) to become generally familiar with and to keep the Owner informed about the progress and quality of the portion of the Work completed, (2) to endeavor to guard the Owner against defects and deficiencies in the Work, and (3) to determine in general if Work is being performed in a manner indicating that the Work, when fully completed, will be in accordance with the Contract Documents. The Owner will not

make exhaustive or continuous on-Project Site inspections to check the quality or quantity of the Work. Unless otherwise required in a Change Order, the Owner will neither have control over or charge of, nor be responsible for the construction means, methods, techniques, sequences or procedures, or for the safety precautions and programs in connection with the Work.

B.1.3 Except as otherwise provided in the Contract Documents or when direct communications have been specifically authorized, the Owner and Contractor shall communicate with each other within a reasonable time frame about matters arising out of or relating to the Contract. Communications by and with the Architect/Engineer's consultants shall be through the Architect/Engineer. Communications by and with Subcontractors and material suppliers shall be through the Contractor. Communications by and with separate contractors shall be through the Owner.

B.1.4 Based upon the Architect/Engineer's evaluations of the Contractor's Application for Payment, or unless otherwise stipulated by the Owner, the Architect/Engineer will review and certify the amounts due the Contractor and will issue Certificates for Payment in such amounts.

B.2 CONTRACTOR'S MEANS AND METHODS; MITIGATION OF IMPACTS

B.2.1 The Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. If the Contract Documents give specific instructions concerning construction means, methods, techniques, sequences or procedures, the Contractor shall evaluate the Project Site safety thereof and, except as stated below, shall be fully and solely responsible for the Project Site safety of such means, methods, techniques, sequences or procedures.

B.2.2 The Contractor is responsible to protect and maintain the Work during the course of construction and to mitigate any adverse impacts to the Project, including those caused by authorized changes, which may affect cost, schedule, or quality.

B.2.3 The Contractor is responsible for the actions of all its personnel, laborers, suppliers, agents, and Subcontractors on the Project. The Contractor shall enforce strict discipline and good order among Contractor's employees and other persons carrying out the Work. The Contractor shall not permit employment of persons who are unfit or unskilled for the tasks assigned to them.

B.3 MATERIALS AND WORKMANSHIP

B.3.1 The intent of the Contract Documents is to provide for the construction and completion of every detail of the Work described. All Work shall be performed in a professional manner and, unless the means or methods of performing a task are specified elsewhere in the Contract Documents, Contractor shall employ methods that are generally accepted and used by the industry, in accordance with industry standards.

B.3.2 The Contractor is responsible to perform the Work as required by the Contract Documents. Defective Work shall be corrected at the Contractor's sole expense and within a reasonable time frame.

B.3.3 Work done and materials furnished may be subject to inspection and/or observation and testing by the Owner to determine if they conform to the Contract Documents. Inspection of the Work by the Owner does not relieve the Contractor of responsibility for the Work in accordance with the Contract Documents.

B.3.4 Contractor shall furnish adequate facilities, as required, for the Owner to have safe access to the Work including without limitation walkways, railings, ladders, tunnels, and platforms. Producers, suppliers, and fabricators shall also provide proper facilities and access to their facilities.

B.3.5 The Contractor shall furnish Samples of materials for testing by the Owner and include the cost of the Samples in the Contract Price.

B.4 PERMITS

Contractor shall obtain and pay for all necessary permits, licenses and fees, except for those specifically excluded in the Supplemental General Conditions, as required for the project. Contractor shall be responsible for all violations of the law. Contractor shall give all requisite notices to public authorities.

B.5 COMPLIANCE WITH GOVERNMENT REGULATIONS

B.5.1 Contractor shall comply with Applicable Laws, as amended pertaining to the Work and the Contract. Failure to comply with such requirements shall constitute a breach of Contract and shall be grounds for Contract termination. Without limiting the generality of the foregoing, Contractor expressly agrees to comply with the following, as applicable and as may be amended from time to time: (i) Title VI and VII of Civil Rights Act of 1964, as amended; (ii) Section 503 and 504 of the Rehabilitation Act of 1973, as amended; (iii) the Health Insurance Portability and Accountability Act of 1996; (iv) the Americans with Disabilities Act of 1990, as amended; (v) ORS Chapter 659A; as amended; (vi) all regulations and administrative rules established pursuant to any applicable laws; and (vii) all other applicable requirements of federal, state, county or other local government entity statutes, rules and regulations.

B.5.2 Contractor shall comply with all applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations, and

(a) Contractor shall not discriminate against Disadvantaged, Minority, Women or Emerging Small Business enterprises, as those terms are defined in ORS 200.005, or a business enterprise that is owned or controlled by or that employs a disabled veteran, as that term is defined in ORS 408.225, in the awarding of subcontracts.

(b) Contractor shall maintain, in current and valid form, all licenses and certificates required by Applicable Laws or the Contract when performing the Work.

B.5.3 Contractor shall certify that it shall not accept a bid from Subcontractors to perform Work unless such Subcontractors are registered with the Construction Contractors Board in accordance with ORS 701.021 at the time they submit their bids to the Contractor.

B.5.4 Contractor shall certify that each landscape contracting business, as defined in ORS 671.520(2), performing Work under the Contract holds a valid landscape construction professional license issued pursuant to ORS 671.560.

B.5.5 The following notice is applicable to Contractors who perform excavation Work. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center at (877) 668-4001.

B.5.6 Failure to comply with any or all of the requirements of B.5.1 through B.5.5 shall be a material breach of Contract and constitute

grounds for Contract termination. Damages or costs resulting from such noncompliance shall be the responsibility of Contractor.

B.5.7 The Contractor shall include in each subcontract those provisions required under ORS 279C.580.

B.5.8 Contractor shall comply with ORS 652.220, compliance of which is a material element of this Contract and failure to comply is a material breach that entitles County to exercise any rights and remedies available under this Contract including, but not limited to, termination for default.

B.6 SUPERINTENDENCE

Contractor shall keep on the Project Site, during the progress of the Work, a competent superintendent and any necessary assistants who shall be satisfactory to the Owner and who shall represent the Contractor on the Project Site. Directions given to the superintendent by the Owner shall be confirmed in writing to the Contractor.

B.7 INSPECTION

B.7.1 Owner shall have access to the Work at all times.

B.7.2 Inspection of the Work will be made by the Owner at its discretion. The Owner will have authority to reject Work that does not conform to the Contract Documents in the Owner's sole discretion. Any Work found to be not in conformance with the Contract Documents, in the discretion of the Owner, shall be removed and replaced at the Contractor's expense.

B.7.3 Contractor shall make or obtain at the appropriate time all tests, inspections and approvals of portions of the Work required by the Contract Documents or by Applicable Laws or orders of public authorities having jurisdiction. Unless otherwise provided, the Contractor shall make arrangements for such tests, inspections and approvals with an independent testing laboratory or entity acceptable to the Owner, or with the appropriate public authority, and shall bear all related costs of tests, inspections and approvals. Tests or inspections conducted pursuant to the Contract Documents shall be made promptly to avoid unreasonable delay in the Work. The Contractor shall give the Owner timely notice of when and where tests and inspections are to be made so that the Owner may be present for such procedures. Required certificates of testing, inspection or approval shall, unless otherwise required by the Contract Documents, be secured by the Contractor and promptly delivered to the Owner.

B.7.4 As required by the Contract Documents, Work done or material used without required inspection or testing and/or without providing timely notice to the Owner may be ordered removed at the Contractor's expense.

B.7.5 If directed to do so by Owner or other permitting authority any time before the Work is accepted, the Contractor shall uncover portions of the completed Work for inspection. After inspection, the Contractor shall restore such portions of Work to the standard required by the Contract. If the Work uncovered is unacceptable or was done without required testing or inspection or sufficient notice to the Owner, the uncovering and restoration shall be done at the Contractor's expense. If the Work uncovered is acceptable and was done with sufficient notice to the Owner, the uncovering and restoration will be paid for pursuant to a Change Order.

B.7.6 If any testing or inspection reveals failure of the portions of the Work to comply with requirements established by the Contract Documents, all costs made necessary by such failure, including those of repeated procedures and compensation for the Owner's and Architect/Engineer's services and expenses, shall be at the Contractor's expense.

B.7.7 In Owner's sole discretion, it may authorize other interested parties to inspect the Work affecting their interests or property. Their right to inspect shall not make them a party to the Contract and shall not interfere with the rights of the parties of the Contract. Instructions or orders of such parties shall be transmitted to the Contractor, through the Owner.

B.8 SUBCONTRACTS AND ASSIGNMENT

B.8.1 Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound by the terms and conditions of these General Conditions and Supplemental General Conditions, and to assume toward the Contractor all of the obligations and responsibilities which the Contractor assumes toward the Owner thereunder, unless (1) the same are clearly inapplicable to the subcontract at issue because of legal requirements or industry practices, or (2) specific exceptions are requested by Contractor and approved in writing by Owner. Where appropriate, Contractor shall require each Subcontractor to enter into similar agreements with sub-subcontractors at any level.

B.8.2 At Owner's request, Contractor shall submit to Owner prior to their execution either Contractor's form of subcontract, or the subcontract to be executed with any particular Subcontractor. If Owner disapproves such form, Contractor shall not execute the form until the matters disapproved are resolved to Owner's satisfaction. Owner's review, comment upon or approval of any such form shall not relieve Contractor of its obligations under this Agreement or be deemed a waiver of such obligations of Contractor.

B.8.3 Contractor shall not assign, sell, or transfer its rights, or delegate its responsibilities under the Contract, in whole or in part, without the prior written approval of the Owner. No such written approval shall relieve Contractor of any obligations of the Contract, and any transferee shall be considered the agent of the Contractor and bound to perform in accordance with the Contract Documents. Contractor shall remain liable as between the original parties to the Contract as if no assignment had occurred.

B.9 OWNER'S RIGHT TO DO WORK

Owner reserves the right to perform other or additional work at or near the Project Site with other agents than those of the Contractor. If such work takes place within or next to the Project Site, Contractor shall coordinate work with the other contractors or agents, cooperate with all other contractors or forces, carry out the Work in a way that will minimize interference and delay for all agents involved, place and dispose of materials being used so as not to interfere with the operations of another, and join the Work with the work of the others in an acceptable manner and perform it in proper sequence to that of the others. The Owner will resolve any disagreements that may arise between or among Contractor and the other contractors over the method or order of doing all work (including the Work). In case of unavoidable interference, the Owner will establish work priority (including the Work) in the Owner's sole discretion.

B.10 OTHER CONTRACTS

In all cases and at any time, the Owner has the right to execute other contracts related to or unrelated to the Work of the Contract. The Contractor of the Contract shall fully cooperate with any and all other contractors without additional cost to the Owner in the manner described in Section B.13.

B.11 ALLOWANCES

B.11.1 The Contractor shall include in the Contract Price all allowances stated in the Contract Documents. Items covered by allowances

shall be supplied for such amounts and by such persons or entities as the Owner may direct.

B.11.2 Unless otherwise provided in the Contract Documents:

- (a) when finally reconciled, allowances shall cover the cost of the Contractor's materials and equipment delivered at the Project Site and all required taxes, less applicable trade discounts;
- (b) Contractor's costs for unloading and handling at the Project Site, labor, installation costs, Overhead, profit and other expenses contemplated for stated allowance amounts shall be included in the Contract Price but not in the allowances;
- (c) whenever costs are more than or less than allowances, the Contract Price shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect (i) the difference between actual costs and the allowances under Section B.17.2(a) and (ii) changes in Contractor's costs under Section B.17.2(b);
- (d) Unless Owner requests otherwise, Contractor shall provide to Owner a proposed fixed price for any allowance work prior to its performance.

B.12 SUBMITTALS, SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- B.12.1 The Contractor shall prepare and keep current, for the Architect's/Engineer's approval (or for the approval of Owner if approval authority has not been delegated to the Architect/Engineer), a schedule and list of submittals which is coordinated with the Contractor's construction schedule and allows the Architect/Engineer reasonable time to review submittals. Owner reserves the right to finally approve the schedule and list of submittals. Submittals include, without limitation, Shop Drawings, Product Data, and Samples.
- B.12.2 Shop Drawings, Product Data, Samples and similar submittals are not Contract Documents. The purpose of their submittal is to demonstrate for those portions of the Work for which submittals are required by the Contract Documents the way by which the Contractor proposes to conform to the information given and the design concept expressed in the Contract Documents. Review of submittals by the Architect/Engineer is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, or for approval of safety precautions or, unless otherwise specifically stated by the Architect/Engineer, of any construction means, methods, techniques, sequences or procedures, all of which remain the responsibility of the Contractor as required by the Contract Documents. The Architect/Engineer's review of the Contractor's submittals shall not relieve the Contractor of its obligations under the Contract Documents. The Architect/Engineer's approval of a specific item shall not indicate approval of an assembly of which the item is a component. Informational submittals upon which the Architect/Engineer is not expected to take responsive action may be so identified in the Contract Documents. Submittals which are not required by the Contract Documents may be returned by the Architect/Engineer without action.
- B.12.3 The Contractor shall review for compliance with the Contract Documents, approve and submit to the Architect/Engineer Shop Drawings, Product Data, Samples and similar submittals required by the Contract Documents with reasonable promptness and in such sequence as to cause no delay in the Work or in the activities of the Owner or of separate contractors. Submittals which are not marked as reviewed for compliance with the Contract Documents

and approved by the Contractor may be returned by the Architect/Engineer without action.

- B.12.4 By approving and submitting Shop Drawings, Product Data, Samples and similar submittals, the Contractor represents that the Contractor has determined and verified materials, field measurements and field construction criteria related thereto, or will do so, and has checked and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents.
- B.12.5 The Contractor shall perform no portion of the Work for which the Contract Documents require submittal and review of Shop Drawings, Product Data, Samples or similar submittals until the respective submittal has been approved by the Architect/Engineer.
- B.12.6 The Work shall be in accordance with approved submittals except that the Contractor shall not be relieved of responsibility for deviations from requirements of the Contract Documents by the Architect/Engineer's review or approval of Shop Drawings, Product Data, Samples or similar submittals unless the Contractor has specifically informed the Architect/Engineer in writing of such deviation at the time of submittal and (i) the Architect/Engineer has given written approval to the specific deviation as a minor change in the Work, or (ii) a Change Order has been executed by Owner authorizing the deviation. The Contractor shall not be relieved of responsibility for errors or omissions in Shop Drawings, Product Data, Samples or similar submittals by the Architect/Engineer's review or approval thereof.
- B.12.7 In the event that Owner elects not to have the obligations and duties described under this Section B.18 performed by the Architect/Engineer, or in the event no Architect/Engineer is employed by Owner on the Project, all obligations and duties assigned to the Architect/Engineer hereunder shall be performed by the Owner.

B.13 SUBSTITUTIONS

The Contractor may make Substitutions only with the written consent of the Owner, after evaluation by the Owner and only in accordance with a Change Order. Substitutions shall be subject to the requirements of the Solicitation Document. By making requests for Substitutions, the Contractor represents that the Contractor has personally investigated the proposed substitute product; represents that the Contractor will provide the same warranty for the Substitution that the Contractor would for the product originally specified unless approved otherwise; certifies that the cost data presented is complete and includes all related costs under the Contract including redesign costs, and waives all claims for additional costs related to the Substitution which subsequently become apparent; and will coordinate the installation of the accepted Substitution, making such changes as may be required for the Work to be completed in all respects.

B.14 USE OF PLANS AND SPECIFICATIONS

Plans, Specifications and related Contract Documents furnished to Contractor by Owner or Owner's Architect/Engineer shall be used solely for the performance of the Work under the Contract. Contractor and its Subcontractors and suppliers are authorized to use and reproduce applicable portions of such documents appropriate to the execution of the Work, but shall not claim any ownership or other interest in them beyond the scope of the Contract, and no such interest shall attach. Unless otherwise indicated, all common law, statutory and other reserved rights, in addition to copyrights, are retained by Owner.

SECTION C
WAGES AND LABOR

C.1 PREVAILING WAGE RATES ON PUBLIC WORKS

Contractor shall comply fully with the provisions of ORS 279C.800 through 279C.870. Pursuant to ORS 279C.830(1)(d), Contractor shall pay workers at not less than the specified minimum hourly rate of wage, and shall include that requirement in all subcontracts. If the Work is subject to both the state prevailing wage rate law and the federal Davis-Bacon Act, Contractor shall pay the higher of the applicable state or federal prevailing rate of wage. Contractor shall provide written notice to all workers of the number of hours per day and days per week such workers may be required to work.

C.2 PAYROLL CERTIFICATION AND FEE REQUIREMENTS

- C.2.1 In accordance with ORS 279C.845, the Contractor and every Subcontractor shall submit written certified statements to the Owner on the form prescribed by the Commissioner of the Bureau of Labor and Industries ("BOLI"), certifying the hourly rate of wage paid each worker which the Contractor or the Subcontractor has employed on the Project and further certifying that no worker employed on the Project has been paid less than the prevailing rate of wage or less than the minimum hourly rate of wage specified in the Contract, which certificate and statement shall be verified by the oath of the Contractor or the Subcontractor that the Contractor or Subcontractor has read the certified statement, that the Contractor or Subcontractor knows the contents of the certified statement, and, that to the Contractor's or Subcontractor's best knowledge and belief, the certified statement is true. The certified statements shall set out accurately and completely the payroll records for the prior week, including the name and address of each worker, the worker's correct classification, rate of pay, daily and weekly number of hours worked, deductions made, and actual wages paid. Certified statements for each week during which the Contractor or Subcontractor has employed a worker on the Project shall be submitted once a month, by the fifth (5th) business day of the following month. The Contractor and Subcontractors shall preserve the certified statements for a period of ten (10) years from the date of completion of the Contract.
- C.2.2 Pursuant to ORS 279C.845(7), the Owner shall retain 25 percent of any amount earned by the Contractor on the Project until the Contractor has filed the certified statements required by section C.2.1. The Owner shall pay to the Contractor the amount retained under this subsection within 14 days after the Contractor files the required certified statements, regardless of whether a Subcontractor has failed to file certified statements.
- C.2.3 Pursuant to ORS 279C.845(8), the Contractor shall retain 25 percent of any amount earned by a first-tier Subcontractor on this Project until the first-tier Subcontractor has filed with the Owner the certified statements required by C.2.1. Before paying any amount retained under this subsection, the Contractor shall verify that the first-tier Subcontractor has filed the certified statement. Within 14 days after the first-tier Subcontractor files the required certified statement the Contractor shall pay the first-tier Subcontractor any amount retained under this subsection.
- C.2.4 In accordance with statutory requirements and administrative rules promulgated by the Commissioner of the Bureau of Labor and Industries, the fee required by ORS 279C.825(1) will be paid by Owner to the Commissioner.

C.3 PROMPT PAYMENT AND CONTRACT CONDITIONS

- C.3.1 As a condition to Owner's performance hereunder, the Contractor shall:
- C.3.1.1 Make payment promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the Work provided for in the Contract.
- C.3.1.2 Pay all contributions or amounts due the State Industrial Accident Fund or successor program from such Contractor or Subcontractor incurred in the performance of the Contract.
- C.3.1.3 Not permit any lien or claim to be filed or prosecuted against the Owner on account of any labor or material furnished. Contractor will not assign any claims that Contractor has against Owner, or assign any sums due by Owner, to Subcontractors, suppliers, or manufacturers, and will not make any agreement or act in any way to give Subcontractors a claim or standing to make a claim against the Owner.
- C.3.1.4 Pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
- C.3.2 If Contractor fails, neglects or refuses to make prompt payment of any claim for labor or services furnished to the Contractor of a Subcontractor by any person in connection with the Project as such claim becomes due, the proper officer(s) representing the Owner may pay the claim and charge the amount of the payment against funds due or to become due Contractor under the Contract. Payment of claims in this manner shall not relieve the Contractor or the Contractor's surety from obligation with respect to any unpaid claims.
- C.3.3 Contractor shall include in each subcontract for property or services entered into by the Contractor and a first-tier subcontractor, including a material supplier, for the purpose of performing a construction contract, a payment clause that obligates the Contractor to pay the first-tier Subcontractor for satisfactory performance under its subcontract within ten (10) Days out of such amounts as are paid to the Contractor by the Owner under such contract.
- C.3.4 If the Contractor or a first-tier subcontractor fails, neglects or refuses to pay a person that provides labor or materials in connection with the Contract within 30 days after receiving payment from the contracting agency or a contractor, the Contractor or first-tier subcontractor owes the person the amount due plus interest charges that begin at the end of the 10-day period within which payment is due under ORS 279C.580 (4) and that end upon final payment, unless payment is subject to a good faith dispute as defined in ORS 279C.580. The rate of interest on the amount due is nine percent per annum. The amount of interest may not be waived.
- C.3.5 If the Contractor or a subcontractor fails, neglects or refuses to make payment to a person furnishing labor or materials in connection with the Contract, the person may file a complaint with the Construction Contractors Board, unless payment is subject to a good faith dispute as defined in ORS 279C.580.
- C.3.6 All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. Contractor shall ensure that each of its Subcontractors complies with these requirements.
- C.3.7 In accordance with ORS 279C.570, for all subcontracts that exceed \$500,000 that the Contractor withholds retainage, the Contractor shall place amounts deducted as retainage into an interest-bearing escrow account. Interest on the retainage amount accrues from the

date the payment request is approved until the date the retainage is paid to the Subcontractor to which it is due.

C.4 PAYMENT FOR MEDICAL CARE

As a condition to Owner's performance hereunder, Contractor shall promptly, as due, make payment to any person, co-partnership, association or corporation furnishing medical, surgical, and hospital care or other needed care and attention, incident to sickness or injury, to the employees of the Contractor, of all sums of which the Contractor agrees to pay for the services and all moneys and sums that the Contractor collected or deducted from the wages of employees under any law, contract or agreement for the purpose of providing or paying for the services.

C.5 HOURS OF LABOR

As a condition to Owner's performance hereunder, no person shall be employed to perform Work under the Contract for more than ten (10) hours in any one day or forty (40) hours in any one week, except in cases of necessity, emergency or where public policy absolutely requires it. In such instances, Contractor shall pay the employee at least time and a half pay:

- (a) For all overtime in excess of eight (8) hours a day or forty (40) hours in any one week when the work week is five consecutive Days, Monday through Friday; or
- (b) For all overtime in excess of ten (10) hours a day or forty (40) hours in any one week when the work week is four consecutive Days, Monday through Friday; and
- (c) For all Work performed on Saturday and on any legal holiday specified in ORS 279C.540.

This Section C.5 will not apply to Contractor's Work under the Contract to the extent Contractor is currently a party to a collective bargaining agreement with any labor organization.

This Section C.5 shall not excuse Contractor from completion of the Work within the time required under the Contract.

SECTION D CHANGES IN THE WORK

D.1 CHANGES IN WORK

D.1.1 The terms of the Contract shall not be waived, altered, modified, supplemented or amended in any manner whatsoever, without prior written agreement and then only after any necessary approvals have been obtained. A Change Order is required to modify the Contract, which shall not be effective until its execution by the parties to the Contract and all approvals required by public contracting laws have been obtained.

D.1.2 It is mutually agreed that changes in Plans, quantities, or details of construction may be necessary or desirable during the course of construction. Within the general scope of the Contract, the Owner may at any time, without notice to the sureties and without impairing the Contract, require changes it deems necessary or desirable within the scope of this Project and consistent with this Section D.1. All changes to the Work shall be documented and Change Orders shall be executed under the conditions of the Contract Documents. Such changes may include, but are not limited to:

- (a) Modification of specifications and design.
- (b) Increases or decreases in quantities.
- (c) Increases or decreases to the amount of Work.
- (d) Addition or elimination of any Work item.
- (e) Change in the duration of the Project.

- (f) Acceleration or delay in performance of Work.
- (g) Deductive changes.

Deductive changes are those that reduce the scope of the Work, and shall be made by mutual agreement whenever feasible. In cases of suspension or partial termination under Section J, Owner reserves the right to unilaterally impose a deductive change and to self-perform such Work, for which the provisions of Section B.13 (Owner's Right to Do Work) shall then apply. Adjustments in compensation shall be made under Section D.1.3, in which costs for deductive changes shall be based upon a Direct Costs adjustment together with the related percentage markup specified for profit, Overhead and other indirect costs, unless otherwise agreed to by Owner.

D.1.3 The Owner and Contractor agree that adjustments to or deletions from the Work shall be administered and compensated according to the following:

- (a) Unit Pricing: Unit pricing may be utilized at the Owner's option when unit prices or solicitation alternates were provided that established the cost for adjustments to Work, and a binding obligation exists under the Contract on the parties covering the terms and conditions of the adjustment to Work.
- (b) Fixed Fee: If the Owner elects not to utilize unit pricing, or in the event that unit pricing is not available or appropriate, fixed pricing may be used for adjustments to or deletions from the Work. In fixed pricing, the basis of payments or total price shall be agreed upon in writing between the parties to the Contract, and shall be established before the Work is done whenever feasible. Notwithstanding the foregoing, the mark-ups set forth in Section D.1.3(c) shall be utilized in establishing fixed pricing, and such mark-ups shall not be exceeded. Cost and price data relating to adjustments to or deletions from the Work shall be supplied by Contractor to Owner upon request, but Owner shall be under no obligation to make such requests.
- (c) Time and Material: In the event that unit pricing and fixed pricing are not utilized, then adjustments to or deletions from the Work shall be performed on a cost reimbursement basis for Direct Costs. Such Work shall be compensated on the basis of the actual, reasonable and allowable cost of labor, equipment, and material furnished on the Work performed. The Contractor or Subcontractor who performs the Work shall be allowed to add up to ten percent (10%) markup to the Direct Costs as full compensation for profit, Overhead and other indirect costs for Work performed with the Contractor's or Subcontractor's own agents

Each ascending tier Subcontractor or the Contractor that did not perform the Work, will be allowed to add up to five percent (5%) supplemental markup on the Direct Costs of the Work (but not the above allowable markups) covered by a Change Order. No additional markup shall be permitted for any third tier or greater descending Subcontractor.

Example: \$20,000 of Direct Costs Work performed by a 2nd Tier Subcontractor

	Markup	Allowed Total Fee Plus Markup
General Contractor	5%	\$1,000.00
1 st Tier Sub Contractor	5%	\$1,000.00
2 nd Tier Sub Contractor	10%	\$22,000.00

- (d) Payments made to the Contractor shall be complete compensation for Overhead, profit, and all costs that were incurred by the Contractor or by other agents furnished by the Contractor, including Subcontractors, for adjustments to or deletions from the Work pursuant to a Change Order. Owner may establish a maximum cost for additional Work under this Section D.1.3, which shall not be exceeded for reimbursement without additional written

authorization from Owner in the form of a Change Order. Contractor shall not be required to complete such additional Work without additional authorization.

- D.1.4 Any necessary adjustment of Contract Time that may be required as a result of adjustments to or deletions from the Work must be agreed upon by the parties before the start of the revised Work unless Owner authorizes Contractor to start the revised Work before agreement on Contract Time adjustment.

Contractor shall submit any request for additional compensation (and additional Contract Time if Contractor was authorized to start Work before an adjustment of Contract Time was approved) as soon as possible but no later than thirty (30) Days after receipt of Owner's request for additional Work. If Contractor's request for additional compensation or adjustment of Contract Time is not made within the thirty (30) Day time limit, Contractor's requests pertaining to that additional Work shall be barred. The thirty (30) Day time limit for making requests shall not be extended for any reason, including without limitation Contractor's claimed inability to determine the amount of additional compensation or adjustment of Contract Time, unless an extension is granted in writing by Owner. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, Contractor may proceed to file a Claim under Section D.3, Claims Review Process. No other reimbursement, compensation, or payment will be made, except as provided in Section D.1.5 for impact claims.

- D.1.5 If any adjustment to Work under Section D.1.3 causes an increase or decrease in the Contractor's cost of, or the Contract Time required for the performance of any other part of the Work under the Contract, Contractor shall submit a written request to the Owner, setting forth the nature and specific extent of the request, including all time and cost impacts against the Contract as soon as possible, but no later than thirty (30) Days after receipt of Owner's request for adjustments to or deletions from the Work by Contractor.

The thirty (30) Day time limit applies to claims of Subcontractors, suppliers, or manufacturers who may be affected by Owner's request for adjustments to or deletions from the Work and who request additional compensation or an extension of Contract Time to perform; Contractor has responsibility for contacting its Subcontractors, suppliers, or manufacturers within the thirty (30) Day time limit, and including their requests with Contractor's requests. If the request involves Work to be completed by Subcontractors, or materials to be furnished by suppliers or manufacturers, such requests shall be submitted to the Contractor in writing with full analysis and justification for the adjustments to compensation and Contract Time requested. The Contractor shall analyze and evaluate the merits of the requests submitted by Subcontractors, suppliers, and manufacturers to Contractor prior to including those requests and Contractor's analysis and evaluation of those requests with Contractor's requests for adjustments to compensation or Contract Time that Contractor submits to the Owner. Failure of Subcontractors, suppliers, manufacturers or others to submit their requests to Contractor for inclusion with Contractor's requests submitted to Owner within the time period and by the means described in this section shall constitute a waiver of these Subcontractor claims. The Owner will not consider direct requests or claims from Subcontractors, suppliers, manufacturers or others not a party to the Contract. The consideration of such requests and claims under this section does not give any Person, not a party to the Contract the right to bring a claim against Owner, whether in this claims process, in litigation, or in any dispute resolution process.

If the Owner denies the Contractor's request for adjustment to compensation or Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

- D.1.6 No request or Claim by the Contractor for additional costs or an adjustment of Contract Time shall be allowed if made after receipt of final payment application under the Contract. Final payment application must be made by Contractor within the time required under Section E.6.4.

- D.1.7 It is understood that changes in the Work are inherent in construction of this type. The number of changes, the scope of those changes, and the effect they have on the progress of the original Work cannot be defined at this time. The Contractor agrees that it will work in good faith with Owner to undertake changes, when agreed upon by execution of a Change Order. Each change will be evaluated for extension of Contract Time and increase or decrease in compensation based on its own merit.

D.2 DELAYS

- D.2.1 Contractor shall not be entitled to additional compensation or additional Contract Time for Avoidable Delays.

- D.2.2 In the event of Unavoidable Delays, Contractor may be entitled to the following:

- (a) Contractor may be entitled to additional compensation or additional Contract Time, or both, for Unavoidable Delays described in Section D.2.1.2 (a) and (b).
- (b) Contractor may be entitled to additional Contract Time for Unavoidable Delays described in Section D.2.1.2(c) and (d).

In the event of any requests for additional compensation or additional Contract Time, or both, as applicable, arising under this Section D.2.2 for Unavoidable Delays, other than requests for additional compensation or additional Contract Time for differing Project Site conditions for which a review process is established under Section A.4.5, Contractor shall submit a written notification of the delay to the Owner within two (2) Days of the occurrence of the cause of the delay. This written notification shall state the cause of the potential delay, the Project components impacted by the delay, and the anticipated additional Contract Time extension or the additional compensation, or both, as applicable, resulting from the delay. Within seven (7) Days after the cause of the delay has been mitigated, or in no case more than thirty (30) Days after the initial written notification, the Contractor shall submit to the Owner, a complete and detailed request for additional compensation or additional Contract Time, or both, as applicable, resulting from the delay. If the Owner denies Contractor's request for additional compensation or adjustment of Contract Time, the Contractor may proceed to file a Claim under Section D.3, Claims Review Process.

If Contractor does not timely submit the notices required under this Section D.2, Contractor's Claim shall be barred.

D.3 CLAIMS REVIEW PROCESS

- D.3.1 All Contractor Claims shall be referred to the Owner for review. Contractor's Claims, including Claims for adjustments to compensation or Contract Time, shall be submitted in writing by Contractor to the Owner within five (5) Days after a denial of Contractor's initial request for an adjustment of Contract terms, payment of money, extension of Contract Time or other relief, provided that such initial request has been submitted in accordance with the requirements and within the time limits established in these County General Conditions. Within thirty (30) Days after the initial Claim, Owner shall receive from Contractor a complete and detailed description of the Claim (the "Detailed Notice") that includes all information required by Section D.3.2. Unless the Claim is made in accordance with these time requirements, it shall be barred.

D.3.2 The Detailed Notice of the Claim shall be submitted in writing by Contractor and shall include all information, records and documentation necessary for the Owner to properly and completely evaluate the claim, including, but not limited to a detailed, factual statement of the basis of the Claim, pertinent dates, Contract provisions which support or allow the Claim, reference to or copies of any documents which support the Claim, the dollar value of the Claim, and the Contract Time adjustment requested for the Claim. If the Claim involves Work to be completed by Subcontractors, the Contractor will analyze and evaluate the merits of the Subcontractor claim prior to forwarding it and that analysis and evaluation to the Owner. The Owner will not consider direct claims from Subcontractors, suppliers, manufacturers, or others not a party to the Contract. Contractor agrees that it will make no agreement, covenant, or assignment, nor will it commit any other act that will permit or assist any Subcontractor, supplier, manufacturer, or other to directly or indirectly make a claim against Owner.

D.3.3 The Owner, through the Architect/Engineer (or other employee or agent assigned by the Owner) will review all Claims and take one or more of the following preliminary actions within ten (10) Days of receipt of the Detailed Notice of a Claim: (1) request additional supporting information from the Contractor; (2) inform the Contractor and Owner in writing of the time required for adequate review and response; (3) reject the Claim in whole or in part and identify the reasons for rejection; (4) recommend approval of all or part of the Claim; (5) arrange a meeting with the Contractor for formal review of the Claim; or (6) propose an alternate resolution.

D.3.4 Once the Engineer or Project Manager determines the Owner is in receipt of a properly submitted claim, the Engineer or Project Manager may arrange a meeting, as agreed by the parties, with the Contractor in order to present the claim for formal review and discussion. A person authorized by the Contractor to execute Change Orders on behalf of the Contractor must be present and attend all claim meetings.

D.3.5 The Owner's decision, through the Architect/Engineer (or other employee or agent assigned by the Owner), shall be final and binding on the Contractor unless appealed by written notice to the Owner within fifteen (15) Days of receipt of the decision. The Contractor must present written documentation supporting the Claim within fifteen (15) Days of the notice of appeal. After receiving the appeal documentation, the Owner, through the appropriate department director, shall review the materials and render a decision within thirty (30) Days after receiving the appeal documents.

D.3.6 If, at any step in the claim decision or review process, the Contractor fails to promptly submit requested information or documentation that the Owner deems necessary to analyze the claim, the Contractor is deemed to have waived its right to further review, and the Claim will not be considered properly filed and preserved.

D.3.7 Both parties agree to exercise their best efforts in good faith to resolve all disputes within sixty (60) Days of the issuance of the appeal in Section D. 3.4 above. If the parties are unable to resolve their issues through mediation or otherwise, either party may seek redress through all available remedies in equity or in law.

D.3.8 Unless otherwise directed by Owner, Contractor shall proceed with the Work while any Claim, or mediation or litigation arising from a Claim, is pending. Regardless of the review period or the final decision of the Owner, the Contractor shall continue to diligently pursue the Work as identified in the Contract Documents. In no case is the Contractor justified or allowed to cease or delay Work, in whole or in part, without a written stop work order from the Owner.

SECTION E PAYMENTS

E.1 SCHEDULE OF VALUES

The Contractor shall submit, by or before the pre-construction conference (as described in Section H.1.3), a schedule of values ("Schedule of Values") for the Contract Work. This schedule shall provide a breakdown of values for the Contract Work and will be the basis for progress payments. The breakdown shall demonstrate reasonable, identifiable, and measurable components of the Work. Unless objected to by the Owner, this schedule shall be used as the basis for reviewing Contractor's applications for payment. If objected to by Owner, Contractor shall revise the schedule of values and resubmit the same for approval of Owner.

E.2 APPLICATIONS FOR PAYMENT

E.2.1 Owner shall make progress payments on the Contract monthly as Work progresses, in accordance with the requirements of this Section E.2 and ORS 279C.570. Applications for payment shall be based upon estimates of Work completed and the Schedule of Values. As a condition precedent to Owner's obligation to pay, all applications for payment shall be approved by the Owner. A progress payment shall not be considered acceptance or approval of any Work or waiver of any defects therein. Owner shall pay to Contractor interest in accordance with ORS 279C.570 for overdue invoices, not including retainage, due the Contractor. Overdue invoices will be those that have not been paid within the earlier of:

- (a) Thirty (30) days after receipt of the invoice; or
- (b) Fifteen (15) days after the payment is approved by the County.

Notwithstanding the foregoing, in instances when an application for payment is filled out incorrectly, or when there is any defect or impropriety in any submitted application or when there is a good faith dispute, Owner shall so notify the Contractor within fifteen (15) Days stating the reason or reasons the application for payment is defective or improper or the reasons for the dispute. A defective or improper application for payment, if corrected by the Contractor within seven (7) Days of being notified by the Owner, shall not cause a payment to be made later than specified in this section unless interest is also paid. Payment of interest will be postponed when payment on the principal is delayed because of disagreement between the Owner and the Contractor.

Owner reserves the right, instead of requiring the Contractor to correct or resubmit a defective or improper application for payment, to reject the defective or improper portion of the application for payment and pay the remainder of the application for such amounts which are correct and proper.

Owner, upon written notice to the Contractor, may elect to make payments to the Contractor only by means of Electronic Funds Transfers ("EFT") through Automated Clearing House ("ACH") payments. If Owner makes this election, the Contractor shall arrange for receipt of the EFT/ACH payments.

E.2.2 Contractor shall submit to the Owner an application for each payment and, if required, receipts or other vouchers showing payments for materials and labor including payments to Subcontractors. Contractor shall include in its application for payment a schedule of the percentages of the various parts of the Work completed, based on the Schedule of Values which shall aggregate to the payment application total, and shall include, on the face of each copy thereof, a certificate in substantially the following form:

"I, the undersigned, hereby certify that the above bill is true and correct, and the payment therefore, has not been received.

Signed: _____
Dated: _____"

E.2.3 Generally, applications for payment will be accepted only for materials that have been installed. Under special conditions, applications for payment for stored materials will be accepted at Owner's sole discretion. Such a payment, if made, will be subject to the following conditions:

- (a) The request for stored material shall be submitted at least thirty (30) Days in advance of the application for payment on which it appears. Applications for payment shall be entertained for major equipment, components or expenditures only.
- (b) The Contractor shall submit applications for payment showing the quantity and cost of the material stored.
- (c) The material shall be stored in a bonded warehouse and Owner shall be granted the right to access the material for the purpose of removal or inspection at any time during the Contract Period.
- (d) The Contractor shall name the Owner as co-insured on the insurance policy covering the full value of the property while in the care and custody of the Contractor until it is installed. A certificate noting this coverage shall be issued to the Owner.
- (e) Payments shall be made for materials and equipment only. The submitted amount in the application for payment shall be reduced by the cost of transportation from the storage site to the Project Site and for the cost of an inspector to verify delivery and condition of the goods at the storage site. The cost of storage and inspection shall be borne solely by the Contractor.
- (f) Within sixty (60) Days of the application for payment, the Contractor shall submit evidence of payment covering the material and/or equipment stored and of payment for the storage site.
- (g) Payment for stored materials and/or equipment shall in no way indicate acceptance of the materials and/or equipment or waive any rights under the Contract for the rejection of the Work or materials and/or equipment not in conformance with the Contract Documents.
- (h) All required documentation shall be submitted with the respective application for payment.

E.2.4 The Owner reserves the right to withhold all or part of a payment, or may nullify in whole or part any payment previously made, to such extent as may be necessary in the Owner's opinion to protect the Owner from loss because of:

- (a) Work that is defective and not remedied, or that has been demonstrated or identified as failing to conform with Applicable Laws or the Contract Documents;
- (b) third party claims filed or evidence reasonably indicating that such claims will likely be filed unless security acceptable to the Owner is provided by the Contractor;
- (c) failure of the Contractor to make payments properly to Subcontractors or for labor, materials or equipment (in which case Owner may issue checks made payable jointly to Contractor and such unpaid persons under this provision, or directly to Subcontractors and suppliers at any level under Section C.3.2);

- (d) reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;
- (e) damage to the Work, Owner or Owner's agent;
- (f) reasonable evidence that the Work will not be completed within the Contract Time required by the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
- (g) failure to carry out the Work in accordance with the Contract Documents; or
- (h) assessment of liquidated damages, when withholding is made for offset purposes.

E.2.5 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

- (a) Take that portion of the Contract Price properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Price allocated to that portion of the Work in the Schedule of Values, less retainage as provided in Section E.5. Pending final determination of cost to the Owner of changes in the Work, no amounts for changes in the Work can be included in applications for payment until the Contract Price has been adjusted by a Change Order;
- (b) Add that portion of the Contract Price properly allocable to materials and equipment delivered and suitably stored at the Project Site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner pursuant to Section E.2.3, suitably stored off the Project Site at a location agreed upon in writing), less retainage as provided in Section E.5;
- (c) Subtract the aggregate of previous payments made by the Owner; and
- (d) Subtract any amounts for which the Owner has withheld or nullified payment as provided in the Contract Documents.

E.2.6 Contractor's applications for payment shall not include requests for payment for portions of the Work for which the Contractor does not intend to pay to a Subcontractor or material supplier.

E.2.7 The Contractor warrants to Owner that title to all Work covered by an application for payment will pass to the Owner no later than the time of payment. The Contractor further warrants that upon submittal of an application for payment all Work for which payments are received from the Owner shall be free and clear of liens, claims, security interests or encumbrances in favor of the Contractor, Subcontractors, material suppliers, or other persons or entities making a claim by reason of having provided financing, labor, materials and equipment relating to the Work.

E.2.8 If Contractor disputes any determination by Owner with regard to any application for payment, Contractor nevertheless shall continue to expeditiously perform the Work. No payment made hereunder shall be or be construed to be final acceptance or approval of that portion of the Work to which such partial payment relates or shall relieve Contractor of any of its obligations hereunder.

E.3 PAYROLL CERTIFICATION REQUIREMENT

Owner's receipt of payroll certification pursuant to Section C.2 of the Contract shall be a condition precedent to Owner's obligation to pay any progress payments or final payment otherwise due.

E.4 DUAL PAYMENT SOURCES

Contractor shall not be compensated for Work performed under the Contract from any state agency other than the agency that is a party to the Contract.

E.5 RETAINAGE

E.5.1 Retainage shall be withheld and released in accordance with the requirements set forth in Local Contract Review Board Rules or the applicable County standard.

E.5.1.1 Owner may reserve as retainage from any progress payment an amount not to exceed five percent of the payment. As Work progresses, Owner may reduce the amount of retainage on or may eliminate retainage on any remaining monthly Contract payments after fifty (50) percent of the Work under the Contract is completed if, in the Owner's discretion, such Work is progressing satisfactorily. Elimination or reduction of retainage shall be allowed only upon written application by the Contractor, which application shall include written approval of Contractor's surety; except that when the Work is ninety-seven and a half percent (97.5%) completed in Owner's estimation, the Owner may, at its discretion and without application by the Contractor, reduce the retained amount to hundred (100) percent of the value of the Work remaining to be done. Upon receipt of written application by the Contractor, Owner shall respond in writing within a reasonable time.

E.5.1.2 If retainage is withheld, unless the Contractor requests and the Owner accepts a form of retainage described in options (a) or (b) below, the Owner (except as otherwise provided below for a contract of \$500,000 or less), will deposit the retainage in an interest-bearing escrow account as required by ORS 279C.570(2). The Contractor shall execute such documentation and instructions respecting the interest-bearing escrow account as the Owner may require to protect its interests, including but not limited to a provision that no funds may be paid from the account to anyone without the Owner's advance written authorization. For a Contract over \$500,000, if the Contractor requests that the Owner deposit the retainage in an interest-bearing account under ORS 279C.560(5), the Owner will use an interest-bearing escrow account as stated above. For a Contract of \$500,000 or less, if the Contractor requests that the Owner deposit the retainage in an interest-bearing account under ORS 279C.560(5), the Owner will use an interest-bearing account (in a bank, savings bank, trust company or savings association) as provided under ORS 279C.450(5).

In accordance with the provisions of ORS 279C.560, Local Contract Review Board Rules, or the applicable County standard, unless the Owner finds in writing that accepting bonds, securities or other instruments described in option (a) below or a security bond described in option (b) below poses an extraordinary risk that is not typically associated with the bond, security or instrument, the Owner will approve the Contractor's written request:

- a. to be paid amounts which would otherwise have been retained from progress payments where Contractor has deposited acceptable bonds, securities or other instruments of equal value with Owner or in a custodial account or other mutually-agreed account satisfactory to Owner, with an approved bank or trust company to be held in lieu of the cash retainage for the benefit of Owner. Interest or earnings on the bonds, securities or other instruments shall accrue to the Contractor. The Contractor shall execute and provide such documentation and instructions respecting the bonds, securities and other instruments as the Owner may require to protect its interests. To be permissible, the bonds, securities and other instruments must be of a character approved by Owner; or

- b. that the Contractor be allowed, with the approval of the Owner, Owner allow Contractor to deposit a surety bond for the benefit of Owner, in a form acceptable to Owner, in lieu of all or a portion of funds retained, or to be retained. Such bond and any proceeds therefrom shall be made subject to all claims and liens in the manner and priority as set forth for retainage under ORS 279C.550 to ORS 279C.625.

When the Owner has accepted the Contractor's election of option (a) or (b), Owner may recover from Contractor any additional costs incurred through such election by reducing Contractor's final payment. Where the Owner has agreed to Contractor's request for option (b), Contractor shall accept like bonds from Subcontractors and suppliers on the Project from which Contractor has required retainages.

E. 5.1.3 The retainage held by Owner shall be included in and paid to the Contractor as part of the final payment of the Contract Price. The Owner shall pay to Contractor interest at the rate of two thirds of one percent per month on the final payment due Contractor, interest to commence forty-five (45) Days after the date which Owner receives Contractor's final approved application for payment and Work under the Contract has been completed and accepted and to run until the date when final payment is tendered to Contractor. The Contractor shall notify Owner in writing when the Contractor considers the Work complete and deliver to Owner its final application for payment and Owner shall, within fifteen (15) Days after receiving the written notice and the application for payment, either accept the Work or notify the Contractor of Work yet to be performed on the Contract. If Owner does not within the time allowed notify the Contractor of Work yet to be performed to fulfill contractual obligations, the interest provided by this subsection shall commence to run forty-five (45) Days after the end of the fifteen (15) Day period.

E.5.1.4 Owner will reduce the amount of the retainage if the Contractor notifies the Owner that the Contractor has deposited in an escrow account with a bank or trust company, in a manner authorized by the Owner, bonds and securities of equal value of a kind approved by the Owner and such bonds and securities have in fact been deposited.

E.5.1.5 Contractor agrees that if Contractor elects to reserve a retainage from any progress payment due to any Subcontractor or supplier, such retainage shall not exceed five percent of the payment, and such retainage withheld from Subcontractors and suppliers shall be subject to the same terms and conditions stated in Subsection E.5 as apply to Owner's retainage from any progress payment due to Contractor.

E.5.1.6 The Contractor shall comply with all applicable legal requirements for withholding and releasing retainage and for prompt payments, including but not limited to those in ORS Chapters 279C and 701, and 49 CFR 26.29.

E.6 FINAL PAYMENT

E.6.1 Upon completion of all the Work under the Contract, the Contractor shall notify the Owner, in writing, that Contractor has completed Contractor's obligations under the Contract and shall prepare its application requesting final payment. The amount of final payment will be the difference between the total amount due the Contractor pursuant to the Contract Documents and the sum of all payments previously made. Upon receipt of such notice and application for payment, the Owner will inspect the Work, and, if acceptable, submit to Contractor a recommendation as to acceptance of the completed Work and the final estimate of the amount due the Contractor. If the Work is not acceptable, Owner will notify Contractor within fifteen (15) Days of Contractor's request for final payment. Upon approval of this final application for payment by the Owner and compliance by the Contractor with

provisions in Section K, and Contractor's satisfaction of other provisions of the Contract Documents as may be applicable, the Owner shall pay to the Contractor all monies due under the provisions of these Contract Documents.

- E.6.2 Neither final payment nor any remaining retained percentage shall become due until the Contractor submits to the Owner (1) a certificate evidencing that insurance required by the Contract Documents to remain in force after final payment is currently in effect and will not be canceled or allowed to expire until at least thirty (30) Days' prior written notice has been given to the Owner, (2) a written statement that the Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents, (3) consent of surety, if any, to final payment and (4), if required by the Owner, other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the Owner. If a Subcontractor refuses to furnish a release or waiver required by the Owner, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against such lien. If such lien remains unsatisfied after payments are made, the Contractor shall refund to the Owner all money that the Owner may be compelled to pay in discharging such lien.
- E.6.3 Acceptance of final payment by the Contractor, a Subcontractor or material supplier shall constitute a waiver of claims by that payee except those previously made in writing and identified by that payee as unsettled at the time of final application for payment.
- E.6.4 Contractor agrees to submit its final payment application within ninety (90) Days after Substantial Completion, unless written extension is granted by Owner. Contractor shall not delay final payment application for any reason, including without limitation nonpayment of Subcontractors, suppliers, manufacturers or others not a party to the Contract, or lack of resolution of a dispute with Owner or any other person of matters arising out of or relating to the Contract. If Contractor fails to submit its final payment application within ninety (90) Days after Substantial Completion, and Contractor has not obtained written extension by Owner, all requests or Claims for additional costs or an extension of Contract Time shall be barred.

SECTION F

PROJECT SITE CONDITIONS

F.1 USE OF PREMISES

Contractor shall confine equipment, storage of materials and operation of Work to the limits indicated by Contract Documents, Applicable Laws, permits or directions of the Owner. Contractor shall follow the Owner's instructions regarding use of premises, if any.

F.2 PROTECTION OF WORKERS, PROPERTY AND THE PUBLIC

- F.2.1 Contractor shall maintain continuous and adequate protection of all of the Work from damage and shall protect the Owner, workers and property from injury or loss arising in connection with the Contract. Contractor shall remedy acceptably to the Owner any damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by authorized representatives or personnel of the Owner. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents.
- F.2.2 Contractor shall take all necessary precautions for the safety of all personnel on the Project Site or otherwise engaged in the undertaking of the Work and shall comply with the Contract Documents, best practices and all applicable provisions of federal, state and municipal safety laws and building codes to prevent

accidents or injury to persons on, about or adjacent to the premises where the Work is being performed. Contractor shall erect and properly maintain at all times, as required by the conditions and progress of the Work, all necessary safeguards for protection of workers and the public against any hazards created by construction. Contractor shall designate a responsible employee or associate on the Project Site, whose duty shall be the prevention of accidents. The name and position of the person designated shall be reported to the Owner. The Owner has no responsibility for Project Site safety. Project Site safety shall be the responsibility of the Contractor.

- F.2.3 Contractor shall not enter upon private property without first obtaining permission from the property owner or its duly authorized representative. Contractor shall be responsible for the preservation of all public and private property along and adjacent to the Work contemplated under the Contract and shall use every precaution necessary to prevent damage thereto. In the event the Contractor damages any property, the Contractor shall at once notify the property owner and make, or arrange to make, full restitution. Contractor shall, immediately and in writing, report to the Owner, all pertinent facts relating to such property damage and the ultimate disposition of the claim for damage.
- F.2.4 Contractor shall be responsible for protection of adjacent work areas including impacts brought about by activities, equipment, labor, utilities, vehicles and materials on the Project Site.
- F.2.5 Contractor shall at all times direct its activities in such a manner as to minimize adverse effects on the environment. Handling of all materials shall be conducted so no release will occur that may pollute or become hazardous.
- F.2.6 In an emergency affecting the safety of life or limb or of the Work or of adjoining property, the Contractor, without special instruction or authorization from the Owner, shall act reasonably to prevent threatened loss or injury, and shall so act, without appeal, if instructed by the Owner. Any compensation claimed by the Contractor on account of emergency work shall be determined in accordance with section D.
- F.2.7 Contractor shall comply with all Owner safety rules and regulations, if applicable. Prior to commencement of any Work, Contractor and Subcontractors shall be required to complete an Owner Contractor Safety Orientation and submit all Owner required safety plans.
- F.2.8 Contractor shall demonstrate that an employee drug testing program is in place.

F.3 CUTTING AND PATCHING

- F.3.1 If applicable, Contractor shall be responsible for coordinating all cutting, fitting, or patching of the Work to make its several parts come together properly and fit to receive or be received by work of other contractors or Subcontractors shown upon, or reasonably implied by, the Contract Documents.
- F.3.2 If applicable, Contractor shall be responsible for restoring all cut, fitted, or patched surfaces to an original condition; provided, however, that if a different condition is specified in the Contract Documents, then Contractor shall be responsible for restoring such surfaces to the condition specified in the Contract Documents.

F.4 CLEANING UP

From time to time as may be prudent or ordered by the Owner and, in any event, immediately after completion of the Work, the Contractor shall, at its own expense, clean up and remove all refuse and unused materials of any kind resulting from the Work. If Contractor fails to do so within twenty-four (24) hours after notification by the Owner the work may be

done by others and the cost charged to the Contractor and deducted from payment due the Contractor.

F.5 ENVIRONMENTAL CONTAMINATION

F.5.1. Contractor shall be held responsible for and shall indemnify, defend (with counsel of Owner's choice), and hold harmless Owner from and against any costs, expenses, damages, claims, and causes of action, or any of them, resulting from all spills, releases, discharges, leaks and disposal of environmental pollution, including storage, transportation, and handling during the performance of the Work or Contractor's obligations under the Contract which occur as a result of, or are contributed by, the negligence or actions of Contractor or its personnel, agents, or Subcontractors or any failure to perform in accordance with the Contract Documents (except to the extent otherwise void under ORS 30.140). Nothing in this section F.5.1 shall limit Contractor's responsibility for obtaining insurance coverages required under Section G.3 of the Contract, and Contractor shall take no action that would void or impair such coverages.

F.5.1.1 Contractor agrees to promptly dispose of such spills, releases, discharge or leaks to the satisfaction of Owner and regulatory agencies having jurisdiction in a manner that complies with Applicable Laws. Cleanup shall be at no cost to the Owner and shall be performed by properly qualified and, if applicable, licensed personnel.

F.5.1.2 Unless otherwise approved in the Solicitation Document, Contractor shall obtain the Owner's written consent prior to bringing onto the Project Site any (i) environmental pollutants or (ii) hazardous substances or materials, as the same or reasonably similar terms are used in any Applicable Laws. In any event, Contractor shall provide prior written notice to Owner when hazardous materials are brought on to the Project Site. The Contractor, at all times, shall:

- (a) properly handle, use and dispose of all environmental pollutants and hazardous substances or materials on the Project Site, in accordance with all Applicable Laws;
- (b) be responsible for any and all spills, releases, discharges, or leaks of (or from) environmental pollutants or hazardous substances or materials which Contractor has brought onto the Project Site; and
- (c) promptly clean up and remediate, without cost to the Owner, such spills, releases, discharges, or leaks to the Owner's satisfaction and in compliance with all Applicable Laws.

F.5.2 Contractor shall report all reportable quantity releases, as such releases are defined in Applicable Laws. Upon discovery, regardless of quantity, Contractor must verbally report all releases to the Owner in a prompt manner. A written follow-up report shall be submitted to Owner within 48 hours of the telephonic report. Such written report shall contain, as a minimum:

- (a) Description of items released (identity, quantity, manifest numbers, and any and all other documentation required by law).
- (b) Whether amount of items released is EPA/DEQ reportable, and, if so, when reported.
- (c) Exact time and location of release, including a description of the area involved.
- (d) Containment procedures initiated.

(e) Summary of communications about the release between Contractor and State, local or federal officials other than Owner. Any communication to the press will be done by Owner and Contractor will defer to Owner.

(f) Description of cleanup procedures employed or to be employed at the Project Site, including disposal location of spill residue.

(g) Personal injuries, if any, resulting from, or aggravated by, the release.

F.6 ENVIRONMENTAL CLEAN-UP

F.6.1 Unless disposition of environmental pollution is specifically a part of the Contract, or was caused by the Contractor (reference F.5 Environmental Contamination), Contractor shall immediately notify Owner of any hazardous substance(s) which Contractor discovers or encounters during performance of the Work required by the Contract. "Hazardous substance(s)" means any hazardous, toxic and radioactive materials and those substances defined as "hazardous substances," "hazardous materials," "hazardous wastes," "toxic substances," or other similar designations in any federal, state, or local law, regulation, or ordinance, including without limitation asbestos, polychlorinated biphenyl ("PCB"), or petroleum, and any substances, materials or wastes regulated by 40 CFR, Part 261 and defined as hazardous in 40 CFR S 261.3. In addition to notifying Owner of any hazardous substance(s) discovered or encountered, Contractor shall immediately cease working in any particular area of the Project where a hazardous substance(s) has been discovered or encountered if continued work in such area would present a risk or danger to the health or wellbeing of Contractor's or any Subcontractor's work force, property or the environment.

F.6.2 Upon being notified by Contractor of the presence of hazardous substance(s) on the Project Site, not brought on to the Project Site by Contractor, Owner shall arrange for the proper disposition of such hazardous substance(s).

F.7 DEMOLITION

F.7.1 For demolition tasks, if any, the Contractor shall salvage or recycle construction and demolition debris, if feasible and cost-effective.

SECTION G **INDEMNITY, BONDING, AND INSURANCE**

G.1 RESPONSIBILITY FOR DAMAGES / INDEMNITY

G.1.1 Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay that may be caused by, or result from, the carrying out of the Work to be done under the Contract, or from any act, omission or neglect of the Contractor, its Subcontractors, employees, guests, visitors, invitees and agents.

G.1.2 To the fullest extent permitted by law, Contractor shall indemnify, defend (with counsel approved by Owner) and hold harmless the Owner and its elected officials, officers, directors, agents, and employees (collectively "Indemnitees") from and against all liabilities, damages, losses, claims, expenses, demands and actions of any nature whatsoever which arise out of, result from or are related to: (a) any damage, injury, loss, expense, inconvenience or delay described in this Section G.1; (b) any accident or occurrence which happens or is alleged to have happened in or about the Project Site or any place where the Work is being performed, or in the vicinity of either, at any time prior to the time the Work is fully completed in all respects; (c) any failure of the Contractor to

observe or perform any duty or obligation under the Contract Documents which is to be observed or performed by the Contractor, or any breach of any agreement, representation or warranty of the Contractor contained in the Contract Documents or in any subcontract; (d) the negligent acts or omissions of the Contractor, a Subcontractor or anyone directly or indirectly employed by them or any one of them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder (except to the extent otherwise void under ORS 30.140); and (e) any lien filed upon the Project or bond claim in connection with the Work. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section G.1.2.

- G.1.3 In claims against any person or entity indemnified under Section G.1.2 by an employee of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, the indemnification obligation under Section G.1.2 shall not be limited on amount or type of damages, compensation or benefits payable by or for the Contractor or a Subcontractor under workers' compensation acts, disability benefit acts or other employee benefit acts.

G.2 PERFORMANCE AND PAYMENT SECURITY; PUBLIC WORKS BOND

- G.2.1 When the Contract Price is \$50,000 or more, the Contractor shall furnish and maintain in effect at all times during the Contract Period a performance bond in a sum equal to the Contract Price and a separate payment bond also in a sum equal to the Contract Price. Contractor shall furnish such bonds even if the Contract Price is less than the above thresholds if otherwise required by the Contract Documents. If the Contract Price is increased, Contractor shall increase its payment and performance bonds to reflect the amended Contract Price.
- G.2.2 Bond forms furnished by the Owner and notarized by Contractor's surety company authorized to do business in Oregon are the only acceptable forms of performance and payment security, unless otherwise specified in the Contract Documents.
- G.2.3 Before execution of the Contract, the Contractor shall file with the Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by Oregon Revised Statutes, Chapter 279C.830 and 279C.836, unless otherwise exempt under those provisions. The Contractor shall also include in every subcontract a provision requiring the Subcontractor to have a public works bond filed with the Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the Subcontractor has filed a public works bond before permitting any Subcontractor to start Work.

