Contract Documents for:

Elk River Recovery Program: Elk River Estuary Restoration, Lower Swain

Prepared by:
California Trout North Coast Region
1380 9th Street, Arcata, CA 95521
kgurin@caltrout.org (707)496-8554

CALIFORNIA TROUT, INC.

REQUEST FOR QUALIFICATIONS AND INVITATION FOR BID

1. **Bid Submission.** California Trout Inc. (CalTrout) will accept bids with qualification for its Elk River Recovery Program: Elk River Estuary Restoration, Lower Swain Project ("Project"), by or before Wednesday June 19, 2026, at 3:00 p.m. and shall be emailed to Katy Gurin, CalTrout Senior Project Manager at kgurin@caltrout.org.

   California Trout (CalTrout) is not a public agency, and this competitive bid process is not subject to the provisions of the Public Contract Code. While CalTrout has voluntarily chosen to adopt procedures that may bear some similarity to the procedures for competitive bidding under the Public Contract Code, it has no obligation to follow any procedures mandated by that Code.

2. Project Information.

2.1 Location and Description. The Project is located on CalTrout property south of the City of Eureka. The Project generally includes excavation to restore tidal channels, reuse of onsite excavated sediments to construct habitat features, drainage improvements and placement of habitat structures, seed and straw mulch.

2.2 Time for Final Completion. All contract work shall be completed between July 15, 2026 and October 15, 2026, total of 64 working days. Work on weekends and holidays will be subject to approval. Working hours are limited to 7:00 am to 6:00pm.

2.3 Funding. The estimated funding available for the Project is $2,624,400.00 from the federal funding sources specified in the Special Conditions.

3. License and Registration Requirements.

3.1 License. This Project requires a valid California contractor's license for the following classification(s): Class A – General Engineering Contractor.

3.2 DIR Registration. CalTrout may not accept a Bid Proposal from or enter into the Contract with a bidder, without proof that the bidder is registered with the California Department of Industrial Relations ("DIR") to perform public work pursuant to Labor Code § 1725.5, subject to limited legal exceptions.

4. Contract Documents. The plans, specifications, bid forms and contract documents for the Project, and any addenda thereto ("Contract Documents") may be downloaded from District's website located at: https://caltrout.org/projects/elk-river-recovery-project/. A printed copy of the Contract Documents is not available.

5. Bid Security. The Bid Proposal must be accompanied by bid security of ten percent of the maximum bid amount, in the form of a cashier's or certified check made payable to District, or a bid bond executed by a surety licensed to do business in the State of California on the Bid Bond form included with the Contract Documents. The bid security must guarantee that within ten days after CalTrout issues the Notice of Award, the successful bidder will execute the Contract and submit the payment and performance bonds, and insurance certificates.

6. Prevailing Wage Requirements.

6.1 General. Pursuant to California Labor Code § 1720 et seq., this Project is subject to the prevailing wage requirements applicable to the locality in which the Work is to be performed for each craft, classification or type of worker needed to perform the Work, including employer payments for health and welfare, pension, vacation, apprenticeship and similar purposes.

6.2 Rates. The prevailing rates are available online at http://www.dir.ca.gov/DLSR. Each Contractor and Subcontractor must pay no less than the specified rates to all workers employed to work on the Project. The schedule of per diem wages is based upon a working day of eight hours. The rate for holiday and overtime work must be at least time and one-half.

6.3 Compliance. The Contract will be subject to compliance monitoring and enforcement by the DIR, under Labor Code § 1771.4.

7. Performance and Payment Bonds. The successful bidder will be required to provide performance and payment bonds, each for 100% of the Contract Price, as further specified in the Contract Documents.

8. Subcontractor List. Each Subcontractor must be registered with the DIR. Each bidder must submit a completed Subcontractor List form with its Bid Proposal, including the name, location of the place of business, California contractor license number, DIR registration number, and portion of the Work to be performed for each Subcontractor.

10. Instructions to Bidders. All bidders should carefully review the Instructions to Bidders for more detailed information before submitting a Bid Proposal.

11. Bidders' Conference. A bidders' conference (pre-bid meeting) will be held on Friday June 5, 2026 at 10:00 a.m., at the project site located at the intersection of Pine Hill Road and Elk River Rd, Eureka, CA (see map below) to acquaint prospective bidders with the Contract Documents and the Worksite. **The bidders' conference is mandatory.**

By: Katy Gurin
Senior Project Manager
California Trout, Inc.

May 27, 2026

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INSTRUCTIONS TO BIDDERS

SECTION 1. GENERAL INFORMATION

1.1 LOCATION OF THE WORK

The Project is located along Swain Slough within the Elk River watershed with Pine Hill Road bisecting the project area into two sites. The site north of Pine Hill Road is 21 ac and the site south of Pine Hill Road is 16 ac (Figure 1 2). Martin Slough enters Swain Slough just south of the Pine Hill Road bridge. These sites are currently owned by CalTrout. The Project is in Humboldt County, California; Latitude 40°45'11.28"N , Longitude 124°11'1.69"W. See location map in Notice Inviting Bidders and Project Plans.

1.2 PROJECT DESCRIPTION AND DESCRIPTION OF SERVICES

Project Description

Work under this solicitation consists of restoring tidal marsh and salmonid habitat at the 37-acre Lower Swain site and as described in the Summary of Work (Section 01 11 00) and as shown on the plans.The design plans, and specifications were developed by Northern Hydrology and Engineering (NHE). The project is funded by NOAA, with California Trout as grantee and project manager. The project team consists of CalTrout (project management and administration; biological monitor), NHE (engineer of record), GHD (construction management and oversight), Stillwater Sciences (vegetation oversight), the Wiyot Tribe (cultural monitoring), Samara (native plant propagation, seed supply, and vegetation installation) a labor compliance officer (prevailing wage compliance), and a licensed general contractor to be selected.

1.3 TIME SCHEDULE

Contractors shall adhere to the timetable noted below:

Contract documents available to prospective Contractors	**May 27, 2026**
Mandatory Pre-Bid Site Visit, 10:00am	**June 5, 2026**
End date for open period for Contractors questions before bid and qualifications are due	June 10, 2026
Bid and qualifications submittal is due by 3:00 p.m. (bid closes)	**June 19, 2026**
Estimated Notification of Intent to Award of Agreement to successful Contractor	Week of June 22, 2026
Estimated Date Bonding/Signed Contract and Insurance to CalTrout	Week of June 29, 2026
CalTrout Reviews Bonds and Executes Agreement	Week of July 6, 2026
Pre-Construction Meeting	Week of July 6, 2026

Submittal Development and Review	Week of July 6, 2026
Target Contract Start Date	July 15 2026
Contract End Date	October 15, 2026

Technical questions must be submitted in writing and received by CalTrout via email to Katy Gurin at kgurin@caltrout.org on or before the close of business on **Friday, June 10, 2026, at 5:00 p.m.**

Bids received by CalTrout in compliance with all standards and provisions requested in this document shall remain valid for 60 days.

1.4 SUBMISSION OF BID PROPOSAL DOCUMENTS

Signed electronic documents must be received by **3:00 p.m. on June 19, 2026,** at the contract document email address: **kgurin@caltrout.org** Please address emails with the subject heading:

"(your company) _____ - Lower Swain Project Bid and Qualifications"

Documents may be titled:

ATTN:

CALIFORNIA TROUT

Elk River Recovery Program: Elk River Estuary Restoration, Lower Swain

REQUEST FOR QUALIFICATIONS and INVITATION FOR BID
Attn. Katy Gurin / Project Manager
kgurin@caltrout.org
1380 9th Street
Arcata, CA. 95521

1.5 DISPOSITION OF BIDS

a. All documents submitted in response to this Invitation for Bid and Request for Qualifications will become the property of CalTrout and may be returned only at the bidder's expense. The bids submitted are valid for 60 days.
b. Upon bid opening, all documents submitted in response to this Invitation for Bid and Request for Qualifications will become the property of CalTrout and will not be shared or distributed.

1.6 CONDITIONS OF SERVICE

a. CalTrout is soliciting bids and qualifications from Contractors to provide equipment, materials, labors and operators to perform tidal channel and tidal marsh restoration including wood habitat structure installation, log and soil hauling at the project site.

b. Service shall not commence until the Agreement is fully executed and all permits have been obtained. Should the CONTRACTOR fail to commence work within 5 days of the Notice to Proceed, CalTrout reserves the right to

terminate the Agreement. In addition, the CONTRACTOR shall be liable to CalTrout for the difference between the CONTRACTOR'S bid price and the actual cost of performing work by the second bidder or by another contractor.

c. All performance under the Agreement shall be completed on or before the termination date of the Agreement unless this Agreement is amended by CalTrout to extend the term.

d. No oral understanding or agreement shall be binding on either party.

1.7 PREVAILING WAGES.

a. **In General.** This contract subject to the provisions of Part 7 of Division 2 of the California Labor Code (Sections 1720 et seq.). In accordance with Labor Code Section 1771, CONTRACTOR and all subcontractors shall pay not less than current prevailing wage rates as determined by the California Department of Industrial Relations ("DIR") to all workers employed on this project. In accordance with Labor Code Section 1815, CONTRACTOR and all subcontractors shall pay all workers employed on this project 1 ½ the basic rate of pay for work performed in excess specified hour limitations. The work performed pursuant to the Agreement is subject to compliance monitoring and enforcement by the Department of Industrial Relations. See Federal Provisions in Appendix for Federal Prevailing Wage requirements.

b. **Registration**. CONTRACTOR and all subcontractors are not qualified to bid on or be listed in a bid proposal and shall not engage in the performance of any work under this contract, unless currently registered and qualified to perform public work pursuant to section 1725.5 of the California Labor Code. CONTRACTOR represents and warrants that it is registered and qualified to perform public work pursuant to section 1725.5 of the Labor Code.

c. **Posting.** The CONTRACTOR shall post at the job site the determination of the DIR director of the prevailing rate of per diem wages together with all job notices that are required by regulations of the DIR.

d. **Payroll Record Reporting.** CONTRACTOR and any subcontractors shall keep accurate payroll records in accordance with Section 1776 of the Labor Code and shall furnish the payroll records directly to the Labor Commissioner in accordance with the law.

e. **Subcontracts.** CONTRACTOR shall not enter a subcontract without proof that the subcontractor is registered with DIR and qualified to perform public work pursuant to section 1725.5 of the California Labor Code. Any subcontracts must require compliance with the prevailing wage law terms of this contract.

f. **Report on Prevailing Rate of Wages**. CalTrout has obtained the general prevailing rate of per diem wages in the vicinity of the project for each type of worker needed, a copy of which is on file at CalTrout's principal office and shall be made available to any interested party upon request. Bidders may also obtain the General Prevailing Wage Rates for specific job classifications from the Department of Industrial Relations at (415) 703-4281 or visit https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm. Bidders are advised that if they intend to use a craft or classification not on file in the general wage determinations, they may be required to pay the wage rate of that craft of classification most closely related to it as shown in the general determinations.

g. **Employment of Apprentices.** CONTRACTOR's attention is directed to the provisions in Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by CONTRACTOR or any subcontractor. It shall be the responsibility of the CONTRACTOR to effectuate compliance on the part of itself and any subcontractors with the requirements of said sections in the employment of apprentices. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

h. **Penalties.** CONTRACTOR's attention is directed to provisions in Labor Code Sections 1775 and 1813. In accordance with Labor Code Section 1775, CONTRACTOR and subcontractors may be subject to penalties for CONTRACTOR's and subcontractors' failure to pay prevailing wage rates. In accordance with Labor Code Section 1813, CONTRACTOR or subcontractors may be subject to penalties for CONTRACTOR's or subcontractors' failure

to pay overtime pay rates for hours worked by workers employed on this project in excess specified hour limitations.

i. CONTRACTOR shall take affirmative steps to assure that qualified small, minority and women-owned businesses are used when possible as sources of supplies, construction, and services in the performance of the Contract and subcontracts. Affirmative steps taken shall include the following:

- Include qualified small, minority and women-owned businesses on solicitation lists;
- Assuring that small, minority and women-owned businesses are solicited whenever they are potential sources;
- Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation of small, minority and women-owned businesses;
- Establishing delivery schedules, where the requirements of the work permit, which will encourage participation by small, minority and women- owned businesses;
- Using the services and assistance of the Small Business Administration, the Minority business Development Agency of the U.S. Department of Commerce, and the State Office of Small Business and Disabled Veteran Business Enterprise Certification; and
- If the Contractor awards subcontracts, requiring the subcontractor to take the affirmative steps in this subsection.

Standards for Financial Management System: CONTRACTOR and all subcontractors shall maintain fiscal control and accounting procedures which are sufficient to:

Permit preparation of reports required by Title 48 CFR Part 31 (including those required by Title 48 CFR part 31.40 and 31.41) and statutes authorizing the grant funding this Contract.

Permit tracing of funds to a level of expenditure adequate to establish that such funds have not been used in violation of the restrictions and prohibitions of applicable statutes.

A requirement to this effect shall be placed in all subcontracts related to performance of work under this Agreement.

SECTION 2. BID AND QUALIFICATIONS REQUIREMENTS

2.1 STATEMENT OF QUALIFICATIONS

Statement of Qualifications. Contractor's Statement of Qualifications (SOQ) shall clearly and accurately demonstrate specialized knowledge and experience required for consideration. Submit a copy of the SOQ, including a Cover Letter (Letter of Interest). The SOQ shall be prepared in an electronically formatted 8.5" x 11" PDF with cover pages as tabs to divide sections and any additional SOQ documentation. If your file exceeds 20 MB, please provide a link in addition to the PDF at the time of submittal.

2.2 SOQ CHECKLIST

All bid documents shall include the following originally signed documents:

1. Cover letter signed by an authorized representative of the Contractor, and which includes the Contractor's:
    a. Legal name as registered with the Secretary of State, California Business Program
    b. Address (mailing & street, if different)
    c. Telephone number
    d. Fax number
    e. Name, title, and email address of Contractor's contact person for this RFQ

2. Lower Swain Project base bid amount worksheet and listed total amount (see section 4, Bid Proposal);
3. Professional Construction License in the State of California.
4. Related project experience and references (Section 4.4);
5. Bid bond
6. Payment bond
7. Performance bond
8. Proof of insurance
9. Written statement of Contractor's qualifications that is responsive to the selection criteria described in Section 2.5, Selection Criteria. The contractor shall include examples of successful projects within budget.
10. Written statement that describes how the Contractor would approach completing each task and how they would integrate activities across tasks to inform the different sequences in Design. A work plan should be included as part of the written statement to set forth a timeline and schedule for completing deliverables by their required completion dates per subsection 4.1, Contractor Bid Schedule Table.
11. Address firm's ability to provide staff, resources, and materials to the Project within time constraints and geographic location of the Project.

Costs incurred for developing the SOQ and in anticipation of award of the agreement are entirely the responsibility of Contractor and shall not be charged to CalTrout and/or the State of California. All submittals become the property of CalTrout upon receipt and will not be returned to Contractor except as described in Section 01 33 23 List of Submittals.

2.3 GENERAL BID REQUIREMENTS

CONTRACTOR will provide a realistic and balanced bid and follow all stipulations, conditions and guidelines outlined in the contract documents.

2.4 EVALUATION AND SELECTION PROCESS

a. CalTrout will put each bid and qualifications through a process of evaluation to determine the responsiveness of qualified Contractors to CalTrout's needs. CalTrout will select a firm with which to enter a contract for services based on qualifications and demonstrated experience, skill sets, schedule, and approach to addressing the tasks identified.
    a. The contract documents will be evaluated based on the Contractor's experience, references, schedule, availability, and price for each item to be delivered.

a. Contract documents that contain false or misleading information or provide references that do not support an attribute or condition claimed by the Contractor may be rejected. If, in the opinion of CalTrout, information was intended to mislead CalTrout in its evaluation of the bid and qualifications, and the attribute, condition, or capability is a requirement of this invitation, it will be the basis for rejection of the contact documents.

b. At the time of opening, contract documents will be checked for the presence or absence of required information in conformance with the submission requirements of this invitation.

c. Based on CalTrout's evaluation of whether the information provided by the firms are complete, CalTrout will select the CONTRACTOR it considers the most highly qualified and timely to deliver the project, based on the description of their company and how they will be able to meet the schedule and provide the needed workers and equipment.

2.5 SELECTION CRITERIA TABLE

The selection committee will be appointed by CalTrout's North Coast Director and will evaluate the SOQs (Statement of Qualifications) using the following criteria*:

	Scoring Category	Maximum Number of Points
1	**Restoration Construction Experience:** Demonstrate experience interpreting construction plansets, staking and surveying the project area, managing water, working with heavy equipment to excavate and grade to detailed designs and specifications in soft and saturated marsh soilsin California.. List and describe projects detailing construction experience on projects of comparable size and scope; with environmental procedures like those of this project; and that demonstrate familiarity with environmental regulations applicable to construction operations.	10
2	**Restoration Project Management Experience:** Describe experience with project management and proven record of accomplishment of working with non-profit and public agency staff to implement habitat restoration projects with compress schedules. Provide evidence of experience completing projects within limited instream work windows.	10
3	**Environmental Permit Compliance:** Demonstrate experience with regulatory permit compliance for the protection of biological resources, riparian and wetland habitats, archeological resources, and water quality for multi-benefit restoration projects in California.	10
4	**Vegetation Management:** Describe experience with removing invasive species, relocating sensitive species and placing seed and straw mulch.	10
	Additive Bid option scoring criteria	
5	**Large Wood structures.** Describe experience and show examples of installation of large wood habitat log structures.	10

**The Contractor shall respond in writing indicating how its firm's experience fulfills the requirements of these criteria.*

Bid documents not including the above documents and information may be rejected.

a. All bid documents are to be sent to **California Trout (CalTrout)** within the period indicated under Section 1-3, Time Schedule. Bid documents received after the due date and time will be rejected. All contract documents are valid for 60 days after the due date.

b. Bids shall be accompanied by a certified cashier's check/s or a bid bond in the amount of ten percent (10%) of the total bid price, made payable to the order of "California Trout, Inc."

c. CalTrout does not accept alternate Contract language from a Contractor. Contract documents with such

language will be considered a counter proposal and will be rejected. CalTrout's General Conditions are not negotiable.

d. Bid documents may be rejected if conditional or incomplete, or if they contain any alterations of form or other irregularities of any kind. CalTrout may waive any immaterial deviation in a bid or qualifications. CalTrout's waiver of immaterial defect shall in no way modify the Invitation for Bid and Request for Qualifications document or excuse the Contractor from full compliance with the objectives if awarded the Agreement. CalTrout reserves the right to reject all bids for any reason.

e. Costs for developing contract documents and preparation of award of the Agreement are entirely the responsibility of the Contractor and shall not be chargeable to CalTrout.

f. This Invitation for Bid and Request for Qualifications shall be signed by an individual who is authorized to bind the bidding firm contractually. The signature must indicate the title or position that the individual holds in the firm. An unsigned bid or qualifications shall be rejected.

g. A Contractor may modify a bid or qualifications after its submission by withdrawal and resubmission before the due date. Modification of a bid or qualifications offered in any other manner, oral or written, will not be considered.

h. A Contractor may withdraw bid or qualifications by submitting a written request for its withdrawal to CalTrout, signed by the Contractor or an agent authorized in accordance with Paragraph g above. A Contractor may thereafter submit a new bid or qualifications before the submission deadline. Contract documents may not be withdrawn after the due date. Contract documents received after the due date and time will be rejected.

i. CalTrout may modify the Invitation for Bid and Request for Qualifications prior to the date fixed for submission of contract documents by the issuance of an addendum to all parties who received a bid and qualifications package.

j. CalTrout reserves the right to reject all bids and qualifications.

k. All bid and contract documents are proprietary private documents and will not be shared or distributed.

l. Contractors are cautioned not to rely on CalTrout, during the evaluation, to discover and report to the Contractor all defects and errors in the submitted documents. Contractors should carefully proofread their documents for errors and adherence to the Invitation for Bid and Request for Qualifications requirements before submitting them.

m. Where applicable, the Contractor should carefully examine the worksite and material and installation specifications. Contractors shall investigate conditions, character, quality of surface, subsurface materials, or obstacles to be encountered. No additions to the Agreement amount will be made because of failure to thoroughly examine the worksite and specifications.

SECTION 3. ADMINISTRATIVE PROCESS AND REQUIREMENTS

3.1 AGREEMENT FOR SERVICES

The Project Team, consisting of The CalTrout Project Manager and the GHD Construction Manager, will notify the number one ranked (selected) Contractor in writing and provide information for entering into the Agreement.

The selected Contractor, with which CalTrout successfully negotiated, shall be required to execute an Agreement (See Section 5.3 Sample Agreement for Subcontractor Services). The Standard Agreement shall include the agreement terms and conditions of this RFQ. Contractor shall execute the Agreement documents and return them within seven (7) calendar days after Contractor has received written notice of the successfully negotiated agreement.

CalTrout reserves the right to modify or update the Standard Agreement in the interest of CalTrout, in whole or in part, at any time up to the negotiation of the Agreement with the Contractor. By submitting a bid for this RFQ, the prospective Contractor and its key subcontractors acknowledge that (a) the Project Team will provide the services required in the Agreement, and (b) have no objection to the Standard Agreement.

If a satisfactory contractual agreement on services and compensation cannot be reached between CalTrout and the selected Contractor, CalTrout reserves the right to terminate negotiations with the selected Contractor and attempt to reach satisfactory contractual agreement with the remaining qualified Contractors in order of their ranking.

3.2 REJECTION OF BID DOCUMENTS

Bid documents may, at the discretion of CalTrout, be rejected for any reason, including but not limited to if they show any alteration of form, additions not called for, conditional contract documents, incomplete bid documents, erasures, or irregularities of any kind. Bids in which the price of any item appears to be abnormally high or low may also be rejected.

Bid documents must be received electronically by the specified deadline in the general schedule section 1.3. Contract documents or an electronic or oral modification of contract documents, or contract documents received after the advertised time for receiving contract documents shall be rejected.

CalTrout reserves the right to reject any or all contract documents or to waive any defect or irregularity in bidding.

3.3 CONTRACT

CONTRACTOR to whom award is made will be required to execute a written CONTRACT, in the form included in this IFB/RFQ, with CalTrout, and to furnish approved bonds and insurance certificates as herein provided within five (5) business days after the date or receipt of the notice of intent to award to such CONTRACTOR (Section 5.3 Sample Agreement). Additionally, after receiving all appropriate bonds and certifications, the contract will be awarded.

3.4 PERFORMANCE AND PAYMENT BONDS

Contractor, at its own cost and expense, shall furnish bonds in favor of CalTrout, individually or as a co-obligee, in the following amounts: for faithful **performance**, one hundred percent (100%) of the contract value; and for **payment** (labor and materials), one hundred percent (100%) of the contract value. The bonds shall provide that Contractor shall well and truly perform the “contract,” rather than “work contracted to be done.” If the latter is used, the bond may be rejected. Any bond furnished shall be executed by an admitted corporate surety insurer licensed in the State of California.

The Performance Bond shall be security for all the provisions of CONTRACT including, but not limited to, the guaranty provisions.

All bonds shall contain the following language:

All alterations, extensions of time, extra and additional work, and other changes authorized by the specifications, or any part of the Contract may be made without securing the consent of the surety or sureties on the Contract bonds. Surety waives any requirement of notice of any such alterations, extensions of time, extra work and additional work or any other changes.

CalTrout shall not disburse to the Contractor payment for obligations incurred by Contractor or subcontractor of the Contractor until the Contractor submits to CalTrout a lien release corresponding to the work invoiced (and complies with other prerequisites to payment under this Contract).

Sample templates for Performance Bond and Payment Bond are in APPENDIX D, General Provisions of this document.

3.5 INSURANCE

CONTRACTOR shall obtain insurance acceptable to California Trout (CalTrout), Northern Hydrology and Engineering (NHE), McBain and Associates, and landowners California State Parks (CSP) (hereafter “LANDOWNERS”) from an insurer admitted in California with an A.M Best rating of A: VII or greater. Documentation of the proper insurance shall be provided within five (5) business days after CONTRACTOR has received notice that the CONTRACT has been awarded and prior to CalTrout executing the CONTRACT and issuing a NOTICE TO PROCEED. CONTRACTOR shall not commence WORK, nor shall it allow its employees or subcontractors or anyone to commence WORK until all insurance required hereunder has been submitted and approved and a NOTICE TO PROCEED has been issued.

With respect to performance of WORK under this CONTRACT, CONTRACTOR shall maintain and shall require all its sub-contractors to maintain insurance as described below:

3.5.1 Workers' compensation insurance with statutory limits as required by the Labor Code of the State of California. The Workers’ compensation policy shall be endorsed with a waiver of subrogation in favor of CalTrout, CalTrout’s designees, and LANDOWNERS for all WORK performed by CONTRACTOR, its employees, agents, and subcontractors.

Said policy shall be endorsed with the following specific language:

"This policy shall not be cancelled or materially changed without first giving thirty (30) DAYS prior written notice by certified mail return receipt requested to the CALTROUT NORTH COAST DIRECTOR."

3.5.2 Commercial General Liability Insurance covering bodily injury and property damage utilizing an occurrence policy form, in an amount no less than $2,000,000 combined single limit for each occurrence ($2,000,000 AGGREGATE). Said commercial general liability insurance policy shall either be endorsed with the following specific language or contain equivalent language in the policy:

3.5.2.1 CalTrout, CalTrout’s designees, and LANDOWNERS and their officers, officials, employees, and volunteers shall be covered as additional insureds with respect to liability arising out of work or operations performed by or on behalf of CONTRACTOR, including materials, parts or equipment furnished in connection with such work or operations and automobiles owned, leased, hired, or borrowed by or on behalf of CONTRACTOR.

3.5.2.2 The inclusion of more than one insured shall not operate to impair the rights of one insured against another insured, and the coverage afforded shall apply as though separate policies had been issued to each insured, but the inclusion of more than one insurance shall not operate to increase the limits of the company's liability.

3.5.2.3 For any claims related to the WORK, CONTRACTOR's policy shall be considered primary insurance as to CalTrout, CalTrout's Designees and LANDOWNERS and their officers, officials, employees, and volunteers. Any insurance or self- insurance maintained by CalTrout, CalTrout's Designees and LANDOWNERS and their officers, officials, employees, and volunteers shall be in excess of CONTRACTOR's insurance only and shall not contribute with it.

3.5.2.4 This policy shall not be cancelled or materially changed without first giving thirty (30) DAYS prior written notice by certified mail return receipt requested has been given to the CALTROUT NORTH COAST DIRECTOR, 1380 9th St, Arcata, California, 95521.

3.5.3 Automobile liability insurance covering bodily injury and property damage in an amount no less than $2,000,000 combined single limit for each occurrence. Said insurance shall include coverage for owned, hired, and non-owned vehicles. Said policy shall be endorsed with the following language:

1. This policy shall not be cancelled or materially changed without first giving thirty (30) DAYS prior written notice by certified mail return receipt requested to the CALTROUT NORTH COAST DIRECTOR.

2. CalTrout, CalTrout's Designees and LANDOWNERS and their officers, officials, employees, and volunteers are included as additional insured about damages and defense of claims arising from: the ownership, operation, maintenance, use, loading or unloading any auto owned, leased, hired, or borrowed by the Named insured, or for which the named insured is responsible.

3.5.4 Documentation

The following documentation shall be submitted to CalTrout to evidence the above-required insurance:

1. Properly executed Certificates of Insurance clearly evidencing all coverages, limits, and endorsements required above. Said certificates shall be submitted prior to the execution of this contract.

2. Any deductibles or self-insured retentions must be declared to and approved by CalTrout. At the option of CalTrout, either (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects CalTrout, CalTrout's Designees and LANDOWNERS, and their officers, officials, employees, agents, and volunteers; or (2) CONTRACTOR shall provide a financial guarantee satisfactory to CalTrout guaranteeing payment of loses and related investigations, claim administration and defense expenses.

3. Signed copies of the specified endorsements for each policy. Said endorsement copies shall be submitted within ten (10) DAYS of execution of contract.

4. Upon CalTrout's written request, certified copies of insurance policies. Said policy copies shall be submitted within thirty (30) DAYS of CalTrout's request.

3.5.5 Policy Obligations

CONTRACTOR's indemnity and other obligations shall not be limited by the foregoing insurance requirements.

3.5.6 Material Breach

If CONTRACTOR, for any reason, fails to maintain insurance coverage that is required pursuant to this CONTRACT, the same shall be deemed a material breach of CONTRACT. CalTrout, as its sole option, may terminate this CONTRACT and obtain damages from the CONTRACTOR resulting from said breach. Alternatively, CalTrout may purchase such required insurance coverage, and without further notice to CONTRACTOR, CalTrout may deduct from sums due to CONTRACTOR any premium costs advanced by CalTrout for such insurance. These remedies shall be in addition to any other remedies available to CalTrout.

3.6 EXPERIENCE

CONTRACTOR must, if requested by CalTrout, present satisfactory evidence that it is fully prepared with the necessary experience, capital, machinery, and material to furnish the articles called for and to conduct the WORK as required by the specifications (See Section 4.4, Related Project Experience).

3.7 EXAMINATION OF JOB SITE AND CONTRACT DOCUMENTS

CONTRACTORS shall carefully examine the site(s) of the contemplated WORK, the PLANS and SPECIFICATIONS, and the PROPOSAL and CONTRACT DOCUMENTS and forms therefore and are required to personally satisfy themselves of all local conditions affecting the WORK and delivery of the articles. The accuracy of the interpretation of the facts disclosed by borings or other preliminary investigations is not guaranteed by CalTrout.

3.8 ADDENDUM

If any person contemplating submitting a bid for the proposed CONTRACT is in doubt as to the true meaning of any part of the PLANS, SPECIFICATIONS, or other proposed CONTRACT DOCUMENTS, or finds discrepancies in, or omissions from the PLANS or SPECIFICATIONS, they may submit to the CALTROUT NORTH COAST DIRECTOR a written request for an interpretation or correction thereof. The person submitting the request will be responsible for its prompt delivery (see Section 1.3 Time Schedule).

Any interpretation or correction of the proposed CONTRACT DOCUMENTS prior to bid opening will be made solely in the form of written ADDENDUM to the CONTRACT DOCUMENTS and when issued will be on file at the office of the CALTROUT NORTH COAST DIRECTOR before bids are opened. Interpretations, corrections, or changes in the proposed CONTRACT allegedly made in any other manner shall not be binding for any purpose and BIDDERS shall not rely on such interpretations, corrections, or changes. In addition, all ADDENDA will be mailed to each person purchasing CONTRACT DOCUMENTS, but it shall be BIDDER's responsibility to make inquiry as to the ADDENDA issued. All such ADDENDA shall become part of the CONTRACT documents and all BIDDERS shall be bound by such ADDENDA, whether received by BIDDER.

SECTION 4. B I D P R O P O S A L

4.1 CONTRACTOR BID SCHEDULE TABLE

The bid schedule is listed below. CalTrout will provide an Excel File of this table with item details to assist the Contractor in submitting lump sum estimates and bid options. For more detail on bid items see Specifications Section 01 15 00 Measurement and Payment.

AL = Allowance CF = Cubic Feet CY = Cubic Yard EA = Each LB = Pounds
LF = Linear Foot LS = Lump Sum SF = Square Feet TON = Ton (2000 lbs)
SY = Square Yard AC = Acres Final Pay Items (F)

BID SCHEDULE

BID ITEM NO.	ITEM DESCRIPTION	EST. QTY.	UNIT	UNIT COST	EXTENDED TOTAL AMOUNT
BASE BID SCHEDULE					
1	Mobilization / Demobilization	1	LS	$	$
2	Dust/Erosion Control, Water Management and Environmental Protection	1	LS	$	$
3	Construction Surveying / Staking	1	LS	$	$
4	Demolition, Debris Removal and Disposal	1	LS	$	$
5	Invasive Vegetation Removal and Sensitive Plant Salvage	1	LS	$	$
6	Earthwork (Excavation, Native Backfill & Grading)	1	LS	$	$
7 (F)	Rock Slope Protection (Class II, Method B)	100	CY	$	$
8	18" Dia. HDPE Culvert	152	LF	$	$
9	18" Check Valve	3	EA	$	$
10 (F)	Fence including Gate	520	LF	$	$
11	Final Surface Treatments, Seed and Mulch	1	LS	$	$
				Base Bid Total	$
ADDITIVE BID SCHEDULE					
A1	Final Surface Treatment (Rip 12 inches)	7.7	AC	$	$
A2	Remove and Salvage Tree for Large Wood Structure	7	EA	$	$
A3	Furnish and Install Pinning Logs for Large Wood Structures	42	EA	$	$
				Additive Bid Total	$
				TOTAL BID (Base + Additive)	$

4.2 RELATED PROJECT EXPERIENCE

CONTRACTOR shall furnish the information requested below regarding three similar projects previously completed by the **CONTRACTOR**. List projects related to in-channel construction, earth moving, and road upgrading and decommissioning (add additional pages if necessary).

PROJECT NAME:
Brief description of project:

_____
_____

Period of construction: _____ Project Cost:_____ Reference (entity name, contract name, and phone): _____

_____

PROJECT NAME:
Brief description of project:

_____
_____

Period of construction: _____ Project Cost:_____ Reference (entity name, contract name, and phone): _____

_____

PROJECT NAME:
Brief description of project:

_____
_____

Period of construction: _____ Project Cost:_____ Reference (entity name, contract name, and phone): _____

_____

Total years of watershed and fisheries construction experience (____years)

CONTRACTOR has read and understands the contract documents for construction. CONTRACTOR recognizes and agrees:

(a) In case of a discrepancy between words and figures, the words shall prevail, and in the case of a discrepancy between unit prices and totals, whichever results in the lowest price to CalTrout shall prevail.

(b) CalTrout reserves the right to eliminate any section of this proposal from the contract without claim of the CONTRACTOR for profits lost.

(c) No verbal agreement or conversation with any officer, agent, or employee of CalTrout, either before or after the execution of the Agreement, shall affect or modify any of the terms or obligations of this proposal.

(d) CalTrout will not be responsible for any errors or omission on the part of the undersigned in making up his/her/their CONTRACT DOCUMENTS, nor will the CONTRACTOR be released on account of error.

(e) The undersigned CONTRACTOR is properly licensed in accordance with the State of California Act providing for the registration of Contractors.

(f) The Undersigned CONTRACTOR certifies that he/she/they has confirmed that the proposed form of contract, and the plans and specifications are complete.

Respectfully submitted:

Signature:

Title:_____

Company: _____ Taxpayer ID#:_____

Address: _____

City/State/Zip:_____ _____

License number: _____ Seal (if Bid is by a corporation):_____

Date:

4.3 CALTROUT DEPARTMENT OF INDUSTRIAL RELATIONS REPORTING

CalTrout has the obligation to report this contract to the Department of Industrial Relations (DIR) and provide various information including that specified below. In addition to filling out this form for CalTrout, you have the obligation to submit certified payroll records directly to DIR.

Project: Lower Swain Project.

Contractor Name:				
Contractor Mailing Address:				
Contractor E-mail Address:				
Contractor Telephone:				
Contractor License Number:				
DIR Registration Number:				
Classification(s) or type(s) of workers that will be employed by the contractor for this project:				
Subcontractors:	License	DIR	Worker	Work to Be Performed:

I certify that the information set forth above is correct and that I am authorized to provide this information on behalf of the contractor named in the first line above.

_____ _____

(Signature) Date

_____

(Printed Name)

SECTION 5. SAMPLE NOTICES AND CONTRACT

5.1 SAMPLE NOTICE OF AWARD

PROJECT DESCRIPTION:

To:

CalTrout has considered the CONTRACT DOCUMENTS submitted by you for the above-described WORK in response to its Notice to Contractors dated _____, 2026, and Instruction to Contractors.

You are hereby notified that your BID has been accepted for items in the amount of
$_____

You are required by the Instruction to Bidders to execute the Contract and furnish the required CONTRACTOR'S Performance Bond, Payment Bond, and certificates of insurance within five (5) business days from the date of this Notice to you.

If you fail to execute said Contract and to furnish said BONDS and proof of insurance within five (5) business days from the date of this Notice, CalTrout will be entitled to consider all your rights arising out of CalTrout's acceptance of your BID as abandoned and as a forfeiture of your BID BOND. CalTrout will be entitled to such other rights as may be granted by law.

You are required to return an acknowledged copy of this NOTICE OF AWARD to CalTrout.

Dated this _____ day of _____ 2026.

Owner: _____

By: _____

Title: _____

5.2 ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by this on the_____day of _____, 2026.

By:_____

Title:

5.3 SAMPLE AGREEMENT FOR SUBCONTRACTOR SERVICES

CONTRACT

This agreement ("Contract") is executed as of the last date signed below ("Effective Date"), by _____ (hereinafter called the "Contractor") and California Trout, Inc., a Californian non-profit organization with its principal place of business at 360 Pine Street, 4th Floor, San Francisco, California 94104, (hereinafter called "CalTrout"), collectively known as the "Parties."

WHEREAS Contractor has substantial experience in the work required by this Contract; and

WHEREAS Contractor desires to perform such work and CalTrout desires to have Contractor perform such work.

NOW THEREFORE, in consideration of the mutual covenants and premises herein contained, the Parties hereto agree as follows:

1 – Scope of Work

Contractor shall perform the work described in Invitation for Bids/Request for Qualifications in compliance with all plans, specifications, engineer's direction, and other Contract Documents. The term "Contract Documents" means the documents listed in Section 2, below. Any work called for in one Contract Document not mentioned in another is to be performed and executed the same as if mentioned in all Contract Documents. Contractor shall perform the Work diligently in accordance with the standards of its profession and to CalTrout's satisfaction.

2 – Contract Documents

This Contract consists of all the following Contract Documents, all of which are as fully a part thereof as if herein set out in full and if not attached hereto, the same as attached hereto. Unless otherwise stated in the General Conditions, in case of any conflict or inconsistency among the Contract Documents, the following order of precedence will apply, from highest to lowest:

1. Contract Change Orders
2. Addenda to the Contract
3. This Contract
4. Notice to Proceed
5. Notice of Award
6. Special Conditions
7. General Conditions
8. Payment and Performance Bonds
9. Insurance Documents
10. Project Plans or Drawings
11. Project Specifications
12. Contractor's Bid Proposal and attachments
13. Instructions to Bidders

3 – Compensation

This is a lump sum contract. As full consideration for satisfactory performance of the Work by the Contractor, CalTrout will compensate the Contractor in the amount of $ **_____,** the quoted price, in the manner provided in the General Conditions and subject to any adjustment provided therein.

4 – Grant Agreement and Labor Code Requirements

This Work is a "public works" project pursuant to Labor Code sections 1720. Contractor shall comply with all applicable prevailing wage requirements contained below and in the Grant Agreement(s) attached hereto as _____. Contractor shall also comply with the provisions of Part 7 of Division 2 of the California Labor Code (Sections 1720 thorough 1861), which includes but is not limited to the following requirements:

a. General. In accordance with Labor Code Section 1771, Contractor and all subcontractors shall pay not less than current prevailing wage rates as determined by the California Department of Industrial Relations ("DIR") to all workers employed on this project. In accordance with Labor Code Section 1815, Contractor and all subcontractors shall pay all workers employed on this project 1 ½ the basic rate of pay for work performed in excess specified hour limitations. The work performed pursuant to this agreement is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

b. Registration. Contractor and all subcontractors are not qualified to bid on or be listed in a bid proposal, subject to the requirements of section 4104 of the California Public Contract Code and shall not engage in the performance of any work under this contract, unless currently registered and qualified to perform public work pursuant to section 1725.5 of the California Labor Code. Contractor represents and warrants that it is registered and qualified to perform public work pursuant to section 1725.5 of the Labor Code.

c. Posting. Contractor shall post at the job site the determination of the DIR director of the prevailing rate of per diem wages together with all job notices that are required by regulations of the DIR.

d. Payroll Record Reporting. Contractor and any subcontractors shall keep accurate payroll records in accordance with Section 1776 of the Labor Code and shall furnish the payroll records directly to the DIR at https://www.dir.ca.gov/Public-Works/Certified-Payroll-Reporting.html, and to Carolyn Lay with North Valley Labor Compliance Services via email at cplay@sbcglobal.net.

e. Subcontracts. Contractor shall not enter a subcontract without proof that the subcontractor is registered with DIR and qualified to perform public work pursuant to section 1725.5 of the California Labor Code. Any subcontracts must require compliance with the prevailing wage law terms of this contract.

f. Report on Prevailing Rate of Wages. CalTrout has obtained the general prevailing rate of per diem wages in the vicinity of the project for each type of worker needed, a copy of which is on file at CalTrout's principal office and shall be made available to any interested party upon request. General Prevailing Wage Rates for specific job classifications are also available from the Department of Industrial Relations at (415) 703-4281 or online at https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm.

g. Employment of Apprentices. Contractor's attention is directed to the provisions in Sections 1777.5 and 1777.6 of the Labor Code concerning the employment of apprentices by the Contractor or any subcontractor. It shall be the responsibility of the Contractor to effectuate compliance on the part of itself and any subcontractors with the requirements of said sections in the employment of apprentices. Information relative to apprenticeship standards, wage schedules, and other requirements may be obtained from the Director of Industrial Relations, ex-officio the Administrator of Apprenticeship, San Francisco, California, or from the Division of Apprenticeship Standards and its branch offices.

h. Penalties. Contractor's attention is directed to provisions in Labor Code Sections 1775, 1776, and 1813. In accordance with Labor Code Section 1775, Contractor and subcontractors may be subject to penalties for the failure to pay prevailing wage rates. In accordance with Labor Code Section 1776, Contractor and subcontractors may be subject to penalties for failure to maintain accurate and complete payroll records. Contractor and subcontractors in accordance with Labor Code Section 1813, Contractor and subcontractors may be subject to penalties for the failure to pay overtime pay rates for hours worked by workers employed on this project in excess specified hour limitations.

5 – Notices

All notices or communication concerning a party's compliance with the terms of this Contract shall be in writing and may be given either personally, by certified mail, return receipt requested, or by overnight express carrier. Notices must also be provided via email. The notice shall be deemed to have been given and received on the date delivered in person or the date upon which the postal authority or overnight express carrier indicates that the mailing was delivered to the address of the receiving party. Any party, by giving ten (10) days written notice to the other, may designate any other address as substitution of the address to which the notice or communication shall be given. Notices or communications shall be given to the Parties at the addresses set forth below until specified otherwise in writing:

Notices to CalTrout shall be sent to:

California Trout North Coast Region
1380 9th Street
Arcata, CA 95521
kgurin@caltrout.org

Notices to Contractor shall be sent to:

INSERT CONTRACTOR INFORMATION

6 – Authority to Execute Agreement

Each individual executing this Contract represents that he or she is duly authorized to sign and deliver the agreement on behalf the party indicated and that this Contract is binding on such party in accordance with its terms. This Contract may be executed in two or more counterparts, each of which shall be deemed an original, but all of which taken together shall constitute the same instrument.

[signatures on next page]

IN WITNESS WHEREOF, the Parties have executed this Contract.