G.3 INSURANCE

- G.3.1 Primary Coverage: Insurance carried by Contractor under the Contract shall be the primary coverage. The coverages indicated are minimums unless otherwise specified in the Contract Documents.
- G.3.2 Workers' Compensation: All employers, including Contractor, that employ subject workers who work under the Contract in the State of Oregon shall comply with ORS 656.017 and provide the required Workers' Compensation coverage, unless such employers are exempt under ORS 656.126. This shall include Employer's Liability Insurance with coverage limits of not less than the minimum amount required by statute for each accident. Contractors who perform the Work without the assistance or labor of any employee need not obtain such coverage if the Contractor certifies so in writing. Contractor shall ensure that each of its

Subcontractors complies with these requirements. The Contractor shall require proof of such Workers' Compensation coverage by receiving and keeping on file a certificate of insurance from each Subcontractor or anyone else directly employed by either the Contractor or its Subcontractors.

G.3.3 Builder's Risk Insurance:

- G.3.3.1 Builder's Risk: During the term of the Contract, for new construction the Contractor shall obtain and keep in effect Builder's Risk insurance on an all risk forms, including earthquake and flood, for an amount equal to the full amount of the Contract, plus any changes in values due to modifications, Change Orders and loss of materials added. Such Builder's Risk shall include, in addition to earthquake and flood, theft, vandalism, mischief, collapse, transit, debris removal, and architect's fees "soft costs" associated with delay of Project due to insured peril. Any deductible shall not exceed \$50,000 for each loss, except the earthquake and flood deductible which shall not exceed 2 percent of each loss or \$50,000, whichever is greater. The deductible shall be paid by Contractor. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear.

- G.3.3.2 Builder's Risk Installation Floater: For Work other than new construction, Contractor shall obtain and keep in effect during the term of the Contract, a Builder's Risk Installation Floater for coverage of the Contractor's labor, materials and equipment to be used for completion of the Work performed under the Contract. The minimum amount of coverage to be carried shall be equal to the full amount of the Contract. The policy will include as loss payees Owner, the Contractor and its Subcontractors as their interests may appear. Owner may waive this requirement at its sole and absolute discretion.

- G.3.3.3 Such insurance shall be maintained until Owner has occupied the facility.

- G.3.3.4 A loss insured under the Builder's Risk insurance shall be adjusted by the Owner and made payable to the Owner as loss payee. The Contractor shall pay Subcontractors their just shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require Subcontractors to make payments to their Sub-subcontractors in similar manner. The Owner shall have power to adjust and settle a loss with insurers.

G.3.4 General Liability Insurance:

- G.3.4.1 Commercial General Liability: Upon execution of a Contract, Contractor shall obtain, and keep in effect at Contractor's expense for the term of the Contract, Commercial General Liability Insurance ("CGL") covering bodily injury and property damage in the amount of not less than \$1,000,000 per claim and \$2,000,000 per occurrence in a form satisfactory to Owner. This insurance shall include personal injury liability, products and completed operations, and contractual liability coverage for the indemnities provided under the Contract (to the extent contractual liability coverage for the indemnity is available in the marketplace), and shall be issued on an occurrence basis written on ISO Form GC 00 01 (12 04 or later) or an equivalent form approved in advance by Owner. The CGL shall provide separation of insured language. The policy or policies obtained by Contractor for purposes of fulfilling the requirements of this section shall be primary insurance with respect to the Owner. Any insurance or self-insurance maintained by the County shall be excess and shall not contribute to it.

- G.3.4.2 Automobile Liability: Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Automobile Liability Insurance covering owned, and/or hired

vehicles, as applicable. The coverage may be written in combination with the Commercial General Liability Insurance. Contractor shall provide proof of insurance of not less than \$1,000,000 per claim and \$2,000,000 per occurrence. Contractor and its Subcontractors shall be responsible for ensuring that all non-owned vehicles maintain adequate Automobile Liability insurance while on Project Site.

- G.3.4.3 Owner may adjust the insurance amounts required in Section G.3.4.1 and G.3.4.2 based upon institution specific risk assessments through the issuance of Supplemental General Conditions and a Contract.
- G.3.4.4 To the extent that the Contract Documents require the Contractor to provide professional design services, design-build, or certifications related to systems, materials, or equipment, the Contractor shall (1) purchase and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim and \$2,000,000 general annual aggregate and (2) cause those Subcontractors (of any tier) who are providing professional design services including any design-build services to procure and maintain professional liability/errors-and-omissions insurance with limits of not less than \$1,000,000 for each claim and \$2,000,000 general annual aggregate. This policy shall be for the protection of the Owner, its elected officials, officers, agents and employees against liability for damages because of personal injury, bodily injury, death, or damage to property, including loss of use thereof, and damages because of negligent acts, errors and omissions in any way related to the Contract. The Owner, at its option, may require a complete copy of the above policy.
- G.3.4.5 "Tail" Coverage: If any of the required liability insurance is arranged on a "claims made" basis, "tail" coverage will be required at the completion of the Contract for a duration of 36 months or the maximum time period available in the marketplace if less than 36 months. Contractor shall furnish certification of "tail" coverage as described or continuous "claims made" liability coverage for 36 months following Final Completion. Continuous "claims made" coverage will be acceptable in lieu of "tail" coverage, provided its retroactive date is on or before the effective date of the Contract. Owner's receipt of the policy endorsement evidencing such coverage shall be a condition precedent to Owner's obligation to make final payment and to Owner's final acceptance of Work or services and related warranty (if any).
- G.3.4.6 Umbrella Liability (if required by Owner through issuance of Supplemental General Conditions): Contractor shall obtain, at Contractor's expense, and keep in effect during the term of the Contract, Umbrella liability Insurance over and above the general liability, automobile liability and workers' compensation coverage if required by Owner in specified limits at time of requirement.
- G.3.4.7 Pollution Liability may be required by Owner through issuance of Supplemental General Conditions.
- G.3.5 Additional Insured: The general liability insurance coverage, automobile liability, umbrella, and pollution liability if required, shall include the Owner as additional insureds but only with respect to the Contractor's activities to be performed under the Contract. The additional-insured endorsement for CGL insurance must be written on ISO Form CG 20 10 (10 01) and CG 20 37 (10 01), or their equivalent, but shall not use either of the following forms: CG 20 10 (10 93) or CG 20 10 (03 94). Proof of insurance must include a copy of the endorsement showing "Clackamas County, its elected officials, agents, officers, and employees" as scheduled insureds.

If Contractor cannot obtain an insurer to name the Owner as additional insureds, Contractor shall obtain at Contractor's

expense, and keep in effect during the term of the Contract, Owners and Contractors Protective Liability Insurance, naming the Owner as additional insureds with not less than a \$2,000,000 limit per occurrence. This policy must be kept in effect for 36 months following Final Completion. As evidence of coverage, Contractor shall furnish the actual policy to Owner prior to execution of the Contract.

- G.3.6 Notice of Cancellation or Change: If the Contractor receives a non-renewal or cancellation notice from an insurance carrier affording coverage required herein, or receives notice that coverage no longer complies with the insurance requirements herein, Contractor agrees to notify Owner by fax within five (5) business days with a copy of the non-renewal or cancellation notice, or written specifics as to which coverage is no longer in compliance. When notified by Owner, the Contractor agrees to stop Work pursuant to the Contract at Contractor's expense, unless all required insurance remain in effect. Any failure to comply with the reporting provisions of this insurance, except for the potential exhaustion of aggregate limits, shall not affect the coverages provided to the Owner and its institutions, divisions, officers, and employees.

Owner shall have the right, but not the obligation, of prohibiting Contractor from entering the Project Site until a new certificate(s) of insurance is provided to Owner evidencing the replacement coverage. The Contractor agrees that Owner reserves the right to withhold payment to Contractor until evidence of reinstated or replacement coverage is provided to Owner.

- G.3.7 Certificate(s) of Insurance/Insurance Carrier Qualification: As evidence of the insurance coverage required by the Contract, the Contractor shall furnish certificate(s) of insurance to the Owner prior to execution of the Contract. The certificate(s) will specify all of the parties who are additional insureds or loss payees for the Contract. A renewal certificate shall be sent to Owner at least 10 days prior to coverage expiration. Insurance coverage required under the Contract shall be obtained from insurance companies or entities acceptable to the Owner and that are eligible to provide such insurance under Oregon law. Eligible insurers include admitted insurers that have been issued a certificate of authority from the Oregon Department of Consumer and Business Services authorizing them to conduct an insurance business and issue policies of insurance in the state of Oregon, and certain non-admitted surplus lines insurers that satisfy the requirements of applicable Oregon law and which are subject to approval by the Owner. The Contractor shall be financially responsible for all deductibles, self-insured retentions and/or self-insurance included hereunder. Any deductible, self-insured retention and/or self-insurance in excess of \$50,000 shall be subject to approval by the Owner in writing and shall be a condition precedent to the effectiveness of any Contract.

SECTION H

SCHEDULE OF WORK

H.1 CONTRACT PERIOD

- H.1.1 Time is of the essence. The Contractor shall at all times carry on the Work diligently, without delay and punctually fulfill all requirements herein.
- H.1.2 Notice to Proceed. Unless otherwise directed in the Contract Documents, Contractor shall commence Work on the Project Site within fifteen (15) Days of the Notice to Proceed. Notwithstanding the Notice to Proceed, Contractor shall not be authorized to proceed with the Work until all initial Contract requirements, including the Contract, performance bond and payment bond, and certificates of insurance, have been fully executed and submitted in a form acceptable to Owner.

H.1.3 Unless otherwise not required in the Construction Documents, Contractor shall participate in a pre-construction conference with the Owner's representative and designated design team. The purpose of this pre-construction conference is to review the Contractor's proposed Schedule of Values and to review any other Project logistics to be coordinated between the parties.

H.1.4 Unless specifically extended by a Change Order, all Work shall be complete by the date contained in the Contract Documents. The Owner shall have the right to accelerate the completion date of the Work, which may require the use of overtime. Such accelerated Work schedule shall be an acceleration in performance of Work under Section D.1.2(f) and shall be subject to the provisions of Section D.1.

H.1.5 The Owner shall not waive any rights under the Contract by permitting the Contractor to continue or complete in whole or in part the Work after the date described in Section H.1.2 above.

H.2 SCHEDULE

H.2.1 Contractor shall provide, by or before the pre-construction conference, the initial as-planned schedule for review and acceptance by the Owner. The submitted schedule must illustrate Work by Project components, labor trades, and long lead items broken down by building and/or floor where applicable. If Owner shall so elect, Contractor shall provide the schedule in CPM format showing the graphical network of planned activities, including i) a reasonably detailed list of all activities required to complete the Work; ii) the time and duration that each activity will take to completion; and iii) the dependencies between the activities. Schedules lacking adequate detail, or unreasonably detailed, will be rejected. The schedule shall include the following: Notice to Proceed or the date the Work commences, if no Notice to Proceed is issued by Owner, Substantial Completion, and Final Completion. Schedules shall be updated monthly, unless otherwise required by the Contract Documents, and submitted with the monthly application for payment. Acceptance of the Schedule by the Owner does not constitute agreement by the Owner as to the Contractor's sequencing, means, methods, or durations. Any positive difference between the Contractor's scheduled completion and the Contract completion date is float owned by the Owner. Owner reserves the right to negotiate the float if it is deemed to be in Owner's best interest to do so. In no case shall the Contractor make a claim for delays if the Work is completed within the Contract Time but after Contractor's scheduled completion.

H.2.2 All Work shall be completed during normal weekdays (Monday through Friday) between the hours of 7:00 a.m. and 5:00 p.m. unless otherwise specified in the Contract Documents. Unless otherwise specified in the Contract Documents, no Work shall be performed during the following holidays:

- New Year's Day
- Martin Luther King Day
- Memorial Day
- Independence Day
- Labor Day
- Veterans Day
- Thanksgiving Day
- Christmas Day
- President's Day

When a holiday falls on a Sunday, the following Monday shall be recognized as a legal holiday. When a holiday falls on Saturday, the preceding Friday shall be recognized as a legal holiday.

H.3 PARTIAL OCCUPANCY OR USE

The Owner may occupy or use any completed or partially completed portion of the Work at any stage, provided such occupancy or use is consented to by public authorities having jurisdiction over the Work. Such partial occupancy or use may commence whether or not the portion is substantially complete, provided the Owner and Contractor have reasonably accepted in writing the responsibilities assigned to each of them. Approval by the Contractor to partial occupancy or use shall not be unreasonably withheld. Immediately prior to such partial occupancy or use, the Owner and Contractor shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work. Partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of Work not complying with the requirements of the Contract Documents.

SECTION I *CORRECTION OF WORK*

I.1 CORRECTION OF WORK BEFORE FINAL PAYMENT

The Contractor warrants to the Owner that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects, and that the Work will conform to the requirements of the Contract Documents. Work failing to conform to these requirements shall be deemed defective. Contractor shall promptly remove from the premises and replace all defective materials and equipment as determined by the Owner, whether incorporated in the Work or not. Removal and replacement shall be without loss or expense to the Owner, and Contractor shall bear the cost of repairing all Work destroyed or damaged by such removal or replacement. Contractor shall be allowed a period of no longer than thirty (30) Days after Substantial Completion for completion of defective (Punch List) work. At the end of the thirty-day period, or earlier if requested by the Contractor, Owner shall arrange for inspection of the Work by the Architect/Engineer. Should the work not be complete, and all corrections made, the costs for all subsequent reinspections shall be borne by the Contractor. If Contractor fails to complete the Punch List work within the thirty (30) Day period, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand without affecting Contractor's obligations.

I.2 WARRANTY WORK

I.2.1 Neither the final certificate of payment nor any provision of the Contract Documents shall relieve the Contractor from responsibility for Defective Work and, unless a longer period is specified, Contractor shall correct all defects that appear in the Work within a period of one year from the date of issuance of the written notice of Substantial Completion by the Owner except for latent defects which will be remedied by the Contractor at any time they become apparent. The Owner shall give Contractor notice of defects with reasonable promptness. Contractor shall perform such warranty work within a reasonable time after Owner's demand and at Contractor's sole expense. If Contractor fails to complete the warranty work within such period as Owner determines reasonable, or at any time in the event of warranty work consisting of emergency repairs, Owner may perform such work and Contractor shall reimburse Owner all costs of the same within ten (10) Days after demand, without affecting Contractor's obligations. The Contractor shall perform the warranty Work by correcting defects within twenty-four (24) hours of notification by Owner, unless otherwise specified in the Contract Documents. Should the Contractor fail to respond within the specified response time, the Owner may, at its option, complete the necessary repairs using another contractor or its agents. If Owner completes the repairs using Owner's agent, Contractor shall pay Owner at the rate of one and one-half (1½) times the standard hourly rate of Owner's agent, plus related overhead and any direct non-salary costs. If Owner completes the repairs using another contractor, Contractor shall pay

Owner the amount of Owner's direct costs billed by the other contractor for the work, plus the direct salary costs and related overhead and direct non-salary expenses of Owner's agents who are required to monitor that contractor's work. Work performed by Owner using Owner's own agents or those of another contractor shall not affect the Contractor's contractual duties under these provisions, including warranty provisions.

- I.2.2 Nothing in this Section I.2 provision shall negate guarantees or warranties for periods longer than one year including without limitation, such guarantees or warranties required by other sections of the Contract Documents for specific installations, materials, processes, equipment or fixtures.
- I.2.3 In addition to Contractor's warranty, manufacturer's warranties shall pass to the Owner and shall not take effect until such portion of the Work covered by the applicable warranty has been accepted in writing by the Owner.
- I.2.4 The one-year period for correction of Work shall be extended with respect to portions of Work performed after Substantial Completion by the period of time between Substantial Completion and the actual performance of the Work, and shall be extended by corrective Work performed by the Contractor pursuant to this Section, as to the Work corrected. The Contractor shall remove from the Project Site portions of the Work which are not in accordance with the requirements of the Contract Documents and are neither corrected by the Contractor nor accepted by the Owner.
- I.2.5 Nothing contained in this Section I.2 shall be construed to establish a period of limitation with respect to other obligations which the Contractor might have under the Contract Documents. Establishment of the period for correction of Work as described in this Section I.2 relates only to the specific obligation of the Contractor to correct the Work, and has no relationship to the time within which the obligation to comply with the Contract Documents may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Contractor's liability with respect to the Contractor's obligations other than specifically to correct the Work.
- I.2.6 If the Owner prefers to accept Work which is not in accordance with the requirements of the Contract Documents, the Owner may do so instead of requiring its removal and correction, in which case the Contract Price will be reduced as appropriate and equitable as determined by Owner. Such adjustment shall be effected whether or not final payment has been made.

SECTION J

SUSPENSION AND/OR TERMINATION OF THE WORK

J.1 OWNER'S RIGHT TO SUSPEND THE WORK

- J.1.1 The Owner has the authority to suspend portions or all of the Work due to the following causes:
 - (a) Failure of the Contractor to correct unsafe conditions;
 - (b) Failure of the Contractor to carry out any provision of the Contract;
 - (c) Failure of the Contractor to carry out orders;
 - (d) Conditions, in the opinion of the Owner, which are unsuitable for performing the Work;
 - (e) Time required to investigate differing Project Site conditions; or
 - (f) Any reason considered to be in the public interest.

- J.1.2 The Owner shall notify Contractor and the Contractor's Surety in writing of the effective date and time of the suspension, and Owner shall notify Contractor and Contractor's surety in writing to resume Work.

J.2 CONTRACTOR'S RESPONSIBILITIES

- J.2.1 During the period of the suspension, Contractor is responsible to continue maintenance at the Project just as if the Work were in progress. This includes, but is not limited to, protection of completed Work, maintenance of access, protection of stored materials, temporary facilities, and clean-up.
- J.2.2 When the Work is recommenced after the suspension, the Contractor shall replace or renew any Work damaged during the suspension, remove any materials or facilities used as part of temporary maintenance, and complete the Work in every respect as though its prosecution had been continuous and without suspension.

J.3 COMPENSATION FOR SUSPENSION

Depending on the reason for suspension of the Work, the Contractor or the Owner may be due compensation by the other party. If the suspension was required due to acts or omissions of Contractor, the Owner may assess the Contractor actual costs of the suspension in terms of administration, remedial work by the Owner's agents or another contractor to correct the problem associated with the suspension, rent of temporary facilities, and other actual costs related to the suspension, and any liquidated damages arising from the delay. If the suspension was caused by acts or omissions of the Owner, the Contractor may be due compensation which shall be defined using Section D, Changes in Work. If the suspension was required through no fault of the Contractor or the Owner, neither party shall owe the other for the impact.

J.4 OWNER'S RIGHT TO TERMINATE CONTRACT

- J.4.1 The Owner may, without prejudice to any other right or remedy, and after giving Contractor seven (7) Days' written notice and an opportunity to cure, terminate the Contract in whole or in part under the following conditions:
 - (a) If Contractor should, voluntarily or involuntarily, seek protection under the United States Bankruptcy Code and Contractor as debtor-in-possession or the Trustee for the estate fails to assume the Contract within a reasonable time;
 - (b) If Contractor should make a general assignment for the benefit of Contractor's creditors;
 - (c) If a receiver should be appointed on account of Contractor's insolvency;
 - (d) If Contractor should repeatedly refuse or fail to supply an adequate number of skilled workers or proper materials to carry on the Work as required by the Contract Documents, or otherwise fail to perform the Work in a timely manner;
 - (e) If Contractor should repeatedly fail to make prompt payment to Subcontractors or for material or labor, or should disregard laws, ordinances or the instructions of the Owner;
 - (f) If Contractor is otherwise in breach of any part of the Contract; or
 - (g) If Contractor is in violation of Applicable Laws, either in the conduct of its business or in its performance of the Work.

- J.4.2 At any time that any of the above occurs, Owner may exercise all rights and remedies available to Owner at law or in equity, and, in

addition, Owner may take possession of the premises and of all materials and appliances and finish the Work by whatever method it may deem expedient. In such case, the Contractor shall not be entitled to receive further payment until the Work is completed. If the Owner's cost of finishing the Work exceeds the unpaid balance of the Contract Price, Contractor shall pay the difference to the Owner.

J.5 TERMINATION FOR CONVENIENCE, NON-APPROPRIATION OF FUNDS, OR FORCE MAJEURE

- J.5.1 Owner may terminate the Contract in whole or in part whenever Owner determines: (a) that termination of the Contract is in the best interest of Owner or the public; (b) that the Owner failed to receive funding, appropriations, allocations or other expenditure authority as contemplated by Owner's budget and Owner determines, in its sole determination, and its assessment and ranking of the policy objectives explicit or implicit in Owner's budget, Owner may determine it is necessary to and may terminate the Contract; or (c) in the event of Force Majeure.
- J.5.2 The Owner shall provide the Contractor with seven (7) Days prior written notice of a termination for Owner's or for public convenience. After such notice, the Contractor shall provide the Owner with immediate and peaceful possession of the premises and materials located on and off the premises for which the Contractor received progress payment under Section E. Compensation for Work terminated by the Owner under this provision will be according to Section E. In no circumstance shall Contractor be entitled to lost profits for Work not performed due to termination. If the Contract is terminated for public convenience, neither the Contractor nor its Surety shall be relieved of liability for damages or losses suffered by the Owner as a result of defective, unacceptable or unauthorized Work completed or performed.

J.6 ACTION UPON TERMINATION

- J.6.1 Upon receiving a notice of termination, and except as directed otherwise by the Owner, Contractor shall immediately cease placing further subcontracts or orders for materials, services, or facilities. In addition, Contractor shall terminate all subcontracts or orders to the extent they relate to the Work terminated and, with the prior written approval of the Owner, settle all outstanding liabilities and termination settlement proposals arising from the termination of subcontracts and orders.
- J.6.2 As directed by the Owner, Contractor shall, upon termination, transfer title and deliver to the Owner all Record Documents, information, and other property that, if the Contract had been completed, would have been required to be furnished to the Owner.
- J.6.3 Upon Owner's notice of termination pursuant to either Section J.4 or J.5, if Owner shall so elect, Contractor shall assign to the Owner such subcontracts and orders as Owner shall specify. In the event Owner elects to take assignment of any such subcontract or order, Contractor shall take such action and shall execute such documents as Owner shall reasonably require for the effectiveness of such assignment and Contractor shall ensure that no contractual arrangement between it and its subcontractors or suppliers of any tier or sub-tier shall prevent such assignment.

SECTION K **CONTRACT CLOSE OUT**

K.1 RECORD DOCUMENTS

As a condition of final payment (refer also to section E.6), Contractor shall comply with the following: Contractor shall provide Record Documents for the entire Project to Owner. Record Documents shall depict the Project as constructed and shall reflect each and every change, modification, and deletion made during the construction. Record

Documents are part of the Work and shall be provided prior to the Owner's issuance of final payment. Record Documents include all modifications to the Contract Documents unless otherwise directed.

K.2 OPERATION AND MAINTENANCE MANUALS

As part of the Work, Contractor shall submit two completed operation and maintenance manuals ("O & M Manuals") for review by the Owner prior to submission of any pay request for more than 75% of the Work. Owner's receipt of the O & M Manuals shall be a condition precedent to any payment thereafter due. The O & M Manuals shall contain a complete set of all submittals, all product data as required by the specifications, training information, telephone list and contact information for all consultants, manufacturers, installer and suppliers, manufacturer's printed data, record and shop drawings, schematic diagrams of systems, appropriate equipment indices, warranties and bonds. The Owner shall review and return one O & M Manual for any modifications or adjustments required. Prior to submission of its final pay request, Contractor shall deliver two (2) complete and approved sets of O & M Manuals in paper form and one (1) complete and approved set in electronic form to the Owner and Owner's receipt of the O & M Manuals shall be a condition precedent to Owner's obligation to make final payment.

K.3 COMPLETION NOTICES

- K.3.1 Contractor shall provide Owner written notice of both Substantial and Final Completion. The certificate of Substantial Completion shall state the date of Substantial Completion, the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and the time within which the Contractor shall finish all items on the Punch List accompanying the Certificate. Both completion notices must be signed and notarized by the Contractor and signed by the Architect/Engineer (if applicable) and Owner to be valid. The Owner shall provide the final signature on the notices. The notices shall take effect on the date they are signed by the Owner.
- K.3.2 Substantial Completion of a facility with operating systems (e.g., mechanical, electrical, HVAC) shall be that degree of completion that has provided a minimum of thirty (30) continuous Days of successful, trouble-free operation, which period shall begin after all performance and acceptance testing has been successfully demonstrated to the Owner. All equipment contained in the Work, plus all other components necessary to enable the Owner to operate the facility in the manner that was intended, shall be complete on the Substantial Completion date. The Contractor may request that a Punch List be prepared by the Owner with submission of the request for the Substantial Completion notice.

K.4 TRAINING

As part of the Work, and prior to submission of the final application for payment, the Contractor shall schedule with the Owner training sessions for all equipment and systems as required by the Contract Documents. Contractor shall schedule training sessions at least two weeks in advance of the date of training to allow Owner to provide its personnel with adequate notice. If assignments arise because of termination under Section J.4, then such assignments shall not relieve Contractor of liability hereunder. The O & M Manual shall be used as a basis for training. In addition to any off-Project Site training required by the Contract Documents, training shall include a formal session conducted at the Project Site after the equipment and/or system is completely installed and operational in its normal operating environment.

K.5 EXTRA MATERIALS

As part of the Work, Contractor shall provide spare parts, extra maintenance materials, and other materials or products in the quantities specified in the Contract Documents prior to final payment. Delivery point for extra materials shall be designated by the Owner.

K.6 ENVIRONMENTAL CLEAN-UP

As part of the Final Completion notice, or as a separate written notice submitted with or before the notice of Final Completion, the Contractor shall notify the Owner that all environmental and pollution clean-up, remediation and closure have been completed in accordance with all Applicable Laws and pursuant to the authority of all agencies having jurisdiction, and Contractor shall provide Owner with any and all documentation related to the same, including but not limited to directives, orders, letters, certificates and permits related to or arising from such environmental pollution. The notice shall reaffirm the indemnification given under Section F.5.1 above. Contractor's completion of its obligations under this Section K.6 and Owner's receipt of documents evidencing such completion shall be a condition precedent to Owner's obligation to make final payment.

K.7 CERTIFICATE OF OCCUPANCY

Owner's receipt of an unconditioned certificate of occupancy from the appropriate state and/or local building officials shall be a condition precedent to Owner's obligation to make final payment, except to the extent failure to obtain an unconditional certificate of occupancy is due to the fault or neglect of Owner.

K.8 OTHER CONTRACTOR RESPONSIBILITIES

The Contractor shall be responsible for returning to the Owner all property of Owner issued to Contractor during construction such as keys, security passes, Project Site admittance badges, and all other pertinent items. Upon notice from Owner, Contractor shall be responsible for notifying the appropriate utility companies to transfer utility charges from the Contractor to the Owner. The utility transfer date shall not be before Substantial Completion and may not be until Final Completion, if the Owner does not take beneficial use of the facility and the Contractor's agents continue with the Work.

The Owner's property is drug free and weapons free areas and the use of tobacco products is only allowed in designated areas. Contractor shall be required to ensure that its employees, Subcontractors and agents shall comply with these requirements.

SECTION L GENERAL PROVISIONS

L.1 NO THIRD PARTY BENEFICIARIES

Owner and Contractor are the only parties to the Contract and are the only parties entitled to enforce its terms. Nothing in the Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly, or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of the Contract.

L.2 SEVERABILITY

If any provision of the Contract is declared by a court to be unenforceable, illegal, or in conflict with any law, the validity of the remaining terms and provisions shall not be affected and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular provision held to be invalid.

L.3 ACCESS TO RECORDS

L.3.1 Contractor shall keep, at all times on the Project Site, one record copy of the complete Contract Documents, including the Plans, Specifications, addenda, and Change Orders (if any) in good order and marked currently to record field changes and selections made during construction, and one record copy of Shop Drawings, Product Data, Samples and similar submittals, and shall at all times give the Owner access thereto.

L.3.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or the Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

L.4 WAIVER

Failure of the Owner to enforce any provision of the Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of the Contract.

L.5 SUCCESSORS IN INTEREST

The provisions of the Contract shall be binding upon and shall accrue to the benefit of the parties to the Contract and their respective permitted successors and assigns.

L.6 GOVERNING LAW

The Contract shall be governed by and construed in accordance with the laws of the State of Oregon without giving effect to the conflict of law provisions thereof.

L.7 APPLICABLE LAW

Contractor hereto agrees to comply in all ways with applicable local, state and federal ordinances, statutes, laws and regulations.

L.8 NON-EXCLUSIVE RIGHTS AND REMEDIES

Except as otherwise expressly provided herein, the rights and remedies expressly afforded under the provisions of the Contract shall not be deemed exclusive, and shall be in addition to and cumulative with any and all rights and remedies otherwise available at law or in equity. The exercise by either Party of any one or more of such remedies shall not preclude the exercise by it, at the same or different times, of any other remedies for the same default or breach, or for any other default or breach, by the other Party.

L.9 INTERPRETATION

The titles of the sections of the Contract are inserted for convenience of reference only and shall be disregarded in construing or interpreting any of its provisions.

L.10 DEBT LIMITATION

The Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent.

L.11 LITIGATION

Any Claim between Owner and Contractor that arises from or relates to the Contract and that is not resolved through the Claims Review Process in Section D.3 shall be brought and conducted solely and exclusively within the Circuit Court of Clackamas County for the State of Oregon; provided, however, if a Claim must be brought in a federal forum, then it

shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the County of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. CONTRACTOR, BY EXECUTION OF THE CONTRACT, HEREBY CONSENTS TO THE IN PERSONAM JURISDICTION OF THE COURTS REFERENCED IN THIS SECTION.

L. 12 SURVIVAL

All warranty, indemnification, and record retention provisions of the Contract, and all of Contractor's other obligations under the Contract that are not fully performed by the time of Final Completion or termination, and all other rights and obligations which by their context are intended to survive, shall survive Final Completion or any termination of the Contract.

L.13 ACCESS TO RECORDS

L.13.1. Contractor shall keep, at all times on the Work site, one record copy of the complete Contract Documents, including the Plans, Specifications, Construction Change Directives and addenda, in good order and marked currently to record field changes and selections made during construction, and one copy of Shop Drawings, Project Data, Samples and similar submittals, and shall at all times give the Owner access thereto.

L.13.2 Contractor shall retain and the Owner and its duly authorized representatives shall have access, for a period not less than ten (10) years, to all Record Documents, financial and accounting records, and other books, documents, papers and records of Contractor which are pertinent to the Contract, including records pertaining to Overhead and indirect costs, for the purpose of making audit, examination, excerpts and transcripts. If for any reason, any part of the Work or this Contract shall be subject to litigation, Contractor shall retain all such records until all litigation is resolved and Contractor shall continue to provide Owner and/or its agents with full access to such records until such time as all litigation is complete and all periods for appeal have expired and full and final satisfaction of any judgment, order or decree is recorded and Owner receives a record copy of documentation from Contractor.

L.14 WAIVER

Failure of the Owner to enforce any provision of this Contract shall not constitute a waiver or relinquishment by the Owner of the right to such performance in the future nor of the right to enforce any other provision of this Contract.

L. 15 NO ATTORNEY FEES.

In the event any arbitration, action or proceeding, including any bankruptcy proceeding, is instituted to enforce any term of this Contract, each party shall be responsible for its own attorneys' fees and expenses.



**WATER ENVIRONMENT SERVICES
PUBLIC IMPROVEMENT CONTRACT**

PERFORMANCE BOND

Bond No.: 09477134
Solicitation: #2025-29
Project Name: Three Creeks Floodplain Enhancement Project

Fidelity and Deposit

Company of Maryland (Surety #1)
(Surety #2)*

Bond Amount No. 1:	\$ <u>1,607,901.86</u>
Bond Amount No. 2:*	\$ <u> </u>
Total Penal Sum of Bond:	\$ <u>1,607,901.86</u>

** If using multiple sureties*

We, Suulutaaq, Inc. as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Water Environment Services ("District"), the sum of (Total Penal Sum of Bond) \$ One Million Six Hundred Seven Thousand Nine Hundred One and 86/100 (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and

WHEREAS, the Principal has entered into a contract with the District, along with the plans, specifications, terms and conditions of which are contained in the above-referenced Project Contract Documents; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless the District and Clackamas County and their elected officials, officers, employees and agents, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Principal or its subcontractors, and shall in all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the District, be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this _____ day of _____, 20____.

PRINCIPAL: Suulutaag, Inc.

By: [Signature]
Signature
president
Official Capacity
Attest: Race McClary
Corporation Secretary

SURETY: Fidelity and Deposit Company of Maryland
[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each bond]

Chase McGraw, Attorney-in-Fact
Name
[Signature]
Signature
1299 Zurich Way, 10th Floor
Address
Schaumburg IL 60196
City State Zip
(847) 605-6000 N/A
Phone Fax





WATER ENVIRONMENT SERVICES
PUBLIC IMPROVEMENT CONTRACT

PAYMENT BOND

Bond No.: 09477134
Solicitation: #2025-29
Project Name: Three Creeks Floodplain Enhancement Project
Fidelity and Deposit

Company of Maryland (Surety #1)	Bond Amount No. 1:	\$ <u>1,607,901.86</u>
(Surety #2)*	Bond Amount No. 2:*	\$ _____
	Total Penal Sum of Bond:	\$ <u>1,607,901.86</u>

* If using multiple sureties

We, Suulutaaq, Inc., as Principal, and the above identified Surety(ies), authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto Water Environment Services ("District"), the sum of (Total Penal Sum of Bond) One Million Six Hundred Seven Thousand Nine Hundred One and 86/100 (Provided, that we the Sureties bind ourselves in such sum "jointly and severally" as well as "severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety); and

WHEREAS, the Principal has entered into a contract with the District, along with the plans, specifications, terms and conditions of which are contained in above-referenced Project Contract Documents; and

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, and shall defend, indemnify, and save harmless the District and Clackamas County and their elected officials, officers, employees and agents, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, and shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; and shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167, and shall permit no lien nor claim to be filed or prosecuted against the District on account of any labor or materials furnished; and shall do all things required of

the Principal by the laws of this State, then this obligation shall be void; otherwise, it shall remain in full force and effect for so long as any term of the Contract remains in effect.
Nonpayment of the bond premium will not invalidate this bond nor shall the District be obligated for the payment of any premiums.

This bond is given and received under authority of Oregon Revised Statutes Chapter 279C and the Clackamas County Local Contractor Review Board Rules, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED
BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this _____ day of _____, 20_____.

PRINCIPAL: Suulutaag, Inc.

By: _____

Signature

president

Official Capacity

Attest: Race McClary

Corporation Secretary

SURETY: Fidelity and Deposit Company of Maryland
[Add signatures for each if using multiple bonds]

BY ATTORNEY-IN-FACT:
[Power-of-Attorney must accompany each bond]

Chase McGraw, Attorney-in-Fact

Name

Chase McGraw

Signature

1299 Zurich Way, 10th Floor
Address

Schaumburg
City

IL
State

60196
Zip

(847) 605-6000
Phone

N/A
Fax



**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

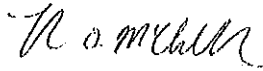
KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Illinois, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Illinois (herein collectively called the "Companies"), by Thomas O. McClellan, Vice President, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Kelly Michael Layman, Glen Lopez, Kirk C. Leadbetter, James Geerin, Tanya Lee Hutchison, Kristy M. Konte, Chase McGraw, of Anchorage, Alaska its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: any and all bonds and undertakings, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

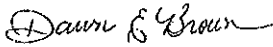
IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 4th day of September, A.D. 2024.



ATTEST:
**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



By: Thomas O. McClellan
Vice President



By: Dawn E. Brown
Secretary

**State of Maryland
County of Baltimore**

On this 4th day of September, A.D. 2024, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, Thomas O. McClellan, Vice President and Dawn E. Brown, Secretary of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Genevieve M. Maison

GENEVIEVE M. MAISON
NOTARY PUBLIC
BALTIMORE COUNTY, MD
My Commission Expires JANUARY 27, 2025



Authenticity of this bond can be confirmed at bondvalidator.zurichna.com or 410-559-8790

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this _____ day of _____.



MJ Petlick

Mary Jean Petlick
Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT A COMPLETE DESCRIPTION OF THE CLAIM INCLUDING THE PRINCIPAL ON THE BOND, THE BOND NUMBER, AND YOUR CONTACT INFORMATION TO:

Zurich Surety Claims
1299 Zurich Way
Schaumburg, IL 60196-1056
reportsfclaims@zurichna.com
800-626-4577

Authenticity of this bond can be confirmed at bondvalidator.zurichna.com or 410-559-8790



CLACKAMAS COUNTY
PUBLIC IMPROVEMENT CONTRACT
PROJECT INFORMATION, PLANS, SPECIFICATIONS AND DRAWINGS

PROJECT: #2025-29 Three Creeks Floodplain Enhancement Project

Project Background:

The 3-Creeks Protected Area Enhancement Project is a stream restoration and floodplain enhancement project located within an approximately 80-acre protected natural area. The project consists of temporary traffic control, erosion control, temporary and permanent access paths, floodplain grading, temporary water management to allow construction below the ordinary high water elevation of Mt. Scott Creek, constructing in-stream Log Jams, Riffles, Cascades, and Post Reinforcement structures, final wearing surface for permanent access paths and restoration of temporary access paths, installing planting and conducting plant establishment.

Scope: Project is located along approximately 4,300 linear feet of Mt Scott Creek within an 80-acre natural area known as the 3-Creeks Protected Area, a site requiring habitat restoration. It is the intent of Water Environment Services (“WES”) to improve habitat and water quality improvement in this area. This Project will provide construction services related to the 3-Creeks floodplain enhancement project. Construction services include, but are not limited to: excavation, grading, temporary water management, construction of log jams and riffle structures, planting, and construction/maintenance/restoration of temporary construction and permanent access roads.

The Work to be done under this Contract consists of the following:

1. Install and conduct temporary traffic control.
2. Install erosion control.
3. Construct temporary and permanent access paths.
4. Perform floodplain grading.
5. Conduct temporary water management to allow construction below the ordinary high water elevation of Mt. Scott Creek.
6. Working from upstream to downstream, construct in-stream Log Jams, Riffles, Cascades, and Post Reinforcement structures.
7. Apply final wearing surface for permanent access paths and remove temporary access paths.
8. Restore temporary access roads, install planting, and conduct plant establishment.
9. Perform additional and incidental work as called for by the Specifications and Plans.

Engineers Estimate: \$2,353,000.00

Key Dates:

All Basic Bid Work may begin as soon as the Notice to Proceed (“NTP”) is issued

Substantial Completion: March 15, 2026

Final Completion: June 30, 2026

This project is anticipated to take approximately 8 month (plus a 1-year plant establishment period). In-water work may only occur between July 15 and September 30 (as required by

ODFW's Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources, March 2024). Planting must occur between November 1 and March 15.

Final plant establishment, final completion should be March 30, 2027

The Scope further includes the following Plans, Specifications and Drawings:

CLACKAMAS WATER ENVIRONMENT SERVICES SPECIAL PROVISIONS FOR Grading, Drainage, and Structures 3- Creeks Floodplain Enhancement, 3-Creeks Natural Area Clackamas County, (72 Pages)

Oregon Standard Drawings, ODOT/APWA, current edition
(<https://www.oregon.gov/odot/engineering/pages/drawings-roadway.aspx>) and Oregon Standard Specifications for Construction, current edition
(https://www.oregon.gov/odot/Business/Specs/2024_STANDARD_SPECIFICATIONS.pdf)

WATER ENVIRONMENT SERVICES 3-CREEKS FLOODPLAIN ENHANCEMENT 100% DESIGN- Drawing Set, Sheets No. G1;G2; SP1- SP13; L1 – L9; EC1 – EC6. (30 Pages)

Clackamas County Title 6-noise control regulations
(<https://dochub.clackamas.us/documents/drupal/5e976f74-eea5-4935-bfa8-99ecf0cbd228>)

ODFW's Oregon Guidelines for Timing of In-Water Work to Protect Fish and Wildlife Resources, March 2024 (<https://www.dfw.state.or.us/lands/inwater/2024%20Oregon%20In-Water%20Work%20Guidelines.pdf>)

Copies of permits (DSL Removal-Fill, USACE 404, DEQ 410, ODFW Fish Passage authorization, County floodplain development permit, NMFS ESA SLOPES consistency letter, SHPO 106 concurrence) can be supplied upon request or available at attached link for reference:
<https://www.dropbox.com/home/3Creeks%20Permits%20folder>

DESCRIPTION OF WORK

Grading, Drainage, and Structures
3-Creeks Floodplain Enhancement
3-Creeks Natural Area
Clackamas County

CLASS OF WORK

The Class of Work for this Project is the combination of 1) Earthwork and Drainage.

WORK TO BE DONE

The Work to be done under this Contract consists of the following:

1. Install and conduct temporary traffic control.
2. Install erosion control.
3. Construct access paths.
4. Perform floodplain grading.
5. Working from upstream to downstream, construct in-stream structures.
6. Apply final wearing surface for permanent access paths and remove/restore temporary access paths.
7. Install landscaping and plantings.
8. Perform additional and Incidental Work as called for by the Specifications and Plans.

APPLICABLE SPECIAL PROVISIONS

The Specifications that are applicable to the Work on this Project is the 2024 edition of the "Oregon Standard Specifications for Construction", as modified by these Special Provisions. All Sections in Part 00100 apply, whether or not modified or referenced in the Special Provisions.

All number references in these Special Provisions shall be understood to refer to the Sections and subsections of the Standard Specifications bearing like numbers and to Sections and subsections contained in these Special Provisions in their entirety.

SPECIAL PROVISIONS

(*****)

The following Special Provisions are made a part of this contract and supersede any conflicting provisions of the 2024 Standard Specifications for Road, Bridge and Municipal Construction, including the Local Agency (APWA) General Special Provisions, and the foregoing Amendments to the Standard Specifications.

These Special Provisions are made up of both General Special Provisions (GSPs) from various sources, which may have project-specific fill-ins; and project-specific Special Provisions. Each Provision supplements, modifies, or replaces the comparable Standard Specification, or is a new Provision. The deletion, amendment, alteration, or addition to any subsection or portion of the Standard Specifications is meant to pertain only to that particular portion of the section, and in no way should it be interpreted that the balance of the section does not apply.

Special Provisions types are differentiated as follows:

(date)	General Special Provision
(*****)	Project Specific Special Provision

For the purpose of clarifying the sections provided, the Project Specific Special Provisions have the following section descriptors added. The descriptors help clarify if the section is to *supplement*, add *new*, *replace* or *modify* the Standard Specifications and Amendments.

Supplement: Text supplements or adds clarification to the identified section of the Standard Specifications.

New: Item/specification is unique to this project and will not be found in the Standard Specifications.

Replacement: A replacement of the entire identified section or subsection of the Standard Specifications.

Modification: A revision or other modification of the identified sentence, paragraph, or portion of a section of the Standard Specifications as noted.

Also incorporated into the Contract Documents by reference are:

- *Oregon Standard Drawings*, ODOT/APWA, current edition

The Contractor shall obtain copies of these publications, at Contractor's own expense.

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BID SCHEDULE



CLACKAMAS WATER ENVIRONMENT SERVICES

SPECIAL PROVISIONS

FOR

Grading, Drainage, and Structures
3-Creeks Floodplain Enhancement
3-Creeks Natural Area
Clackamas County

PROFESSIONAL OF RECORD CERTIFICATION:

<p>Seal w/signature</p>  <p><i>Expires 12/31/2026</i></p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for <u>Mobilization, Traffic Control, Temporary Erosion and Sediment Control, and Earthwork</u>. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section(s) 00210, 02220, 02221, 02222, 00237, 00245, 00280, 00281, 00290, 00305, 00310, 00320, 00330, 00350, 00390, 00398, 00640, 00940, 01040, 02320, 02690, 02910</p>
 <p><i>EXPIRES: 12/31/2026</i></p>	<p>I certify the Special Provision Section(s) listed below are applicable to the design for the subject project for <u>Channel Fill, Stream Materials</u>. Modified Special Provisions were prepared by me or under my supervision.</p> <p>Section(s) 00332, 00391, 00392, 01092, 01093, 01094, 01095</p>

FINAL ELECTRONIC DOCUMENT AVAILABLE UPON REQUEST

SECTION 00210 - MOBILIZATION

Comply with Section 00210 of the Standard Specifications.

SECTION 00220 - ACCOMMODATIONS FOR PUBLIC TRAFFIC

Comply with Section 00220 of the Standard Specifications modified as follows:

00220.02(a) General Requirements - Add the following bullets to the end of the bullet list:

- When flagging operations may extend traffic queues onto the railroad crossing, protect traffic at the intersection of SE Harmony Road and SE Linwood Avenue by providing an additional flagger. Position additional flagger signs according to the "Advance Flagger for Extended Traffic Queues" configuration shown on the Standard Drawings. Do not allow traffic to stop on the railroad crossing.

SECTION 00221 - COMMON PROVISIONS FOR WORK ZONE TRAFFIC CONTROL

Comply with Section 00221 of the Standard Specifications modified as follows:

00221.06 Traffic Control Plan - Replace this subsection with the following subsection:

00221.06 Traffic Control Plan and Tourist-Oriented Directional and Business Logo Signs –

(a) Traffic Control Plan - Submit one of the following, 5 Calendar Days before the preconstruction conference:

(1) Contractor-Modified Traffic Control Plan - The Contractor may request to use a Contractor-modified Agency TCP, or a TCP developed by the Contractor. Do not use a modified TCP, or a TCP developed by the Contractor, unless approved by the Engineer. Use the Agency TCP unless a modified TCP, or a TCP developed by the Contractor is accepted.

The Engineer is not obligated to consider any modified Agency TCP or a TCP developed by the Contractor. The Agency will not be liable to the Contractor for failure to accept or act upon any request for a modified Agency TCP or a TCP developed by the Contractor.

To conserve time and funds, the Contractor may first submit a written request for a preliminary review by the Engineer. The request should contain a description of the proposal together with a rough estimate of anticipated dollar and time impacts. The Engineer will, within a reasonable time, respond to the Contractor in writing whether or not the request would be considered by the Agency.

If requesting a Contractor-modified Agency TCP, or a TCP developed by the Contractor, at a minimum the request shall meet all requirements of the Contract documents and comply with the Project transportation management plan (TMP). Provide the following information:

- Stamped Working Drawings according to 00150.35 that include the proposed TCP showing all TCM and quantities of TCD.
- A TPAR plan that includes:
 - Details and features used to provide pedestrian accessibility.
 - Pedestrian staging Plans at a scale no smaller than 1 inch = 50 feet.
 - Temporary alternate facilities or detour routes for pedestrian traffic.
- Staging sequences and details for Work affecting vehicular, pedestrian, and bicycle traffic.
- Proposed order and duration of the TCM.
- A detailed temporary striping plan.

If the Contractor's request to use a Contractor-modified Agency TCP, or a TCP developed by the Contractor is approved in whole or in part, acceptance will be made by a Change Order.

3- Creeks Floodplain Enhancement

The Engineer will establish prices that represent a fair measure of the value of Work to be added, changed, or deleted as a result of any accepted modifications to the Agency TCP or an accepted TCP developed by the Contractor.

Once a TCP has been accepted by the Engineer, any additional modifications must be submitted by the Contractor for Agency review following the procedure described above. The Engineer is not obligated to consider additional modifications to a previously approved TCP.

(b) Tourist-Oriented Directional and Business Logo Signs - Submit one of the following for approval, at least 5 Calendar Days before the preconstruction conference:

(1) No Signs - If there are no tourist-oriented directional (TOD) or business logo signs on the Project, a written notification that no TOD or business logo signs exist within the Project limits or

(2) Signs - Submit one copy of a sketch map of the Project showing all existing TOD and business logo signs and a written narrative describing how these signs will be kept in service and protected throughout all the construction stages. If modifications are necessary, submit updated information to the Engineer for approval at least 21 Calendar Days before the change is needed.

NUMBER OF TRAFFIC CONTROL PLAN SHEETS: To be determined by Contractor.

To be accompanied by Standard Drawings:

TM800..... Tables, Abrupt Edge and PCMS Details

TM821, TM822..... Temporary Sign Supports

TM843..... Multi-Lane Signalized Intersection Details

TM850..... 2 Lane, 2-Way Roadways

TM851, TM852, TM853, TM854, TM855 Non-Freeway Multi-Lane Sections

SECTION 00222 – TEMPORARY TRAFFIC CONTROL SIGNS

Comply with Section 00222 of the Standard Specifications modified as follows:

00222.40(e) Temporary Sign Placement - Add the following to the end of the bullet list:

- Place a "WAIT FOR FLAGGER" (CR4-23) sign approximately 50 feet in advance of each flagger station, facing incoming pedestrian traffic. Install the sign on a conical marker or other temporary sign support, as shown or as directed. Do not allow the sign installation height or location to block the visibility of the flagger for incoming public traffic.
- Install a 54-inch "TRUCKS LEAVING HIGHWAY XXXX FT" sign in advance of each entrance point to the Work Area at sign spacing "A" from the "TCD Spacing Table" shown on the Standard Drawings. Install a 54-inch "TRUCKS ENTERING HIGHWAY XXXX FT" sign in advance of each exit point from the Work Area at sign spacing "A" from the "TCD Spacing Table" shown on the Standard Drawings.
- Install a 72 by 24-inch "CONSTRUCTION VEHICLE DO NOT FOLLOW" (CW23-14) sign on rigid substrate on the back of all Material or Equipment delivery vehicles.
- During pilot car operations, install a 15 by 24-inch "WAIT FOR PILOT CAR" (CR4-20) sign at stop-controlled side roads and accesses intersecting the Highway within the limits of the pilot car operation.
- During pilot car operations, install a 12 by 12-inch "WAIT FOR PILOT CAR" (CR4-20a) sign in private residential driveways accessing the Highway within the limits of the pilot car operation. Place the sign in the driveway facing the private residence and so the sign face is not visible to Public Traffic on the Highway. Do not use the sign for apartments, condominiums or business accesses.
- At accesses, side roads, or residential driveways where "WAIT FOR PILOT CAR" (CR4-20) signs are installed, do not allow traffic to be stopped or held for longer than 20 minutes.
- In addition to the signs, public notification (e.g. flyers, door hangers) may be used to inform the residents that may be affected by the pilot car operations and the "WAIT FOR PILOT CAR" signs.

SECTION 00237 - AGENCY-PROVIDED STAGING AREAS

Section 00237, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00237.00 Scope - This Work consists of utilizing Agency provided prospective or mandatory staging areas as the Contractor elects or as required for the construction of the Contract.

Locate staging area(s) in previously improved area(s) that have been paved or compacted and graveled, unless otherwise shown or approved.

00237.01 Prospective Staging Areas - If the Contractor elects not to utilize the listed prospective staging area(s) or elects to use other or additional staging areas, 00290.10 applies.

(a) Prospective Staging Area, Access Road above Flood Control Structure:

- **Location** - Station 54+00 to 55+00 LT: Where the paved access road widens out above the flood control structure
- **Access** - Follow the paved access road off of SE Harmony Road onto the 3-Creeks Natural Site property.
- **Available Area** - 0.03 acres

Do not stage Equipment, store Materials, or operate beyond the staging area boundary shown or delineated unless otherwise directed in writing.

If used, restore the site to preconstruction condition, as directed, by:

- Removing all imported fabric, rock, and other construction and non-combustible debris
- Removing all solid waste and hazardous materials, including spills, and dispose properly
- Performing preventative and repair maintenance as necessary to minimize the damage to the existing asphalt and gravel access roads.
- Patching damaged asphalt and restoring the existing asphalt access road as directed by the Engineer.

(b) Prospective Staging Area, Floodplain:

- **Location** - Station 2+85 to 7+75 LT: Located adjacent to the proposed floodplain grading area.
- **Access** - Follow the proposed construction access road from the south. Vehicles using the south access will enter the site from SE Harmony Road.- 0.33 acres

3- Creeks Floodplain Enhancement

Delineate the limits of each site with work zone fencing from section 00221.13 of the QPL for the duration of the Project. Remove the fencing when the Project is complete and the site has been restored to preconstruction conditions. Do not stage Equipment, store Materials, or operate beyond the staging area boundary shown or delineated unless otherwise directed in writing.

If used, restore the site to preconstruction condition, as directed, by:

- Removing all imported fabric, rock, and other construction and non-combustible debris
- Removing all solid waste and hazardous materials, including spills, and dispose properly
- Removing work zone fencing
- Leveling and scarifying the ground
- Restoring all disturbed earth according to the Planting Plans.

00237.40 General - All vehicles and Equipment, prior to entering the site for the first time, and each subsequent time if the vehicle has left the Roadway outside the construction Project limits, shall be steam cleaned of all debris (soil, dirt, plant parts, and vegetative matter) before being brought back to the site. Notify the Engineer before moving each vehicle onto the site. Certify, in writing, that the Equipment has been steam cleaned.

00237.41 Restrictions and Protection of Resources - Comply with the following for all operations within the staging area operations:

- Protect cultural resources according to 00290.50.
- Protect migratory birds according to 00290.36(a).

00237.47 Staging Area Vacating - Before vacating the staging area(s) the following apply:

- Remove all structures, construction debris and trash, and equipment from the staging area.
- Remove solid waste and hazardous material from the site and dispose of properly. Provide documentary evidence of proper disposal and verify the amount of material removed.
- If a spill or dumping has occurred or if a spill or dumping is suspected to have occurred, 00290.20(3)(g) applies.
- Attend a post-work meeting at each staging area to evaluate staging area rehabilitation work with the Engineer.

SECTION 00245 - TEMPORARY WATER MANAGEMENT

Section 00245, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00245.00 Scope - This Work consists of furnishing, installing, operating, maintaining, and removing temporary water management facilities in regulated Work areas.

00245.01 Abbreviations:

TWM - Temporary Water Management
TWMF - Temporary Water Management Facility
TWMP - Temporary Water Management Plan

00245.02 Definitions:

Temporary Water Management Facility - A TWMF that conveys water around or through Work areas, removes water from Work areas, and treats and discharges water at locations outside Work areas.

00245.03 Temporary Water Management Plan - The Agency TWMP is a concept plan. 28 Calendar Days before beginning Work in regulated Work areas, submit stamped Working Drawings of a Contractor-developed TWMP, according to 00150.35, based on either the Agency's concept plan or an independent plan that meets water quality and environmental guideline requirements and does not negatively affect neighboring properties or water rights.

Include the following minimum information in the TWMP:

- The sequence and schedule for dewatering and re-watering. This sequence and schedule must include when to contact the Engineer prior to dewatering and re-watering.
- How the Work area is isolated from the active stream flow upstream, through, and downstream.
- How the stream flow is routed and conveyed around or through the isolated Work area.
- How fish passage is provided around the Work area, if required.
- How the isolated Work area is de-watered.
- How the pumped water is treated, if necessary, before it is discharged downstream.
- Description of all construction stages, including appropriate contact points for each stage.
- A list of on-site backup Materials and Equipment.
- Provide the name of the TWM Subcontractor (if applicable) and Contractor's superintendent, and their 24-hour contact phone number 10 Days before the pre-Work meeting. If changes in the appointment of the TWM Subcontractor or Contractor's superintendent occur during the term of the Contract, provide written notice to the Engineer within 5 Calendar Days of the change.
- Calculations of water withdraw pump's capacity.

3- Creeks Floodplain Enhancement

- Details of the proposed water intake screen used to isolate in-water Work area and how it meets the requirements of 00290.34(c)(3).

Any change to the TWMP during construction requires approval prior to implementation.

Obtain the Engineer's written approval before beginning Work in in-water Work areas.

00245.04 Pre-Work Meeting - Before beginning any TWM Work, attend a pre-work meeting at the Project Site with the Engineer no more than 8 Calendar Days prior to implementation of TWM. Required meeting attendees include:

- Engineer
- Contractor
- TWM Subcontractor (if applicable)
- Agency Environmental Coordinator or their appointed representative

The pre-Work meeting agenda typically includes the method of TWM, the TWMP, fish salvage plan and strategy, describe environmental risks, turbidity monitoring, energy dissipation, dewatering and re-watering plan and strategy, site clean-up expectations, and the circumstances under which contacting the Engineer is required.

Materials

00245.10 Materials - Furnish Materials meeting the following requirements:

Pipe	00445.11
Plastic Sheeting	00280.14(a)
Riprap	00390.11
Sandbags	00280.15(a)
Water Intake Screening.....	00290.34(c)

Furnish pumps that are:

- Self-priming.
- Equipped with a variable speed governor.
- Equipped with a power source.
- Able to pump water that contains soft and hard solids.

Construction

00245.40 Fish Removal - Qualified Agency, ODFW, or consultant biologists will remove fish and other aquatic organisms from the isolation Work areas. Coordinate fish removal with the Engineer at least 28 Calendar Days before beginning Work in regulated Work areas. Allow access into the isolation Work areas before, during and after installation of the TWMP to perform the specified tasks as follows:

3- Creeks Floodplain Enhancement

- **Before Installation of TWMF** - Before any in-water Work, including installing TWMF, qualified personnel will remove fish and other native aquatic organisms from within the proposed isolated Work area.
- **After Installation of TWMF** - After installing TWMF and the reduction of the water level through the isolated Work area has begun, qualified personnel will remove all fish and aquatic organisms as the water level is reduced. Do not completely de-water the isolation area until all fish and aquatic organisms have been removed.

00245.41 Installation - During installation of the temporary water management facility, maintain a downstream water flow rate of at least 50 percent of the upstream water flow rate.

00245.42 Operation - Operate temporary water management as follows:

- Protect fish and fish habitat according to 00290.34.
- Maintain and control water flow downstream of the isolated Work area for the duration of the diversion to prevent downstream de-watering.
- Clean, maintain and repair water intake screening to ensure adequate flows and protection of aquatic organisms.
- In the event of containment failure immediately notify the Engineer so arrangements can be made to remove fish and aquatic organisms from the isolation Work areas prior to the continuation of Work within the ordinary high water limits.
- When using a pump for bypassing water during temporary water management, physically monitor the pump in-person and maintain the pump at all times including non-work hours. Provide a back-up pump on-site and ready for use as necessary. Provide the Engineer with a daily report documenting monitoring activities.

Maintenance

00245.60 Maintenance - Monitor water turbidity according to 00290.30(a)(8).

Finishing and Cleaning Up

00245.70 Removal - Prior to removal of the TWMF, obtain approval from the Engineer after completion of all Work within ordinary high water limits. Remove the TWMF and re-water and restore the stream flow. Maintain downstream water flow during removal of the facility. Staged or metered re-watering may be required and will be determined by the Engineer.

Measurement

00245.80 Measurement - No measurement of quantities will be made for temporary water management facilities.

The estimated quantities of Materials required for the temporary water management facility are:

Temporary Water Management Facility at Station 17+80:

3- Creeks Floodplain Enhancement

Pipe	65 Feet
Pump Hose	50 Feet
Pump	2 Day
Plastic Sheeting	49 Square Yard
Riprap	1 Cubic Yard
Sandbags	30 Each
Sand	0.5 Cubic Yard

Temporary Water Management Facility at Station 20+40:

Pipe	680 Feet
Pump Hose	50 Feet
Pump	19 Day
Plastic Sheeting	43 Square Yard
Riprap	1 Cubic Yard
Sandbags	33 Each
Sand	1 Cubic Yard

Temporary Water Management Facility at Station 30+30:

Pipe	800 Feet
Pump Hose	50 Feet
Pump	23 Day
Plastic Sheeting	41 Square Yard
Riprap	1 Cubic Yard
Sandbags	36 Each
Sand	1 Cubic Yard

Temporary Water Management Facility at Station 41+45:

Pipe	125 Feet
Pump Hose	50 Feet
Pump	4 Day
Plastic Sheeting	43 Square Yard
Riprap	1 Cubic Yard
Sandbags	27 Each
Sand	0.5 Cubic Yard

Temporary Water Management Facility at Station 43+00:

Pipe	95 Feet
Pump Hose	50 Feet
Pump	3 Day
Plastic Sheeting	36 Square Yard
Riprap	1 Cubic Yard
Sandbags	27 Each
Sand	0.5 Cubic Yard

3- Creeks Floodplain Enhancement

Temporary Water Management Facility at Station 46+00:

Pipe	125 Feet
Pump Hose	50 Feet
Pump	4 Day
Plastic Sheeting	38 Square Yard
Riprap	1 Cubic Yard
Sandbags.....	27 Each
Sand	0.5 Cubic Yard

Temporary Water Management Facility at Station 48+85:

Pipe	75 Feet
Pump Hose	50 Feet
Pump	3 Day
Plastic Sheeting	33 Square Yard
Riprap	1 Cubic Yard
Sandbags.....	18 Each
Sand	0.5 Cubic Yard

Temporary Water Management Facility at Station 51+85:

Pipe	75 Feet
Pump Hose	50 Feet
Pump	3 Day
Plastic Sheeting	44 Square Yard
Riprap	1 Cubic Yard
Sandbags.....	33 Each
Sand	1 Cubic Yard

The quantities of bypass pump monitoring will be measured on the time basis, of the actual number of Days the bypass pump is in operation and a daily monitoring report is received.

Turbidity monitoring will be measured according to 00290.80.

Payment

00245.90 Payment - The accepted quantities of temporary water management facilities will be paid for at the Contract lump sum amount for the item "Temporary Water Management Facility at Station _____".

The location of the facility will be inserted in the blank.

The accepted quantities of bypass pump monitoring will be paid for at the Contract unit price, per Day, for the item "Bypass Pump Monitoring".

Payment will be payment in full for furnishing and placing all Materials, and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

Turbidity monitoring will be paid for according to 00290.90.

3- Creeks Floodplain Enhancement

No separate or additional payment will be made for TWMP, maintaining, operating, monitoring, moving, or removing the facility.

SECTION 00280 - EROSION AND SEDIMENT CONTROL

Comply with Section 00280 of the Standard Specifications modified as follows:

00280.00 Scope - Replace the paragraph that begins "This Work also consists of providing temporary ..." with the following paragraph:

This Work also consists of providing temporary erosion and sediment control (ESC) measures and furnishing, installing, moving, operating, maintaining, inspecting, and removing ESC throughout the Project area according to the Standard Drawings, the erosion and sediment control plan (ESCP), the Specifications, or as directed, until the site is permanently stabilized. Included also is the monitoring of weather, of stormwater and receiving waters, the reporting of monitoring observations, the reporting of corrective actions (when necessary) and the updates and revisions of the ESCP, including ESCP cover sheet, necessary to keep it representative of current site conditions and compliant with the 1200-CA or CN permit if applicable.

Delete the paragraph that begins "When contaminants, pollutants or hazardous materials...".

Add the following paragraph to the end of this subsection:

The Agency's NPDES 1200-CN permit is applicable to the Project.

00280.04 Erosion and Sediment Control Plan on Agency Controlled Lands - Replace the bullet that begins "Information required under 1200-CA..." with the following bullet:

- Information required under 1200-CN permit, if applicable.

Add the following paragraphs to the end of this subsection:

Fill in required information listed on the ESCP cover sheet prior to beginning of construction and submit revised cover sheet to Engineer 10 Days before the preconstruction meeting. Monitor weather, stormwater runoff, and receiving waters, and document monitoring observations. Immediately upon discovery, notify Engineer if a 1200-CN permit non-compliance occurs. Provide updates and revisions of the ESCP, including ESCP cover sheet, necessary to keep it representative of current site conditions and compliant with the 1200-CN permit.

When contaminants, pollutants or hazardous materials are discovered in the Project location in soils or groundwater comply with 00290.20(f) and, provide an environmental management plan (EMP) as required by the 1200-CN permit if applicable.

00280.14(e) Slope and Channel Liner Matting - Replace the bullet that begins "Type A – Slope..." with the following bullets:

- **Type A: Rolled** – Rolled slope protection mat, fully biodegradable, for Clay Soil Slopes 1V:3H or flatter.

00280.16(k) Active Treatment System – Add the following sentence to the end of this subsection:

Obtain approval of the active treatment system from DEQ prior to use.

00280.30 Erosion and Sediment Control Manager –

Add the following bullet to the beginning of the bullet list under “The ESCM duties include:”

- Be present at the Project Site during all ground disturbing activities.

Replace the bullet that begins “Monitor rainfall, snow melt and runoff ...” with the following bullet:

- Visually monitor rainfall, snow melt and runoff at the Project Site.

Replace the bullet that begins “Monitor water quality in receiving streams in ...” with the following bullet:

- Visually monitor water quality in receiving streams in the vicinity of the Project Site.

Replace the bullet that begins “Monitor water in sediment traps receiving ...” with the following bullet:

- Monitor the pH of the water in sediment traps receiving runoff from soils amended with cementitious material for acidity or alkalinity.

00280.41(f) Hauling Material – Replace this subsection, except for the subsection number and title, with the following:

Cover loads carrying soil or sediment which may generate dust. Haul saturated loads in water tight beds or drain saturated loads prior to leaving the Project Site.

00280.41(g) Underground Injection Controls (UIC) – Replace this subsection, except for the subsection number and title, with the following:

Do not allow storm water from work area to enter Underground Injection Control (UIC) inlets, UIC catch basins or UIC wells.

00280.62 Inspecting and Monitoring – Delete the paragraph that begins “Inspect the Project Site...”.

00280.62(a) Inspection - Replace the paragraph that begins "Perform site inspection, complete..." with the following paragraph:

Inspect the Project Site and all ESC devices for Effective Function and potential erosion or sediment movement and complete all applicable parts of the ODOT Erosion Control Monitoring Form, and submit the form to the Agency as follows:

00280.62(b) Rainfall – Add the following to the end of this subsection:

3- Creeks Floodplain Enhancement

The closest on-line rain gauge is located at:
forecast.weather.gov/MapClick.php?lat=45.44496505&lon=-122.62824845&unit=0&lg=english&FcstType=graphical

00280.64(a) Corrective Action Timelines – Delete the bullet that begins “If completion of corrective action is not feasible...”

Delete the bullet that begins “Provide a schedule for clean-up and corrective actions...”

Delete the bullet that begins “Provide all corrective action documentation and photographs...”

00280.64(b) Corrective Action Documentation – Add the following bullets to the beginning of the bullet list:

- If completion of corrective action is not feasible within 24 hours, document the reasons why the time line cannot be met.
- Provide a schedule for clean-up and corrective actions that restores Effective Functioning as soon as feasible. If schedule cannot be met document the reasons for the delay.
- Provide all corrective action documentation and photographs to Agency within 24 hours of completion of corrective actions.

SECTION 00281 – 700 GRAM COIR FIBER SOIL STABILIZATION MATTING

Section 00281, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00281.00 Scope - This work shall consist of furnishing, transporting, storing, installing and maintaining 700 gram coir fiber soil stabilization matting along the streambanks, slopes, and at other locations designated in the Contract Documents.

00281.01 Related Sections

- A. All Contract Documents
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.
- C. Section 00330 Earthwork
- D. Section 01092 Log Jam
- E. Section 01093 Riffle
- F. Section 01094 Cascade

00281.02 Abbreviations, Definitions, and Terms – See contract documents

- A. CM: Coir matting.
- B. O.C.: On center.
- C. LOD: Limit of disturbance.

00281.03 Submittals – The Contractor shall submit the following supplier information and material data to the Owner for approval for the following features/structures:

- A. The Contractor shall submit the source of supply and material data for all the coir fiber soil stabilization matting and components listed in the Contract Documents including matting, stakes and straw.

00281.04 Quality Assurance – Any substitutions or material alterations proposed for use must be submitted and approved before application.

00281.05 Delivery, Storage, and Handling

- A. Deliver, store, and handle soil stabilization matting material with care as to not defect the product. Keep stored in a dry place.
- B. Materials and equipment shall be kept in the approved staging and stockpile areas until installation can occur and/or upon removal.
- C. Nonconforming, unsuitable material shall be removed at the Contractor's expense.

00281.06 Sequencing and Scheduling

- A. Shall be installed per the Erosion and Sediment Control Plan, in the sequence indicated per the Sequence of Construction and as indicated on the approved Plans.

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- B. The soil stabilization matting shall be installed immediately following the grading activities or as needed when building. Any herbivory damage that occurs to plantings between grading and installation of the soil stabilization matting shall be replaced by the Contractor at no additional cost.

00281.07 Warranty – The Contractor shall warranty soil stabilization matting for the contracted length of time. Any material that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost to the Owner.

00281.08 Maintenance

- A. The Contractor shall maintain the soil stabilization matting for the contracted length of time, including but limited to:
1. Replace ripped or missing matting.
 2. Replace broken or missing stakes.
 3. Replacing or removal of matting and stakes at the Owner's request.
- B. Any soil stabilization matting and stakes that need be replaced or repaired shall be done so by the Contractor at no additional cost to the Owner.

Materials

00281.10 General

- A. The Contractor shall only use products which have been approved by the Owner and/or Engineer.
- B. It is a best practice to provide approved like materials from the same manufacturer or supplier to provide consistent composition and appearance. When more than one manufacturer or supplier is necessary to obtain the materials in the quantities and/or timeframe necessary, the Contractor shall provide a submittal for each different manufacturer or supplier and receive approval from the Owner prior to application.

00281.11 Materials

A. Coir Fiber Matting (700g)

1. Coir fiber soil stabilization matting shall be made of 100 % natural and biodegradable coconut fibers having a minimum longevity of 4 years and conform to the following:

Mass/Unit Area	700 grams/sq. meter
Thickness	At least 0.35 inches
Shear Stress	4.5 psf
Velocity	12.0 ft/sec
Open Area – Calculated	50%
UV Stability	80% min. @500 hrs

2. Any substitutions must be approved by the Owner.

B. Wood Stakes

1. Wood Stakes shall be hardwood 24 inch in length. Stakes must be fully biodegradable and shall have the ability to pin the matting. This can be a notch,

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parallel member, or triangular shape that results in securing the matting. Any substitutions must be approved by the Owner.

C. Straw mulch

1. When planting area is associated with installation of Soil Stabilization Matting, provide topsoil, soil amendments, and mulch as specified. Topsoil, soil amendments, and mulch shall be anchored by the Soil Stabilization Matting.

00281.12 Equipment – Use equipment adequate in size capacity, and numbers to accomplish the Work of this Section in a timely and safe working.

Construction

00281.40 General

- A. All materials and construction techniques shall be installed as indicated in the Contract Documents.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and methods needed to accomplish the Work of this Specification in a timely and safe working manner.
- C. During installation of soil stabilization matting, all areas shall be kept neat, clean and free of all trash and debris, and all reasonable precautions shall be taken to avoid damage to existing plants, turf, structures, and private property.

00281.41 Preparation

- A. Place salvaged topsoil prior to placing soil stabilization matting.
- B. Place topsoil, soil amendments, and mulch prior to placing soil stabilization matting.

00281.42 Installation

1. The Contractor shall place and secure soil stabilization matting on:
 1. All graded streambanks from the toe of bank to the top of bank.
 2. Streambank and floodplain at structure locations per the construction details on the Plans, including at riffle, cascade, and log jam installation locations.
 3. Graded floodplain bench.
 4. All slopes steeper than or equal to 3:1 that do not consist of bedrock as shown indicated in the Contract Documents.
 5. Or as directed by the Engineer and/or Owner.
- B. The soil stabilization matting shall be rolled lengthwise (parallel to flow) along the stream bank extending from toe of slope to a minimum of 6 feet past the top of bank or as shown per the structure construction details on the Plans, upon completion of grading and application of seeding.
- C. At toe of slope key in trench 1 foot below stream invert and secure with stakes 2 foot O.C. in all directions. Backfill with existing streambed material.

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- D. If more than one roll is required, overlap should be a minimum of 6 inches and securely fastened with stakes 2 foot O.C. When overlapping ends of matting, the upstream roll shall be placed overtop the downstream roll conducive with sheet flow. When overlapping edges of matting mid-bank, the upslope matting shall be placed overtop the downslope matting conducive with sheet flow.
- E. Matting shall be placed to take the shape of the ground and in full contact with the soil. Stakes shall be arranged 2 feet on center across each mat, so that there shall be approximately 2 stakes per square yard. Stakes shall be driven through the mat and into the ground with the top of the stake within 2" of the ground surface. If stakes are not adequately driven the Owner may request rework or cutting of the stakes. Matting can be installed incrementally as construction progresses, per the sequence of construction.

00281.42 Closeout Activities - The Contractor shall be responsible for the removal of all trash and any other materials incidental to the work in this Section.

Measurement

00281.80 Measurement - Soil stabilization matting shall be measured as Square Yards (SY).

Payment

00281.90 Payment -

For Soil Stabilization Matting used in 01092 Log Jam, 01093 Riffle, and 01094 Cascade, no payment shall be performed under this specification and shall be incidental to their respective structures and shall be paid under the structure-specific line items.

For all other uses, the payment will be full compensation for the furnishment, transportation, storing, installation, maintenance, removal, and disposal, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

SECTION 00290 - ENVIRONMENTAL PROTECTION

Comply with Section 00290 of the Standard Specifications modified as follows:

00290.10 Staging and Disposal Sites – Replace the paragraph that begins “Locate staging areas...” with the following paragraph:

Locate staging areas and disposal sites in previously improved or disturbed sites, including existing Roadways, pullouts, turnouts, parking lots, and storage yards that have been compacted, and graveled or paved, unless otherwise specified in Section 00237 or approved, in writing, by the Engineer,

Add the following subsection:

00290.30(a)(7) Water Quality:

- Do not discharge water contaminated by pollutants including sediment, drilling fluids and waste, concrete, grout, or water contained within a work area isolation, into any waters of the State or U.S. or conveyances draining thereto until it has been treated using Materials such as those listed in 00280.15 or 00280.16 or by pumping to a vegetated upland location. Do not allow Project discharges to increase the concentration of any pollutant in the receiving water to a level that exceeds the limits prescribed by OAR 340-041.
- Do not use permanent stormwater quality treatment facilities to treat construction runoff unless prescribed by an ESCP approved under Section 00280.
- If construction discharge water is released using an outfall or diffuser port, do not exceed velocities more than 4 feet per second, and do not exceed an aperture size of 1 inch.
- Implement containment measures adequate to prevent pollutants from entering waters of the State or U.S. Such pollutants include but are not limited to construction and demolition materials, waste spoils, fuel or petroleum products, detergents, silt, welding slag and grindings, concrete sawcutting by-products and sandblasting abrasives. Do not allow curing concrete or grout to be submerged within waters of the State or U.S. less than 24 hours after placement, except within work area isolation. Do not end-dump riprap into the waters of the State or U.S. Place riprap from above the ordinary high water line.
- Monitor weather and streamflow forecasts and conditions to anticipate high flows that may unintentionally inundate any portion of the Project Site.
- If high flow conditions occur or are anticipated to occur that may unintentionally inundate any portion of the Project Site, remove all potentially affected Equipment, Materials, and debris from the potential inundation area. Cease Work in the area until water recedes and the risk of further high water events passes. The Engineer retains the authority to temporarily halt or modify the Work in case of excessive turbidity or damage to natural resources.
- If Work in or around waters of the State or U.S. violate permit conditions or any requirement of this subsection, stop such Work and notify the Engineer.

Add the following subsection:

00290.30(a)(8) Meter Turbidity Monitoring - In addition to the requirements of 00280.62(c) to monitor the receiving stream to identify water quality issues, during Work in waters of the State or U.S., implement best management practices (BMPs) to minimize turbidity, and monitor turbidity using a turbidity meter that has been maintained and calibrated according to the manufacturer's specifications and according to the following:

- Measure upcurrent and downcurrent turbidity at two-hour intervals and perform work based on turbidity measurements according to the following:
 - Take upcurrent samples at a location representative of background turbidity approximately 100 feet from the work area.
 - Take downcurrent samples at a location approximately 100 feet from the work area at approximately mid-depth of the water body and within any visible turbidity plume.
 - If the downcurrent reading is less than 5 nephelometric turbidity units (NTU) higher than the upcurrent reading, continue to Work and take readings every two hours.
 - If the downcurrent reading is greater than or equal to 5 and less than 30 NTU higher than the upcurrent reading, modify work procedures and repair or upgrade BMPs, continue Work, and continue to take readings every two hours. If after four hours the downcurrent reading is still greater than or equal to 5 NTU higher than the upcurrent reading, stop all work in water and repair or upgrade BMPs. Resume work in water only after the downcurrent reading is less than 5 NTU above the upcurrent reading.
 - If the downcurrent reading is greater than or equal to 30 and less than 50 NTU higher than the upcurrent reading, modify work procedures, repair or upgrade BMPs and continue Work. If, at the subsequent two-hour reading, the downcurrent reading is still more than 30 NTU higher than the upcurrent reading, stop all work in water and repair or upgrade BMPs. Resume work in water only after the downcurrent reading is less than 5 NTU above the upcurrent NTU reading.
 - If the downcurrent reading is 50 NTU or more higher than the upcurrent reading, stop all work in water, repair or upgrade BMPs, and inform the Engineer. Resume work in water only after the downcurrent reading is less than 5 NTU above the upcurrent NTU, as determined by continued readings made no more than two hours apart.
- Document all turbidity monitoring observations on form 734-2755, "Turbidity Monitoring Report" <https://www.oregon.gov/odot/Forms/2ODOT/7342755ip.pdf>, or another form approved by the Engineer. Submit reports to the Engineer weekly during work in water and keep copies of the reports at the Project Site.
- Meter turbidity monitoring may be temporarily suspended if all of the following conditions are met:
 - Temporary water management and work area isolation measures have been installed and are functioning as designed.
 - The Engineer, after consultation with DEQ, has authorized the suspension of turbidity monitoring. The Engineer will provide information to be documented on the turbidity monitoring form, including the date of the DEQ authorization and the name of the DEQ employee providing the authorization.
- Resume the turbidity monitoring protocol if Work during a temporary suspension of meter turbidity monitoring causes a release of a visible turbidity plume.

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00290.32 Noise Control - Add the following paragraph to the end of this subsection:

Review *Clackamas County Code Section 6.05* which describes noise control regulations. Obtain and be responsible for necessary permits described in *Clackamas County Code Section 6.05.070* . Comply with the applicable noise control requirements for Project Work.

00290.34 Protection of Fish and Fish Habitat - Add the following paragraph:

Meet with the Agency Biologist, Resource Representative, Engineer, and inspector on site, before moving equipment on-site or beginning any work, to ensure that all parties understand the locations of sensitive biological sites and the measures that are required to be taken to protect them.

00290.34(a) Regulated Work Areas - Add the following to the end of this subsection:

The regulated work area is the area at or below the ordinary high water (OHW) elevation shown on the plans.

Perform work within the regulated work area only during the in-water work period. The in-water work period is from July 15th to September 30th.

The total volume of material filled or discharged into waters of the State and waters of the U.S. shall not exceed 9,299 cubic yards.

The total volume of material excavated from the waters of the State and waters of the U.S. shall not exceed 31,972 cubic yards.

Submit a schedule to complete all work within the regulated work area within the in-water work period at least 10 days prior to the preconstruction conference.

00290.34(b) Prohibited Operations - Add the following to the end of this subsection:

- Allow entry within the regulated work area or between stations
 - 17+94 and 28+10
 - 30+55 and 39+71
 - 41+64 and 43+84
 - 46+16 and 47+55
 - 48+75 and 52+86
- Install steel piles greater than 24 inches in diameter or H-pile larger than designation HP 24 within the regulated work area.

Add the following subsection:

00290.34(c) Aquatic Species Protection Measures Required by Environmental Permits:

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(1) General Requirements:

- Do not install fish ladders (for example: pool and weirs, vertical slots, fishways) or fish trapping systems.
- Do not apply surface fertilizer within 50 feet of any stream channel.

Use heavy equipment as follows:

- Choice of equipment must have the least adverse effects on the environment (for example: minimally sized, low ground pressure).
- Secure absorbent material around all stationary power equipment (for example: generators, cranes, drilling equipment) operated within 150 feet of wetlands, waters of the State, waters of the U. S., drainage ditches, or water quality facilities to prevent leaks, unless suitable containment is provided to prevent spills from entering waters of the State or waters of the U.S.
- Do not cross directly through a stream for construction access, unless shown or approved. If shown or approved, cross perpendicular to the stream and do not block stream flow. When a crossing is no longer needed, completely remove the crossing and restore the soils and vegetation to the original condition.
- Store fuel and maintain all equipment in staging areas that are at least 150 feet away from any waters of the State, waters of the U.S., or storm inlet or on an impervious surface that is isolated from any waters of the State, waters of the U.S., or storm inlet.
- If temporary access roads are needed within 150 feet of any body of water, use existing routes unless new routes are shown or approved.
- Before beginning work on temporary access routes that are not shown, submit a proposal to the Engineer for approval.

(2) Work Area Isolation - Provide work isolation according to Section 00245. Provide safe passage around or through the isolated work area for adult and juvenile migratory fish unless passage did not previously exist.

(3) Water Intake Screening - Install, operate, and maintain fish screens on each water intake used for project construction, including pumps used to isolate an in-water work area. When drawing or pumping water from any stream, protect fish by equipping intakes with screens having a minimum 27 percent open area and meeting the following requirements:

- Perforated plate openings shall be 3/32 inch or smaller.
- Mesh or woven wire screen openings shall be 3/32 inch or smaller in the narrowest direction.
- Profile bar screen or wedge wire openings shall be 1/16 inch or smaller in the narrow direction.

Choose size and position of screens to meet the following criteria in Table 00290-1:

Table 00290-1

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Type	Approach Velocity ¹ (Ft./Sec.)	Sweeping Velocity ² (Ft./Sec.)	Wetted Area of Screen (Sq. Ft.)	Comments
Ditch Screen	≤ 0.4	Shall exceed approach velocity	Divide max. water flow rate (cfs) by 0.4 fps	If screen is longer than 4 feet, angle 45° or less to stream flow
Screen with proven self-cleaning system	≤ 0.4	–	Divide max. water flow rate (cfs) by 0.4 fps	–
Screen with no cleaning system other than manual	≤ 0.2	–	Divide max. water flow rate (cfs) by 0.2 fps	Pump rate 1 cfs or less
¹ Velocity perpendicular to screen face at a distance of approximately 3 inches ² Velocity parallel to screen				

Provide ditch screens with a bypass system to transport fish safely and rapidly back to the stream.

(4) Special Aquatic Habitats - The following exploration or construction activities are not allowed in special aquatic habitats:

- Use of pesticides and herbicides, unless allowed according to Section 01030.
- Use of short pieces of plastic ribbon to determine flow patterns.
- Temporary roads or drilling pads built on steep slopes, where grade, soil type, or other features suggest a likelihood of excessive erosion or slope failure.
- Exploratory drilling in estuaries that cannot be conducted from a work barge, or an existing bridge, dock, or wharf.
- Installation of a fish screen on any permanent water diversion or intake that is not already screened.
- Drilling or sampling in an EPA-designated Superfund Site, a state-designated clean-up area, or the likely impact zone of a significant contaminant source, as identified by historical information, U. S. Army Corps of Engineers representative, or the Agency.

(5) Site Restoration - Restore damaged streambanks to a natural slope, pattern, and profile suitable for establishment of permanent woody vegetation unless precluded by pre-project conditions (for example: natural rock substrate):

- Replant all damaged streambanks before the first April 15 following construction.
- If use of large wood, native topsoil, or native channel material is required for the site restoration according to the roadside development plans, stockpile all large wood, native vegetation, weed-free topsoil, and native channel material displaced by construction. Cut trees or large wood and trees into pieces of no less than 20 feet in length, or as shown on the roadside development plans or as directed. Stockpiled native wood and vegetation remain the property of the Agency.

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- Stabilize all disturbed soils, including obliteration of temporary access roads, following any break in work unless construction will resume in 4 Calendar Days.

(6) Surface Water Diversions - Surface water may be diverted to meet construction needs other than work area isolation, consistent with Oregon law, only if water from sources that are already developed, such as municipal supplies, small ponds, reservoirs, or tank trucks, is unavailable or inadequate, and meeting the following conditions:

- When alternative surface sources are available, divert from the stream with the greatest flow.
- Install, operate, and maintain a temporary fish screen.
- Do not exceed a pumping rate and volume of 10 percent of the available flow. For streams with less than 5 cubic feet per second, do not exceed drafting of 18,000 gallons per Day. Do not use more than one pump for each site.

(11) Ditch and Culvert Cleaning - Complete ditch cleaning, culvert and trash rack cleaning by working from the top of bank, unless work area isolation would result in less habitat disturbance.

- Do not work more than 20 feet upstream or downstream the culvert or trash rack.
- Remove only the minimum amount of wood, sediment, or other natural debris necessary to maintain the facility's function, without disturbing spawning gravel or changing the configuration of the original ditch, unless the new configuration is part of the project design.
- Place all large wood, cobbles, and gravels recovered from during culvert and trash rack cleaning downstream from the structure.
- Complete drift removal in the following priority, as directed:
 - Pull and release whole logs or trees downstream.
 - Pull whole logs and trees and place in the riparian area, as directed.
 - Remove whole logs or trees only if roadside development plans have been developed for replacement in-kind.
 - Pull, cut only as necessary, and release logs and trees downstream.

(13) Temporary Power, Communication and Water Lines - Before installing temporary power, communication, or water lines across streams or bodies of water, submit a proposed plan to the Engineer for approval. Do not begin installation before receiving approval from the Engineer. Proposed plans for installation of temporary power, communication, and water lines and stream crossings shall utilize the following design methods in the listed order of priority:

1. Aerial lines, including lines hung from existing bridges.
2. Directional drilling, boring and jacking that spans the channel migration zone and any associated wetland.

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3. Trenching, which is restricted to intermittent streams and may only be used when the stream is naturally dry. For all sections of trenches below the ordinary high water line, backfill with native material and cap with clean gravel suitable for fish use in the project area.

Align each crossing as perpendicular to the watercourse as possible. For drilled, bored, or jacked crossings, ensure that the line is below the total scour prism. Return any large wood displaced by trenching or plowing as nearly as possible to its original position, or otherwise arranged to restore habitat functions.

(14) Injured Fish Notification - If a dead or injured fish is found in the project area, immediately notify the Agency. If the injured fish is in a location where further injury or stress may take place, attempt to move the fish to a safer location, if one is available, near the capture site while keeping the fish in the water and reducing its stress as much as possible. Do not disturb the fish after it has been moved. If the fish is dead or dies while being captured or moved, save the fish and any tags. The Agency will notify appropriate regulatory agencies about the injured or dead fish and provide additional direction to the Contractor.

Add the following subsection:

00290.36(a) Migratory Birds - Add the following to the end of this subsection:

Do not disturb migratory bird nesting habitat (shrubs, trees, and structures), or clear vegetation from February 1 to July 31 of each year without prior written approval from the Engineer. Notify the Engineer, in writing, a minimum of 10 Calendar Days prior to starting activities that could harm nesting birds.

(1) Bird Management - Bird management activities to comply with the Migratory Bird Treaty Act will be performed by **WES** and its permitted agents. Ensure that **WES** and its permitted agents have access to the project area as needed to prevent migratory bird nesting. Nesting prevention may include daily bird harassment and the installation and maintenance of devices that exclude birds.

Do not disturb migratory bird nesting habitat (shrubs, trees and structures) or clear vegetation from March 1 to September 1 each calendar year without prior written approval from the Engineer. Notify the Engineer, in writing, a minimum of 10 Calendar Days prior to starting activities that could harm nesting birds.

- before June 1.

00290.41 Protection of Waters of the U.S. or State - Add the following to the end of this subsection:

Permits have been obtained for this project from the US Army Corps of Engineers (Corps) and the Department of State Lands (DSL). Keep a copy of Corps and DSL permits at the project site during construction. Changes to the project that may increase the amount of fill placed or material removed in waters of the U.S. or State, or the acreage of waters impacted are not authorized. The following waters of the U.S. or State are present and have been determined to be unavoidable as indicated in Table 00290-2:

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Table 00290-2

Impact Waters of the US or State	Removal Volume (cu yds.)	Fill Volume (Cu yds)	Structure	Duration of Impact (Temporary or Permanent)	Area of impact (Acres)
Mt. Scott Creek	1,461.57		Cobble riffles and cascades	Permanent	0.36
Mt. Scott Creek	831.11		Log jams	Permanent	0.26
Mt. Scott Creek	4,368.52		Temporary in-stream access	Temporary	1.55
Mt. Scott Creek	1,340.28		Isolation barriers	Temporary	0.166
Wetland C	20.28		Log jams	Permanent	0.01
Wetland D	29.06		Cobble riffle and log jams	Permanent	0.01
Wetland F	61.48		Construction access	Temporary	0.08
Wetland F	101.85		Construction access	Permanent	0.13
Mt. Scott Creek		1,890.11	Cobble riffles and cascades	Permanent	0.36
Mt. Scott Creek		1,320.22	Log jams	Permanent	0.26
Mt. Scott Creek		166.67	Post reinforcement	Permanent	0.05
Mt. Scott Creek		4,368.52	Temporary in-stream access	Temporary	1.55
Mt. Scott Creek		1,340.28	Isolation barriers	Temporary	0.166
Wetland C		20.28	Cobble riffle and log jams	Permanent	0.01
Wetland D		29.06	Cobble riffle and log jams	Permanent	0.01
Wetland F		61.48	Construction access	Temporary	0.08
Wetland F		101.85	Construction access	Permanent	0.13

00290.51 Protection of Sensitive Cultural Sites - Add the following to the end of this subsection:

There are sensitive cultural sites or areas of high probability for cultural resources on this Project. At the time of preparation of the Plans, **1** site was identified.

The Agency Archaeology Representative for this Project is Kayla Woods, USACE Project Manager.

All contact with the Agency Archaeology Representative shall be through the Engineer.

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An Inadvertent Discovery Plan (IDP) has been developed for this project. The IDP is available from the Engineer.

Meet with the Engineer at least 10 Calendar Days prior to beginning ground disturbing activities to discuss sensitive cultural sites on the Project. Required attendees include:

- The Contractor's supervisory personnel.
- Subcontractors, including contract archaeological monitors, and supervisory personnel who will be involved in ground disturbing activities.
- Agency archaeology representative or region environmental coordinator.
- When applicable, tribal representative(s) or monitor(s).

Prior to beginning On-Site Work, install work zone fencing from section 00221.13 of the QPL, or lath and flagging, around no work zones, as shown or as directed.

00290.90 Payment - Add the following paragraph(s) to the end of this subsection:

The accepted quantities of turbidity monitoring will be paid for at the Contract lump sum amount for the item "Turbidity Monitoring".

Payment for turbidity monitoring will be payment in full for furnishing and placing all Materials and for furnishing all Equipment, labor, and Incidentals necessary to complete the Work as specified.

No separate or additional payment will be made for work zone fencing.

SECTION 00305 - CONSTRUCTION SURVEY WORK

Comply with Section 00305 of the Standard Specifications.

SECTION 00310 - REMOVAL OF STRUCTURES AND OBSTRUCTIONS

Comply with Section 00310 of the Standard Specifications.

SECTION 00320 - CLEARING AND GRUBBING

Comply with Section 00320 of the Standard Specifications modified as follows:

00320.40(c) Tree and Vegetation Trimming - Replace the bullet that begins "Trim branches obstructing sight..." with the following bullet:

- Trim and remove branches, vegetation, or other materials obstructing sight distance at intersections or impairing visibility of signs, signals, illumination, and other TCD.

00320.42 Disposal of Matter - Replace this subsection with the following subsection:

00320.42 Ownership and Disposal of Matter - Vegetation and natural material designated for preservation and salvage are the property of the Agency. All other matter and debris accumulated from clearing and grubbing operations become the Contractor's property at the place of origin. Dispose of all matter and debris according to 00290.20.

SECTION 00330 – EARTHWORK

Comply with Section 00330 of the Standard Specifications modified as follows:

00330.03 Basis of Performance - Add the following paragraph to the end of this subsection:

Perform all earthwork under this Section except for Structure Excavation on the excavation basis.

SECTION 00332 – CHANNEL FILL

Section 00332, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00332.00 Scope - This work shall consist of furnishing, transporting, stockpiling, installing and maintaining Channel Fill material, as shown on the Plans, or as directed by the Owner.

00332.01 Related Sections

- A. All Contract Documents
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.
- G. Section 00330 Earthwork
- H. Section 01092 Log Jam
- I. Section 01093 Riffle
- J. Section 01094 Cascade

00332.02 Abbreviations, Definitions, and Terms – See contract documents

- A. LOD: Limits of Disturbance
- B. OSHA: Occupational Safety and Health Administration

00332.03 Submittals – The Contractor shall submit the following supplier information and material data to the Owner for approval for the following features/structures:

- A. The following shall be submitted:
 - 1. All materials noted in Materials.
 - 2. The Contractor shall submit written notification before reuse of any excavated materials and shall submit soil tests/classifications. The Contractor may only reuse material after receiving approval by the Owner.
 - 3. Permits for transport and legal disposal off-site of excavated material and debris.
- B. For Imported Channel Fill, submit manufacturers or supplier's information and soil test analysis report for each source prior to purchase and delivery to site:
 - 1. Physical for particle size analysis (texture) by sieve and hydrometer method.
 - 2. Test results shall be representative of imported channel fill source and be dated within the past 6 months.

00332.04 Quality Assurance – Contractor shall ensure the material delivered to the site matches and is consistent with the approved material submittals for Imported Channel Fill.

00332.05 Delivery, Storage, and Handling

- A. Conduct all necessary maintenance of traffic.
- B. Do not close or obstruct roadways without permits.

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- C. Conduct operations with minimum interference to public or private roadways.

Materials

00332.10 Materials

- A. Salvaged Channel Fill. Native materials generated from approved on-site excavation activities during stream restoration construction work shall be tested and approved and upon approval, used to meet proposed subgrade elevations for the installation of instream structures within the restored stream channel. Suitable material is defined as the following and shall be approved by the Owner.

Satisfactory Soils: Soil Classification Groups GW, GP, GM, SW, SP, and SM according to ASTM D 2487, Groups A-1, A-2-4, A-2-5, and A-3 according to AASHTO M 145, or a combination of these groups; free of rock or gravel larger than 3 inches in any dimension, debris, waste, frozen materials, vegetation, and other deleterious matter.

Potentially Unsatisfactory Soils: Soil Classification Groups GC, SC, CL, ML, OL, CH, MH, OH, and PT according to ASTM D 2487, Groups A-2-6, A-2-7, A-4, A-5, A-6, and A-7 according to AASHTO M 145, or a combination of these groups.

- B. Unsuitable Material will not be used as fill material for this project. Unsuitable material shall be addressed by the Contractor with the Owner's approval.
- C. Imported Channel Fill. Where salvaged backfill volumes are insufficient, imported channel fill shall consist of sand, loamy sand, sandy loam and loam textures, as defined by the U.S. Department of Agriculture (USDA). The gradation of the soil as determined by USDA classifications shall be within the following ranges:

CLASSIFICATION/SIEVE SIZE: (USDA Classifications)

Size Sample	Material	Acceptable Percentage Range of Total
2.0 in to 2.0 mm	Gravel	0-5%
2.0 mm to 0.05 mm	Sand	30-100%
0.05 mm to 0.002 mm	Silt	0-50%
<0.002 mm	Clay	0-20%

00332.12 Equipment – The Contractor shall utilize equipment that is appropriately sized to perform this Work.

Construction

00332.40 Preparation

1. Install erosion and sediment control measures, as specified in Section 00280 Erosion and Sediment Control, before demolishing and/or clearing site. When demolition

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interferes with the stream channel, install a pump around practice in accordance with Section 00245 Temporary Water Management.

2. Do not demolish or clear cut the entire site at one time. Perform demolition in conjunction with the phases provided in the sequence of construction. Prior to beginning site work, all trees shown for removal on the Plans shall be delineated by the Contractor, reviewed and approved by the Owner. Upon Owner approval begin clearing operations within the limits of construction for the phase in accordance with Section 00320 Clearing & Grubbing. Clearing shall be kept to a minimum and performed as needed to complete the work. Given the environmental nature of the work, trees should be preserved as much as possible with approval from the Owner.
3. Clear the ground surface of designated trees, brush, weeds, roots, matted leaves, small structures, debris, and other objectionable material, vegetation, and growth.

00332.41 Installation

- A. The Contractor shall place approved Channel Fill material as specified in the Specifications and as shown in the Plans. The Channel Fill material shall be placed and spread in layers not to exceed 8 inches in un-compacted thickness and then compacted to produce a firm and uniform layer of subsoil. No static roller or vibratory equipment is necessary to achieve compaction. The Contractor shall compact the material to final grade specified on the Plans with the bucket of an excavator or by tracking over the material.
 1. Wherever possible, Contractor shall maximize the reuse of all excavated material that meets the Specification for Channel Fill. When possible, salvaged material shall be utilized within the immediate Work area it is generated. If there is a surplus of suitable excavated material at one location of project, the surplus shall be carefully removed, transported, and delivered to an approved stockpile location to be used on another project area.
 2. Where salvaged backfill is not available, Contractor shall import channel fill.

Measurement

00332.80 Measurement

Salvaged Channel Fill shall not be measured under 00330 Earthwork.

When excavated material is deemed to be unsuitable for reuse by Owner and hauled off and disposed, Additional Channel Fill will be measured as Cubic Yard (CY). Imported Channel Fill will be measured as Cubic Yard (CY).

Payment

00332.90 Payment -

Imported Channel Fill will be paid for as Cubic Yard (CY) at the unit price per the schedule of unit prices. With the approval of the Owner, payment may be based on the percent of

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imported clean sand completed within a given month. Delivery tickets shall be submitted to substantiate quantities.

Salvaged Channel Fill shall be paid under 00330 Earthwork.

When excavated material is deemed to be unsuitable for reuse by Owner and hauled off and disposed, Additional Channel Fill will be paid for as Cubic Yard (CY) at the Unit Price per the Schedule of Unit Prices.

The payment will be full compensation for the furnishment, transportation, stockpiling, installation, maintenance, removal, and disposal, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

SECTION 00350 - GEOSYNTHETIC INSTALLATION

Comply with Section 00350 of the Standard Specifications.

SECTION 00390 - RIPRAP PROTECTION

Comply with Section 00390 of the Standard Specifications.

SECTION 00391 – STREAMBED MATERIAL

Section 00391, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00391.00 Scope - This work shall consist of furnishing, transporting, storing, installing, and maintaining Streambed Material as described in the Contract Documents.

00391.01 Related Sections

- A. All Contract Documents
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.
- C. Section 00330 Earthwork
- D. Section 01092 Log Jam
- E. Section 01093 Riffle
- F. Section 01094 Cascade

00391.02 Abbreviations, Definitions, and Terms – See contract documents

- A. LWD: Large Woody Debris.
- B. ASTM: American Society for Testing Materials.

00391.03 Submittals – The Contractor shall submit the following supplier information and material data to the Owner for approval for the following features/structures:

- A. The Contractor shall obtain from the quarry and submit to the Owner for approval a certificate stating that the provided materials conform with the contract requirements and verify the following:
 - 1. Rock Classification
 - 2. Unit Weight (lbs. per cubic foot)
 - 3. Weight of streambed material being supplied
 - 4. Source of supply
- B. Samples shall be submitted to the Owner for approval, prior to its use in the Project. Any unsuitable material shall be removed at the Contractor's expense.

00391.04 Quality Assurance – Contractor shall ensure the material delivered to the site matches and is consistent with the approved material submittals for Streambed Material. Any substitutions or material alterations proposed for use must be submitted and approved before application.

00391.05 Delivery, Storage, and Handling – Store Streambed Material in approved staging and stockpile areas.

00391.06 Sequencing and Scheduling – If applicable, salvage existing Streambed Material from the existing channel and set aside for reuse onsite if acceptable by the Owner.

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00391.07 Warranty – The Contractor shall warranty the Streambed Material for the contracted length of time. Any material that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost to the Owner.

00391.08 Maintenance – The Contractor shall maintain Streambed Material for the contracted length of time. Any material that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost to the Owner.

Materials

00391.10 General – Provide approved materials from the same manufacturer or supplier to provide consistent composition and appearance.

00391.11 Materials

A. Streambed Material

1. Streambed Material shall be composed of 75% cobble, ranging from rounded to sub-angular shaped and that meets the size gradation shown, well and evenly mixed with 25% gravel consisting of No. 6 Coarse Aggregate (Section 02690). Furnished Streambed Material shall consist of rock that is sound, tough, dense, resistant to the action of air and water, and suitable in all respects for the purpose intended.
2. Cobble material shall be of appropriate color obtained from an approved source. Acceptable colors include green/gray, brown/gray, dark gray, and/or dark brown in color.
3. The dimension and gradation of Streambed Material shall be as shown on the Construction Plans. Streambed material shall be composed of an evenly distributed mix of material for the full depth specified that meets the gradations shown in the table.
4. Streambed Material shall have a minimum unit weight of 160 lbs. per cubic foot. Material with less unit weight shall be reviewed and approved at the discretion of the Engineer.
5. The Contractor shall locate potential sources for Streambed Material. The Contractor and the Owner will jointly visit the sites to determine whether the stone meets the specified requirements only at the Owners request. Source of Streambed Material shall be from an approved mining operation with valid regulatory permits made available upon request. Streambed Material shall not be harvested from streams or rivers outside a commercial quarry operation. The Contractor will not be granted an extension of time or extra compensation due to delay caused by sampling, testing, approval or disapproval of stone protection material under the requirements of these specifications.
6. Wash-In material is required to choke in the void space of all Streambed Material installed. This material is Type I aggregate in ODOT Section 00706.12 Aggregate.

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- B. Soil material shall be excavated for Streambed Material structures as needed, stockpiled, re-used if considered suitable or hauled offsite and disposed. All excavation necessary to install Streambed Material shall not be paid but is considered incidental to structures.

00391.12 Equipment – It is the responsibility of The Contractor to utilize the appropriate equipment necessary to complete the requirements in this specification in a safe working manner.

Construction

00391.40 General

- A. The Contractor shall install the Streambed Material in accordance with the Contract Documents.
- B. The Contractor shall utilize all materials, tools, equipment, and labor to perform this scope of work to the standards set forth in the Contract Documents.

00391.41 Preparation - Prepare the subgrade for the placement of the Streambed Material by excavating to the appropriate grades in accordance with Section 00330 Earthwork.

00391.41 Installation

- A. Streambed Material shall be placed by mechanical or other acceptable methods so that the in-place gradation is same as the gradation as shown per the construction details on the Plans or as directed by the Owner.
- B. Channel Wash-In material must be repeatedly placed with Streambed Material and worked or washed into all void space of Streambed Material to the satisfaction of the Engineer.

00391.42 Closeout Activities - The Contractor shall be responsible for the removal of all trash and any other materials incidental to the project and disposing of them off-site at no additional cost to the Owner.

Measurement

00391.80 Measurement

No measurement shall be performed under this specification.

Payment

00391.90 Payment - No payment shall be performed under this specification. All Streambed Material shall be incidental to their respective structures 01093 Riffle and 01094 Cascade and shall be paid under the structure-specific line items.

SECTION 00392 – BOULDERS

Section 00392, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00392.00 Scope - This work shall consist of furnishing, transporting, storing, installing, and maintaining Boulders as described in the Contract Documents.

00392.01 Related Sections

- A. All Contract Documents
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.
- C. Section 01093 Riffle
- D. Section 01094 Cascade

00392.02 Abbreviations, Definitions, and Terms – See contract documents

- A. ASTM: American Society for Testing Materials.

00392.03 Submittals – The Contractor shall submit the following supplier information and material data to the Owner for approval for the following features/structures:

- A. The Contractor shall obtain from the quarry and submit to the Owner for approval a certificate stating that the provided materials conform with the contract requirements and verify the following:
 - 1. Rock Classification and color
 - 2. Unit Weight (lbs. per cubic foot)
 - 3. Weight of Boulders being supplied
 - 4. Source of supply
- B. Samples shall be submitted to the Owner for final field approval, prior to use in the Project. Any unsuitable material shall be removed at the Contractor's expense.

00392.04 Quality Assurance

- A. The Contractor shall ensure the material delivered to the site matches these specifications for type, dimension, and color. The Owner reserves the right to reject any non-conforming material delivered to the site.
- B. Any substitutions or material alterations proposed for use must be submitted and approved before application.

00392.05 Delivery, Storage, and Handling – Store Boulders in approved staging and stockpile areas.

00392.06 Sequencing and Scheduling – If applicable, salvage existing Boulders from the existing channel and set aside for reuse onsite if acceptable by the Owner.

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00392.07 Warranty – The Contractor shall warranty the Boulders for the contracted length of time. Any material that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost to the Owner.

00392.08 Maintenance – The Contractor shall maintain Boulders for the contracted length of time. Any material that has to be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost to the Owner.

Materials

00392.10 General – Provide approved materials from the same manufacturer or supplier to provide consistent composition and appearance.

00392.11 Materials

A. Boulders

1. Boulders shall consist of angular flat sandstone rock of appropriate color obtained from an approved source. Acceptable colors include green/gray, brown/gray, dark gray, and/or dark brown in color. Concrete or limestone shall not be considered as an alternative.
2. The dimensions of all Boulders shall be as shown on the Plans.
3. Boulders shall have a minimum unit weight of 160 lbs. per cubic foot.
4. Boulders shall be free from laminations, weak cleavages, and shall not disintegrate from the action of air, salt water, and in handling and placing.
5. The Contractor shall locate potential sources for Boulders. The Contractor and the Owner will jointly visit the sites to determine whether the stone meets the specified requirements only at the Owners request. Source of Boulder shall be from an approved mining operation with valid regulatory permits made available upon request. Boulders shall not be harvested from streams or rivers outside a commercial quarry operation. The Contractor will not be granted an extension of time or extra compensation due to delay caused by sampling, testing, approval or disapproval of stone protection material under the requirements of these specifications.
6. Source of Boulders shall be from an approved mining operation with up-to-date regulatory permits. Boulders shall not be harvested from streams or rivers outside a commercial quarry operation.

- ##### **B. Soil material**
- Soil material shall be excavated for Boulder structures as needed, stockpiled, re-used if considered suitable or hauled offsite and disposed. All excavation necessary to install Boulders shall not be paid but is considered incidental to structures.

00392.12 Equipment – It is the responsibility of The Contractor to utilize the appropriate equipment necessary to complete the requirements in this specification in a safe working manner.

Construction

00392.40 General

- A. The Contractor shall install the Boulders in accordance with the Contract Documents.
- B. The Contractor shall utilize all materials, tools, equipment, and labor to perform this scope of work to the standards set forth in the Contract Documents.

00392.41 Preparation - Prepare the subgrade for the placement of the Boulders by excavating to the appropriate grades in accordance with the Plans and Section 01093 Riffle.

00392.41 Installation

- A. Boulders shall be placed by mechanical or other acceptable methods as shown per the Plans or as directed by the Owner.
- B. See corresponding structure details for guidance on Boulder orientation and placement. The Boulders shall be placed to form a neat and uniform surface area. When applicable footer Boulders shall be placed so that the front edge and face of the stone creates a smooth flow path. Seams between all Boulders shall be staggered. Boulders shall be placed in such a manner with a minimum of voids. When voids are large enough to fit streambed material, the Contractor shall fill voids with streambed material. All void space must be choked in repeatedly. No mortar is permitted.
- C. In the event where installation of the structure may damage tree roots, excavation shall be minimized and brought to the attention of the Owner. This may include reducing the length of the structure, minimal root pruning, removing the tree, or eliminating trenching for footer rocks. This decision shall be field determined and approved by the Owner.

00392.42 Closeout Activities - The Contractor shall be responsible for the removal of all trash and any other materials incidental to the project and disposing of them off-site at no additional cost to the Owner.

Measurement

00392.80 Measurement

No measurement shall be performed under this specification.

Payment

00392.90 Payment - No payment shall be performed under this specification. All Boulders shall be incidental to their respective structures 01093 Riffle and 01094 Cascade and shall be paid under the structure-specific line items.

SECTION 00398 - ROCK SLOPE STABILIZATION AND REINFORCEMENT

Comply with Section 00398 of the Standard Specifications.

SECTION 00640 - AGGREGATE BASE AND SHOULDERS

Comply with Section 00640 of the Standard Specifications modified as follows:

00640.80 Measurement – Replace this subsection with the following:

The quantities of Aggregate will be measured on the weight basis, in the hauling vehicle, except for “1/4” Minus Crushed Rock”. “1/4” Minus Crushed Rock” will be measured on a volume basis.

00640.90 Payment – Add the following Pay Item to this subsection:

Pay Item	Unit of Measurement
(c) 1/4” Minus Crushed Rock _____	Cubic Yard

SECTION 00940 - SIGNS

Comply with Section 00940 of the Standard Specifications modified as follows:

00940.47 Sign Erecting - Add the following paragraph to the end of this subsection:

Trim and remove branches, vegetation, or other materials obstructing the visibility of signs by Public Traffic, as directed.

00940.90 Payment - Add the following paragraph(s) to the end of this subsection:

Trimming and removal of branches, vegetation, or other materials will be paid for according to 00320.90.

SECTION 01040 - PLANTING

Comply with Section 01040 of the Standard Specifications modified as follows:

01040.04(b) Notice of Inspections – Replace “24 hours” with “48 hours”.

01040.13(a) Soil Fertility Test and Soil Amendment Report

Delete paragraph (1) Sampling and replace with the following:

Take two samples from each of the planting areas except the “Temporary Wetland Impacts” area. Mix the samples to create three separate samples called “Temporary and Permanent Riparian Buffer Impacts”, “Temporary and Permanent Floodplain Impacts”, and “Upland Impacts”. Furnish Soil fertility test results that provide information on available nutrient content and fertility status of the Soil. Conduct sampling procedures according to the Oregon State University Extension Service handout EC 628, “How to Take a Soil Sample... and Why”.

01040.48 Planting Area Preparation - Replace the sentence that begins “Identify, kill, and remove...” with the following sentence:

Identify, kill, and remove Weeds according to 01030.62(b)(3).

01040.48(b) Method “B” (Non-Cultivated Planting Areas) – Replace the second paragraph with the following:

Mix equal parts by volume Commercially Available Compost with Topsoil. Add any Soil conditioners, Soil amendments, Soil bio-amendments or fertilizers with the mixture as required. The Compost and Topsoil mixture shall be placed to a depth of 6 inches over a prepared bare soil subgrade in all areas except the “Temporary Wetland Impacts” area. Do not compact.

1040.53(b) Non-Ornamental Plant Beds – Replace with the following:

Spread Wood Chip Mulch to a depth of 4” across all planting areas except “Temporary Wetland Impacts” areas.

01040.71 Plant Care and Success Criteria - Add the following to the end of this subsection:

The following watering frequencies are required:

- All trees and shrubs, water at a frequency of 2 times per week, or as needed to maintain plant health during the one-year Plant Establishment Period, at a depth of 8”.

01040.90 Final Trimming and Cleanup - Add the following to the end of this subsection:

Topsoil and wetland Topsoil will be measured on the volume basis at the time of placement. Trucking invoices may be used to determine volumes if the quantities are verifiable to the satisfaction of the Engineer.

Partial payments for plant Materials will be made as follows:

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**At the time of the original planting
60%**

**After the first plant establishment inspection
10%**

**After the second plant establishment inspection
10%**

**After the third plant establishment inspection
10%**

**At completion of the establishment period
10%**

SECTION 01092 – LOG JAM

Section 01092, which is not a Standard Specification, is included in this Project by Special Provision.

Description

01092.00 Scope - This work shall consist of the salvage or import of materials as well as the installation of these structures, as specified in the Contract Documents.

01092.01 Related Sections

- A. All Contract Documents
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.

01092.02 Abbreviations, Definitions, and Terms – See contract documents

- A. O.C.: On center

01092.03 Submittals – The Contractor shall submit the following supplier information and material data to the Owner for approval for the following features/structures:

- A. 700 gram matting
- B. 1000 gram matting
- C. Imported Rootwads, Vertical Wood Posts, and Vertical Key Logs
- D. All other woody material to be field approved by Owner prior to use.

01092.04 Quality Assurance – Contractor shall ensure the material delivered to the site matches these specifications for type, dimension, and color. The Owner reserves the right to reject any non-conforming material delivered to the site.

01092.05 Delivery, Storage, and Handling - Store woody material in approved staging and stockpile areas. Particularly out of areas prone to flooding where material could float away.

01092.06 Warranty – The Contractor shall warranty the Log Jams for the contracted length of time. Any features that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost.

01092.07 Maintenance – The Contractor shall maintain Log Jams for the contracted length of time. Any features that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost.

Materials

1092.10 General

- A. Salvaged products:
 - 1. With approval from the Owner, the Contractor shall use suitable woody material as a result of the site clearing process.

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2. The Contractor shall salvage suitable logs, rootwads and brush for Log Jams.
 3. The Contractor shall make every effort to salvage these materials for reuse onsite and not export the material resulting in import of woody material to the site. The Contractor shall save the necessary number of trees, with their rootwads intact, to construct the Log Jams as indicated on the Plans. These shall be handled and stored in a manner to avoid damage to the root fan or tree trunk.
- B. Imported products:
2. If insufficient numbers of trees are available onsite the Contractor shall supply large woody debris, rootwads, logs and brush.
- C. No live trees not identified for removal shall be harvested for the sole purpose of providing materials for this item. If sufficient materials meeting the above requirements are not available from the project site, the Contractor shall then obtain off-site material meeting specified requirements at no additional cost to the Owner.

01092.11 Materials – All woody material must have been harvested within the last six months. Woody material harvested more than six months prior to installation shall not be used.

A. Rootwad

1. Rootwad trunks shall be a minimum of 10 inches in diameter and a minimum length to allow proper key-in to the subgrade per the detail. Rootwad fan shall be a minimum width of 6 feet in diameter. Use rot resistant species if possible. Use wood free of defects, major damage, and decay.
2. The Contractor shall sharpen the end of the log with a chainsaw to assist with driving it into the ground.

D. Key Logs

1. Horizontal and Vertical Key Logs shall be locally sourced, hardwood species preferred, sound and free from cracks, seams and other defects conducive to accelerated weathering. All logs shall be inspected for approval by the Engineer prior to installation. Logs shall have the following properties:
 - i. Horizontal Key Logs shall be a minimum of 12 inches diameter and minimum length to allow proper key-in to the banks and bed per the details and notes on the Plans.
 - ii. Vertical Key logs shall be a minimum of 10 inches diameter and minimum length to allow proper key-in to the bed and banks per the details and notes on the Plans.
 - iii. On any exposed ends, the Contractor shall attempt to avoid clean flush cuts on the ends. A more natural looking “broken” tip/end is necessary.
 - iv. On any end keyed into the bed or bank, Key Logs shall have driven ends sharpen the end of the of the log with a chainsaw to assist with driving it into the ground.

E. Ballast Logs

1. Ballast logs shall be composed of 6 to 10 inch diameter branches/trunk, approximately 6 to 10 foot long

F. Brush Mattress

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1. Brush Mattress shall be composed of woody material (a mix of brush, limbs, and small rootwads) and salvaged onsite fill material.
2. Brush and limbs shall be 1 to 4 inches in diameter and broken into 2 to 4 foot lengths. Small rootwads shall have trunks 4 to 8 inches in diameter and 4 to 6 feet long.
3. Woody material shall be evenly mixed with salvaged onsite fill material (50% woody and 50% fill).

G. Log Jam Backfill

1. Jam Backfill shall be composed of a combination of salvaged backfill, salvaged Stream Bed Material and/or Channel Fill Material. The source of the material is a function of the availability and composition of the salvaged material. When salvaged material is available for reuse, it shall be reused to the maximum extent. The combined composition of the log jam backfill may include loose clay, silt, sand and gravel, but must include a minimum of 50% sand and gravel.

H. Vertical Wood Posts

1. Vertical wood posts shall be cedar posts and be a minimum of 4 inches diameter and of sufficient length to achieve 3 feet key in depth plus height of the proposed structure.

I. Coir matting

1. 700 gram coir fiber soil stabilization matting per Section 00281 Soil Stabilization Matting.
2. 1000 gram coir fiber matting shall be made of 100% natural and biodegradable coconut fibers and conform to the following:

Mass/Unit Area	1000 grams/sq. meter
Thickness	At least 0.35 inches
Shear Stress	5.5 psf
Velocity	17.0 ft/sec
Open Area – Calculated	36%
UV Stability	80% min. @500 hrs

Construction

01092.40 General

- A. All Log Jams shall be installed per the Plans.
- B. Placement of the Log Jams shall be installed per the Plans and/or verified by the Engineer to ensure locations are suitable.

01092.41 Preparation

- A. The Contractor shall import the necessary woody material to complete these structures.
- B. If applicable, harvest on-site large woody debris (rootwads) by pushing over trees as part of the approved clearing, leaving as much of the root fan and accompanying sod and soil clumps intact as possible.

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01092.42 Installation

- A. Per the Contract Documents.
- B. The structures must be sufficiently packed with material and matting to force surface flow over the top of the structures. Leaking, by-pass or other issues allowing flow under or through the structure is not acceptable and will require rework by the Contractor.

01092.43 Closeout Activities - The Contractor shall be responsible for the removal of all trash and any other materials incidental to the project and disposing of them off-site per the General Conditions at no additional cost to the Owner.

Measurement

01092.80 Measurement - Log Jam shall be measured as Each (EA) of structure installed. Size is the defining difference between Baseflow and Reinforced Riffles.

Payment

01092.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per Each (EA) for the bid item "Log Jam".

The payment will be full compensation for the furnishment, transportation, storing, installation, maintenance, removal, and disposal, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

SECTION 01093 - RIFFLE

Section 01093, which is not a Standard Specification, is included in this Project by Special Provision.

Description

01093.00 Scope - This work shall consist of furnishing, transporting, stockpiling, installing and maintaining Riffle structures as specified in the Contract Documents.

01093.01 Related Sections

- A. All Contract Documents
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.

01093.02 Abbreviations, Definitions, and Terms – See contract documents

01093.03 Submittals – The Contractor shall submit material data and the quarry/supplier of all Riffle Structure components listed within this Specification Materials and on the Plans.

01093.04 Quality Assurance

- A. The Contractor shall ensure the material delivered to the Site matches these specifications for type, dimension and color. The Owner reserves the right to reject any non-conforming material delivered to the site.
- B. Any substitutions or material alterations proposed for use must be submitted and approved by the Owner before application.

01093.05 Delivery, Storage, and Handling

- A. Deliver, store and handle products in a safe and efficient manner.
- B. Materials and equipment shall be kept in the approved staging and stockpile areas and kept dry and in neat conditions as to not damage the product.
- C. Non-confirming, unsuitable material shall be removed at the Contractor's expense.

01093.06 Sequencing and Scheduling – Riffle structures shall be installed in the sequence indicated per the Sequence of Construction as indicated on the approved Plans or as directed and/or approved by the Owner.

01093.07 Warranty – The Contractor shall warranty the Riffle structure(s) for the contracted length of time. Any Riffle structures that must be repaired or replaced shall be done so by the Contractor at no additional cost to the Owner.

01093.08 Maintenance – The Contractor shall maintain the Riffle structure(s) for the contracted length. Any Riffle structures that must be repaired or replaced shall be done so by the Contractor at no additional cost to the Owner.

Materials

01093.10 General

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- A. Contractor shall only use products which have been approved by the Owner and/or Engineer.
- B. It is best practice to provide approved like materials from the same manufacturer or supplier to provide consistent composition and appearance. When more than one manufacturer or supplier is necessary to obtain the materials in the quantities and/or timeframe necessary, the Contractor shall provide a submittal for each different manufacturer or supplier and receive approval from the Owner prior to application.

01093.11 Materials

- A. Boulders
 - ii. Boulders for the Riffle structure(s) shall meet the requirements in Section 00392 Boulders.
- B. Streambed Material
 - ii. Streambed material shall meet the requirements in Section 00391 Streambed Material.
- C. Granular Filter Blanket
 - i. Granular Filter Blanket material for the Riffle structure(s) shall meet the requirements of Type I aggregate in Section 00706.12 Aggregate.
- D. Channel Fill material
 - ii. Channel Fill material for the Riffle structure(s) shall meet the requirements in Section 00332 Channel Fill.
- E. Channel Wash-in material
 - ii. Granular Filter Blanket material for the Riffle structure(s) shall meet the requirements of Type I aggregate in Section 00706.12 Aggregate.
- F. Soil Stabilization Matting
 - i. Soil Stabilization Matting for the Riffle structure(s) shall meet the requirements of Section 00281 700 gram coir fiber soil stabilization matting.