INSERT CONTRACTOR NAME

Name _____ Date _____

Signature _____ Tax ID _____

Mailing Address _____

State/City/Zip _____ Phone_____

California Trout, Incorporated

Signature_____ Date _____

By _____

Lower Swain Project APPENDICES

APPENDIX A CONTRACT PLANS

ELK RIVER ESTUARY RESTORATION: LOWER SWAIN SLOUGH
HUMBOLDT COUNTY, CALIFORNIA

PREPARED FOR:

CALIFORNIA TROUT

DEPARTMENT OF COMMERCE,

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA),

NOS OFFICE FOR COASTAL MANAGEMENT (OCM)

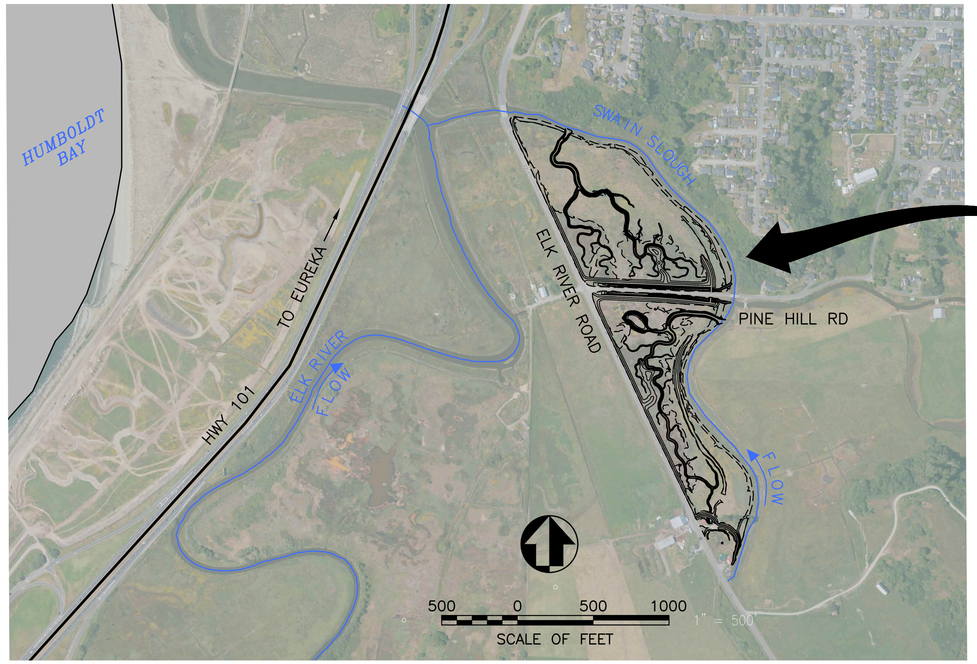
FEDERAL FUNDING PROVIDED BY:

BIPARTISAN INFRASTRUCTURE LAW

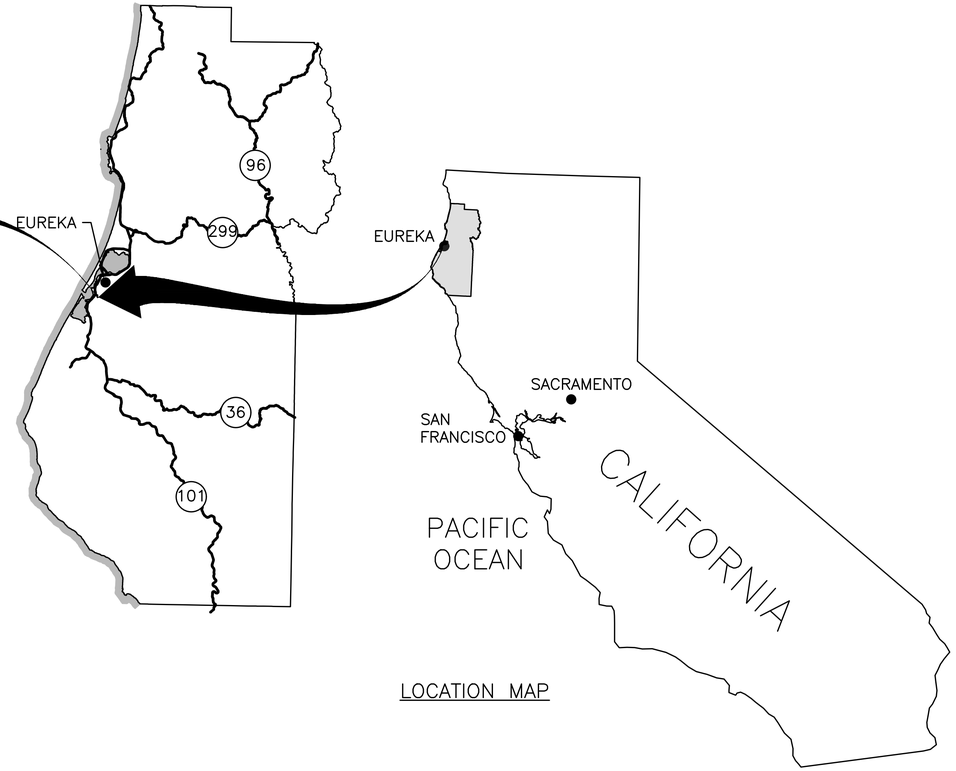
GRANT AGREEMENT # NA24NOSX473C0069–T1–01

PREPARED BY:

NORTHERN HYDROLOGY & ENGINEERING



AREA MAP



LOCATION MAP

THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF JEFFREY K. ANDERSON P.E. LICENSE # 50713
THESE PLANS SUPERCEDE STAMPED AND SIGNED PLANS DATED 05/08/2026 AND 05/22/2026.

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

Northern Hydrology & Engineering
- Engineering
- Hydrology
- Geomorphology
- Water Resources

3101 CONCORDE DR, SUITE H, MCKINLEYVILLE, CA 95519

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	G1	COVER	1 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/25/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/25/2026 3:43 PM – By: LICENSED USER – R17.1 – File: G1–COVER

SHEET LIST

SHEET	SUB–SHEET	TITLE
1	G1	COVER
2	G2	SHEET LIST AND LEGEND
3	G3	NOTES
4	G4	SITE CONDITIONS
5	G5	CONSTRUCTION ACCESS STOCKPILE & STAGING
6	D1	DEMOLITION & SALVAGE
7	D2	INVASIVE VEGETATION TREATMENTS
8	C1.0	GRADING OVERVIEW INDEX
9	C1.1	GRADING PLAN 1
10	C1.2	GRADING PLAN 2
11	C1.3	GRADING PLAN 3
12	C1.4	GRADING PLAN 4
13	C1.5	GRADING PLAN 5
14	C1.6	GRADING PLAN 6
15	C2.0	SURFACE PREPARATION AND MATERIAL EXCAVATION ZONES
16	C2.1	FINAL SURFACE TREATMENTS
17	C3.0	PROFILES 1
18	C3.1	PROFILES 2
19	C3.2	PROFILES 3
20	C3.3	PROFILES 4
21	C3.4	PROFILES 5
22	C3.5	PROFILES 6
23	C3.6	PROFILES 7
24	C3.7	SECTIONS 1
25	C3.8	SECTIONS 2
26	C4.0	ISOPACH 1
27	C4.1	ISOPACH 2
28	C5.0	DEWATERING AND WATER PREVENTION PLAN
29	C6.0	DETAILS 1
30	C6.1	DETAILS 2
31	C6.2	DETAILS 3
32	C6.3	DETAILS 4
33	C6.4	DETAILS 5
34	C6.5	DETAILS 6

LEGEND

- EXISTING CONTOUR (1–FT INTERVAL)
- EXISTING CONTOUR (5–FT INTERVAL)
- DESIGN CONTOUR (1–FT INTERVAL)
- DESIGN CONTOUR (5–FT INTERVAL)
- GRADING BOUNDARY
- GAS — GAS LINE
- W — WATER LINE
- FENCE (E)
- FENCE (D)
- R/W FROM COUNTY MAPS
- HUMBOLDT COUNTY APN BOUNDARIES

- CULVERT (E)
- TIDE GATE (E)
- UTILITY POLE (E)

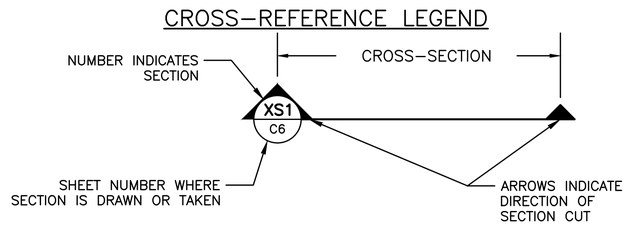
- ROCK SLOPE PROTECTION

- LARGE WOOD STRUCTURE

ABBREVIATIONS/SYMBOLS

ACR	ACRE
AC	ASPHALT CEMENT
APN	ASSESSOR PARCEL NUMBER
APPRX, ~	APPROXIMATELY
BM	BENCHMARK
CM	CONSTRUCTION MANAGER
CMP	CORRUGATED METAL PIPE
CO	CONTRACT OWNER OR CONTRACTING OFFICER
COR	CONTRACT OWNER REPRESENTATIVE OR CONTRACTING OFFICER REPRESENTATIVE
CP	CONTROL POINT
CY	CUBIC YARD
(D)	DESIGN
DIA	DIAMETER
DBH	DIAMETER AT BREAST HEIGHT
(E)	EXISTING
EG	EXISTING GROUND
EL, ELEV	ELEVATION
FG	FINISHED GRADE
FT, '	FEET OR FOOT
GS	GROUND SURFACE
GWE	GROUND WATER ELEVATION
H	HORIZONTAL
HDPE	HIGH DENSITY POLYETHYLENE
HDPEP	HIGH DENSITY POLYETHYLENE PIPE
INVEL	INVERT ELEVATION
IN, "	INCH
INV	INVERT
LP	LONGITUDINAL PROFILE
LWS	LARGE WOOD STRUCTURE
MAX	MAXIMUM
MIN	MINIMUM
MW	MONITORING WELL
(N)	NEW
NA	NOT APPLICABLE
NHE	NORTHERN HYDROLOGY & ENGINEERING
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
O.C.	ON CENTER
PT	PROJECT TEAM
R/W	RIGHT OF WAY
RCB	REINFORCED CONCRETE BOX CULVERT
RD	ROAD
RCP	REINFORCED CONCRETE PIPE
RSP	ROCK SLOPE PROTECTION
SF	SQUARE FOOT
SPECS	SPECIFICATIONS
STA	STATION
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
SWS	STILLWATER SCIENCES
TBD	TO BE DETERMINED
TBM	TEMPORARY BENCHMARK
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VERTICAL
VE	VERTICAL EXAGGERATION
W/	WITH
WSE	WATER SURFACE ELEVATION
XS	CROSS–SECTION
YR	YEAR
#	NUMBER
%	PERCENT
∅	DIAMETER

CROSS–REFERENCE LEGEND



REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED: NHE CADD: TC TECH. REVIEW: JKA, BP DATE: 05/21/2026	SUB SHEET NO. G2	TITLE OF SHEET: SHEET LIST AND LEGEND HUMBOLDT COUNTY, CA	SHEET 2 OF 34

Plotted: 5/21/2026 2:07 PM – By: LICENSED USER – R17.1 – File: G2–SHEET–LIST–AND–LEGEND

GENERAL NOTES

1. LAND OWNER CONTACT INFORMATION:

KATY GURIN, DARREN MIERAU, WILLIAM MATSUBU
CALIFORNIA TROUT, INC
1380 9TH ST, ARCATA CA 95521
707–825–0420
kgurin@caltrout.org
DMierau@caltrout.org
wmatsubu@caltrout.org

DOUG FRINK
P.O. BOX 1072
FERNDALE, CA 95536
707–498–1402
dfrink1@suddenlink.net

2. PROJECT ENGINEER INFORMATION:

JEFFREY K. ANDERSON, P.E.
NORTHERN HYDROLOGY AND ENGINEERING (NHE)
3101 CONCORDE DRIVE SUITE H, MCKINLEYVILLE, CA 95519
707–839–2195

3. CONSTRUCTION MANAGER INFORMATION:

JEREMY SVEHLA
GHD INC.
718 3RD ST, EUREKA, CA 95501
707–443–8326

4. THESE PLANS REPRESENT THE WORK TO BE PERFORMED FOR THE ELK RIVER ESTUARY: LOWER SWAIN SLOUGH PROJECT.

5. ALL IMPROVEMENTS SHALL BE ACCOMPLISHED UNDER THE APPROVAL, INSPECTION AND TO THE SATISFACTION OF THE OWNER OR OWNER'S REPRESENTATIVE. THE OWNER'S REPRESENTATIVE INCLUDE THE CONSTRUCTION MANAGER, PROJECT ENGINEER AND BIOLOGISTS. ALL OF THE CONSTRUCTION IMPROVEMENTS SHALL COMPLY WITH THESE PLANS, SPECIFICATIONS AND NOTES.

6. ALL COMMUNICATIONS, SUBMITTALS, REQUESTS FOR INFORMATION (RFI), PAY REQUESTS, ETC., WILL BE TO OR FROM THE CONSTRUCTION MANAGER. AS REQUIRED, THE CONSTRUCTION MANAGER WILL COORDINATE WITH THE APPROPRIATE ORGANIZATION, FOR EXAMPLE THE PROJECT ENGINEER, REGARDING THE COMMUNICATION, SUBMITTAL OR RFI. CONTRACTOR RFI'S OR INSPECTION REQUESTS SHALL BE MADE AT LEAST 48 HOURS IN ADVANCE.

7. SHOULD IT APPEAR THAT THE WORK TO BE DONE, OR ANY MATTER RELATIVE THERETO, IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS, THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER (VIA THE CONSTRUCTION MANAGER) RESPONSIBLE FOR THE PLAN PREPARATION BEFORE CONDUCTING WORK ON THAT PORTION OF THE PROJECT.

8. DUE TO UNKNOWN OR UNFORESEEN FIELD CONDITIONS, SOME OF THE GRADING ACTIVITIES WILL NEED TO BE DIRECTED IN THE FIELD, WHICH ARE INDICATED ON THE PLANS AS "AS DIRECTED IN THE FIELD".

9. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY UNDERGROUND SERVICE ALERT (USA) AT (800) 642–2444 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF WORK TO VERIFY THE LOCATION OF UNDERGROUND UTILITIES WITHIN THE PROJECT AREA. NO WORK SHALL BE DONE UNTIL USA HAS MARKED ALL UNDERGROUND UTILITIES.

10. THE LOCATION OF ANY UTILITIES SHOWN ON THESE PLANS IS APPROXIMATE AND FOR INFORMATION ONLY. THE LOCATION, TYPE, SIZE AND/OR DEPTH INDICATED WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION, TYPE, SIZE AND/OR DEPTH PRIOR TO PERFORMING ANY EXCAVATION OR OTHER WORK CLOSE TO ANY UNDERGROUND PIPELINE, CONDUIT, DUCTS, WIRE, STRUCTURE OR OTHER UTILITIES SUBJECT TO CONCERNS FOR SAFETY, DISPLACEMENT, AND/OR DAMAGE BY REASONS OF THEIR OPERATIONS.

11. CONSTRUCTION HOURS TO BE AS REQUIRED BY PERMITS. ANY CHANGES TO CONSTRUCTION HOURS TO BE APPROVED BY CONSTRUCTION MANAGER.

12. THE CONTRACTOR SHALL AGREE TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, AND FURTHER AGREES THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS IN ACCORDANCE WITH THE PROVISIONS OUTLINED BY THE PROJECT CONTRACT.

13. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND HIS/HER SUBCONTRACTOR(S) TO EXAMINE THE PROJECT SITE PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED, SUCH AS THE NATURE AND LOCATION OF THE WORK AND THE GENERAL AND LOCAL CONDITIONS, PARTICULARLY THOSE AFFECTING THE AVAILABILITY OF TRANSPORTATION, ACCESS TO AND FROM THE SITE, THE DISPOSAL, HANDLING, AND STORAGE OF MATERIALS, AVAILABILITY OF LABOR, WATER, ELECTRICITY, ROADS, THE UNCERTAINTIES OF WEATHER, THE CONDITIONS OF THE GROUND, SURFACE AND SUBSURFACE MATERIALS, THE EQUIPMENT AND FACILITIES NEEDED PRIMARILY FOR AND DURING THE PERFORMANCE OF THE WORK, AND THE COSTS THEREOF. ANY FAILURE BY THE CONTRACTOR AND SUBCONTRACTOR(S) TO ACQUAINT THEMSELVES WITH ALL THE AVAILABLE INFORMATION WILL NOT RELIEVE THEM FROM RESPONSIBILITY FOR PROPERLY ESTIMATING THE DIFFICULTY AND COST OF SUCCESSFULLY PERFORMING THE WORK.

14. THE CONTRACTOR SHALL MAINTAIN A SET OF PLANS ON THE JOB SHOWING "AS–CONSTRUCTED" CHANGES MADE TO DATE. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL SUPPLY TO THE CONSTRUCTION MANAGER A SET OF PLANS, MARKED UP TO THE SATISFACTION OF THE PROJECT ENGINEER, REFLECTING THE AS–CONSTRUCTED MODIFICATIONS.

15. ALL REVISIONS TO THESE PLANS MUST BE MADE BY THE PROJECT ENGINEER RESPONSIBLE FOR THE PLAN PREPARATION AND SHALL ACCURATELY BE SHOWN ON REVISED PLANS.

16. COPIES OF ALL ENVIRONMENTAL PERMITS WILL BE PROVIDED TO THE CONTRACTOR, AND MUST BE KEPT ON–SITE AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN AT HIS/HER OWN EXPENSE ALL PERMITS, LICENSES, INSURANCE POLICIES, ETC., NOT ALREADY OBTAINED BY THE OWNER OR OWNER'S REPRESENTATIVES, AS MAY BE NECESSARY TO COMPLY WITH STATE AND LOCAL LAWS ASSOCIATED WITH THE PERFORMANCE OF THE WORK. CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL PERMITS.

17. UNLESS NOTED OTHERWISE ON THE PLANS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS AND OTHER SURVEY MARKERS IDENTIFIED IN THESE PLANS.

18. THE CONTRACTOR SHALL PROVIDE, PLACE, AND MAINTAIN ALL LIGHTS, SIGNS, BARRICADES, FLAG PERSONS, PILOT CAR, OR OTHER DEVICES NECESSARY TO CONTROL TRAFFIC THROUGH THE CONSTRUCTION AREA AND FOR PUBLIC SAFETY IN ACCORDANCE WITH THESE PLANS, THE CALTRANS STANDARD SPECIFICATIONS, CURRENT EDITION AND THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

19. THE CONTRACTOR SHALL USE ONLY DESIGNATED STAGING AREAS FOR STORAGE OF EQUIPMENT AND MATERIALS AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SECURITY OF ALL EQUIPMENT AND MATERIALS.

20. AT NO TIME SHALL THE CONTRACTOR UNDERTAKE TO CLOSE OFF ANY EXISTING UTILITY LINES OR OPEN VALVES OR TAKE ANY OTHER ACTION WHICH WOULD AFFECT THE OPERATION OF EXISTING WATER OR UTILITY SYSTEMS WITHOUT PRIOR APPROVAL FROM THE CONSTRUCTION MANAGER. APPROVAL SHALL BE REQUESTED AT LEAST 48 HOURS IN ADVANCE OF THE TIME THAT THE INTERRUPTION OF THE EXISTING SYSTEM IS REQUIRED. ANY INTERRUPTION OF SERVICE TO UTILITY SERVICES, WHETHER INTENTIONAL OR NOT, MUST BE KEPT TO A MINIMUM TIME PERIOD.

21. THE CONTRACTOR WILL PROVIDE CONSTRUCTION STAKING FOR THE ENTIRE PROJECT.

22. ALL CONTROL STATIONING AND DATA DIMENSIONING ARE REFERENCED TO THE THALWEG OF THE DESIGN CHANNEL OR BACKWATER/POND FEATURE SHOWN UNLESS OTHERWISE NOTED.

23. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES AND IMPROVEMENTS WITHIN AND OUTSIDE THE LIMITS OF THE PROJECT AREA.

24. EQUIPMENT EXCLUSION AREAS SHALL BE CLEARLY FLAGGED BY THE CONTRACTOR PRIOR TO CONSTRUCTION TO SERVE AS A BUFFER FOR SENSITIVE SPECIES AND RESOURCES.

25. NO VEGETATION SHALL BE REMOVED PRIOR TO APPROVAL BY THE CONSTRUCTION MANAGER OR PROJECT BIOLOGIST.

26. IF, DURING CONSTRUCTION, ARCHAEOLOGICAL ARTIFACTS OR REMAINS ARE ENCOUNTERED, CONSTRUCTION IN THE VICINITY SHALL BE HALTED, AND THE CONSTRUCTION MANAGER SHALL BE NOTIFIED IMMEDIATELY.

27. EROSION CONTROL STRUCTURES AND OTHER CONSTRUCTION BEST MANAGEMENT PRACTICES (BMP) SHALL CONTAIN AND CONTROL EROSION AND PROVIDE FOR THE SAFE DISCHARGE OF SILT–FREE RUNOFF FROM THE PROJECT SITE INTO RECEIVING WATER BODIES. SUITABLE BMP SUPPLIES FOR MITIGATING SEDIMENT IMPACTS TO ONSITE WATERWAYS SHALL BE MAINTAINED AT THE PROJECT SITE BY THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING ALL TEMPORARY EROSION CONTROL MEASURES. THE EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THESE PLANS, THE STANDARD SPECIFICATIONS, LOCAL, COUNTY AND STATE ORDINANCES, AND APPLICABLE PERMIT REQUIREMENTS. THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION MANAGER PRIOR TO THE COMMENCEMENT OF WORK FOR A PRE–GRADING INSPECTION OF THE INSTALLED TEMPORARY EROSION CONTROL FACILITIES AND BMP'S. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE AND PERFORMANCE OF THE TEMPORARY EROSION CONTROL MEASURES AND BMP'S THROUGHOUT THE DURATION OF THE PROJECT.

28. THE CONTRACTOR SHALL KEEP ALL AREAS GENERATING DUST WELL WATERED DURING THE TERM OF THIS CONTRACT. THIS INCLUDES, BUT IS NOT LIMITED TO ACCESS RAMPS, ROADS, FILL AREAS AND ANY OTHER AREAS THAT MAY GENERATE DUST AS A RESULT OF THE CONTRACTOR'S OPERATIONS.

29. NONE OF THE NOTES, OR CONSTRUCTION DRAWINGS SHALL PRECLUDE THE CONTRACTOR FROM SUBSTITUTION OF MATERIALS OR PRACTICES NECESSARY TO COMPLETE THE PROJECT IN A TIMELY AND ECONOMICAL MANNER. ANY SUBSTITUTION OR FORGONE INSPECTIONS WITHOUT THE EXPLICIT CONSENT OF THE CONSTRUCTION MANAGER BECOME THE RESPONSIBILITY OF THE CONTRACTOR. WHERE THE SPECIFICATIONS, NOTES, OR CONSTRUCTION DRAWINGS ARE NOT CONSISTENT WITH LOCAL REGULATIONS, AN EXPLICIT RECONSIDERATION OF PLANS AND SPECIFICATIONS BY THE CONSTRUCTION MANAGER IS REQUIRED PRIOR TO ENACTMENT OF ANY CHANGES.

30. TOPOGRAPHY BASED ON: (1) CITY OF EUREKA 2019 LIDAR AND (2) NHE GROUND SURVEYS. VERTICAL DATUM: NAVD88 (US SURVEY FOOT).

DISCLAIMERS

1. THE PROJECT ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS AND SPECIFICATIONS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PROJECT ENGINEER RESPONSIBLE FOR PREPARATION OF THESE PLANS.

SURVEY CONTROL POINTS

1. SURVEY CONTROL POINTS WILL BE PROVIDED TO THE SELECTED CONTRACTOR PRIOR TO CONSTRUCTION. CONTROL POINTS WILL EXIST ALONG PINE HILL RD NEAR THE PROJECT SITE.

PROJECT QUANTITIES

TOTAL PROJECT QUANTITIES

SOURCE	GRADING AREA (ACRES)	CUT (CY)	FILL (CY)	NET (CY)	NOTES
DESIGN	20.3	20,770	17,730	3,040	DG MINUS EG
MISC EXCAVATION		5,570	5,570	0	VEG SCRAPE, TYPE 1&2 B OVER–EX, MINOR EXCAVATIONS
TOTAL		26,340	23,300	3,040	

TOTAL RSP QUANTITIES

MATERIAL TYPES	UNIT	QUANTITY
CLASS II RSP	CY	100
	TONS	157
TYPE 8 FABRIC	SQFT	842

FINAL SURFACE TREATMENT AREAS

SURFACE TREATMENT	AREA (ACRES)	NOTES
RIP 6	5.4	RIPPING SURFACE 6 IN
RIP 12	7.7	RIPPING SURFACE 12 IN
DECOMPACT	5.7	RIPPING SURFACE 12–18 IN
SEED AND MULCH	6.6	CONSISTS OF THREE DIFFERENT SEED MIXES

NORTH AREA PROJECT QUANTITIES

SOURCE	GRADING AREA (ACRES)	CUT (CY)	FILL (CY)	NET (CY)	NOTES
DESIGN	9.5	8,630	9,230	–600	DG MINUS EG
MISC EXCAVATION		2,720	2,720	0	VEG SCRAPE, TYPE 1&2 B OVER–EX, MINOR EXCAVATIONS
SUBTOTAL		11,360	11,950	–600	
EXPORT TO SOUTH		680		–680	EXPORT TYPE 1&2 A FOR NATURAL SEDIMENT LEVEE FILL (NEGATIVE NET INDICATES EXPORT)
IMPORT FROM SOUTH		1,280		1,280	IMPORT TYPE 1&2 B AND/OR TYPE 2/3 FOR SHALLOW AND DITCH FILL (POSITIVE NET INDICATES IMPORT)
TOTAL NET				0	TOTAL NET CUT/FILL FOLLOWING IMPORT AND EXPORT OF MATERIAL

SOUTH AREA PROJECT QUANTITIES

SOURCE	GRADING AREA (ACRES)	CUT (CY)	FILL (CY)	NET (CY)	NOTES
DESIGN	10.8	12,130	8,500	3,630	DG MINUS EG
MISC EXCAVATION		2,850	2,850	0	VEG SCRAPE, TYPE 1&2 B OVER–EX, MINOR EXCAVATIONS
SUBTOTAL		14,980	11,350	3,630	
EXPORT TO NORTH		1,280		–1,280	EXPORT TYPE 1&2 B AND/OR TYPE 2/3 FOR SHALLOW AND DITCH FILL (NEGATIVE NET INDICATES EXPORT)
IMPORT FROM NORTH		680		680	IMPORT TYPE 1&2 A FOR NATURAL SEDIMENT LEVEE FILL (POSITIVE NET INDICATES IMPORT)
TOTAL NET				3,040	TOTAL NET CUT/FILL FOLLOWING IMPORT AND EXPORT OF MATERIAL

QUANTITY NOTES:

1. ROCK TONNAGE = 1.563 TONS/CY (ASSUMES 30% VOID SPACE AND SPECIFIC GRAVITY = 2.65).
2. EXCESS NET MATERIAL (3040 CY) TO BE USED FOR COMPACTION LOSSES AND/OR ADDITIONAL SHALLOW FILL FOR MARSH AND HUMMOCKS.
3. ADDITIONAL QUANTITY DETAILS ARE PROVIDED ON SHEETS G5, D1, D2, C2.0, AND C2.1.
4. FENCE QUANTITIES NOT PROVIDED ON THIS SHEET, SEE SHEET C6.5 FOR QUANTITIES.

REGISTERED PROFESSIONAL ENGINEER — JEFFREY K. ANDERSON — No. 50713 — CIVIL — STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	G3	NOTES AND QUANTITIES	3 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/20/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:08 PM – By: LICENSED USER – R17.1 – File: G3–NOTES

125 0 125 250
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT			
DESIGNED: NHE CADD TC TECH. REVIEW: JKA, BP DATE: 05/19/2026	SUB SHEET NO. G4	TITLE OF SHEET EXISTING SITE CONDITIONS HUMBOLDT COUNTY, CA	SHEET 4 OF 34

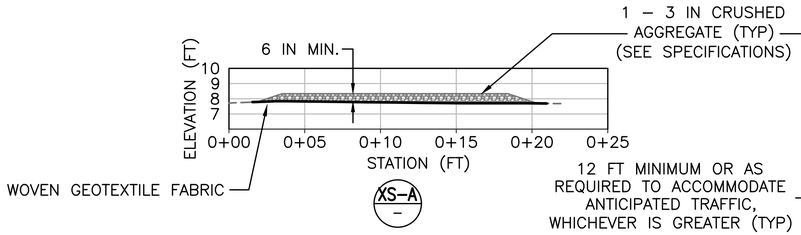
Plotted: 5/21/2026 2:08 PM – By: LICENSED USER – R17.1 – File: G4-SITE-CONDITIONS

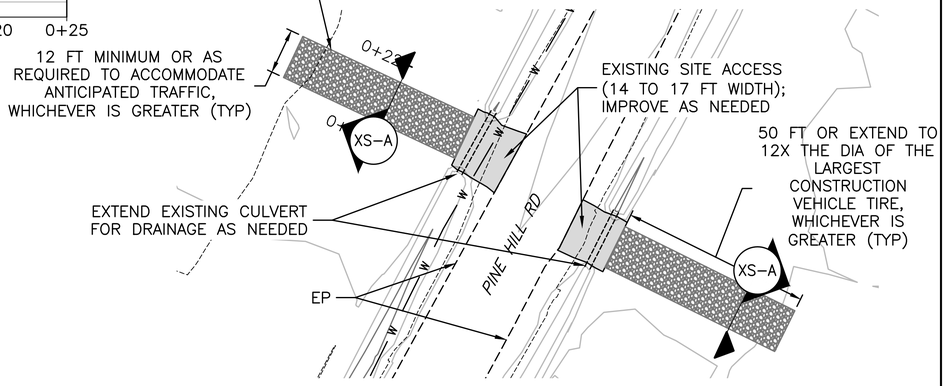
SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW THE APPROXIMATE EXTENT AND LOCATIONS OF CONTRACTOR ACCESS, STAGING, AND STOCKPILING AREAS.
2. HAUL ROUTES, ACCESS, AND STOCKPILING MAY OCCUR WITHIN GRADING BOUNDARY AND TEMPORARY HAUL ROUTES.
3. SITE ACCESS, STAGING, AND STOCKPILING TO OCCUR WITHIN DESIGNATED AREAS (KEYNOTE 1).
4. NO ACCESS, STAGING OR STOCKPILING AREAS MAY OCCUR OUTSIDE OF DESIGNATED AREAS WITHOUT PRIOR APPROVAL AND FIELD VERIFICATION.
5. ATTENTION SHALL BE GIVEN TO THE GAS LINE SPECIAL ACCESS ZONE OVER THE 10 INCH DIAMETER HIGH PRESSURE GAS LINE. NO WORK CAN OCCUR WITHIN THE GAS LINE SPECIAL ACCESS ZONE WITHOUT GAS LINE SUBMITTAL AND APPROVAL.
6. REFER TO SPECIFICATIONS FOR GAS LINE POT HOLING REQUIREMENTS, AND EQUIPMENT AND EXCAVATION RESTRICTIONS WITHIN 10 FT WIDE GAS LINE SPECIAL ACCESS ZONE AND 5 FT WIDE GAS LINE WORK ZONE SHOWN ON SHEET C6.0 DETAIL 4.
7. GAS LINE POT HOLING LOCATIONS SHOWN ON SHEETS C1.1–C1.6.
8. CONTRACTOR STAGING AREAS AND ACCESS FROM PINE HILL ROAD TO BE IMPROVED PER DETAIL 1.
9. ALL ACCESS, STAGING, AND TEMPORARY HAUL ROUTES SHALL BE DECOMPACTED AND TREATED AS SHOWN ON SHEET C2.1.
10. ROCK AND GEOTEXTILE SHALL BE COMPLETELY REMOVED FROM ACCESS AND STAGING AREAS PRIOR TO DECOMPACTION.
11. DESIGN CONTOURS (1 FT INTERVAL) SHOWN IN RED FOR CLARITY.
12. CONTRACTOR CAN SUPPLY ALTERNATIVE HAUL ROUTE LOCATIONS TO PROJECT TEAM FOR APPROVAL. TOTAL HAUL ROUTE AREA CANNOT EXCEED 4.9 ACRES.
13. TEMPORARY ACCESS, STAGING, AND STOCKPILE AREAS ARE INTENDED FOR LIGHT DUTY ACTIVITIES TO SUPPORT CONSTRUCTION IN THIS LOCATION. ACCESS AND USE PERMITTED UPON PRIOR APPROVAL.
14. TEMPORARY CONSTRUCTION ENTRANCE;
   A. ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC ROADWAY, AND DEGRADATION OF EXISTING PAVEMENT.
   B. INSTALL CORRUGATED STEEL PANEL GRATES OR TIRE WASHING STATION AS NEEDED TO PREVENT TRACKING OF MUD ONTO PUBLIC ROAD.
   C. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS MUST BE REMOVED IMMEDIATELY.
   D. ACCESSES SHALL BE INSPECTED DAILY AND AFTER EACH RAINFALL WITH MAINTENANCE PROVIDED BY THE CONTRACTOR AS NECESSARY.
   E. GEOTEXTILE FABRIC SHALL BE WOVEN, MIRAFI 500x OR APPROVED EQUAL.

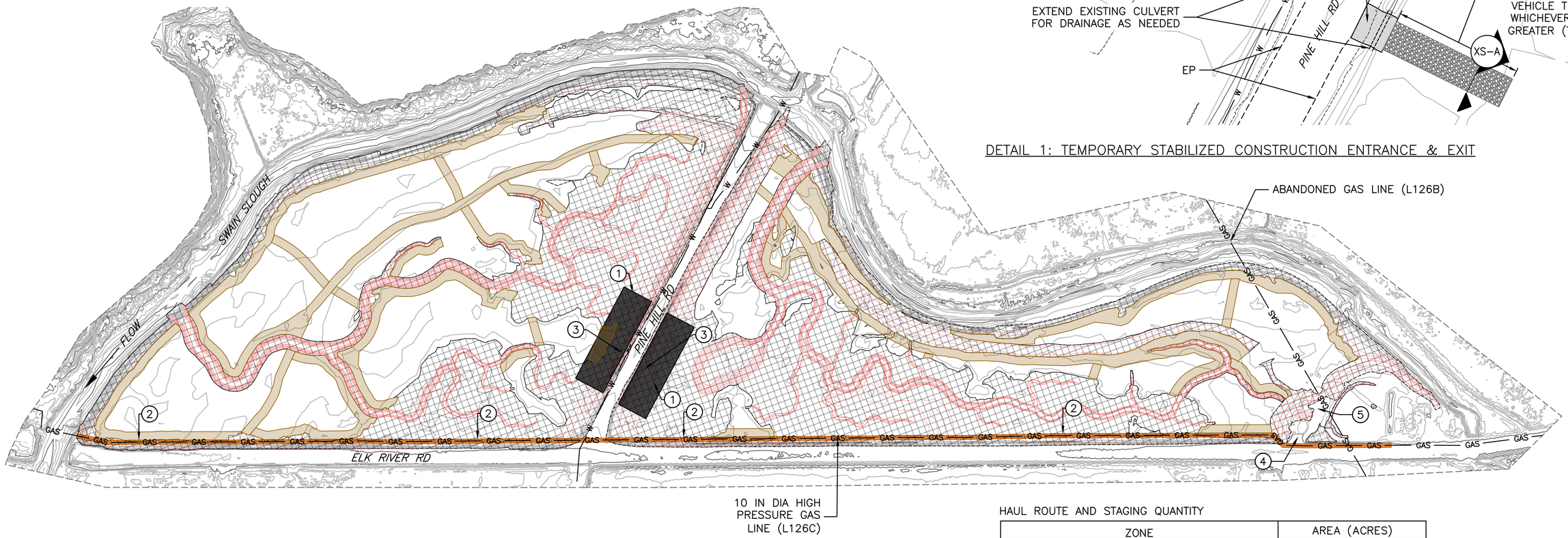
KEY NOTES:

1. SITE ACCESS, STAGING, & STOCKPILING; TO BE DETERMINED IN FIELD
2. GAS LINE SPECIAL ACCESS ZONE
3. EXISTING SITE ACCESS; IMPROVE PER DETAIL 1
4. TEMPORARY ACCESS ZONE; ACCESS PERMITTED UPON PRIOR APPROVAL
5. TEMPORARY STAGING AND STOCKPILE; USE PERMITTED UPON PRIOR APPROVAL





DETAIL 1: TEMPORARY STABILIZED CONSTRUCTION ENTRANCE & EXIT



HAUL ROUTE AND STAGING QUANTITY

ZONE	AREA (ACRES)
HAUL ROUTES	4.9
STAGING AREAS	0.9
GAS LINE SPECIAL ACCESS ZONE	0.7

SHEET LEGEND:

- GRADING BOUNDARY; HAUL ROUTES, ACCESS, & STOCKPILING
- TEMPORARY HAUL ROUTES
- GAS LINE SPECIAL ACCESS ZONE
- SITE ACCESS, STAGING, STOCKPILE
- TEMPORARY DEWATERING BERM

125 0 125 250
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED: NHE	CADD TC	TECH. REVIEW: JKA, BP	DATE: 05/20/2026

SUB SHEET NO. G5

TITLE OF SHEET
CONSTRUCTION ACCESS, STOCKPILING, & STAGING

HUMBOLDT COUNTY, CA

SHEET 5 OF 34

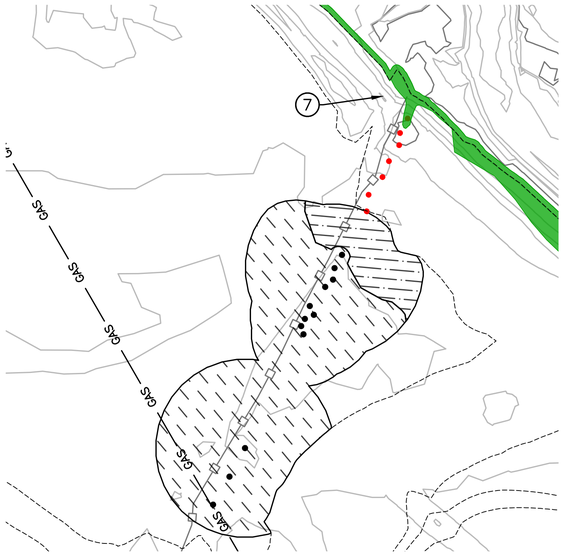
Plotted: 5/21/2026 2:08 PM – By: LICENSED USER – R17.1 – File: G5–CONSTRUCTION–ACCESS–STOCKPILE–STAGING

SHEET NOTES:

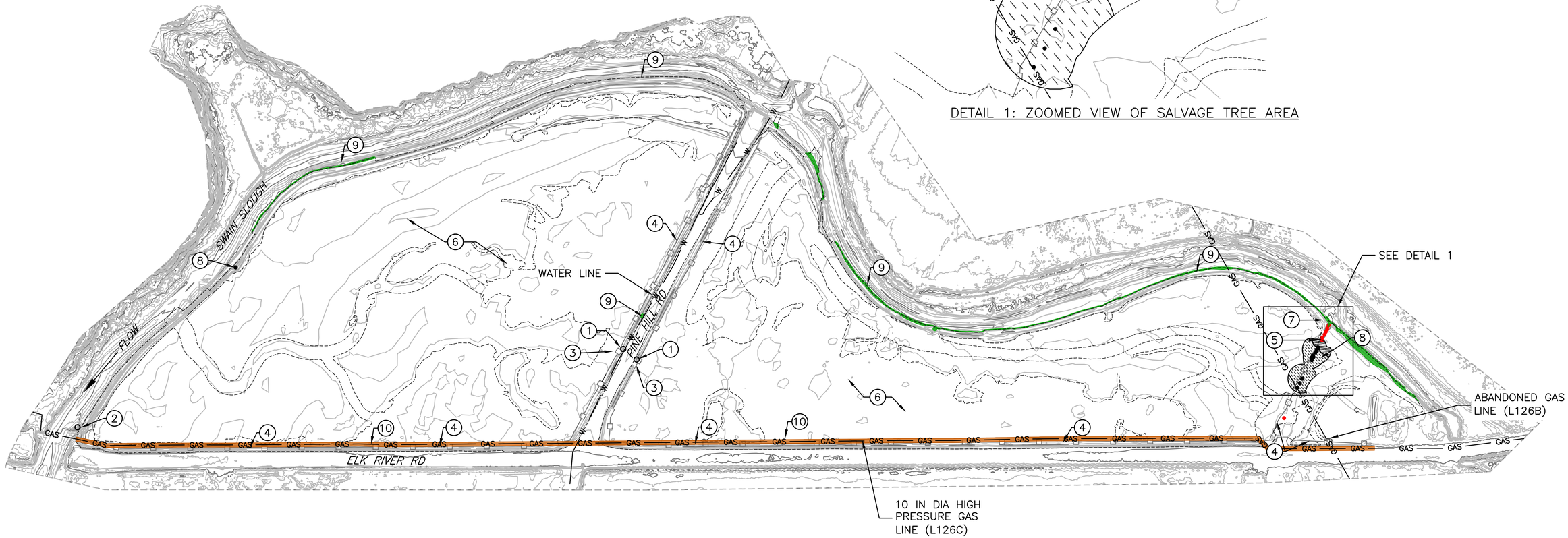
1. ADDITIONAL ITEMS TO BE DEMOLISHED/SALVAGED MAY BE IDENTIFIED OR LOCATED DURING CONSTRUCTION.
2. REFER TO SHEET D2 FOR INVASIVE VEGETATION REMOVAL.
3. GROUND SURFACE VEGETATION SCRAPE IS CONSIDERED EXCAVATION; REFER TO SHEETS C1.0–C1.6.
4. LYNGBYE SEDGE SALVAGE AND TRANSPLANTING WILL OCCUR AT MULTIPLE LOCATIONS ALONG SWAIN SLOUGH, AS DIRECTED IN THE FIELD. REFER TO SHEET C6.3, DETAIL 2.
5. LYNGBYE SEDGE SALVAGE AND TRANSPLANTING TO OCCUR DURING LEVEE REMOVAL AND DITCH FILL ACTIVITIES.
6. EXCESS SOIL EXCAVATION FROM LYNGBYE SEDGE TRANSPLANTING CAN BE USED TO FILL DRAINAGE DITCH DURING LEVEE REMOVAL AND DITCH FILL ACTIVITIES.
7. SEE SHEET D2 FOR INVASIVE PLANT TREATMENT.
8. REFER TO SHEET C6.3, DETAIL 3 FOR CYPRESS TREE SALVAGE.
9. REFER TO SPECIFICATIONS FOR GAS LINE POT HOLING REQUIREMENTS, AND EQUIPMENT AND EXCAVATION RESTRICTIONS WITHIN 10 FT WIDE GAS LINE SPECIAL ACCESS ZONE AND 5 FT WIDE GAS LINE WORK ZONE SHOWN ON SHEET C6.0 DETAIL 4.
10. GAS LINE POT HOLING LOCATIONS SHOWN ON SHEETS C1.1–C1.6.

KEY NOTES:

1. REMOVE 12" ø RCP CULVERT & OFF–HAUL
2. REMOVE 24" ø RCP & TIDE GATE & OFF–HAUL
3. REMOVE ACCESS & STAGING & OFF–HAUL NON SOIL MATERIAL
4. DISMANTLE FENCING & OFF–HAUL
5. SALVAGE TREES FOR USE IN LARGE WOOD STRUCTURE AS DIRECTED IN THE FIELD.
6. CLEAR AND GRUB WOODY DEBRIS AND ROOTS WITHIN GRADING BOUNDARY
7. REMOVE CONCRETE BAGS, APPROXIMATELY 10 BAGS OR LESS
8. MONTEREY CYPRESS TREES
9. LYNGBYE SEDGE SALVAGE & TRANSPLANTING; SEE SHEET NOTES.
10. GAS LINE SPECIAL ACCESS ZONE



DETAIL 1: ZOOMED VIEW OF SALVAGE TREE AREA



SHEET LEGEND

- RETAIN TREE
- SALVAGE TREE WITH ROOTS INTACT
- TREE PROTECTION ZONE
- TREE PROTECTION ZONE – MINIMIZE FOOTPRINT
- GAS LINE SPECIAL ACCESS ZONE

VEGETATION SALVAGE QUANTITIES

SHEET LEGEND	COMMON NAME	LATIN NAME	AREA (SQ–FT)	CUT DEPTH (FT)	VOLUME (CY)
	LYNGBYE SEDGE	Carex lyngbyei	8490	1.50	472

125 0 125 250
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	D1	DEMOLITION & SALVAGE	6 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

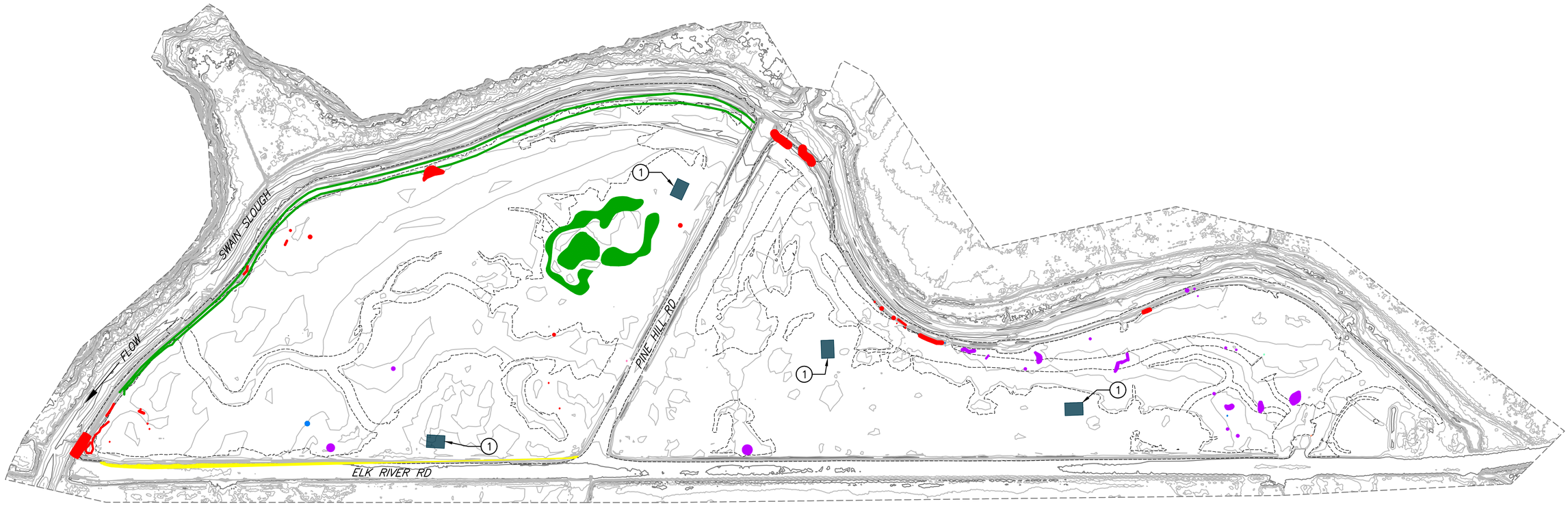
Plotted: 5/21/2026 2:08 PM – By: LICENSED USER – R17.1 – File: D1–DEMOLITION–AND–SALVAGE

SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW THE APPROXIMATE EXTENT OF INVASIVE PLANT TREATMENTS.
2. INVASIVE TREATMENTS SHALL BE CONDUCTED PER THE SPECIFICATIONS, AND AS DIRECTED IN THE FIELD USING THE FOLLOWING TREATMENT METHODS: REMOVAL WITH HEAVY EQUIPMENT, AND REMOVAL BY MANUAL METHODS.
3. ADDITIONAL INVASIVE PLANTS NOT SHOWN HERE MAY BE IDENTIFIED IN THE FIELD AND REQUIRED TO BE TREATED.
4. INVASIVE PLANTS NOT OFF-HAULED SHALL BE BURIED AT LEAST 3 FT DEEP WITHIN DESIGNATED BURIAL AREAS AND AS DIRECTED IN THE FIELD. BURIAL AREAS WILL BE DETERMINED IN THE FIELD BASED ON AMOUNT OF INVASIVE VEGETATION EXCAVATED.

KEY NOTES:

(1) INVASIVE VEGETATION BURIAL SITE, APPRX LOCATION



INVASIVE VEGETATION QUANTITY AND DISPOSAL METHOD

SHEET LEGEND	COMMON NAME	LATIN NAME	AREA (SQ-FT)	MIN CUT DEPTH (FT)	VOLUME (CY)	DISPOSAL
	BULL THISTLE	Cirsium vulgare	130	0.67	3	OFF-HAUL
	FENNEL	Foeniculum vulgare	3650	0.67	90	OFF-HAUL
	HIMALAYAN BLACKBERRY	Rubus armeniacus	7470	0.67	184	OFF-HAUL
	DENSE FLOWERED CORDGRASS	Spartina densiflora	5720	0.67	141	ONSITE BURIAL
	DENSE FLOWERED CORDGRASS (SPARSE)	Spartina densiflora - Sparse	3550	0.67	88	ONSITE BURIAL
	HEMLOCK	Conium maculatum	10	0.67	0.2	OFF-HAUL
	SOWTHISTLE	Sonchus sp.	10	0.67	0.2	OFF-HAUL
	SPANISH HEATH	Erica lusitanica	10	0.67	0.2	OFF-HAUL

SHEET LEGEND

INVASIVE VEGETATION BURIAL SITE

125 0 125 250
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JESSICA A. KERR
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	D2	INVASIVE VEGETATION TREATMENTS	7 OF 34
DRAWN: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

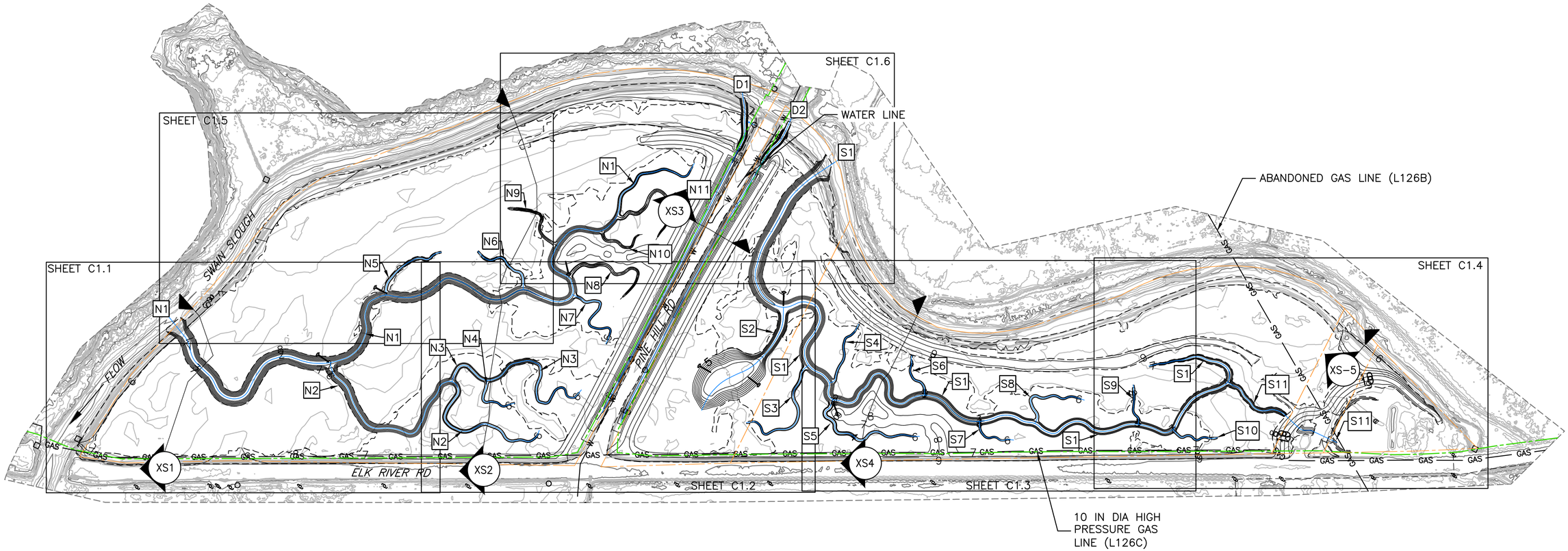
Plotted: 5/25/2026 10:56 AM - By: LICENSED USER - R17.1 - File: D2-INVASIVE-VEGETATION-REMOVAL

SHEET NOTES:

1. THIS DRAWING SHOWS THE OVERALL PROJECT ELEMENTS AND FEATURES. SEE GRADING SHEETS C1.1 TO C1.6 FOR ADDITIONAL DETAIL AND INFORMATION.
2. PROFILE AND SECTION ALIGNMENTS ARE SHOWN ON THIS DRAWING, REFER TO SHEET G2 FOR CROSS–REFERENCE LEGEND AND DESCRIPTION.
3. CONSTRUCTION SITE ACCESS AND STAGING NOT SHOWN ON THIS DRAWING, SEE SHEET G5.
4. PROTECT LAND RESOURCES. NO VEGETATION REMOVAL, EQUIPMENT ACCESS, OR DISTURBANCE OUTSIDE OF GRADING BOUNDARY AND AREAS SHOWN ON SHEET G5 AND C2.1.
5. VEGETATION SALVAGE AREAS NOT SHOWN ON THIS DRAWING, SEE SHEET D1.
6. INVASIVE VEGETATION REMOVAL AREAS NOT SHOWN ON THIS DRAWING, SEE SHEET D2.
7. DEWATER SITE AND ISOLATE WORK AREAS DURING ALL GRADING ACTIVITIES, SEE SHEET C5.0.
8. SALVAGE TREES REMOVED WITHIN GRADING AREAS TO BE USED IN LARGE WOOD STRUCTURES, SEE SHEET C6.4.
9. DESIGN CONTOURS ON THIS SHEET DEPICT PROJECT FINISHED GRADE; REFER TO SHEET C2.0 FOR VEGETATION SCRAPE AND SOIL EXCAVATION ZONES AND USE.
10. INVASIVE VEGETATION FREE MATERIAL EXCAVATED FROM THE SITE TO BE USED AS SITE FILL, AS INDICATED IN THESE PLANS AND AS DIRECTED IN THE FIELD.
11. FINISH GRADE TREATMENTS NOT SHOWN ON THIS DRAWING, SEE SHEET C2.1.
12. LARGE WOOD STRUCTURES SHOWN ON THIS DRAWING DO NOT REPRESENT ACTUAL SIZE, LOCATION, CONFIGURATION, AND NUMBER OF LOGS TO BE USED. ACTUAL WOOD STRUCTURE CONFIGURATIONS TO BE DETERMINED IN FIELD. REFER TO SHEET C6.4 FOR TYPICAL LARGE WOOD CONFIGURATION.
13. KEY NOTE ELEMENTS AND OTHER FEATURES NOT SHOWN ON THIS DRAWING.
14. SHEET NOTES AND KEY NOTES ON THIS DRAWING APPLY TO SHEETS C1.0–C1.6 AND C3.0–C3.8.
15. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

KEY NOTES:

- XX CHANNEL
- 2 POND
- 3 ALCOVE
- 4 REMOVE LEVEE, FILL DITCH
- 5 NATURAL SHORELINE
- 6 NATURAL SEDIMENT LEVEE FILL
- 7 ECO–LEVEE A
- 8 SHALLOW FILL
- 9 HUMMOCK
- DX OR 10 DRAINAGE SWALE
- 11 CULVERT
- 12 CULVERT WITH TIDE GATE
- 13 RSP
- 14 ECO–LEVEE B
- 15 WETLAND BENCH



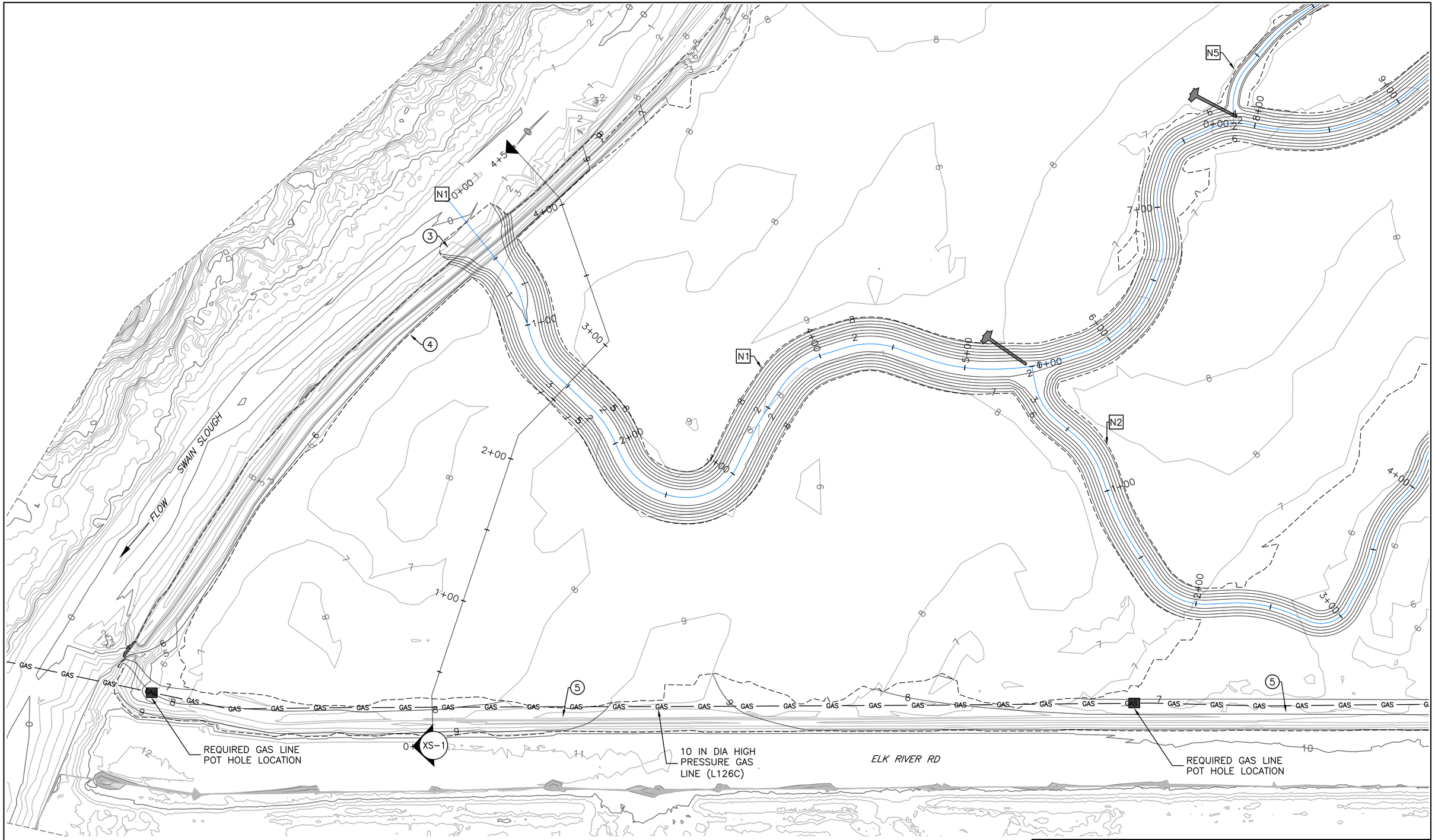
125 0 125 250
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT			
DESIGNED: NHE CADD: TC TECH. REVIEW: JKA, BP DATE: 05/19/2026	SUB SHEET NO. C1.0	TITLE OF SHEET GRADING OVERVIEW INDEX HUMBOLDT COUNTY, CA	SHEET 8 OF 34

Plotted: 5/21/2026 2:08 PM – By: LICENSED USER – R17.1 – File: C1P0–GRADING–OVERVIEW

Plotted: 5/21/2026 2:08 PM – By: LICENSED USER – R17.1 – File: C1P1–C1P6–GRADING–OVERVIEW–SHEETS



SHEET NOTES:

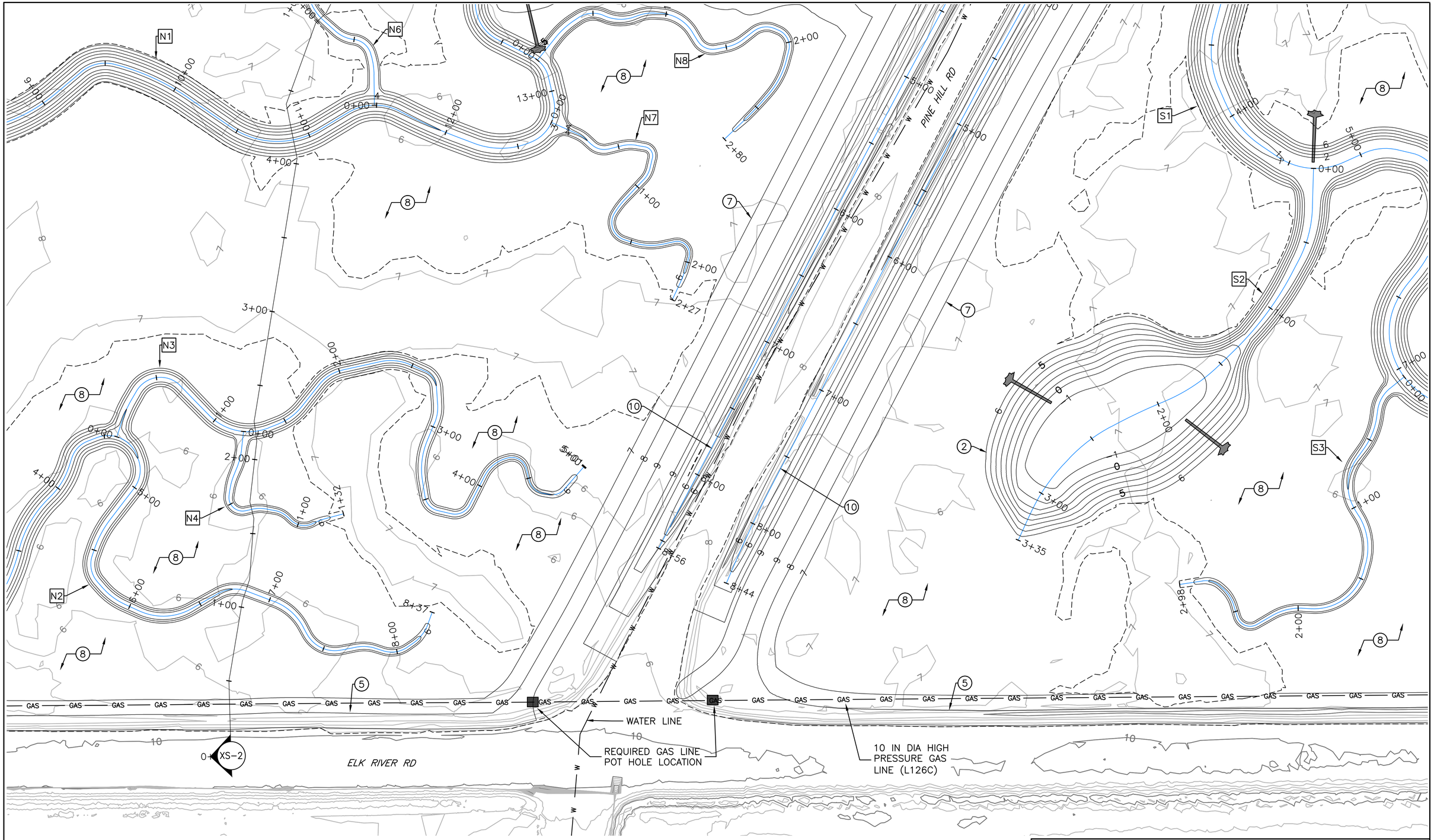
1. REFER TO SHEET C1.0 FOR ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. ONLY GAS LINE AND WATER LINE UTILITIES SHOWN ON THIS DRAWING, REFER TO SHEET G4 FOR ADDITIONAL EXISTING SITE CONDITIONS.
3. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

30 0 30 60
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER JEFFREY K. ANDERSON No. 50713 CIVIL STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C1.1	GRADING PLAN 1	9 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/21/2026		HUMBOLDT COUNTY, CA	



SHEET NOTES:

1. REFER TO SHEET C1.0 FOR ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. ONLY GAS LINE AND WATER LINE UTILITIES SHOWN ON THIS DRAWING, REFER TO SHEET G4 FOR ADDITIONAL EXISTING SITE CONDITIONS.
3. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

30 0 30 60
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C1.2	GRADING PLAN 2	10 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/21/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:08 PM – By: LICENSED USER – R17.1 – File: C1P1–C1P6–GRADING–OVERVIEW–SHEETS

Plotted: 5/21/2026 2:08 PM – By: LICENSED USER – R17.1 – File: C1P1-C1P6-GRADING-OVERVIEW-SHEETS

SWAIN SLOUGH

FLOW

ELK RIVER RD

REQUIRED GAS LINE POT HOLE LOCATION

10 IN DIA HIGH PRESSURE GAS LINE (L126C)

XS-4

SHEET NOTES:

1. REFER TO SHEET C1.0 FOR ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. ONLY GAS LINE AND WATER LINE UTILITIES SHOWN ON THIS DRAWING, REFER TO SHEET G4 FOR ADDITIONAL EXISTING SITE CONDITIONS.
3. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

30 0 30 60
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C1.3	GRADING PLAN 3	11 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/21/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C1P1–C1P6–GRADING–OVERVIEW–SHEETS

SWAIN SLOUGH

FLOW

ABANDONED GAS LINE
(L126B)

ELK RIVER RD

10 IN DIA HIGH PRESSURE GAS LINE (L126C)

REQUIRED GAS LINE POT HOLE LOCATION

SEE SHEET C6.5 FOR NEW FENCE DETAILS.

S1 S9 S11 N10 XS–5

SHEET NOTES:

1. REFER TO SHEET C1.0 FOR ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. ONLY GAS LINE AND WATER LINE UTILITIES SHOWN ON THIS DRAWING, REFER TO SHEET G4 FOR ADDITIONAL EXISTING SITE CONDITIONS.
3. REFER TO SHEET C6.2 FOR ADDITIONAL CULVERT DETAILS.
4. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

30 0 30 60
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. MORRIS
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C1.4	GRADING PLAN 4	12 OF 34
DRAWN: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/21/2026		HUMBOLDT COUNTY, CA	

SHEET NOTES:

1. REFER TO SHEET C1.0 FOR ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. ONLY GAS LINE AND WATER LINE UTILITIES SHOWN ON THIS DRAWING, REFER TO SHEET G4 FOR ADDITIONAL EXISTING SITE CONDITIONS.
3. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

30 0 30 60
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. KNERR
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C1.5	GRADING PLAN 5	13 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/21/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C1P1–C1P6–GRADING–OVERVIEW–SHEETS

Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C1P1-C1P6-GRADING-OVERVIEW-SHEETS

SWAIN SLOUGH

FLOW

18" RCP CULVERT (E); CONNECT OUTLETS TO NEW DRAINAGE CHANNELS AS DIRECTED IN FIELD.

D1

D2

S1

N1

N6

N8

N9

N10

N11

WATER LINE

XS3

PINE HILL RD

SWAIN SLOUGH

SHEET NOTES:

1. REFER TO SHEET C1.0 FOR ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. ONLY GAS LINE AND WATER LINE UTILITIES SHOWN ON THIS DRAWING, REFER TO SHEET G4 FOR ADDITIONAL EXISTING SITE CONDITIONS.
3. REFER TO SHEET C6.1 FOR ADDITIONAL CULVERT AND TIDE GATE DETAILS.
4. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

SHEET LEGEND

DRAINAGE DITCH (D) TO BE CONSTRUCTED AS DIRECTED IN FIELD

30 0 30 60

SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C1.6	GRADING PLAN 6	14 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/21/2026		HUMBOLDT COUNTY, CA	

DESCRIPTION AND QUANTITIES OF SURFACE TREATMENT AND EXCAVATION ZONE LOCATIONS[1]

SHEET LEGEND	EXCAVATION	NORTH AREA (ACRES)	NORTH VOLUME (CY)	SOUTH AREA (ACRES)	SOUTH VOLUME (CY)	LOCATIONS / NOTES
	VEG SCRAPE	0.8	1165	0.6	800	EXISTING DRAINAGE DITCH MARGIN
	TYPE 1&2 A	0.8	1752	0.8	1399	CHANNEL, POND
	TYPE 1&2 B	1.9	3027	2.3	3747	CHANNEL, POND, ECO–LEVEE, NATURAL SHORELINE, DRAINAGE SWALE
	RIP 12	0.2	–	0.9	–	RIP GROUND SURFACE TO 12 IN DEPTH PRIOR TO NATURAL SEDIMENT LEVEE FILL PLACEMENT
	TYPE 2&3	1.7	4307	1.9	7624	MATERIAL BELOW TYPE 1&2 A OR B EXCAVATION WITHIN CHANNEL

[1]REFER TO SHEETS C1.0 TO C1.6 FOR LOCATIONS BY KEY NOTES

MATERIAL EXCAVATION TYPES AND FILL LOCATIONS BY NUMBERED PRIORITY[1]

MATERIAL TYPE	MATERIAL FILL LOCATIONS BY NUMBERED PRIORITY
VEG SCRAPE	1) SHALLOW FILL
TYPE 1&2 A	1) NATURAL SEDIMENT LEVEE FILL; 2) ECO–LEVEE AND NATURAL SHORELINE 6" SOIL CAP; 3) SHALLOW FILL
TYPE 1&2 B	1) ECO–LEVEE AND NATURAL SHORELINE 6" SOIL CAP; 2) SHALLOW FILL; 3) DITCH FILL
TYPE 2&3	1) ECO–LEVEE AND NATURAL SHORELINE FILL CORE; 2) DITCH FILL; 3) SHALLOW FILL

[1]REFER TO SHEETS C1.0 TO C1.6 FOR LOCATIONS BY KEY NOTES; SHEET C6.0 FOR FILL CONSTRUCTION DETAILS

SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW THE APPROXIMATE EXTENT AND LOCATIONS OF SURFACE PREPARATION AND MATERIAL EXCAVATION ZONES; AND FILL LOCATIONS BY MATERIAL TYPES.
2. MATERIAL TYPES HAVE A NUMBERED PRIORITY OF USE BY FILL LOCATIONS.
3. RIP 12 CONSISTS OF RIPPING THE EXISTING GROUND AND VEGETATION TO A DEPTH OF 12 INCHES AS DIRECTED IN THE FIELD, PRIOR TO FILL PLACEMENT.
4. VEG SCRAPE CONSISTS OF EXCAVATING GROUND VEGETATION AND ROOT MASS WITH MINIMAL SOIL EXCAVATION BELOW ROOT MASS.
5. TYPE 1&2 A CONSISTS OF EXCAVATING GROUND VEGETATION, ROOT MASS, AND SUBSURFACE SOILS ABOVE 6 FT GROUND ELEVATION AS DIRECTED IN THE FIELD. THIS MATERIAL TARGETS SILTS, SILTY AND CLAYEY SANDS, AND CLAYEY SILTS, AND AVOIDS DENSE MEDIUM TO HIGH PLASTICITY CLAY.
6. TYPE 1&2 B CONSISTS OF EXCAVATING GROUND VEGETATION, ROOT MASS, AND SUBSURFACE SOILS TO AN APPROXIMATE DEPTH OF 6 TO 12 INCHES TO FIRM NATIVE SOIL AS DIRECTED IN THE FIELD. THIS MATERIAL TARGETS SILTS, SILTY AND CLAYEY SANDS, AND LOW PLASTICITY CLAY, AND SILTY CLAY, AND AVOIDS DENSE MEDIUM TO HIGH PLASTICITY CLAY.
7. TYPE 2&3 CONSISTS OF EXCAVATING CLEAN SOIL BELOW TYPE 1&2 A OR B EXCAVATION TO FINISH GRADE WITHIN CHANNELS ONLY, AND AS DIRECTED IN THE FIELD. THIS MATERIAL TARGETS CLAYEY SANDS AND SILTS, LOW PLASTICITY CLAY AND SILTY CLAY, AND DENSE MEDIUM TO HIGH PLASTICITY CLAY.
8. DEPENDING ON MOISTURE CONTENT TYPE 2&3 SOIL MAY REQUIRE DRYING PRIOR TO FINAL PLACEMENT.
9. QUANTITIES PROVIDED ON THIS SHEET ARE FOR INFORMATION ONLY. REFER TO SHEET G2 FOR PROJECT QUANTITIES.
10. REFER TO SPECIFICATIONS FOR EARTHWORKS.

125 0 125 250
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
No. 50713
CIVIL
STATE OF CALIFORNIA

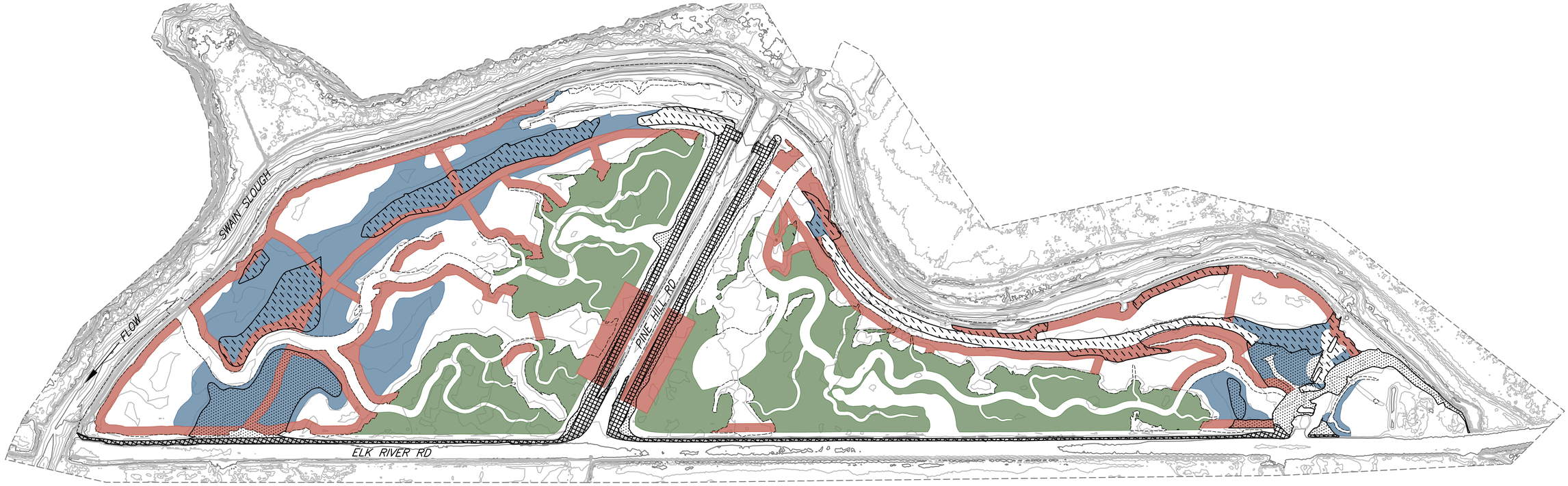
LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C2.0	SURFACE PREPARATION AND MATERIAL EXCAVATION ZONES	15 OF 34
DRAWN: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C2P0–SURFACE–PREPARATION–AND–MATERIAL–EXCAVATION–ZONES

SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW THE APPROXIMATE EXTENT AND LOCATIONS OF FINAL SURFACE TREATMENTS AND SEED AND MULCH ZONES.
2. REFER TO SPECIFICATIONS REGARDING RIPPING, DECOMPACTION, AND SEED AND MULCH FOR ADDITIONAL DETAILS.
3. RIP 6 CONSISTS OF RIPPING GROUND SURFACES OUTSIDE THE GRADING BOUNDARY APPROXIMATELY 6 INCHES AND AS DIRECTED IN THE FIELD. RIP 6 IS INTENDED TO BREAK UP THE EXISTING GROUND SURFACE VEGETATION AND ROOT MASS.
4. RIP 12 CONSISTS OF RIPPING FINISHED GRADE SURFACES APPROXIMATELY 12 INCHES AND AS DIRECTED IN THE FIELD. RIP 12 IS INTENDED TO RIP THROUGH THE SHALLOW FILL INTO THE UNDERLYING NATIVE GROUND AND BRING SURFACE VEGETATION ROOT MASS AND SEED TO THE SURFACE.
5. DECOMPACT CONSISTS OF DECOMPACTING AND RESTORATION TEMPORARY HAUL ROUTES, AND ACCESS, STOCKPILING, AND STAGING AREAS TO ORIGINAL GROUND OR DESIGN GRADE ELEVATIONS. DECOMPACTION CONSISTS OF RIPPING 12 TO 18 INCHES THROUGH COMPACTED LAYERS AS DIRECTED IN FIELD. ADDITIONAL DECOMPACTION MEASURES, SUCH AS TILLING OR PLOWING, MAY BE REQUIRED.
6. SEED AND MULCH WILL OCCUR FOLLOWING RIPPING AND DECOMPACTION, AND WITHIN THE AREAS SHOWN ON THIS DRAWING. SOME SEED AND MULCH AREAS DO NOT REQUIRE RIPPING; HOWEVER, DEPENDING ON CONTRACTOR METHODS AND FILL PLACEMENT TECHNIQUES THESE AREAS MAY BECOME OVERLY COMPACTED AND REQUIRE RIPPING PRIOR TO PLACING SEED AND MULCH.
7. RIPPING SHALL BE PARALLEL TO GROUND CONTOURS, AND/OR PARALLEL TO CHANNELS.
8. DEPENDING ON GROUND SURFACE CONDITIONS FOLLOWING RIPPING, SURFACE CROSS TRACKING OR TRACKING-IN WITH TRACKED EQUIPMENT MAY BE REQUIRED TO BREAK UP CLODS AND SMOOTH SURFACE AS DIRECTED IN THE FIELD.
9. QUANTITIES PROVIDED ON THIS SHEET ARE FOR INFORMATION ONLY. REFER TO SHEET G2 FOR PROJECT QUANTITIES.
10. NO RIPPING TO OCCUR WITHIN 10 FT WIDE GAS LINE SPECIAL ACCESS ZONE (SEE DETAIL 4, SHEET C6.0).



FINAL SURFACE TREATMENT AREAS AND ZONES

SHEET LEGEND	ZONE	AREA (ACRES)
	RIP 6 IN	5.4
	RIP 12 IN	7.7
	DECOMPACT	5.7
	SEED MIX 1	1.3
	SEED MIX 2	2.2
	SEED MIX 3	3.0

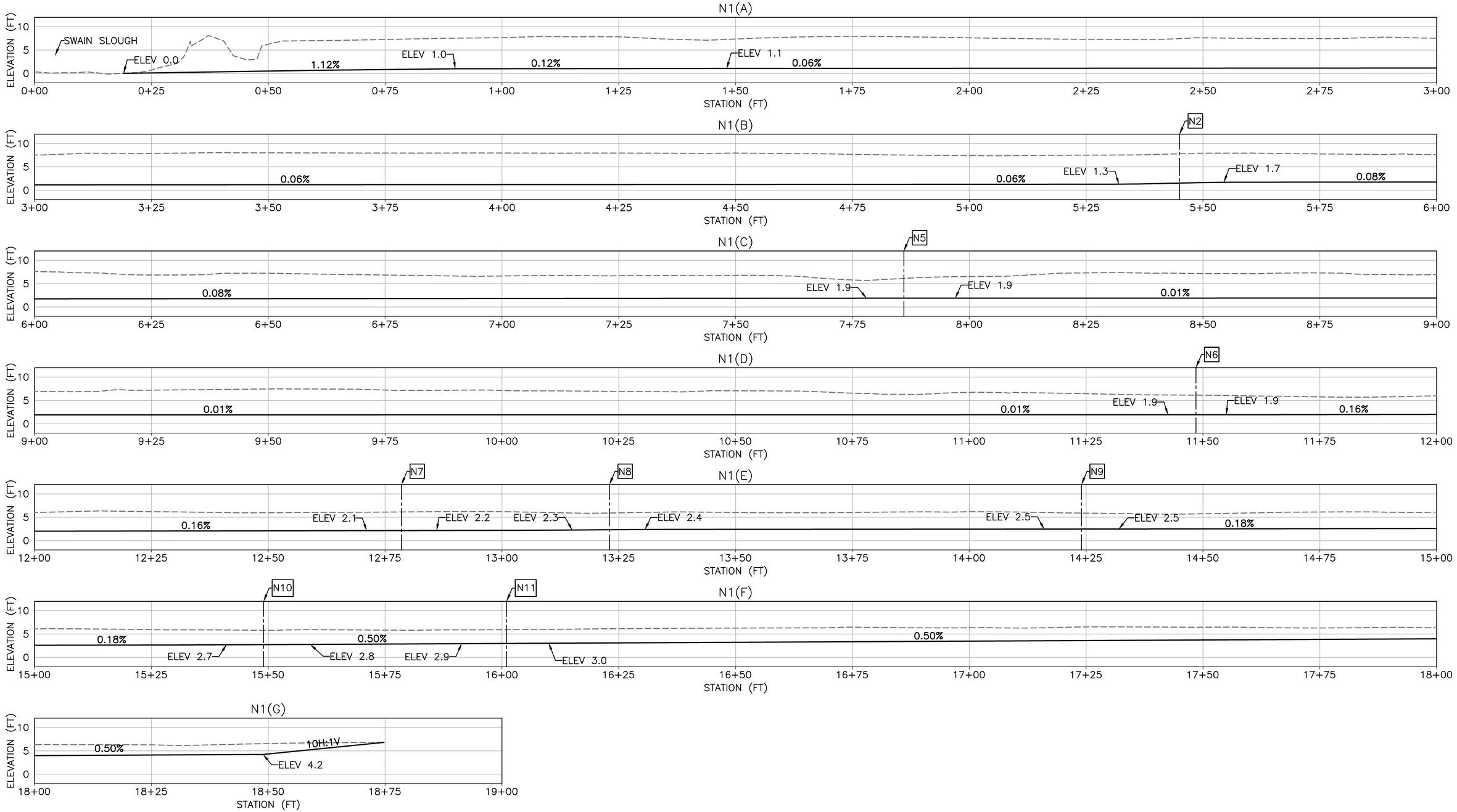
125 0 125 250
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C2.1	FINAL SURFACE TREATMENTS: RIPPING, DECOMPACTION, AND SEED AND MULCH	16 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/20/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:09 PM - By: LICENSED USER - R17.1 - File: C2P1-FINAL-SURFACE-TREATMENTS



SHEET NOTES:

1. SEE SITE OVERVIEW SHEET C1.0 FOR PROFILE ALIGNMENT LOCATION, AND ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.

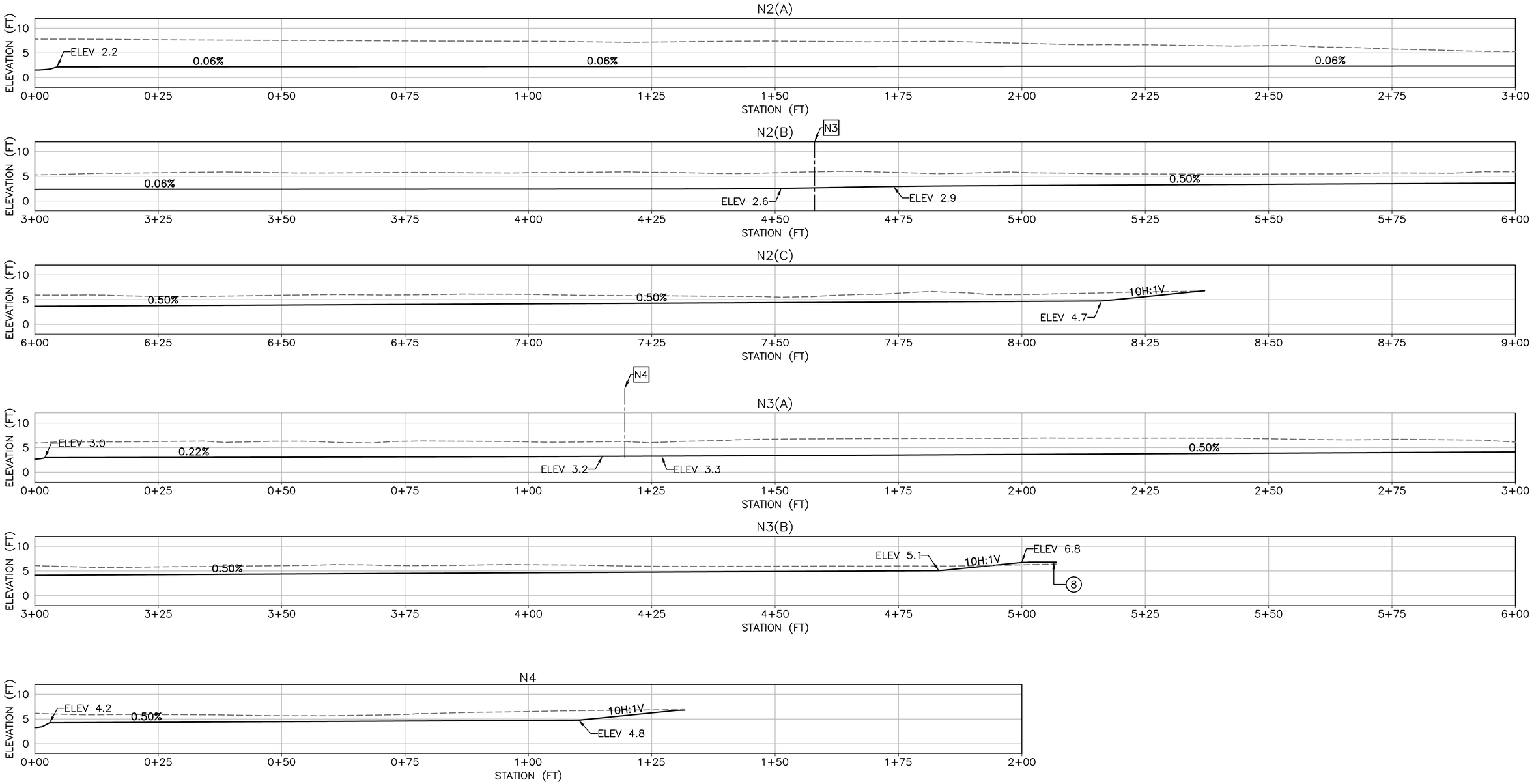
EXISTING GRADE PROFILE
DESIGN GRADE PROFILE

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C3.0	PROFILES 1	17 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C3P0-C3P8-SECTIONS-AND-PROFILES



SHEET NOTES:

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2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.