01093.12 Equipment

- A. Use equipment adequate in size capacity, and numbers to accomplish the Work of this Section in a timely and safe working manner.
- B. Utilize the excavator bucket to achieve proper placement and compaction of Boulders, and Streambed Material.

Construction

01093.40 General

- A. All materials and construction techniques shall be installed as indicated in the Contract Documents.
- B. Proper installation is critical, improperly installed Riffle structures do not function as intended. If functional intent is not met and surface flow over the Riffle is not observed, the Contractor shall re-work the structures to ensure proper function.

01093.41 Preparation

- A. If applicable, it is the Contractor's responsibility to install and maintain the temporary tree and plant protections in accordance with the Contract Documents prior to grading activities.

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- B. It is the Contractor's responsibility to install and maintain the applicable temporary erosion and sediment controls in accordance with the Contract Documents prior to grading activities.
- C. If applicable, it is the Contractor's responsibility to install and maintain dewatering controls in accordance with the Contract Documents prior to grading and in-stream activities.
- D. If applicable, it is the Contractor's responsibility to clear and grub the immediate area of proposed Riffle structure(s) prior to Riffle installation in accordance with the Contract Documents Grubbing.

01093.42 Installation

- A. The Contractor shall stake out the nodes provided for each Riffle structure. See structure tables on the Plans with node locations and elevations defining the layout of the Riffle that relates to the construction detail.
- B. In areas requiring fill, the existing stream channel shall be filled and compacted with the bucket or by other means in maximum 8-inch lifts of Channel Fill material to meet subgrade elevations necessary to place 6" Granular Filter Blanket and Streambed Material at the required depth to meet final elevations as shown on the Plans. In areas of cut, Channel Fill material under the Riffle is not needed. The Contractor shall cut existing material to get to the subgrade elevation required for the placement of Granular Filter Blanket and Streambed Material based on existing conditions.
- C. The Riffle shall be constructed beginning at the downstream most extent of the structure. In Plan view, the Riffle shall be placed in an arc formation to the approximate radii shown on the grading plan, with the center of the arc set in the lowest point (thalweg) along the length of the channel. Refer to node locations for width of Riffle across channel as shown on the Plans.
- E. In the event that resistant bedrock is present in the area of installation, the bedrock shall be used instead of footer boulders, or as directed by the Engineer. If friable and weathered bedrock is present and can be trenched, footer boulders will still be required.
- F. In the event where installation of the Riffle structure may damage tree roots, excavation shall be minimized. This may include adjusting the position of the structure, reducing the length of the structure, minimal root pruning, removing the tree, or eliminating trenching for footer rocks. This decision shall be field determined and authorized by the Engineer and/or Owner.
- G. Excavate a trench at the downstream extent of the structure into the existing stream bed substrate or fill material to place Streambed Material and boulders for the toe cross section. Riffle and footer boulders shall be placed in Streambed Material in orientations shown on the Plans. Boulders shall be interlocked and shall not rock or rotate in position once installed. The entire footer boulder and part of the riffle boulder shall be placed so that the front edge and face of the stone creates a smooth flow path. Footer boulders shall be placed so that the front edge and face of the stone creates a smooth flow path. Riffle boulders shall be placed immediately upstream and abut the footer boulders. The upstream extent of the riffle boulders placed at the center of channel shall be at the elevation shown on the profile and in the structure tables for each Riffle. The boulders shall be placed to form a neat and uniform surface area. Seams between all boulders shall be staggered and boulders shall not be stacked. No mortar is permitted. All voids in boulders shall be filled with Streambed Material.

3- Creeks Floodplain Enhancement

- H. The Contractor shall install the Streambed Material. This material shall be placed by mechanical or other acceptable methods with minimum voids. The material shall be placed to form a neat and uniform surface area in lifts that fully incorporate the Streambed Material leaving no voids. No mortar is permitted. Streambed Material shall be graded from the smallest to the largest pieces as specified above and will be controlled by visual inspection. The grading of Streambed Material shall be controlled by visual inspection or as directed by the Engineer. Streambed Material shall meet a finish grade tolerance of +/- 0.2 feet to allow for larger cobble to protrude above the proposed finish grade.
- I. The Streambed Material shall be used to form an apron at the downstream end of the structure and tie into the existing channel bottom. The thickness (depth) of Streambed Material shall be 2 feet throughout the Riffle, including the aprons before tapering into the pool, except for under the boulders.
- J. Channel Wash-In Material shall be washed into the Riffle structures to fill all void space and produce surface flow of water over the Riffle.

01093.43 Closeout Activities - The Contractor shall be responsible for the removal of all trash and any other materials incidental to the Work in this section, disposing of them off-site, at no additional cost to the Owner.

Measurement

01093.80 Measurement - Riffle shall be measured as Each (EA) of structure installed.

Payment

01093.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per Each (EA) for the bid item "Riffle".

The payment will be full compensation for the furnishment, transportation, stockpiling, installation, maintenance, and warranty for all materials, labor, equipment, tools, and incidentals necessary to complete the work. All Items 00281 Soil Stabilization Matting, 00330 Earthwork, 00332 Channel Fill Material, 00391 Streambed Material, and 00392 Boulders are incidental to Riffles.

SECTION 01094 - CASCADE

Section 01094, which is not a Standard Specification, is included in this Project by Special Provision.

Description

01094.00 Scope - This work shall consist of furnishing, transporting, stockpiling, installing and maintaining Cascade structures as specified in the Contract Documents.

01094.01 Related Sections

- A. All Contract Documents
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.

01094.02 Abbreviations, Definitions, and Terms – See contract documents

01094.03 Submittals – The Contractor shall submit material data and the quarry/supplier of all Cascade Structure components listed within this Specification Materials and on the Plans.

01094.04 Quality Assurance

- A. The Contractor shall ensure the material delivered to the Site matches these specifications for type, dimension and color. The Owner reserves the right to reject any non-conforming material delivered to the site.
- B. Any substitutions or material alterations proposed for use must be submitted and approved by the Owner before application.

01094.05 Delivery, Storage, and Handling

- A. Deliver, store and handle products in a safe and efficient manner.
- B. Materials and equipment shall be kept in the approved staging and stockpile areas and kept dry and in neat conditions as to not damage the product.
- C. Non-confirming, unsuitable material shall be removed at the Contractor's expense.

01094.06 Sequencing and Scheduling – Cascade structures shall be installed in the sequence indicated per the Sequence of Construction as indicated on the approved Plans or as directed and/or approved by the Owner.

01094.07 Warranty – The Contractor shall warranty the Cascade structures for the contracted length of time. Any Cascade structures that must be repaired or replaced shall be done so by the Contractor at no additional cost to the Owner.

01094.08 Maintenance – The Contractor shall maintain the Cascade structures for the contracted length. Any Cascade structures that must be repaired or replaced shall be done so by the Contractor at no additional cost to the Owner.

Materials

01094.10 General

3- Creeks Floodplain Enhancement

- A. Contractor shall only use products which have been approved by the Owner and/or Engineer.
- B. It is best practice to provide approved like materials from the same manufacturer or supplier to provide consistent composition and appearance. When more than one manufacturer or supplier is necessary to obtain the materials in the quantities and/or timeframe necessary, the Contractor shall provide a submittal for each different manufacturer or supplier and receive approval from the Owner prior to application.

01094.11 Materials

- A. Geotextile
 - i. Non-woven SE geotextile shall meet the requirements in Section 00350 Geosynthetic Installation.
- B. Boulders
 - i. Boulders for the Cascade structures shall meet the requirements in Section 00392 Boulders.
- C. Streambed Material
 - i. Streambed material shall meet the requirements in Section 00391 Streambed Material.
- D. Channel Fill material
 - i. Channel Fill material for the Cascade structures shall meet the requirements in Section 00332 Channel Fill.
- E. Channel Wash-in material
 - i. Channel Wash-In material for the Cascade structures shall meet the requirements of Type I aggregate in Section 00706.12 Aggregate.
- F. Soil Stabilization Matting
 - i. Soil Stabilization Matting for the Cascade structure(s) shall meet the requirements of Section 00281 700 gram coir fiber soil stabilization matting.

01094.12 Equipment

- A. Use equipment adequate in size capacity, and numbers to accomplish the Work of this Section in a timely and safe working manner.
- B. Utilize the excavator bucket to achieve proper placement and compaction of Boulders and Streambed Material.

Construction

01094.40 General

- A. All materials and construction techniques shall be installed as indicated in the Contract Documents.
- B. Proper installation is critical, improperly installed Cascade structures do not function as intended. If functional intent is not met and surface flow over the Cascade is not observed, the Contractor shall re-work the structures to ensure proper function.

01094.41 Preparation

- A. If applicable, it is the Contractor's responsibility to install and maintain the temporary tree and plant protections in accordance with the Contract Documents prior to grading activities.

3- Creeks Floodplain Enhancement

- B. It is the Contractor's responsibility to install and maintain the applicable temporary erosion and sediment controls in accordance with the Contract Documents prior to grading activities.
- C. If applicable, it is the Contractor's responsibility to install and maintain dewatering controls in accordance with the Contract Documents prior to grading and in-stream activities.
- D. If applicable, it is the Contractor's responsibility to clear and grub the immediate area of proposed Cascade structures prior to Cascade installation in accordance with the Contract Documents.

01094.42 Installation

- A. The Contractor shall stake out the nodes provided for each Cascade structure. See structure tables on the Plans with node locations and elevations defining the layout of the Cascade that relates to the construction detail.
- B. In areas requiring fill, the existing stream channel shall be filled and compacted with the bucket or by other means in maximum 8-inch lifts of Channel Fill material to meet subgrade elevations necessary to place Cascade materials at the required depth to meet final elevation specified on the profile as shown on the Plans. In areas of cut, Channel Fill material is not needed. The Contractor shall cut existing material to get to the subgrade elevation required for the placement of Cascade materials based on existing conditions.
- C. The Cascade shall be constructed beginning at the downstream most extent of the structure. In plan view, the Cascade shall be placed in an arc formation to the approximate radii shown on the grading plan, with the center of the arc set in the lowest point (thalweg) along the length of the channel. Refer to node locations for width of Cascade across channel as shown on the Plans.
- D. In the event that resistant bedrock is present in the area of installation, the bedrock shall be used instead of footer boulders, or as directed by the Engineer. If friable and weathered bedrock is present and can be trenched, footer boulders will still be required.
- E. In the event where installation of the Cascade structure may damage tree roots, excavation shall be minimized. This may include adjusting the position of the structure, reducing the length of the structure, minimal root pruning, removing the tree, or eliminating trenching for footer rocks. This decision shall be field determined and authorized by the Engineer and/or Owner.
- F. Excavate a trench at the downstream extent of the structure into the existing stream bed substrate to place geotextile, boulders, and Streambed Material for the toe cross section. Geotextile shall be placed at boulder subgrade elevations as per the construction detail on the Plans. Install geotextile below all footer boulders and Streambed Material, separating them from the underlying Channel Fill material or existing ground, as shown on the Plans. Install an adequate width of geotextile that will extend the width of the structure when the structure has been completed in orientations shown in the Plans. Cascade and footer boulders shall be placed on top of the geotextile in orientations shown on the Plans with Streambed Material used to fill all voids. Boulders shall be interlocked and shall not rock or rotate in position once installed. The footer boulder shall extend below the pool tie-in elevation shown on the profile in the Plans. Footer boulders shall be placed so that the front edge and face of the stone creates a smooth flow path. Cascade boulders shall be placed immediately upstream and abut the footer boulders. The upstream extent of the Cascade boulders placed at the center of channel shall be at the elevation shown on the profile and in

3- Creeks Floodplain Enhancement

the structure tables for each Cascade. The boulders shall be placed to form a neat and uniform surface area. Seams between all boulders shall be staggered and boulders shall not be stacked. Voids between boulders shall be filled with Streambed material. No mortar is permitted. Trim excess geotextile fabric so that fabric is flush with tops of boulders.

- G. The Contractor shall install the Streambed material. This material shall be placed by mechanical or other acceptable methods with minimum voids. The material shall be placed to form a neat and uniform surface area in lifts that fully incorporate the Streambed Material leaving no voids. No mortar is permitted. Streambed Material shall be graded from the smallest to the largest pieces as specified above and will be controlled by visual inspection. The grading of Streambed Material shall be controlled by visual inspection or as directed by the Engineer. Streambed Material shall meet a finish grade tolerance of +/- 0.2 feet to allow for larger cobble to protrude above the proposed finish grade.
- H. Boulders and Streambed Material shall be used to form an apron at the downstream end of the structure as shown in the construction detail. Streambed Material shall be used to build the glide and run that tie into the pool at each end of the cascade. The thickness of the Streambed Material glide and run shall be a minimum of 2 feet.
- I. Channel Wash-In Material shall be washed into the Cascade structures to fill all void space and produce surface flow of water over the Cascade.

01093.43 Closeout Activities - The Contractor shall be responsible for the removal of all trash and any other materials incidental to the Work in this section, disposing of them off-site, at no additional cost to the Owner.

Measurement

01094.80 Measurement – Cascade shall be measured as Each (EA) of structure installed.

Payment

01093.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per Each (EA) for the bid item "Cascade".

The payment will be full compensation for the furnishment, transportation, stockpiling, installation, maintenance, and warranty for all materials, labor, equipment, tools, and incidentals necessary to complete the work. All Items 00281 Soil Stabilization Matting, 00330 Earthwork, 00332 Channel Fill Material, 00391 Streambed Material, and 00392 Boulders, are incidental to Cascades.

SECTION 01095 – POST REINFORCEMENT

Section 01095, which is not a Standard Specification, is included in this Project by Special Provision.

Description

01095.00 Scope - This work shall consist of the import of materials as well as the installation of these structures, as specified in the Contract Documents.

01095.01 Related Sections

- A. All Contract Documents
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.

01095.02 Abbreviations, Definitions, and Terms – See contract documents

- A. O.C.: On center

01095.03 Submittals – The Contractor shall submit the following supplier information and material data to the Owner for approval for the following features/structures:

A. Vertical Wood Posts

01095.04 Quality Assurance – Contractor shall ensure the material delivered to the site matches these specifications for type, dimension, and color. The Owner reserves the right to reject any non-conforming material delivered to the site.

01095.05 Delivery, Storage, and Handling - Store material in approved staging and stockpile areas. Particularly out of areas prone to flooding where material could float away.

01095.06 Warranty – The Contractor shall warranty the Post Reinforcement for the contracted length of time. Any features that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost.

01095.07 Maintenance – The Contractor shall maintain Post Reinforcement for the contracted length of time. Any features that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost.

Materials

01095.10 General

- A. No live trees not identified for removal shall be harvested for the sole purpose of providing materials for this item. If sufficient materials meeting the above requirements are not available from the project site, the Contractor shall then obtain off-site material meeting specified requirements at no additional cost to the Owner.

01095.11 Materials

- A. Vertical Wood Posts

3- Creeks Floodplain Enhancement

1. Vertical wood posts shall be cedar posts and be a minimum of 4 inches diameter and of sufficient length to achieve 3 feet key in depth plus height of the proposed structure.

Construction

01095.40 General

- A. All Post Reinforcement shall be installed per the Plans.
- B. Placement of the Post Reinforcement shall be installed per the Plans and/or verified by the Engineer to ensure locations are suitable.

01095.41 Preparation

- A. The Contractor shall import the necessary woody material to complete these structures.

01095.42 Installation

- A. Per the Contract Documents.

01095.43 Closeout Activities - The Contractor shall be responsible for the removal of all trash and any other materials incidental to the project and disposing of them off-site per the General Conditions at no additional cost to the Owner.

Measurement

01095.80 Measurement - Post Reinforcement shall be measured as Each (EA) of structure installed.

Payment

01095.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per Each (EA) for the bid item "Post Reinforcement".

The payment will be full compensation for the furnishment, transportation, storing, installation, maintenance, removal, and disposal, and for all materials, labor, equipment, tools, and incidentals necessary to complete the work.

SECTION 02320 - GEOSYNTHETICS

Comply with Section 02320 of the Standard Specifications modified as follows:

02320.20 Geotextile Property Values – Replace Table 02320-3 with the following table:

Table 02320-3 Geotextile Property Values for Sediment Fence ¹

Geotextile Property	ASTM Test Method	Unit	Geotextile Property Requirements
			Woven and Nonwoven
Grab Tensile Strength (minimum) Machine and Cross Machine Directions	D 4632	lb	120 100
Apparent Opening Size (AOS) (maximum) U.S. Standard Sieve	D 4751	—	30
Permittivity (minimum)	D 4491	sec ⁻¹	0.05
Ultraviolet Stability Retained Strength (minimum)	D 4355 (at 500 hours)	%	70
¹ All geotextile properties are Minimum Average Roll Values (MARV). The test results for any sampled roll in a lot shall meet or exceed the values shown in the table.			

SECTION 02690 - PCC AGGREGATES

Comply with Section 02690 of the Standard Specifications.

SECTION 02910 - SIGN MATERIALS

Comply with Section 02910 of the Standard Specifications modified as follows:

Add the following subsection:

02910.70 Anti-Graffiti Coating for Signs:

(a) General - Use anti-graffiti coating from the QPL. Apply anti-graffiti coating over both the background and legend sheeting, per the manufacturer's recommendation.

(b) Acceptance - Furnish a quality compliance certificate according to 00165.35, certifying that the anti-graffiti coating used is an acceptable product on the QPL.

YOUT: 1 COVER SHEET
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 PLOTTED BY: BelKat DATE: Thursday, February 6, 2025 3:58:08 PM



▷	REVISIONS	DATE	BY	DESIGNED
				DRAWN
				CHECKED
				APPROVED

REGISTERED PROFESSIONAL
ENGINEER
96589PE
OREGON
SEPTEMBER 08, 2020
CLARA FRANCIS OLSON
EXPIRES: 12/31/24

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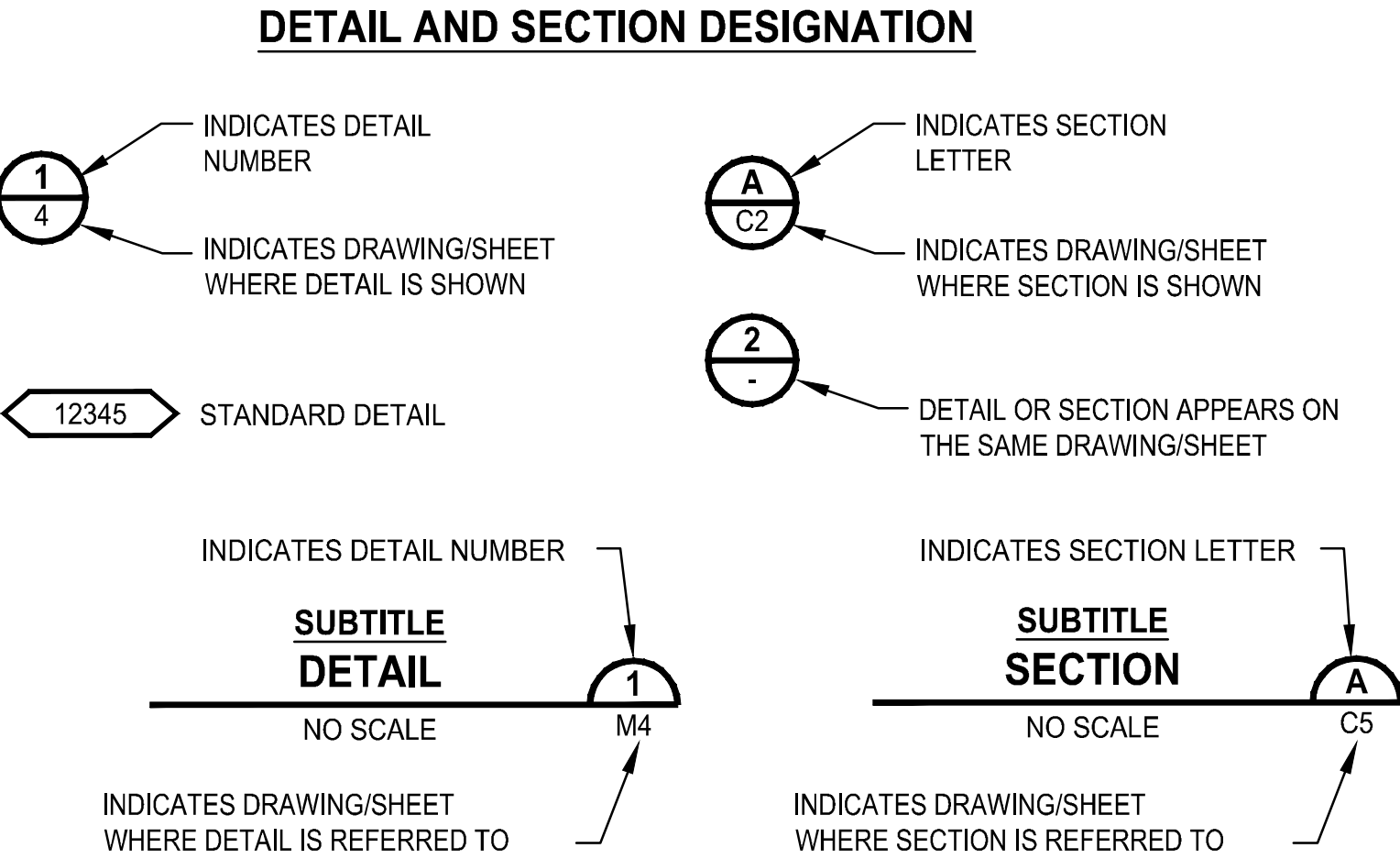
DRAWING NO.
1 OF 30

G1

LAYOUT: 2 GENERAL NOTES LEGEND AND ABBREVIATIONS PATH: I:\Projects\19535.01 WES Three Creeks Floodplain\CAD\Plans PLOTTED BY: ssoizweidel DATE: Tuesday, January 28, 2025 12:15:34 AM

LEGEND		
DESCRIPTION	PROPOSED	EXISTING
STREAM CENTERLINE		
MAJOR CONTOURS		
MINOR CONTOURS		
SURVEY CONTROL POINT		
EDGE OF ASPHALT		
TOP OF BANK		
EXISTING DECIDUOUS TREE		
EXISTING CEDAR TREE		
EXISTING DOWNED TREE		
EXISTING LARGE WOOD		
EXISTING WETLANDS		

ABBREVIATIONS	
CONC	CONCRETE
HORIZ	HORIZONTAL
TYP	TYPICAL
VERT	VERTICAL
US-T	UPSTREAM TOP OF RIFFLE/CASCADE
US-B	UPSTREAM BOTTOM OF RIFFLE/CASCADE
US-R	UPSTREAM RIGHT OF RIFFLE/CASCADE
US-L	UPSTREAM LEFT OF RIFFLE/CASCADE
DS-T	DOWNSTREAM TOP OF RIFFLE/CASCADE
DS-B	DOWNSTREAM BOTTOM OF RIFFLE/CASCADE
DS-R	DOWNSTREAM RIGHT OF RIFFLE/CASCADE
DS-L	DOWNSTREAM LEFT OF RIFFLE/CASCADE
US-TL	UPSTREAM TOP OF LOG JAM
CS-1	CROSS SECTION 1



HORIZONTAL DATUM:
HORIZONTAL DATUM FOR THIS SURVEY IS NAD 1983(2011), EPOCH 2010.00, OREGON STATE PLANE NORTH ZONE, INT'L FEET BASED ON THE OREGON REAL-TIME NETWORK (ORGN) GNSS OBSERVATIONS AND SCALED TO GROUND DISTANCES BY APPLYING A SCALE FACTOR OF 1.0000957194 FROM PT # 1.

VERTICAL DATUM:
VERTICAL DATUM FOR THIS SURVEY IS (NAVD88) BASED ON CONTROL PROVIDED TO PARAMETRIX FROM CLACKAMAS COUNTY.

REVISIONS	DATE	BY	DESIGNED
			DRAWN
			CHECKED
			APPROVED

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY	
FILE NAME	cv013c
JOB No.	553-1751-033
DATE	JANUARY 27, 2025



Parametrix
719 2nd Avenue, Suite 200 • Seattle, WA 98104
Ph: 206.394.3700

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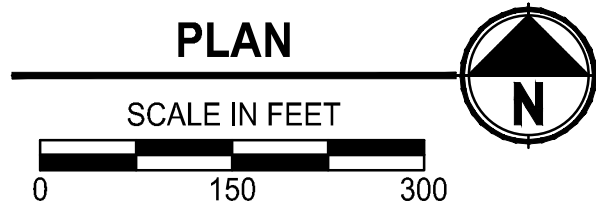
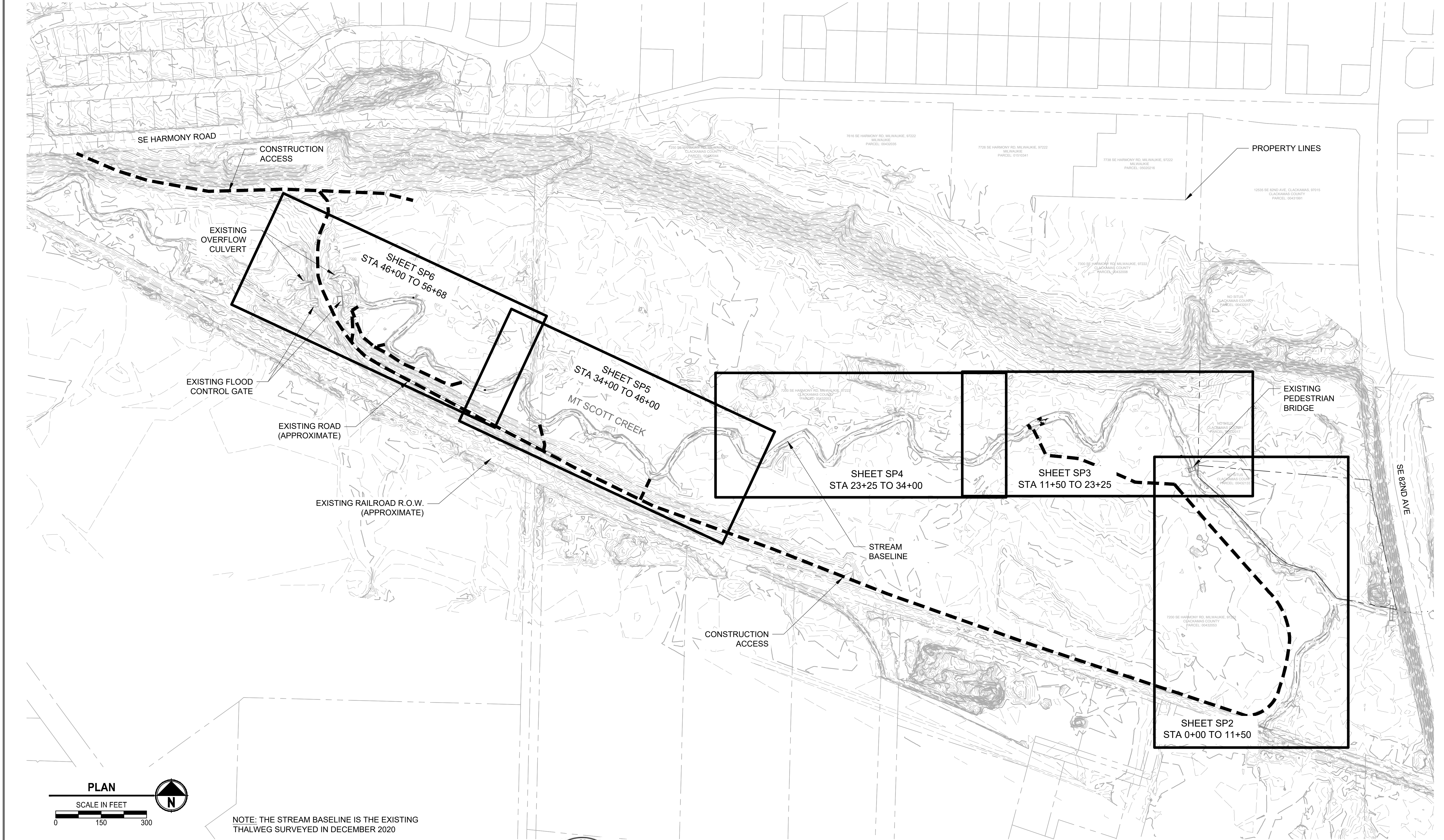
PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

GENERAL NOTES, LEGEND,
AND ABBREVIATIONS

DRAWING NO.
2 OF 30

G2

LAYOUT: 3 OVERALL SITE PLAN PATH: I:\Projects\19535.01 WES Three Creeks Floodplain\CAD\Plans PLOTTED BY: szdzweidel DATE: Tuesday, January 28, 2025 12:15:48 AM



NOTE: THE STREAM BASELINE IS THE EXISTING THALWEG SURVEYED IN DECEMBER 2020

REVISIONS	DATE	BY	DESIGNED
			CFO
			DRAWN
			CS
			CHECKED
			APPROVED

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME
pc013c
JOB No.
553-1751-033
DATE
JANUARY 27, 2025



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PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT CLACKAMAS COUNTY, OR

OVERALL SITE PLAN

DRAWING NO. 3 OF 30
SP1

LAYOUT: 4 FLOODPLAIN LOWERING PLAN PATH: I:\Projects\19535.01 WES Three Creeks Floodplain\CAD\Plans PLOTTED BY: ssaizwedel DATE: Tuesday, January 28, 2025 12:15:52 AM

LEGEND

- 90

89

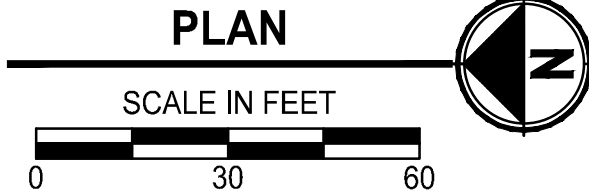
RIFFLE STRUCTURE
SEE DETAIL SHEET SP9

LOG JAM STRUCTURE
SEE DETAIL SHEET SP10

CASCADE STRUCTURE
SEE DETAIL SHEET SP11

POST REINFORCEMENT
SEE DETAIL SHEET SP12
- PR. MAJOR CONTOUR

PR. MINOR CONTOUR



REVISIONS	DATE	BY	DESIGNED ML, SS
			DRAWN SS
			CHECKED
			APPROVED

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME pc013c
JOB NO. 553-1751-033
DATE JANUARY 27, 2025



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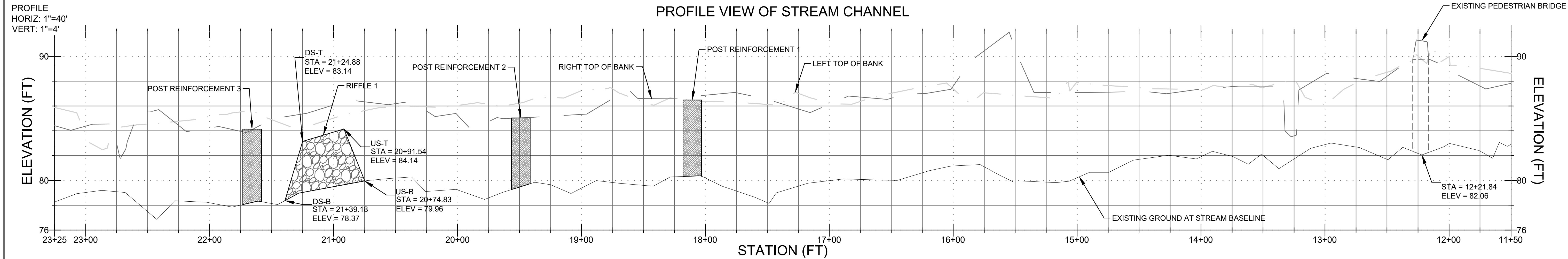
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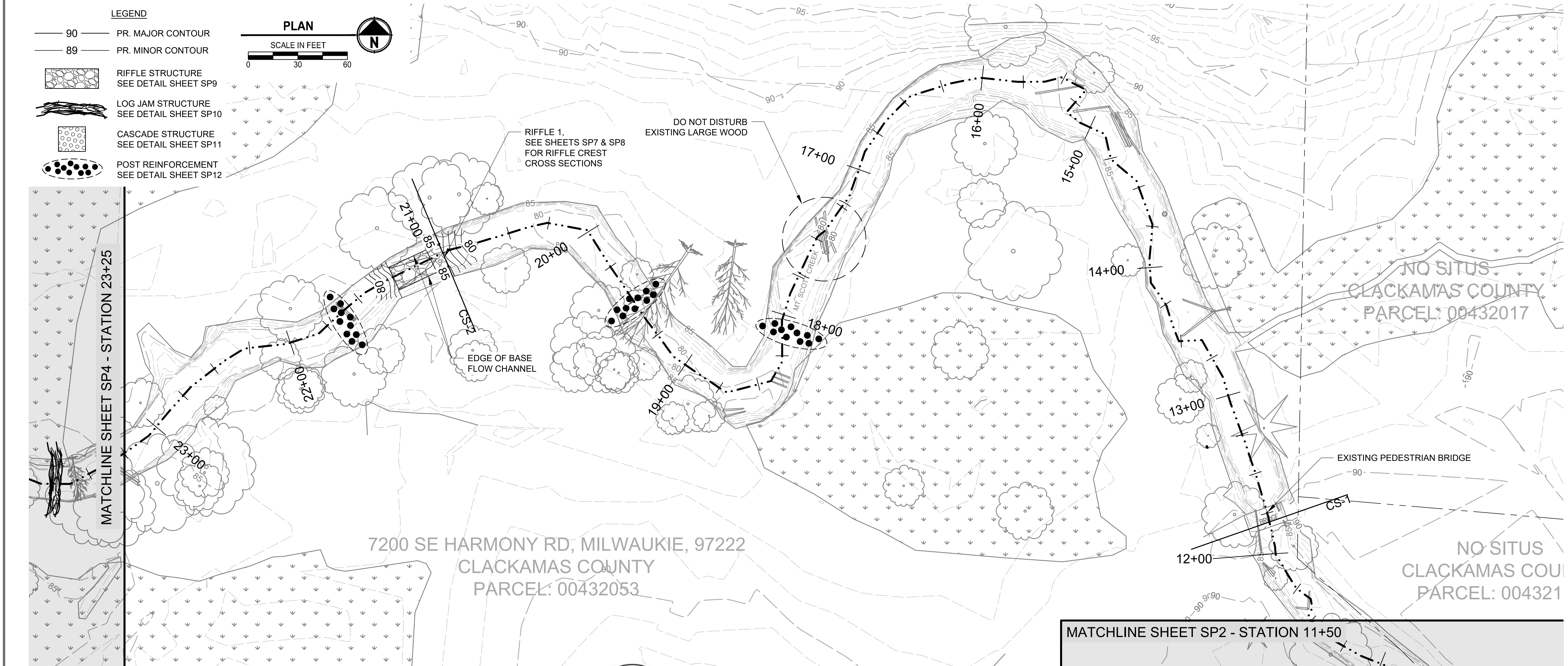
PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT CLACKAMAS COUNTY, OR

FLOODPLAIN LOWERING PLAN

DRAWING NO. 4 OF 30
SP2



NOTE: POST REINFORCEMENT OF EXISTING LARGE WOOD IS NOT SHOWN IN PROFILE VIEW



REVISIONS	DATE	BY	DESIGNED ML, SS
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			CHECKED
			APPROVED

ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

FILE NAME
pc013c

JOB NO.
553-1751-033

DATE
JANUARY 27, 2025



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PROJECT NAME

3-CREEKS FLOODPLAIN ENHANCEMENT

CLACKAMAS COUNTY, OR

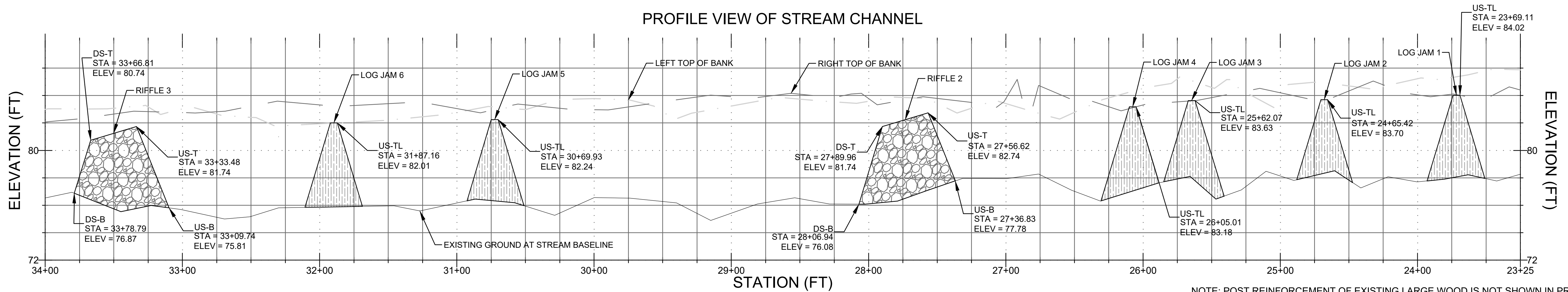
SITE PLAN AND PROFILE 1

DRAWING NO.
5 OF 30

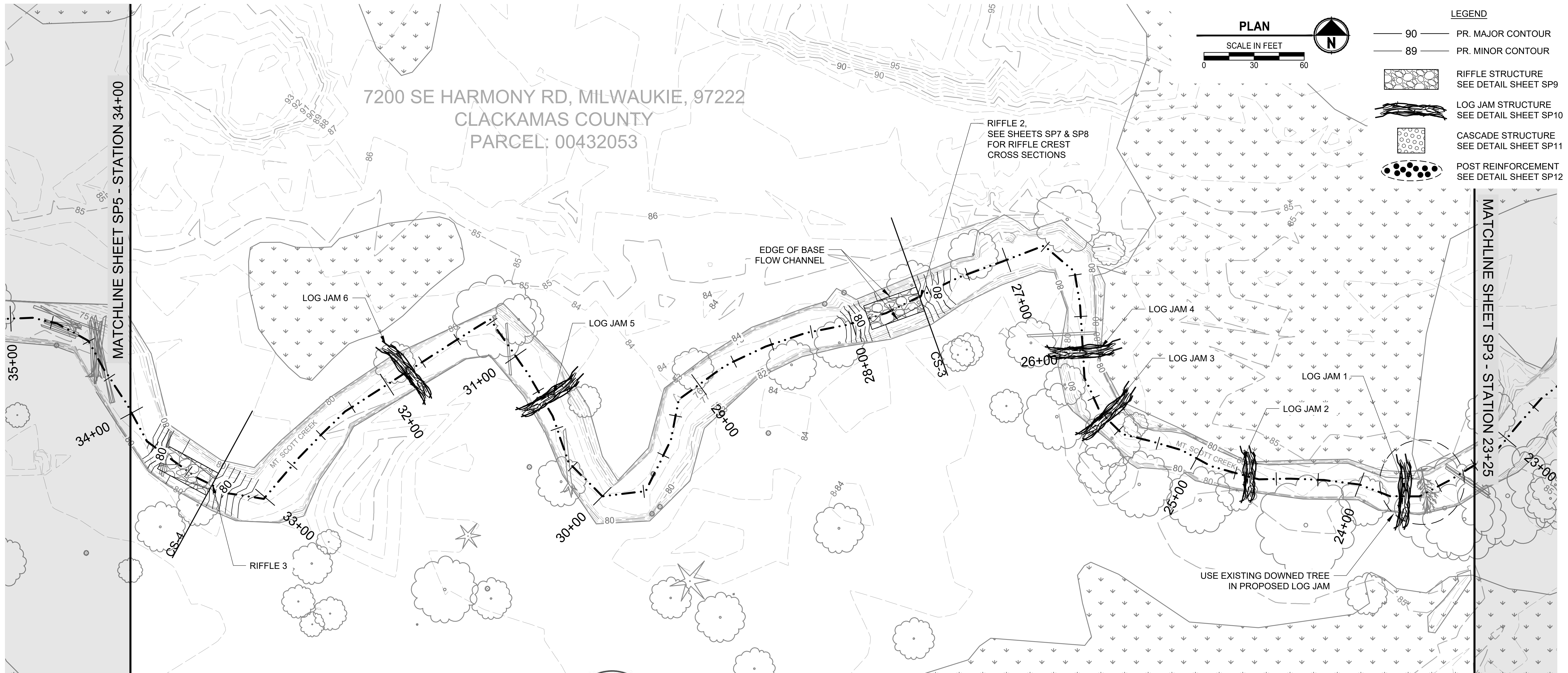
SP3

PROFILE
HORIZ: 1"=40'
VERT: 1"=4'

PROFILE VIEW OF STREAM CHANNEL



NOTE: POST REINFORCEMENT OF EXISTING LARGE WOOD IS NOT SHOWN IN PROFILE VIEW



LEGEND

- 90 PR. MAJOR CONTOUR
- 89 PR. MINOR CONTOUR
- RIFFLE STRUCTURE
SEE DETAIL SHEET SP9
- LOG JAM STRUCTURE
SEE DETAIL SHEET SP10
- CASCADE STRUCTURE
SEE DETAIL SHEET SP11
- POST REINFORCEMENT
SEE DETAIL SHEET SP12

LAYOUT: 6 SITE PLAN AND PROFILE 2
PATH: I:\Projects\19535.01 MES Three Creeks Floodplain\CAD\Plans
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			APPROVED

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JOB NO. 553-1751-033
DATE JANUARY 27, 2025



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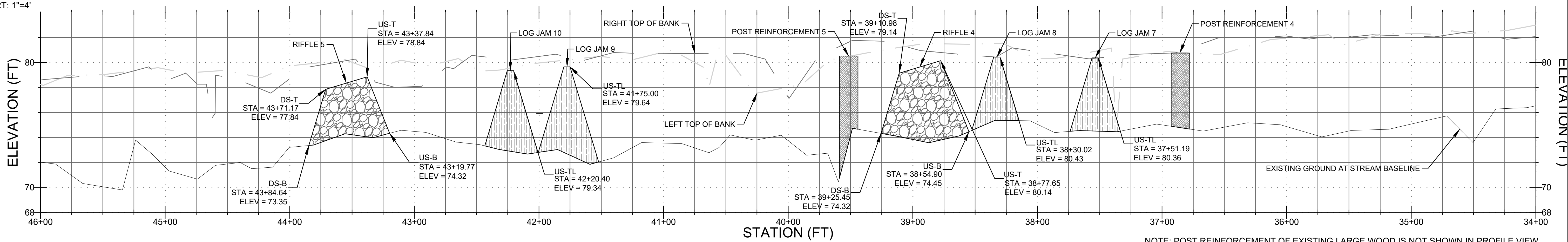
PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

SITE PLAN AND PROFILE 2

DRAWING NO.
6 OF 30
SP4

PROFILE
HORIZ: 1"=40'
VERT: 1"=4'

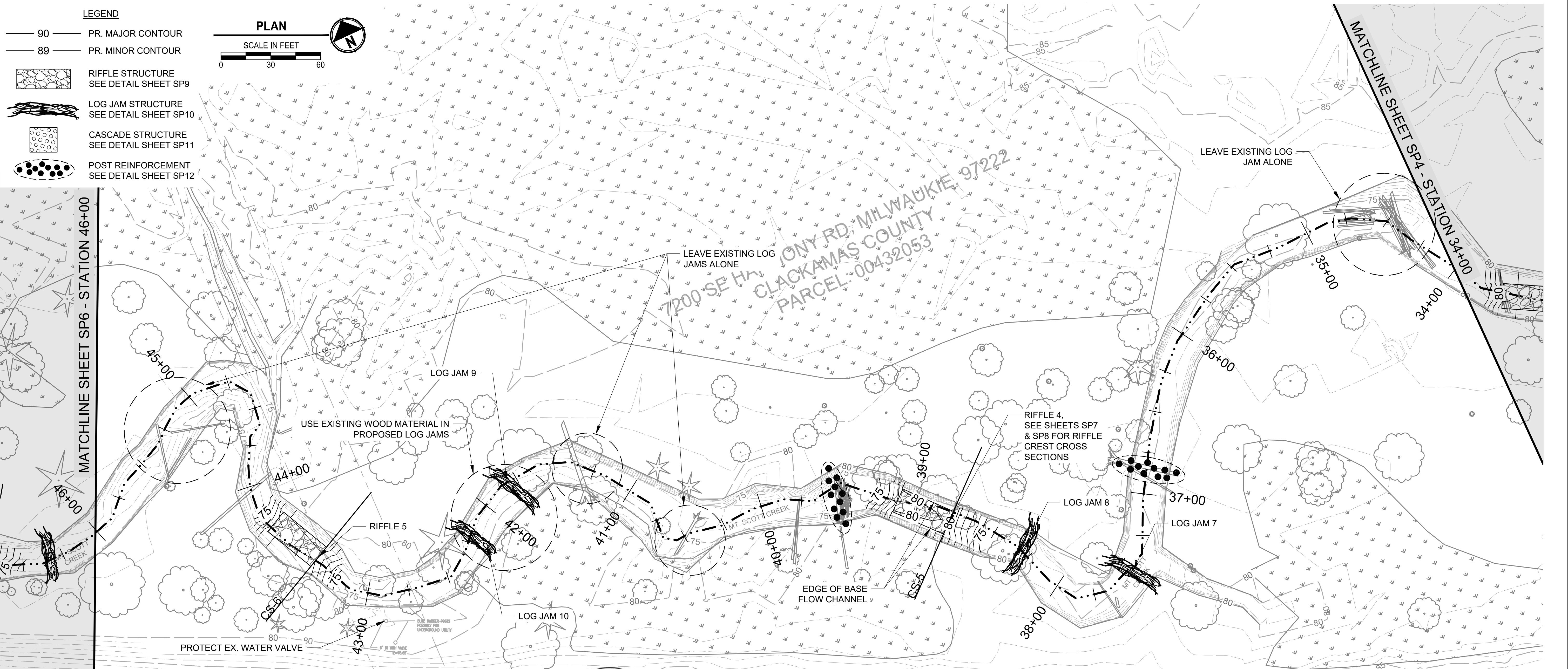
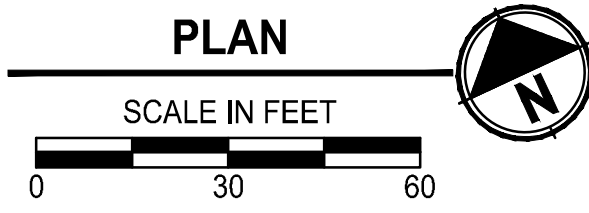
PROFILE VIEW OF STREAM CHANNEL



NOTE: POST REINFORCEMENT OF EXISTING LARGE WOOD IS NOT SHOWN IN PROFILE VIEW

LEGEND

- 90 PR. MAJOR CONTOUR
- 89 PR. MINOR CONTOUR
- RIFFLE STRUCTURE
SEE DETAIL SHEET SP9
- LOG JAM STRUCTURE
SEE DETAIL SHEET SP10
- CASCADE STRUCTURE
SEE DETAIL SHEET SP11
- POST REINFORCEMENT
SEE DETAIL SHEET SP12



REVISIONS	DATE	BY	DESIGNED ML SS
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			CHECKED
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JOB NO.
553-1751-033

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PROJECT NAME

3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

SITE PLAN AND PROFILE 3

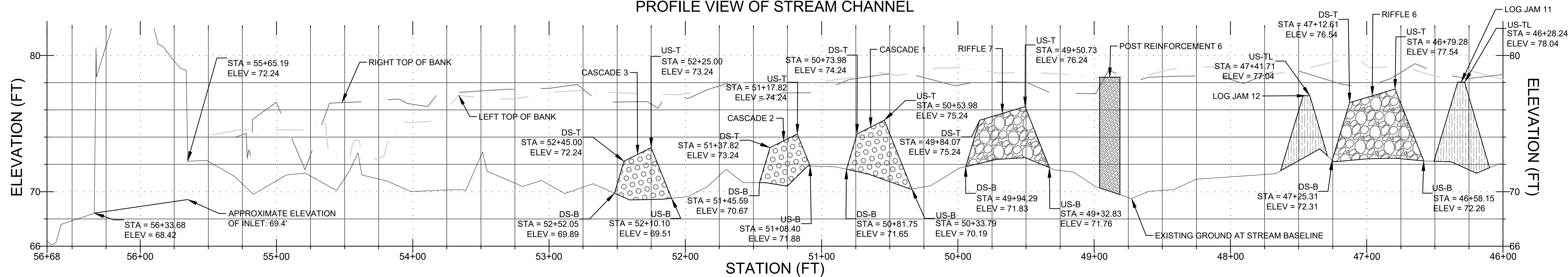
DRAWING NO.
7 OF 30

SP5

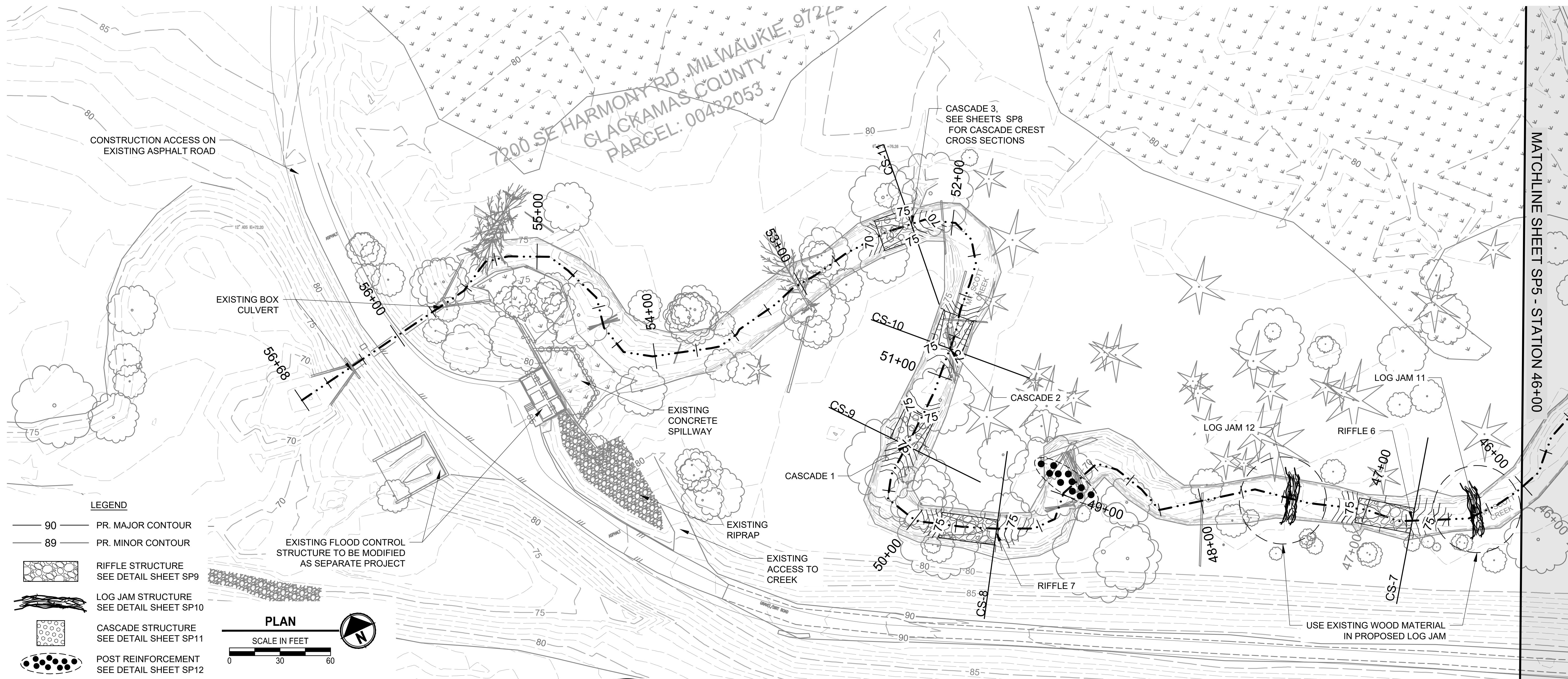
LAYOUT: 7 SITE PLAN AND PROFILE 3 PATH: I:\Projects\19535.01 WES Three Creeks Floodplain CAD\Plans PLOTTED BY: scslawedel DATE: Tuesday, January 28, 2025 12:16:09 AM

PROFILE
HORIZ: 1"=40'
VERT: 1"=4'

PROFILE VIEW OF STREAM CHANNEL



NOTE: POST REINFORCEMENT OF EXISTING LARGE WOOD IS NOT SHOWN IN PROFILE VIEW

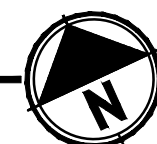


LEGEND

- 90 PR. MAJOR CONTOUR
- 89 PR. MINOR CONTOUR
- RIFFLE STRUCTURE SEE DETAIL SHEET SP9
- LOG JAM STRUCTURE SEE DETAIL SHEET SP10
- CASCADE STRUCTURE SEE DETAIL SHEET SP11
- POST REINFORCEMENT SEE DETAIL SHEET SP12

PLAN

SCALE IN FEET
0 30 60



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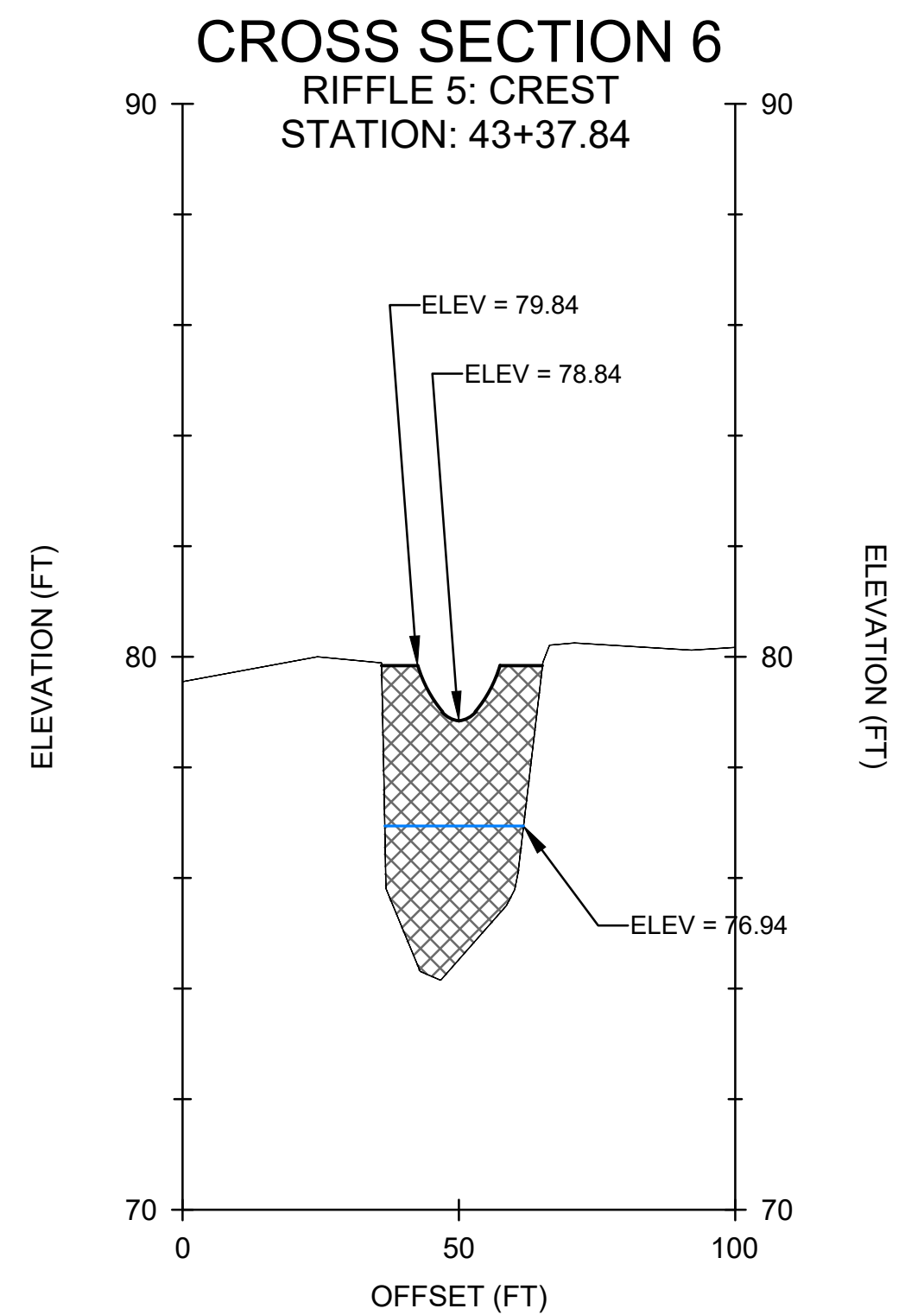
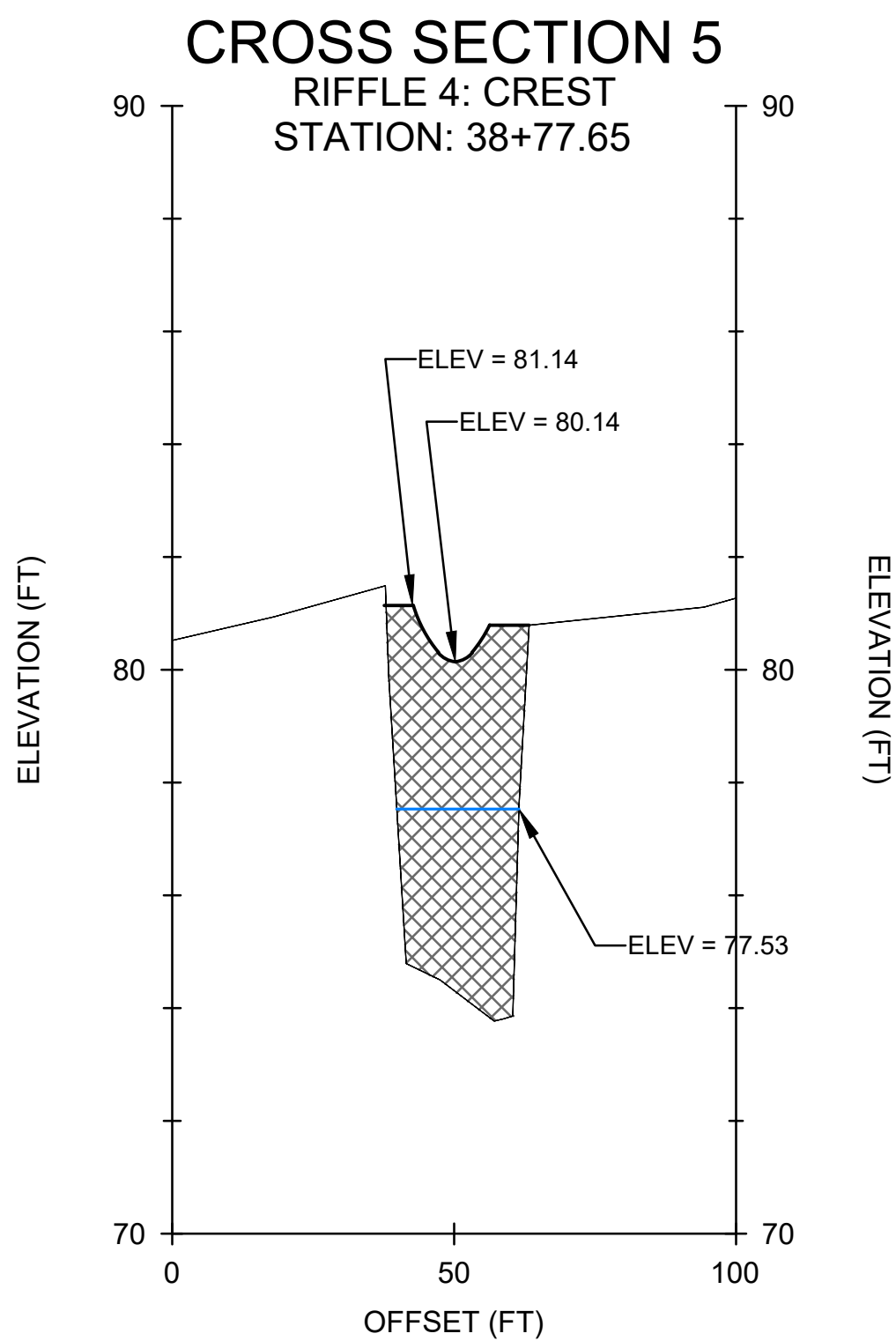
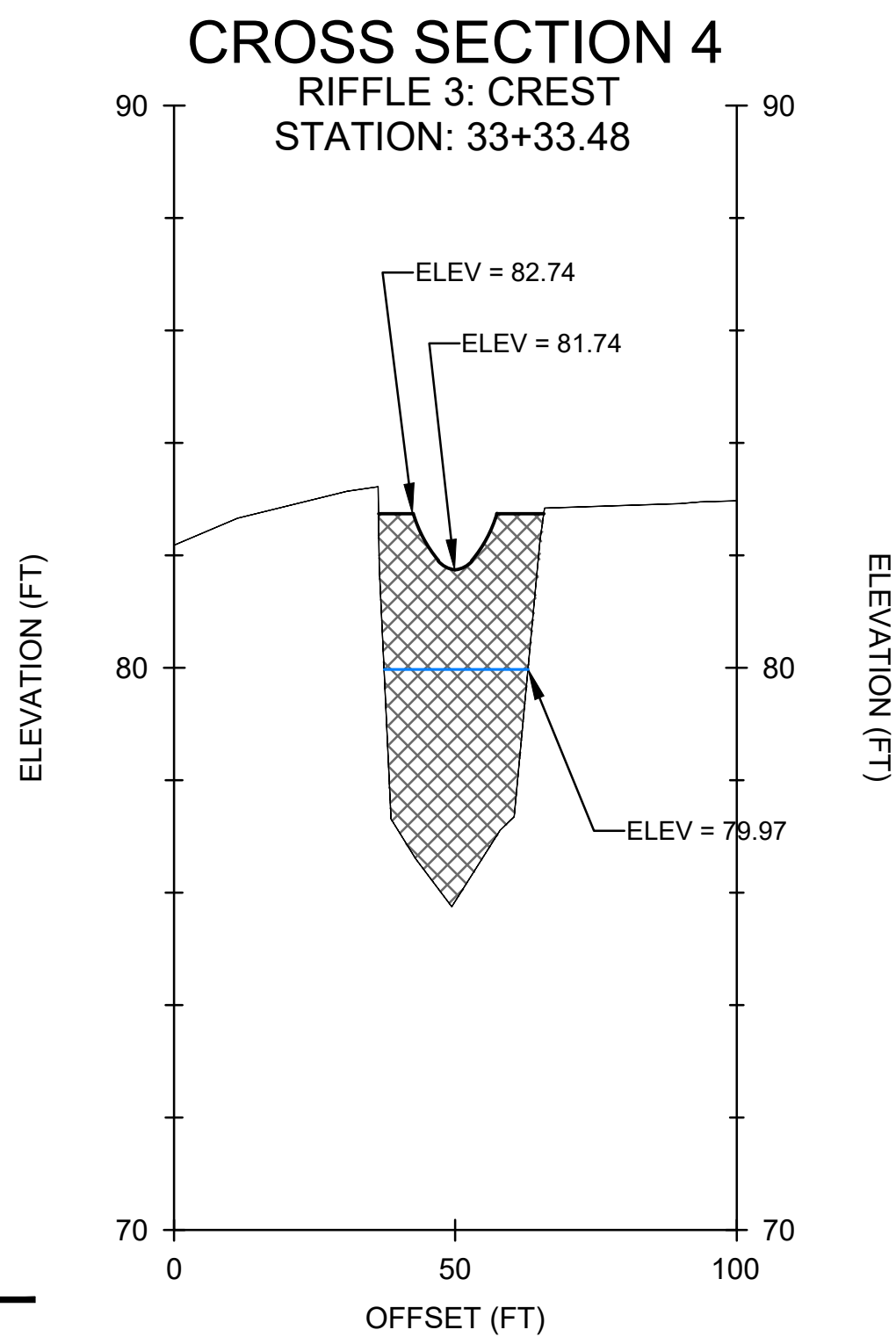
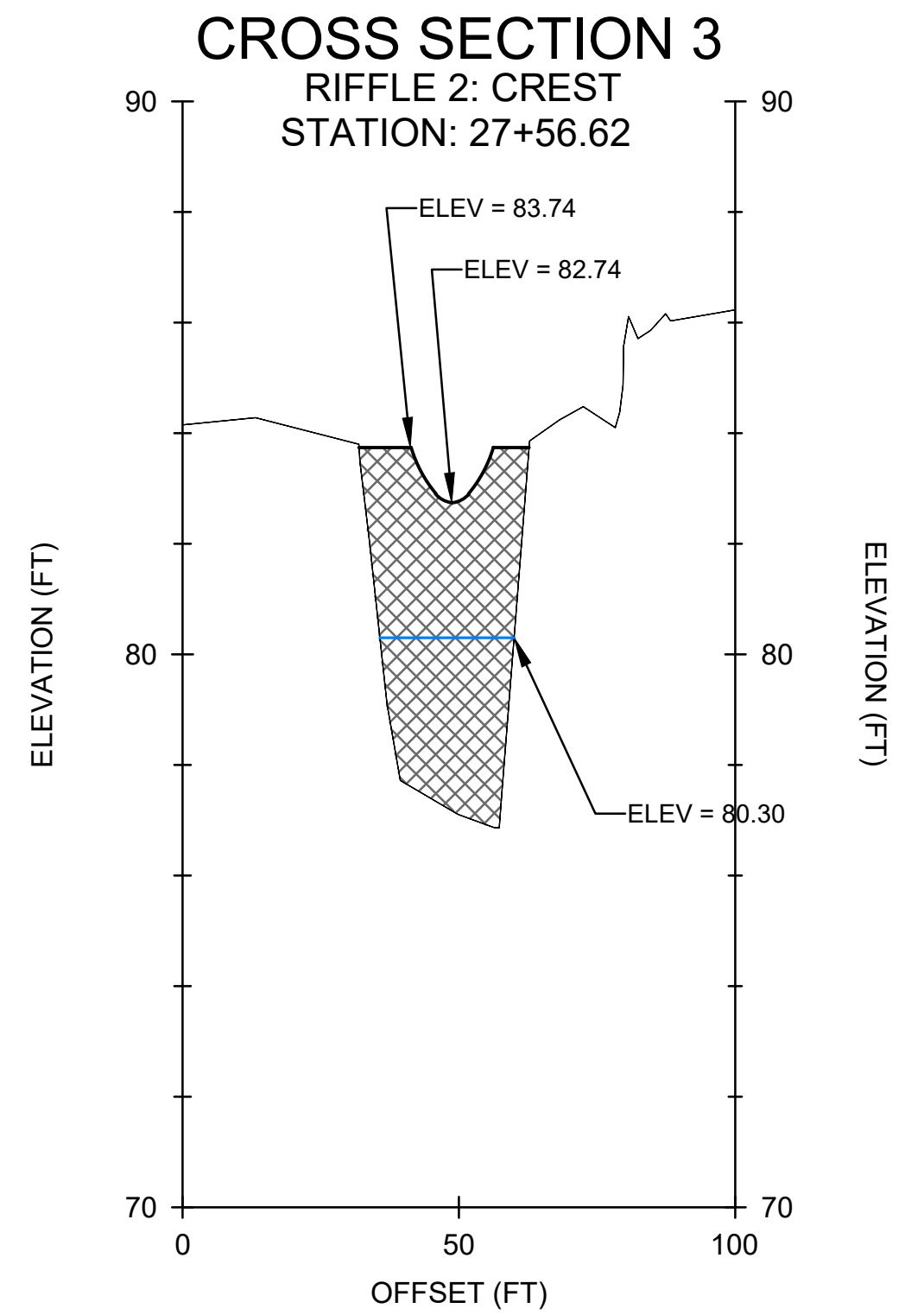
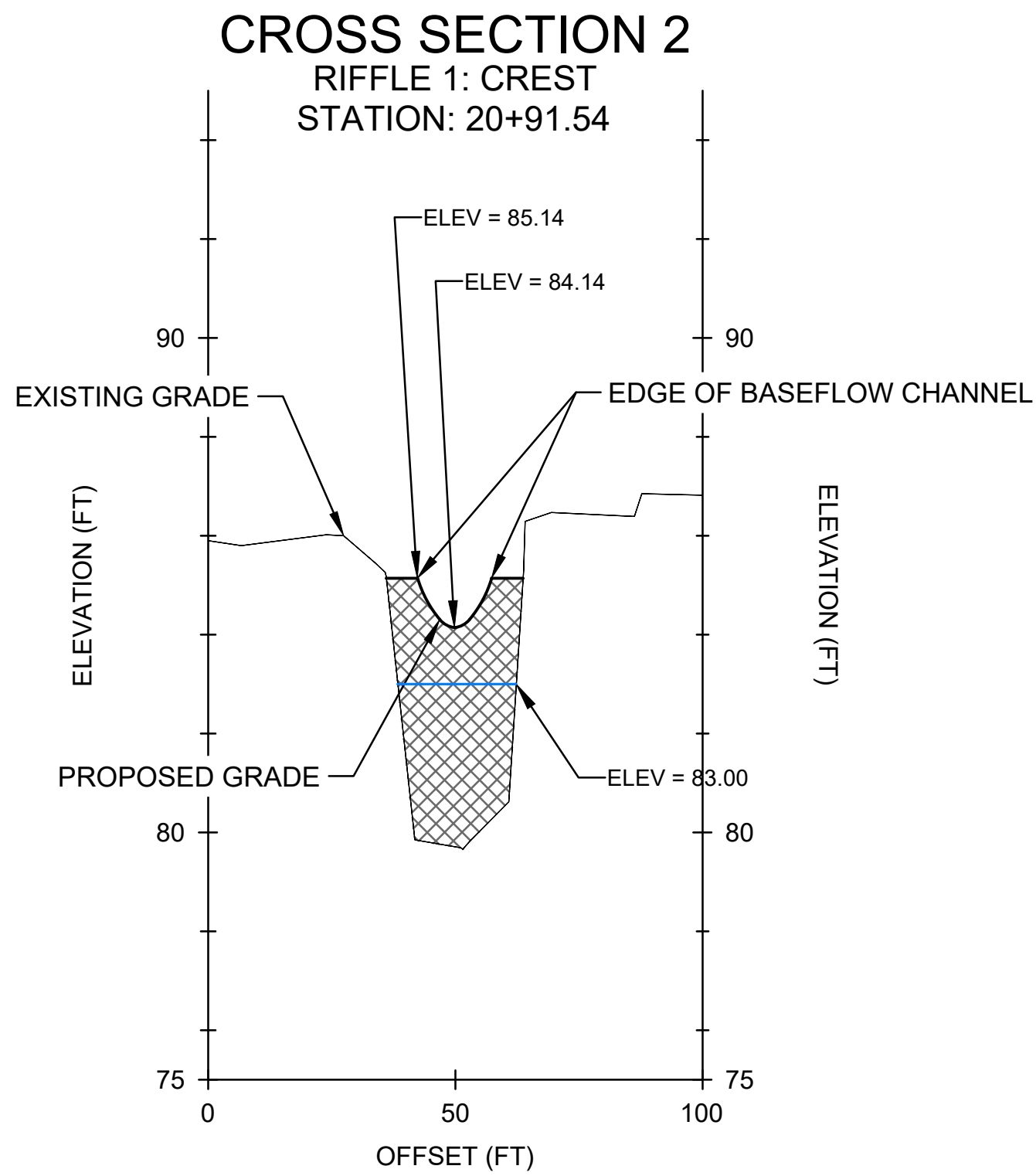
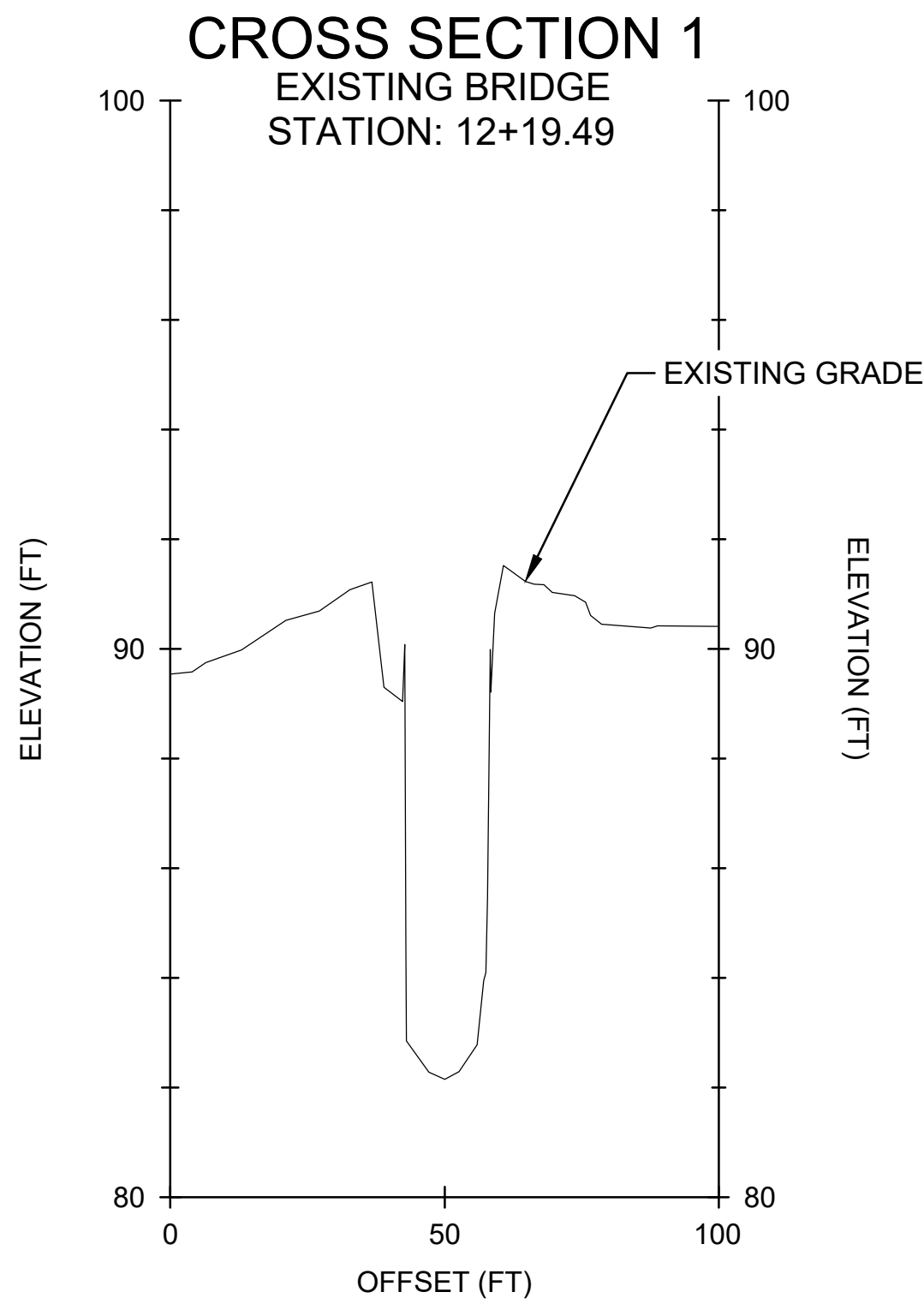
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SITE PLAN AND PROFILE 4

DRAWING NO. 8 OF 30
SP6

LAYOUT: 9 CROSS SECTIONS 1 PATH: I:\Projects\19535.01 MES Three Creeks Floodplain\CAD\Plans PLOTTED BY: ssolzweidel DATE: Tuesday, January 28, 2025 12:16:16 AM



LEGEND

-  RIFFLE
-  OHWM

NOTE: CROSS SECTIONS ARE ORIENTED AS
IF LOOKING IN A DOWNSTREAM DIRECTION

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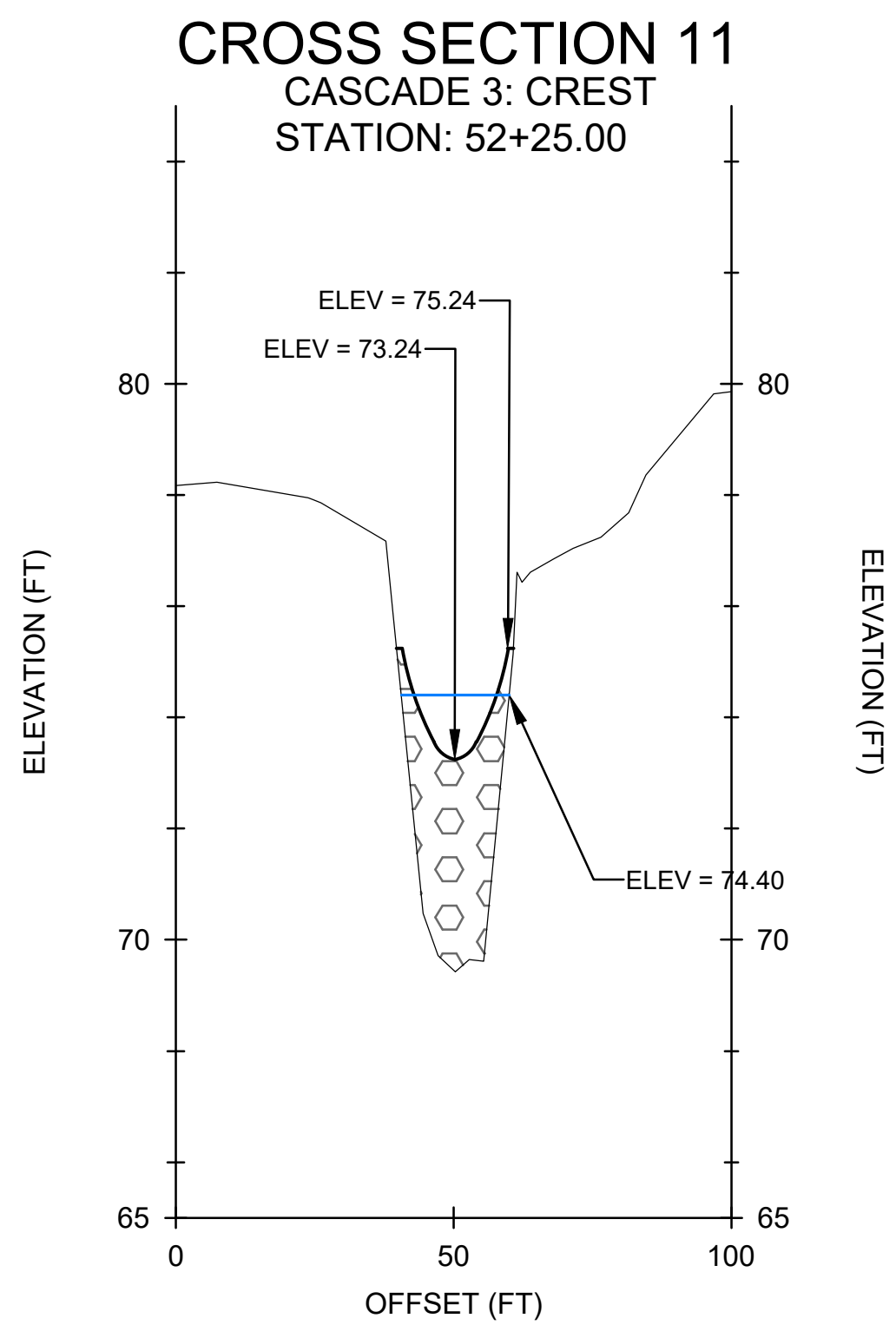
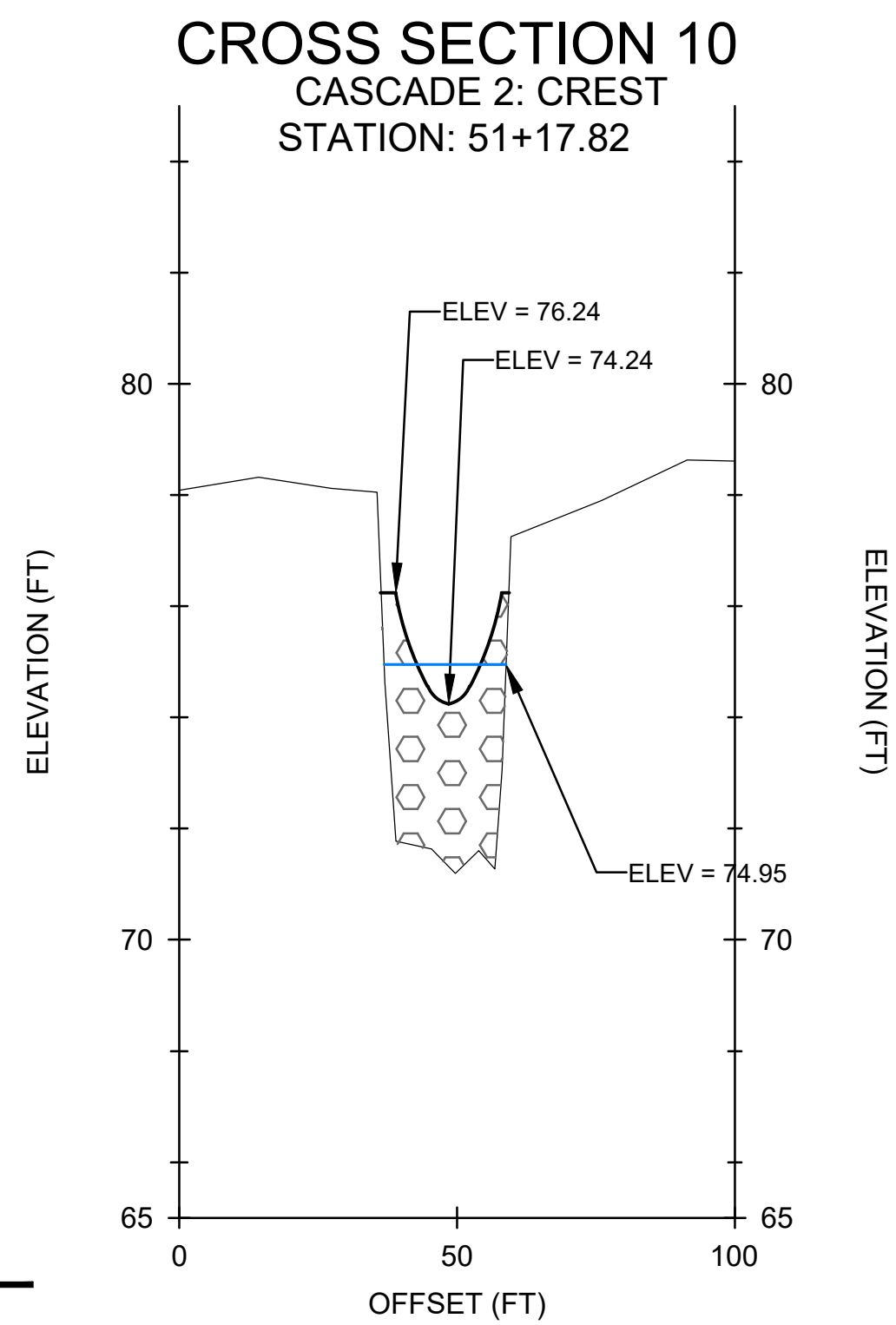
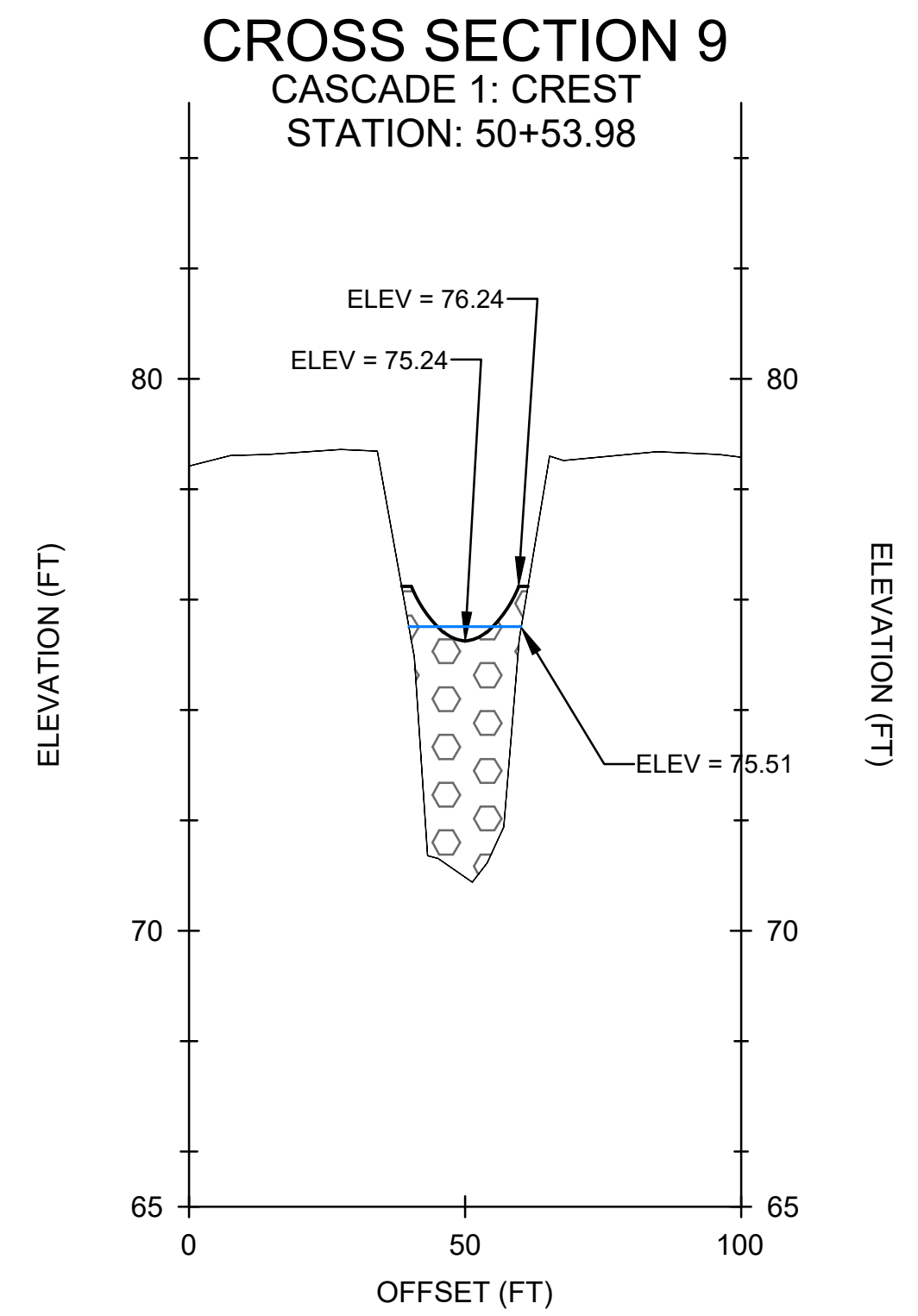
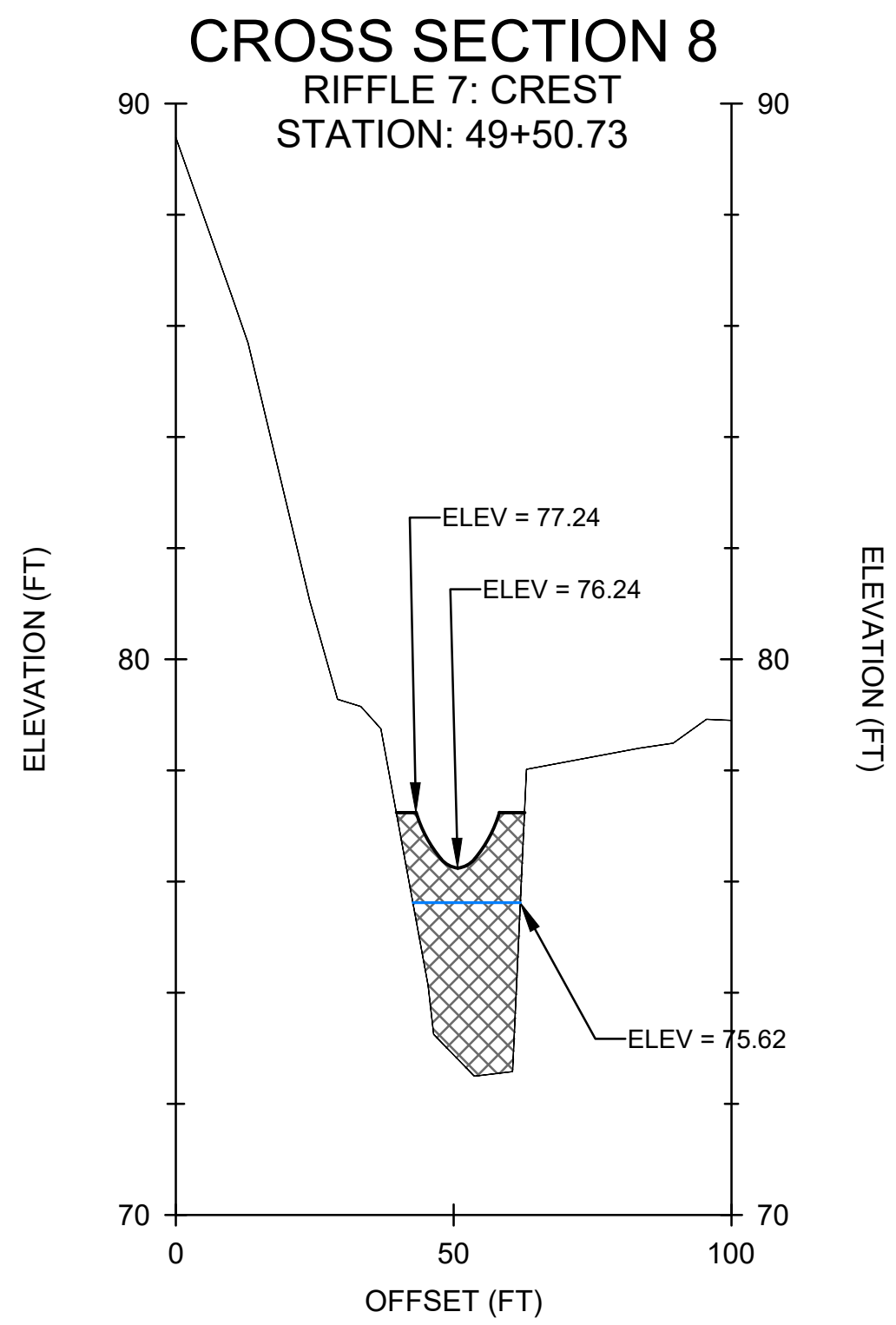
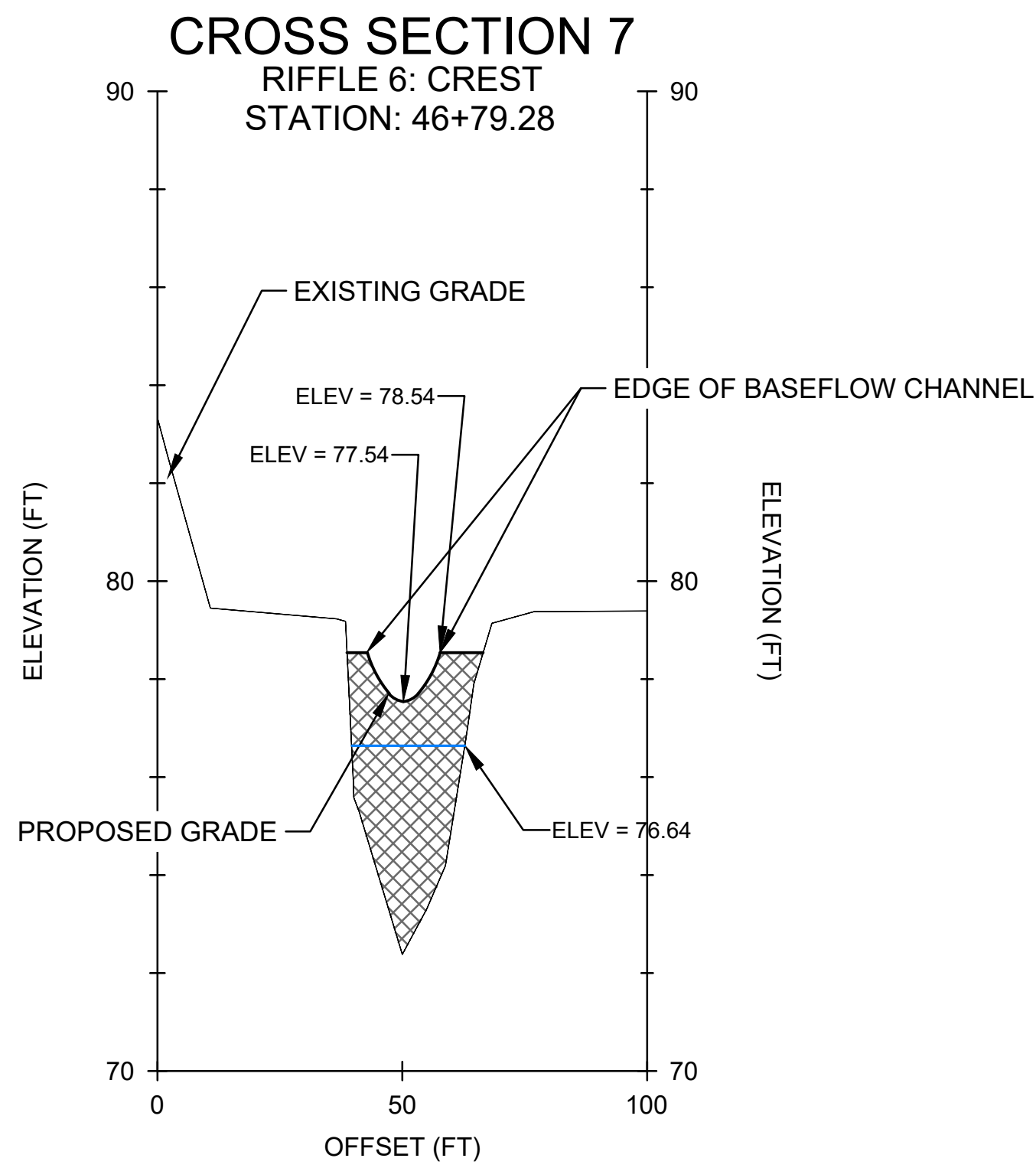
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CLACKAMAS COUNTY, OR




CROSS SECTIONS 1
SP7

DRAWING NO. 9 OF 30
SP7

LAYOUT: 10 CROSS SECTIONS 2 PATH: I:\Projects\19535.01 WES Three Creeks Floodplain\CAD\Plans PLOTTED BY: sralzweidel DATE: Tuesday, January 28, 2025 12:16:21 AM



LEGEND

-  RIFFLE
-  CASCADE
-  OHWM

NOTE: CROSS SECTIONS ARE ORIENTED AS
IF LOOKING IN A DOWNSTREAM DIRECTION

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			SS
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CROSS SECTIONS 2

DRAWING NO. 10 OF 30
SP8

LAYOUT: STRUCTURE TABLE PATH: i:\Projects\19535.01 MES Three Creeks Floodplain\CAD\Plans PLOTTED BY: ssolzweidel DATE: Tuesday, January 28, 2025 12:16:26 AM

STRUCTURE TABLES								
RIFFLES								
DESIGN						AS-BUILT		
ID	Station	Node	Easting	Northing	Elevation	Easting	Northing	Elevation
R1	20+91.54	US-R	7667275.44	649630.78	85.14			
		US-T	7667278.62	649623.98	84.14			
		US-L	7667281.79	649617.19	85.14			
		DS-R	7667245.25	649616.67	84.14			
		DS-T	7667248.42	649609.88	83.14			
		DS-L	7667251.59	649603.08	84.14			
R2	27+56.62	US-R	7666751.23	649610.94	83.74			
		US-T	7666753.75	649603.87	82.74			
		US-L	7666756.27	649596.81	83.74			
		DS-R	7666719.84	649599.72	82.74			
		DS-T	7666722.36	649592.66	81.74			
		DS-L	7666724.89	649585.59	82.74			
R3	33+33.48	US-R	7666333.72	649499.51	82.74			
		US-T	7666330.13	649492.93	81.74			
		US-L	7666326.54	649486.34	82.74			
		DS-R	7666304.45	649515.46	81.74			
		DS-T	7666300.86	649508.88	80.74			
		DS-L	7666297.27	649502.29	81.74			
R4	38+77.65	US-R	7665946.33	649527.85	81.14			
		US-T	7665940.73	649522.85	80.14			
		US-L	7665935.14	649517.85	81.14			
		DS-R	7665924.12	649552.70	80.14			
		DS-T	7665918.53	649547.71	79.14			
		DS-L	7665912.93	649542.71	80.14			
R5	43+37.84	US-R	7665594.00	649664.60	79.84			
		US-T	7665587.28	649661.27	78.84			
		US-L	7665580.56	649657.94	79.84			
		DS-R	7665579.21	649694.47	78.84			
		DS-T	7665572.49	649691.14	77.84			
		DS-L	7665565.77	649687.81	78.84			
R6	46+79.28	US-R	7665407.98	649745.09	78.54			
		US-T	7665403.66	649738.95	77.54			
		US-L	7665399.34	649732.82	78.54			
		DS-R	7665380.73	649764.28	77.54			
		DS-T	7665376.41	649758.15	76.54			
		DS-L	7665372.10	649752.02	77.54			
R7	49+50.73	US-R	7665180.08	649841.22	77.24			
		US-T	7665176.07	649834.88	76.24			
		US-L	7665172.06	649828.54	77.24			
		DS-R	7665151.91	649859.03	76.24			
		DS-T	7665147.90	649852.69	75.24			
		DS-L	7665143.89	649846.35	76.24			

STRUCTURE TABLES								
CASCADES								
DESIGN						AS-BUILT		
ID	Station	Node	Easting	Northing	Elevation	Easting	Northing	Elevation
C1	50+53.98	US-R	7665154.3024	649897.3659	77.24			
		US-T	7665148.2953	649904.7256	75.24			
		US-L	7665142.2881	649912.0852	77.24			
		DS-R	7665169.7964	649910.0126	76.24			
		DS-T	7665163.7892	649917.3722	74.24			
		DS-L	7665157.7821	649924.7318	76.24			
C2	51+17.82	US-R	7665201.7011	649940.0704	76.24			
		US-T	7665194.9533	649946.7575	74.24			
		US-L	7665188.2055	649953.4446	76.24			
		DS-R	7665215.7792	649954.2762	75.24			
		DS-T	7665209.0314	649960.9634	73.24			
		DS-L	7665202.2836	649967.6505	75.24			
C3	52+25.00	US-R	7665206.9476	650031.3593	75.24			
		US-T	7665206.0622	650021.9008	73.24			
		US-L	7665205.1767	650012.4421	75.24			
		DS-R	7665187.0347	650033.2234	74.24			
		DS-T	7665186.1492	650023.7648	72.24			
		DS-L	7665185.2638	650014.3061	74.24			

STRUCTURE TABLES								
LOG JAMS								
DESIGN						AS-BUILT		
ID	Station	Node	Easting	Northing	Elevation	Easting	Northing	Elevation
L1	23+69.11	US-T	7667043.8055	649485.7425	84.02			
L2	24+65.42	US-T	7666950.7298	649496.9504	83.70			
L3	25+62.07	US-T	7666863.8263	649533.7284	83.63			
L4	26+05.01	US-T	7666850.9691	649573.7337	83.18			
L5	30+69.93	US-T	7666527.8730	649543.8571	82.24			
L6	31+87.16	US-T	7666445.4431	649559.5415	82.01			
L7	37+51.19	US-T	7666025.0819	649451.3894	80.36			
L8	38+30.02	US-T	7665973.608	649489.7425	80.43			
L9	41+75.00	US-T	7665714.883	649651.3229	79.64			
L10	42+20.40	US-T	7665678.389	649633.3493	79.34			
L11	46+28.24	US-T	7665442.813	649726.4714	78.04			
L12	47+41.71	US-T	7665345.934	649777.9388	77.04			

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PROJECT NAME

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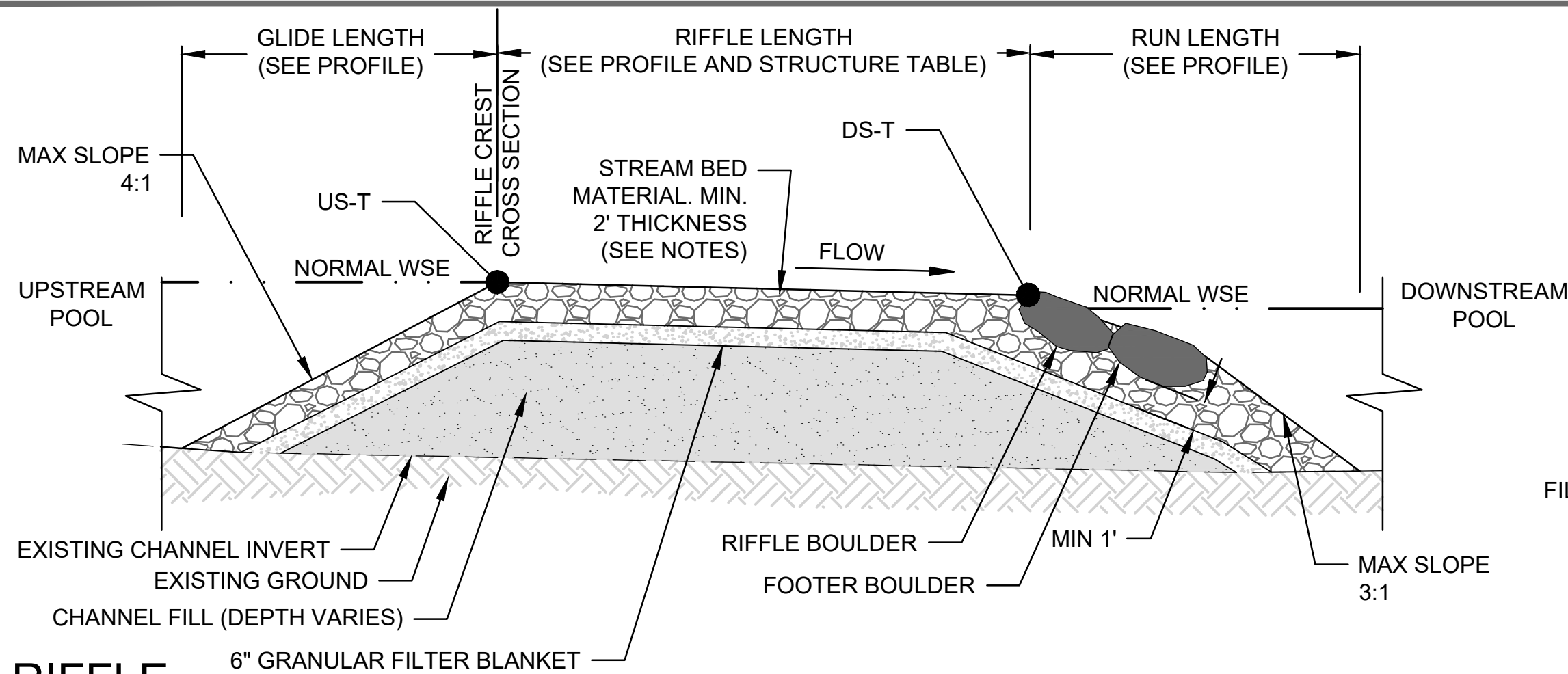
CLACKAMAS COUNTY, OR

STRUCTURE TABLE

DRAWING NO.
11 OF 30

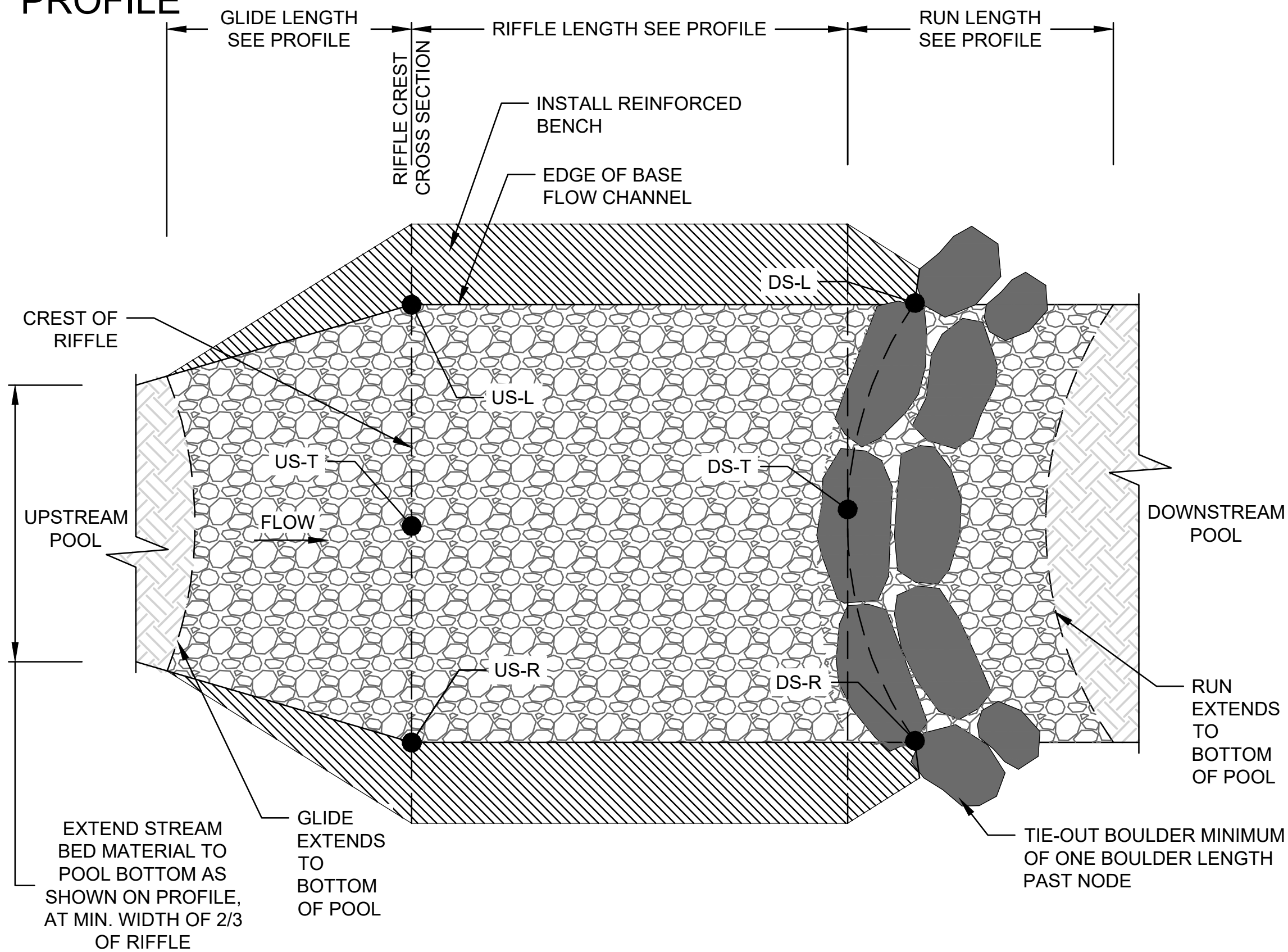
SP9

PATH: I:\Projects\19535.01 WES Three Creeks Floodplain\CAD\Plans
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LAYOUT: DETAILS



RIFFLE PROFILE

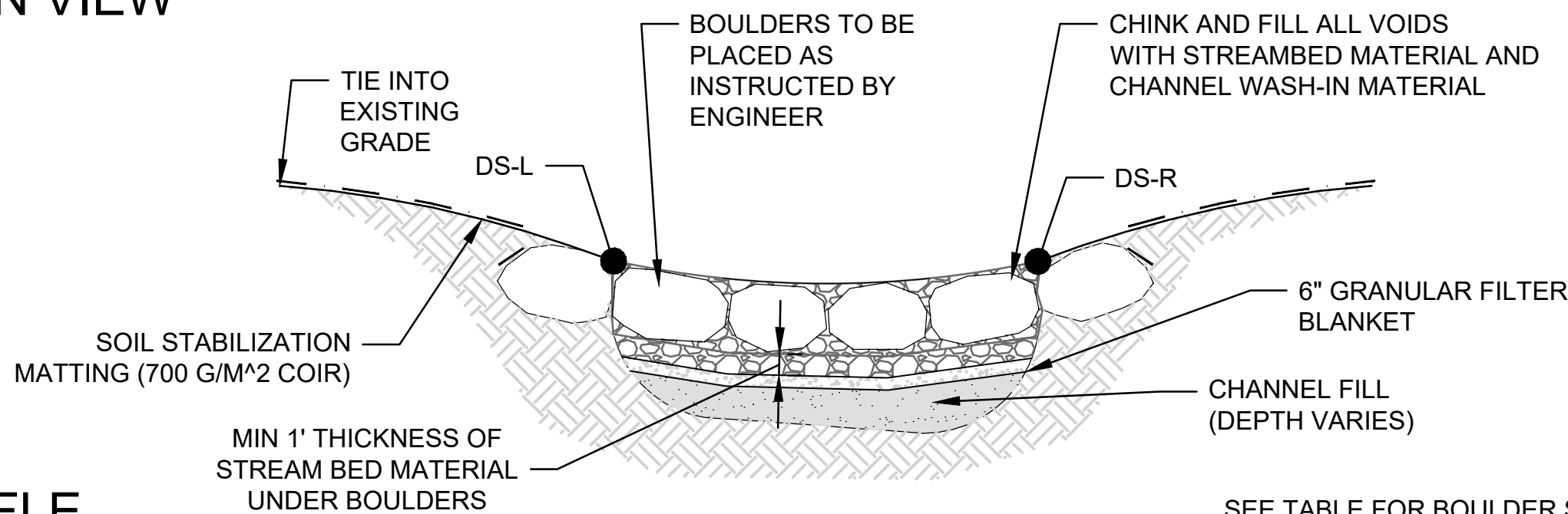
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RIFFLE PLAN VIEW

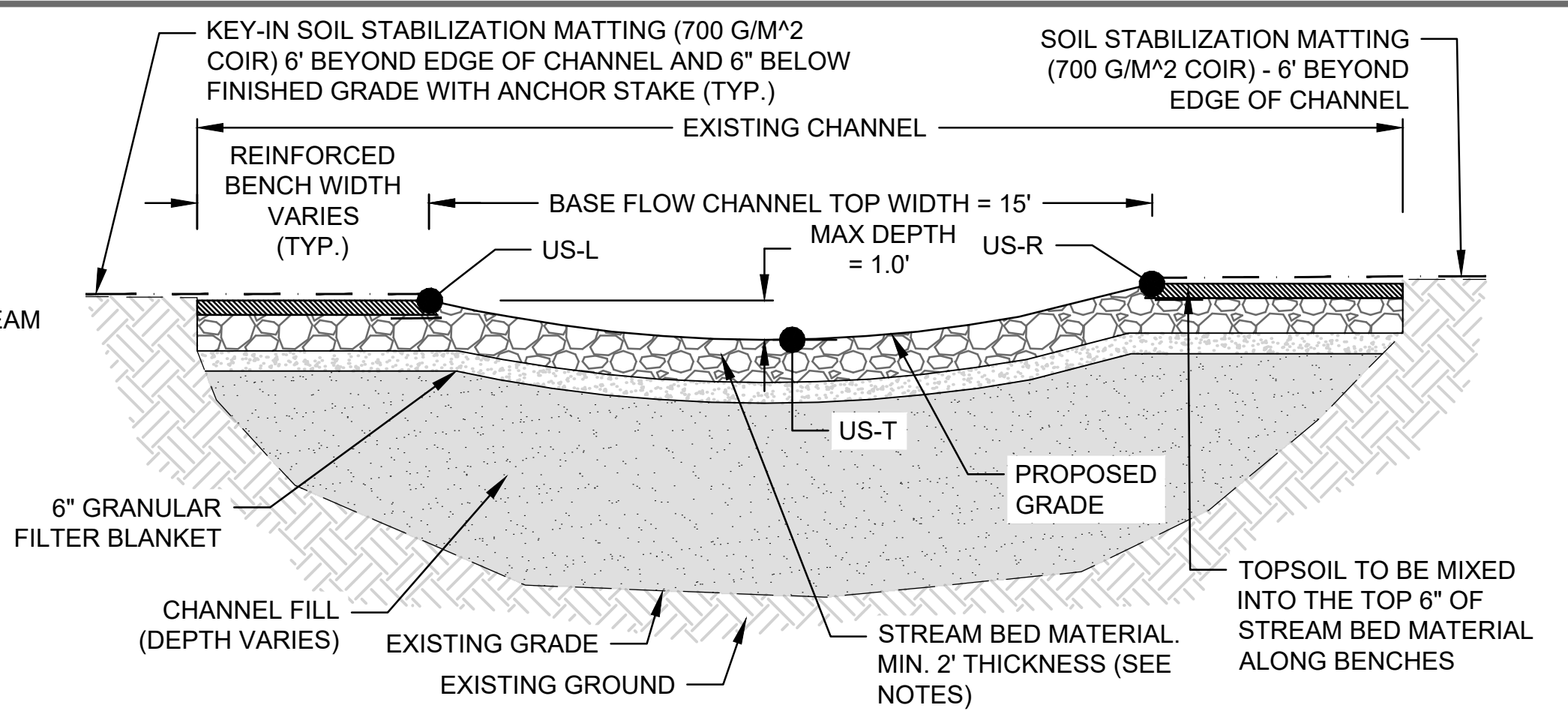
NOTE: SEE STRUCTURE TABLE FOR
NODE LOCATIONS, ELEVATIONS

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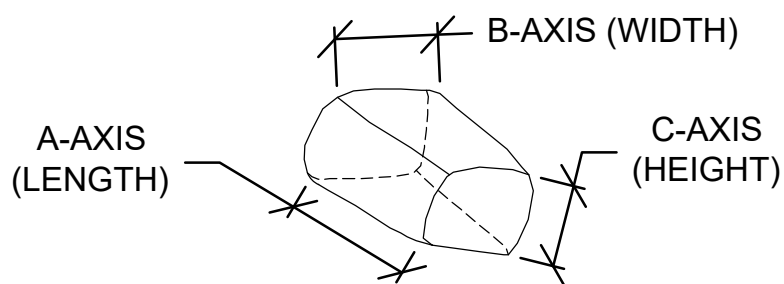
RIFFLE BOULDER CROSS SECTION

SEE TABLE FOR BOULDER SIZING
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RIFFLE CREST CROSS SECTION

NOT TO SCALE



RIFFLE BOULDER AXIS

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BOULDER DIMENSIONS (FT)			
BOULDER TYPE	A-AXIS	B-AXIS	C-AXIS
RIFFLE	2	1.5 - 2	1.5
FOOTER	2 - 3	2 - 3	1.5 - 2

STREAM BED MATERIAL COBBLE GRADATION TABLE	
CUMULATIVE % FINER	SIZE (IN)
10	3
30	6
50	8
85	11
100	12
STREAM BED MATERIAL GRAVEL: NO. 6 COARSE AGGREGATE (ODOT 02690.20)	

NOTES:

1. STREAM BED MATERIAL CONSISTS OF AN EVENLY DISTRIBUTED MIX OF 75% COBBLE AND 25% NO. 6 GRAVEL. COBBLE SHALL MEET THE GRADATION SHOWN IN TABLE.
2. AS STREAMBED MATERIAL IS INSTALLED, CONTRACTOR SHALL WORK IN CHANNEL WASH-IN MATERIAL WITHIN EACH 6" LIFT OF STREAMBED MATERIAL USING MECHANICAL OR HYDRAULIC METHODS TO ENSURE VOIDS ARE FILLED AND ULTIMATELY DEMONSTRATE SURFACE FLOW OVER STRUCTURES AT COMPLETION OF CONSTRUCTION, AND NOT THROUGH OR BELOW STRUCTURES. THE CONTRACTOR SHALL WORK IN MATERIAL UNTIL BASEFLOW IS AT THE CREST OF THE STRUCTURES OR AS APPROVED BY THE ENGINEER. THE VOLUME OF CHANNEL WASH-IN MATERIAL REQUIRED MAY VARY BUT IS TYPICALLY EQUAL TO APPROXIMATELY 20% OF VOLUME OF STREAMBED MATERIAL. CHANNEL WASH-IN MATERIAL SHALL BE TYPE I AGGREGATE (ODOT 00706.12).