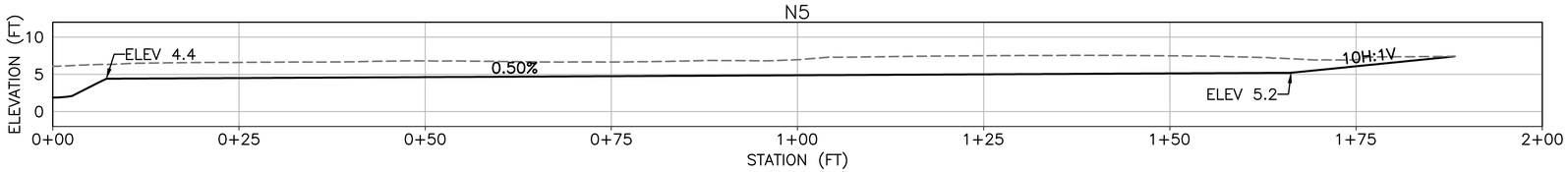
------ EXISTING GRADE PROFILE
——— DESIGN GRADE PROFILE

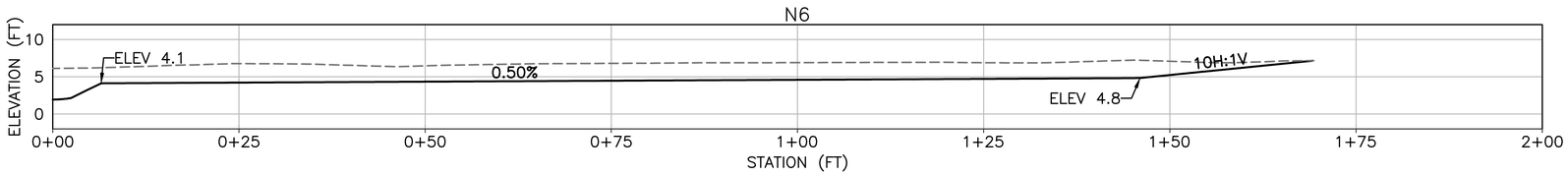
REGISTERED PROFESSIONAL ENGINEER
No. 50713
CIVIL
STATE OF CALIFORNIA

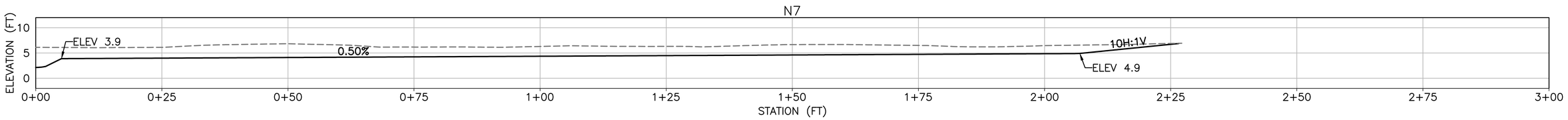
LOWER SWAIN SLOUGH PROJECT

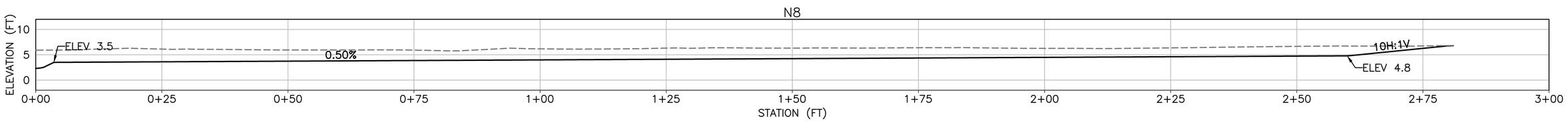
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C3.1	PROFILES 2	18 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

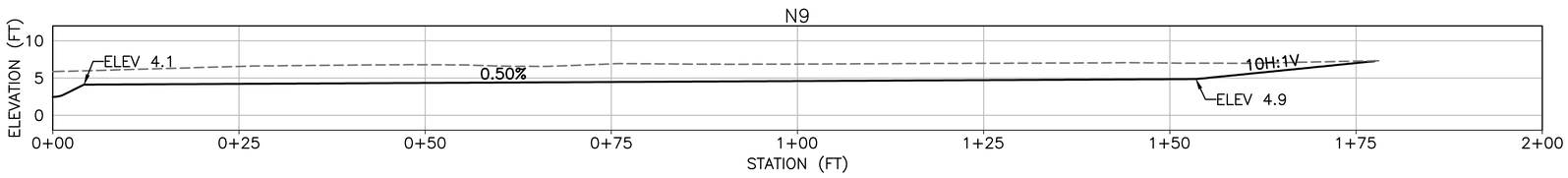
Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C3P0–C3P8–SECTIONS–AND–PROFILES

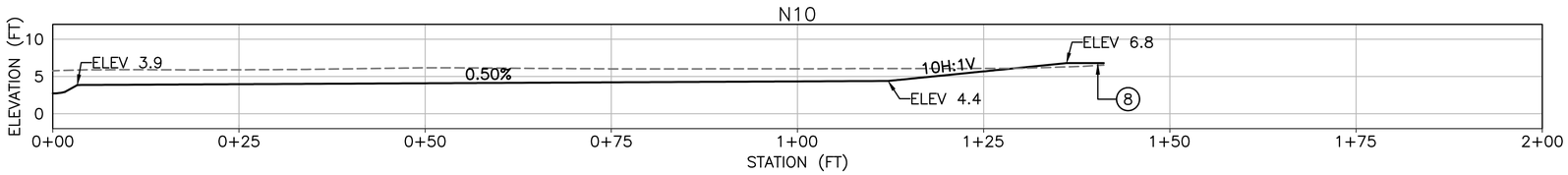


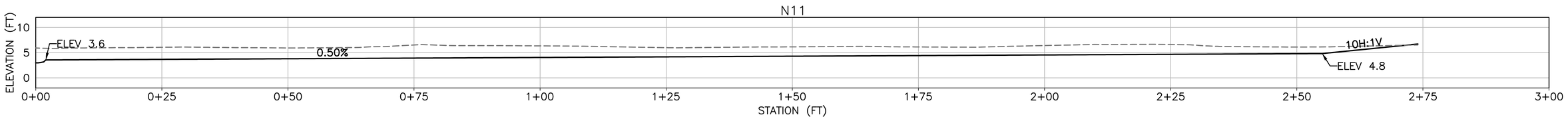












SHEET NOTES:
1. SEE SITE OVERVIEW SHEET C1.0 FOR PROFILE ALIGNMENT LOCATION, AND ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.

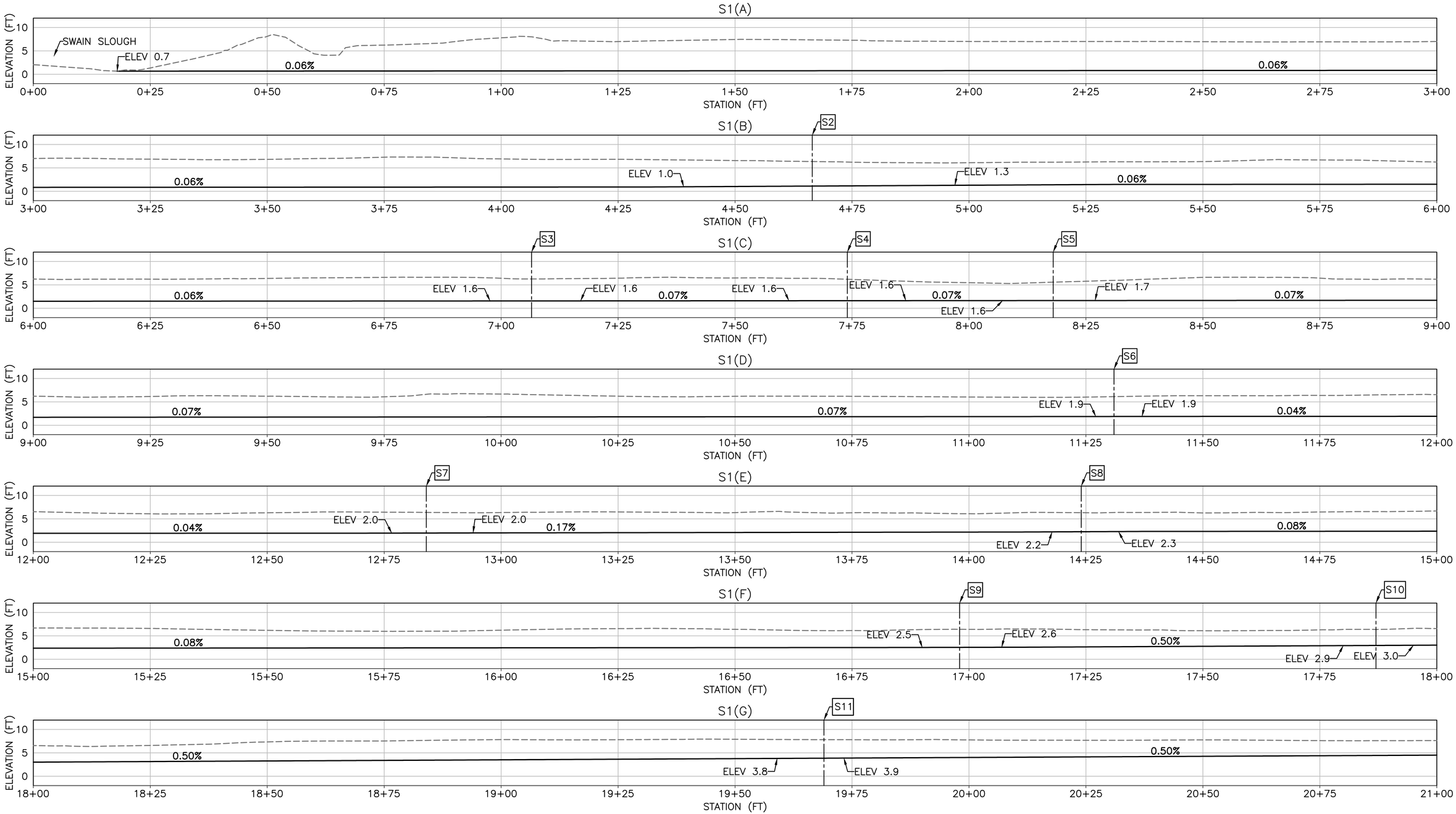
EXISTING GRADE PROFILE
DESIGN GRADE PROFILE

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C3.2	PROFILES 3	19 OF 34
DRAWN: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C3P0-C3P8-SECTIONS-AND-PROFILES



SHEET NOTES:

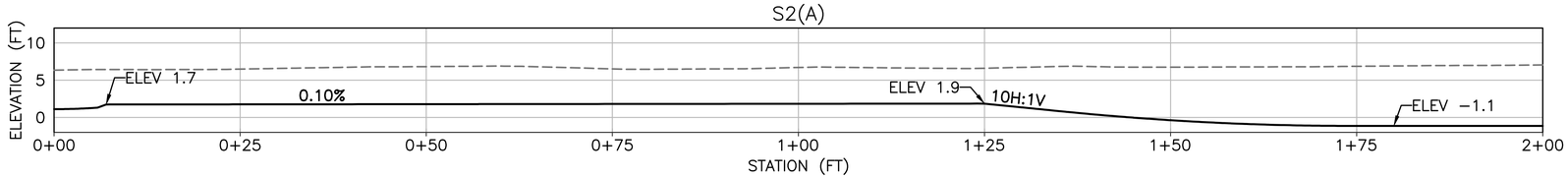
1. SEE SITE OVERVIEW SHEET C1.0 FOR PROFILE ALIGNMENT LOCATION, AND ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.

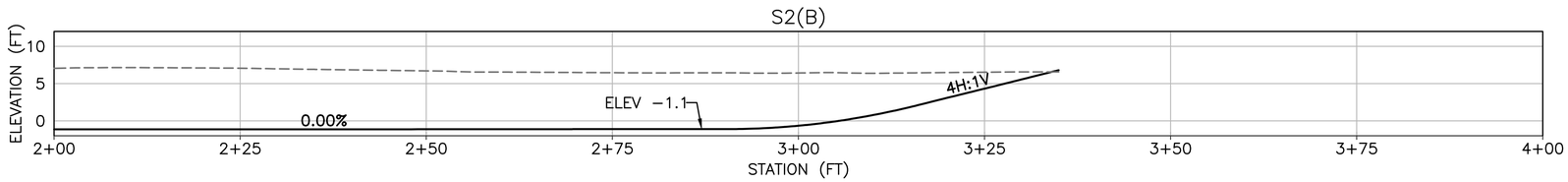
REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

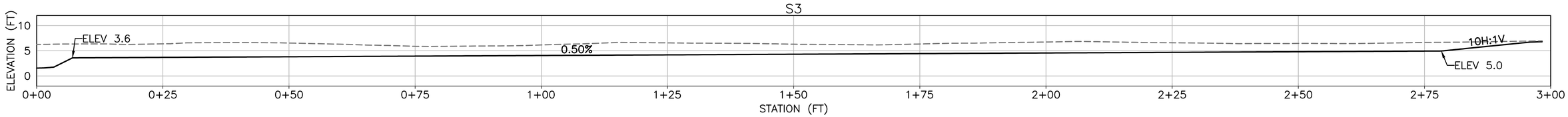
LOWER SWAIN SLOUGH PROJECT

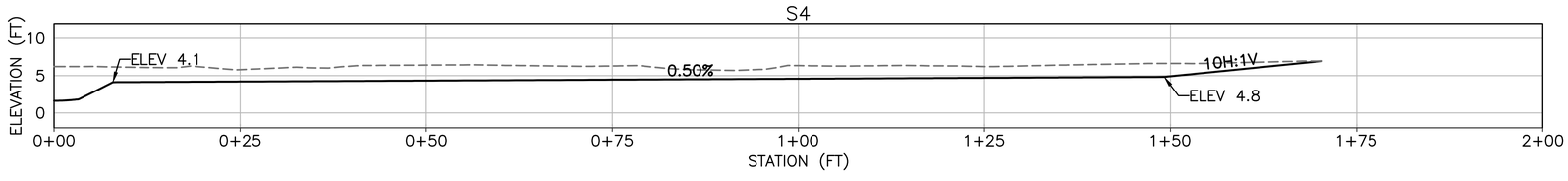
DESIGNED: NHE	SUB SHEET NO.	TITLE OF SHEET	SHEET
CADD TC	C3.3	PROFILES 4	20 OF 34
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

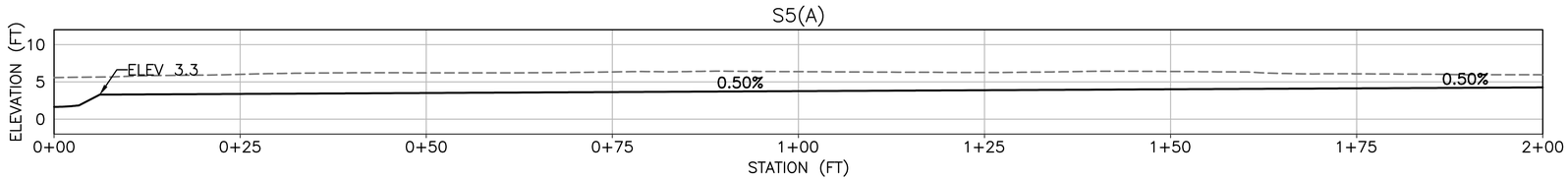
Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C3P0-C3P8-SECTIONS-AND-PROFILES

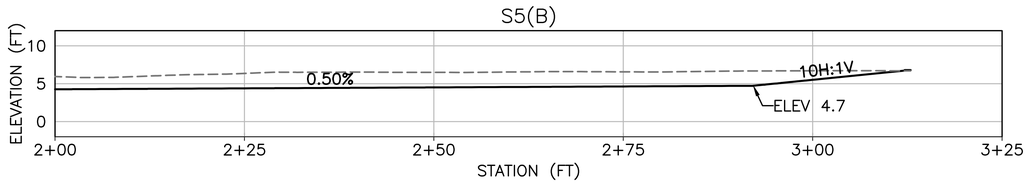


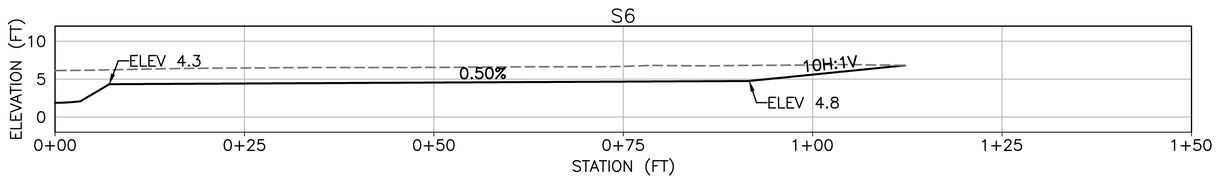












SHEET NOTES:
1. SEE SITE OVERVIEW SHEET C1.0 FOR PROFILE ALIGNMENT LOCATION, AND ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.

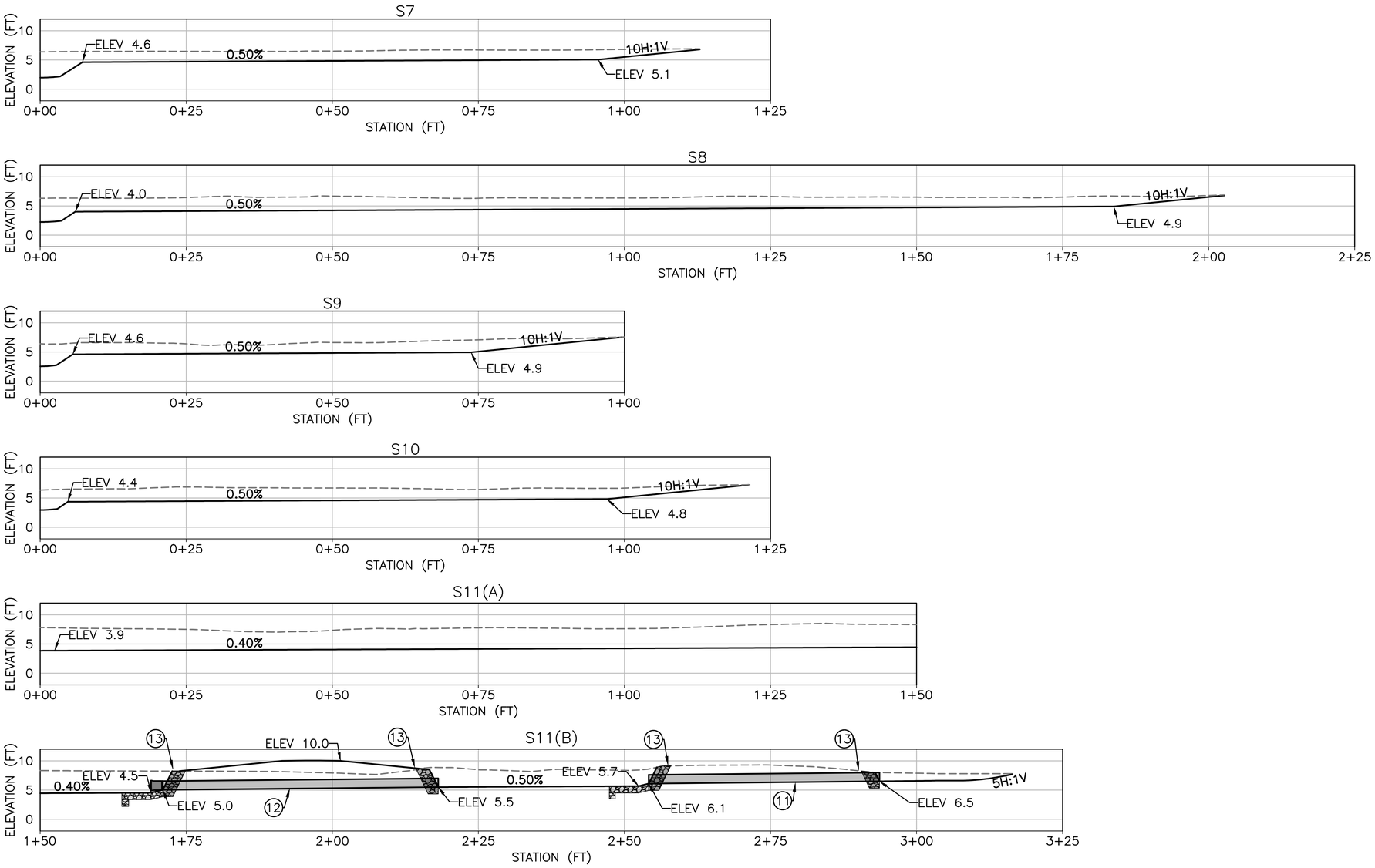
EXISTING GRADE PROFILE
DESIGN GRADE PROFILE

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. PECKHAM
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C3.4	PROFILES 5	21 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C3P0-C3P8-SECTIONS-AND-PROFILES



SHEET NOTES:

1. SEE SITE OVERVIEW SHEET C1.0 FOR PROFILE ALIGNMENT LOCATION, AND ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.
4. REFER TO SHEET C6.2 FOR ADDITIONAL CULVERT DETAILS.

EXISTING GRADE PROFILE

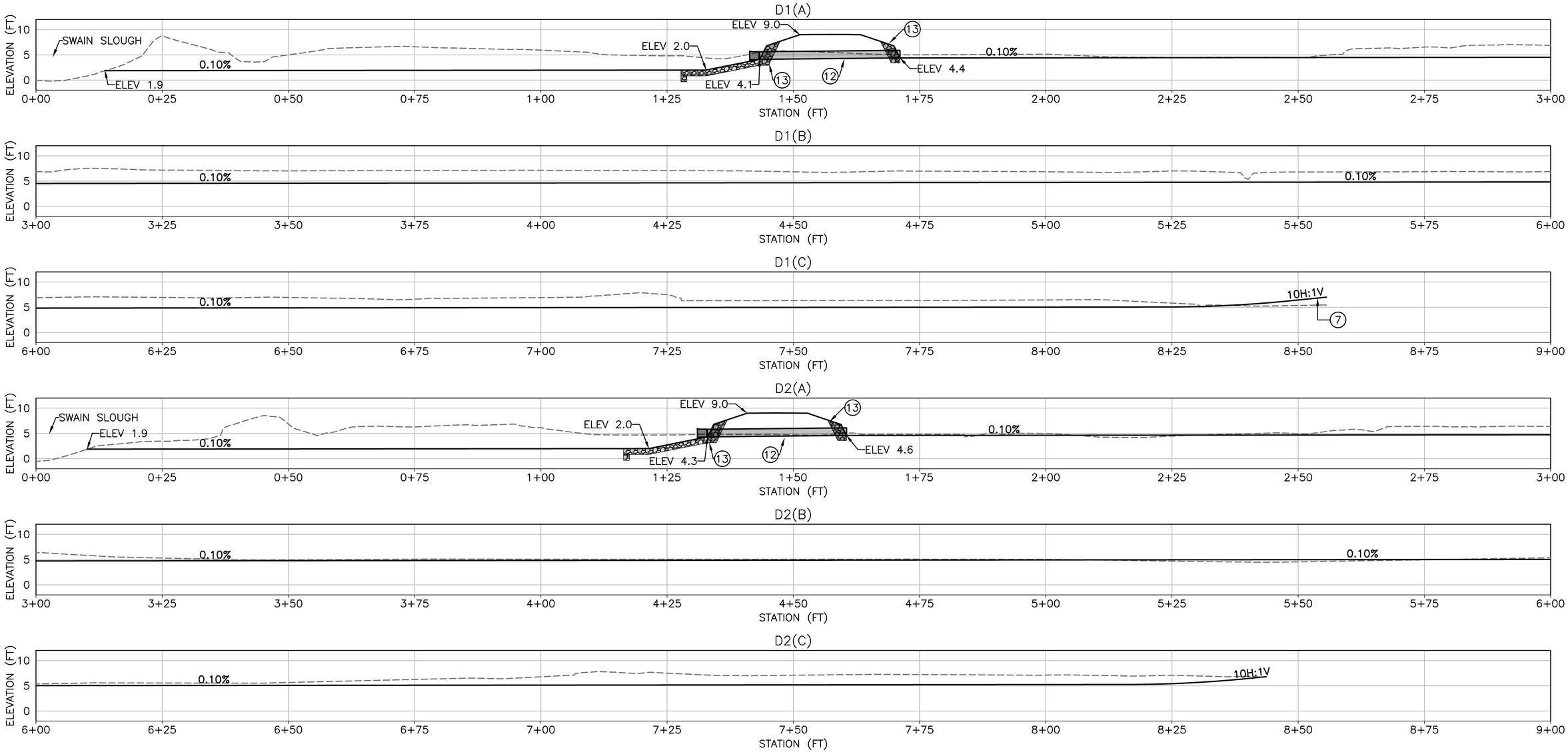
DESIGN GRADE PROFILE

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. NICHOLS
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C3.5	PROFILES 6	22 OF 34
DRAWN: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:09 PM – By: LICENSED USER – R17.1 – File: C3P0-C3P8-SECTIONS-AND-PROFILES



Plotted: 5/21/2026 2:10 PM – By: LICENSED USER – R17.1 – File: C3P0-C3P8-SECTIONS-AND-PROFILES

SHEET NOTES:

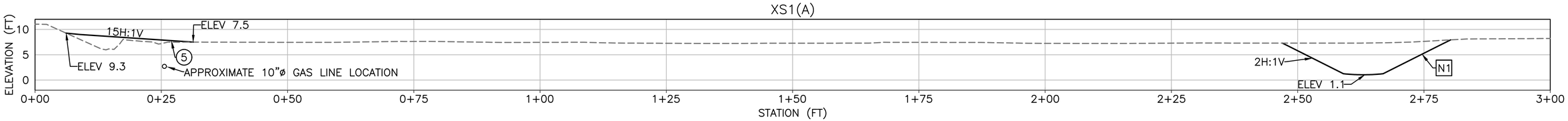
1. SEE SITE OVERVIEW SHEET C1.0 FOR PROFILE ALIGNMENT LOCATION, AND ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.
4. SEE SHEET C6.1 FOR ADDITIONAL CULVERT AND TIDE GATE DETAILS.

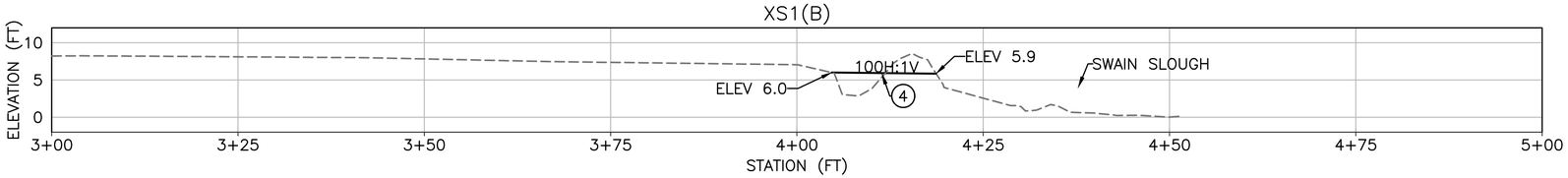
- - - - - - EXISTING GRADE PROFILE
——— DESIGN GRADE PROFILE

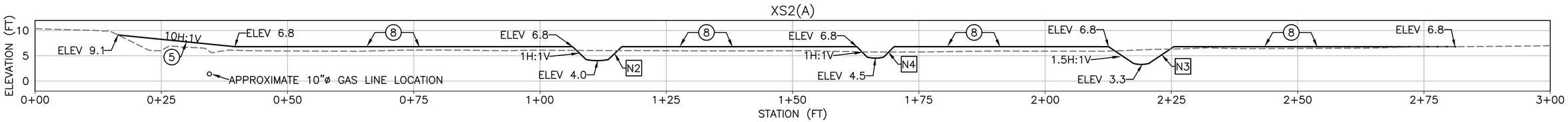
REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ACKERMAN
No. 50713
CIVIL
STATE OF CALIFORNIA

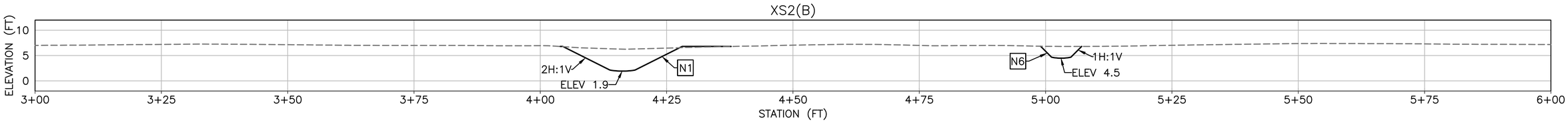
LOWER SWAIN SLOUGH PROJECT

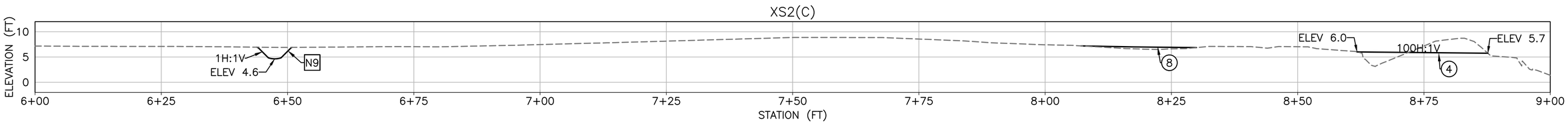
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE		PROFILES 7	23
CADD: TC	C3.6		OF
TECH. REVIEW: JKA, BP			34
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	











SHEET NOTES:

1. SEE SITE OVERVIEW SHEET C1.0 FOR PROFILE ALIGNMENT LOCATION, AND ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.
4. LOCATION OF 10" ø GAS LINE IS APPROXIMATE; SEE SPECIFICATIONS AND DETAIL 4, SHEET C6.0.

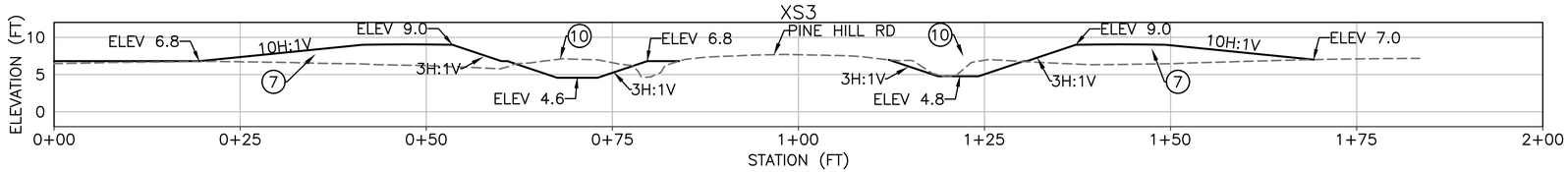
- - - - - - EXISTING GRADE PROFILE
——— DESIGN GRADE PROFILE

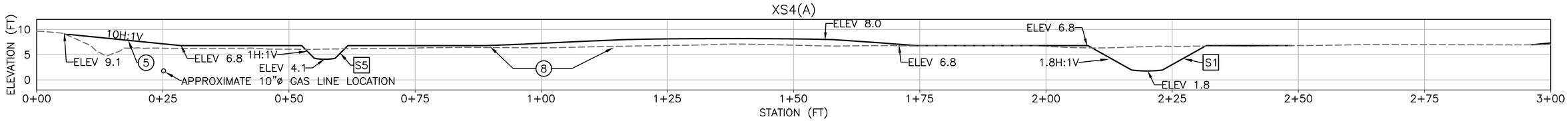
REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. INGRAM
No. 50713
CIVIL
STATE OF CALIFORNIA

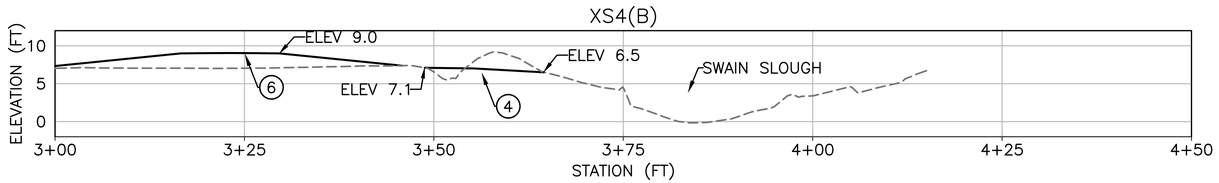
LOWER SWAIN SLOUGH PROJECT

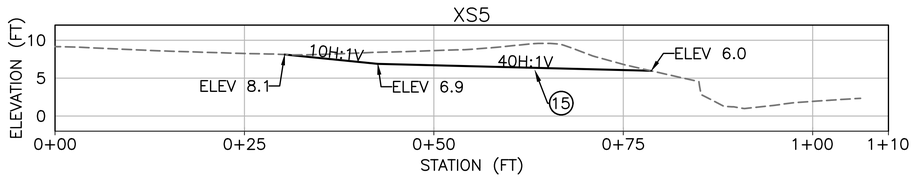
DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C3.7	SECTIONS 1	24 OF 34
DRAWN: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:10 PM – By: LICENSED USER – R17.1 – File: C3P0-C3P8-SECTIONS-AND-PROFILES









SHEET NOTES:

1. SEE SITE OVERVIEW SHEET C1.0 FOR PROFILE ALIGNMENT LOCATION, AND ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
2. NO VERTICAL EXAGGERATION; HORIZONTAL SCALE 1 IN = 10 FT.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.
4. LOCATION OF 10" ø GAS LINE IS APPROXIMATE; SEE SPECIFICATIONS AND DETAIL 4, SHEET C6.0.

- - - - - - EXISTING GRADE PROFILE
——— DESIGN GRADE PROFILE

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. ANDERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C3.8	SECTIONS 2	25 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

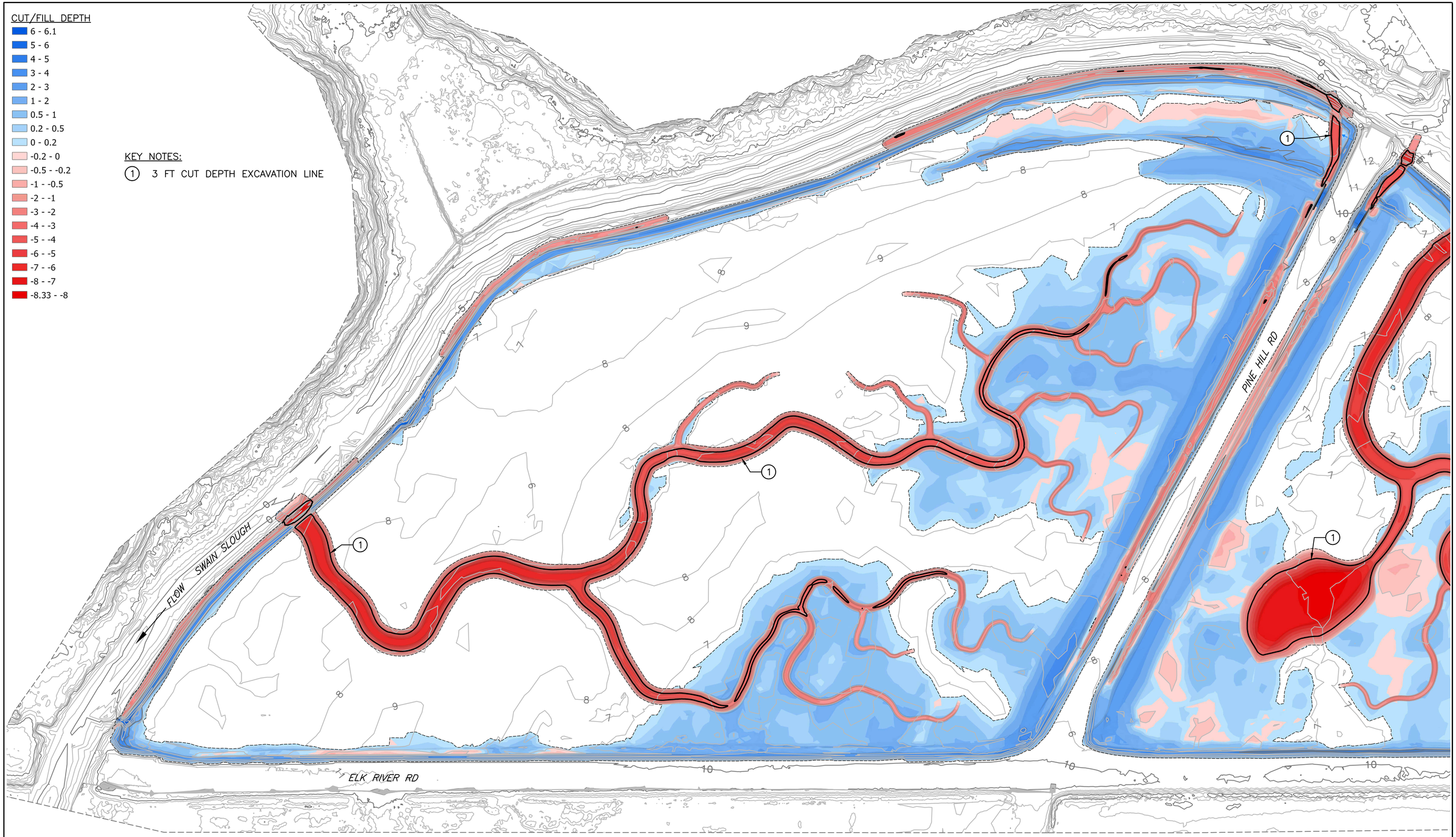
Plotted: 5/21/2026 2:10 PM - By: LICENSED USER - R17.1 - File: C3P0-C3P8-SECTIONS-AND-PROFILES

CUT/FILL DEPTH

- 6 - 6.1
- 5 - 6
- 4 - 5
- 3 - 4
- 2 - 3
- 1 - 2
- 0.5 - 1
- 0.2 - 0.5
- 0 - 0.2
- -0.2 - 0
- -0.5 - -0.2
- -1 - -0.5
- -2 - -1
- -3 - -2
- -4 - -3
- -5 - -4
- -6 - -5
- -7 - -6
- -8 - -7
- -8.33 - -8

KEY NOTES:

(1) 3 FT CUT DEPTH EXCAVATION LINE



SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW FINISHED GRADE CUT/FILL DEPTHS RELATIVE TO EXISTING GRADE.
2. OVER-EXCAVATION CUT DEPTHS ARE NOT SHOWON ON THIS SHEET.
3. LABELS REPRESENT CUT/FILL DEPTHS IN FEET RELATIVE TO EXISTING GRADE.
4. SEE SHEETS C1.0 TO C1.6 FOR ADDITIONAL GRADING DETAILS.
5. SEE SHEET G2 FOR EARTHWORK VOLUMES SUMMARY.
6. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

60 0 60 120
SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. PIERSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C4.0	ISOPACH 1	26 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:10 PM – By: LICENSED USER – R17.1 – File: C4P0-ISOPACH

KEY NOTES:

(1) 3 FT CUT DEPTH EXCAVATION LINE

CUT/FILL DEPTH

- 6 - 6.1
- 5 - 6
- 4 - 5
- 3 - 4
- 2 - 3
- 1 - 2
- 0.5 - 1
- 0.2 - 0.5
- 0 - 0.2
- -0.2 - 0
- -0.5 - -0.2
- -1 - -0.5
- -2 - -1
- -3 - -2
- -4 - -3
- -5 - -4
- -6 - -5
- -7 - -6
- -8 - -7
- -8.33 - -8

PINE HILL RD

SWAIN SLOUGH

FLOW

ELK RIVER RD

SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW FINISHED GRADE CUT/FILL DEPTHS RELATIVE TO EXISTING GRADE.
2. OVER-EXCAVATION CUT DEPTHS ARE NOT SHOWON ON THIS SHEET.
3. LABELS REPRESENT CUT/FILL DEPTHS IN FEET RELATIVE TO EXISTING GRADE.
4. SEE SHEETS C1.0 TO C1.6 FOR ADDITIONAL GRADING DETAILS.
5. SEE SHEET G2 FOR EARTHWORK VOLUMES SUMMARY.
6. CULTURAL MONITOR REQUIRED TO BE ONSITE FOR ANY EXCAVATION BELOW 3 FT DEPTH.

60 0 60 120

SCALE OF FEET

REGISTERED PROFESSIONAL ENGINEER
JEFFREY A. MORRIS
No. 50713
CIVIL
STATE OF CALIFORNIA

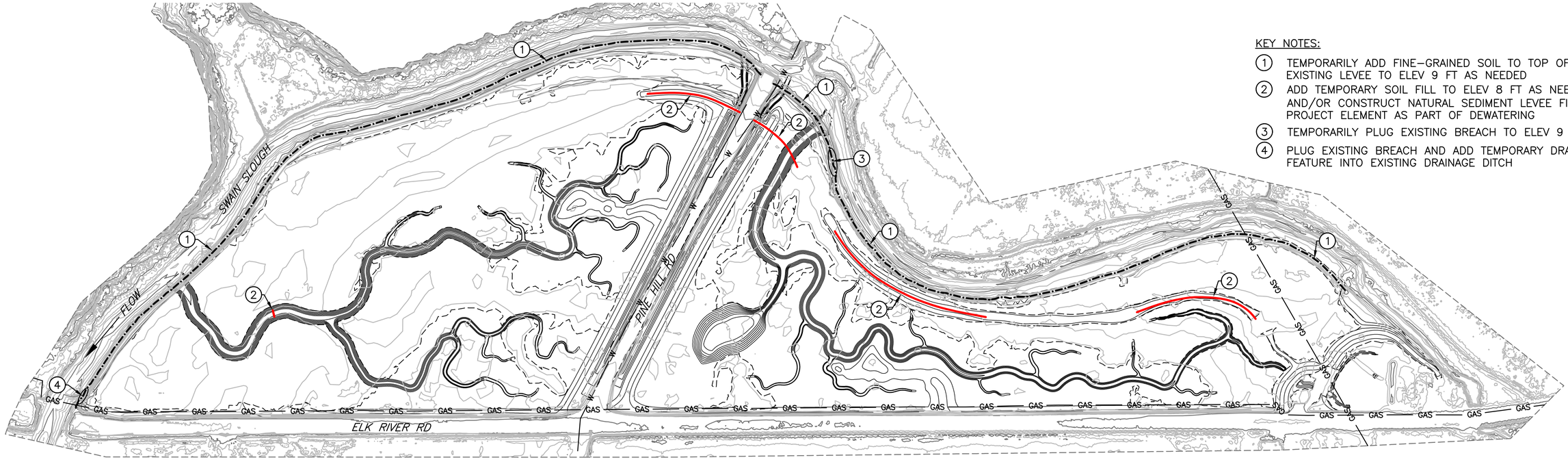
LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C4.1	ISOPACH 2	27 OF 34
DRAWN: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:10 PM – By: LICENSED USER – R17.1 – File: C4P0-ISOPACH

SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO DEMONSTRATE POTENTIAL WATER PREVENTION AND DEWATERING FEATURES.
2. CONTRACTOR SHALL DEVELOP A SEDIMENT MANAGEMENT AND DEWATERING PLAN AND SUBMIT TO PROJECT TEAM FOR APPROVAL PRIOR TO SITE CONSTRUCTION ACTIVITIES. DEWATERING PLAN SHALL ADDRESS SITE SEDIMENT/STORMWATER, DEWATERING, AND CONSTRUCTION WATER MANAGEMENT, AND COMPLY WITH ALL PERMIT REQUIREMENTS, AND PROJECT PLANS AND SPECIFICATIONS.
3. NO PERENNIAL STREAMS EXIST WITHIN THE GRADING BOUNDARY, EXCEPT SWAIN SLOUGH.
4. PORTIONS OF THE PROJECT SITE CURRENTLY FLOOD DURING HIGH TIDES THROUGH EXISTING LEVEE BREACHES AND LOW ELEVATION SPOTS, AND INTERNAL DRAINAGE DITCHES.
5. SHALLOW GROUNDWATER EXISTS WITHIN THE GRADING BOUNDARY, AND WILL DISCHARGE TO THE EXISTING DRAINAGE DITCH AND OTHER LOW GROUND ELEVATION AREAS.
6. CONSTRUCTION WATER WILL NEED TO BE MANAGED ONSITE AS DIRECTED IN THE SPECIFICATIONS.
7. EXISTING LEVEE BREACHES SHOULD BE PLUGGED TO 9 FT ELEVATION.
8. APPROXIMATELY 2,700 FT OF EXISTING LEVEE SHOULD BE RAISED TO 9 FT ELEVATION (ABOUT 0.5 TO 1 FT FILL DEPTH) USING FINE-GRAINED SOILS BORROWED LANDWARD OF THE LEVEE AND NEAR THE EXISTING DRAINAGE DITCH. FILL CAN BE PLACED ON THE TOP AND LANDWARD SIDE SLOPE OF THE EXISTING LEVEE. NO EXCAVATION OR FILL PLACEMENT CAN OCCUR ON THE SWAIN SLOUGH SIDE SLOPE OF THE EXISTING LEVEE.
9. BARRIERS CONSTRUCTED TO ELEVATION 9 FT SHOULD PREVENT FLOODING TO THE SITE FROM HIGH TIDE DURING CONSTRUCTION.
10. FOLLOWING CONSTRUCTION OF REMAINING PROJECT ELEMENTS, THE EXISTING LEVEE AND TEMPORARY FILL MATERIAL CAN BE REMOVED AND USED TO FILL THE EXISTING DRAINAGE DITCH AND BORROW AREAS. THIS IS PART OF THE REMOVE LEVEE, FILL DITCH PROJECT ELEMENT (SEE SHEET C1.0 TO C1.6).
11. SOME GRADING WILL NEED TO BE CONDUCTED DURING LOW TIDE PERIODS WHEN TIDAL WATER IS BELOW GRADING/GROUND ELEVATIONS.
12. CONTRACTOR MAY CONSTRUCT THE NATURAL SEDIMENT LEVEE FILL PROJECT ELEMENT (SEE SHEET C1.0 TO C1.6) INITIALLY AS PART OF DEWATERING TO PROVIDE THE SECONDARY BARRIER FEATURE (KEY NOTE 2 ON THIS SHEET) TO PROTECT AGAINST TIDAL FLOODING.
13. A TEMPORARY DRAINAGE FEATURE WILL NEED TO BE CONSTRUCTED TO DRAIN WATER FROM THE EXISTING DRAINAGE DITCH. SOME OPTIONS INCLUDE DEWATERING PUMP OR TEMPORARY CULVERT AND TIDE GATE AT THE EXISTING LEVEE BREACH LOCATION (KEY NOTE 4 ON THIS SHEET). REFER TO SPECIFICATIONS FOR MORE DETAIL REGARDING DEWATERING SITE AND CONSTRUCTION WATER.
14. CHANNEL CONSTRUCTION IN SWAIN SLOUGH WILL REQUIRE CONSTRUCTION DURING LOW TIDE PERIODS ONLY AND BELOW WATER LEVEL EXCAVATION.
15. DESIGN GRADING BOUNDARY AND CONTOURS SHOWN FOR CLARITY.
16. ACCUMULATED GROUND WATER OR OTHER CLEAR WATER FROM THE SITE CAN BE DISCHARGED TO SWAIN SLOUGH DURING SLACK AND/OR EBB TIDE PERIODS.
17. DIRTY CONSTRUCTION WATER WILL NEED TO BE STORED AND ALLOWED TO SETTLE FOR 48 HOURS. AFTER SETTLING CONSTRUCTION WATER CAN BE DISCHARGED TO SWAIN SLOUGH DURING SLACK AND/OR EBB TIDE PERIODS.
18. CHANNEL EXCAVATION AREAS CAN BE USED TO STORE CONSTRUCTION WATER.
19. DESIGN CONTOURS (1 FT INTERVAL) SHOWN FOR CLARITY. GRADING FOR DEWATERING OR WATER PREVENTION WILL OCCUR TO EXISTING SITE GRADES.



KEY NOTES:

1. TEMPORARILY ADD FINE-GRAINED SOIL TO TOP OF EXISTING LEVEE TO ELEV 9 FT AS NEEDED
2. ADD TEMPORARY SOIL FILL TO ELEV 8 FT AS NEEDED, AND/OR CONSTRUCT NATURAL SEDIMENT LEVEE FILL PROJECT ELEMENT AS PART OF DEWATERING
3. TEMPORARILY PLUG EXISTING BREACH TO ELEV 9 FT
4. PLUG EXISTING BREACH AND ADD TEMPORARY DRAINAGE FEATURE INTO EXISTING DRAINAGE DITCH

SHEET LEGEND

EXISTING LEVEE TOP FILL TO 9 FT ELEV

TEMPORARY FILL BARRIER TO 8 FT ELEV

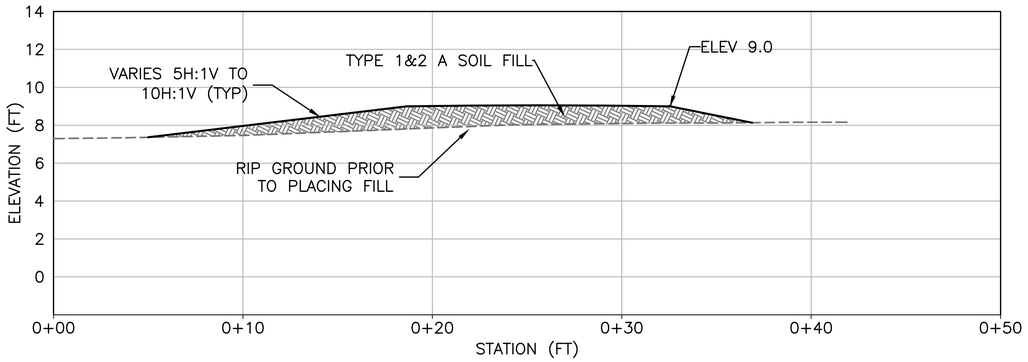
125 0 125 250

SCALE OF FEET

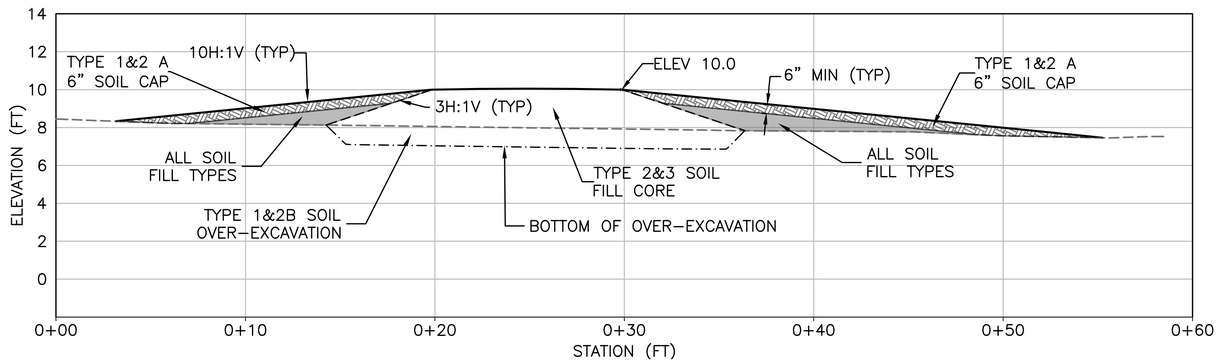
REGISTERED PROFESSIONAL ENGINEER
BENJAMIN PARKER
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT			
DESIGNED: NHE DRAWN: TC TECH. REVIEW: JKA, BP DATE: 05/19/2026	SUB SHEET NO. C5.0	TITLE OF SHEET DEWATERING AND WATER PREVENTION PLAN HUMBOLDT COUNTY, CA	SHEET 28 OF 34

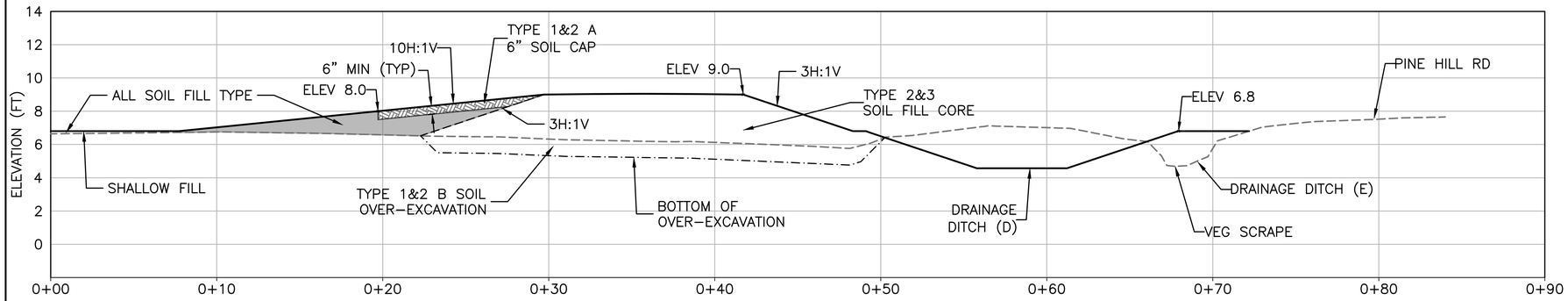
Plotted: 5/21/2026 2:10 PM - By: LICENSED USER - R17.1 - File: C5P0-DEWATERING-AND-WATER-PREVENTION-PLAN



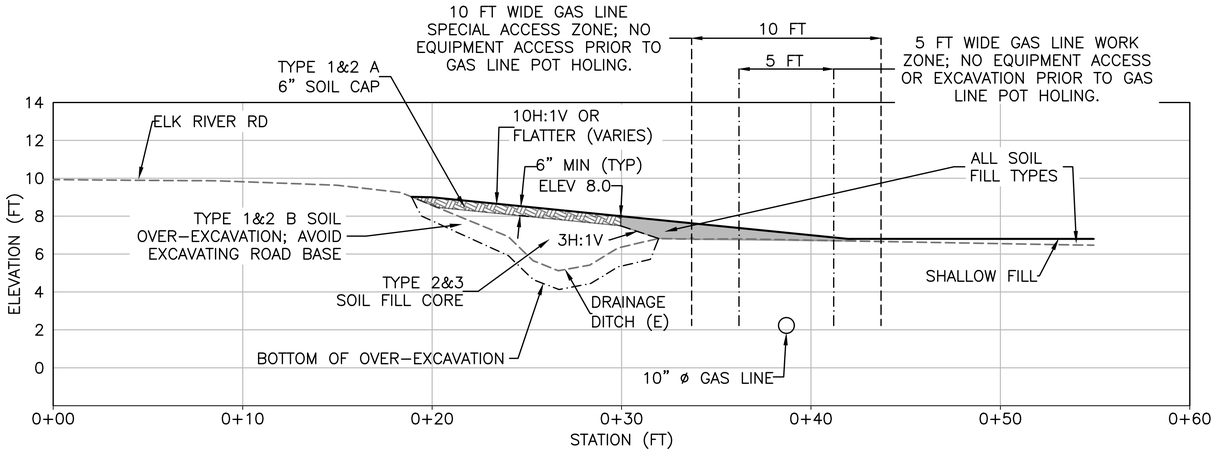
DETAIL 1: NATURAL SEDIMENT LEVEE FILL TYPICAL SECTION



DETAIL 3: ECO-LEVEE B TYPICAL SECTION



DETAIL 2: ECO-LEVEE A TYPICAL SECTION



DETAIL 4: NATURAL SHORELINE TYPICAL SECTION

SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW TYPICAL DETAILS OF THE ECO-LEVEES, NATURAL SEDIMENT LEVEE FILL, AND NATURAL SHORELINE.
2. ALL DETAIL VIEWS ON THIS DRAWING HAVE NO VERTICAL EXAGGERATION.
3. REFER TO SHEETS C1.0 TO C1.6, AND C3.7 TO C3.8 FOR GREATER DETAIL REGARDING THE GRADING AND FILL PLACEMENT WITHIN ECO-LEVEE, NATURAL SEDIMENT LEVEE FILL, AND NATURAL SHORELINE REGIONS.
4. ADDITIONAL DETAIL ON SOIL PREPARATION AND MATERIAL EXCAVATION ZONES PROVIDED ON SHEET C2.0.
5. ADDITIONAL DETAIL ON FINAL SURFACE TREATMENTS PROVIDED ON SHEET C2.1.
6. REFER TO SPECIFICATIONS FOR GAS LINE POT HOLING REQUIREMENTS, AND EQUIPMENT AND EXCAVATION RESTRICTIONS WITHIN 10 FT WIDE GAS LINE SPECIAL ACCESS ZONE AND 5 FT WIDE GAS LINE WORK ZONE SHOWN ON SHEETS C1.1-1.4.
7. GAS LINE POT HOLING LOCATIONS SHOWN ON SHEETS C1.1-C1.4.
8. IF TYPE 1&2 A MATERIAL IS NOT AVAILABLE FOR 6" SOIL CAP ON ECO-LEVEE OR NATURAL SHORELINE, THEN TYPE 1&2 B MATERIAL MAY BE USED AS DIRECTED IN FIELD.
9. HATCHING FOR TYPE 1&2 A, TYPE 1&2 A 6" SOIL CAP, AND ALL SOIL FILL TYPES SHOWN FOR CLARITY ON THIS SHEET ONLY.

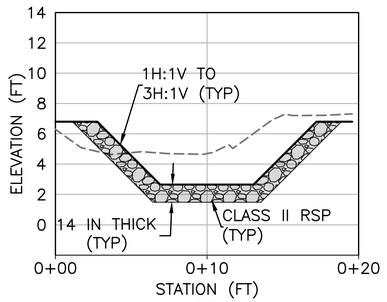
EXISTING GRADE PROFILE
DESIGN GRADE PROFILE

REGISTERED PROFESSIONAL ENGINEER JEFFREY K. ANDERSON No. 50713 CIVIL STATE OF CALIFORNIA

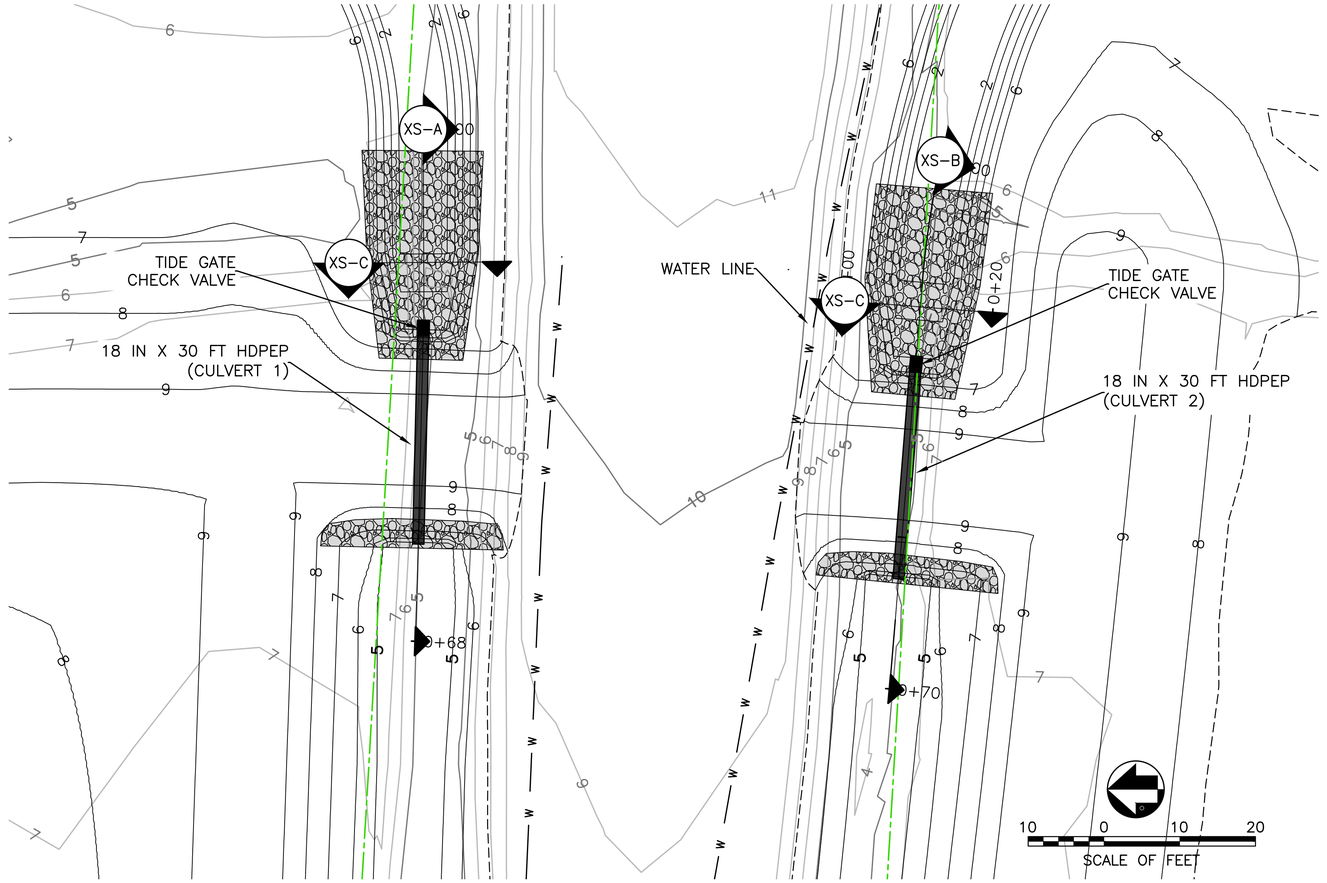
LOWER SWAIN SLOUGH PROJECT			
DESIGNED: NHE CADD: TC TECH. REVIEW: JKA, BP DATE: 05/19/2026	SUB SHEET NO. C6.0	TITLE OF SHEET DETAILS 1 HUMBOLDT COUNTY, CA	SHEET 29 OF 34

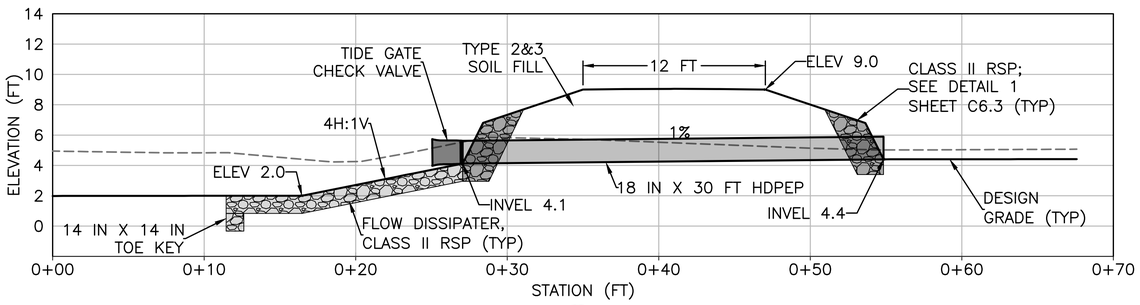
Plotted: 5/21/2026 2:10 PM - By: LICENSED USER - R17.1 - File: C6P0-DETAIL1-EARTHWORK

EXAMPLE OF TIDE GATE CHECK VALVE INSTALLED AT COCHRAN CK, HUMBOLDT COUNTY

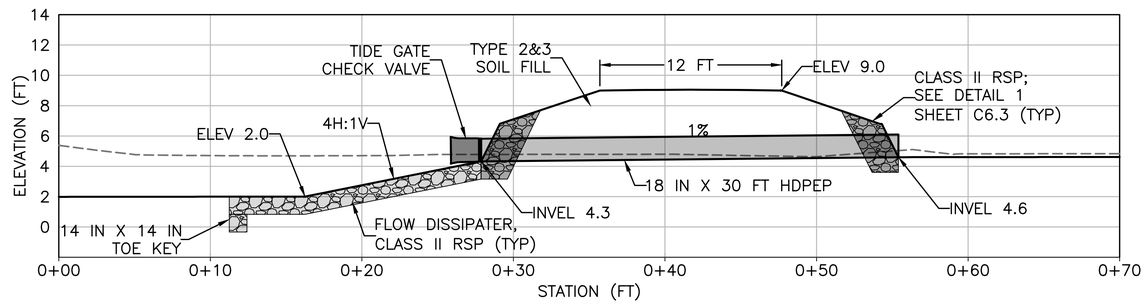


XS-C FLOW DISSIPATER SECTION





XS-A CULVERT 1 PROFILE



XS-B CULVERT 2 PROFILE

SHEET NOTES:

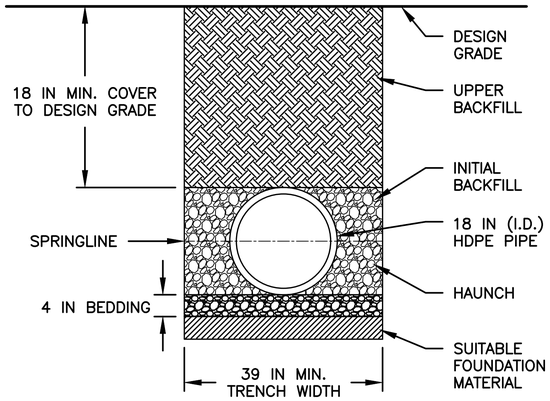
1. THE INTENT OF THIS DRAWING IS TO SHOW ZOOMED DRAINAGE INFRASTRUCTURE PLANVIEW AND DETAILS.
2. ALL SECTION VIEWS ON THIS DRAWING HAVE NO VERTICAL EXAGGERATION.
3. REFER TO SHEET 6.2 AND SPECIFICATIONS FOR ADDITIONAL CULVERT DETAILS.

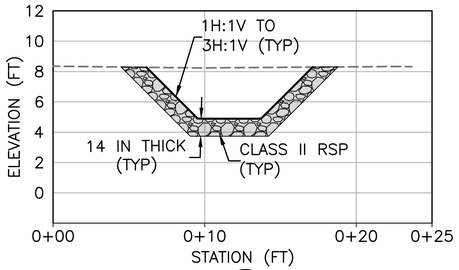
REGISTERED PROFESSIONAL ENGINEER
JEFFREY M. JACKSON
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C6.1	DETAILS 2	30 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:10 PM - By: LICENSED USER - R17.1 - File: C6P1-DETAIL2-TG-DETAIL





XS-C — FLOW DISSIPATER SECTION

CULVERT NOTES:

1. SEE SPECIFICATIONS FOR PIPE MATERIAL TYPE AND TRENCH BACKFILL REQUIREMENTS.

2. ALL PIPE SYSTEMS SHALL BE INSTALLED AS SHOWN ON THE PLANS, IN ACCORDANCE WITH ASTM D2321, MANUFACTURE RECOMMENDED INSTALLATION GUIDELINES, AND COUNTY AND CALTRANS STANDARDS.

3. FOUNDATION: IT IS ANTICIPATED THAT NATIVE SOILS WILL BE SUITABLE FOUNDATION MATERIAL. HOWEVER, WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE PROJECT ENGINEER AND REPLACED WITH SUITABLE MATERIAL AS SPECIFIED BY THE PROJECT ENGINEER.

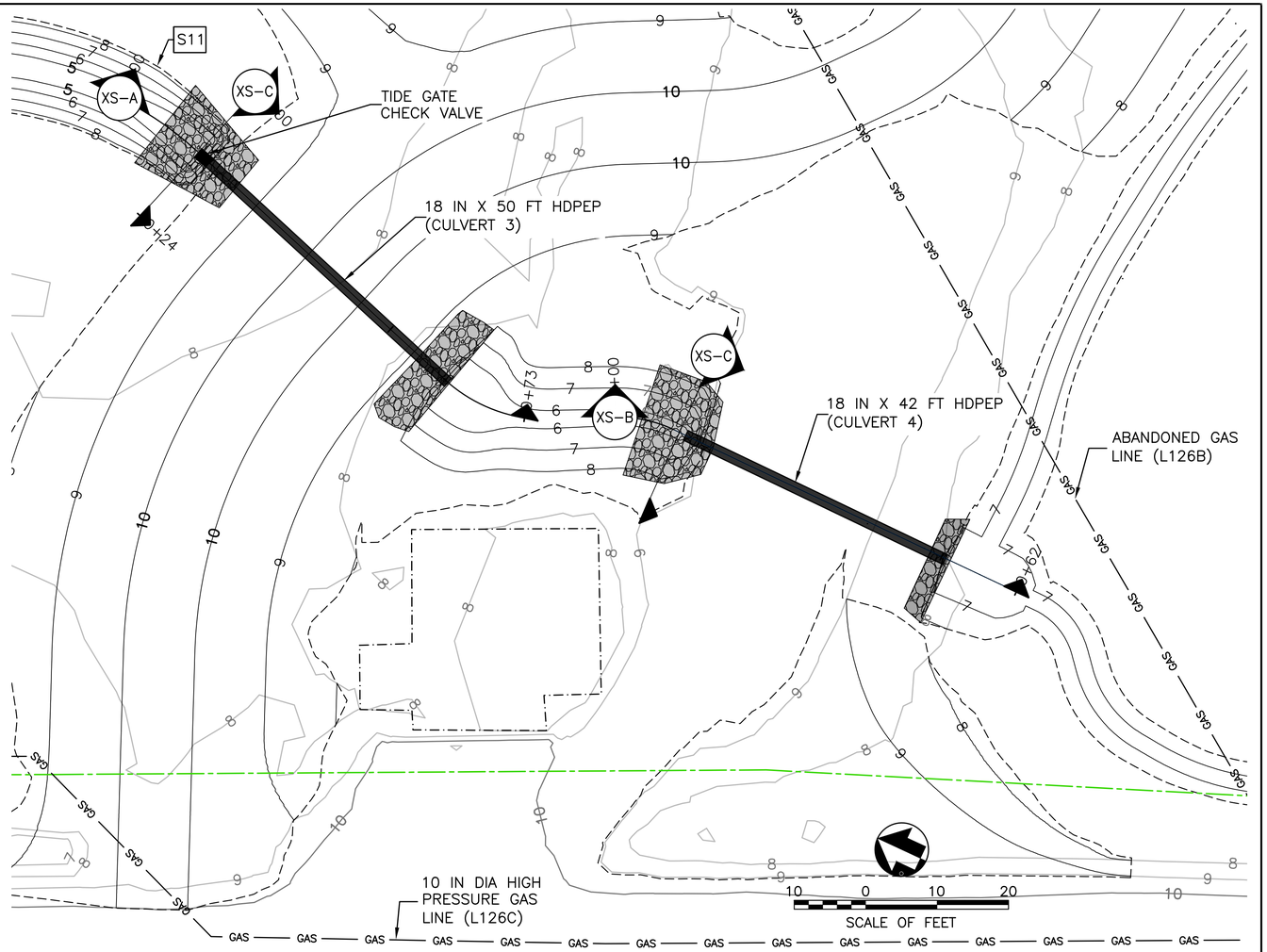
4. BEDDING: TRENCH BEDDING SHALL BE ¾" MAX CLASS 2 AGGREGATE BASE COMPACTED TO APPROXIMATELY 95% RELATIVE COMPACTION. THE CONTRACTOR SHALL MAKE A REASONABLE ATTEMPT TO COMPACT THE BEDDING TO 95% RELATIVE COMPACTION. COMPACTION TESTING WILL NOT BE REQUIRED. OWNER RESERVES THE RIGHT TO TEST COMPACTION IF CONTRACTORS WORK QUALITY WARRANTS.

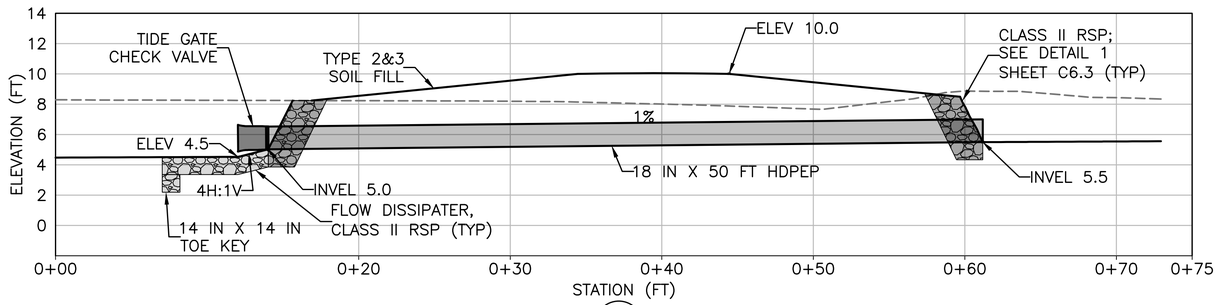
THE BEDDING MATERIAL BENEATH THE PIPE AND FITTINGS/COUPLINGS SHALL BE REMOVED AS NECESSARY TO FULLY SUPPORT THE FULL LENGTH OF PIPE.

5. TRENCH INITIAL BACKFILL: TRENCH BACKFILL SHALL BE ¾" MAX CLASS 2 AGGREGATE BASE PLACED IN LIFTS NO GREATER THAN 12" THICK, AND COMPACTED TO 90% RELATIVE COMPACTION. THE CONTRACTOR SHALL MAKE A REASONABLE ATTEMPT TO COMPACT THE BACKFILL TO 90% RELATIVE COMPACTION. COMPACTION WITHIN THE HAUNCH ZONE SHALL BE WITH 'J' BAR OR PNEUMATIC 'POGO' STICK.

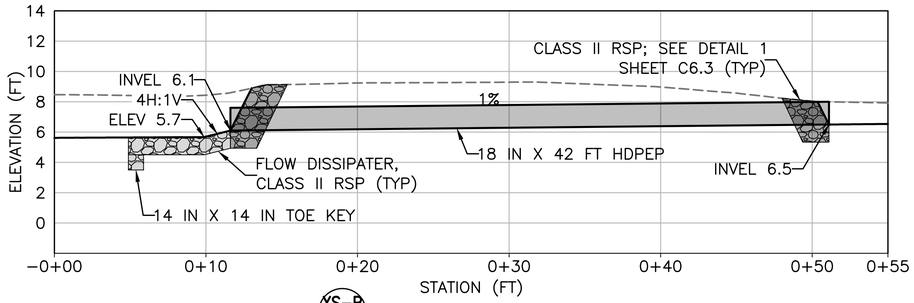
6. TRENCH UPPER BACKFILL: TRENCH BACKFILL ABOVE THE INITIAL BACKFILL WILL BE WITH NATIVE SOILS OR TYPE 2&3 SOIL AND COMPACTED TO 85% OR GREATER RELATIVE COMPACTION.

7. MINIMUM COVER: MINIMUM COVER SHALL BE 18" OR AS INDICATED ON THE PLANS.





XS-A — CULVERT 3 PROFILE



XS-B — CULVERT 4 PROFILE

SHEET NOTES:

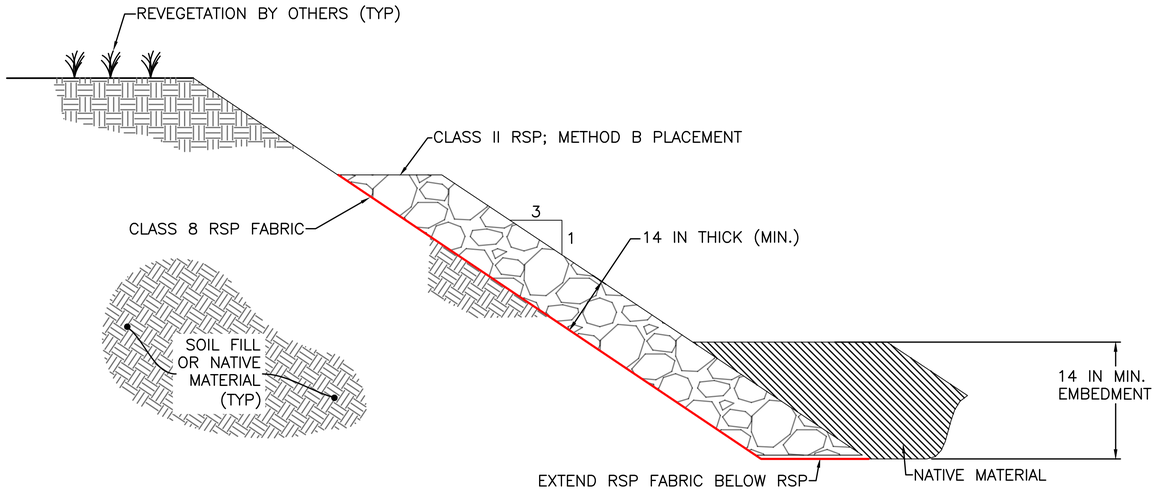
1. THE INTENT OF THIS DRAWING IS TO SHOW ZOOMED DRAINAGE INFRASTRUCTURE PLANVIEW AND DETAILS.
2. REFER TO SHEET C1.0 FOR ADDITIONAL SHEET NOTES AND KEY NOTE DEFINITIONS.
3. REFER TO SHEET C6.1 AND SPECIFICATIONS FOR ADDITIONAL CULVERT AND TIDE GATE DETAILS.
4. ALL SECTION VIEWS ON THIS DRAWING HAVE NO VERTICAL EXAGGERATION.

REGISTERED PROFESSIONAL ENGINEER — JEFFREY K. NICKEL — No. 50713 — CIVIL — STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

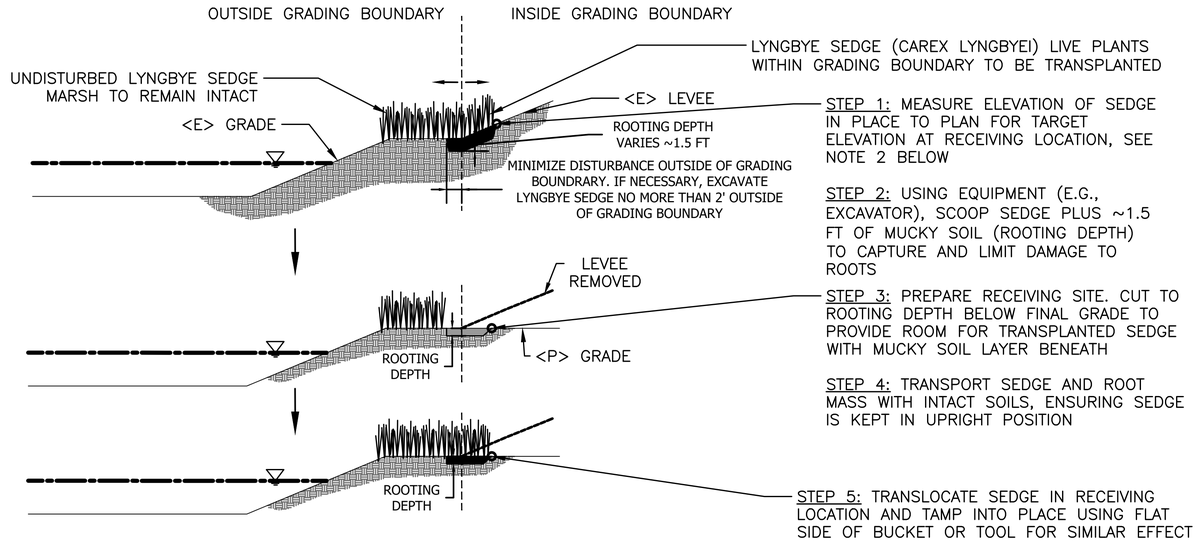
DESIGNED: NHE	SUB SHEET NO.	TITLE OF SHEET	SHEET
DRAWN: TC	C6.2	DETAILS 3	31 OF 34
TECH. REVIEW: JKA, BP			
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

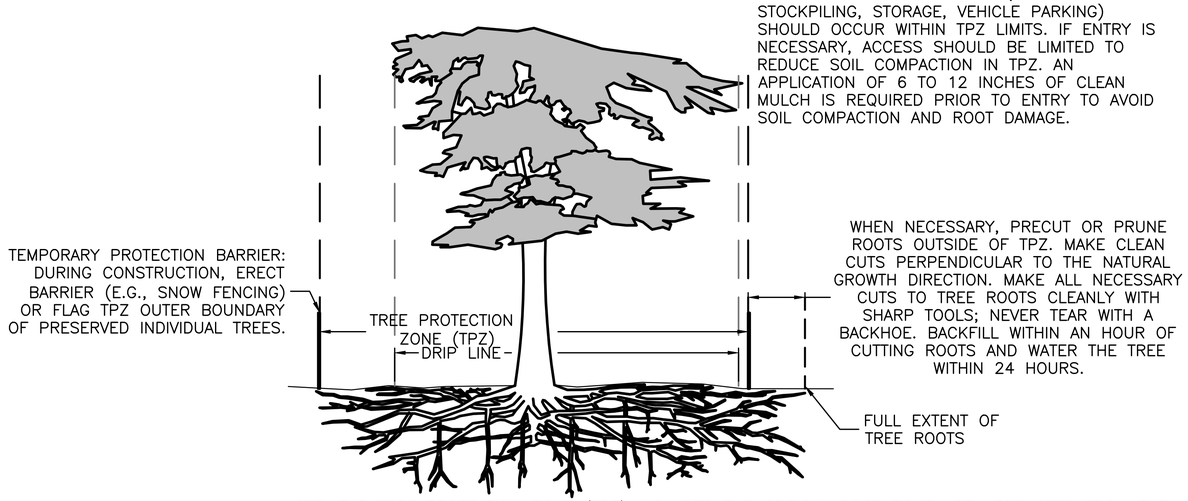
Plotted: 5/21/2026 2:11 PM – By: LICENSED USER – R17.1 – File: C6P2–DETAIL3–TG–DETAIL



DETAIL 1: ROCK SLOPE PROTECTION TYPICAL SECTION

(NTS)





NOTE: THE TREE PROTECTION ZONE (TPZ) INCLUDES THE CRITICAL ROOT ZONE AREA ESTIMATED FROM THE TREE DIAMETER. SEE TPZ LIMITS ON PLAN FOR ALL PRESERVED TREES.

DETAIL 3: TREE PROTECTION ZONE DETAIL

(NTS)

LYNGBYE SEDGE TRANSPLANTING NOTES:

1. INSPECT AND REMOVE ANY INVASIVE PLANTS PRIOR TO DIVIDING.
2. RECEIVING LOCATION (REGRADED SURFACE OR OTHER DESIGNATED RECEIVING SITE) WILL BE DEEMED SUITABLE FOR SEDGE TRANSPLANT WHEN APPROVED BY THE OVERSEEING CONSTRUCTION MANAGER/BOTANIST.

DETAIL 2: LYNGBYE SEDGE SALVAGE AND TRANSPLANT DETAIL

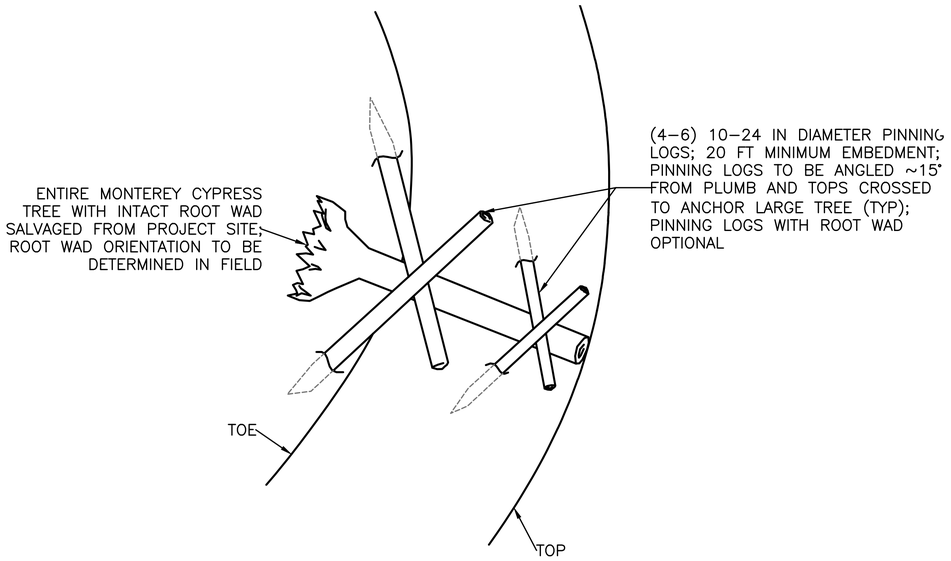
(NTS)

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. PETERSEN
No. 50713
CIVIL
STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C6.3	DETAILS 4	32 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/08/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:11 PM – By: LICENSED USER – R17.1 – File: C6P3-DETAIL4



DETAIL 3: LWS INSTALLATION WITHIN FLOODPLAIN. PHOTO OF LWS INSTALLED AT PRAIRIE CREEK, HUMBOLDT COUNTY.

DETAIL 4: LWS INSTALLATION WITHIN FLOODPLAIN. PHOTO OF LWS INSTALLED AT PRAIRIE CREEK, HUMBOLDT COUNTY.

SHEET NOTES:

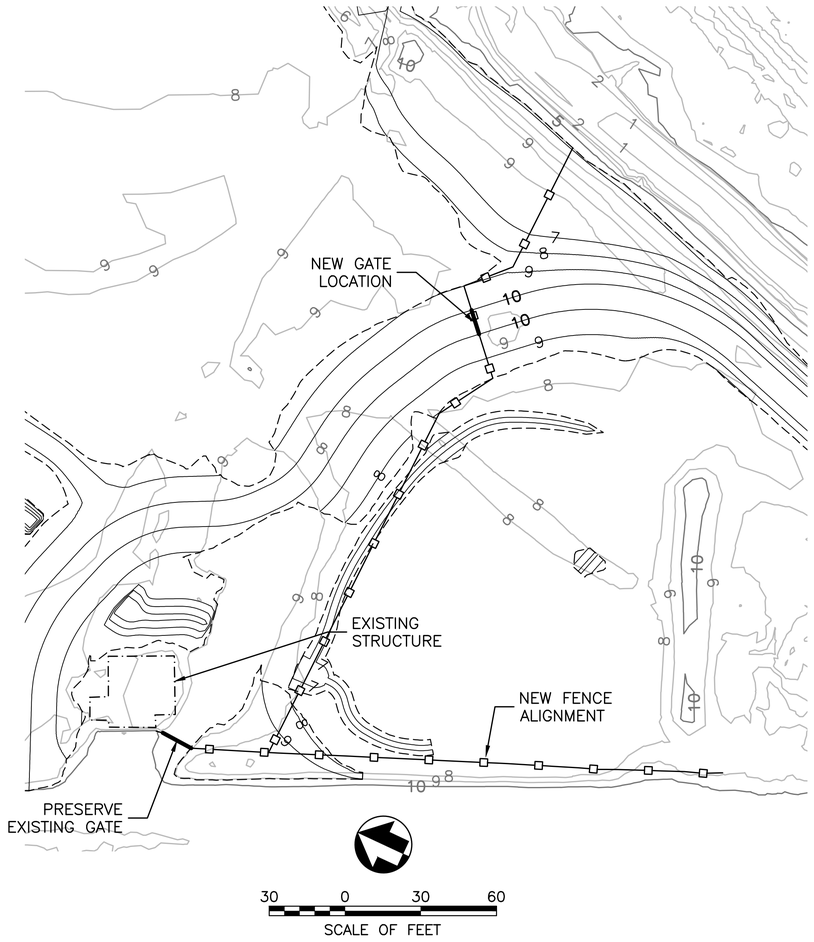
1. THE INTENT OF THIS SHEET IS TO SHOW GENERAL EXAMPLES OF THE TYPES OF LARGE WOOD STRUCTURES TO BE INSTALLED.
2. THIS SHEET SHOWS APPROXIMATE LARGE WOOD STRUCTURE LOCATIONS, CONFIGURATIONS, GRADES, DIMENSIONS, AND PLACEMENT.
3. DUE TO VARIABLE FIELD CONDITIONS, LOG OR TREE VARIABILITY, AND OTHER UNFORESEEN CONDITIONS, THE FINAL LARGE WOOD LOCATIONS, CONFIGURATIONS, GRADES, DIMENSIONS, AND PLACEMENT WILL BE DETERMINED IN THE FIELD.
4. FOR CLARITY, ONLY LARGE WOOD AND PINNING LOGS ARE SHOWN ON THE DETAILS. SMALL WOOD LESS THAN 6 TO 8 INCHES DBH MAY BE INTEGRATED INTO THE LOG STRUCTURES. SMALL WOOD SHOULD BE PLACED SO THAT THE LARGE WOOD AND PINNING LOGS PROVIDE ANCHORING.
5. LOGS TO BE PUSHED INTO BANK OR BED WILL NEED A TIP CUT ONTO THE EMBEDDED END (SHOWN ON DETAILS). LOGS TRENCHED INTO BANK CAN BE FLUSH CUT AT EMBEDDED END (NOT SHOWN ON DETAILS).
6. SEVEN (7) LARGE WOOD STRUCTURES ARE CURRENTLY PROPOSED USING SALVAGED MONTEREY CYPRESS TREES FROM THE SITE. AS FEASIBLE, THE ENTIRE SALVAGED TREE WITH ROOT WAD WILL BE USED IN THE LOG STRUCTURE.
7. CONTRACTOR WILL NEED TO TRANSPORT SALVAGED TREES TO LOG STRUCTURE LOCATIONS.
8. 4 TO 6 PINNING LOGS WILL BE REQUIRED FOR EACH LOG STRUCTURE BASED ON SIZE OF SALVAGED MONTEREY CYPRESS TREE.
9. CONTRACTOR TO SUPPLY PINNING LOGS.
10. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS REGARDING LARGE WOOD STRUCTURES.