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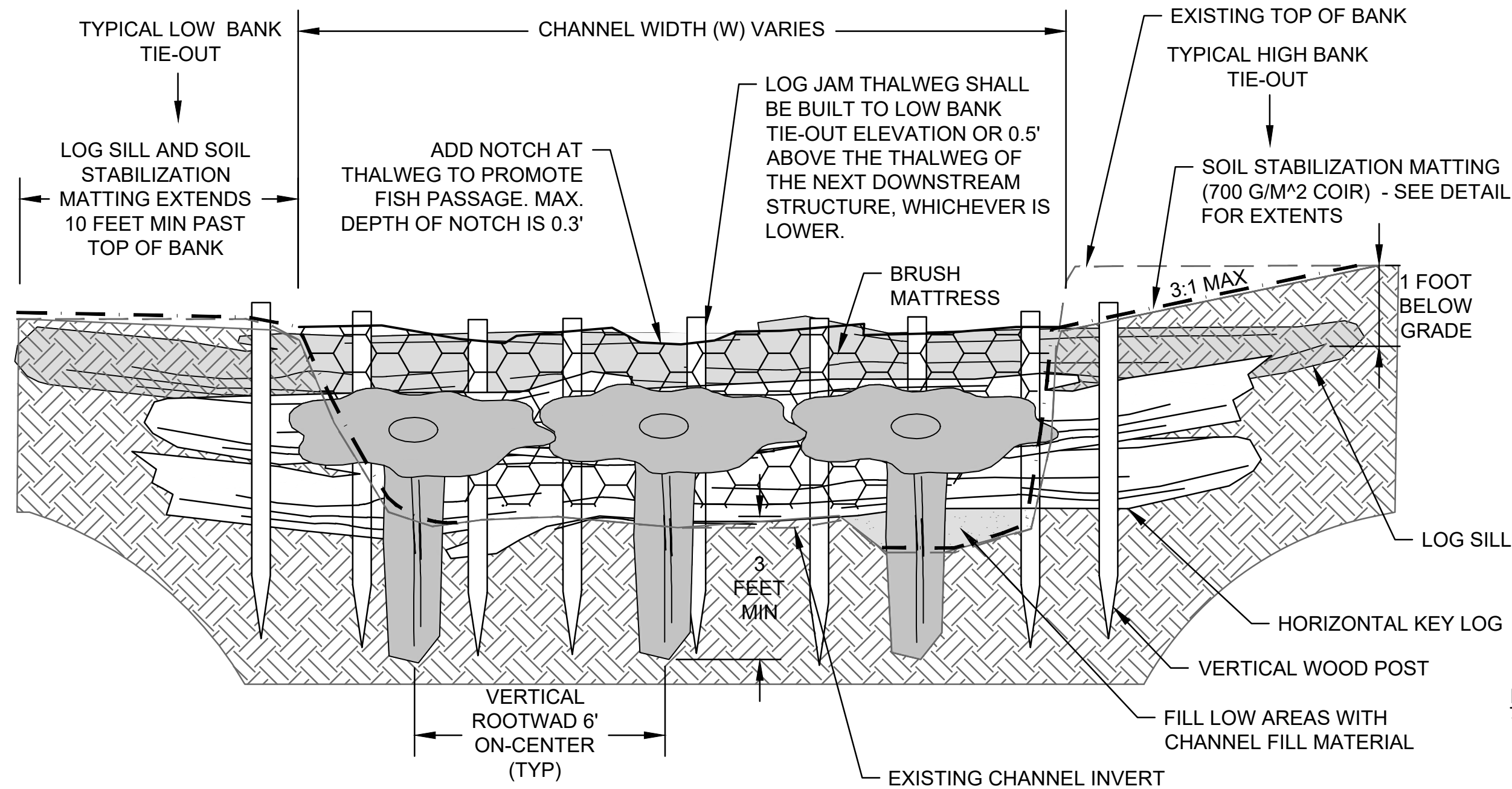
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DETAILS

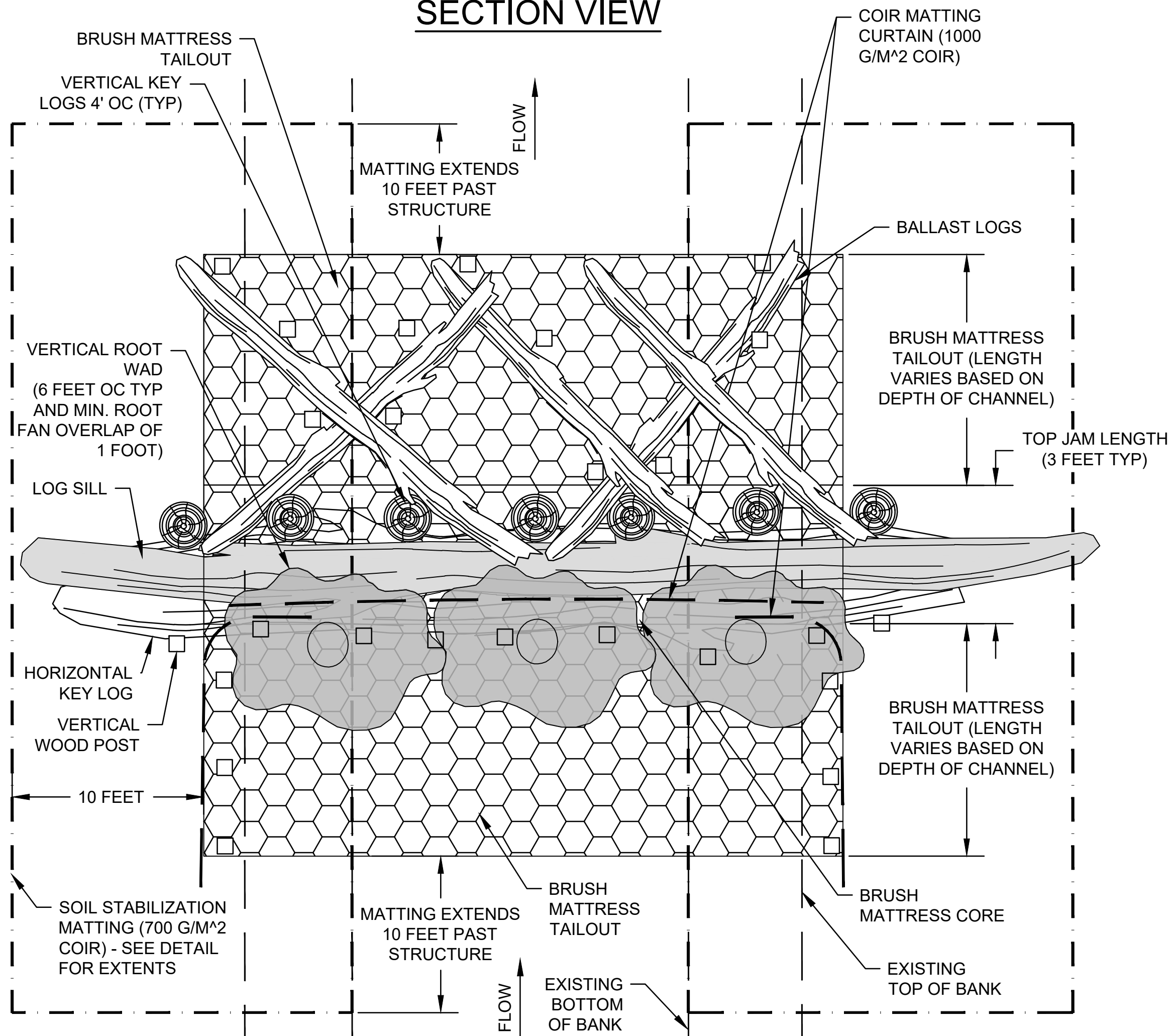
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12 OF 30

SP10

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LAYOUT: 12 DETAILS



SECTION VIEW



PLAN VIEW

LOG JAM

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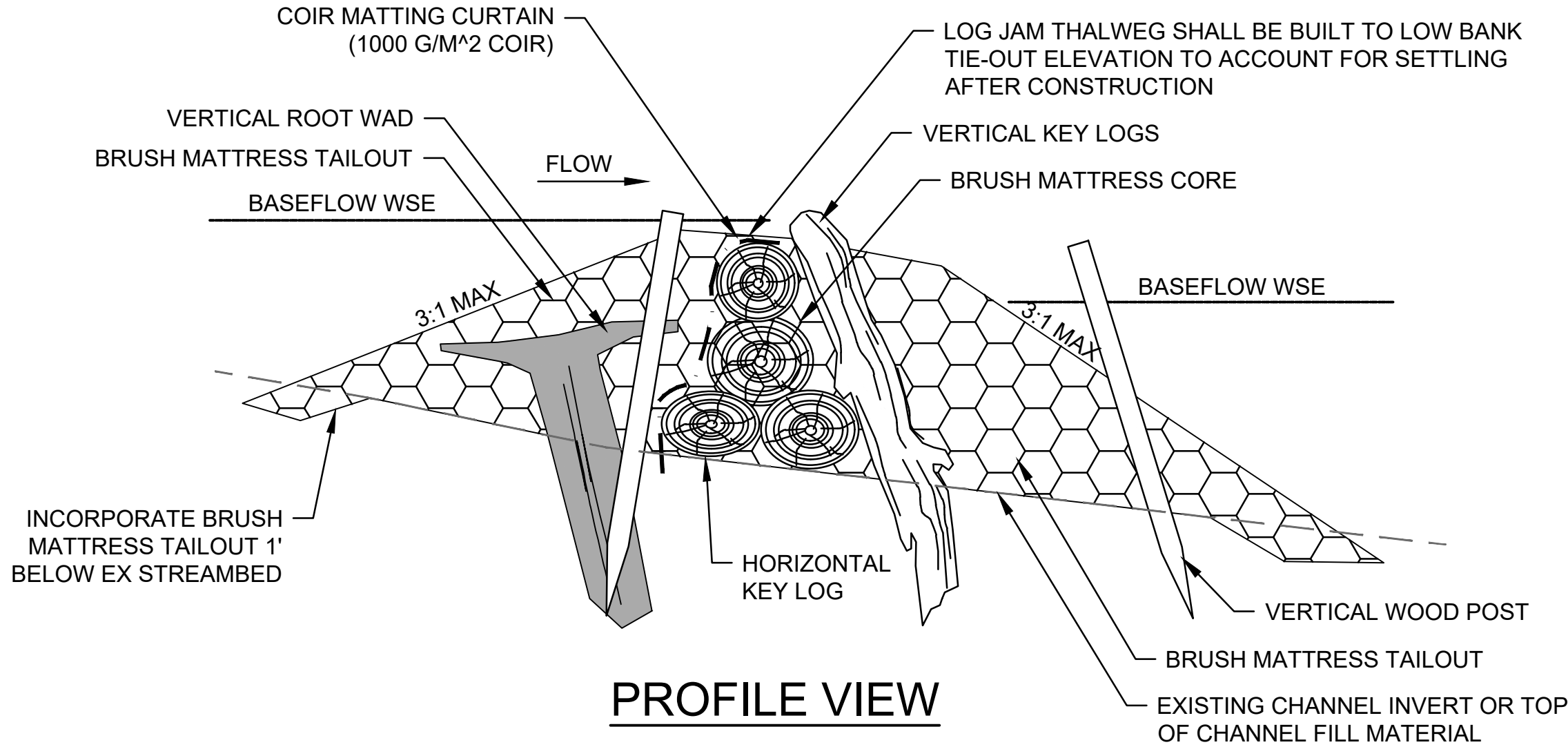
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DETAILS
SP11

DRAWING NO. 13 OF 30
SP11



PROFILE VIEW

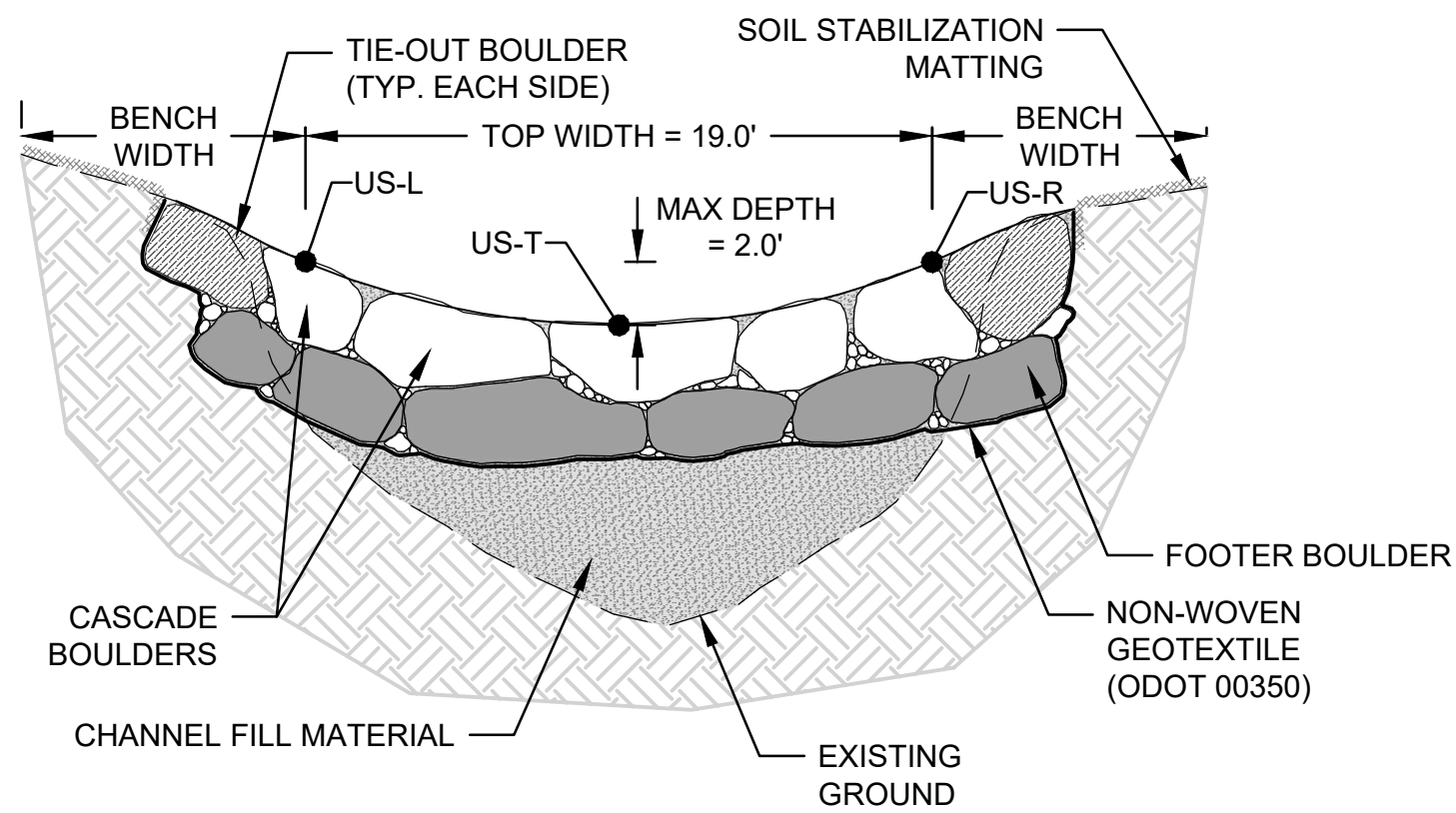
LOG JAM SEQUENCE OF CONSTRUCTION:

- PRIOR TO THE INSTALLATION OF LOG JAM, INSPECT STREAMBANKS TO IDENTIFY ANY SIGNIFICANT UNDERCUTS OR VOIDS ALONG BANKS AT THE PROPOSED LOCATION. IF VOIDS ARE FOUND, ENGINEER SHALL MAKE DETERMINATION IF LOG JAM LOCATION IS SHIFTED TO AVOID OR IF VOIDS CAN BE SUFFICIENTLY COMPACTED AND PLUGGED.
- THE EXISTING STREAMBED MATERIAL SHALL BE HARVESTED WITHIN THE FOOTPRINT OF THE STRUCTURE PRIOR TO THE INSTALLATION OF LOG JAM FOR REUSE AS A COMPONENT OF THE BRUSH MATTRESS.
- COMPACT STREAMBANKS AS DIRECTED AND LAY SOIL STABILIZATION MATTING ALONG BOTH BANKS FOR FULL LENGTH OF STRUCTURE PLUS MIN. 10 FEET UPSTREAM AND DOWNSTREAM, KEYING LOWER EDGE INTO TOE OF SLOPE PRIOR TO INSTALLING WOOD. UPPER EDGE OF MATTING TO EXTEND 10 FEET PAST EXISTING TOP OF BANK.
- INSTALL TWO LOWER ROWS OF KEY LOGS HORIZONTALLY ACROSS FULL WIDTH OF EXISTING CHANNEL, SHARPENED ENDS KEYED INTO EXISTING BANK/BED A MINIMUM OF 3 FEET. IF MULTIPLE KEY LOGS ARE NEEDED TO SPAN CHANNEL WIDTH, THE MINIMUM OVERLAP SHALL BE 3 FEET. THE HEIGHT OF KEY LOGS SHALL EXTEND FROM THE EXISTING STREAMBED TO THE PROPOSED STRUCTURE THALWEG.
- BACKFILL IN AND AROUND KEY LOGS AS THEY ARE INSTALLED WITH BRUSH MATTRESS AND SALVAGED ON-SITE FILL MATERIAL IN 1 FOOT COMPACTED LIFTS TO FORM DENSE BRUSH MATTRESS CORE INTERWOVEN BETWEEN THE KEY LOGS. EACH 1 FOOT LAYER OF BRUSH MATTRESS AND SOIL SHALL BE WET COMPACTED TO MINIMIZE SETTLEMENT AND VOIDS.
- INSTALL 1000 SERIES STABILIZATION MATTING ON THE UPSTREAM FACE OF THE KEY LOGS TO FORM A CONTINUOUS CURTAIN THAT EXTENDS THE FULL WIDTH OF THE SECTION AND WRAPS UPSTREAM ALONG BOTH BANKS FOR A MINIMUM OF 6 FEET. THE HEIGHT OF 1000 SERIES STABILIZATION MATTING SHALL EXTEND FROM A MINIMUM OF 1' BELOW EXISTING GRADE TO TOP OF KEY LOGS. ENSURE THE 1000 SERIES STABILIZATION MATTING IS INSTALLED IN GOOD CONTACT WITH BANK FACES SO THERE ARE NO VOIDS AT TIE IN POINTS. INSTALL VERTICAL WOOD POSTS ON UPSTREAM SIDE OF 1000 SERIES STABILIZATION MATTING TO PIN IN AGAINST THE KEY LOGS AND BANKS. IF MULTIPLE SHEETS OF 1000 SERIES STABILIZATION MATTING ARE NEEDED, MINIMUM OF 2' OVERLAP IS REQUIRED.
- INSTALL FIRST LAYERS OF BRUSH MATTRESS TAILOUTS ON UP AND DOWNSTREAM SIDES OF STRUCTURE IN 1 FOOT COMPACTED LIFTS, INCORPORATING THE MATERIAL INTO THE STREAMBED A MINIMUM OF 1 FOOT.
- INSTALL VERTICAL KEY LOGS ACROSS CHANNEL (TYPICALLY 4 FEET ON-CENTER) ON DOWNSTREAM SIDE OF HORIZONTAL KEY LOGS, SHARPENED END KEYED INTO EXISTING BED A MINIMUM OF 3 FEET. CONTINUE TO BACKFILL AND COMPACT ALL VOIDS WITH BRUSH MATTRESS AND ON-SITE FILL MATERIAL.
- INSTALL VERTICAL ROOT WADS ACROSS CHANNEL (TYPICALLY 6 FEET ON-CENTER) ON UPSTREAM SIDE OF KEY LOGS. SHARPENED END KEYED INTO EXISTING BED A MINIMUM OF 3 FEET. ROOT FAN OF EACH SHOULD OVERLAP A MINIMUM OF 1 FOOT. ENSURE ROOT FAN IS PRESSED TIGHT TO BRUSH MATTRESS CURTAIN BELOW ROOT FAN TO ELIMINATE ALL VOIDS. CONTINUE TO BACKFILL AND COMPACT ALL VOIDS WITH BRUSH MATTRESS AND ON-SITE FILL MATERIAL.
- SILL LOGS SHALL BE INCORPORATED INTO LOG JAMS TO ELIMINATE UNPROTECTED SURFACE AT TOP OF BANK TIE IN LOCATION. COMPACT GROUND SURROUNDING LOG SILL AND ALL TIE-IN POINTS ALONG THE STRUCTURE.
- INSTALL FINAL TOP LAYERS OF BRUSH MATTRESS TAILOUTS ON UP AND DOWNSTREAM SIDES OF STRUCTURE, BACKFILLED WITH ON-SITE FILL MATERIAL IN 1 FOOT COMPACTED LIFTS. ENSURE SUFFICIENT BRUSH MATTRESS TAILOUT IS PROVIDED ON DOWNSTREAM SIDE TO MINIMIZE VERTICAL PLUNGING FLOWS. FINISHED SURFACE OF DOWNSTREAM TAILOUT SHALL BE DRESSED WITH LARGER DIAMETER BRUSH (4" TO 8" DIAMETER) BALLASTED DOWN WITH 6" TO 10" DIAMETER BRANCHES/TRUNKS.
- INSTALL VERTICAL WOOD POSTS ACROSS THE CHANNEL AT DOWNSTREAM END OF BRUSH MATTRESS TAILOUT IN STAGGERED PATTERN, ON 3 FOOT CENTERS PUSHED INTO EXISTING BED A MINIMUM OF 3 FEET. POSTS SHALL BE ANGLED UPSTREAM APPROXIMATELY 30 DEGREES FROM VERTICAL TO PIN BALLAST LOGS/BRUSH MATTRESS IN PLACE.
- WHEN COMPLETE, STREAM BASEFLOW SHOULD BE IMPOUNDED UPSTREAM OF STRUCTURE.
- ONCE LOG JAM IS CONSTRUCTED, COMPLETE INSTALLATION OF SOIL STABILIZATION MATTING AND STABILIZE ALL DISTURBED TIE-IN LOCATIONS AS SPECIFIED.

LOG JAM GENERAL NOTES:

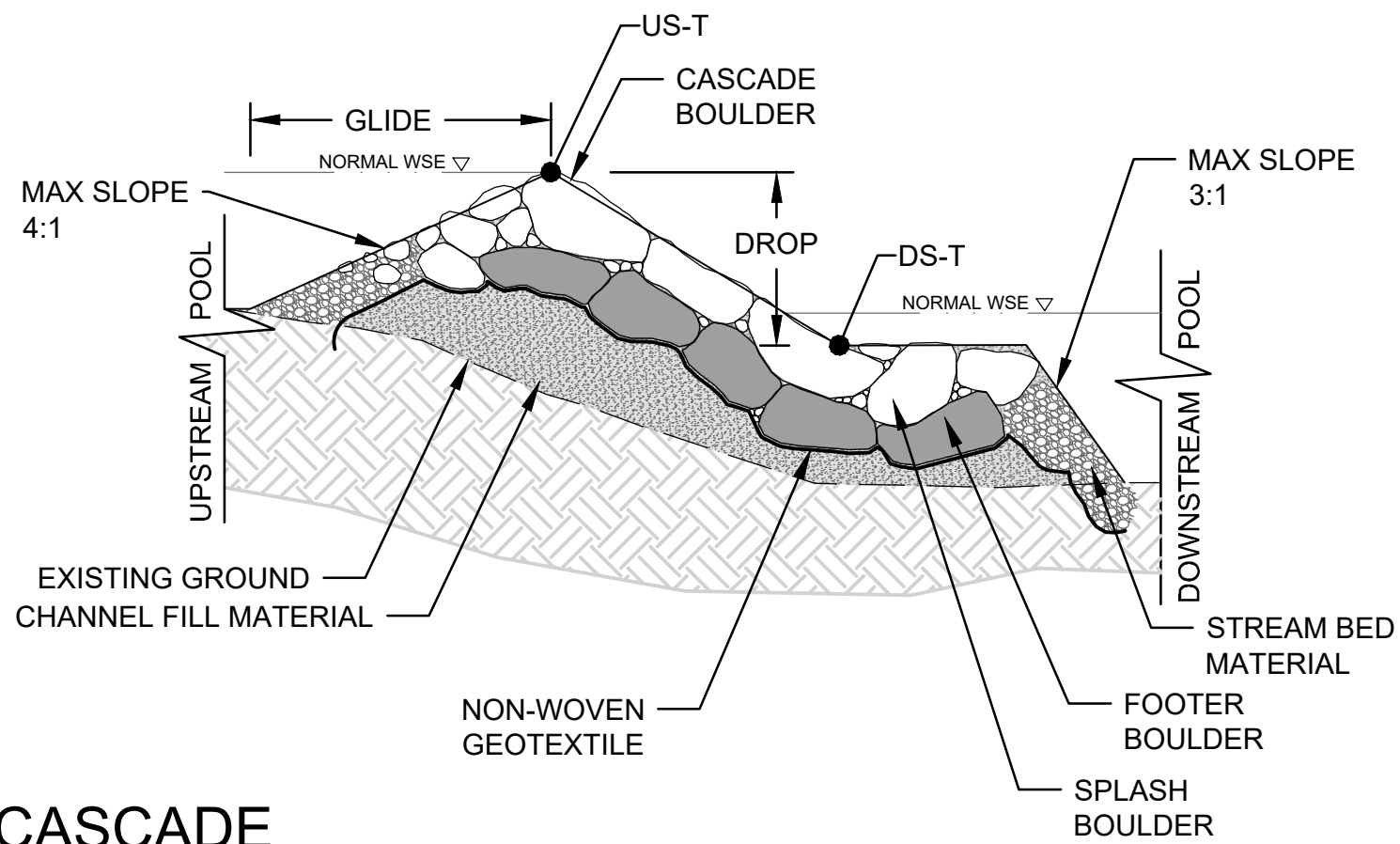
- SEE PROFILE FOR STRUCTURE LOCATION.
- FOR ALL MATERIAL SIZE AND TYPE, REFER TO SPECIFICATIONS AND NOTES PROVIDED ON THIS DETAIL.
- WOODY MATERIAL CAN BE OBTAINED ONSITE FROM PROJECT TREE REMOVAL OR EXISTING DOWNED TREES ON FLOODPLAIN. DO NOT USE EXISTING WOOD IN CHANNEL. ROT-RESISTANT SPECIES ARE PREFERRED FOR USE IF AVAILABLE, BUT ANY WOOD FREE OF DEFECTS, MAJOR DAMAGE AND DECAY CAN BE USED AS NEEDED.
- KEY LOGS SHALL BE A MINIMUM OF 12 INCHES DIAMETER CUT TO REQUIRED LENGTH. HORIZONTAL KEY LOGS ARE TYPICALLY 1.5 X CHANNEL WIDTH TO ACHIEVE SINGLE SPAN WITH BANK KEY-IN. VERTICAL KEY LOGS ARE TYPICALLY BANK HEIGHT + 3' TO ACHIEVE BED KEY IN.
- ROOT WAD TRUNKS SHALL BE A MINIMUM OF 12 INCHES DIAMETER CUT TO A LENGTH OF THE BANK HEIGHT + 3' TO ACHIEVE BED KEY IN. ROOT WAD FAN WIDTH TO BE MINIMUM OF 6 FEET IN DIAMETER TO ENSURE OVERLAP OF FANS.
- THE BRUSH MATTRESS SHALL BE COMPOSED OF A MIX OF WOODY MATERIAL (BRUSH, LIMBS AND SMALL ROOTWADS) AND SALVAGED ONSITE FILL MATERIAL. BRUSH SHALL BE 1 TO 4 INCHES IN DIAMETER AND BROKEN INTO 2 TO 4 FOOT LONG PIECES. SMALL ROOTWAD TRUNKS SHALL BE 4 TO 8 INCHES IN DIAMETER AND 4 TO 6 FOOT LONG. THIS WOODY MATERIAL SHALL BE EVENLY MIXED WITH SALVAGED ON-SITE FILL MATERIAL (50% WOODY AND 50% FILL).
- BALLAST LOGS SHALL BE COMPOSED OF 6 TO 10 INCH DIAMETER BRANCHES/TRUNKS, APPROXIMATELY 6 TO 8 FOOT LONG.
- VERTICAL WOOD POSTS SHALL BE CEDAR POSTS AND BE A MINIMUM OF 4 INCHES DIAMETER AND OF SUFFICIENT LENGTH TO ACHIEVE 3 FEET KEY IN DEPTH PLUS HEIGHT OF THE PROPOSED STRUCTURE.
- THE NUMBER AND LENGTH OF KEY LOGS AND ROOT WADS MAY VARY PER STRUCTURE, DEPENDING ON THE EXISTING CHANNEL WIDTH AND DEPTH. SUFFICIENT MATERIAL IS NECESSARY TO ACHIEVE SPECIFIED GRADE, SECTION, AND DENSITY TO INFLUENCE WATER SURFACE ELEVATION AT BASEFLOW SO THAT IT IS FLOWING OVERTOP OF STRUCTURE.
- WHERE POSSIBLE, ALL MATERIAL SHALL BE DRIVEN OR PUSHED INTO STREAM BED AND BANKS TO DEPTHS SPECIFIED WITH MINIMAL EXCAVATION. SHARPEN ENDS OF LOG WITH A CHAINSAW AND DRIVE SHARPENED END INTO GROUND AS DIRECTED IN FIELD.
- ALL EXPOSED LOG ENDS SHALL HAVE BROKEN OR ROUGHENED END, RATHER THAN SAW CUT END WHEN POSSIBLE.
- THIS DETAIL DEPICTS THE TYPICAL PREFERRED COMPOSITION AND CONFIGURATION OF LOG JAM MEMBERS. ALTERATION OF THIS COMPOSITION/CONFIGURATION DUE TO ISSUES OBTAINING NECESSARY MATERIALS OR OTHER REASON IS ACCEPTABLE ONLY WITH PRIOR APPROVAL FROM THE ENGINEER. FINISHED GRADE OF ALTERED STRUCTURES SHALL REMAIN AS SPECIFIED ON THE PLANS.

PATH: I:\Projects\19535.01 WES Three Creeks Floodplain\CAD\Plans PLOTTED BY: scdzweidel DATE: Tuesday, January 28, 2025 12:16:40 AM LAYOUT: 13 DETAILS



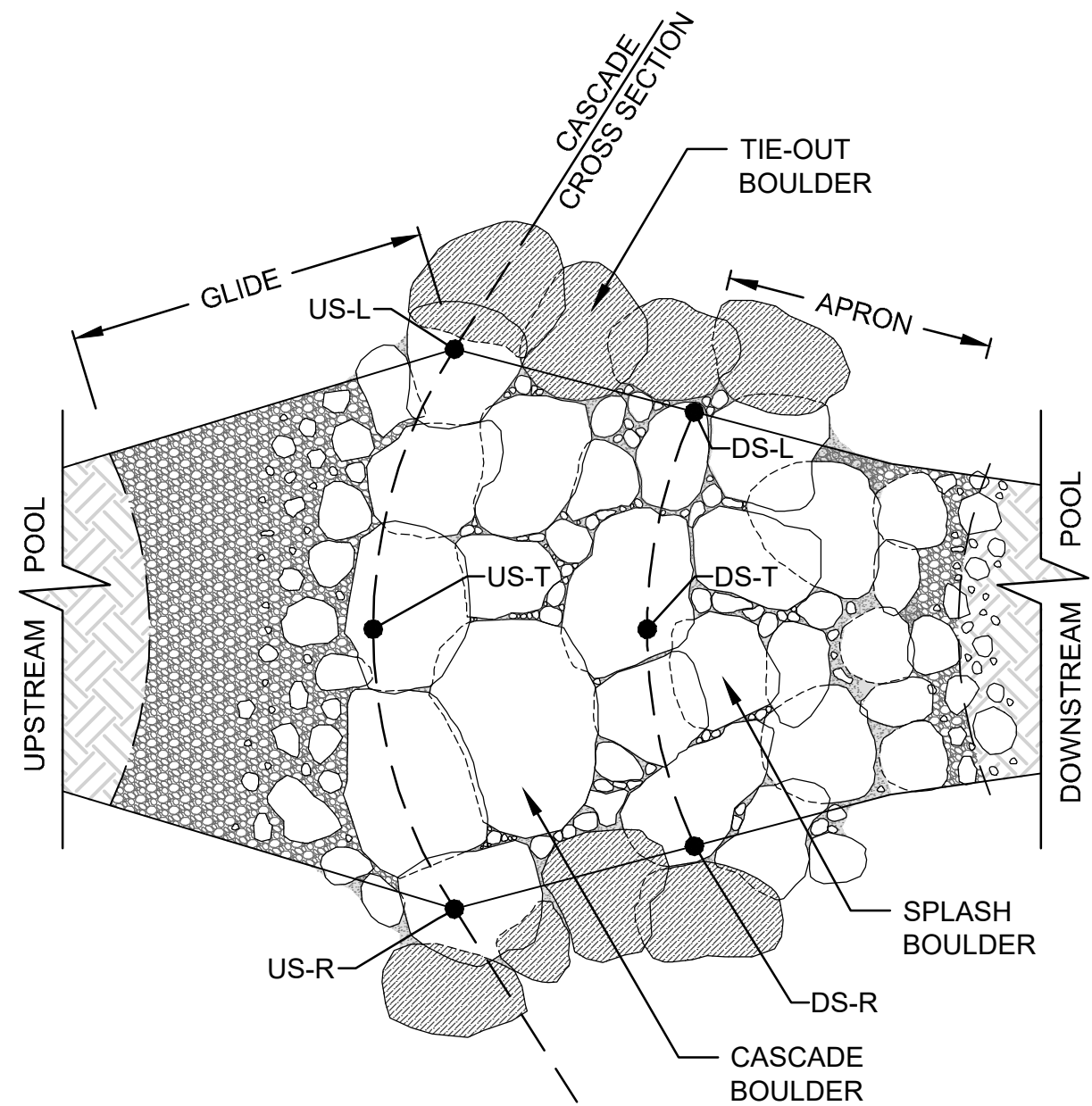
CASCADe
CROSS SECTION

NOT TO SCALE



CASCADe
PROFILE

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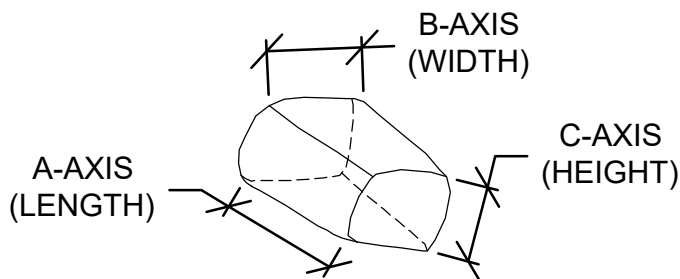


CASCADe
PLAN VIEW

NOT TO SCALE

CASCADe NOTES:

1. REFER TO STRUCTURE TABLE FOR NODE LOCATIONS AND ELEVATIONS DEFINING THE FOOTPRINT OF CASCADe. SEE PROFILE FOR UPSTREAM AND DOWNSTREAM EXTENT OF PROTECTION (GLIDE AND APRON).
2. SEE TYPICAL SECTIONS FOR DEPTH AND WIDTH OF CHANNEL CROSS SECTION. THE CROSS SECTION SHALL BE CONSTRUCTED IN A PARABOLIC SHAPE BETWEEN GIVEN NODES.
3. FOR ALL MATERIAL SIZES, REFER TO SPECIFICATIONS AND TABLES PROVIDED ON THIS DETAIL.
4. CHANNEL FILL MATERIAL MAY BE HARVESTED ON-SITE PRIOR TO INSTALLATION OF CASCADe IF IT MEETS THE SPECIFICATIONS.
5. THE NUMBER OF BOULDERS VARIES DEPENDING ON TYPICAL SECTION WIDTH AND BOULDER DIMENSIONS.
6. IN AREAS OF CUT, CHANNEL FILL MATERIAL IS NOT NEEDED. IN AREAS OF FILL, EXISTING STREAM CHANNEL TO BE FILLED IN 8" LIFTS WITH CHANNEL FILL MATERIAL TO ELEVATION THAT ALLOWS FOR REQUIRED MINIMUM THICKNESS OF BOULDERS.
7. LAY A CONTINUOUS SHEET OF GEOTEXTILE ON TOP OF EXISTING GROUND AND CHANNEL FILL MATERIAL.
8. AS NEEDED, EXCAVATE THE DOWNSTREAM TIE OUT AREA FOR STREAM BED MATERIAL AND FOOTER BOULDERS AND INSTALL THE FOOTER AND CASCADe BOULDERS. TOP OF CASCADe BOULDERS SHALL BE PARABOLIC IN SHAPE AND MEET FINISHED GRADE DEFINED BY STRUCTURE TABLE NODES.
9. THE BOULDERS SHALL BE TILTED DOWNSTREAM AS SHOWN ON THE DETAIL AND NOT STACKED. STAGGER SEAMS OF BOULDERS BETWEEN EACH ROW.
10. INSTALL BOULDER AND STREAM BED MATERIAL APRON TO BLEND INTO DOWN STREAM POOL AS SHOWN ON DETAIL. APRON RUN SHALL HAVE A MINIMUM THICKNESS OF 2' OF STREAM BED MATERIAL.
11. TIE-OUT BOULDER SHALL EXTEND PAST THE CORNER NODES DS-R & DS-L A MIN. OF ONE BOULDER LENGTH (B-AXIS) INTO EXISTING BANK. WHERE THIS CONFLICTS WITH EXISTING TREE ROOTS OR BEDROCK, TIE-OUT BOULDER MAY BE ELIMINATED OR ADJUSTED AT DIRECTION OF ENGINEER.
12. FILL ALL VOIDS BETWEEN BOULDERS WITH STREAM BED MATERIAL TO THE FINISHED GRADES, COMPRESSING MATERIALS TO MAINTAIN PARABOLIC CROSS SECTION SHAPE.
13. CHANNEL WASH-IN MATERIAL SHALL BE REPEATEDLY WORKED INTO FULL DEPTH OF THE STREAM BED MATERIAL AND BOULDERS TO FILL VOIDS.
14. INSTALL STREAM BED MATERIAL GLIDE AS SHOWN ON DETAIL WITH A MINIMUM THICKNESS OF 2'.
15. ONCE CASCADe IS CONSTRUCTED, STABILIZE ALL DISTURBED TIE-IN LOCATIONS AS SPECIFIED.



CASCADe
BOULDER AXIS

NOT TO SCALE

BOULDER DIMENSIONS (FT)			
BOULDER TYPE	A-AXIS	B-AXIS	C-AXIS
CASCADe / SPLASH / TIE-OUT	2	1.5-2	1.5
FOOTER	2-3	2-3	1.5-2

STREAM BED MATERIAL COBBLE GRADATION TABLE	
CUMULATIVE % FINER	SIZE (IN)
10	3
30	6
50	8
85	11
100	12
STREAM BED MATERIAL GRAVEL: NO. 6 COARSE AGGREGATE (ODOT 02690.20)	

NOTE:

IMPORTED GRAVEL SHALL BE INCORPORATED INTO RIFFLE MIX AT AN APPROXIMATE RATIO OF 75% RIFFLE MIX TO 25% GRAVEL.

REVISIONS	DATE	BY	DESIGNED ML SS
			DRAWN SS
			CHECKED
			APPROVED

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FILE NAME	dt013c
JOB No.	553-1751-033
DATE	JANUARY 27, 2025



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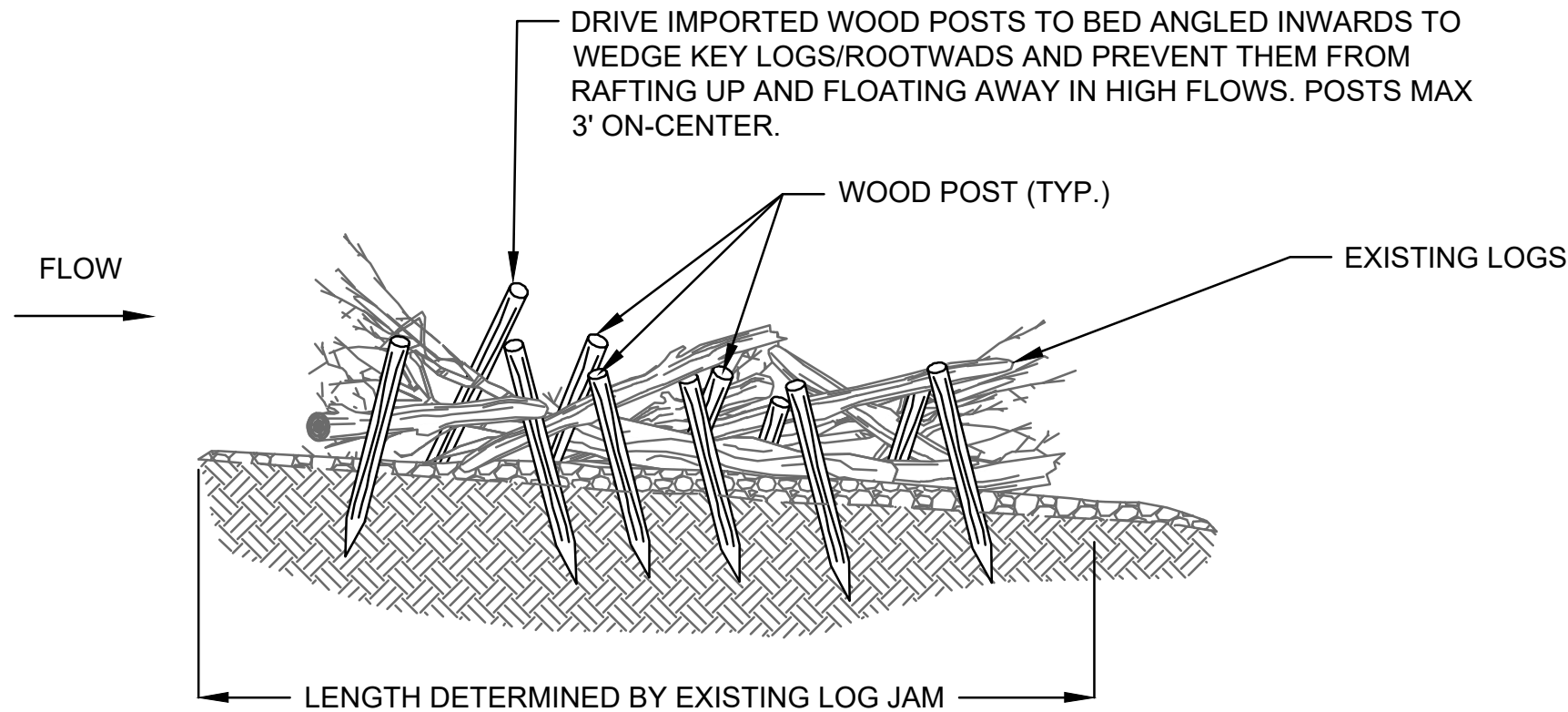
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CASCADe REGION
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Portland, OR 97209 / 503.223.0919 ext
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PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT CLACKAMAS COUNTY, OR

DETAILS

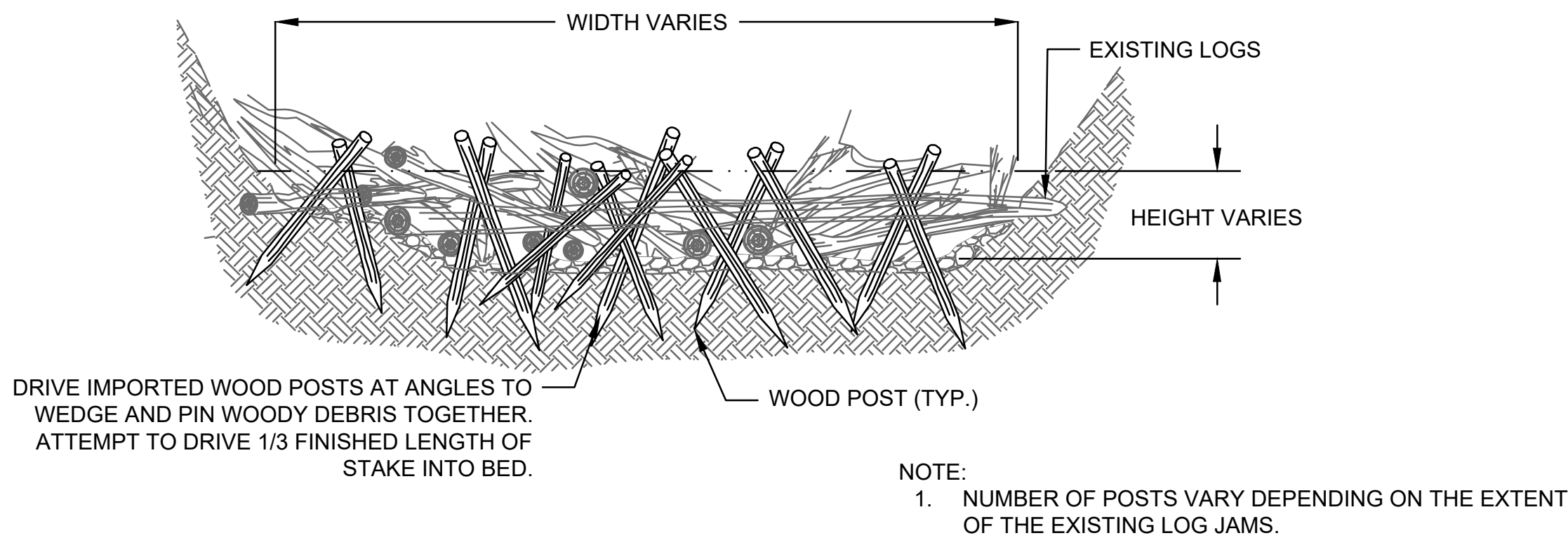
DRAWING NO. 14 OF 30
SP12

PATH: I:\Projects\19535.01_WES Three Creeks Floodplain\CAD\Plans PLOTTED BY: scdzwedel DATE: Tuesday, January 28, 2025 12:16:45 AM LAYOUT: 14 DETAILS



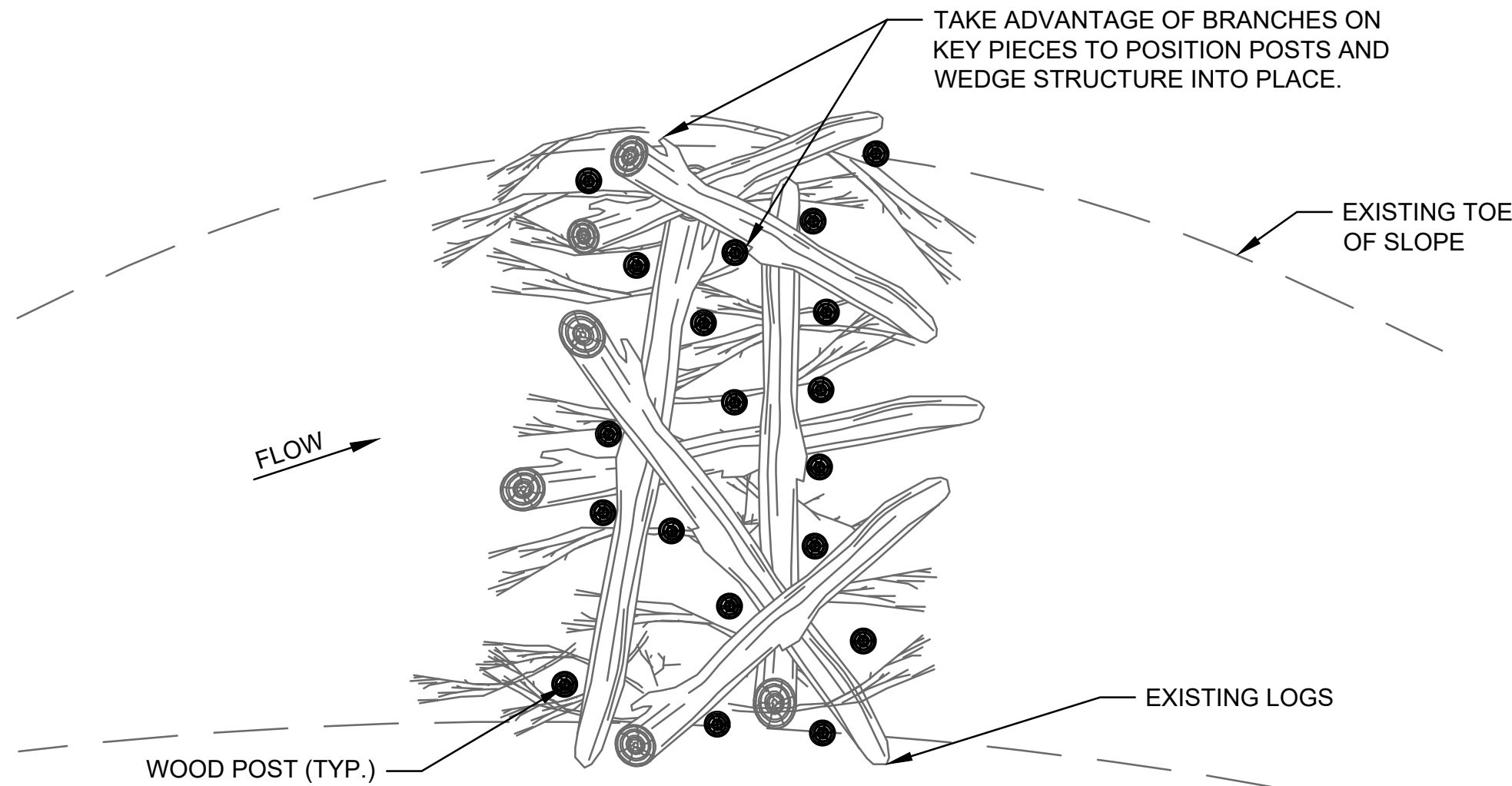
POST REINFORCEMENT
PROFILE

NOT TO SCALE



POST REINFORCEMENT
SECTION

NOT TO SCALE



ADAPTED FROM CHANNEL-SPANNING PALS DETAIL, UTAH STATE LOW TECH PROCESSED BASED RESTORATION MANUAL

POST REINFORCEMENT
PLAN

NOT TO SCALE

POST REINFORCEMENT NOTES:

1. POST REINFORCEMENT IS INTENDED TO MAKE EXISTING LOG JAMS MORE PERMANENT WHILE MINIMIZING DISTURBANCE TO SURROUNDING GROUND AND VEGETATION. USE MINIMUM REQUIRED EQUIPMENT TO INSTALL.
2. POSTS ARE INSTALLED IN EXISTING LOG JAMS AS SHOWN ON THE PLANS. MINIMIZE THE DISTURBANCE TO EXISTING WOOD AS MUCH AS POSSIBLE.
3. DRIVE WOOD POSTS AT ANGLE ACROSS ENTIRE CHANNEL TO PIN AND WEDGE EXISTING LARGE WOOD. SPACE POSTS A MAXIMUM OF 3' ON CENTER AND DRIVE 1/3 OF POST INTO EXISTING GROUND.
4. WOOD POSTS SHALL BE CEDAR POSTS AND BE A MINIMUM OF 4 INCHES DIAMETER AND 6 FOOT LENGTH.
5. POSTS SHALL BE DRIVEN OR PUSHED INTO STREAM BED AND BANKS TO DEPTHS SPECIFIED WITH MINIMAL EXCAVATION. SHARPEN ENDS OF LOG WITH A CHAINSAW AND DRIVE SHARPENED INTO GROUND AS DIRECTED BY THE ENGINEER.
6. THIS DETAIL DEPICTS THE TYPICAL COMPOSITION AND CONFIGURATION OF POST REINFORCEMENT. EXISTING LOG JAMS VARY. POST PLACEMENT WILL NEED TO BE FIELD FIT TO EXISTING CONDITIONS. ALTERATION OF THIS COMPOSITION/CONFIGURATION IS ACCEPTABLE WITH PRIOR APPROVAL FROM THE ENGINEER.

REVISIONS	DATE	BY	DESIGNED
			ML, SS
			DRAWN
			SS
			CHECKED
			APPROVED

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME dt013c
JOB No. 553-1751-033
DATE JANUARY 27, 2025



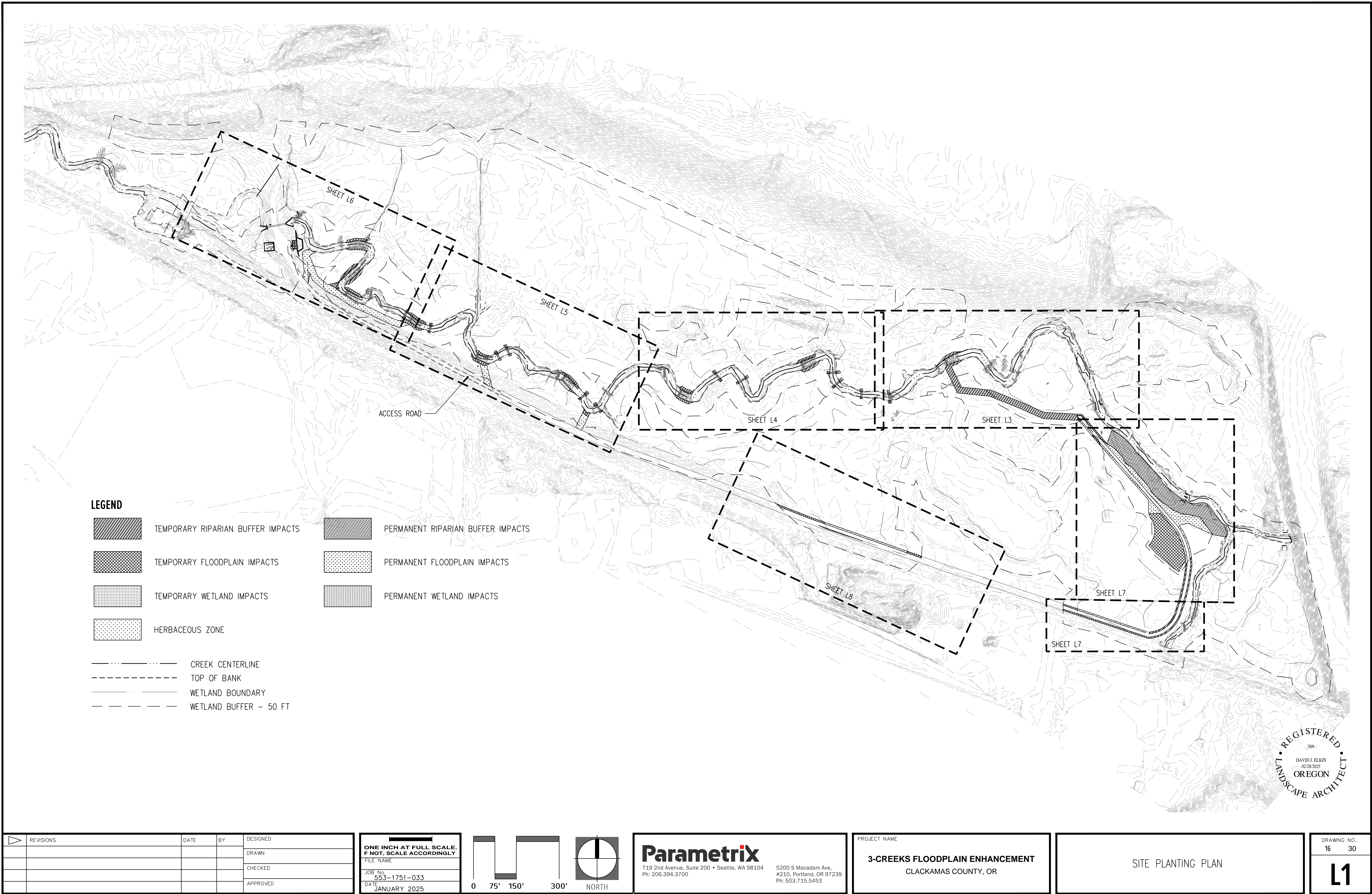
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PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT CLACKAMAS COUNTY, OR

DETAILS

DRAWING NO. 15 OF 30
SP13



TEMPORARY RIPARIAN BUFFER IMPACTS						SIZE: 27,322 SF (0.63 AC)
FREQUENCY (%)	COMMON NAME	BOTANICAL NAME	SIZE	INDIVIDUAL MINIMUM SPACING (FT)	TOTAL QUANTITY	
	TREES					
33%	RED ALDER	Alnus rubra	5 GAL	15	40	
33%	WESTERN CRABAPPLE	Malus fusca	5 GAL	15	40	
33%	CASCARA	Rhamnus purshiana	5 GAL	15	40	
				TOTAL	120	
	SHRUBS					
17%	PACIFIC SERVICEBERRY	Amelanchier alnifolia	1 GAL	8	142	
17%	TWINBERRY HONEYSUCKLE	Lonicera involunrata	1 GAL	8	142	
67%	CLUSTERED ROSE	Rosa pisocarpa	1 GAL	8	142	
				TOTAL	426	
	HERBACEOUS					
33%	CALIFORNIA OATGRASS	Danthonia californica	10 CI	3	1,012	
33%	TUFTED HAIRGRASS	Deschampsia caespitosa	10 CI	3	1,012	
33%	SLENDER HAIRGRASS	Deschampsia elongata	10 CI	3	1,012	
				TOTAL	3,036	

TEMPORARY FLOODPLAIN IMPACTS						SIZE: 14,804 SF (0.34 AC)
FREQUENCY (%)	COMMON NAME	BOTANICAL NAME	SIZE	INDIVIDUAL MINIMUM SPACING (FT)	TOTAL QUANTITY	
	TREES					
50%	SHINING WILLOW	Salix lasiandra	5 GAL	15	33	
25%	RED ALDER	Alnus rubra	5 GAL	15	16	
25%	BLACK COTTONWOOD	Populus balsamifera	5 GAL	15	16	
				TOTAL	65	
	SHRUBS					
13%	PACIFIC SERVICEBERRY	Amelanchier alnifolia	1 GAL	8	46	
13%	RED TWIG DOGWOOD	Cornus sericea	1 GAL	8	46	
13%	TWINBERRY HONEYSUCKLE	Lonicera involunrata	1 GAL	8	46	
13%	PACIFIC NINEBARK	Physocarpus capitatus	1 GAL	8	46	
50%	CLUSTERED ROSE	Rosa pisocarpa	1 GAL	8	46	
				TOTAL	230	
	HERBACEOUS					
20%	CALIFORNIA OATGRASS	Danthonia californica	10 CI	3	329	
20%	TUFTED HAIRGRASS	Deschampsia caespitosa	10 CI	3	329	
20%	SLENDER HAIRGRASS	Deschampsia elongata	10 CI	3	329	
20%	SPREADING RUSH	Juncus patens	10 CI	3	329	
20%	SMALL-FRUITED BULRUSH	Scirpus microcarpus	10 CI	3	329	
				TOTAL	1,645	

TEMPORARY WETLAND IMPACTS						SIZE: 3,604 SF (0.08 AC)
FREQUENCY (%)	COMMON NAME	BOTANICAL NAME	SIZE	INDIVIDUAL MINIMUM SPACING (FT)	TOTAL QUANTITY	
	TREES					
100%	SHINING WILLOW	Salix lasiandra	5 GAL	15	16	
				TOTAL	16	
	SHRUBS					
50%	RED TWIG DOGWOOD	Cornus sericea	1 GAL	8	28	
50%	PACIFIC NINEBARK	Physocarpus capitatus	1 GAL	8	28	
				TOTAL	56	
	HERBACEOUS					
20%	CALIFORNIA OATGRASS	Danthonia californica	10 CI	3	80	
20%	TUFTED HAIRGRASS	Deschampsia caespitosa	10 CI	3	80	
20%	SLENDER HAIRGRASS	Deschampsia elongata	10 CI	3	80	
20%	SPREADING RUSH	Juncus patens	10 CI	3	80	
20%	SMALL-FRUITED BULRUSH	Scirpus microcarpus	10 CI	3	80	
				TOTAL	400	

PERMANENT RIPARIAN BUFFER IMPACTS						SIZE: 28,515 SF (0.65 AC)
FREQUENCY (%)	COMMON NAME	BOTANICAL NAME	SIZE	INDIVIDUAL MINIMUM SPACING (FT)	TOTAL QUANTITY	
	TREES					
33%	RED ALDER	Alnus rubra	5 GAL	15	42	
33%	WESTERN CRABAPPLE	Malus fusca	5 GAL	15	42	
33%	CASCARA	Rhamnus purshiana	5 GAL	15	42	
				TOTAL	126	
	SHRUBS					
17%	PACIFIC SERVICEBERRY	Amelanchier alnifolia	1 GAL	8	149	
17%	TWINBERRY HONEYSUCKLE	Lonicera involunrata	1 GAL	8	149	
67%	CLUSTERED ROSE	Rosa pisocarpa	1 GAL	8	149	
				TOTAL	447	
	HERBACEOUS					
33%	CALIFORNIA OATGRASS	Danthonia californica	10 CI	3	1,056	
33%	TUFTED HAIRGRASS	Deschampsia caespitosa	10 CI	3	1,056	
33%	SLENDER HAIRGRASS	Deschampsia elongata	10 CI	3	1,056	
				TOTAL	3,168	

PERMANENT FLOODPLAIN IMPACTS						SIZE: 15,053 SF (0.35 AC)
FREQUENCY (%)	COMMON NAME	BOTANICAL NAME	SIZE	INDIVIDUAL MINIMUM SPACING (FT)	TOTAL QUANTITY	
	TREES					
50%	SHINING WILLOW	Salix lasiandra	5 GAL	15	33	
25%	RED ALDER	Alnus rubra	5 GAL	15	17	
25%	BLACK COTTONWOOD	Populus balsamifera	5 GAL	15	17	
				TOTAL	67	
	SHRUBS					
13%	PACIFIC SERVICEBERRY	Amelanchier alnifolia	1 GAL	8	47	
13%	RED TWIG DOGWOOD	Cornus sericea	1 GAL	8	47	
13%	TWINBERRY HONEYSUCKLE	Lonicera involunrata	1 GAL	8	47	
13%	PACIFIC NINEBARK	Physocarpus capitatus	1 GAL	8	47	
50%	CLUSTERED ROSE	Rosa pisocarpa	1 GAL	8	47	
				TOTAL	235	
	HERBACEOUS					
20%	CALIFORNIA OATGRASS	Danthonia californica	10 CI	3	335	
20%	TUFTED HAIRGRASS	Deschampsia caespitosa	10 CI	3	335	
20%	SLENDER HAIRGRASS	Deschampsia elongata	10 CI	3	335	
20%	SPREADING RUSH	Juncus patens	10 CI	3	335	
20%	SMALL-FRUITED BULRUSH	Scirpus microcarpus	10 CI	3	335	
				TOTAL	1,675	

PERMANENT WETLAND IMPACTS						SIZE: 628 SF (0.01 AC)
FREQUENCY (%)	COMMON NAME	BOTANICAL NAME	SIZE	INDIVIDUAL MINIMUM SPACING (FT)	TOTAL QUANTITY	
	TREES					
100%	SHINING WILLOW	Salix lasiandra	5 GAL	15	3	
				TOTAL	3	
	SHRUBS					
50%	RED TWIG DOGWOOD	Cornus sericea	1 GAL	8	5	
50%	PACIFIC NINEBARK	Physocarpus capitatus	1 GAL	8	5	
				TOTAL	10	
	HERBACEOUS					
20%	CALIFORNIA OATGRASS	Danthonia californica	10 CI	3	14	
20%	TUFTED HAIRGRASS	Deschampsia caespitosa	10 CI	3	14	
20%	SLENDER HAIRGRASS	Deschampsia elongata	10 CI	3	14	
20%	SPREADING RUSH	Juncus patens	10 CI	3	14	
20%	SMALL-FRUITED BULRUSH	Scirpus microcarpus	10 CI	3	14	
				TOTAL	70	

HERBACEOUS ZONE						SIZE: 14,646 SF (0.34 AC)
FREQUENCY (%)	COMMON NAME	BOTANICAL NAME	SIZE	INDIVIDUAL MINIMUM SPACING (FT)	TOTAL QUANTITY	
	HERBACEOUS					
20%	CALIFORNIA OATGRASS	Danthonia californica	10 CI	3	542	
20%	TUFTED HAIRGRASS	Deschampsia caespitosa	10 CI	3	542	
20%	SLENDER HAIRGRASS	Deschampsia elongata	10 CI	3	542	
20%	MEADOW BARLEY	Hordeum brachyanrthurum	10 CI	3	542	
20%	CALIFORNIA BROME-GRASS	Bromus carinatus	10 CI	3	542	
				TOTAL	2,710	

GENERAL NOTES

1.

CONTRACTOR SHALL PROVIDE TOPSOIL, SOIL AMENDMENTS, AND MULCH AS SPECIFIED.
2.

PLANTS ARE TO BE CLUSTERED IN GROUPINGS OF THE SAME SPECIES USING THE FOLLOWING INTERVALS:
TREES: 3
SHRUBS: 3-5
HERBACEOUS: 7-9
REFER TO LEGEND FOR SPACING INFORMATION.
3.

ALL PLANTS SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAILS AND SPECIFICATIONS PROVIDED AS PART OF THE CONSTRUCTION DOCUMENT PACKAGE.
4.

QUANTITIES ARE LISTED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL COUNTS MUST BE VERIFIED BY THE CONTRACTOR IN THE CASE OF A DISCREPANCY BETWEEN THE LEGEND AND THE PLAN, PLANTS INDICATED ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN THE LEGEND.
5.

VERIFY ALL QUANTITIES AND VARIETIES SHOWN ON THE DRAWINGS PRIOR TO ORDERING. OWNER MUST APPROVE ANY NECESSARY SUBSTITUTIONS DURING SUBMITTALS PROCESS. REVIEW PROCESS TO BE ESTABLISHED AT PRE-CONSTRUCTION MEETING.



REVISIONS	DATE	BY	DESIGNED
			DRAWN
			CHECKED
			APPROVED

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FILE NAME	
JOB No.	553-1751-033
DATE	JANUARY 2025

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Ph: 503.715.5453

PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT CLACKAMAS COUNTY, OR

PLANTING LEGEND

DRAWING NO. 17 OF 30
L2

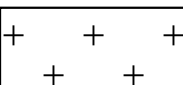
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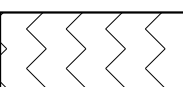
TEMPORARY RIPARIAN BUFFER IMPACTS



PERMANENT RIPARIAN BUFFER IMPACTS



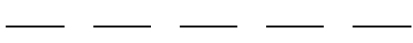
PERMANENT FLOODPLAIN IMPACTS



PERMANENT WETLAND IMPACTS



WETLAND BOUNDARY



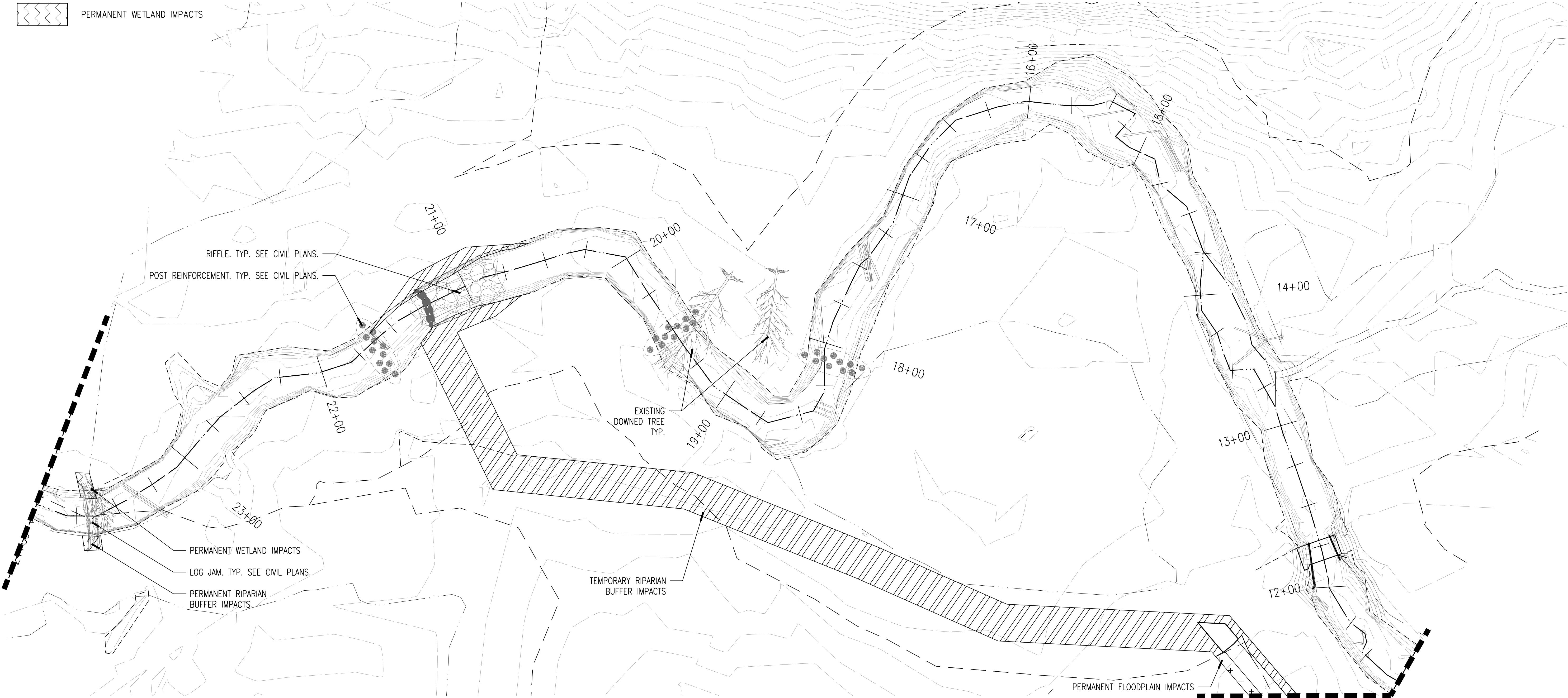
WETLAND BUFFER - 50 FT



CREEK CENTERLINE

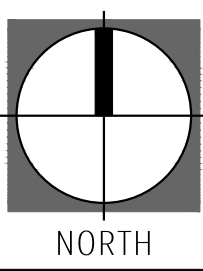
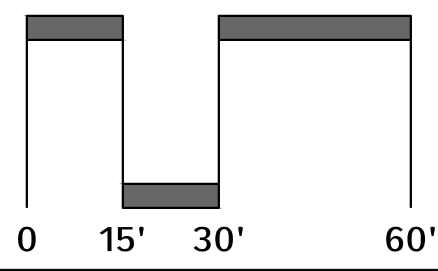


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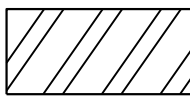
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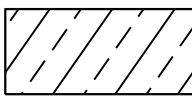
PLANTING PLAN

DRAWING NO. 18 OF 30
L3

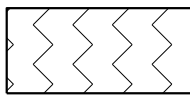
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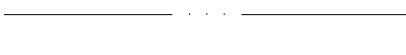
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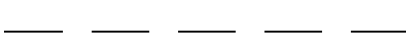
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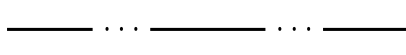
PERMANENT WETLAND IMPACTS



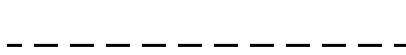
WETLAND BOUNDARY



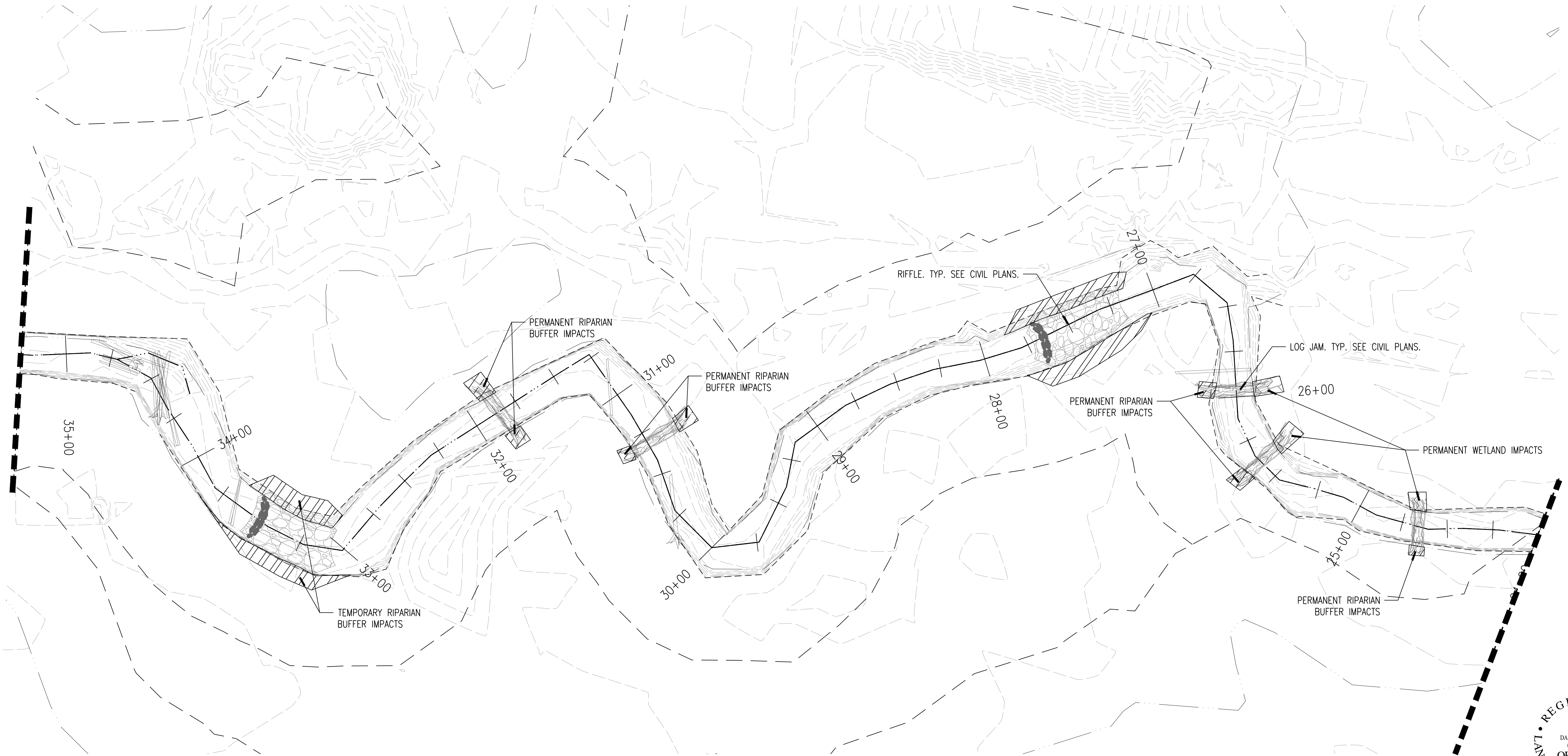
WETLAND BUFFER - 50 FT



CREEK CENTERLINE



TOP OF BANK



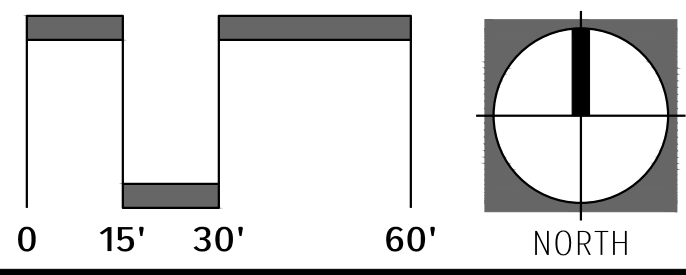
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			DRAWN
			CHECKED
			APPROVED

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JOB No. 553-1751-033

DATE JANUARY 2025



Parametrix

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Ph: 206.394.3700

5200 S Macadam Ave,
#210, Portland, OR 97239
Ph: 503.715.5453

PROJECT NAME

3-CREEKS FLOODPLAIN ENHANCEMENT

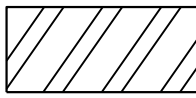
CLACKAMAS COUNTY, OR

PLANTING PLAN

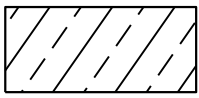
DRAWING NO.
19 OF 30

L4

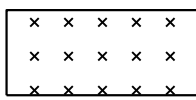
LEGEND



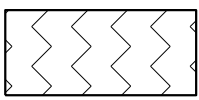
TEMPORARY RIPARIAN BUFFER IMPACTS



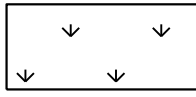
PERMANENT RIPARIAN BUFFER IMPACTS



TEMPORARY WETLAND IMPACTS



PERMANENT WETLAND IMPACTS



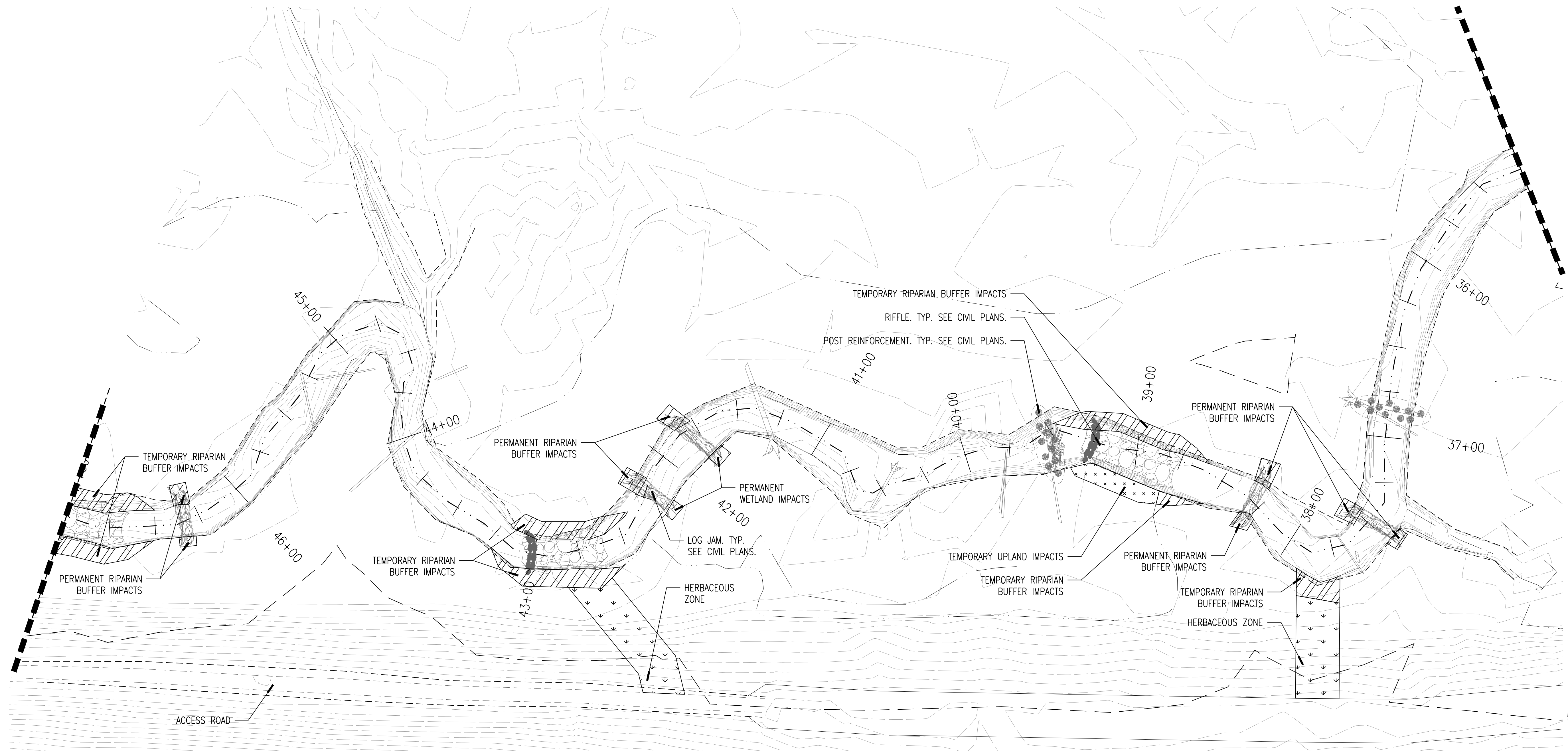
HERBACEOUS ZONE

WETLAND BOUNDARY

WETLAND BUFFER - 50 FT

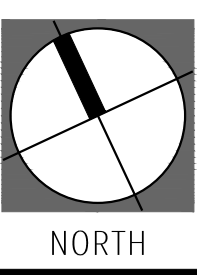
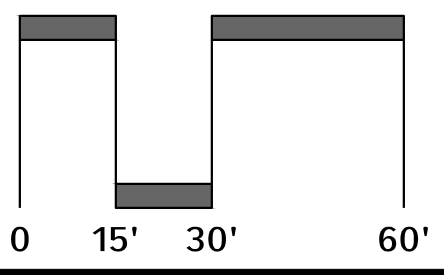
CREEK CENTERLINE

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JOB No.	553-1751-033
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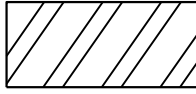
5200 S Macadam Ave,
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PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT CLACKAMAS COUNTY, OR

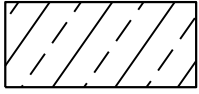
PLANTING PLAN

DRAWING NO. 20 OF 30
L5

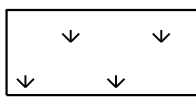
LEGEND



TEMPORARY RIPARIAN BUFFER IMPACTS



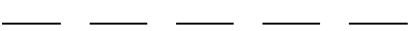
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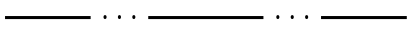
HERBACEOUS ZONE



WETLAND BOUNDARY



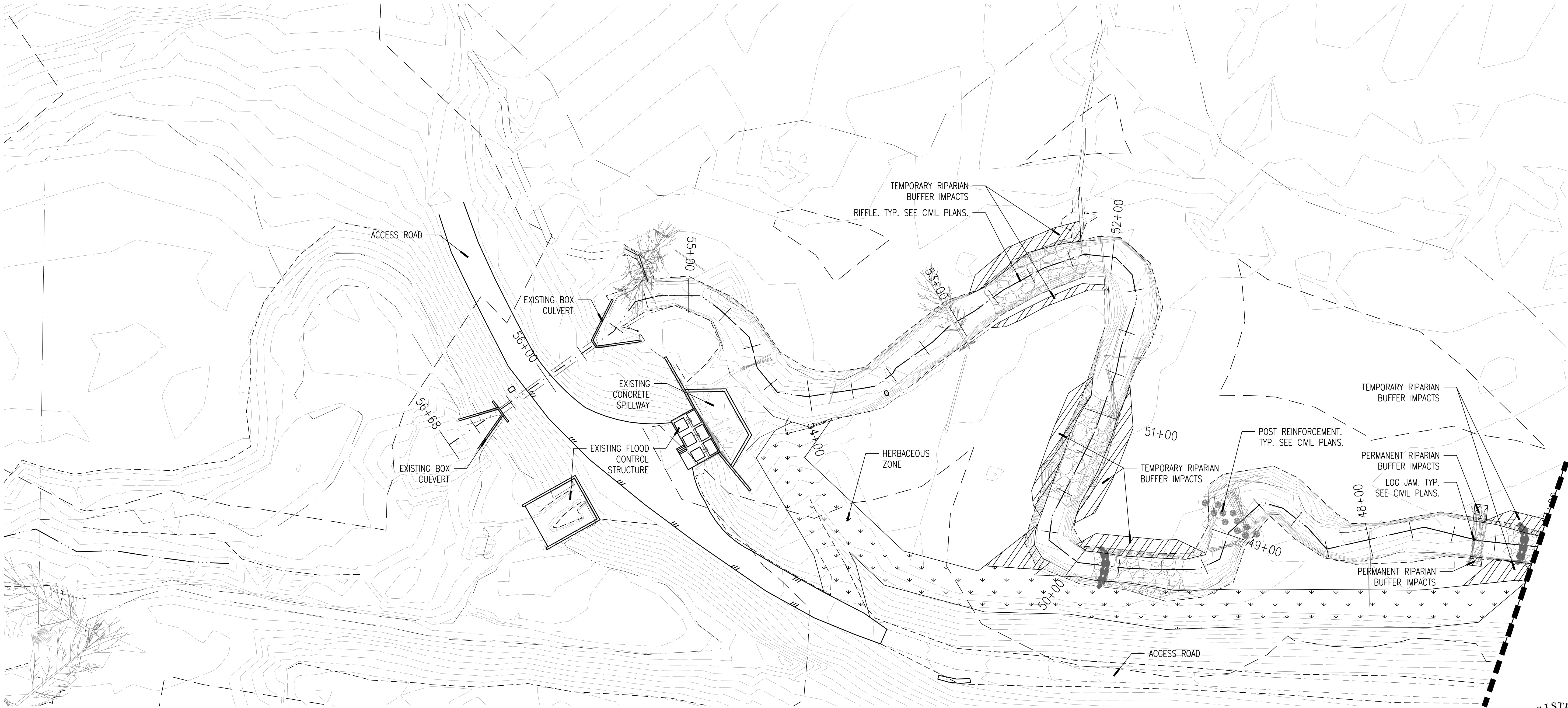
WETLAND BUFFER - 50 FT



CREEK CENTERLINE

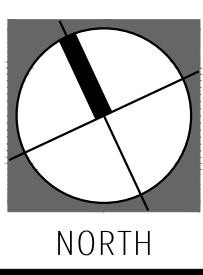
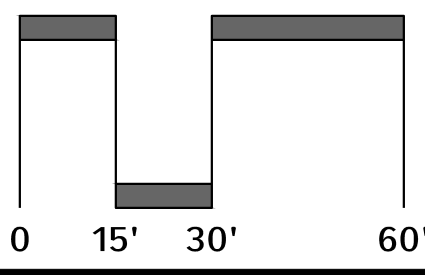


TOP OF BANK



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FILE NAME	
JOB No.	553-1751-033
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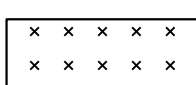

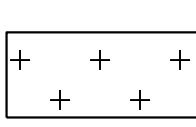
5200 S Macadam Ave,
#210, Portland, OR 97239
Ph: 503.715.5453





PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT CLACKAMAS COUNTY, OR

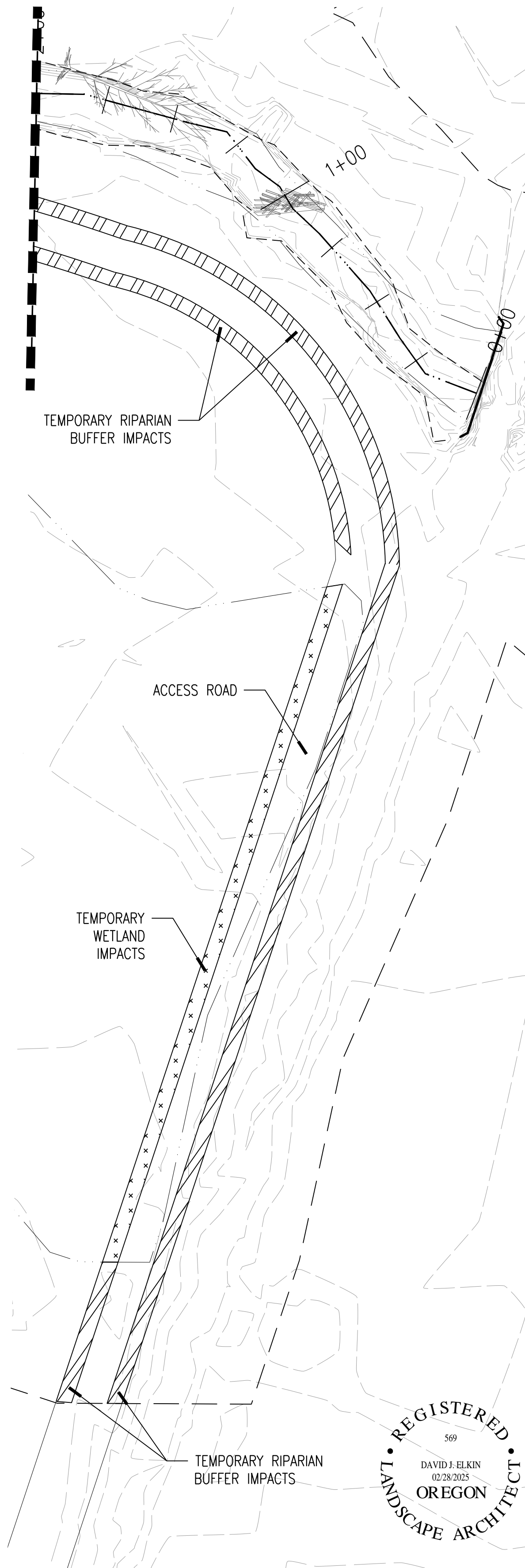
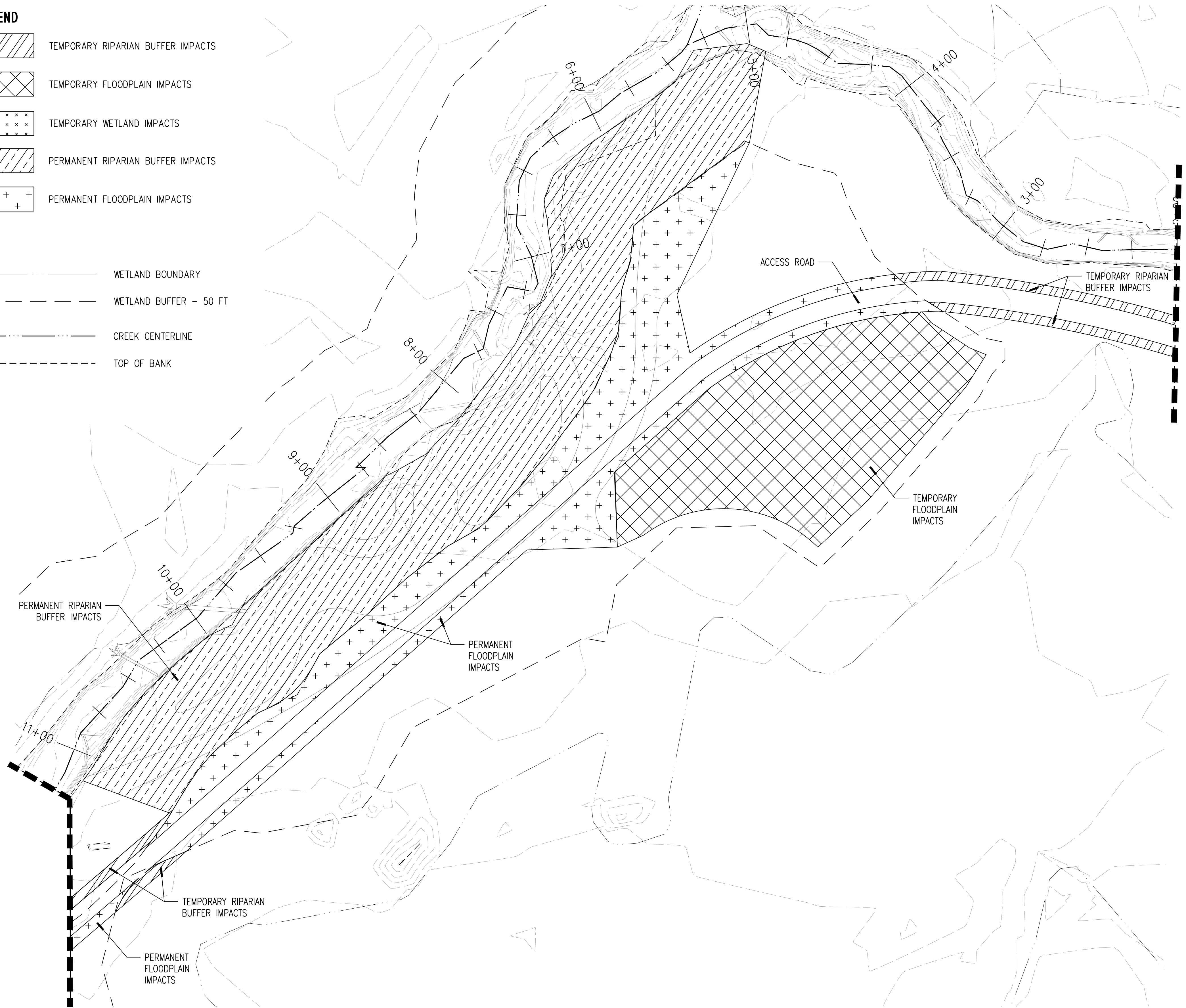
PLANTING PLAN

DRAWING NO. 21 OF 30
L6

LEGEND

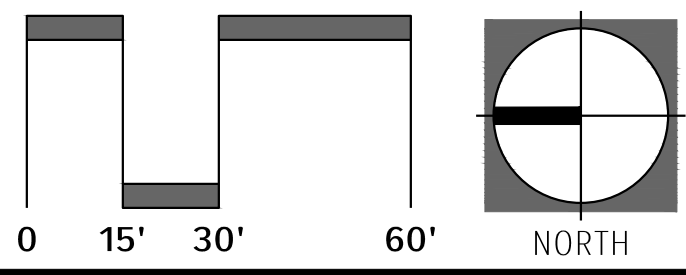
-  TEMPORARY RIPARIAN BUFFER IMPACTS
-  TEMPORARY FLOODPLAIN IMPACTS
-  TEMPORARY WETLAND IMPACTS
-  PERMANENT RIPARIAN BUFFER IMPACTS
-  PERMANENT FLOODPLAIN IMPACTS

-  WETLAND BOUNDARY
-  WETLAND BUFFER - 50 FT
-  CREEK CENTERLINE
-  TOP OF BANK



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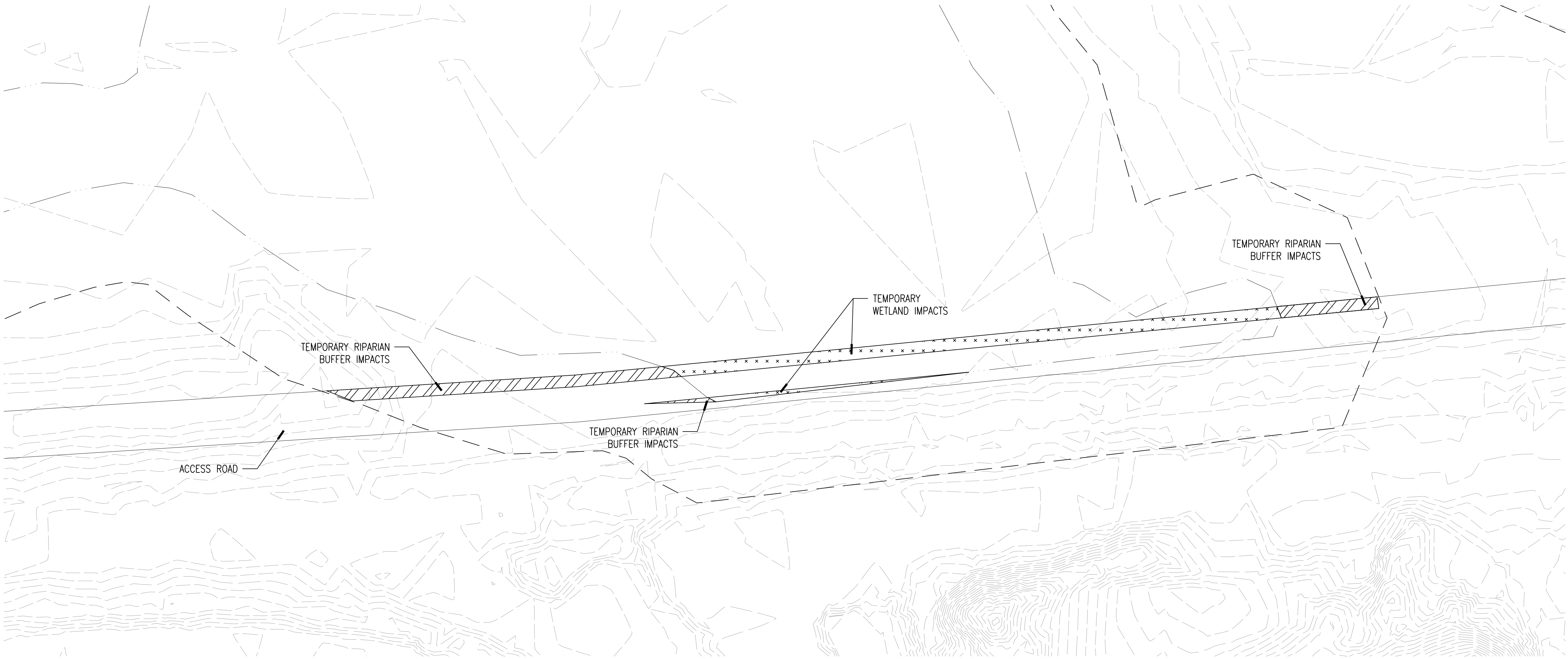
PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT CLACKAMAS COUNTY, OR

PLANTING PLAN

DRAWING NO. 22 OF 30
L7

LEGEND

- TEMPORARY RIPARIAN BUFFER IMPACTS
- TEMPORARY WETLAND IMPACTS
- WETLAND BOUNDARY
- WETLAND BUFFER – 50 FT
- CREEK CENTERLINE
- TOP OF BANK



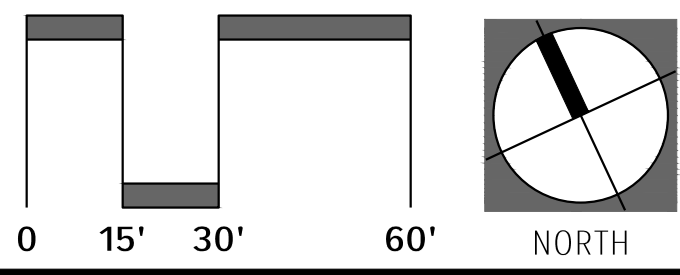
REVISIONS	DATE	BY	DESIGNED
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			CHECKED
			APPROVED

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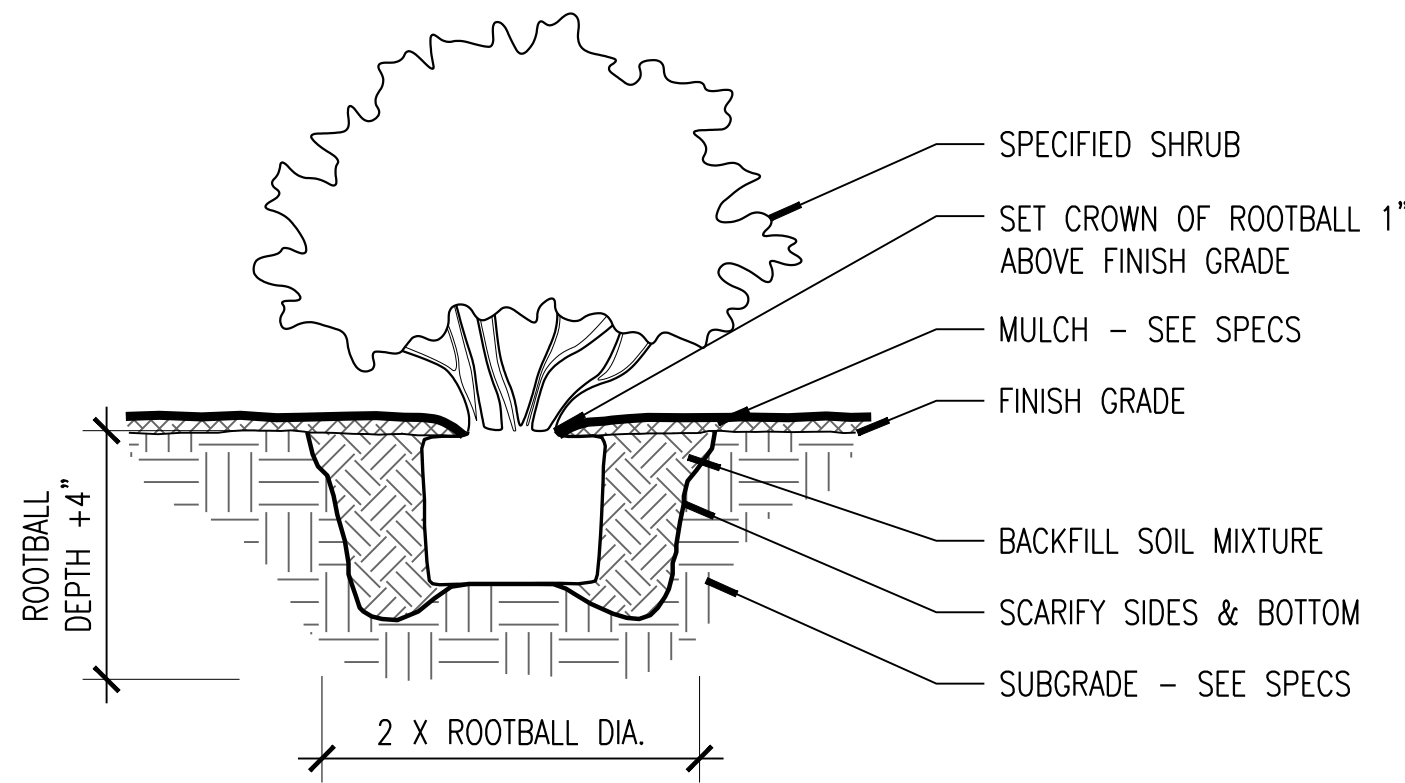
PROJECT NAME

3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

PLANTING PLAN

DRAWING NO.
23 OF 30

L8

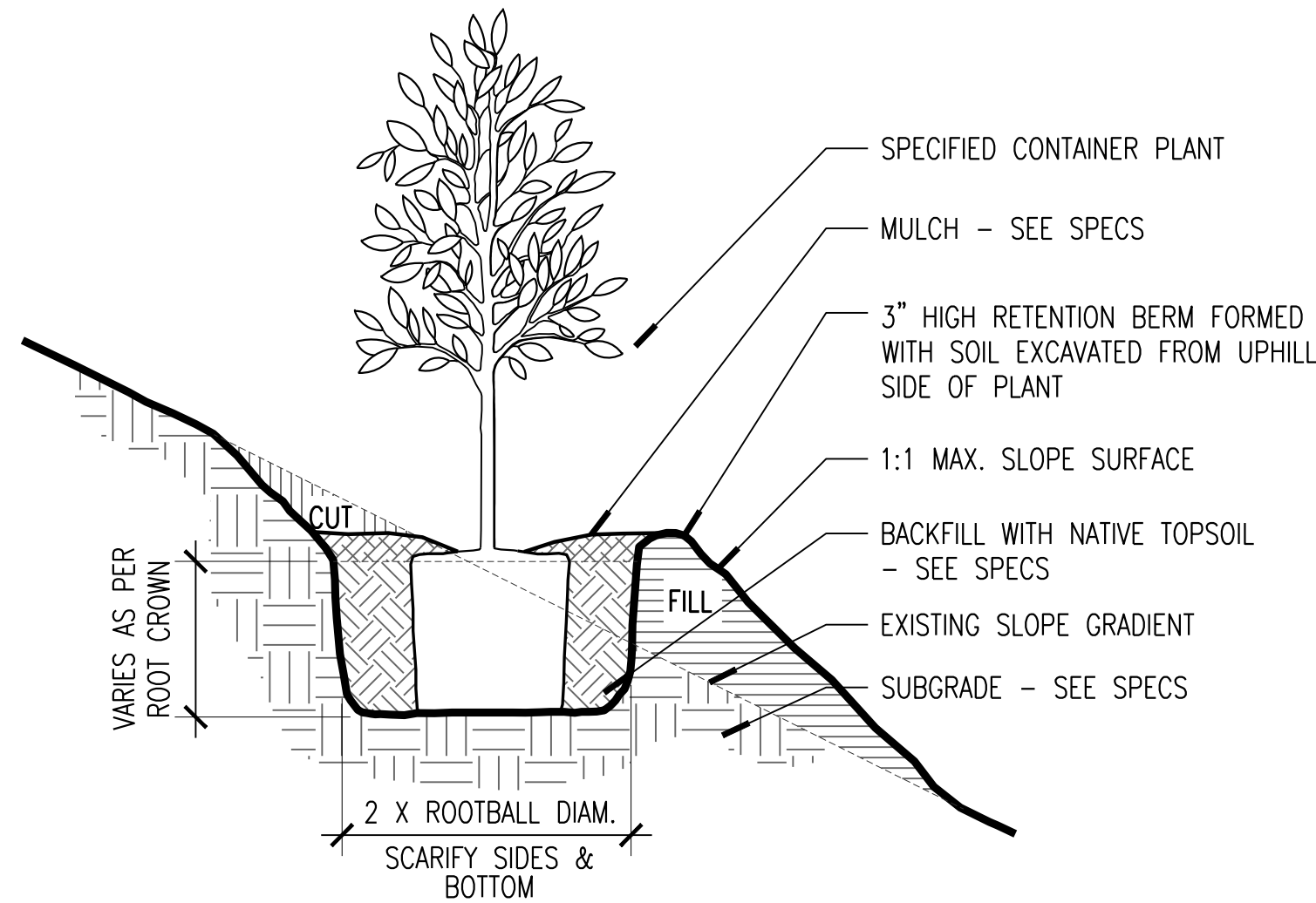


3 SHRUB PLANTING

Section

NOT TO SCALE

329333_01_Shrub Planting

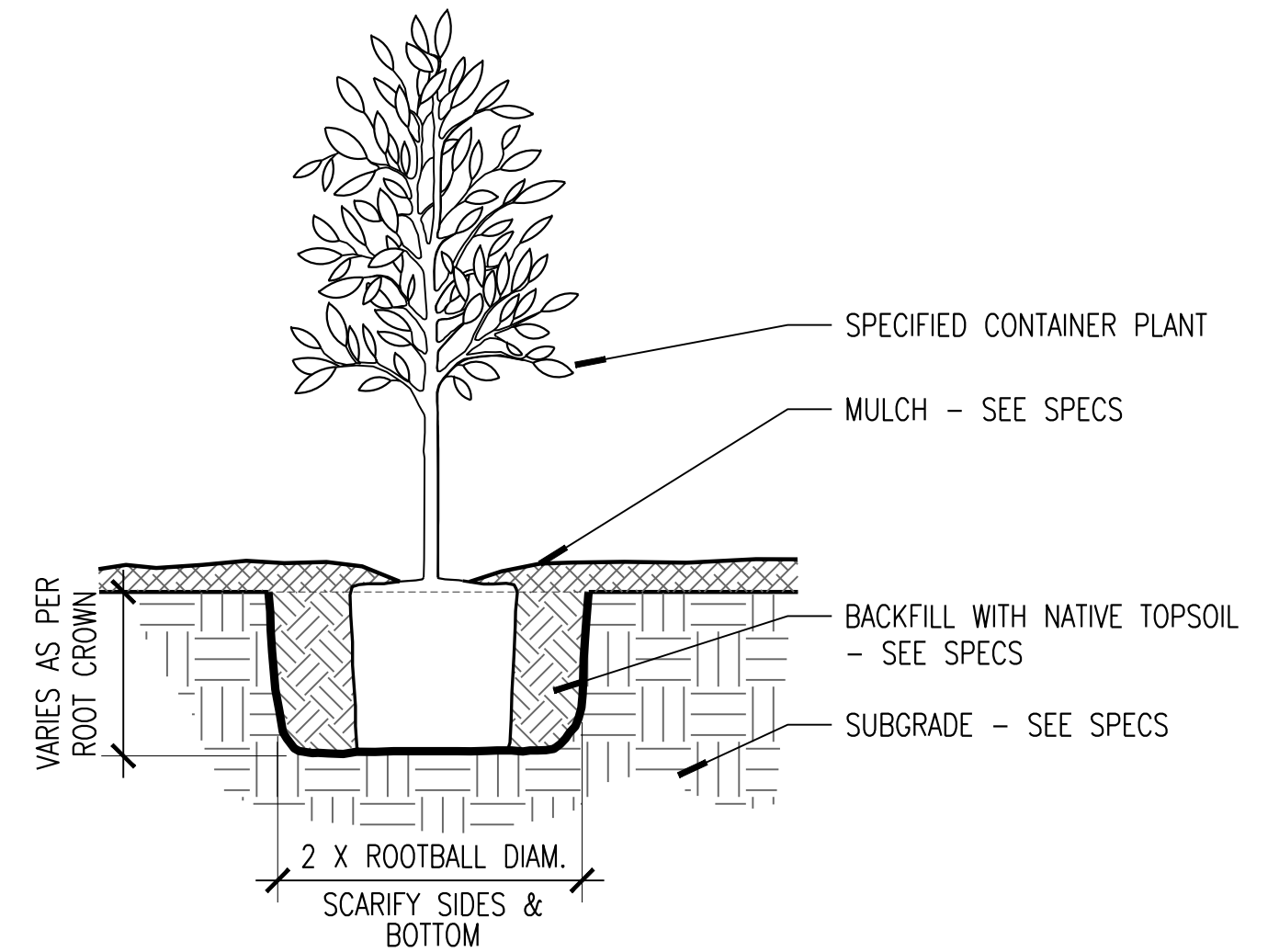


2 DECIDUOUS TREE CONTAINER PLANTING ON SLOPES

Section

NOT TO SCALE

329343_02_Deciduous Tree Container Planting on Slopes

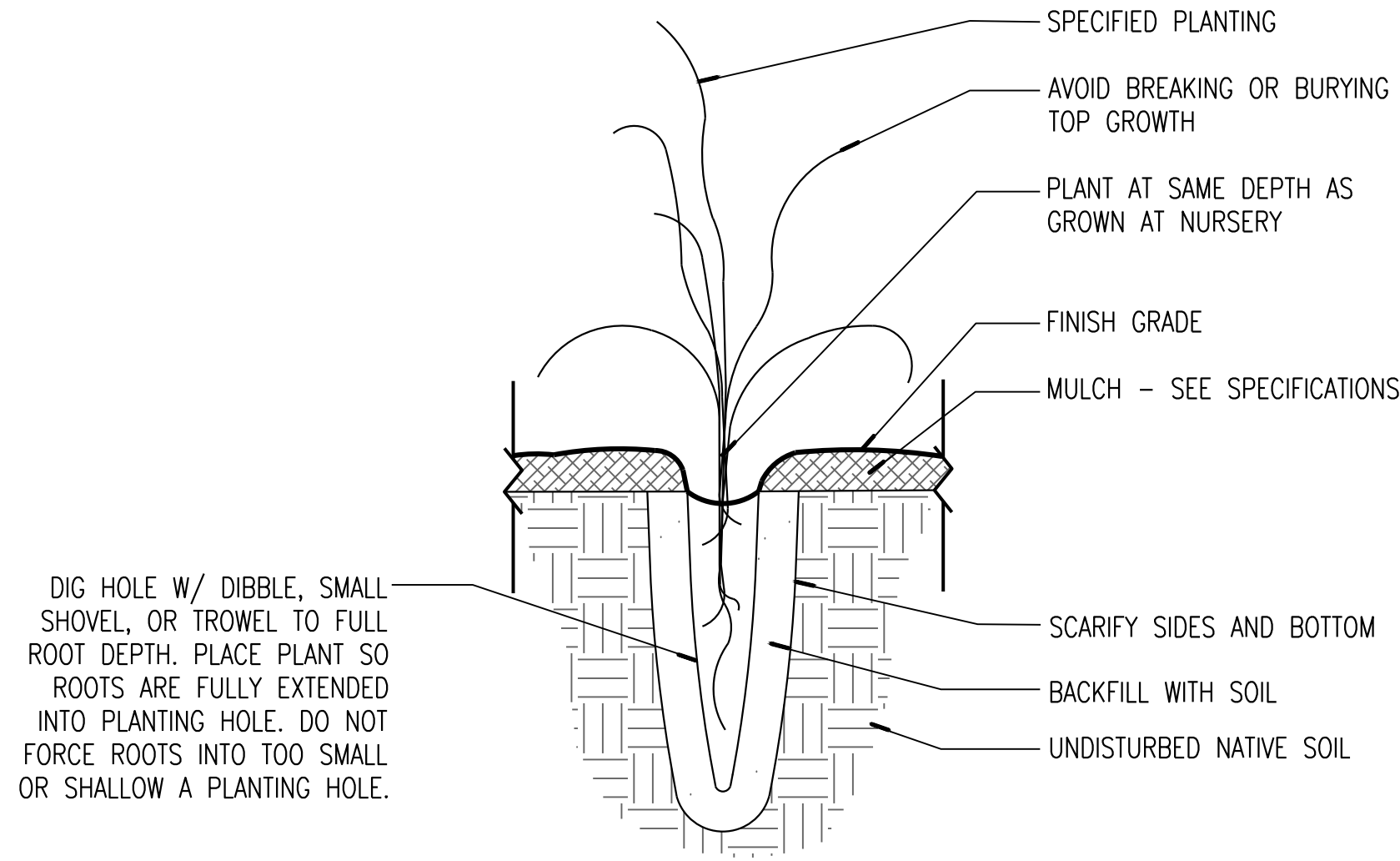


1 DECIDUOUS TREE CONTAINER PLANTING

Section

NOT TO SCALE

329343_01_Deciduous Tree Planting

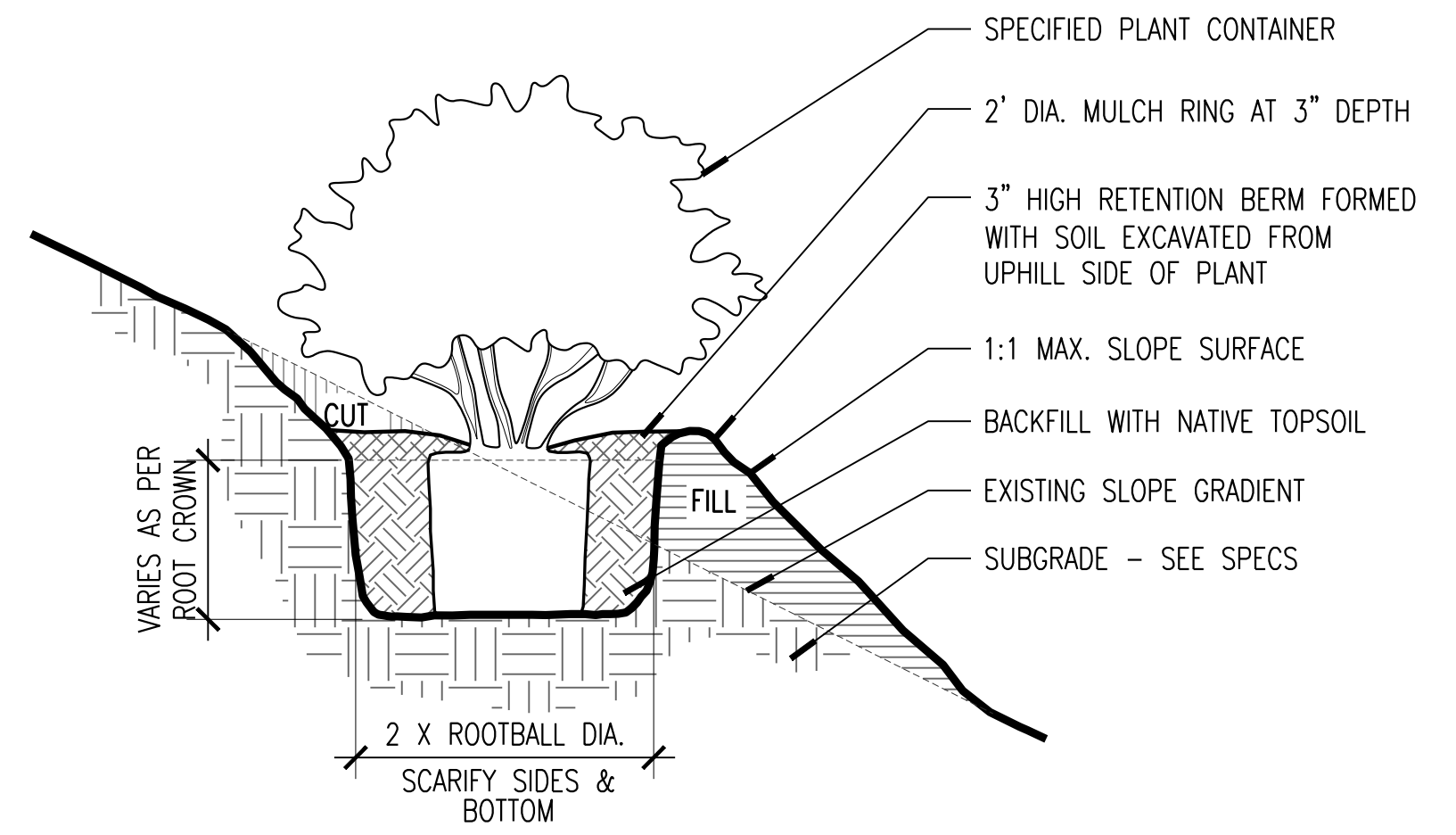


5 PLUG PLANTING

Section

NOT TO SCALE

329300_03 Plug Planting



4 SHRUB CONTAINER PLANTING ON SLOPES

Section

0 3" 6" 12"

329333_Shrub Container Planting on Slopes



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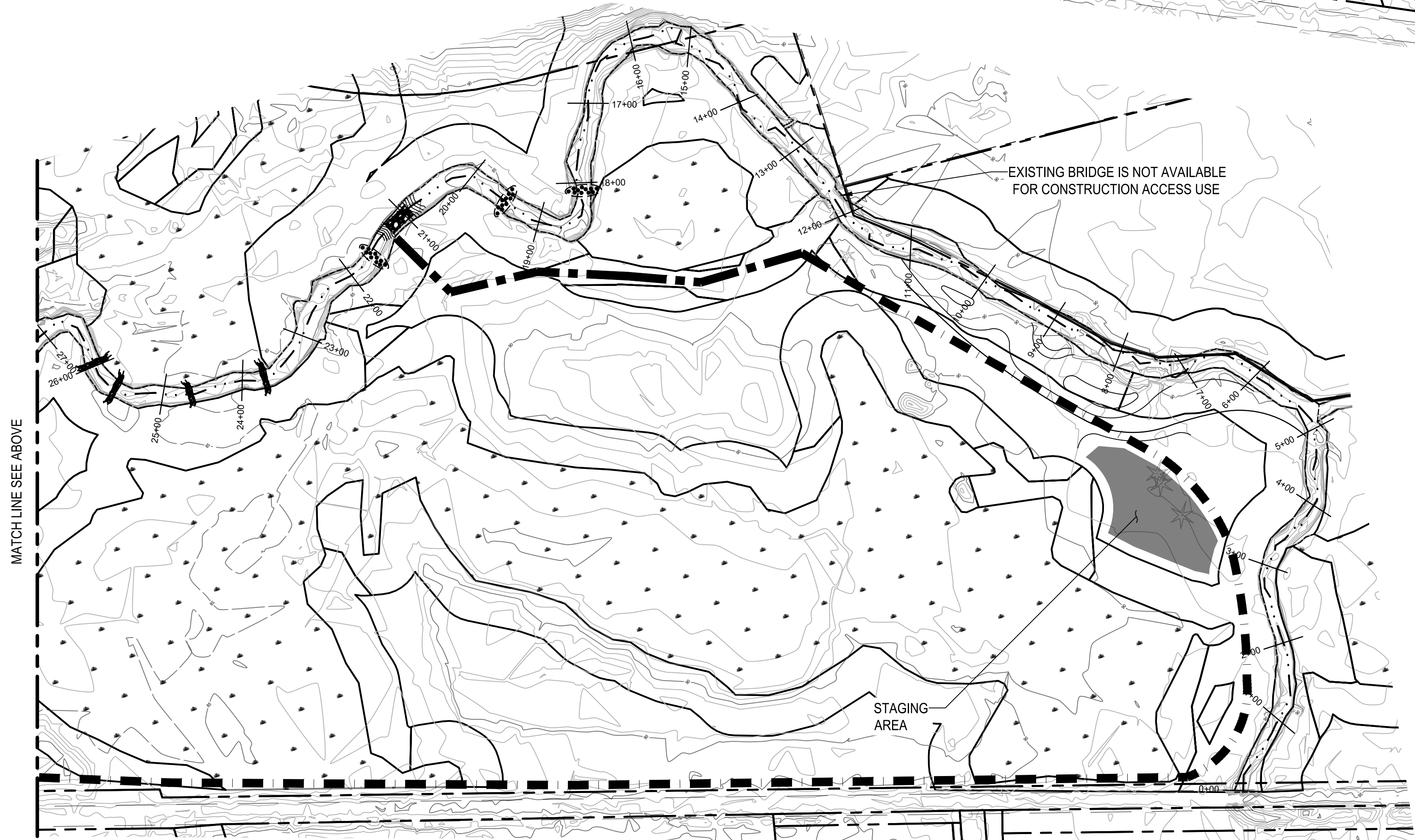
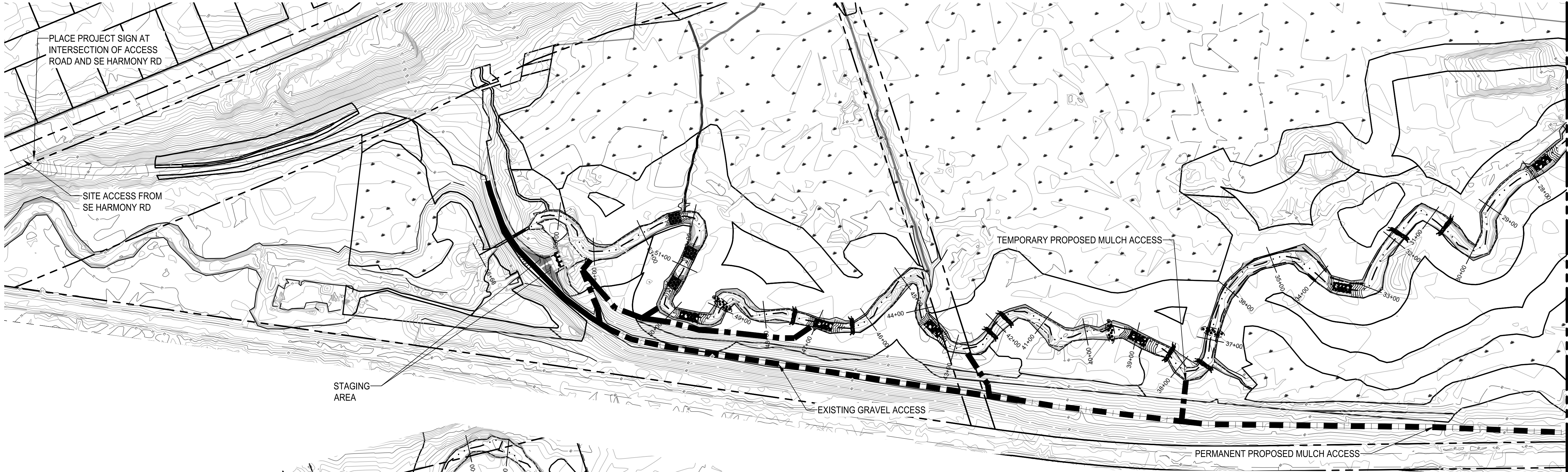
3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

PLANTING CONSTRUCTION DETAILS

DRAWING NO.
24 OF 30

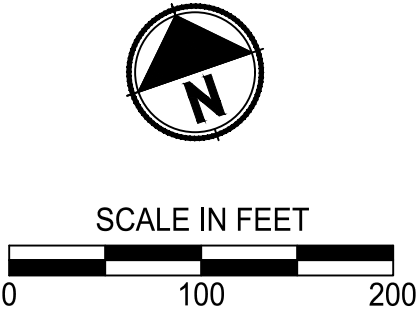
L9

LAYOUT: EC1 PATH: \\parametrix.com\pmx\FSO\Projects\Clients\751-Clackamas Cnty\553-1751-033_3CkFloodplainEnhance\995\cva\CADD\DWG\Stream Dewatering & TESC PLOTTED BY: Belkat DATE: Thursday, February 6, 2025 4:21:38 PM



LEGEND

- STAGING AREA
- EXISTING CONSTRUCTION ACCESS ROAD: ASPHALT
- EXISTING CONSTRUCTION ACCESS ROAD: GRAVEL
- PERMANENT PROPOSED CONSTRUCTION ACCESS PATH: MULCH
- TEMPORARY PROPOSED CONSTRUCTION ACCESS PATH: MULCH
- DELINEATED WETLANDS
- DELINEATED STREAMS
- WQRA BUFFERS
- EXISTING PROPERTY LINE
- 90
- 89
- PR. MAJOR CONTOUR
- PR. MINOR CONTOUR
- RIFFLE STRUCTURE
SEE DETAIL SHEET SP9
- LOG JAM STRUCTURE
SEE DETAIL SHEET SP10
- CASCADE STRUCTURE
SEE DETAIL SHEET SP11
- POST REINFORCEMENT
SEE DETAIL SHEET SP12



NOTE:
1. ALL ACCESS ROADS WILL BE CONSTRUCTED PER DETAIL 1 ON SHEET EC2 AND MAINTAINED DURING CONSTRUCTION. ONCE ALL IN-STREAM WORK HAS BEEN COMPLETED, ROADS WILL BE RESTORED PER DETAIL 3 (EC2) OR CONSTRUCTED PER DETAIL 2 (EC2) TO MAINTAIN PERMANENT ACCESS AS SHOWN ON THIS SHEET.