REGISTERED PROFESSIONAL ENGINEER
JEFFREY K. JACKSON
No. 50713
CIVIL
STATE OF CALIFORNIA

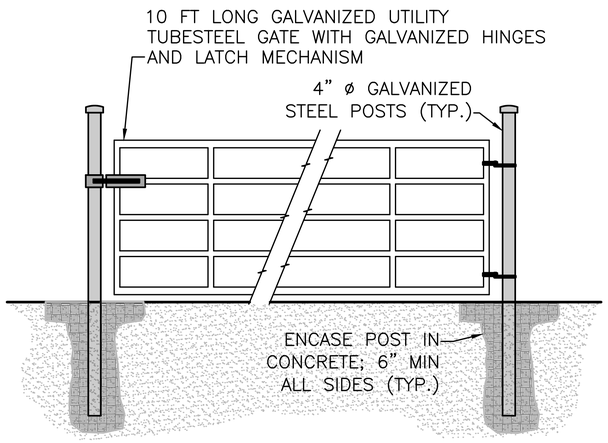
LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE	C6.4	DETAILS 5	33 OF 34
CADD: TC			
TECH. REVIEW: JKA, BP			
DATE: 05/08/2026		HUMBOLDT COUNTY, CA	

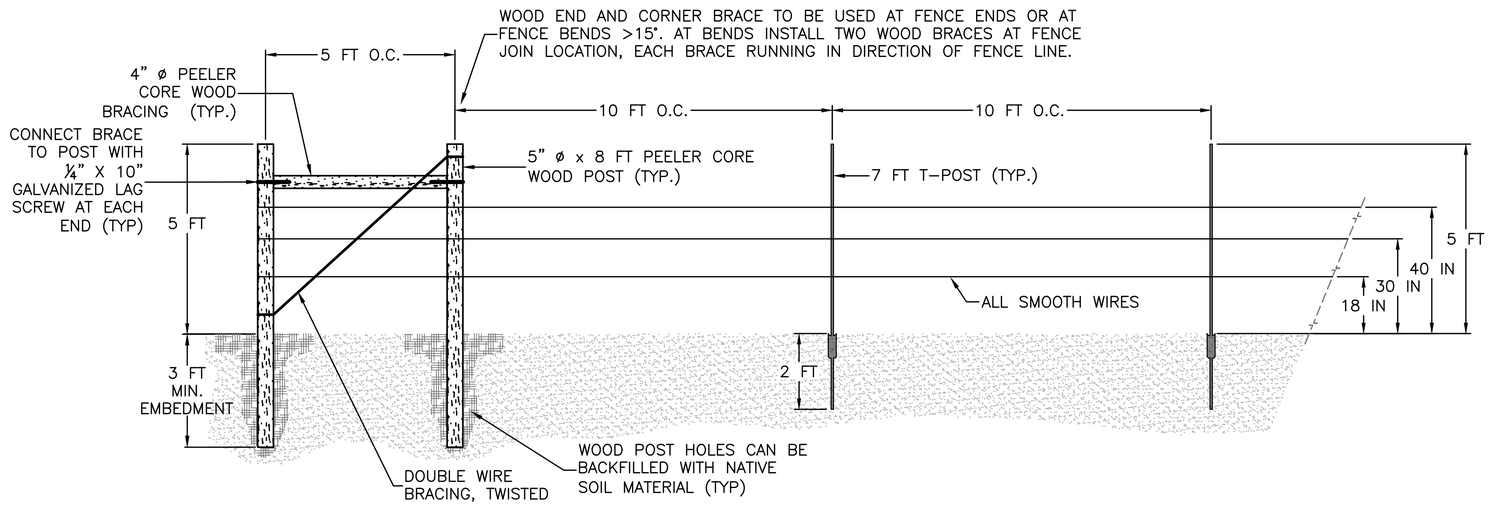
Plotted: 5/21/2026 2:11 PM – By: LICENSED USER – R17.1 – File: C6P5–DETAIL5–WOOD



FENCE PLAN VIEW



DETAIL 1: TYPICAL GATE INSTALLATION



DETAIL 2: TYPICAL FENCE INSTALLATION FOR PROJECT FENCE LINE

SHEET NOTES:

1. THE INTENT OF THIS DRAWING IS TO SHOW THE APPROXIMATE NEW WILDLIFE FRIENDLY FENCE ALIGNMENT AND DETAILS.
2. FINAL FENCE ALIGNMENT NEEDS TO BE FIELD VERIFIED WITH THE LANDOWNER AND CM.
3. REFER TO SPECIFICATIONS FOR ADDITIONAL FENCE AND GATE DETAILS.
4. FENCE WIRE SHALL BE SMOOTH 12.5 GAUGE MINIMUM GALVANIZED WIRE.
5. GATE, GATE HINGES, AND LATCH MECHANISM TO BE GALVANIZED STEEL. FINAL GATE BRAND TO BE DETERMINED BY LANDOWNER.
6. CONTRACTOR CAN PROVIDE ALTERNATIVE FENCE CONSTRUCTION DETAILS TO CM FOR APPROVAL.
7. APPROXIMATE FENCE LENGTH EQUALS 520 FT WITH ONE GATE.

REGISTERED PROFESSIONAL ENGINEER — JEFFREY K. ANDERSON — No. 50713 — CIVIL — STATE OF CALIFORNIA

LOWER SWAIN SLOUGH PROJECT

DESIGNED:	SUB SHEET NO.	TITLE OF SHEET	SHEET
NHE		DETAILS 6	34
CADD: TC, BD	C6.5		OF
TECH. REVIEW: JKA, BP			34
DATE: 05/19/2026		HUMBOLDT COUNTY, CA	

Plotted: 5/21/2026 2:11 PM - By: LICENSED USER - R17.1 - File: C6P6-DETAIL6-FENCE

APPENDIX B GENERAL SPECIFICATIONS

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Division 01- General Requirements

0 00 General Requirements

01 11 00 Summary of Work

PART 1 GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Work Covered by the Contract Documents.
2. Actions Integral to the Work: Access and Sequencing
3. Permissible Work Windows
4. Work by Others under other contracts.
5. Furnished Materials.
6. Contractor use of Premises and Staging Areas
7. Public use of site.
8. Work Restrictions.
9. Special Construction Requirements.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Project location: Lower Swain Slough, Humboldt County, within the Elk River watershed south of Eureka.

B. The site may support sensitive, listed, or at-risk organisms, including:

1. Angelica lucida (sea-watch)
2. Carex lyngbyei (Lyngbye's sedge)
3. Castilleja ambigua subsp. Humboldtiensis (Humboldt Bay owl's-clover)
4. Spergularia canadensis var. occidentalis (western sand-spurrey)
5. Zostera marina (eelgrass)
6. Pacific lamprey (Entosphenus tridentatus)
7. Western brook lamprey (Lampetra richardsoni)
8. Longfin smelt (Spirinchus thaleichthys)
9. Eulachon, southern DPS (Thaleichthys pacificus)
10. Coho salmon, southern Oregon/northern California Coast Evolutionary Significant Unit (ESU) (Oncorhynchus kisutch)
11. Chinook salmon, California Coastal ESU (Oncorhynchus tshawytscha)
12. Steelhead, northern California DPS winter-run (Oncorhynchus mykiss irideus)
13. Coast cutthroat trout (Oncorhynchus clarkii clarkii)
14. Tidewater goby (Eucyclogobius newberryi)
15. Northern red-legged frog (Rana aurora)
16. Northwestern pond turtle (Actinemys marmorata)
17. Numerous bird species protected under the Migratory Bird Treaty Act (MBTA)

18. White-tailed kite (Elanus leucurus)
19. Northern harrier (Circus hudsonius)
20. Bald eagle (Haliaeetus leucocephalus)
21. Grasshopper sparrow (Ammodramus savannarum)
22. Pallid bat (Antrozous pallidus)

C. Project Contract documents include:

1. Elk River Estuary: Lower Swain Slough, referred to as “Drawings” or “Plans”.
2. Elk River Estuary: Lower Swain Slough Specifications, referred to as “Specifications or Specs”

D. Project Reference documents include:

1. Geologic Characterization
2. State of California, Department of Transportation (Caltrans) Specifications and Standards.

E. Site Access: Access to the site shall be from Pine Hill Road and Elk River Road in Humboldt County, CA. Access via Elk River Road must be approved by the Construction Manager (CM) and landowner.

F. The work occurs in two areas, north and south of Pine Hill Road, and includes (not in order):

1. confirm L126C pipeline depth and alignment per PG&E requirements;
2. mobilization, preparation of staging areas north and south of Pine Hill Road, and construction materials preparations;
3. isolate site from tidal flooding;
4. remove vegetation where subsequent earthworks are designed, salvage and replant selected species;
5. remove and dispose, or bury invasive plants as indicated on Drawings;
6. excavation of tidal channels, pond, wetland bench;
7. removal and disposal of selected infrastructure (e.g., tide gate, culverts, fencing, concrete bags);
8. remove and salvage of cypress trees for reuse as large wood habitat structures;
9. construction of eco-levees and associated drainage infrastructure;
10. wetland and hummock shallow fill;
11. natural shoreline along Elk River Road;
12. ripping and spreading native seed and mulch;
13. installation of culverts and rock slope protection
14. ripping shallow fill and other areas;
15. decompaction of temporary haul routes, access, stockpile, and staging areas;
16. natural sediment levee fill;
17. levee removal and filling drainage ditches;
18. installation of fence and gate.
19. demobilization

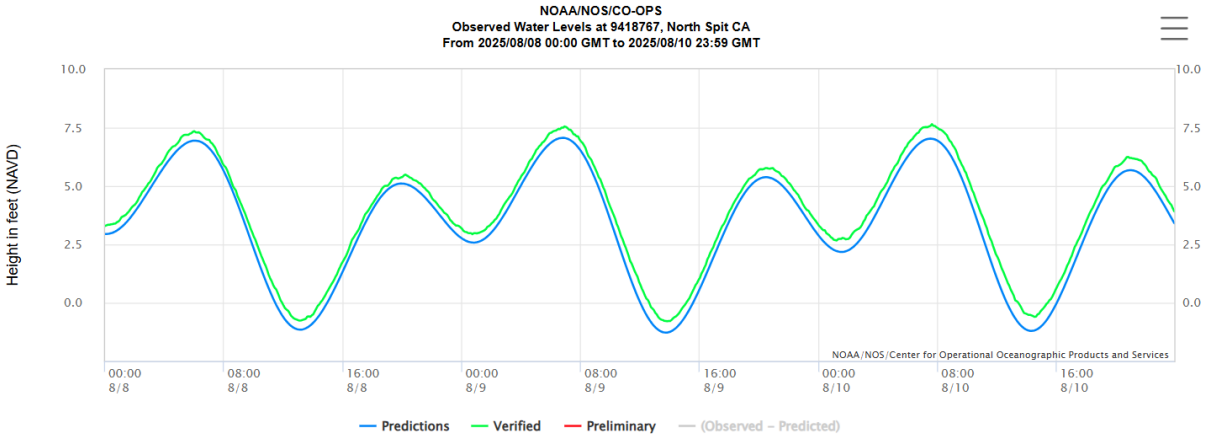
G. All the items shown in these specifications and drawings will be constructed under a single prime contract unless otherwise specified.

H. Items that are integral to this project are described below:

1. Portions of the site are regularly inundated by high tides due to multiple breaches in the existing levee, low levee elevations, and failed infrastructure.

   a. The NOAA Station at North Spit, CA (9418767) provides approximate elevations of high tides that can be plotted in the NAVD88 datum.

   b. Observed high tides are routinely higher than predicted high tides.



   c. Tidal monitoring at the project sites indicates that low tide at the project site is controlled by a downstream sill that maintains the water elevation at ~1 FT, NAVD88 at the project site. This elevation may vary during the construction season.

2. Access Management and Protections

   a. Access to the site is from Pine Hill Road.

   b. Access from Elk River Road through private property at the south end of the project site is limited and requires approval of the CM and landowner.

   c. Levees and measures to isolate the site from Swain Slough will be maintained to separate the excavation from Swain Slough throughout construction, until the tidal channels are complete.

   d. Traffic control will be required to manage traffic along Elk River Rd and Pine Hill Rd.

10. Work Window

   a. The work items in this Contract shall be carefully sequenced and managed by the Contractor to complete the project in the permissible construction window.

   b. The permissible work window for compliance with the regulatory permits is June 15 to October 15 or as defined by the working days, whichever is more restrictive.

   c. Some project elements must be constructed during lower tides.

   d. Some project elements will require excavation below water surface.

   e. Early rains could temporarily prevent work in the project area during such events. The Contractor shall leave leeway for possible temporary delays in the initial project schedule.

3. Sequencing

a. This project requires careful advance sequencing and coordination with environmental and cultural resource monitors.

4. Environmental Protection

a. Environmental protections of endangered species are critical and on-going components of all aspects of this work (Section 01 45 00 Environmental Protection).

5. Cultural Resources Protection

a. Protections and monitoring for any potential cultural resources are critical and on-going components of the work.

6. Work by Others

a. Prior to initiation of the construction, a CalTrout designated biologist will conduct nesting bird surveys, and fish relocation during the contract period. Revegetation will be conducted by others after the construction work window. Contractor shall cooperate with the biologist and revegetation contractor.

1.3 MATERIALS FURNISHED BY CALTROUT:

A. Seed for final surface treatments (see Section 32 92 19 Seed and Mulch and Drawings, Sheet C2.1).

1.4 CONTRACTOR USE OF PREMISES, STAGING AREA, AND ROADS

A. General: Contractor shall have full use of the areas identified in construction documents, with strict limits to the boundaries of disturbance for construction operations. The Contractor shall only use areas identified in drawings for staging, access, stockpiling, equipment storage, and any other work activities unless additional areas are identified in an approved Access Plan.

B. Existing Utilities: The existence and location of underground utilities are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities.

1. The Contractor shall contact Underground Service Alert (USA) (1-800-642- 2444) seven (7) calendar days prior to the start of each construction phase and shall be responsible for maintaining a valid USA location tag through renewal during the construction. The Contractor shall be responsible to coordinate a utility field meeting with CM at which time the Contractor shall explain the limits and impacts of work that may affect USA member utilities.

2. Contractor shall be responsible for locating and preventing damage to known utilities.

a. If damage occurs to a utility, repair utility at no additional expense to CalTrout.

b. If damage occurs to an unknown utility, repair utility.

3. It is the Contractor's responsibility to locate and mark all utilities within the project work area. Field location and marking shall be performed a minimum of three (3) days prior to ground disturbance; notify CM upon completion of field location and marking.

4. A gas line special access zone shown on the Drawings (Sheet G5) is located around the 10-inch diameter high pressure gas line (L126C). The contractor is required to coordinate with PG&E standby and comply with PG&E requirements

for work in the vicinity of the gas line as follows.

a. Prior to any work within the vicinity of the gas line, the Contractor shall contact PG&E and schedule PG&E standby to be onsite to observe the Contractor's use and potholing within the gas line Special Access Zone and Special Work Zone. The Special Access Zone is defined as 5 FT from the outside edge of the gas line. The Special Work Zone are defined as 2 FT from the outside edge of the pipe.

b. The location of the gas line shown on the plans is approximate. Contractor's access to verify the pipe depth and alignment within the Special Access Zone shall be completed under the presence of PG&E standby, except for clearing and grubbing with hand equipment. Under the presence of PG&E standby, contractor shall pothole to determine the depth and alignment of the pipeline prior to any equipment access and use in the vicinity of the gas line including, but not limited to, driving within the gas line Special Access and Work Zones, clearing, grubbing, vegetation scrape, and excavation with equipment.

c. Potholes shall be performed using hand dug or vacuum excavation per PG&E requirements and with PG&E standby.

d. Equipment access within the gas line Special Access Zone during potholing:

    1) The minimum number of potholes to verify the depth and alignment of the pipe is shown on the plans.

    2) Additional potholes may be required if the depth of the pipe is less than, or close to 2 FT deep and / or the depth is variable.

e. Following verification of pipeline depth and alignment, the allowable equipment used over or within the Special Access Zone to complete the work shown on the plans is limited to the allowable wheel loads in Table 1. Loads are per ½ axle.

Table 1. Maximum allowable wheel loads.

Depth of Cover (ft)	No Soil Restraint (lbs)
2.00	10472
3.00	22182
4.00	35698
5.00	52549
6.00	72758
7.00	96264
8.00	122101

f. Earthwork (excavation, vegetation scrape, clearing and grubbing, ripping etc.):

    1) No excavation may occur within 2 FT radius around the outside edge of the gas line, except for potholing to locate the gas line with PG&E standby.

    2) Excavation with equipment following potholing will only apply to the distance from the pothole approved by PG&E.

    3) Excavation of 6-12 inches deep within the Special Access Zone is

anticipated at three locations where eco-levee crosses the gas line. See Drawings C1.2 and C1.4 for locations.

a) Excavation is only allowed after potholing confirms the alignment and depth of the gas line and the potholing demonstrates that the cut will not disturb soil within a 2 FT radius around the outside edge of the pipe and approval is provided by PG&E and CM.

b) PG&E may require additional potholes if gas line depth is variable or shallow (less than 2 FT depth).

c) If insufficient cover occurs around the gas line, clearing and grubbing and excavation with hand methods may be required within the Special Access Zone.

4) Ripping is not required within the Special Access Zone.

5) Clearing and grubbing with hand equipment is allowed with the Special Access Zone.

6) Fill may be placed over the gas line without potholing.

C. Hauling Restrictions: Comply with all legal load restrictions in the hauling of materials. A special permit will not relieve Contractor of liability for damage which may result from moving of equipment. During movement of its vehicles on the roads, the Contractor is responsible for providing safe conditions for other drivers.

D. The Contractor shall keep all waste and contaminants contained at the staging area and shall use wildlife proof trash receptacles with lids. Uneaten human food and trash shall not remain exposed in the work zone or staging area. The Contractor shall ensure that all workers dispose of food scraps, paper wrappers, food containers, cans, bottles, and other trash into covered or closed trash containers.

1.5 PUBLIC USE OF SITE

A. The site is not public. However, residents from Pine Hill frequently walk along Pine Hill Road.

1.6 SPECIAL CONSTRUCTION REQUIREMENTS

A. CalTrout will be responsible for biological, archeological, and cultural monitoring and the Contractor is responsible for scheduling work accordingly, cooperating with the monitors and complying with the requirements in the specifications and regulatory permits. No persons working for the Contractor shall handle, harass, capture, or disturb sensitive species or cultural resources.

B. The Contractor shall be aware that representatives of regulatory agencies are likely to visit the site throughout the period of construction. Regulatory personnel are always permitted on the site without advance notice.

C. The Contractor shall be aware that representatives of the Press or other media may visit during the work.

D. The Contractor shall be held responsible for fines or civil liabilities imposed by Regulatory Agencies as a result of the Contractor’s actions.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION 01 11 00

01 15 00 Measurement and Payment

PART 1 GENERAL

1.01 GENERAL

A. Unless otherwise specified in other individual sections of these specifications, quantities of work shall be determined from measurements or dimensions in horizontal planes.

B. Units of measurement shall be in accordance with U.S. Standard Measures.

C. See the general conditions for special provisions related to progress payments and payment schedule to the contractor.

D. The measurement and payment items are listed below:

1. Payment shall be made at the bid prices and shall be considered as full compensation for furnishing all labor, materials, tools, supplies, and services as required for proper completion of the work described in the following bid items, complete in place, and to the satisfaction of the Engineer.

2. The payments to the Contractor are based on the following items. It is the intent that the scope of the description of the following items encompasses the entire scope of the work as shown on the plans and described in the specifications. The bid amounts shall be for complete in place installations.

3. Pay Item Quantities- All bid Item list quantities are shown in the Bid Schedule as final pay items for payment purposes only. For a final pay item, accept payment based on the Bid Item List quantity, to achieve the lines and grades shown on the plans, regardless of actual quantity used unless dimensions are changed by the Construction Manager.

4. Items of work or other services which the Contractor is required to supply, such as final clean-up or other incidental items, and which are not listed as separate bid items shall be included in the related bid items and shall be considered as paid in those items, whether or not specifically identified in the following descriptions. Also considered to be included in such costs are any costs associated with the repair of damage which may occur to existing improvements as a result of the Contractor’s operations.

5. Any other work shown on the plans and not specifically mentioned/described in the following bid items will be paid under Bid Item No. 1.

1.02 LUMP SUM BREAKDOWN SUBMITTALS

A. After award of the Contract and prior to approval of initial progress payment requests, the Contractor shall submit a cost breakdown list to the Engineer for all Lump Sum bid items. The list shall consist of the major elements of work that make up each of the lump sum bid items and shall be used for determining progress pay estimates. The Contractor shall provide amounts for each element of interest to CalTrout. The distribution breakdown that the contractor indicates for any lump sum bid item may be revised as deemed necessary by the Engineer if it appears such items are unbalanced, unless the Contractor can substantiate these costs. Only elements of work of value to CalTrout shall be included in the list.

1.03 BASE BID ITEMS

ITEM 1. MOBILIZATION/DEMOBILIZATION

Measurement for this item shall be on a LUMP SUM basis. Payment shall correspond to percent complete as confirmed by the Construction Manager and described in this bid item below. This Work covers all Contractor costs and effort associated with mobilizing equipment, materials, and labor to the project site as well as demobilization of the same for the bid schedule. The incremental mobilization/demobilization costs associated with any additive bid items will be covered in those items, if awarded. Items covered by this item include, but are not limited to, bonds, insurance, contracting and administrative and permitting costs, equipment mobilization to the work areas, temporary facilities and utilities, potholing, temporary shoring / bracing, temporary access roads, temporary culverts, temporary fencing, temporary signs and, punch list items, repairs of damaged property, site cleanup, final site restoration, road repairs and project maintenance and warranty.

1. This Bid Item also covers the development of the Project Approach Plan submittal. The Project Approach Plan will define the overall approach the contractor proposes to take to complete the work associated with the contract documents. It also includes any revisions based on owner or agency comments.

2. When 10 percent of the total original Contract amount is earned from bid items, excluding amounts paid for materials on hand, 50 percent of the amount of the bid price for mobilization/demobilization will be paid for mobilization/demobilization. Upon completion of all Work on the project, payment of the balance of the bid amount for mobilization/demobilization will be paid.

3. Any other work shown on the plans and not specifically mentioned/described in the following bid items will be paid under mobilization/demobilization.

ITEM 2. DUST/EROSION CONTROL, WATER MANAGEMENT, AND ENVIRONMENTAL PROTECTION

Measurement for this item shall be on a LUMP SUM basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary to construct and manage facilities and work associated with water meeting permit requirements including control, diversion and disposal of water. Items covered by this include, but are not limited to, cooperation with CalTrout's cultural resources monitor, cooperation with CalTrout biologists, installation of temporary cofferdams, installation of temporary earthen berms to prevent tidal inundation into active work areas, dewatering pumps, and disposal of water. This item also includes maintenance and removal of water management system. This item also includes routine dust suppression, maintenance of existing construction entrances, tire cleaning stations as needed to prevent tracking, and cleaning of public roads. This Work covers all Contractor costs and effort associated with obtaining construction water from approved sources, applying water to prevent fugitive dust, installation and removal of temporary stabilized construction entrances, and as-needed routine street sweeping/vacuuming on County roads to comply with project permits. This item covers all Contractor costs and effort associated with providing erosion/sediment control BMPs, developing a water pollution control plan (WPCP), complying with the WPCP, and performing all necessary inspections and adjustments to the BMPs to comply with the WPCP and compliance with all applicable local, regional and federal laws, protection of cultural and historic resources, and all other environmental protection measures shall be considered incidental to this item.

ITEM 3. CONSTRUCTION SURVEYING / STAKING

Measurement for this item shall be on a LUMP SUM basis. Payment shall correspond to percent complete as confirmed by the Construction Manager. This Work covers all Contractor costs and effort associated with providing construction staking, establishing control and project layout as described in these Specifications and as required to meet the requirements of the plans. Items covered by this item include, but are not limited to, labor, materials, equipment, and other expenses required to stake the alignment and grades, project features and improvements, haul routes, other areas as required to construct the work and demonstrate conformance to achieving the design grades under the presence of CalTrout's representative.

ITEM 4. DEMOLITION / DEBRIS REMOVAL AND DISPOSAL

Measurement for this item shall be on a LUMP SUM basis. Payment shall correspond to percent complete as confirmed by the Construction Manager. This Work covers all Contractor costs and effort associated with all demolition shown on the plans or required to complete the work shown on the plans, and the removal and disposal of deleterious materials encountered during construction. This includes waste, refuse, and fencing to be removed as shown on the plans, as well as materials removed as part of the demolition as shown on the plans. This also includes the removal, and disposal of additional deleterious materials that may be encountered during construction such as fence material, tires, piping, culverts, bottles, metals, abandoned irrigation piping, troughs, appliances, and other waste. Hazardous material notification and initial coordination with CalTrout and Construction Manger shall be considered as included in the various bid items and no separate payment will be made. If hazardous waste or contaminated material is found that requires disposal, a change order for the additional work will be issued in accordance with this contract.

ITEM 5. INVASIVE VEGETATION REMOVAL AND SENSITIVE PLANT SALVAGE

Measurement for this item shall be on a LUMP SUM basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary to remove existing invasive vegetation. Removed invasive vegetative material shall be disposed of onsite or hauled offsite as described on the plans. This bid item also includes sensitive plant salvage and onsite replanting as shown on the plans.

ITEM 6. EARTHWORK (EXCAVATION, SURFACE PREPARATION, NATIVE BACKFILL & GRADING)

Measurement and payment for this item shall be on a LUMP SUM basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary to complete the excavation, segregating, hauling / transporting, temporary stockpiling, placement, ripping for natural sediment levee fill, and vegetation scraping, in accordance with the requirements as shown on the Plans and as described in the Specifications. Payment shall also include full compensation for all materials, labor, equipment and supervision necessary to complete all excavation, finished grading and placement of fill to achieve the required lines and grades shown on the Plans as required by the Specifications. The intent of the grading design is to achieve the required lines and grades shown on the plans by balancing onsite cuts / fills with any excess material being placed as shallow marsh plain fill.

ITEM 7. ROCK SLOPE PROTECTION (CLASS II, METHOD B)

Measurement for this item shall be on a CUBIC YARD basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary to prepare the subgrade, place the geotextile fabric and rock at the culvert locations as shown on the plans and as required in the specifications. Materials include, but are not limited to,

geotextile fabric and rock necessary to meet the intent as shown on the plans and as required by the specifications.

ITEM 8. 18" HDPE PIPE

Measurement for this item shall be on a LINEAR FOOT basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary for completing all the work involved in subgrade preparation, coupling pipe segments, installing to required lines and grades, bedding, backfilling, compacting, testing, re-testing, as shown on plans and as required by the specifications.

ITEM 9. 18" CHECK VALVE

Measurement for this item shall be on an EACH basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary for completing all the work involved in furnishing and installing check valves as shown on the plans and as required by the specifications.

ITEM 10. FENCE INCLUDING GATE

Measurement for this item shall be on a LINEAR FOOT basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary to complete the installation of the fencing and gate to meet the intent as shown on the plans and as required by the specifications.

ITEM 11. FINAL SURFACE TREATMENTS, SEED AND MULCH

Measurement for this item shall be on a LUMP SUM basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary to complete the final surface treatments, seeding and mulching to meet the intent as shown on the Plans and as required in the Specifications. The LUMP SUM bid price for this item shall include coordination, final surface treatments including ripping 6 inches depth in areas shown on the plans, decompaction in areas shown on the plans and all other areas compacted by the contractor, seed application of CalTrout provided seed, straw mulch and tackifier application, inspections and shall include all supervision, labor, material, equipment, supplies, and incidentals, required for performing all incidental and related work involved in the final surface treatments, seed and mulch applications and seed germination and growth until acceptance. This bid item also includes installing supplemental seed, straw mulch and all other work necessary to establish vegetative cover over seed application areas shown on the plans and as required by the specifications or other required permits. 50% of the contract price will be made upon completion of work and the remaining 50% will be made upon achieving the minimum established vegetative cover in application areas as defined in the specifications. This bid item does not include ripping 12-inch depth, as shown on the plans, and is covered in a separate bid item.

1.04 ADDITIVE BID ITEMS

ITEM A1. FINAL SURFACE TREATMENT (RIP 12 INCHES)

Measurement for this item shall be on an ACRE basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary to rip the area shown on the plans to a 12-inch depth and in accordance to the specifications.

ITEM A2. REMOVE AND SALVAGE TREE FOR LARGE WOOD STRUCTURE

Measurement for this item shall be on an EACH basis. Payment shall include full compensation for all materials, labor, equipment and supervision necessary to complete

the removal, transport and placement of salvage trees for the wood structures. This includes removing the existing trees with root wad, trunk and branches intact, hauling to the installation location, and placing in accordance to the plans. Excess vegetative debris generated during the removal and hauling, may be incorporated into the wood structure under the direction of the engineer or hauled offsite and disposed. Furnising and installing the pinning logs is covered under a separate bid item.

ITEM A3. FURNISH AND INSTALL PINNING LOGS FOR LARGE WOOD STRUCTURE

Measurement for this item shall be on an EACH basis installed. The number of pinning logs installed could vary from 4-6 per wood structure and will be determined upon installation by the engineer. Payment will be made based on the actual number of installed pinning logs that meet the requirements of the plans and includes furnishing the pinning logs to the site and installing in accordance to the plans and under the direction of the engineer. Payment will not be made for pinning logs that crack, break or do not meet the minimum embedment depth and installation requirements.

01 31 00 Project Management and Coordination

PART 1 GENERAL

1.1 SUMMARY

A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:

1. Construction Coordination.
2. Sequencing Planning
3. Requests for Information (RFIs).
4. Project meetings.
5. Environmental Coordination.

B. Related Requirements:

1. Section 01 32 16 Construction Schedule
2. Section 01 33 23 Submittal Procedures
3. Section 01 35 13 Archeological Protection
4. Section 01 45 00 Environmental Protection
5. Section 01 54 00 Temporary Traffic Control
6. Section 01 71 23 Field Engineering
7. Section 01 73 00 Execution
8. Section 01 74 19 Construction Waste Management and Disposal
9. Section 01 77 00 Closeout Procedures

1.2 CONSTRUCTION COORDINATION

A. Coordination: Coordinate construction operations, included in different Sections, which depend on each other for proper installation, connection, and operation.

1. Schedule construction actions in sequence required to obtain the best results where one part of the Work depends on a different part of the Work.
2. Coordinate Work actions to retain access for equipment in each part of a work area and to complete actions with minimal areas of impact.
3. Make adequate provisions to accommodate work actions scheduled for later in the construction period.

B. As needed, Contractor shall prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, construction schedules, and meeting agendas.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Schedules, including the Project Baseline, Updated Full Construction Schedule, and Two-Week Lookahead.
2. Preparation of the Schedule of Values.

3. Installation and removal of temporary facilities and controls.
4. Delivery and processing of submittals.
5. Preconstruction meeting also referred hereinafter as preconstruction conference
6. Weekly progress meetings
7. Project closeout activities. See section 01 77 00 Closeout Procedures.
8. Securing necessary permits and compliance reporting with regulatory requirements.

D. The terms “Construction Manager” or “CM” refer to a CalTrout designated Construction Manager. The terms “Contract Administrator” or “CA” refer to a designated California Trout (CalTrout or CT) staff person. All roles and responsibilities, along with contact information for designated CalTrout staff, will be provided to the Contractor in an organizational chart.

1.3 SUBMITTALS

A. Submittals shall be provided to the Construction Manager by the dates specified in Table 1 Section 01 33 23 List of Submittals. Most submittals must be submitted a minimum of one week prior to the Pre-construction Conference. Construction Manager will notify Contractor of tentative date for the Pre-Construction Conference.

B. Some items listed shall be provided in draft for review by CalTrout prior to the Pre-Construction Conference, with a final revised version due before the Pre-Construction Conference.

C. If all required documents have not been received one week prior to the scheduled Pre-Construction Conference date, the conference will be cancelled, Notice to Proceed will not be issued, and the CM will consider other contractual remedies. Work shall not commence until written Notice to Proceed has been issued.

D. Submit items via the electronic Project Management software program to be provided by the Contractor (Part 2), with either automatic or supplemental email notifications to the CM.

1.4 REQUESTS FOR INFORMATION (RFI)

A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit via email an RFI utilizing a form proposed by the Contractor.

1. CM will not respond to RFIs submitted by other entities controlled by Contractor.
2. Coordinate and submit RFIs in a prompt manner to avoid delays in the work.

B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:

1. RFI number, numbered sequentially.
2. Date.
3. RFI subject.
4. Specification Section number and title and related paragraphs, as appropriate.
5. Drawing number and detail references, as appropriate.
6. Field dimensions and conditions, as appropriate.

7. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
8. Contractor's signature.
9. Requested date for response.
10. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
    a. Include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments on attached sketches.

C. Submit RFIs on the Contractor's Project Management Software Program as follows:
1. Enter the project name and RFI No in the header.
2. Enter the details of the question and attach related documents.

D. CM's Action: CM will review each RFI, determine action required, and respond according to the urgency of the request.
1. The following are not considered to be RFIs:
    a. Requests for approval of submittals.
    b. Requests for approval of substitutions.
    c. Requests for approval of Contractor's means and methods.
    d. Requests for coordination information already indicated in the Contract Documents.
    e. Requests for adjustments in the Contract Time or the Contract Sum.
    f. Requests for interpretations of CM or Engineer's actions on submittals.
    g. Incomplete RFIs or inaccurately prepared RFIs.
2. CM's action may include a request for additional information, in which case time for response will date from time of receipt of additional information.
3. CM's action on RFIs may result in the need for a change to the Contract Time or the Contract Sum. All contract changes will be processed following the terms and conditions of the contract.

1.5 PROJECT MEETINGS

A. Preconstruction Conference: Before start of construction, the contractor will arrange an on-site meeting with CM. The meeting agenda will include the following as a minimum:
1. Roles & Responsibilities/ Lines of Authority.
2. Rules and regulations.
3. Jobsite Safety.
4. Resolution of comments on required documents.
5. Coordination of Subcontractors.
6. Labor law application.
7. Modifications.
8. Payments to Contractor.
9. Payroll reports.
10. Contract time.

11. Liquidated damages.
12. Notice to proceed.
13. Correspondence procedures.
14. Environmental requirements.
15. Interactions with CalTrout-designated biologists (Fish, Vegetation, Bio-Monitor)
16. Interactions with Archeologist / Cultural Resources or Cultural Monitor.
17. Interactions stemming from Work by Others.
18. Visitor Access Management.
19. Acceptance/rejection of work.
20. Progress meetings.
21. Submittal procedures.
22. As-constructed drawings
23. Saturday, Sunday, and holiday work.

B. Progress Meetings: The Contractor will schedule weekly meetings with required attendees, including the CM or CM's Representative.

1. Attendees: In addition to the CM, each Contractor, Subcontractor, supplier, and other entity concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings, as appropriate. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.
2. Meeting Actions: CalTrout will distribute meeting actions following each meeting.
3. The CM will prepare an agenda for each weekly meeting. The meeting agenda will include the following:
    a. Review and approval of actions of previous meetings.
    b. Review other items of significance that could affect progress.
    c. Action Items from Previous Meeting/Week
    d. Safety
    e. Community, Visitor, and Partner Updates or Outreach
    f. Biological Clearance Surveys and Environmental Compliance
    g. Forecasted rainfall
    h. Labor Compliance
    i. Testing
    j. Submittals
    k. Contract Change Orders (CCOs)
    l. RFIs
    m. Review of delivery schedules.
    n. Construction Schedule update (provide updated CPM). Include the weather forecast in the schedule.
    o. Work in progress and projected, including but not limited to:
        1) Advance review and communication for access before entering new work area by CalTrout, CalTrout-designated biologist and cultural

resources monitor

2) Advance review of technical requirements for earthwork
3) Advance review of layout and installation sequence of Large Wood Habitat Structures
4) Advance communications for traffic control
5) Coordination with Revegetation Contractor
6) Inspections of work in progress and projected.
7) Other business relating to work
8) Meeting Participants
9) Previous Meeting/Week Action Items
10) This Meeting Action Items

1.6 ENVIRONMENTAL COORDINATION

A. Contractor's personnel and sub-contractors shall be aware of the environmental sensitivities of the project site and shall participate in an environmental awareness training (approximately 30 minutes) prior to completing work on site. The following apply to all Contractor and sub-contractor personnel.

1. Responsibilities: Responsibilities shall include:
   a. Compliance with applicable Federal, State, and local environmental regulations, including maintaining required documentation.
   b. Ensure all relevant work is coordinated with biological monitoring at the appropriate time.
   c. Monitoring and documentation of environmental procedures.

B. Contractor's Environmental Training Program: CalTrout will conduct an environmental awareness training for workers performing work on the project site. Training shall include the following:

1. Overview of environmental issues related to the Project, including endangered species, turbidity control, measures to prevent equipment from spreading weed seeds and others.
2. Review of site-specific procedures and management plans:
   a. Dewatering and Water Management
   b. Access Plan
   c. Spill Prevention
   d. Refueling and Equipment Repairs
   e. Storm Water Best Management Practices
   f. Protection of plants.
   g. Traffic Management
   h. Cultural Resources
3. The Contractor will be required to have five to seven personnel in supervisory capacities (foreman, superintendent, managers) attend a one-day Contractor Environmental Compliance Training to be held at a location in close proximity to the site. Contractor will coordinate with Construction Manager on date, time and location of training. Attendees must be approved by the Construction Manager.

Attendance at this training will be paid under Section 9-1.02E Allowances.

PART 2 PRODUCTS

END OF SECTION 01 31 00

01 32 16 Construction Schedule

PART 1 GENERAL

1.1 SUMMARY

A. This Section consists of Construction Schedule requirements including but not limited to the following:

1. Schedule coordination for:

a. Work by Others

1) CalTrout will lead removal and relocation of all fish and aquatic species prior to any dewatering activities.

2) SWS will flag all sensitive plant species and move them prior to construction.

3) CalTrout will provide seed mixes to Contractor by September 15th

4) Revegetation Contractor will install native vegetation as specified on the Lower Swain final revegetation design plans the fall/winter during and following construction.

5) Cultural Monitor will be on site during excavation.

2. Schedule of Values

3. Construction Schedule Requirements.

4. Construction Schedule Updates.

5. Time Impact Analysis.

B. Purpose: The Construction Schedule will ensure adequate planning, coordination, scheduling, and reporting during execution of the Work by the Contractor. The Construction Schedule will assist the Contractor and CM in monitoring the progress of the work, evaluating proposed changes, and processing the Contractor's monthly progress payment.

1.2 DEFINITIONS

A. Activity: A discrete part of a project that can be identified for planning, scheduling, monitoring, and controlling the construction project. Activities included in a construction schedule consume time and resources.

1. Critical activities are activities on the critical path. They must start and finish on the planned early start and finish times.

2. Predecessor Activity: An activity that precedes another activity in the network.

3. Successor Activity: An activity that follows another activity in the network.

B. Cost Loading: The allocation of the Schedule of Values for the completion of an activity as scheduled. The sum of costs for all activities must equal the total Contract Sum, unless otherwise approved by the CM.

C. CPM: Critical path method, which is a method of planning and scheduling a construction project where activities are arranged based on activity relationships. Network calculations determine when activities can be performed and the critical path of Project.

D. Critical Path: The longest connected chain of interdependent activities through the

network schedule that establishes the minimum overall Project duration and contains no float.

E. Float: The measure of leeway in starting and completing an activity.

1. Free float is the amount of time an activity can be delayed without adversely affecting the early start of the successor activity.
2. Total float is the measure of leeway in starting or completing an activity without adversely affecting the planned Project completion date.

F. Resource Loading: The allocation of person power and equipment necessary for the completion of an activity as scheduled.

1.3 SUBMITTALS

A. Electronic and Hard Copies: All schedules and reports submitted shall be submitted to CM in the native electronic file format. In addition, hard copies shall be provided at each weekly meeting to project team members who will be present.

B. Schedule of Values: After contract award and before the Pre-Construction Conference submit a schedule of dollar values based on the Contract Price Schedule.

C. Construction Baseline Schedule: After contract award and three weeks before the Preconstruction conference, submit a draft baseline schedule, large enough to show entire schedule for entire construction period. Submit a revised Construction Baseline Schedule addressing CM comments one weekday before Pre-Construction Meeting. Submit schedules in an electronic format.

D. Construction Schedule Updates: After the first two weeks of work on the ground, the Contractor shall provide a full schedule update (Updated Full Construction Schedule) at the weekly progress update meeting. In all other weekly progress update meetings, the Contractor shall provide a two-week look ahead schedule. The Contractor shall provide notification of any substantial changes in these schedules, such as work on weekends or any activities which require coordination with or monitoring by project partners, such as the CM, cultural resources monitor, biologists, etc.

E. On or before the 7th workday preceding the progress payment request date, submit estimates of the percent completion of each schedule activity and necessary supporting data. Provide electronic copies.

1.4 QUALITY ASSURANCE

A. The Contractor shall participate in up to two on-site Quality Assurance meetings with the CM before the Pre-Construction Conference for a review of site requirements and limitations. The on-site meetings can be utilized to review areas for the Dewatering and Water Diversion Plan, per Section 01 45 00 Environmental Protection; Access Plan per Section 01 45 00; Archeological Protection per Section 01 35 13; and Traffic Control per Section 01 54 00, although topics may change at the discretion of the CM and/or Contractor. The Contractor can utilize the site reviews to prepare Pre-Construction submittals for the Dewatering and Water Management Plan and any proposed variations for Access and Staging.

B. Contractor's Schedule Representative: Before or at the preconstruction conference, designate an authorized representative to be responsible for the preparation and maintenance of the Construction Schedule. The Scheduler shall have demonstrated proficiency in the use of scheduling software. The authorized representative will be

responsible for preparing the Baseline Schedule, all required updates, revisions, Time Impact Analyses, and preparation of reports.

1.5 COORDINATION

A. Coordinate schedules with performance of construction activities and in relation to:

1. Removal and relocation of all fish and aquatic species prior to any dewatering activities.
2. Revegetation staging of materials (mulch).
3. Monitoring to be performed by the cultural resources monitor, including:
4. Any Permit requirements
5. Biological surveys, including nesting bird surveys and fish relocation by CalTrout-designated biologists

B. Coordinate Construction Baseline Schedule with the Schedule of Values, list of subcontracts, Submittals Schedule, progress reports, payment requests, and other required schedules and reports.

1. In developing the Construction Baseline Schedule, ensure that the Subcontractor's work at all tiers as well as the prime Contractor's work, is included and coordinated.
2. Secure time commitments for performing critical elements of the Work from parties involved.
3. Coordinate each construction activity in the network with other activities and schedule them in proper sequence.
4. Factor in leeway for potential unpredictable delays due to events which pose safety risks, such as potential high wind events, rain, high flows, soggy or muddy conditions, poor air quality from smoke, etc.

PART 2 PRODUCTS

2.1 SCHEDULE OF VALUES

A. Breakdown each lump sum item into component work activities used in the schedule, for which progress payments may be requested. The work activities broken out within the schedule of values shall be integrated into and made a logical part of the construction baseline schedule submitted under this specification. The total costs for the component work activities shall equal the contract price for that lump sum item. The CM may request data to verify accuracy of dollar values. Include overhead and profit in the total dollar value of unit price items and in the component work activities for each lump sum item.

B. The SOV shall include cost breakdowns for specific actions under each Contract Line Item.

C. Actions scheduled to be performed in the final three weeks of the contract period shall fully reflect their true lump sum cost and shall not be lower than Contractor has estimated for bid purposes.

D. The total cost of all items shall equal the contract price. The Schedule of Values will form the basis for progress payments.

E. If additional specific cost breakdowns are needed by the CM, the CM shall notify the Contractor within two weeks after the Notice to Proceed has been issued.

F. An acceptable Schedule of Values shall be agreed upon by the Contractor and CM before the first progress payment is processed.

2.2 CONSTRUCTION SCHEDULE REQUIREMENTS

A. Construction Baseline Schedule: The estimated duration, sequence and relationship of work activities shall demonstrate completion of all work in any portion of the channel by Nov 1.

B. Construction Baseline Schedule: Prepare Construction Baseline Schedule using a computerized, resource-loaded, time-scaled CPM network analysis diagram for the Work.

1. Develop and finalize Construction Baseline Schedule so it can be accepted for use no later than 30 days after date established for the Notice of Award.

a. Failure to include any work item required for performance of this Contract shall not excuse Contractor from completing all work within applicable completion dates, regardless of the CM’s acceptance of the schedule.

2. Establish procedures for monitoring and updating Construction Baseline Schedule and for reporting progress. Coordinate procedures with progress meeting and payment request dates.

C. Construction Baseline Schedule Preparation: Prepare a list of all activities required to complete the Work and identify probable critical paths.

1. Activities: Indicate the estimated duration, sequence requirements, and relationship of each activity in relation to other activities.

2. Critical Path Activities: Identify critical path activities, including those for interim completion dates. Scheduled start and completion dates shall be consistent with Contract milestone dates.

3. Processing: Process data to produce output data on a computer-drawn, time-scaled network. Revise data, reorganize activity sequences, and reproduce as often as necessary to produce the CPM schedule within the limitations of the Contract Time.

4. The Construction Baseline Schedule as developed shall show the sequence and interdependence of activities required for complete performance of the work. Ensure all work sequences are logical and the Construction Baseline Schedule shows a coordinated plan of the work.

5. Resource loading of each activity shall include all personnel by labor category and equipment type and capacity proposed to complete the activity in the duration shown.

6. Consider seasonal weather conditions in planning and scheduling all work influenced by high and low ambient temperatures, wind, or precipitation to ensure completion of all work within the contract time.

7. Time Frame: Proposed duration assigned to each activity shall be the Contractor's best estimate of time required to complete the activity considering the scope and resources planned for the activity.

a. An early finish date may be shown but the late finish date must be the same date as the last day of the permissible on-site work.

b. Contract completion date shall not be changed by submission of a schedule

that shows an early completion date.

c. The Contractor shall limit use of lead or lag durations between schedule activities.

d. Project Calendars: Develop and incorporate the following calendars:

1) Administrative Calendar: Include a calendar that is based on a 7-day week to be used on any activities that are based on calendar days. Apply this calendar to administrative tasks or any other tasks that are not affected by non-working days (Federal Holidays, weather, etc.).

2) Project Calendar: Include a calendar that is based on the planned work week for the project. Include Federal Holidays, weekends, and any other non-work days indicated in the contract documents. Apply this calendar to activities which are not anticipated to be affected by weather.

3) Weather Calendar: Utilize the Project Calendar and show anticipated normal downtime related to weather as non-working time. Weather days shall be based on data for the local area from a reliable source like the National Oceanic and Atmospheric Administration (NOAA) or source acceptable to the CM. Apply this calendar to activities that are anticipated to be affected by weather.

e. Activity Duration: Define activities so no activity is longer than 15 days, except for non-construction activities including mobilization, shop drawings and submittals, fabrication and delivery of materials and equipment.

f. Submittal Review Time: Include review and re-submittal times indicated. Coordinate submittal review times in Construction Baseline Schedule.

g. Substantial Completion: Allow time for administrative procedures necessary for certification of Substantial Completion. (For more information, refer to Division 01 Specification 01 77 00 Closeout Procedures.

8. Constraints: Include constraints and work restrictions indicated in the Contract Documents and as follows in schedule and show how the sequence of the Work is affected.

a. Phasing: Arrange list of activities on schedule by phase and by area (as defined by Engineer or CM).

b. Work under More Than One Contract: Include a separate activity for each contract.

c. Work Restrictions: Show the effect of the following items on the schedule, as relevant:

d. Service interruptions.

1) Use of premises restrictions.

2) Seasonal variations.

3) Environmental control.

e. Other Constraints: Material staging and stockpiling. Relocation of materials from one area to another.

f. Work Stages: Indicate important stages and sequencing of construction for each major portion of the Work as listed in Section 01 11 00.

9. Milestones: Include milestones indicated in the Contract Documents in schedule, including, but not limited to, the Notice to Proceed and Substantial Completion.

D. Joint Review, Revision, and Acceptance:

1. Upon acceptance of the Construction Baseline Schedule by the CM, save the schedule as a baseline and update on a weekly basis. The construction schedule update will be used to evaluate the Contractor's applications for payment based upon information developed at the Construction Schedule update meeting.

E. Recovery Schedule: When periodic schedule update indicates the Work is 7 or more calendar days behind the current accepted schedule, a separate recovery schedule indicating means by which Contractor intends to regain compliance with the schedule must also be submitted. Indicate changes to working hours, working days, crew sizes, and equipment required to achieve compliance, and date by which recovery will be accomplished.

PART 3 EXECUTION

3.1 CONSTRUCTION SCHEDULE UPDATES

A. Progress Meeting Updates: Provide updated schedule information before each weekly progress meeting.

1. Issue updated schedule concurrently with the report of each such meeting. Incorporate construction progress into the currently accepted schedule in a timely manner.
2. General: Update the Construction Schedule on a weekly basis to reflect actual construction progress and activities throughout the entire contract period and until project substantial completion. The status date of each schedule update shall be the 7th day preceding the progress payment request date.
3. Procedure: The Contractor shall meet with the CM each week at a Construction Schedule update meeting to review actual progress made through the status date of the Construction Schedule update, including dates activities were started and/or completed and the percentage of work completed on each activity started and/or completed.
4. Reports: Concurrent with revising schedule, prepare tabulated reports showing the following:
    a. Identification of activities that have changed.
    b. Changes in early and late start dates.
    c. Changes in the critical path.
    d. Changes in the Contract Time.
    e. Narrative: The report shall include a brief description of the actual progress made during the update period; actual and potential delaying activities; any impediments to progress; issues related to inclement weather; progress toward established milestones and project float. The report shall include a brief description of the work anticipated to be performed in the next month. Any minor revisions to the schedule should be identified so they can be evaluated and accepted or rejected.
    f. As the Work progresses, indicate Actual Completion percentage for each activity.
    g. If the schedule update shows a late finish date after the contract completion date, at a minimum, include the following in the narrative with your submission:

1) Any known delays.

2) Actions that will be taken to get back on schedule.

3) Pending modifications.

4) Impediments or constraints affecting progress.

h. Progress Payments: The weekly updating of the currently accepted Construction Schedule shall be an integral part of the process upon which progress payments will be made under this contract. If the Contractor fails to provide schedule updates or revisions, then a portion of the monthly payment may be retained until such corrections have been made.

B. Distribution: Distribute copies of accepted schedule to Construction Manager, Contract Administrators, Subcontractors, testing and inspecting agencies, and other parties identified by Contractor with a need-to-know schedule responsibility.

1. Post copies in Project meeting rooms and temporary field offices, if applicable.

2. When revisions are made, distribute updated schedules to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in performance of construction activities.

C. Construction Schedule Revisions:

1. Required Revisions: If, as a result of the weekly schedule update, it appears the currently accepted Construction Schedule no longer represents the actual prosecution and progress of the work, the CM will request, and the Contractor shall submit, a revision to the Construction Schedule.

2. The Contractor may also request reasonable revisions to the currently accepted Construction Schedule in the event the Contractor's planning for the work is revised. If the Contractor desires to make changes, the Contractor shall notify the Construction Manager in writing, stating the reason for the proposed revision. Accepted revisions will be incorporated into the currently accepted Construction Schedule for the next monthly schedule update.

3. Reports: Concurrent with revising schedule, prepare tabulated reports showing the following:

a. Identification of activities that have changed.

b. Changes in activity durations in workdays.

c. Changes in the critical path.

END OF SECTION 01 32 16

01 33 00 Submittal Procedures

PART 1 GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for submitting Shop Drawings, Product Data, Samples, and other submittals.

1.2 DEFINITIONS

A. Action Submittals: Written, graphic information, and physical samples that require the contract administrators' or construction manager's responsive action.

B. Informational Submittals: Written information that does not require contract administrators' or construction manager's responsive action. Submittals may be rejected for not complying with the requirements.

1.3 RELATED SECTIONS

A. Section 01 31 00, Project Management and Coordination, Part 2: Project Management Software Program.

1.4 GENERAL SUBMITTAL PROCEDURES

A. General: Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual specific sections.

1. The Construction Manager reserves the right to require submittals in addition to those called for in individual sections.

B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Review them for legibility, accuracy, completeness, and compliance with Contract Documents.

1. Coordinate each submittal with purchasing, testing, delivery, other submittals, phases of work, and related activities that require sequential activity.
2. Coordinate transmittal of different types of submittals for related parts of the Work so processing will not be delayed because of the need to review submittals concurrently for coordination.
    a. CM reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

C. Transmittal: Transmit submittals via email to be provided by the contractor (see Section 01 31 00 Project Management and Coordination). Notify the CMs and CAs via email when a transmittal has been uploaded to the online site.

D. Submittal List: A submittal list has been attached to the end of this Specification Section. The intent is to provide an overall summary of submittal requirements and not a comprehensive list. The requirements of the individual Specification Sections, terms and conditions of the Contract still apply regardless of what is shown on the submittal list.

E. Processing Time: Allow enough time for submittal review, including time for re-submittals, as follows. Time for review shall commence when an e-mail notification is

received by the Construction Manager (or designee) indicating the submittal has been posted and is ready for review. When the Construction Manager has completed their review, an e-mail notification will be sent to the Contractor indicating the submittal has been processed. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including re-submittals.

1. Action Submittals
    b. Initial Review: Allow 10 workdays for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required.
    c. Re-submittal Review: Allow 5 workdays for review of each re-submittal.
2. Informational submittals
    d. Review: Allow 10 days for review of each submittal.

F. Approved Equals:

1. For each item proposed as an “approved equal,” submit supporting data, including:
    e. Drawings and samples as appropriate.
    f. Comparison of the characteristics of the proposed item with that specified.
    g. Changes required in other elements of the work because of the substitution.
    h. Name, address, and telephone number of vendor.
    i. Manufacturer’s literature regarding characteristics, properties, installation, operation, and maintenance, as applicable.
2. A request for approval constitutes a representation that Contractor:
    j. Has investigated the proposed item and determined that it is equal or superior in all respects to that specified.
    k. Will provide the same warranties for the proposed item as for the item specified.
    l. Has determined that the proposed item is compatible with interfacing items.
    m. Will coordinate the installation of an approved item and make all changes required in other elements of the work because of the substitution.
    n. Waives all claims for additional expenses that may be incurred because of the substitution.

G. Electronic Submittals: Identify and incorporate information in each electronic submittal file as follows:

1. 1. Medium: Written submittals shall be submitted electronically. Submittal headings shall use clear project and submittal identifiers.
2. Identification: Submittal number or other unique identifier, including revision identifier.
    o. Submittal number shall use a sequential number (e.g., .001). Re-submittals shall include an alphabetic suffix after another decimal point (e.g., .001.A).
3. Re-submittals: Make re-submittals using the same process used with the initial submittal.
    p. Note date and content of previous submittal.

q. Note date and content of revision in the title block on the submittal and clearly indicate the extent of revision.

r. Re-submit submittals until they are marked “Approved” or “Approved with notations”.

4. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, and others as necessary for performance of construction activities.

5. Use for Construction: Use only final submittals with mark indicating “Approved” or “Approved with notations”. Ensure all notations have been incorporated and, at a minimum, keep one copy of the final approved submittal on site for use during construction.

1.5 CONTRACTOR’S USE OF CAD FILES

A. General: At Contractor’s written request, copies of CAD files and/or relevant GIS files will be provided to Contractor for Contractor’s use in connection with Project, subject to the following conditions:

1. Files may be provided as is; any format or other changes to files or changes to the objects in the drawing will be done only at the discretion of the CM or CA.

1.6 REQUEST FOR SUBMITTALS

A. Contractor is directed to each Specification section for required submittals, however, the anticipated Submittals shall consist of, but is not necessarily limited to the following:

	SPEC. SECTION	SUBMITTAL TYPE	WHEN REQUIRED	SUBMITTAL DATE	RESUBMITTAL DATE	APPROVAL
Submittals Due Before the Pre-Construction Meeting						
1	**01 31 00**	Letter designating Project Superintendent. Superintendent will provide a list with contact information for Contractor’s designated Environmental Manager, Scheduler, Project Manager, and Safety Manager	One week Prior to Preconstruction Meeting			
2	**01 31 00**	Construction Baseline Schedule.	Draft: Three-weeks before Pre-Construction Meeting Final: One week prior to preconstruction meeting			
3	**01 31 00**	Schedule of Values	One Week Prior to Preconstruction Meeting			
4	**0 31 00 and 01 35 23**	Site-Specific Accident Prevention Plan	Draft: Submit for initial review by CM. If approved, CM will submit to CalTrout safety			

			manager. Allow three weeks for Safety Officer Review. Make revisions as needed within 7 days Final: One week before preconstruction meeting.			
5	**01 31 00 and 01 35 23**	A list of Subcontractors, their roles for this project, and contact information.			One Week Prior to Preconstruction Meeting	
6	**01 31 00**	Written statement from subcontractors certifying compliance with labor standards	One week prior to preconstruction meeting.			
7	**01 31 00**	Evidence of liability insurance coverage and workman's compensation			One week prior to preconstruction meeting	
8	**01 31 00 and 01 45 00**	A draft and final Dewatering and Water Management Plan (per Section 01450 and permit requirements)			Draft: Three weeks before preconstruction meeting. Allow for onsite review by CPS, as requested by CM. Final: One week before preconstruction meeting.	
9	**01 31 00 and 01 45 00**	Access Plan			Draft: Three weeks before preconstruction meeting. Final: One week prior to preconstruction meeting.	
10	**01 31 00 and 01 40 00**	Quality Control Plan.	One week prior to preconstruction meeting.			
11	**01 31 00 and 01 54 00**	Temporary Traffic Management Plan	Draft: Three weeks before preconstruction meeting. Final: One week before preconstruction meeting.			
12		Waste Management Plan	One week prior to preconstruction meeting			
13		Spill Prevention and Refueling Plan			One week prior to	

					preconstruction meeting	
14	**Quality reqs**	Substitution Requests	One week prior to preconstruction meeting			
15	**Enviro protection**	Dust Prevention Plan	One week prior to preconstruction meeting			
16	**Enviro protection**	Water Pollution Control Plan	One week prior to preconstruction meeting			
	Multiple sections	Supplier-provided product data sheets including but not limited to culverts, check valves, rock, aggregate base, geotextile fabric, straw, tackifier, gates and fence materials.		One week prior to use		
SUBMITTALS DUE DURING THE WORK						
17	**01 31 00 and 01 32 16**	Full Schedule Update			After the first two weeks of work. Submit at weekly meeting	
18	**01 31 00**	Two-week look ahead schedule			At each weekly meeting after the first two weeks of work	
19	**01 71 23**	Detailed stake layout plan prepared by surveyor			Two business days prior to field survey	
20	**31 20 00**	Planform and cross-sectional drawings of proposed modifications of work that will deviate from drawings for earth moving activities			Prior to construction of modifications	
21	**31 20 00**	Planform and cross-sectional drawings of completed modifications that deviated from design drawings			At weekly meeting following completed of the modifications	
22	**31 20 00**	Compaction Testing Reports				
SUBMITTALS DUE PRIOR TO PROCESSING PAYMENT						
23	**01 32 16**	Estimates of percent complete for each activity on schedule of values			7 days before requesting progress payment	
SUBMITTALS DUE DURING CLOSE-OUT PROCESS						
24		Record (as-built) drawings				

PART 2 PRODUCTS

2.1 ACTION SUBMITTALS

A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.

1. If information must be specially prepared for submittal because standard printed data are not suitable for use, submit as Shop Drawings, not as Product Data.
2. Mark each submittal to show which products and options are applicable.
3. Include the following information, as applicable:
    s. Manufacturer or supplier product specifications.
    t. Testing by recognized testing agency.
    u. Any other relevant information from the manufacturer or supplier.
4. Submit product data in PDF file format before or concurrent with samples.

B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale.

1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
    v. Dimensions.
    w. Excavation or grading drawings.
    x. Schedules.
    y. Notation of coordination requirements.
    z. Notation of dimensions established by field measurement.
    aa. Relationship to adjoining construction clearly indicated.
    bb. Seal and signature of professional engineer if specified.
2. Submit shop drawings as a PDF electronic file.

C. Samples: Submit Samples to construction manager or designee for review of characteristics between submittal and actual component as delivered and installed.

1. Transmit Samples that contain multiple, related components together in one submittal package.
2. Identification: Attach label on unexposed side of Samples that includes the following:
    cc. Generic description of Sample.
    dd. Product name and name of manufacturer.
    ee. Sample source.
    ff. Submittal Number and title of appropriate Specification Section.
3. Disposition: Maintain sets of approved Samples at Project site, available for quality control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.

D. Construction Materials: The Contractor is encouraged to submit for approval products that are recycled, reused, sustainable, or made using environmentally responsible or ethical processes or materials. The contractor is also encouraged to submit for approval products produced with lower lifecycle Greenhouse Gas Emissions than alternatives or use methods that will result in reduced GHG emissions for the project.

2.2 INFORMATIONAL SUBMITTALS

A. General:

1. Submit informational submittals as PDF electronic files to the project management program provided by the contractor and notify the CM and CA via email.
2. Certificates and Certifications: If applicable, provide a notarized statement that includes the signature of the entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity.
3. Informational submittals that do not comply with the requirements specified in the Contract Documents will be rejected and one copy will be returned.

B. Prepare and submit Informational Submittals required by individual Specification Sections. Review all specification sections to identify required submittals and their requirements, including but not limited to the submittals listed in Section 01 33 23 List of Submittals.

C. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and other information specified.

D. Manufacturer Certificates: Prepare written statements on manufacturer's letterhead certifying that manufacturer complies with the requirements in the Contract Documents. Include evidence of manufacturing experience where required.

E. Material Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with the requirements in the Contract Documents.

F. Preconstruction Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.

G. Compatibility Test Reports: Prepare reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product.

PART 3 EXECUTION

3.1 CONTRACTOR'S REVIEW

A. Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions.

3.2 CONSTRUCTION MANAGER'S ACTION

A. General: Submittals may be disapproved without technical review if identification information is missing, not filled in, or if placed on the back of the submittal; an incorrect format of submittals is provided; the transmittal form is incorrectly filled out; submittals are not coordinated; or submittals do not show evidence of Contractor's approval.

1. Any work done or orders for materials or services placed before approval shall be

at the Contractor's own risk.

B. Action Submittals: CM will review each submittal, generate comments on corrections or modifications required, and indicate the appropriate action on the Transmittal Form. The submittal will be marked in one of three ways as defined below:

1. ACCEPTED: Acceptable with no corrections.
2. ACCEPTED WITH NOTATIONS: Minor corrections or clarifications required. All comments are clear, and no further review is required. The Contractor shall address all review comments when proceeding with the work.
3. DISAPPROVED - RESUBMIT: Rejected as not in accordance with the contract or as requiring major corrections or clarifications. The CM will identify the reasons for disapproval. The Contractor shall revise and resubmit with changes clearly identified.

C. Informational Submittals: CM will review each submittal and will either accept or reject it.

D. Partial submittals are not acceptable, will be considered non-responsive, and will be returned without review.

END OF SECTION 01 33 00

01 35 13 Archeological Protection

PART 1 GENERAL

1.1 SUMMARY

A. The work of this section consists of protecting archeological resources.

B. The project location has the potential for discovery of archaeological resources. CalTrout's Cultural Resources Monitor will be onsite during excavation, trenching, or similar activities. The Contractor shall provide advance notice of specific dates for any such excavation to ensure the monitors have adequate time to be present during pertinent actions. No grading 3 FT below the ground surface shall occur without the presence of the Cultural Resources Monitor.

C. The Contractor shall accommodate such monitoring at all times.

D. All onsite personnel shall attend a training lead by the cultural monitoring team prior to commencing their onsite work.

1.2 DEFINITIONS

A. Archeological Resources: Archeological resources are the physical evidences of past human activity, including evidences of the effects of that activity on the environment. Archeological resources represent both prehistoric and historic time periods. They may be artifacts or features and are found above and below ground and under water.

B. Archeologically Sensitive Areas: Areas that have the potential to contain significant (National Register eligible) archeological resources.

C. Non-sensitive Areas: Areas with little, if any, potential of containing significant (National Register eligible) archeological resources.

D. Archeological / Cultural Resources Monitor: Person designated by CalTrout to oversee construction activities that could disturb archeological resources.

E. Archeological Discovery: Previously unknown historic or prehistoric properties, including human remains, found during contractual activities.

F. Archeological Artifact: Archeological artifacts are any portable object made or used by humans such as tools, containers, and food remains. This can include glass, nails, metal, ceramics, bricks, shell, bone, and stone.

G. Archeological Feature: Archeological features are typically non-portable constructions that reflect human activity. Features are such that they cannot be moved from their original location without significant alteration or destruction to the feature. Features can include trash pits, privies, wells, foundations, etc.

H. Archeological Resources Protection Act (ARPA) of 1979 (P.L. 96-95; 93 Stat. 712): defines archeological resources as any material remains of past human life or activities that are of archeological interest and at least 100 years old; Section 4 of the statute describes the requirements that must be met before Federal authorities can issue a permit to excavate or remove any archeological resource on Federal or Indian lands; the

curatorial requirements of artifacts, and other materials excavated or removed.

1.3 SUBMITTALS [NOT USED]

1.4 QUALITY ASSURANCE

A. At least one week before any excavation begins, Contractor shall meet with CM and the Cultural Resources Monitor to discuss Daily Work Schedule and equipment and methods to be used. Contractor shall ensure that approved Daily Work Schedule is followed throughout construction.

PART 2 PRODUCTS

2.1 DAILY WORK SCHEDULE

A. A Daily Work Schedule is required for all work occurring within archeologically sensitive areas. Include all work that is to occur within the area and key the schedule to the drawings to include the following:

1. Starting and ending dates of ground-disturbing construction, particularly anything occurring at 3 FT of depth below ground surface.
2. Locations of temporary facilities, such as barriers, field offices, staging areas, sanitary facilities, borrow pits, and haul and access roads.
3. Types of construction, such as clearing, topsoil stripping, structure or trench excavation, landscaping, and post construction clean up.
4. Methods and equipment used for each type of construction.
5. Plan for relocating work in the event of temporary work stoppages at each archeologically sensitive area

PART 3 EXECUTION

3.1 BARRICADES

A. Comply with requirements specified in 01 56 00 Barriers.

3.2 CULTURAL RESOURCES EDUCATION FOR WORKERS

A. The archaeological / cultural monitor and/or CalTrout's representative will provide cultural resource sensitivity training to all construction workers. Training will involve information regarding what types of cultural materials are likely present in the project area, how to identify cultural materials, and the procedures for contacting the appropriate parties if cultural materials are encountered during construction activities. All construction personnel will be required to participate in the training.

3.3 OBSERVATION

A. Archeological / Cultural Monitor will observe all ground-disturbing site work in areas of any excavation, including construction of temporary facilities, at all archeologically sensitive areas, from a safe location mutually agreed on by Contractor and Monitor. As new ground is broken, Monitors will examine excavated materials, using construction layout centerline and perimeter staking as a reference point to record locations of findings. No grading 3 FT below the ground surface shall occur without the presence of a Cultural Monitor.

3.4 DISCOVERY OF RESOURCES

A. If the Archeological / Cultural Monitor discovers resources, immediate relocation of the work to a non-sensitive area may be required to allow Monitor to identify and document resources and, if necessary, develop an appropriate mitigation plan. While the Monitor is documenting resources in sensitive areas, Contractor shall relocate work to non-sensitive areas at least 100 feet from the sensitive area where monitoring is not normally required.

B. If resources are discovered while Archeological Monitor is absent, stop work immediately and report the discovery to the CM.

C. If the significance and potential treatment of the discovery will alter Drawings, consultation between the Contractor, CM, monitors, and Project Engineer will be completed no later than 24 hours after discovery. A discovery may require consultation with the State Historic Preservation Officer if a significant archeological resource will be adversely impacted.

D. Not all cultural resources are visible on the ground surface. If any cultural resources, such as structural features, bone, shell, flaked or ground stone artifacts, historic-era artifacts, human remains, or architectural remains, are encountered during any project construction activities, work will be suspended immediately at the location of the find and within an appropriate radius of at least 100 feet, and the archeologist will be notified immediately. The unanticipated discovery will be treated according to the guidelines outlined in 36 CFR 800.13.

E. If human remains are discovered during construction activities, all work will stop within 50 feet of the discovery, and the archeologist will be contacted immediately. Furthermore, as required by law, the requirements of California Health and Human Safety Code Section 7050.5 will be followed, and the County coroner will be notified. If the human remains are determined to be of Native American origin, the provisions outlined in the Native American Graves Protection and Repatriation Act (1990) will be followed.

3.5 WORK STOPPAGE

A. The Contractor shall plan, schedule, and execute the work to prevent stoppages at one area from stopping all work at the construction site

END OF SECTION 01 35 13

01 35 23 Safety Requirements

PART 1 GENERAL

1.1 SUMMARY

A. This section includes establishing an effective accident prevention program and providing a safe environment for all personnel and visitors.

B. Related: Section 01 54 00 Traffic Control.

1.2 SUBMITTALS

A. Site-Specific Accident Prevention Plan: After contract award, submit a Site-Specific Accident Prevention Plan. The CM will review the proposed Plan. If the plan requires any revisions or corrections for either review by the Safety Officer, the Contractor shall resubmit the Plan within 7 workdays. A Final Accident Prevention Plan shall be submitted one week before the Pre-Construction Conference.

B. No progress payments will be made until the Plan is accepted.

C. The prime contractor shall be responsible for development, implementation, and oversight of the site-specific plan.

D. The submitted Accident Prevention Plan shall be specific to the job task and scope, not generic or boilerplate. The plan shall be tailored to the job and shall not include activities irrelevant to the specific job.

E. The submitted Accident Prevention Plan shall include required components, as cited in Subsection 3.1 of Section 01 35 23.

1.3 QUALITY ASSURANCE

A. Comply with contract clauses in section 3.2 “General Provisions.” In case of conflicts between Federal, State, and local safety and health requirements, the most stringent shall apply. Equipment or tools not meeting OSHA requirements will not be allowed on the project sites. Failure to comply with the requirements of this section and related sections may result in suspension of work.

B. Qualifications of Employees:

1. All employees must be qualified and able to perform their assigned duties in a safe manner.
2. Do not allow employees to perform work whose ability or alertness is impaired because of prescription or illegal drug use, fatigue, illness, intoxication, or other conditions that may expose themselves or others to injury.
3. Operators of vehicles, hoisting equipment, and hazardous plant equipment shall be able to understand signs, signals, and operating instructions, and be fully capable of operating such equipment. Provide operating instructions for all equipment. Newly hired operators shall be individually tested by an experienced operator or supervisor to determine if they are capable of safely operating equipment.

1.4 ACCIDENT REPORTING

A. Accidents: Notify CM and safety manager immediately in the event of a reportable accident.

PART 2 PRODUCTS

2.1 FIRST AID FACILITIES

A. Provide adequate facilities for the number of employees and the hazards associated with the types of ongoing construction work at the site.

2.2 PERSONNEL PROTECTIVE EQUIPMENT

A. Meet requirements of applicable ANSI standards.

PART 3 EXECUTION

3.1 ACCIDENT PREVENTION PLAN

A. The Plan shall be written to comply with OSHA and project requirements (a generic plan is not acceptable) including but not limited to the following:

1. The Plan shall have a signature page identifying the name, title, phone number and signature of the following:
    a. The plan preparer, the company representative authorized to approve the plan, the Project Manager/Superintendent, and the Project Safety Professional (the same individual may have multiple roles).
2. The Plan shall include a brief description of the project and work to be performed and include a map of the general work location.
3. The Plan shall list major work tasks or job phases and submit a Job Hazard Analysis (JHA) or Phase Hazard Analysis (PHA) for each major task or phase. A JHA or PHA is a breakdown of the task or phase in major steps, identifying what hazards or safety exposures are present, then what measures will be in place to control these identified concerns.
4. The Plan shall establish in detail the protocols to be used to recognize, evaluate, and control hazards associated with each task performed for this project. The level of detail provided in the site-specific plan shall be tailored to the type of work, complexity of operations to be performed, and hazards anticipated.
5. Some work phases, such as excavation, woody habitat structure construction, demolition, or other activities may require separate specific plans. They may also need to include a designated competent person to oversee the work. For such activities, additional aspects or items shall be addressed or attached with the Plan. Competent person(s) shall be identified along with documentation or evidence detailing their competency and/or their skill level.
6. If subcontractors and suppliers (if known) will be on site, the Plan shall identify these individuals or groups, the means for controlling and coordinating with subcontractors and suppliers, and address what the safety responsibilities of subcontractors and suppliers are.
7. The Plan shall list mandatory training topics to be covered which are applicable to this project, such as excavation, fall protection, hazard communication, confined space, respiratory protection, and personal protective equipment as examples. With training identified, the Plan shall include a section for each topic and identify how they will carry out these safety aspects.

8. The Plan shall provide any requirements for periodic training, such as daily/weekly tailgate training occurrences.
9. The Plan shall identify the name(s) of the individual(s) responsible for maintaining training records. Actual certifications such as: First Aid/CPR, etc. applicable to the project should be included as attachments or made available for review.
10. The Plan shall include requirements for site safety inspections, including but not limited to: inspection frequency, name(s) of individuals who are responsible for conducting safety inspections, procedures for performing inspections, documentation and recording of corrective action requirements.
11. The Plan shall identify a Safety Manger who will inspect all equipment prior to it being brought on site; perform daily inspections of the equipment; conduct trainings; track training requirements for use of equipment; implement seat belt requirements; track personnel qualifications for operating equipment; communicate safe operating instructions to the construction crew; implement parking and overnight storing requirements; and implement guarding and safety devices.
12. The Plan shall include a section on Personnel Protective Equipment (PPE). It shall provide an overview explaining the requirements and responsibilities for each employee to wear the appropriate PPE in all operations where there is an exposure to hazardous conditions, or where the need for using such equipment to reduce the hazards to the employees is required. Details in this section should include, but may not be limited to outlining procedures (who, when, how) for conducting the hazard analysis to determine PPE needs, assessment or certification of PPE to be used, the care, treatment and proper storage of PPE, etc.
13. The plan shall identify requirements of reporting workplace accidents both internally and to CalTrout, who will conduct accident investigations, procedures for investigating, and how they will be reported.
14. The Plan shall provide an overview of policies and procedures regarding employee noncompliance with safety requirements and holding personnel accountable for safety.
15. The Plan shall identify how the public will be protected during the contract work.
16. The Plan shall identify emergency contacts for the project and provide the name, phone number, map and driving directions from the worksite to the nearest hospital/emergency medical facility. The Plan shall also address requirements for administering first aid, including training requirements and providing certifications of those who will administer first aid or CPR.
17. The Plan shall develop a Contingency Plan for Severe Weather. The section shall outline procedures addressing each potential severe weather event that is likely to occur at the project site, particularly heavy rain, high winds, poor air quality due to smoke, and fires.
18. If hazardous chemicals will be used or brought on site during project implementation, the Plan shall develop a section overviewing Hazard Communication, provide or make available documentation that employees have received Hazard Communication training, and shall attach or make available copies of Safety Data Sheets (SDS) for each hazardous material that will be onsite.

3.2 EMERGENCY INSTRUCTIONS

A. Post telephone numbers and reporting instructions for ambulance, physician, hospital, fire department, and police in conspicuous locations at the work site.

3.3 FIRE AND LIFE SAFETY

A. Comply with the requirements of NFPA 241 (Standard for Safeguarding Construction, Alteration, and Demolition Operations).

B. Store hazardous materials in accordance with manufacturer and OSHA recommendations. Maintain readily available, on site, MSDS for each chemical.

1. Immediately report all spills of hazardous materials to the park.
2. Maintain a spill emergency response kit.

C. Comply with requirements of the Project Clean Water Act Section 401 Water Quality Certification and Order.

D. The contractor shall cooperate with local fire prevention authorities in eliminating hazardous fire conditions and shall implement the following fire plan under the direction of the PROJECT MANAGER.

E. The Contractor shall be responsible for:

1. Obtaining the phone number of the nearest fire suppression agency and providing this phone number to the PROJECT MANAGER as a first order of work,
2. Immediately reporting to the nearest fire suppression agency fires occurring within the limits of the project,
3. Preventing project personnel from setting open fires not part of the work,
4. Preventing the escape of fires caused directly or indirectly as a result of project operations and extinguishing these fires,
5. Maintaining traffic control to allow for passage of fire suppression vehicles/equipment at all times.

F. The areas to be cleared of vegetation shall be cleared, and kept clear of, flammable material such as dry grass, weeds, brush, downed trees, oily rags and waste, paper, cartons, and plastic waste.

G. The Contractor shall furnish each piece of equipment with the following:

1. One shovel and one fully charged fire extinguisher UL rated at 4 B:C or more on each truck, personnel vehicle tractor, grader or other heavy equipment,
2. One shovel and one back-pack 5-gallon water-filled tank with pump for each welder,
3. One shovel or one chemical pressurized fire extinguisher, fully charged, for each gasoline powered tool, including but not limited to chain saws, soil augers, rock drills, etc. The required fire tools shall, at no time, be farther than 25 feet from the point of operation of the power tool. Fire extinguishers shall be of the type and size required by the California Public Resource Code, Section 4431, and the California Administrative Code, Title 14, Section 1234,

3.4 PROTECTIVE EQUIPMENT

A. Inspect personal protective equipment daily and maintain in a serviceable condition. Clean, sanitize, and repair personal items, as appropriate, before issuing them to another individual.

B. Inspect and maintain other protective equipment and devices before use and on a

periodic basis to ensure safe operation.

3.5 SAFETY MEETINGS

A. As a minimum, conduct weekly 15-minute "toolbox" safety meetings. These meetings shall be conducted by a foreman or supervisor and attended by all construction personnel at the worksite. Topics need to coincide with work scheduled for the following week. Document and submit meeting minutes to the CM within one day after the meeting.

B. Conduct monthly safety meetings for all levels of supervision. Meetings shall be attended by all contractors and subcontractors performing work on the site. Notify the CM of meeting dates and times. These meetings shall be used to review the effectiveness of the Contractor's safety effort, to resolve current health and safety problems, to provide a forum for planning safe construction activities, and for updating the Accident Prevention Plan. The CM may attend the meeting.

3.6 HARD HATS AND PROTECTIVE EQUIPMENT AREAS

A. A hard hat area shall be designated by the Contractor. The hard hat area shall be posted by the Contractor in a manner satisfactory to the CM.

B. It is the Contractor's responsibility to require all those working on or visiting the site to wear hard hats and other necessary personal protective equipment at all times.

3.7 TRAINING

A. First Aid: Provide adequate training to an adequate number of personnel to ensure prompt and efficient first aid.

B. Hazardous Material: Train and instruct each employee exposed to hazardous material in safe and approved methods of handling and storage. Hazardous materials are defined as explosive, flammable, poisonous, corrosive, oxidizing, irritating, or otherwise harmful substances that could cause death or injury.

END OF SECTION 01 35 23

01 40 00 Quality Requirements

PART 1 GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for quality assurance and quality control.

B. The quality of all work shall be the responsibility of the Contractor.

C. See Section 01 71 23 Field Engineering for layout, review, and topographic checking requirements.

1.2 DEFINITIONS

A. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the work to evaluate that actual products incorporated into the work and completed construction comply with requirements.

C. Preconstruction Testing: Tests and inspections that are performed specifically for the project before products and materials are incorporated into the work to verify performance or compliance with specified criteria.

D. D installation of the work and for completed work.

E. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter.” It also does not imply that requirements specified apply exclusively to trades people of the corresponding generic name.

1.3 CONFLICTING REQUIREMENTS

A. Reference Standards: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to CM for a decision before proceeding.

B. Minimum Quality Levels: The quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to CM for a decision before proceeding.

1.4 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.

B. Contractor’s Quality Control Staff:

1. The Contractor's Quality Control Supervisor may also perform other duties if the size of the project permits.
2. The Contractor's job supervisory staff may be used to assist the Quality Control Supervisor supplemented, as necessary, by additional certified testing technicians.

C. Testing Agency Qualifications: refer to technical specifications and section 01 71 23 for testing requirements.

1.5 QUALITY CONTROL

A. The Contractor is responsible for all testing and inspections required by this scope of work. Inspect and test work as needed to ensure that the layout, quality of materials, workmanship, construction, finish, and functional performance comply with applicable specifications, and drawings.

B. Re-testing/Re-inspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and re-inspecting, for construction that replaced work that failed to comply with the Contract Documents.

C. Testing Agency Responsibilities: Cooperate with Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.

1. Notify CM and Contractor promptly of irregularities or deficiencies observed in the work during performance of its services.
2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from requirements.
4. Submit copies of the certified written report of each test, inspection, and similar quality-control service through Contractor.
5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the work.

D. Associated Services: Cooperate with agencies performing inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Provide the following:

1. Access to the work.
2. Incidental labor and facilities necessary to facilitate requested inspections.

E. Coordination: Coordinate sequence of activities to accommodate required quality assurance and control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.

1. Coordinate with CM and Project Engineer for routine inspections, spot topographic checks and similar activities.

PART 2 PRODUCTS

2.1 NOT USED

PART 3 EXECUTION

3.1 OFF-SITE CONTROL

A. Items that are fabricated or assembled off-site shall be inspected for quality control at the place of fabrication unless the CM waives this requirement.

3.2 ON-SITE CONTROL

A. Notification:

1. Notify the CM at least forty-eight (48) hours in advance of the preparatory phase meeting.
2. Notify the CM at least twenty-four (24) hours in advance of the initial and follow-up phases.

B. Preparatory Phase: Perform before beginning each feature of work.

1. Review control submittal requirements with personnel directly responsible for quality assurance and quantity control of the work. As a minimum, the Contractor's Quality Control Supervisor and the foreman responsible for the feature of work shall be in attendance.
2. Review all applicable specifications sections and drawings related to the feature of work.
3. Ensure that copies of all referenced standards related to execution for the feature of work are available on site.
4. Ensure that provisions have been made for field control.
5. Examine the work area to ensure that all preliminary work has been completed.
6. Verify all field dimensions and advise the CM of discrepancies with contract documents.
7. Ensure that necessary equipment and materials are at the project site and that they comply with approved shop drawings and submittals.
8. Document all preparatory phase activities and discussions on the Contractor's Quality Control Daily Report.

C. Initial Phase:

1. As soon as work begins, inspect and test a representative portion of a particular feature of work for quality of workmanship.
2. Review procedures to ensure compliance with contract requirements. Document all initial phase activities and discussions on the Contractor's Quality Control Daily Report.

D. Follow-Up Phase: Inspect and test as work progresses to ensure compliance with contract requirements until completion of work.

E. Additional Preparatory and Initial Phases: Additional preparatory and initial phases may be required on the same feature of work for the following reasons:

1. Quality of on-going work is unacceptable.
2. Changes occur in the applicable quality control staff, on-site production

supervision, or work crew.

3. Work on a particular feature of work is resumed after a substantial period of inactivity.

3.3 ENFORCEMENT

A. The Contractor shall stop work on any item or feature pending satisfactory correction of any deficiency noted by the quality control staff, the CM, or the Project Engineer.

3.4 REPAIR AND PROTECTION

A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.

1. Provide materials and comply with installation requirements specified in other Specification Sections.

B. Protect construction exposed by or for quality-control service activities.

C. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

END OF SECTION 01 40 00

01 45 00 Environmental Protection

PART 1 GENERAL

1.1 SUMMARY

A. This section describes requirements related to federal, state and regional governmental agencies who have jurisdiction over portions of the Work or who have issued permits prior to the performance of the Work. The specific referencing of such permits shall not limit or restrict the obligation of the Contractor to comply with the conditions of all permits affecting the Work, as set forth in the General Conditions.

B. This section consists of requirements to protect endangered species, water quality, the creek banks and creek bed, vegetation, nesting birds and other wildlife, the ground surface, and air quality.

C. This section consists of requirements for:

1. Water management and dewatering
2. Access Plan
3. Plant salvage

D. This section consists of requirements to protect the site from pathogens, chemical spills, turbidity, impacts of equipment, and similar impacts.

1. The Contractor shall execute the contract in such a manner as to cause no pollution and no unreasonable disturbance to the ecology. The Contractor shall immediately take steps, with CM's approval, to repair any damage or clean up any pollution they cause even though it may be the result of an accident and they have exercised all reasonable means of care and caution. The Contractor shall equip each piece of equipment with a spill response kit including fifty (50) - 18"x18" oil sorbent pads and one five-gallon pail with sealable lid. All expenses of clean up resulting from equipment damage, malfunction or repairs will be the Contractor's and no allowance will be made in contract amounts.
2. The contractor shall thoroughly steam clean all equipment prior to delivery to the job site. Equipment shall be free of woody and organic debris, soil, grease, and other foreign matter. The engine compartment, cab, and other enclosed spaces shall also be free of the aforementioned debris. The CM shall inspect all equipment at the time of delivery. Equipment not meeting cleanliness requirements shall not be allowed to proceed into the project areas.
3. The Contractor shall deliver and assemble all fueling and lubricating equipment prior to the beginning of work as described in this contract. Fueling and lubricating equipment includes primary storage and secondary containment structures as described below. All primary fuel and lubricant storage containers shall have secondary containment. Secondary containment shall include a leak-free reservoir that is 120% of the capacity of all primary storage units within the containment area. Secondary containment may be constructed of steel, aluminum, concrete or impermeable fabric liner. Fabric liners shall be made of PVC or Polypropylene reinforced fabric and shall be a minimum of 30 mil thick with welded leak-free seams. Fabric liner shall be supported to withstand any lateral spreading when filled to maximum capacity. Secondary containment shall be maintained so as not to fill with rainwater or other material capable of reducing capacity. Secondary containment areas shall be kept free of empty containers, pollutants and other debris and shall be cleaned if small spills occur. Portable

fueling and lubrication equipment shall have secondary containment unless it is attended at the worksite during work hours and shall remain empty when unattended after work hours or on weekends. Individual containers 5 gallons or less in capacity and not stored in aggregate do not require secondary containment. All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 65 feet (20 meters) from any riparian habitat or water body and place fuel absorbent mats under pump while fueling. The CM must approve all fuel storage and secondary containment before work under this contract can begin.

4. During construction, the following sensitive species may be encountered; CalTrout-provided biologists will perform pre-construction and construction-phase field surveys and species relocation as detailed in project permits:
   a) Special-status fish species that may be encountered include longfin smelt, northern California steelhead, Chinook salmon, coho salmon, coastal cutthroat trout, and lamprey, in addition to other aquatic fish species; these species will be relocated during dewatering by the CalTrout-designated biologist.
   b) Special-status plants that may be encountered include Carex lyngbyei, Castilleja ambigua subsp. humboldtiensis, Spergularia canadensis var. occidentalis, Angelica lucida, and Zostera marina. Avoidance and salvage and translocate zones for specific species (see Drawings). A SWS botanist will oversee the salvage and translocation of Carex lyngbyei (See Drawings, Sheet C6.3 Detail 3).
   c) Caltrout-designated biologists will complete pre-construction surveys for amphibians and reptiles and relocated as needed.
   d) Nesting bird surveys will occur until Aug. 15 or until previously identified nesting birds have fledged. The site is a potential nesting area for various species. Prior to each phase of disturbance during the construction window, CalTrout-designated biologists will perform avian surveys to ensure avoidance of sensitive bird species in the project area and establish exclusion buffers if required in coordination with the California Department of Fish and Wildlife.
5. During post implementation monitoring, monitoring will focus on presence/absence and distribution of native salmonid species, including juveniles and adults.
6. Several sensitive species are covered under the Restoration Management Permit with CDFW, including northwestern pond turtle, tidewater goby, coho salmon, steelhead trout, Chinook salmon, northern red-legged frog, longfin smelt, Pacific lamprey, and coastal cutthroat trout.

E. This section identifies permissible windows for work activities.

F. This section consists of requirements for worker trainings about environmental protections while working on site.

1.2 RELATED REQUIREMENTS

A. Section 01 31 00 – Project Management and Coordination

B. Section 01 56 00 – Barriers

C. Section 01 57 23 – Storm Water Best Management Practices

D. Section 02 41 13 – Selective Demolition

E. Section 31 20 00 – Earth Moving

1.3 SUBMITTALS

A. The schedule for submittals shall follow Section 01 31 00, Project Management and Coordination and shall consist of the following plans.

B. A Dewatering and Water Management Plan.

1. The Contractor shall submit a Draft and Final Dewatering and Water Management Plan. All versions shall address requirements in Section 01 45 00.
2. A Draft Plan shall be submitted to the CM for review a minimum of three weeks before the Pre-Construction Meeting. The Contractor shall participate in an on-site review with the CM, if requested by the CM.
3. The Contractor shall address CM comments to prepare a Final Plan for submittal. If CM has no comments on the Draft Plan, the Contractor shall resubmit the plan as a Final Plan.
4. The Contractor's submittal of a Draft Plan is required for issuance of a Notice to Proceed, but the Contractor shall not implement the plan until the Final Plan is approved by the CM.
5. All versions of the plan shall be submitted in a single electronic file, including all graphics and maps.
6. The plan shall include well-labelled graphics and maps of locations of features.

C. A Draft and Final Access Plan, per Subsection 3.2 of Section 01 45 00. The plan shall be submitted in draft three weeks before the preconstruction conference to allow for review and comment by the CM. The final plan shall address CM comments and shall be submitted one week before the Preconstruction Meeting, per Section 01 31 00. The Contractor shall participate in an on-site review of plans if requested.

D. Updates to the Access Plan during the work, if both parties agree to changes. Submit at the weekly meeting preceding the need for revised access.

E. All versions of plans shall be submitted electronically. Provide maps for in-field reviews.

F. Reports showing the provenance and any applicable details regarding proposed rock for import; copies of invoices for the imported materials.

1.4 ENVIRONMENTAL PERMITS

A. Compliance with Regulatory Permits: The Contractor shall completely review, be familiar with and adhere to the terms of all permits and agency approvals for this project. CalTrout and the CM will be responsible for securing and providing to the Contractor copies of permits, certifications, or authorizations from regulatory agencies. Copies of all permits are available from the CM and will remain at the project site throughout the duration of construction. Permits are additionally on file with the California Trout office.