REVISIONS	DATE	BY	DESIGNED CFO
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IF NOT, SCALE ACCORDINGLY
FILE NAME
PS1751033C-EC1_NO-BRIDGE
JOB No.
553-1751-033
DATE
DECEMBER 2024



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PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

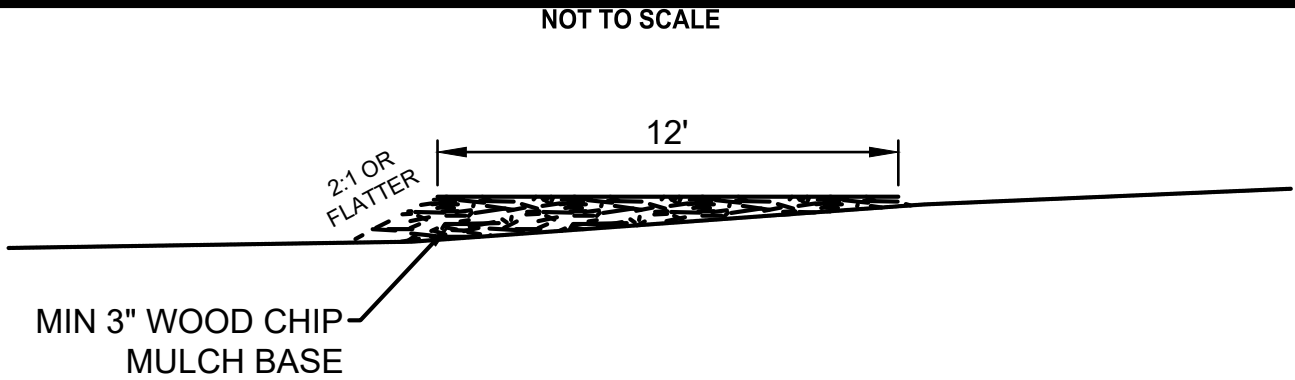
**CONSTRUCTION ACCESS
LAYOUT**

DRAWING NO.
25 OF 30
EC1

LAYOUT: EC2 PATH: \\parametrix.com\pmx\pso\Projects\Clients\751-Clackamas Onyx\553-1751-033 3-CreeksFloodplainEnhance\99Svc\CAAD\DWG\Stream Dewatering & TESC PLOTTED BY: Belkoti DATE: Thursday, February 6, 2025 4:19:37 PM

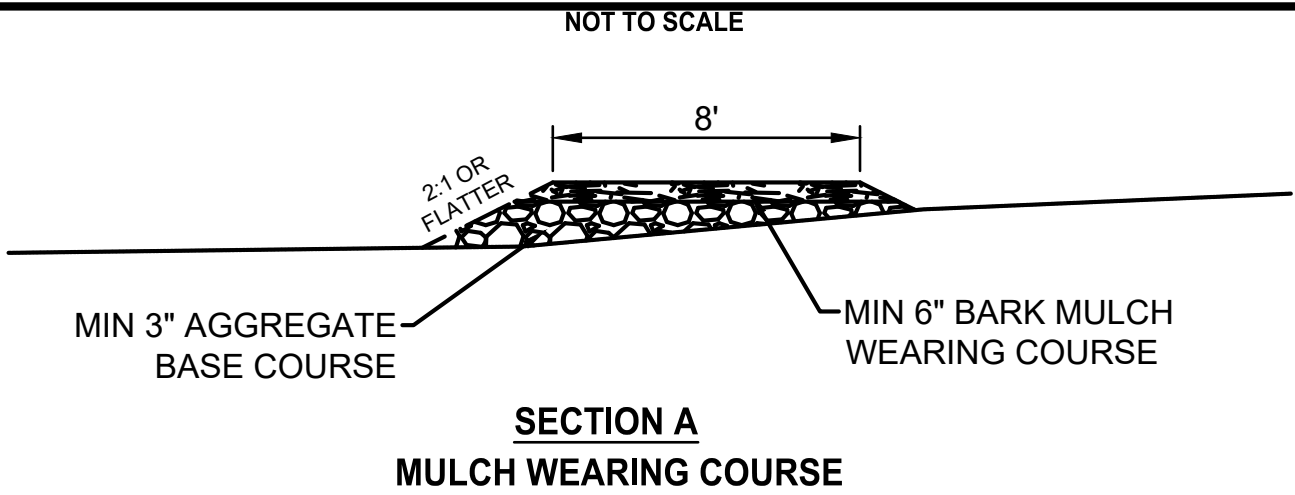
POST-CONSTRUCTION RESTORATION, TYP.

TEMPORARY CONSTRUCTION ACCESS PATH DETAIL, TYP.



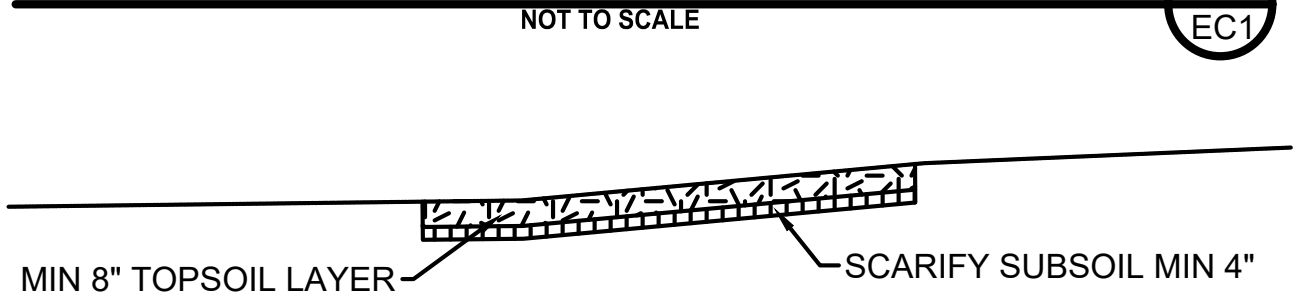
1
EC1

PERMANENT PROPOSED CONSTRUCTION ACCESS DETAIL, TYP.



2
EC1

POST-CONSTRUCTION RESTORATION, TYP.



3
EC1

- NOTES:
- THE TOPSOIL LAYER MAY BE LESS THAN 8 INCHES IF TREE ROOTS LIMIT THE DEPTH OF INCORPORATION.
 - AFTER INSTALLATION, PLANT VEGETATION AND MULCH THE AMENDED SOIL AREA. IF IN A CRITICAL AREA, USE NATIVE SPECIES.

NOTES

- IN-WATER WORK WILL BE CONSTRUCTED DURING THE IN-WATER WORK WINDOW FOR THE PROJECT (JULY 15-SEPTEMBER 30), UNLESS A VARIANCE IS APPROVED BY DSL/ODFW AND USACE/NMFS.
- CONSTRUCTION ACCESS TO THE SITE WILL BE PROVIDED VIA SE HARMONY ROAD. FOLLOW ODOT STANDARD DETAIL TM855 WHEN FLAGGERS ARE NEEDED FOR SHORT DURATION LANE CLOSURES.
- CONSTRUCTION ACCESS TO THE STREAM WILL BE PROVIDED ON THE WESTERN AND EASTERN PROJECT LIMITS.
- TO ACCESS THE WESTERN PROJECT LIMITS, CONSTRUCTION EQUIPMENT WILL USE THE EXISTING ASPHALT ACCESS ROAD, WHERE THE REGIONAL DETENTION FACILITY STRUCTURE IS LOCATED. THERE IS AN EXISTING MAINTENANCE PATH DOWN TO THE STREAM FROM THE ASPHALT ROAD TO ALLOW CONSTRUCTION EQUIPMENT ACCESS TO THE STREAM CHANNEL.
- TO ACCESS THE EASTERN PROJECT LIMITS, CONSTRUCTION EQUIPMENT WILL USE THE EXISTING ASPHALT ROAD AND GRAVEL PATH. WHERE THE GRAVEL PATH ENDS, A MULCHED ROADBED WILL BE INSTALLED AS SHOWN IN THE CONSTRUCTION ACCESS LAYOUT PLAN SHEET PROVIDING A PATH TO THE STREAM JUST DOWNSTREAM OF THE EXISTING BRIDGE. IF ACCESS IS NEEDED ACROSS THE STREAM IN THIS AREA, THE CONTRACTOR WILL SUBMIT A PLAN FOR APPROVAL.
- ROADS WILL BE AVOID TREE ROOTS TO THE MAXIMUM EXTENT PRACTICABLE. ALL ACCESS ROADS WILL BE CONSTRUCTED PER DETAIL 1 AND MAINTAINED DURING CONSTRUCTION. ADD MATERIAL AS NEEDED TO MAINTAIN THE MINIMUM MATERIAL THICKNESS DURING CONSTRUCTION AND PREVENT RUTTING. CONSTRUCTION MATTING TO BE USED IN WETLAND AREAS.
- INCREASE MULCH THICKNESS TO 12" IN AREAS WHERE ROADS GO BENEATH A TREE CANOPY IF IT CANNOT BE AVOIDED.
- ONCE THE STREAM HAS BEEN ACCESSED, CONSTRUCTION WILL WORK ITS WAY DOWN THE STREAM CHANNEL REMOVING EXISTING STRUCTURES AND INSTALLING PROPOSED STRUCTURES ALONG THE WAY.
- ONCE ALL IN-STREAM WORK HAS BEEN COMPLETED, ROADS WILL BE RESTORED PER DETAIL 3 OR CONSTRUCTED PER DETAIL 2 TO MAINTAIN PERMANENT ACCESS AS SHOWN ON SHEET EC1.
- PERMANENT ACCESS ROADS SHALL BE PASSED OVER TWICE WITH A ROLLER COMPACTOR. MATERIAL THICKNESS SHOWN IN DETAIL 2 IS POST COMPACTION.
- PERFORM PREVENTATIVE AND REPAIR MAINTENANCE AS NECESSARY TO MINIMIZE THE DAMAGE TO THE EXISTING ASPHALT AND GRAVEL ACCESS ROADS. PATCH DAMAGED ASPHALT AND RESTORE THE EXISTING ASPHALT ACCESS ROAD AS DIRECTED BY THE ENGINEER.

REVISIONS	DATE	BY	DESIGNED
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			CHECKED
			APPROVED

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JOB No.
553-1751-033
DATE
DECEMBER 2024



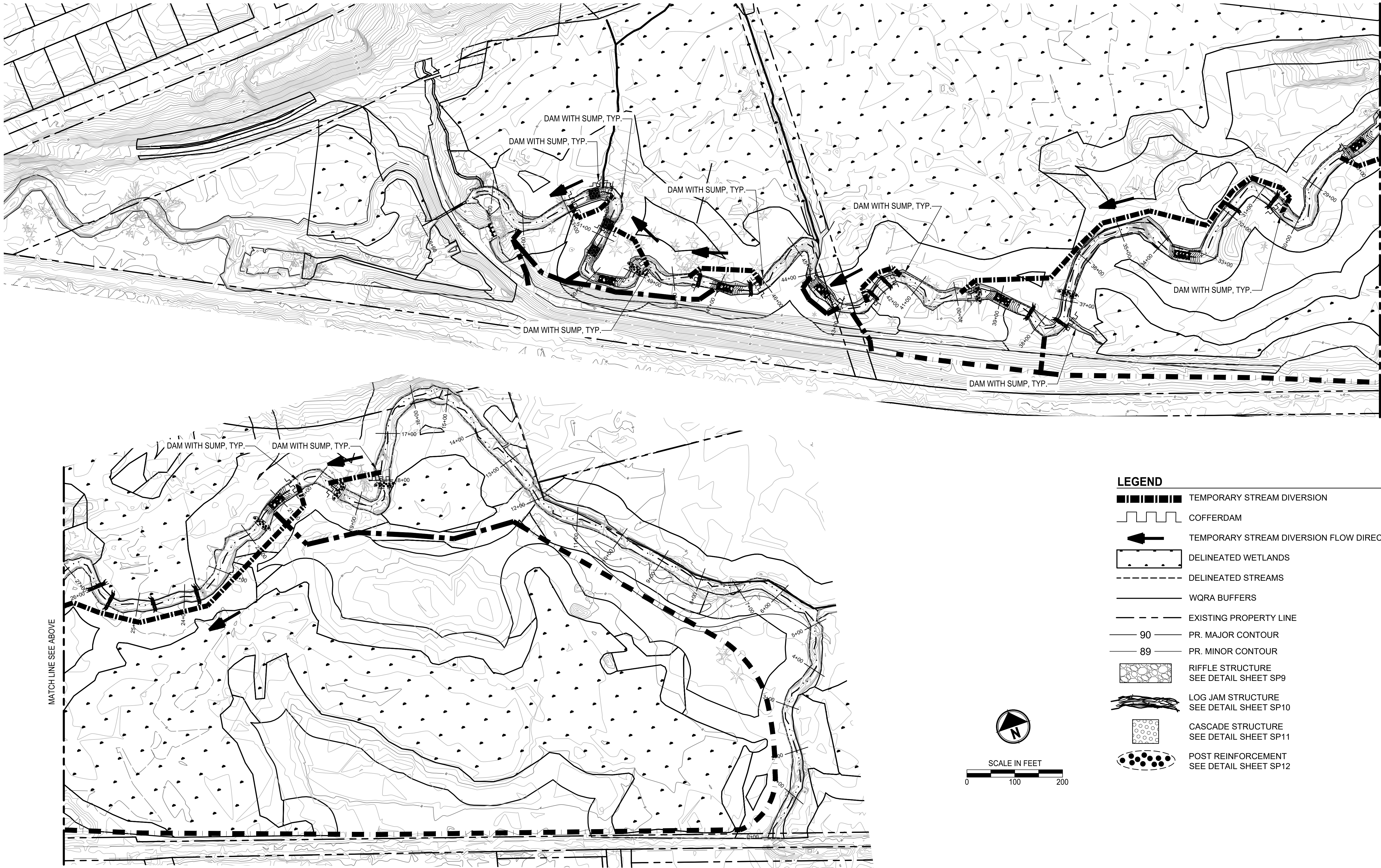
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PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

CONSTRUCTION ACCESS DETAILS

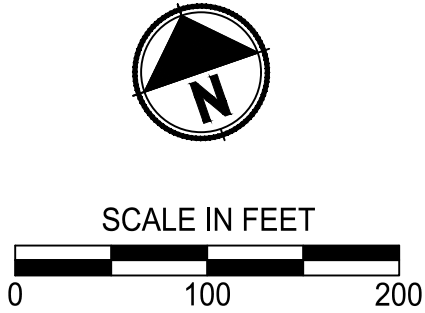
DRAWING NO. 26 OF 30
EC2

PATH: \\parametrix.com\pmx\pso\Projects\Clients\Clackamas\553-1751-033_3CreeksFloodplainEnhance\99Svc\CAAD\DWG\Stream Dewatering & TESC PLOTTED BY: Belkai DATE: Thursday, February 6, 2025 4:17:11 PM LAYOUT: EC3



LEGEND

- TEMPORARY STREAM DIVERSION
- COFFERDAM
- TEMPORARY STREAM DIVERSION FLOW DIRECTION
- DELINEATED WETLANDS
- DELINEATED STREAMS
- WQRA BUFFERS
- EXISTING PROPERTY LINE
- 90 PR. MAJOR CONTOUR
- 89 PR. MINOR CONTOUR
- RIFFLE STRUCTURE
SEE DETAIL SHEET SP9
- LOG JAM STRUCTURE
SEE DETAIL SHEET SP10
- CASCADE STRUCTURE
SEE DETAIL SHEET SP11
- POST REINFORCEMENT
SEE DETAIL SHEET SP12



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			DRAWN CS
			CHECKED
			APPROVED

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JOB No.
553-1751-033

DATE
DECEMBER 2024



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PROJECT NAME

3-CREEKS FLOODPLAIN ENHANCEMENT

CLACKAMAS COUNTY, OR

**STREAM DEWATERING
LAYOUT**

DRAWING NO.
27 OF 30

EC3

LAYOUT: EC4 PATH: \\parametrix.com\pmx\pso\Projects\Clients\751-033 3-CreeksFloodplainEnhance\995vcs\CAAD\DWG\Stream Dewatering & TESC PLOTTED BY: Belkoti DATE: Thursday, February 6, 2025 4:16:42 PM

RIVER MONITORING AND HIGH FLOW/ FLOOD DEMOBILIZATION REQUIREMENTS

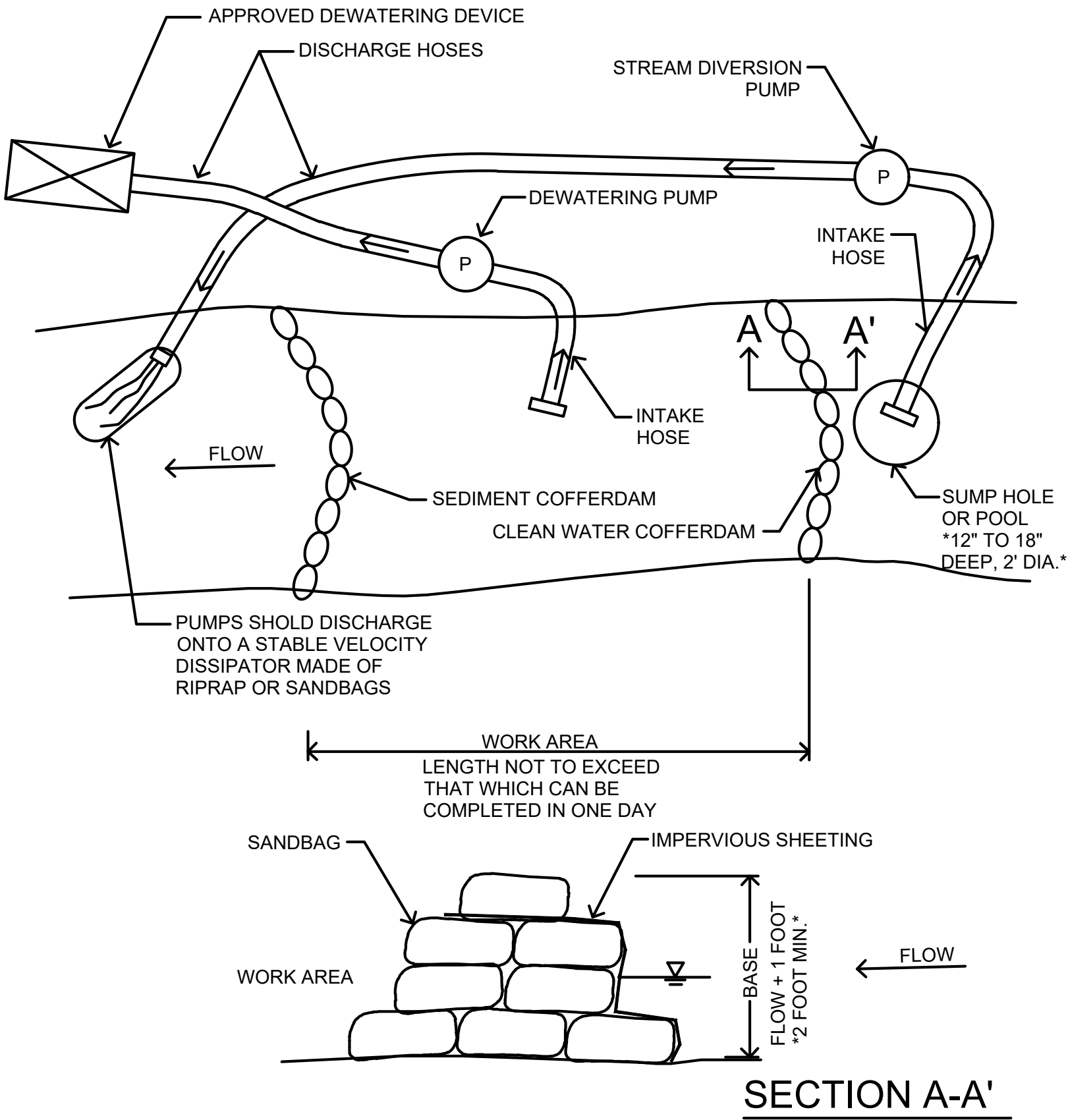
WORK SHALL BE SUSPENDED DURING HIGH FLOW OR FLOOD CONDITIONS THAT PREVENT PROPER AND SAFE EXECUTION OF THE WORK, OR THAT THREATEN TO INUNDATE THE PROJECT SITE. THE CONTRACTOR SHALL MONITOR FLOW AND WEATHER FORECASTS FOR THE PROJECT DAILY, FOR A MINIMUM FORECAST PERIOD OF 5 DAYS. RIVER CONDITIONS SHALL BE MONITORED USING THE NATIONAL WEATHER SERVICE RIVER FORECAST FOR THE WILLAMETTE RIVER AT STATION PRTO3, "WILLAMETTE RIVER NEAR PORTLAND" (<https://water.weather.gov/ahps2/hydrograph.php?wfo=pgr&gage=prto3>). IF FLOW AT ANY OF THESE STATIONS IS PREDICTED TO REACH ACTION LEVEL, OR IF DIRECTED BY THE CONTRACTING AGENCY, THE WORK SHALL BE SUSPENDED, WITH ALL OPEN EXCAVATION ON THE SITE BACKFILLED AND COMPACTED AND ALL EQUIPMENT MOVED TO THE CONTRACTOR STAGING AREA A MINIMUM OF 48 HOURS PRIOR TO THE PREDICTED ACTION LEVEL. IF OVERBANK FLOODING IS PREDICTED IN THE PROJECT AREA, ALL EQUIPMENT AND HAZARDOUS MATERIALS SHALL BE DEMOBILIZED FROM THE SITE TO A LOCATION OUTSIDE THE MOUNT SCOTT CREEK FLOODPLAIN.

IF OVERBANK FLOODING OCCURS ON THE SITE, THE CONTRACTOR SHALL INFORM THE CONTRACTING AGENCY AND THE ENGINEER IMMEDIATELY. WHERE FISH SALVAGE OPERATIONS ARE DETERMINED NECESSARY, THE CONTRACTOR SHALL ASSIST WITH FISH SALVAGE AS DIRECTED. THE CONTRACTING AGENCY WILL PROVIDE FISH EXCLUSION AND HANDLING SERVICES IF THE WORK DICTATES. HOWEVER, IF THE CONTRACTOR DISCOVERS ANY FISH STRANDED BY THE PROJECT AND A CONTRACTING AGENCY BIOLOGIST IS NOT AVAILABLE, THEY SHALL IMMEDIATELY RELEASE THE FISH INTO A FLOWING STREAM OR OPEN WATER.

STREAM DEWATERING CONSTRUCTION SEQUENCE

NOTE: IN-WATER WORK WILL BE CONSTRUCTED DURING THE IN-WATER WORK WINDOW FOR THE PROJECT (JULY 15-SEPTEMBER 30), UNLESS A VARIANCE IS APPROVED BY DSL/ODFW AND USACE/NMFS.

1. ISOLATE THE WORKSITE:
INSTALL COFFER DAMS UPSTREAM AND DOWNSTREAM OF THE AREA IN WHICH THAT DAY'S WORK WILL BE COMPLETED. DIVERT FLOW AROUND THE WORK AREA USING A GRAVITY FED FLEXIBLE BYPASS PIPE AND PUMP TO MAINTAIN FLOW TO THE DOWNSTREAM REACH. FLOW WITHIN THE STREAM CHANNEL SHALL NOT BE INTERRUPTED. THE BYPASS PIPE SHALL BE SIZED TO CARRY TYPICAL BASE FLOW DURING THE CONSTRUCTION WINDOW. DISSIPATE FLOW ENERGY AT THE CHANNEL REENTRY LOCATION USING PLASTIC SHEETING (SEE DETAIL 2, STREAM DEWATERING DETAILS) OR OTHER METHOD APPROVED BY ENGINEER TO PREVENT DAMAGE TO STREAM CHANNEL AND PROVIDE FOR SAFE DOWNSTREAM REENTRY OF FISH, PREFERABLY INTO POOL HABITAT WITH COVER. WORK AREA ISOLATION WILL BE CONDUCTED IN ACCORDANCE WITH SLOPES V CRITERIA.
2. FISH SALVAGE:
BEFORE DEWATERING THE WORK AREA, THE CONTRACTOR WILL ALLOW FISH TO MIGRATE OUT OF THE WORK AREA. THE CONTRACTOR WILL HAVE A QUALIFIED FISHERIES BIOLOGIST PERFORM FISH SALVAGE AND RELOCATION PER SLOPES V PROCEDURES. AN ODFW FISH TAKE PERMIT SHALL BE OBTAINED BEFORE FISH SALVAGE ACTIVITIES OCCUR. A DAM WITH SUMP WILL ALSO BE INSTALLED ON THE UPSTREAM PORTION OF THE WORK SITE, JUST UPSTREAM OF THE COFFERDAM. ANY FISH THAT COLLECT IN THE SUMP WILL BE HAND FISHED AND MIGRATED DOWNSTREAM OUTSIDE THE WORK AREA.
3. DEWATERING THE WORKSITE:
ONCE ALL FISH HAVE MIGRATED OUT OF THE WORK AREA, THE STREAM CHANNEL CAN BE PUMPED DRY. WATER WILL BE PUMPED FROM THE CHANNEL INTO A SEDIMENT FILTER BAG FOR FILTRATION PRIOR TO REENTRY INTO THE DOWNSTREAM CHANNEL. THE SEDIMENT FILTER BAG SHALL BE PLACED SUCH THAT DISCHARGE CAN FLOW INTO THE DOWNSTREAM CHANNEL WITHOUT REENTERING THE ACTIVE WORK SITE.
4. SITE RESTORATION MEASURES:
BEFORE THE END OF EACH WORKDAY, STRUCTURES SHALL BE COMPLETED, AND ALL DISTURBED AREAS SHALL BE RESTORED AS SHOWN ON THE PLANTING PLANS. RIPARIAN RESTORATION WILL COMPLY WITH SLOPES V CRITERIA. STREAMBED RESTORATION SHALL COMPLY WITH SLOPES V CRITERIA FOR BRIDGE PROJECTS.
5. FLOW REINTRODUCTION:
ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED, WATER CAN BE REINTRODUCED INTO THE COMPLETED WORK AREA. RE-WATERING WILL BE CONDUCTED SLOWLY TO PREVENT LOSS OF FLOW DOWNSTREAM AND TO PREVENT A SUDDEN INCREASE IN STREAM TURBIDITY. UPSTREAM FISH PASSAGE MEASURES WILL NOT BE PROVIDED DURING CONSTRUCTION.



PUMP AROUND, TYP.

NOT TO SCALE 1 EC3

NOTES:

1. A TEMPORARY DIKE SHALL BE INSTALLED BY THE CONTRACTOR AND PRE-APPROVED BY THE ENGINEER.
2. THE HEIGHT AND WIDTH OF THE DIKE SHALL BE DETERMINED BY THE CONTRACTOR BASED ON THE WATER SURFACE ELEVATION AND CHANNEL SHAPE AT THE TIME OF CONSTRUCTION.
3. REMOVE LOOSE COBBLE AND BOULDERS FROM THE STREAMBED ONLY AS NEEDED BEFORE PLACING WATER BARRIER TO ENSURE BEST FIT.
4. EXTEND THE COFFERDAM ENDS UP THE BANKS OF THE CHANNEL AS NEEDED TO PREVENT EROSION FROM OCCURRING AROUND THE ENDS OF THE BARRIER.
5. THE DIKE SHALL BE REMOVED FROM THE SITE AND BECOME THE PROPERTY OF THE CONTRACTOR IN COMPLIANCE WITH THE ODFW FISH PASSAGE PERMIT.



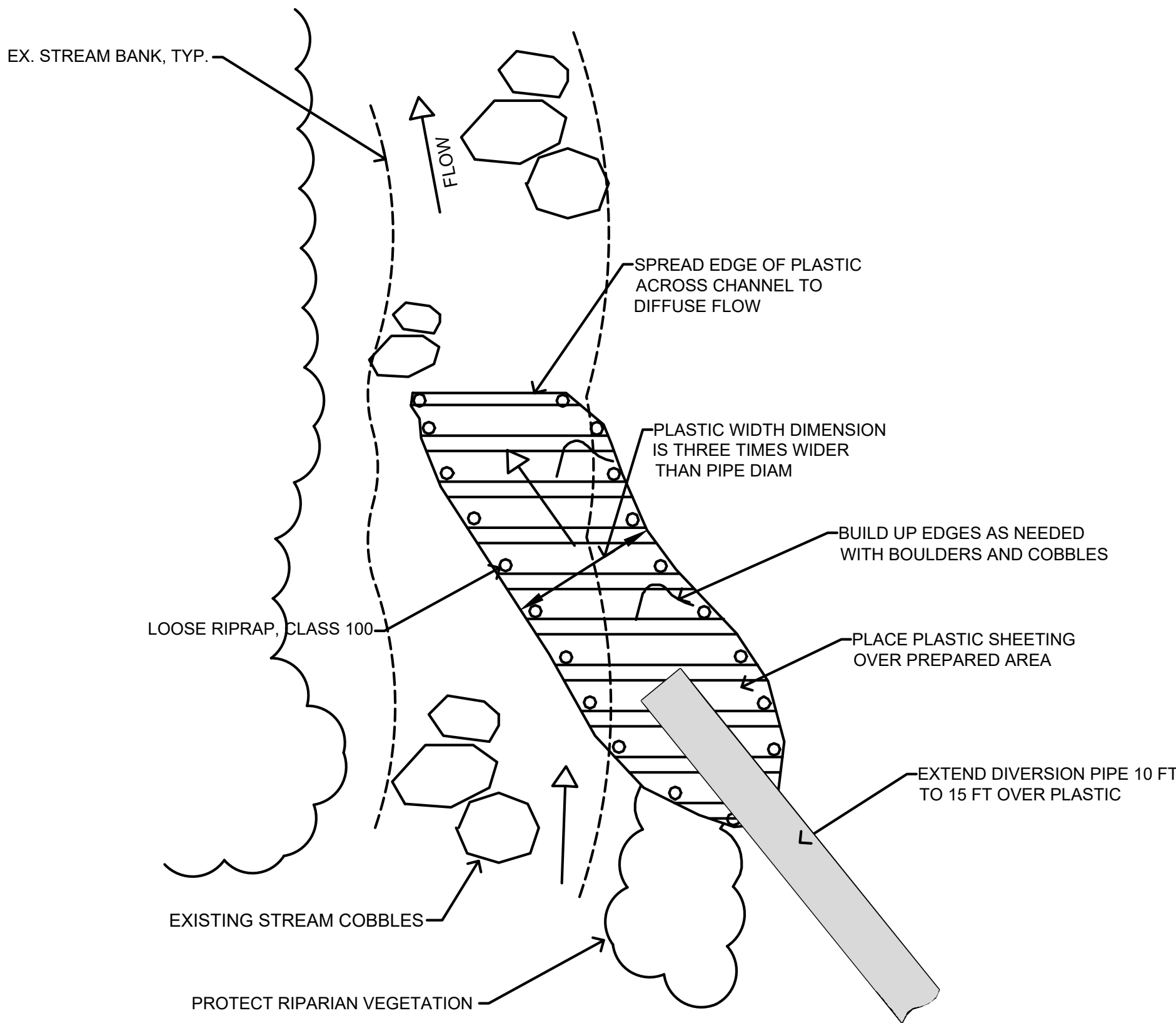
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Ph: 206.394.3700

PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

**STREAM DEWATERING
CONSTRUCTION SEQUENCE**

DRAWING NO.
28 OF 30

EC4



PLASTIC SHEET DIVERSION DETAIL, TYP.

NOT TO SCALE 2 EC3

PATH: \\parametrix.com\pmx\pso\Projects\Clients\751-Clackamas Onyx\553-1751-033 3-Creeks FloodplainEnhance\99Svc\CAOD\DWG\Stream Dewatering & TESC PLOTTED BY: Belkoti DATE: Thursday, February 6, 2025 4:13:17 PM LAYOUT: EC5



LEGEND

CLEARING AND GRUBBING LIMITS

SEDIMENT FENCE PER ODOT STD. PLAN RD1040

HIGH VISIBILITY SEDIMENT FENCE PER PROJECT SPECS

DELINEATED WETLANDS

DELINEATED STREAMS

WQRA BUFFERS

PR. MAJOR CONTOUR

PR. MINOR CONTOUR

RIFFLE STRUCTURE
SEE DETAIL SHEET SP9

LOG JAM STRUCTURE
SEE DETAIL SHEET SP10

CASCADE STRUCTURE
SEE DETAIL SHEET SP11

POST REINFORCEMENT
SEE DETAIL SHEET SP12

EXISTING CONSTRUCTION ACCESS ROAD: ASPHALT

EXISTING CONSTRUCTION ACCESS ROAD: GRAVEL

PERMANENT PROPOSED CONSTRUCTION ACCESS PATH: MULCH

TEMPORARY PROPOSED CONSTRUCTION ACCESS PATH: MULCH

REVISIONS	DATE	BY	DESIGNED
			K. BELL
			DRAWN
			K. BELL
			CHECKED
			APPROVED

ONE INCH AT FULL SCALE.
IF NOT, SCALE ACCORDINGLY

FILE NAME
PS1751033C-EC1_NO-BRIDGE

JOB No.
553-1751-033

DATE
DECEMBER 2024



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PROJECT NAME

3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

TEMPORARY EROSION AND
SEDIMENT CONTROL PLAN

DRAWING NO.
29 OF 30

EC5

LAYOUT: EC6 PATH: \\parametrix.com\pmx\pso\Projects\Clients\751-033 3-CreeksFloodplainEnhance\99Svcs\CADD\DWG\Stream Dewatering & TESC PLOTTED BY: BelKat DATE: Thursday, February 6, 2025 4:12:47 PM

FENCE ANGLE POINT TABLE	
##	LOCATION
A1	53+93 (16.5' LT)
A2	55+46 (131.6' LT)
A3	53+64 (97.0' LT)
A4	55+40 (252.8' LT)
A5	50+24 (13.1' LT)
A6	55+33 (6.5' LT)
A7	50+35 (12.5' LT)
A8	50+41 (17.3' LT)
A9	51+05 (21.8' LT)
A10	51+16 (14.0' LT)
A11	51+22 (9.9' RT)
A12	50+98 (20.2' RT)
A13	50+67 (51.5' RT)
A14	50+47 (21.2' RT)
A15	50+32 (13.7' RT)
A16	50+13 (15.4' LT)
A17	50+15 (21.1' LT)
A18	50+02 (12.3' LT)
A19	50+05 (10.7' RT)
A20	49+90 (17.9' RT)
A21	49+41 (17.4' RT)
A22	49+25 (11.6' RT)
A23	49+22 (15.6' LT)
A24	47+80 (34.5' LT)
A25	47+37 (27.7' LT)
A26	47+25 (9.6' LT)
A27	47+33 (10.7' RT)
A28	47+24 (16.3' RT)
A29	47+18 (19.2' RT)
A30	46+83 (18.2' RT)
A31	46+62 (18.7' RT)
A32	46+50 (8.7' RT)
A33	46+51 (8.1' LT)
A34	46+66 (17.7' LT)
A35	46+79 (19.7' LT)
A36	47+05 (20.7' LT)
A37	47+30 (47.1' LT)
A38	47+50 (55.7' LT)
A39	49+20 (40.9' LT)
A40	49+48 (34.6' LT)

A41	53+49 (173.2' LT)
A42	50+21 (55.7' LT)
A43	53+73 (114.8' LT)
A44	53+84 (95.6' LT)
A45	53+85 (131.8' LT)
A46	54+02 (115.7' LT)
A47	51+86 (250.7' LT)
A48	54+16 (51.6' LT)
A49	54+21 (13.4' LT)
A50	54+13 (13.4' LT)
B1	52+85 (10.3' RT)
B2	52+76 (16.6' RT)
B3	52+54 (20.4' RT)
B4	52+24 (20.4' RT)
B5	51+79 (17.4' LT)
B6	52+12 (20.4' LT)
B7	52+80 (17.9' LT)
B8	51+36 (79.4' LT)
C1	43+21 (8.9' RT)
C2	43+19 (18.9' RT)
C3	42+99 (18.1' RT)
C4	42+68 (14.1' RT)
C5	42+57 (13.7' RT)
C6	42+36 (5.0' RT)
C7	42+53 (15.0' LT)
C8	42+63 (19.8' LT)
C9	41+33 (142.4' LT)
C10	41+57 (156.7' LT)
C11	41+47 (151.3' LT)
C12	41+61 (176.6' LT)
C13	39+10 (136.1' LT)
C14	37+86 (80.2' LT)
C15	37+88 (13.7' LT)
C16	37+74 (17.6' LT)
C17	37+90 (81.4' LT)
C18	37+53 (89.1' LT)
C19	33+53 (239.3' LT)
C20	31+13 (271.3' LT)
C21	30+10 (348.3' LT)
C22	25+15 (467.6' LT)
C23	24+28 (498.4' LT)
C25	01+33 (973.2' LT)

C26	37+28 (1284.2' LT)
C27	22+14 (673.4' LT)
C28	00+02 (603.2' LT)
C29	00+11 (386.1' LT)
C30	00+18 (229.5' LT)
C31	00+19 (71.9' LT)
C32	00+46 (47.5' LT)
C33	01+56 (59.9' LT)
C34	02+41 (46.9' LT)
C35	03+22 (68.3' LT)
C36	04+85 (9.1' LT)
C37	05+43 (62.1' LT)
C38	06+03 (109.6' LT)
C39	06+10 (141.5' LT)
C40	05+28 (151.9' LT)
C41	03+07 (42.0' LT)
C42	02+42 (24.9' LT)
C43	01+56 (40.9' LT)
C44	00+46 (25.4' LT)
C45	00+04 (66.2' LT)
C46	11+04 (666.0' LT)
C47	22+24 (694.2' LT)
C48	32+85 (827.3' LT)
C49	25+17 (491.4 LT)
C50	13+53 (1234.3' LT)
C51	01+51 (1788.8' LT)
C52	02+53 (1981.4' LT)
C53	42+20 (440.2' LT)
C54	34+31 (377.2' LT)
C55	38+37 (156.1' LT)
C56	41+74 (196.9' LT)
C57	41+51 (175.0' LT)
C58	41+58 (168.2' LT)
C59	40+93 (156.6' LT)
C60	41+14 (167.1' LT)
C61	45+42 (240.3' LT)
C62	42+86 (18.6' LT)
C63	43+03 (18.6' LT)
C64	43+12 (12.7' LT)
C65	43+22 (7.4' LT)
D1	18+07 (1590.4' RT)
D2	39+36 (12.9' RT)
D3	39+33 (14.7' RT)

D4	39+10 (19.2' RT)
D5	38+87 (12.4' RT)
D6	38+81 (13.3' RT)
D7	38+69 (9.8' RT)
D8	38+60 (4.8' RT)
D9	38+53 (16.0' LT)
D10	38+72 (24.8' LT)
D11	38+96 (28.1' LT)
D12	39+18 (22.0' LT)
D13	39+28 (21.1' LT)
D14	39+32 (17.7' LT)
E1	33+64 (16.4' RT)
E2	33+59 (24.6' RT)
E3	33+36 (24.1' RT)
E4	32+86 (23.8' RT)
E5	32+86 (16.1' RT)
E6	31+.1 (178.3' LT)
E7	33+15 (24.0' LT)
E8	33+48 (21.3' LT)
E9	33+69 (14.1' LT)
F1	27+86 (9.4' RT)
F2	27+72 (19.7' RT)
F3	27+17 (16.4' RT)
F4	27+10 (14.2' RT)
F5	27+05 (11.6' LT)
F6	27+14 (18.8' LT)
F7	27+27 (25.1' LT)
F8	27+58 (28.2 LT)
F9	27+73 (26.5' LT)
F10	27+80 (15.7' LT)
H1	16+36 (9.6' RT)
H2	16+53 (9.6' RT)
H3	16+69 (13.0' RT)
H4	16+85 (13.9' RT)
H5	17+05 (14.2' RT)
H6	17+22 (7.7' RT)
H7	16+55 (19.6' LT)
H8	16+70 (23.6' LT)
H9	16+80 (23.7' LT)
H10	16+99 (26.8' LT)
H11	17+08 (25.9' LT)

H12	17+17 (16.8' LT)
J1	21+50 (8.2' RT)
J2	21+28 (18.5' RT)
J3	21+22 (19.5' RT)
J4	20+89 (20.6' RT)
J5	20+65 (14.3' RT)
J6	20+60 (16.1' LT)
J7	20+92 (23.8' LT)
J8	21+16 (22.4' LT)
J9	21+16 (103.3' LT)
J10	18+90 (49.2' LT)
J11	18+44 (73.4' LT)
J12	13+82 (236.5' LT)
J13	12+78 (2209.6' LT)
J14	12+45 (187.8' LT)
J15	18+36 (254.5' LT)
J46	12+18 (63.0' LT)
J47	18+29 (281.4' LT)
J48	11+74 (53.5' LT)
J49	11+13 (61.6' LT)
J50	11+13 (10.2' LT)
J51	2+98 (66.4' LT)
J52	02+92 (65.2' LT)
J53	03+70 (128.2' RT)
J54	06+52 (270.7' LT)
J55	07+52 (230.0' LT)
J56	03+21 (210.0' LT)
J57	03+08 (215.2' LT)
J58	07+95 (138.4' LT)
J59	08+09 (131.5' LT)
J60	04+13 (332.5' LT)
J61	09+80 (95.7' LT)
J62	11+25 (77.2' LT)
J63	12+00 (80.5' LT)
J64	12+12 (198.7' LT)
J65	18+43 (102.0' LT)
J66	18+83 (70.1' LT)
J67	21+71 (112.3' LT)
J68	21+40 (18.5' LT)

REVISIONS	DATE	BY	DESIGNED
			K. BELL
			DRAWN
			K. BELL
			CHECKED
			APPROVED

ONE INCH AT FULL SCALE. IF NOT, SCALE ACCORDINGLY
FILE NAME PS1751033C-EC1_NO-BRIDGE
JOB No. 553-1751-033
DATE DECEMBER 2024



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PROJECT NAME
3-CREEKS FLOODPLAIN ENHANCEMENT
CLACKAMAS COUNTY, OR

FENCE ANGLE POINT TABLE

DRAWING NO. 30 OF 30
EC6



INVITATION TO BID #2025-29
Three Creeks Floodplain Enhancement Project
ADDENDUM NUMBER 1
April 22, 2025

On March 27, 2025, Clackamas County ("County") published Invitation to Bid #2025-29 ("BID"). The County has found that it is in its interest to amend the BID through the issuance of this Addendum #1. Except as expressly amended below, all other terms and conditions of the original BID and subsequent Addenda shall remain unchanged.

1. The bid closing date is hereby changed from April 29, 2025 at 2PM to **May 1, 2025 at 3PM.**

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke.

End of Addendum 1



INVITATION TO BID #2025-29
Three Creeks Floodplain Enhancement Project
ADDENDUM NUMBER 2
April 24, 2025

On March 27, 2025, Clackamas County ("County") published Invitation to Bid #2025-29 ("BID") and Addendum #1 on April 22, 2025. The County has found that it is in its interest to amend the BID through the issuance of this Addendum #2. Except as expressly amended below, all other terms and conditions of the original BID and subsequent Addenda shall remain unchanged.

SECTION 00245 - TEMPORARY WATER MANAGEMENT

Construction

00245.40 Fish Removal - The Contractor will remove fish and other aquatic organisms from the isolation Work areas. Coordinate fish removal with the Engineer at least 28 Calendar Days before beginning Work in regulated Work areas. Allow access into the isolation Work areas before, during and after installation of the TWMF to perform the specified tasks as follows.

SECTION 00282 - HIGH VISIBILITY SEDIMENT FENCE

Section 00282, which is not a Standard Specification, is included in this Project by Special Provision.

Description

00282.00 Scope - This work shall consist of obtaining, installing, maintaining, and removing High Visibility Sediment Fence as described in the Contract Documents.

00282.01 Related Sections

- A. All Contract Documents.
- B. Contract, Addenda and Approved Change Orders, Specifications, Approved Submittals, Plans and Reference Standards shall govern in this order.
- C. Section 00280 Erosion and Sediment Control.

00282.02 Abbreviations, Definitions, and Terms - See contract documents:

- A. HVSF - High Visibility Sediment Fence.
- B. ASTM - American Society for Testing Materials.

00282.03 Submittals - The Contractor shall submit the following supplier information and material data to the Owner for approval for the following features/structures:

- A. The Contractor shall submit the source of supply and material data for all the high visibility sediment fence and components listed in the Contract Documents including geotextile, posts, and fasteners. After fencing removal, all seed placed for disturbed ground stabilization shall be submitted and approved under other applicable seeding line items.

00282.04 Quality Assurance - Contractor shall ensure the material delivered to the site matches and is consistent with the approved material submittals for High Visibility Sediment Fence. Any substitutions or material alterations proposed for use must be submitted and approved before application.

00282.05 Delivery, Storage, and Handling - Store High Visibility Sediment Fence in approved staging and stockpile areas.

00282.06 Sequencing and Scheduling - High Visibility Sediment Fence shall be installed prior to any land disturbing activities as indicated on the approved Plans or as directed and/or approved by the Owner.

00282.07 Warranty - The Contractor shall warranty the High Visibility Sediment Fence for the contracted length of time. Any material that must be replaced or repaired shall be replaced or repaired by the Contractor at no additional cost to the Owner.

00282.08 Maintenance - The Contractor shall maintain the High Visibility Sediment Fence for the contracted length. When water and sediment deposits reach approximately $\frac{1}{2}$ the height of the HVSF, or 8 inches whichever is lower, the deposits shall be removed and the soil stabilized in accordance with Section 00280.63 Sediment Removal.

Materials

00282.10 General:

- A. Contractor shall only use products which have been approved by the Owner and/or Engineer.
- B. It is best practice to provide approved like materials from the same manufacturer or supplier to provide consistent composition and appearance. When more than one manufacturer or supplier is necessary to obtain the materials in the quantities and/or timeframe necessary, the Contractor shall provide a submittal for each different manufacturer or supplier and receive approval from the Owner prior to application.

00282.11 Materials:

A. High Visibility Sediment Fence:

1. High visibility sediment fence shall be a minimum of 5 feet in height, high visibility orange in color, and only be used for the dual purpose of demarcating site preservation lines and a sediment control device in a location where high visibility mesh fence and black

silt fence would otherwise be used together at same location. The HVSF geotextile material shall be UV stabilized and meet the material requirements of Table 1.

2.

Mass/Unit Area	700 grams/sq. meter
Thickness	At least 0.35 inches
Shear Stress	4.5 psf
Velocity	12.0 ft/sec
Open Area – Calculated	50%
UV Stability	80% min. @500 hrs

3. Any substitutions must be approved by the Owner.

B. Posts:

1. Posts shall be either wood or steel, 1¼ by 1¼ inches by the minimum length shown in the accompanying detail, and shall be free of defects such as knots, splits, or gouges.
 2. The posts shall have sufficient strength and durability to support the fence through the life of the project.
 3. Backup support is needed for high visibility sediment fence in areas where extra strength may be required, such as the toe of steep cut or fill slopes or areas where equipment may push excessive soils toward the sensitive or protected areas. When backup support is used, wire shall have a maximum mesh spacing of 2 inches, and the plastic mesh shall be as resistant to ultraviolet radiation as the geotextile it supports. The strength of the wire or plastic mesh shall be equivalent to or greater than as required in Table 1, for unsupported geotextile (i.e., 180 lbs. grab tensile strength in the machine direction).
 4. Post spacing shall be as shown in the accompanying detail.
 5. Any substitutions must be approved by the Owner.
- C. Soil material shall be excavated for High Visibility Sediment Fence structures as needed, stockpiled, re-used if considered suitable or hauled offsite and disposed. All excavation necessary to install High Visibility Sediment Fence shall not be paid but is considered incidental to structures.

Table 00282-1

Geotextile Property	ASTM Test Method	Geotextile Property Requirements ¹	
		Unsupported Between Posts	Supported Between Posts With Wire or Polymeric Mesh
AOS	D4751	No. 30 max. for slit wovens, No. 50 for all other geotextile types, No. 100 min.	
Water Permittivity	D4491	0.02 sec-1 min.	
Grab Tensile Strength, in machine and x-machine	D4632	180 lb min. in machine direction, 100 lb min. in x-machine direction	100 lb min.
Grab Failure Strain, in machine and x-machine direction	D4632	30% max. at 180 lb or more	
Ultraviolet (UV) Radiation Stability	D4355	70% strength retained min., after 500 hours in xenon arc device	

¹ All geotextile properties in Tables 1 are minimum average roll values (i.e., the test results for any sampled roll in a lot shall meet or exceed the values shown in the table).

00282.12 Equipment - It is the responsibility of The Contractor to utilize the appropriate equipment necessary to complete the requirements in this specification in a safe working manner.

Construction

00282.40 General:

- A. The Contractor shall install the High Visibility Sediment Fence in accordance with the Contract Documents.
- B. The Contractor shall utilize all materials, tools, equipment, and labor to perform this scope of work to the standards set forth in the Contract Documents.

00282.41 Preparation - Prepare for the placement of the High Visibility Sediment Fence by excavating a trench per the accompanying detail.

00282.41 Installation:

- A. High Visibility Sediment Fence shall be placed by mechanical or other acceptable methods as shown per the construction details on the Plans or as directed by the Owner.
- B. Fencing shall be securely attached to the posts and support system in accordance with manufacturer's guidelines and in a manner that reduces the potential for tearing. Post spacing and attachments shall be as shown in the accompanying detail.
- C. HVSF shall be no less than 48 inches above ground level and a minimum of 4 inches of fabric shall be trenched below ground level to prevent water and sediment from bypassing beneath the fencing.

00282.42 Closeout Activities - The Contractor shall be responsible for the removal of all trash and any other materials incidental to the project and disposing of them off-site at no additional cost to the Owner. The Contractor shall restore add disturbed areas in accordance with Section 00280.63 Sediment Removal.

Measurement

00282.80 Measurement - High visibility sediment fence will be measured by the linear foot along the ground line of the completed fence.

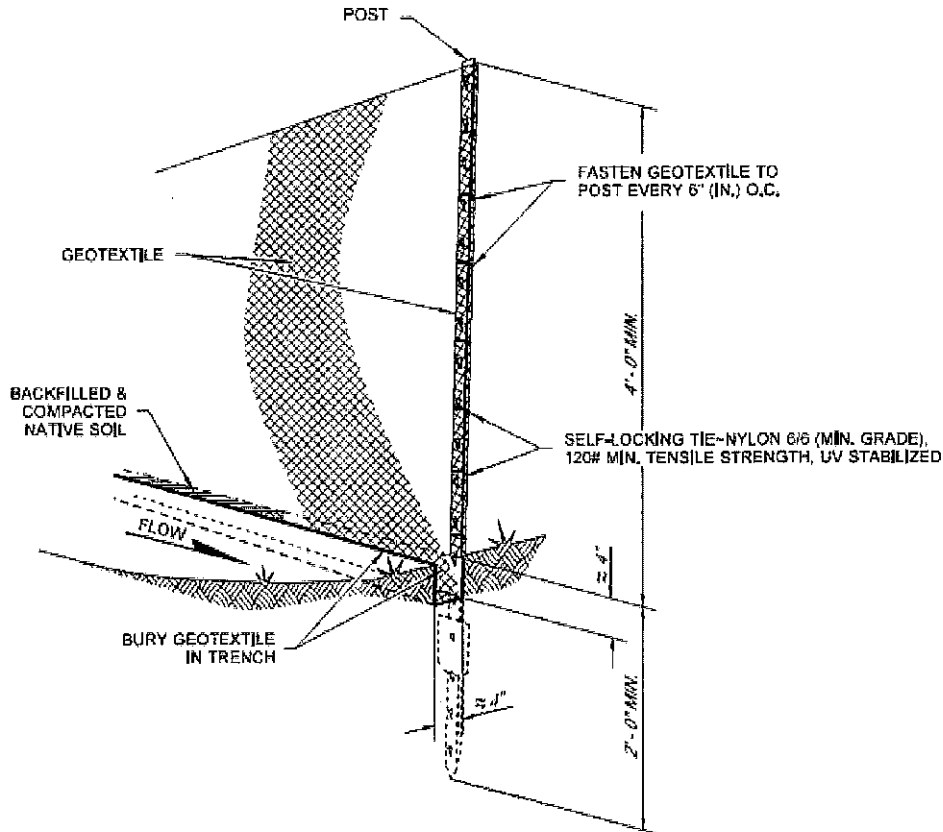
Payment

00282.90 Payment - The accepted quantities of Work performed under this Section will be paid for at the Contract unit price, per linear foot for the Bid item "High Visibility Sediment Fence".

The unit contract price per linear foot for "High Visibility Sediment Fence" shall be full pay for all costs to obtain, install, maintain, and remove the fence as specified. Once removed, the fencing shall remain the property of the Contractor.

A handwritten signature in black ink, appearing to be 'M. V. C.', is located below the payment section. The signature is stylized with large, sweeping loops.

Detail



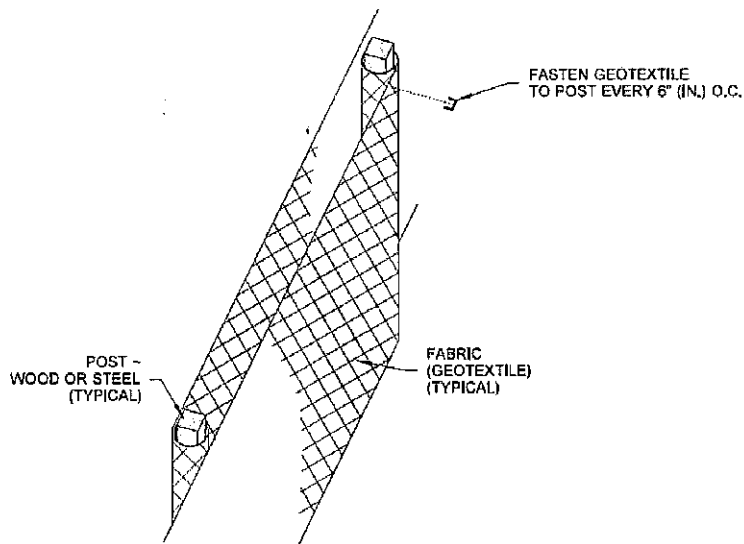
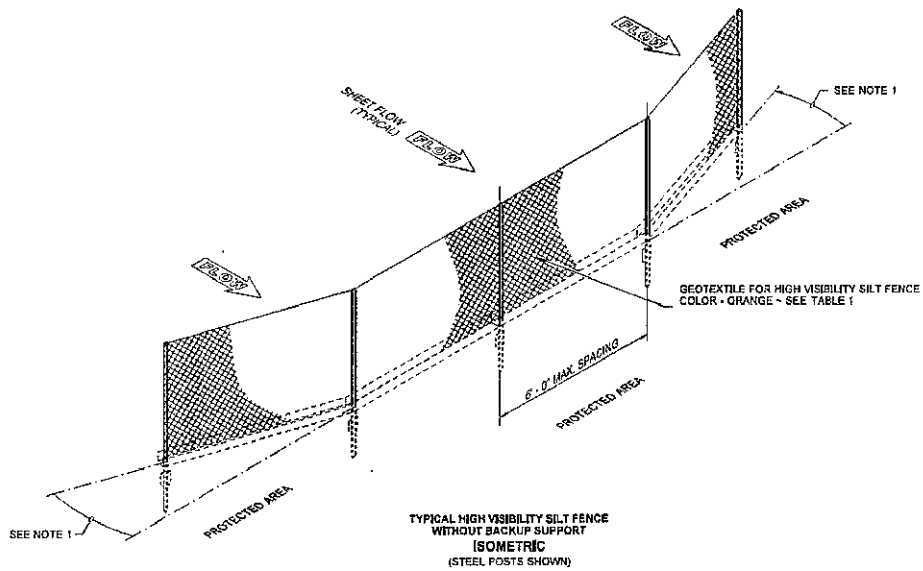
NOTE

DURING EXCAVATION, MINIMIZE DISTURBING THE GROUND AROUND TRENCH AS MUCH AS IS FEASIBLE, AND SMOOTH SURFACE FOLLOWING EXCAVATION TO AVOID CONCENTRATING FLOWS. COMPACTION MUST BE ADEQUATE TO PREVENT UNDERCUTTING FLOWS.

TYPICAL INSTALLATION DETAIL (STEEL POSTS SHOWN)

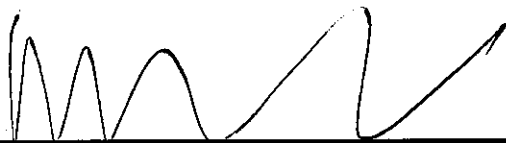
NOTES

1. Angle Terminal end uphill 24" (in) to 48" (in) to prevent flow around fence (Typical).
2. Perform maintenance in accordance with specification.
3. Splices shall never be placed in low spots or sump locations. If splices are located in low or sump areas, the fence may need to be reinstalled unless the Project Engineer approves the installation.
4. Install silt fencing parallel to mapped contour lines.



SPliced FENCE SECTIONS SHALL BE CLOSE ENOUGH TOGETHER
TO PREVENT SILT LADEN WATER FROM ESCAPING THROUGH THE
FENCE AT THE OVERLAP. JOINING SECTIONS SHALL NOT BE PLACED
IN LOW SPOTS OR IN SUMP LOCATIONS.

SPlice DETAIL
(WOOD POSTS SHOWN)



End of Addendum 2