1. Humboldt County Grading and Encroachment Permit
2. California Environmental Quality Act (CEQA) Mitigation, Monitoring, and Reporting Plan Requirements under the California State Water Board State Restoration General Order Programmatic Environmental Impact Report
3. North Coast Regional Water Quality Control Board Clean Water Act Section 401

Notice of Applicability under the California State Water Board State Restoration General Order

4. U.S. Army Corps of Engineers Clean Water Act Section 404 / Rivers and Harbor Act Section 10 Permit
5. National Marine Fisheries Service Endangered Species Act Section 7 Biological Opinion
6. U.S. Fish and Wildlife Service measures required to comply with the Endangered Species Act Section 7 Programmatic Biological Opinion for Statewide Restoration
7. California Coastal Commission Coastal Development Permit
8. Humboldt County Use Permit
9. California Department of Fish and Wildlife Restoration Management Permit (RMP)
10. Humboldt Bay Harbor, Recreation, and Conservation District Shoreline Development Permit

1.5 CONSTRUCTION PERMITS

A. Changes in Permit Conditions: Contractor acknowledges that the Scope of Work includes services not provided under specific Bid Items that are reasonably necessary to comply with the Environmental Permits. In the event that an additional Environmental Permit necessary for the performance of the Work is issued, or an existing Environmental Permit is modified, after the Bid Submission date, the Contractor recognizes the terms, conditions and requirements of such Environmental Permit or modification may require the Contractor to perform services or to provide services or to provide materials which are different from the Scope of Work in the Contract Documents. In such event, the Contractor shall not be entitled to any adjustment in the Contract Sum or Contract Times unless such change in the Work materially differs from the Work in the Contract Documents and such change could not be reasonably expected by the Contractor given the ordinarily encountered and generally recognized implementation of similar Environmental Permits. Contractor shall be responsible for its cost of evaluation of the implications for the Work, of the terms, conditions and restrictions of the Environmental permits, and of responding to any Requests for Proposals or Field Changes of the CM which are issued in connection with the issuance of the Environmental Permits.

B. The specification of specific permits applying to the Work shall not limit or restrict the obligation of the Contractor in the performance of the Work to comply with any and all other laws, regulations or permits which are specified in the Contract Documents or which apply to the performance of the Work.

1.6 REFERENCES TO REGULATORY REQUIREMENTS

A. Codes, laws, ordinances, rules and regulations referred to shall have full force and effect as though printed in full in these specifications. Codes, laws, ordinances, rules, and regulations are not furnished to the Contractor, since the Contractor is assumed to be familiar with their requirements. The listing herein of applicable codes, laws, and regulations for hazardous waste abatement work is supplied to the Contractor as a courtesy and shall not limit the Contractor’s responsibility for complying with all applicable laws, regulations or ordinances having application to the Work. Where conflict among the requirements exists, the most stringent requirements shall be used.

B. Conform to referenced codes, laws, ordinances, rules and regulations.

C. Precedence:

1. Where specified requirements differ from the requirements of applicable codes, ordinances and standards, the more stringent requirements shall take precedence.
2. Where the Plans or Specifications require or describe products or execution of better quality, higher standard or greater size than required by applicable codes, ordinances and standards, the Plans and Specifications shall take precedence so long as such increase is legal.
3. Where no requirements are identified in the Plans or Specifications, comply with all requirements of applicable codes, ordinances and standards of governing authorities having jurisdiction.

1.7 CODES

A. Codes which apply to the Contract Documents include, but are not limited to, the following:

1. Federal Clean Water Act Sections 404 and 401
2. Federal Endangered Species Act, Section 7

1.8 LAWS, ORDINANCES, RULES, AND REGULATIONS

A. During prosecution of Work to be done under the Contract Documents, comply with applicable laws, ordinances, rules, and regulations, including, but not limit to Federal, State of California, and Regional and Local Agencies.

B. Failure to meet water quality conditions of the Water Board 401 Certification will constitute a violation of the Porter-Cologne Water Quality Control Act and the Clean Water Act and may subject the Contractor to civil liability imposed by the Water Board to a maximum of $5,000 per day of violation or $10 for each gallon of waste discharged in violation of the Certification.

C. Other Applicable Laws, Ordinance and Regulations:

1. Where such laws, ordinances rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Time and Contract Sum, except where changes in laws, ordinances, rules, and regulations occur subsequent to the execution date of the Agreement.

1.9 CONFLICTS

A. Between referenced regulatory requirements: Comply with the one establishing the more stringent requirement.

B. Between referenced regulatory requirements and the Contact Documents: Comply with the one establishing the more stringent requirement and in accordance with the General Conditions.

1.10 ENVIRONMENTAL ASSESSMENT OF CONTRACT DEVIATIONS

A. Any deviations, requested by the Contractor, from the drawings, plans and specifications which may have an environmental impact will be subject to approval by the Construction Manager and may require an extended review, processing, and approval time. The CM reserves the right to disapprove alternate methods, even if they are more cost effective,

if the CM determines that the proposed alternate method will have an adverse environmental impact.

1.11 NOTIFICATION

A. The CM will notify the Contractor in writing of any observed noncompliance with Federal, State, or local environmental laws or regulations, permits, and other elements of the Contractor's Environmental Protection plan. The Contractor shall, after receipt of such notice, inform the CM of the proposed corrective action and take such action when approved by the CM. The CM may issue an order stopping all or part of the work until satisfactory corrective action has been taken. No time extensions shall be granted, or equitable adjustments allowed to the Contractor for any such suspensions. This is in addition to any other actions the CM may take under the contract, or in accordance with the Federal Acquisition Regulation or Federal Law.

B. CalTrout or the CM will notify the Water Board of any event causing a violation of compliance with water quality standards as soon as practicable (ideally within 24 hours). Notification may be via telephone, email, delivered written notice, or other verifiable methods.

PART 2 PRODUCTS

2.1 WATER POLLUTION CONTROL PLAN (WPCP)

A. Contractor shall develop a Water Pollution Control Plan (WPCP) as described in Section 01 57 23 consistent with relevant sections of this specification.

2.2 TEMPORARY COFFERDAM PLUGS FOR TIDAL INUNDATION MANAGEMENT

A. Cofferdams shall be constructed of non-polluting materials approved by the Construction Manager including but not limited to sand bags, water bladders, concrete ecology blocks, sheet piles, rock, native soil with appropriate erosion/sediment control measures and/or plastic tarps/geotextiles.

2.3 SILT FENCES

A. Ultraviolet stabilized woven polypropylene face. The filter fabric shall meet the following requirements:

Physical Property	Test Procedure	Required Value
Grab Tensile	ASTM D 4632	160 lbs. min.
Elongation (%)	ASTM D 1682	25 % max.
Mullen Burst Strength, psi, min.	ASTM D 3876	350
Equivalent Opening Size, max.	US Standard Sieve	30-70
Ultraviolet Radiation Resistance, %	ASTM D 4355	70

Strength Retention		
Weight oz./sq. yd.	ASTM D 3776	4

B. Mill Certificate or Affidavit. A mill certificate or affidavit shall be provided attesting that the fabric and factory seams meet chemical, physical, and manufacturing requirements specified above.

C. The Contractor may use either wooden stakes or steel posts for silt fence construction. See plans for size.

2.4 FIBER ROLES (SEDIMENT LOGS OR WATTLES)

A. Composed of bio-degradable materials.

B. The Contractor shall use wooden stakes for fiber role installation. Wooden stakes utilized for fiber role installation, shall have a minimum cross section of 1 inch by 2 inches, or as suggested by the fiber role manufacturer.

PART 3 EXECUTION

3.1 PROTECTION OF WATER RESOURCES

A. No heavy equipment shall operate in a live channel with flowing water. All work by heavy equipment in the channel or on channel banks shall be conducted only when the channel work zone is dewatered.

B. Dewatering and Water Management

1. Refer to the 2022 Streambed Alteration Agreement (Agreement) entered into between the California Department of Fish and Wildlife (CDFW) and Victor Bjelajac (Permittee), representing California Department of Parks and Recreation and the Clean Water Act 401 Water Quality Certification and Order for the 2020 Fisheries Habitat Restoration Projects (SWRCB File #SB21003IN) for requirements.

C. Protection of Channel Features

1. Protect vegetation outside of grading boundaries (see also Tree Protection Zone on drawings).
2. No trees can be cut or modified, with the exception of those specifically identified on the plans. If a tree or log that is not identified on Drawings inhibits earthwork or access, Contractor shall propose a method and location to trim, cut or relocate the wood or tree for review and approval by the CM.
3. Protect logs in channel and banks outside of grading boundaries. See Section 31 20 00 Earth Moving for protection of logs encountered during excavation.

D. Pipe Layout in Relation to Work Activities

1. Work may occur on both banks. Pipe layout for a water diversion system shall be planned to avoid or minimize the need for relocating the pipe during the work.

E. Pumps

1. The Contractor shall place pumps to ensure that intakes prevent impingement of fish.
2. At a minimum, all pumps should be screen per the requirements of the Streambed Alteration Agreement.
3. The Contractor shall check pump intakes daily to remove any debris and ensure intake is not impinged and screens are functional to protect aquatic life from the intake. If any impinged animals are found, the Contractor shall contact the on-site Biological Monitor or CM immediately.

F. Contractor Monitoring for Turbidity, Water Levels and Pollution

1. The Contractor shall adhere to permit conditions to limit turbidity resulting from disturbance. Turbidity monitoring is not required.

G. Removal

1. All temporary fill, cofferdams, pumps, pipes, and sheet plastic shall be removed from the project upon completion of each project phase as well as upon project completion. Removal of temporary materials shall occur in a manner that would allow flow to resume with the least disturbance to the substrate and the least downstream turbidity.
2. All disturbances to the ground surface or channel bed from dewatering equipment shall be restored to the pre-existing condition.

H. Dewatering and Water Management Plan

1. All actions associated with dewatering and water management shall be in accordance to the plans, these specifications, the WPCP and comply with a Final Dewatering and Water Management Plan prepared by the Contractor and approved by the CM, per the terms of the Clean Water Act 401 Water Quality Certification and Order and the Streambed Alteration Agreement. The plan shall identify the following:
2. All actions needed to meet specifications and permit requirements for a water management and dewatering system and to protect salmonids, lamprey, salamanders, and the Northern Red-legged frog.
3. The type, size, and location(s) of cofferdams for the dewatering areas.
4. The locations of and any deviations from drawings for access to dewatering equipment, placement of materials, or extent of dewatering.
5. The location(s), types and capacity of pumps, pump screening, generators, and piping.
6. Schedule and sequencing for both placement and removal of cofferdams, pumps, generators, and pipe layout.
7. Schedule and allowance for removal of fish prior to dewatering and during the initial drawdown.
8. Pump and pipe layout that anticipates locations of other work activities, such as equipment access routes, temporary cofferdams / earthen plugs and bank excavation, to the extent possible, to minimize the potential need to relocate pipe.
9. Proposed back-up methods to supplement dewatering during the dewatering, if necessary.
10. Discharge and intake methods to prevent instream turbidity downstream of the work zone.
11. Methods of checking slough water elevations before and during the work relative to North Spit Tide Gage.

12. Methods of reducing downstream turbidity during cofferdam installation and removal and during re-initiation tidal inundation through the work area.
13. Methods of adaptive management if conditions change.
14. Plans, methods, and locations to pump and discharge turbid water from work areas and trenches, if necessary.
15. A plan for operational oversight, maintenance, and refueling as necessary throughout the period of dewatering.

3.2 ACCESS TO WORK AREAS

A. Access Plan

1. All access routes, staging areas, stockpile areas, and areas utilized for work comply with drawings and an Access Plan approved by CM.
2. An Access Plan shall meet all requirements for vegetation protection
3. The Contractor shall review access details on drawings in the field with the CM. The Contractor shall consider equipment size, sequencing, and similar actions to propose refinements for access, staging, stockpiling, pipe, plant salvage or other work activities in a Draft Access Plan.
4. The Contractor shall submit a Draft Access Plan a minimum of two weeks before the Pre-Construction Meeting and allow 6 workdays for CalTrout review and comment.
5. As part of the CalTrout review of the Draft Access Plan, the Contractor shall stake proposed routes through and uses of vegetated areas in the Draft Access Plan for review by the CM and SWS biologist.
6. The Contractor shall incorporate revisions and comments to prepare a Final Access Plan to be submitted one week before the Pre-Construction Meeting.
7. At least 24 hours before the Contractor begins work in any work zone, the Contractor and CM shall review the details of the approved Access Plan in the field.
8. The Access Plan shall include:
    b. Existing access and staging areas on drawings with proposed refinements shown approximately to scale on drawings. Refinements may be hand-drawn on drawings.
    c. Areas proposed for temporary stockpiling during earthwork, salvaged plants, and other materials and equipment, if other than areas shown on drawings.
    d. Any actions such as materials placement or earth moving proposed to make access routes functional for equipment.
    e. Specific methods and materials to protect paved surfaces where traversed.
    f. Methods to distribute the load of equipment to reduce or avoid compaction in terrestrial areas and the creek bed, such as through equipment choices, protective mats or similar.
    g. Any trees in the access routes which are subject to potential impacts from the work and proposed measures to protect them, including the bark, roots and branches (see Tree Protection Zones on drawings).
    h. Methods to be used to prevent equipment, foot traffic, stockpiling and other activities from extending beyond approved areas approved for use in the Access Plan.

i. Locations of any Security Fence and Construction Fence used to exclude the public and protect vegetated areas from impacts (see Section 01 56 00 Barriers).

j. At least 24 hours before the Contractor begins work, the Contractor and CM shall review the details of the approved Access Plan in the field (see section 01 32 16 Construction Schedule).

k. Planning for compliance with requirements comprehensively listed inproject permits.

B. Bank Protections

1. Access routes to work areas for equipment shall protect vegetation to the extent possible.
2. Access routes shall be limited only to the minimum length, width, and capacity necessary for the equipment used.
3. Where access is approved across vegetated areas, mow the vegetation in advance of equipment entry without disturbing plant roots. Rake cut material and place to side for later placement over exposed soils.
4. All areas used as access points, except any areas within the project footprint or revegetation zone, shall be restored to their original condition, including natural grades and decompacted soil.
5. All slough banks where grading is not shown in designs shall be protected during the work. No vegetation, soil, fallen wood, trees, exposed roots or any other feature of natural banks shall be disturbed during the work.

C. Protection of Swain Slough

1. Swain Slough should be protected from equipment, materials storage, turbid discharges and similar.

3.3 VEGETATION PROTECTION

A. Protection of Special-Status Plants

1. Access through or use of vegetated areas shall follow an approved Access Plan (Subsection 3.2).
2. Prior to construction, CalTrout's designated biologist or SWS biologist will survey the site and flag any special- status, locally rare, or save vegetation, and the CM will review the Contractor's marked access routes.
3. If a special special-status or locally rare species is detected within the construction zone and not already moved by SWS, the Contractor shall adjust the access route to the extent possible and show the modified route in the final Access Plan. If the CM determines a direct impact is unavoidable, SWS shall either salvage plants or, if they are not salvageable, trim branches or leaves of species that will easily resprout. If these measures are not suitable for the species, the Contractor shall cover the area with plywood or other protective materials to be identified in the final Access Plan.
4. After CM acceptance of a final Access Plan and the CalTrout issuance of a Notice to Proceed, the Contractor shall allow 3 workdays for SWS to conduct protective measures identified in the final Access Plan.
5. If a special-status or locally rare species is detected within a 50-foot radius of the construction zone, SWS shall stake the area and the Contractor shall install high visibility protective tape or fencing to prevent trampling or any inadvertent use of

the area. The Contractor shall take measures to ensure that all site personnel avoid these areas.

6. Before equipment enters a new work zone, the Contractor shall mark the limits of work in a vegetated area in advance of starting work. Vegetation shall be mowed above-ground without disturbing roots and plant material shall be stockpiled nearby for replacement on disturbed areas after the work.
7. The Contractor shall request an advance survey by California Trout-designated biologists for nesting birds a minimum of one week before the proposed phased disturbance in each portion of the restoration area
8. Where cutting or clearing is proposed to be conducted before Aug 15, the contractor shall request an advance survey by California Trout-designated biologists to determine if nesting birds would be disturbed by work in the area (Subsection 3.7). If nesting birds occur, California Trout-designated biologist will identify a suitable buffer circumference to avoid or require pausing the work until the nests are fledged, in coordination with the California Department of Fish and Wildlife.
9. Clearing shall only be conducted to the minimum extent needed for the work and as indicated in final drawings.
10. Where tree branches interfere with work areas or access routes, the order of actions conducted by a Contractor shall be to tie back or trim the features and avoid cutting or removal to the extent possible and as indicated in Drawings.
11. All personnel shall minimize trampling on slough banks and terrestrial areas. Personnel shall not walk on vegetated banks or terrestrial areas where approved access routes are available nearby.
12. No ropes, cables, or guys shall be fastened to or attached to any trees for anchorage unless specifically authorized by the CM.
13. Where clearing of herbaceous vegetation is conducted, restrict cutting to only above-ground growth and avoid subsurface disturbance to the extent possible.
14. If equipment is operating in an area where there is a risk of hitting a trunk of a native tree, the Contractor shall add protective padding around the tree and promptly remove it as soon as the risk has ended.
15. No trees or snags shall be removed without advance approval by the CM, even if their removal is shown on drawings.
16. Any trees which must be removed per drawings or cleared for access in the channel shall be removed to retain the whole trunk and branches as a single piece or as long as possible. Where trees are shown for toppling, remove trees with attached root balls. Additional trees identified on the plans for removal may be toppled at the discretion of the CM.
17. The Contractor shall not place, even temporarily, any rock, organic materials, equipment, work supplies or equipment on areas outside of the defined work areas and areas identified in an approved Access or Dewatering Plan.
18. The Contractor shall restore vegetation features damaged or destroyed during construction operations outside the limits of the approved work area.

3.4 PLANT SALVAGE

A. Contractor shall relocate sensitive plants as shown on the plans and as flagged by SWS.

3.5 AIR RESOURCES

A. Equipment operation, activities, or processes performed by the Contractor shall be in

accordance with all Federal and State air emission and performance laws and standards.

B. Idling time shall be minimized.

C. Low or zero emission producing equipment shall be used when feasible.

D. Equipment shall be powered by biodiesel, renewable diesel, or electricity to the extent possible.

E. Sweep daily all paved access roads, parking areas and staging areas at construction sites

F. All trucks transporting soil, sand, or other loose material offsite shall be covered.

G. Use dust-dampening methods when saw cuts of asphalt are made or during other work actions which generate dust.

H. Dampen dust as necessary in access routes or staging areas.

I. Burning will not be allowed.

3.6 CHEMICAL MATERIALS MANAGEMENT AND WASTE DISPOSAL

A. Fuel and Lubricants

1. Storage, fueling and lubrication of equipment and motor vehicles shall be conducted in a manner that affords the maximum protection against spill and evaporation in all areas of work and staging.
2. A Spill Prevention and Refueling Plan will be submitted per Section 01 57 23 Stormwater Best Practices and the requirements of project permits.

B. Solid Wastes

1. Solid wastes (excluding debris cleared under the Contract), shall be placed in containers which are emptied on a regular schedule. Handling, storage, and disposal shall be conducted to prevent contamination. Segregation measures shall be employed so that no hazardous or toxic waste will become co-mingled with solid waste. The Contractor shall transport solid waste off the site and dispose of it in compliance with Federal, State, and local requirements for solid waste disposal. A Subtitle D RCRA permitted landfill shall be the minimum acceptable off-site solid waste disposal option. The Contractor shall comply with Federal, State, and local laws and regulations pertaining to the use of landfill
2. No unauthorized construction-related materials or wastes shall be allowed to enter or be placed where they may be washed by rainfall or runoff into waters of the State. When construction is completed, any excess material shall be removed from the work area and any areas adjacent to the work area where such material may be discharged to waters of the State.

C. Contractor Generated Hazardous Wastes/Excess Hazardous Materials

1. Hazardous wastes are defined in 40 CFR 261, or are as defined by applicable State and local regulations. Hazardous materials are defined in 49 CFR 171 - 178. The Contractor shall, at a minimum, manage and store hazardous waste in compliance with 40 CFR 262 and shall manage and store hazardous waste in accordance with the waste management plan. The Contractor shall take sufficient

measures to prevent spillage of hazardous and toxic materials during dispensing. The Contractor shall segregate hazardous waste from other materials and wastes, shall protect it from the weather by placing it in a safe covered location, and shall take precautionary measures such as berming or other appropriate measures against accidental spillage. The Contractor shall be responsible for storage, describing, packaging, labeling, marking, and placarding of hazardous waste and hazardous material in accordance with 49 CFR 171 - 178, State, and local laws and regulations. The Contractor shall transport Contractor generated hazardous waste off CalTrout property within 30 days in accordance with the Environmental Protection Agency and the Department of Transportation laws and regulations. The Contractor shall dispose of hazardous waste in compliance with Federal, State and local laws and regulations. Spills of hazardous or toxic materials shall be immediately reported to the CM.

2. Cleanup and cleanup costs due to spills shall be the Contractor's responsibility. The disposition of Contractor generated hazardous waste and excess hazardous materials are the Contractor's responsibility.

3.7 BIOLOGICAL MONITORING

A. The Contractor shall perform all work and take such steps required to prevent interference or disturbance to wildlife and species of special concern.

B. Protection for Species of Special Concern - Fish

1. Federally and state-listed threatened fish species, including coho, steelhead, and chinook, inhabit the Elk River and Swain Slough. The Contractor must comply with all terms of the Streambed Alteration Agreement and other regulatory and contractual documents. All measures necessary to avoid take of this listed species shall be followed by the Contractor.

2. California Trout will install nets or fish screens near areas where the dikes were breached at low tide to prevent reentry of any fish species relocated out of the work area. The Contractor shall prevent disturbing fencing and notify the California Trout representative if exclusion fencing is compromised.

l. All aquatic large invertebrates, vertebrates, and fish that may be affected by instream activities will be removed from the work site by the California Trout-designated biologist and relocated outside the work area.

m. If any salmonids are found dead or injured, contact the CM or California Trout-designated biologist who shall then contact NMFS biologist and the ACOE. The purpose of the contact is to review the activities resulting in take and to determine if additional protective measures are required. All salmonid mortalities shall be retained, placed in an appropriately-sized sealable plastic bag, labeled with the date and location of collection, fork length measured, and frozen as soon as possible.

C. Protection for Amphibians and Turtles

1. The Contractor shall accommodate preconstruction surveys by a California Trout-designated biologist within the work area for amphibians, particularly Northern Red-Legged Frogs (NRLF), and Northwestern Pond Turtles (NPT) three to five days prior to beginning work at each location/job site where surface water is present. These preconstruction surveys will be conducted will be planned with a "one step ahead" approach relative to construction activities. The Contractor shall give a one week advance notice of the start of any ground disturbance in areas with or adjacent to surface water, including preparation of the access routes or installation of a dewatering system.

2. The Contractor shall ensure a California Trout-designated biologist is onsite prior to and during initial disturbance at a new site with or near surface water to locate and move any species that may be harmed to a safe and appropriate location.
3. If any amphibian species are found during the pre-construction/clearance surveys, the California Trout-designated biologist will keep record and relocate all individuals outside of the exclusion fenced work area. The Contractor shall not touch, handle, harass or otherwise disturb a NRLF observed in the work zone or adjacent to the work zone. Any personnel observing a NRLF or NPT should contact the CM or California Trout-designated biologist.
4. Materials used on site shall be in accordance with requirements given in project permits.
5. The California Trout-designated biologist will inspect areas where any materials will be placed prior to material placement.

D. Protection of Species of Special Concern – Birds and Bats

1. The Contractor shall also take measures to comply with the migratory Bird Treaty Act.
2. If the Contractor proposes vegetation removal prior to August 15, the Contractor shall request an advance biological survey for nesting birds a minimum of one week before the proposed work.

E. Biological Monitoring by California Trout-designated biologists

1. The Contractor shall accommodate surveys and review by California Trout-designated biologists during the work.
2. The California Trout-designated biologists will capture and relocate any wildlife out of harm's way. The Contractor shall pause work to allow capture of wildlife as necessary.
3. The Contractor shall provide a minimum 48-hour advance notice to California Trout and CM before initiating demolition or earthwork to allow a monitor to be present.

F. Artificial Lighting

1. The Contractor shall not use any artificial or night-time lighting to conduct the work, including during mobilization and demobilization.
2. All work shall be conducted during hours of daylight unless coordinated with the CM.

3.8 CONTAMINATED SOIL/WATER

A. Prior to onset of construction, all construction workers shall be trained in the identification of potentially contaminated soil and/or water, including information on characteristics of potential contamination such as discolored soil, oils or sheens on water, and unusual odors. All work will comply with the requirements of project permits.

B. If hazardous materials are encountered during construction, all construction activities around the discovery will stop and notify the CM. Conduct hazardous materials investigations to identify the nature and extent of contamination and evaluate potential impacts on project construction. If necessary, implement remediation measures consistent with all applicable local, state, and federal codes and regulations.

C. Construction will not resume until remediation is complete. If waste disposal is necessary, the Contractor shall ensure that all hazardous materials removed during

construction are handled and disposed of by a licensed waste-disposal contractor and transported by a licensed hauler to an appropriately licensed and permitted disposal or recycling facility, in accordance with local, state and federal requirements.

3.9 INVASIVE SPECIES AND PATHOGEN PROTECTION

A. All boots or shoes of all work crew, all equipment and all tools shall be disinfected prior to entering the site. If a worker goes to any other work site during the period of work at the site, their boots must be recleaned before entering the off-trail areas or creek within the project site.

B. The Contractor shall clean all previously used construction equipment and both on- and off-road vehicles prior to bringing them to the staging area. The Contractor shall ensure that the equipment is free from soil residuals, egg deposits from plant pests, noxious weeds, and plant seeds. Any equipment arriving at the staging area or work site that is not free of these substances will be rejected from the site by the CM.

C. The interior of equipment (cabs, etc.) shall be free of mud, soil, gravel and other potentially contaminated material prior to arriving at the staging area. Interiors shall be vacuumed, washed, and/or treated with sanitizing agents as needed to eliminate pathogen propagules that could be transferred to the work areas.

D. Small hand tools and other small equipment (including hoses, couplers, hose nozzles and similar) shall be washed and sanitized prior to arrival at the site and be free of soil or other contamination.

E. Hoses shall be new or previously used only for clean water sources without the potential for pathogens.

3.10 MAINTENANCE OF POLLUTION FACILITIES

A. The Contractor shall maintain permanent and temporary pollution control facilities and devices for the duration of the contract or for that length of time construction activities create the pollutant.

3.11 TRAINING OF CONTRACT PERSONNEL

A. Contractor Training of Workers: The Contractor's personnel shall be trained in all phases of environmental protection and pollution control for this project. The Contractor shall conduct environmental protection/pollution control meetings for all Contractor personnel prior to commencing construction activities. Additional meetings shall be conducted for new personnel and when site conditions change. The training and meeting agenda shall include: methods of detecting and avoiding pollution; familiarization with statutory and contractual pollution standards; installation and care of devices, vegetative covers, and instruments required for monitoring purposes to ensure adequate and continuous environmental protection/pollution control; anticipated hazardous or toxic chemicals or wastes, and other regulated contaminants; recognition and protection of archaeological / historical / cultural sites, artifacts, wetlands, and endangered species and their habitat that are known to be in the area.

B. All on-site workers shall participate in a environmental awareness training per Section 01 45 00.

C. All attendees will sign an attendance sheet along with their printed name, company or agency, email address, and telephone number. All workers shall participate in such a

training regardless of when they start work at the site.

3.12 POST-CONSTRUCTION CLEANUP

A. The Contractor shall clean up all areas used for construction in accordance with General Provisions. The Contractor shall, unless otherwise instructed in writing by the CM, obliterate all signs of temporary construction facilities such as haul roads, work area, structures, foundations of temporary structures, stockpiles of excess or waste materials, and other vestiges of construction prior to final acceptance of the work. The disturbed area shall be graded, filled, compacted by hand in sensitive areas, and scarified, as approved by the CM, unless otherwise indicated.

END SECTION 00 45 00

01 51 00 Temporary Services

PART 4 GENERAL

4.1 DESCRIPTION

A. The work of this section consists of providing temporary services required for Contractor's performance of the work of this contract and acceptable use of permanent facilities.

4.2 RELATED REQUIREMENTS

A. Section 01 35 23 – Safety Requirements

B. Section 01 52 13 – Field Offices and Sheds

C. Section 01 11 00 – Summary of Work

1. Subsection 1.3 – Contractor Use of Premises, Staging Area, and Roads

4.3 SUBMITTALS [NOT USED]

PART 5 PRODUCTS

5.1 GENERAL

A. Temporary materials may be new or used but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate the requirements of applicable codes and standards.

5.2 SANITARY FACILITIES

A. Temporary facilities are to be provided and maintained by the Contractor, in accordance with State Health Department requirements for contractor workers.

PART 6 EXECUTION

6.1 ELECTRICITY AND LIGHTING

A. Electricity and lighting will not be available at the work site or staging area. Contractor may use a generator at the discretion of the CM.

6.2 WATER

A. A water source must be secured by the contractor for use in dust suppression.

B. Water from Swain Slough may not be used for dust suppression as it’s saline and some areas throughout the project site will be planted with riparian species that have low salt tolerances. Groundwater encountered during construction may be utilized for dust suppression subject to contractor providing testing results demonstrating no- to low-saline concentrations.

C. Furnish cool, potable water for construction personnel in locations convenient to

workstations.

6.3 SANITARY FACILITIES

A. Place in approved locations at the staging area and only in areas that are not accessible to visitors. The Contractor shall not locate temporary toilet facilities adjacent to a natural water source or in a location to cause a public health hazard, contamination, or nuisance. Toilet facilities should be placed outside of the are inundated by the tides. At the completion of work, the Contractor shall remove toilet from the project site.

B. Maintain and clean toilet facilities.

C. Completely remove temporary sanitary facilities on completion of work.

6.4 FIRE PREVENTION AND PROTECTION

A. Responsible Person: The contractor will place a capable and qualified person in charge of fire protection per Section 01 35 23.

END OF SECTION 01 51 00

01 52 13 Field Offices and Sheds

PART 7 GENERAL

7.1 DESCRIPTION

A. This section defines allowable temporary structures, equipment, and furnishings.

7.2 RELATED REQUIREMENTS

A. Section 01 51 00 – Temporary Services

PART 8 PRODUCTS

8.1 CONTRACTOR'S FIELD OFFICE

A. Contractor may provide an office trailer at the staging area as needed. Typical utility hookups, such as electricity, phone, internet access or cell-phone booster, are not available at the site and provision of such services is not the responsibility of CalTrout.

8.2 STORAGE SHEDS

A. Contractor may provide temporary, weather tight sheds or other covered facilities for storage of materials at the staging area.

B. Any such sheds shall be locked and inaccessible to the public after hours.

C. Allow room for GHD to store a small tote-box of field supplies.

PART 9 EXECUTION

9.1 CONTRACTOR'S FIELD OFFICE

A. Provide office and furnishings as needed.

B. Maintain equipment, furnishings, and structures. Conduct regular trash disposal. Maintain and service water.

9.2 REMOVAL

A. All temporary sheds and structures shall be removed upon completion of the work.

END OF SECTION 01 52 13

01 54 00 Temporary Traffic Control

PART 1 GENERAL

1.1 REQUIREMENTS

A. The Contractor shall provide all materials, equipment, and labor necessary to furnish, place and maintain all temporary traffic control systems, including construction and maintenance area traffic control devices and flaggers to perform the Work in accordance with this Section, and all other appurtenant Work, as shown in the Contract Drawings and as specified therein.

B. The Contractor is responsible for obtaining all traffic and encroachment permits related to the delivery and hauling of construction equipment and materials, and traffic control measures and devices. The Contractor must follow all pertinent State and local requirements for transporting large vehicles and equipment to the project site.

C. The Contractor is responsible for temporary placement, maintenance and removal of temporary traffic control devices and signs in accordance to the approved Temporary Traffic Management Plan. If signs are placed in the County right-of-way (ROW), the Contractor shall be responsible for applying for and securing the necessary encroachment permits and paying all associated fees. If signs are to be placed on private property, the Contractor shall receive permission from the CM and property owner prior to placement.

1.2 SUMMARY

A. Work specified in this Section:

1. Review of proposed Work areas to determine temporary traffic control requirements.
2. Submittal and verification of temporary traffic controls with the CM, prior to implementation.
3. Maintenance of traffic control during the Work.
4. Monitoring traffic control during the Work to determine necessary changes required to maintain adequacy.
5. Maintenance of traffic control during non-work hours to maintain adequacy.
6. Removal of temporary traffic control systems after completion of the Work.

1.3 REFERENCED SPECIFICATIONS, CODES AND STANDARDS

A. State of California, Department of Transportation (Caltrans) Specifications and Standards

1. Standard Specifications, current edition
    a. Section 7 Legal Relations and Responsibility to the Public
    b. Section 12 Temporary Traffic Control
2. California Manual on Uniform Traffic Control Devices (California MUTCD), current edition

B. Humboldt County Public Works Encroachment Permit.

C. Commercial Standards

1. State of California, Division of Industrial Safety, Department of Industrial Relations

a. Safety Orders of the Division of Industrial Safety, Department of Industrial Relations of the State of California, current edition

1.4 CONTRACTOR SUBMITTALS

A. Temporary Traffic Management Plan

1. For any project related work located within the roadway that could alter traffic conditions, the Contractor shall submit a Temporary Traffic Management Plan for approval from the CM, and the County Department of Public Works. This could include but not be limited to temporary lane closures, shoulder closures, truck crossings and construction entrances.

2. The Temporary Traffic Management Plan shall conform to the provisions on the Drawings, these specifications, the County encroachment permit provisions and shall be a living document, subject to modification and updated as project conditions change. If changes are made to the traffic plan, Contractor shall re-submit for approval by the CM and the County. The traffic plan shall be specific to the proposed activities that will occur on the existing roads:

a. The Temporary Traffic Management Plan shall be developed and implemented in accordance with the latest edition of the California Manual on Uniform Traffic Control Devices (MUTCD) and all other pertinent state and local requirements. The traffic plan shall include, but is not limited to, the proposed average daily traffic (ADT), duration of work, haul routes, sign placement, and frequency of on-site meetings to be performed to review and update the traffic plan.

b. Specific details for construction staging, including the location and limits of the work zone. Contractor is responsible for installing signs in accordance with the traffic plan.

c. Locations of all encroachments, excavations, and Gas Line Special Access Zone.

d. Plans for protection of the public from construction-related hazards.

e. Lane closures and traffic routing, including consideration of construction related trucking routes.

f. Hauling routes for approval by the CM and County.

g. Lane closure markings, barricade locations, and sign locations showing the necessary signing, methods of delineation and channelization and reference to the appropriate Caltrans Standards and California MUTCD details for all affected roads.

h. Dimensions of lanes affected by traffic control that will be open to traffic.

i. Dimensions and locations of signs and cone tapers.

j. Identification of side streets and driveways affected by construction and show how they will be handled.

k. Detail of how pedestrian access will be handled through the construction area.

l. Time periods of lane closures and detours.

3. No work except for installation of project identification signs will be allowed to commence prior to approval of the Temporary Traffic Management Plan.

4. A “Letter of Responsibility” on company letterhead, indicating the names and telephone numbers of at least three different persons who shall be available to be contacted in case of emergency at any time during the life of the contract. Said persons must have decision-making authority within the company.

B. Copies of all traffic-related permits.

1. Permit Requirements

a. Contractor shall comply with the County issued encroachment permit.

b. For transporting equipment to and from the site, the Contractor shall obtain all necessary permits and escorts and comply with all requirements of Caltrans, the California Highway Patrol, and Humboldt County Department of Public Works for transport of oversized loads to the project site.

c. The Contractor is responsible for all permit, escort, and traffic management fees.

d. The Contractor shall submit copies all permits obtained for the project to the CM one week before the Pre-Construction Meeting or at the first weekly meeting after receiving them, whichever comes first.

~~e.~~ All Contractor vehicles shall maintain slow speeds and allow right-of-way to pedestrians.

f. The Contractor shall conduct temporary traffic and/or pedestrian management as necessary to maintain a safe and efficient flow. The traffic control shall focus on community safety.

g. CalTrout personnel will not be responsible for managing pedestrian or vehicular traffic.

h. The Contractor shall communicate the CalTrout/CM preferred hours for access, access requirements, and traffic management requirements, to all delivery and subcontractor personnel.

1.5 RELATED REQUIREMENTS

A. Section 01 11 00 – Summary of Work

B. Section 01 32 16 – Construction Schedule

C. Section 01 33 23 – Submittal Procedures

PART 2 PRODUCTS

2.1 GENERAL

A. All construction area stationary and portable sign panels, lights, barricades, and traffic control devices shall be the product of a commercial sign or safety device manufacturer conforming to the requirements of Section 12, "Construction Area Traffic Control Devices," of the Caltrans Standard Specifications, unless otherwise specified in this Section, shown on the Drawings, and/or as directed by the CM.

B. Material may be new or used but shall be suitable for intended purpose. Fences and barriers shall be structurally adequate and neat in appearance.

PART 3 EXECUTION

3.1 GENERAL

A. No work shall commence until traffic control signing has been approved by the CM and the encroachment permit issued by the County.

B. The Contractor shall take all necessary precautions for the protection of the Work and the safety of its employees and the public. Traffic shall be maintained through the construction or maintenance zone in accordance with Sections 7-1.03 Public Convenience, 7-1.04 Public Safety, and 12 Temporary Traffic Control of the Caltrans Standard Specifications and Sections 01 11 00 “Summary of Work.”

C. Field changes to traffic control plans shall be approved by the CM prior to installation.

D. The Contractor shall provide all appropriate traffic control measures in accordance with this Section, prior to start of construction, in the County Right-of-Way (ROW) or in any area adjacent to the ROW where public safety is affected.

E. All construction area signs, lights, barricades, and traffic control devices shall be furnished, installed, maintained, and removed in conformance with the current edition of the California MUTCD. Additional or alternate signs may only be used when specifically authorized by the CM.

F. The Contractor shall monitor traffic and safety conditions and maintain adequate traffic control measures during both work and non-work hours in order to maintain compliance with the requirements of this Section.

G. If a hazardous condition is observed and the CM notifies the Contractor either directly or by telephone, the Contractor shall correct the condition immediately. If the Contractor fails to correct the hazardous condition immediately, CalTrout reserves the right to call in a local contractor to perform the necessary work needed to improve public safety. The cost incurred shall be billed to the Contractor. Should the CM point out any inadequacy of warning and protective measures, such action on the part of the CM shall not relieve the Contractor from responsibility for public safety nor abrogate his obligation to furnish and pay for these devices.

H. All construction area signs, lights, barricades, and temporary traffic control devices shall be completely removed from the roadway when not in use. Locations and methods of storing traffic control equipment adjacent to the roadway between interrupted use shall require prior approval of the CM.

I. Unless noted otherwise on the Drawings, the Contractor shall completely remove all temporary signs, striping and/or delineators and restore the pavement, as necessary, upon removal or relocation of any temporary traffic controls or detours constructed as part of the Work.

J. Contractor shall conduct their operation as to offer the least possible obstruction and inconvenience to the public, and they shall have under construction no greater amount of work than they can prosecute properly with due respect to the rights of the public. Contractor shall provide personal advance notice to each affected resident or business informing them of impending work and provide ample time to remove vehicles and estimated time of driveway closure. This shall be accomplished by delivering a notice to all houses or businesses to be affected by the impending Work. The notice shall be typed and signed by the Contractor or their designated superintendent. The format and

contents of the notice shall be approved by the CM prior to commencement of the Work.

K. Construction operations shall be conducted in such a manner as to cause as little inconvenience as possible to abutting property owners. Convenient access to driveways, houses, and buildings along the line of the work shall be maintained, and temporary approaches to crossings or intersecting roads shall be provided and kept in good condition.

L. Whenever the Contractor's operations create a condition hazardous to the public, furnish, erect, and maintain such fences, barricades, lights, signs and other devices as are necessary to prevent accidents or damage or injury to the public.

M. Should the Contractor appear to be neglectful or negligent in furnishing warning and protective measures as above specified, the CM may direct attention to the existence of hazard, and the necessary warning and protective measures shall be furnished and installed by the Contractor at their expense, without cost to the Owner. Should the CM point out any inadequacy of warning and protective measures, such action on the part of the CM shall not relieve the Contractor from responsibility for public safety nor abrogate their obligation to furnish and pay for these devices.

N. Under no circumstances shall access to other properties be held up more than fifteen (15) minutes at any one time, unless noted otherwise on the plans or in the specifications. The Contractor may coordinate with other property owners to schedule work so that longer delays do not adversely affect other property owners to their satisfaction. Before closing any street to through traffic, Contractor shall obtain prior approval from the CM seven (7) calendar days in advance of closure. Contractor shall provide access to public facilities at all times and make provisions for passage of emergency vehicles.

3.2 USE OF COUNTY AND PUBLIC ROADS

A. The contractor will be responsible for repair of any damage to roads resulting from the construction and hauling activities. The post-project road conditions shall meet or exceed pre-project conditions and, if necessary, be repaired by the Contractor to the satisfaction of the Construction Manager at contractor's expense. The Construction Manager will video document the roads within the project area prior to commencement.

B. All fueling, equipment maintenance, staging and construction management shall be located outside the county road right of way. No construction materials (construction trailers, storage containers, equipment, etc.) shall be allowed within the County right of way.

C. Site visibility must be maintained at the construction entrances in conformance with county code.

D. Temporary lane closure traffic control to be consistent w/ lane closure for low volume, two lane roads per current edition of Caltrans manual of traffic controls and in conformance with the project specifications.

E. Trucks leaving the identified project site shall have tires free of sediment to prevent/minimize sediment from being tracked onto public roadways.

F. All public roads and bridges impacted by the construction activities shall be cleared of all sediment and debris on a daily basis or as directed by the Construction Manager.

G. All active construction areas, application areas and gravel roads shall be watered at a rate sufficient to keep soil moist and prevent wind-blown dust.

H. All trucks hauling soil, sand, and other loose materials shall be covered, or all trucks shall be required to maintain at least 2 feet of freeboard, or shall have adequate moisture content to prevent dust, or utilize some other methods that prevents generation of fugitive dust.

I. Traffic speeds on unpaved roads shall be limited to 10 miles per hour or less if posted, or as directed by the Construction Manager.

END SECTION 01 54 00

01 56 00 Temporary Barriers and Enclosures

PART 1 GENERAL

1.1 DESCRIPTION

A. The work of this section consists of furnishings and barriers that are required for delineating and protecting operations, resources and the public and for obstructing views of the work from visitors.

1.2 RELATED SECTIONS

A. Section 01 45 00 – Environmental Protection

1. Subsection (Access Plan)

B. Section 01 54 00 – Temporary Traffic Control

1.3 REFERENCED SPECIFICATIONS, CODES AND STANDARDS

A. State of California, Department of Transportation (Caltrans) Specifications and Standards

1. California Manual on Uniform Traffic Control Devices (California MUTCD), current edition

PART 2 PRODUCTS

2.1 GENERAL

A. Material may be new or used but shall be suitable for intended purpose. Fences and barriers shall be structurally adequate.

2.2 FENCING

A. Security Fence: Chain link, with fabric dense enough to reduce dust movement, minimum height, 6 feet.

1. Anti-Trip Feet for Security Fence: Feet or covers for feet of a security fence which are low-profile, high visibility and ADA-Compliant.
2. Construction Fencing (also referred to as Safety Barrier, Temporary Construction): This type of fence shall be orange plastic fence made of high-density polyethylene resin with an approximate mesh opening of 1 by 4 inches and minimum height 4 feet or equivalent approved by CM.

2.3 BARRICADES AND SIGNS

A. California MUTCD, Part 6, current edition.

B. Barricades suitable for use on trails to maintain closures and easily allow openings to public access.

2.4 BARRIER TAPE

A. Banner Guard, imprinted with "CAUTION: CONSTRUCTION AREA", manufactured by Reef Industries, Inc., Houston, Texas, or approved equal.

PART 3 EXECUTION

3.1 PROTECTION OF PUBLIC AND CULTURAL RESOURCES

A. Security Fence.

1. The Contractor may install a free-standing security fence around any staging areas not behind a locked gate where equipment and materials are stored.

B. Barricades for Trail Closures.

1. CM will post closure orders for trails during construction. The Contractor shall work with CM if additional barricades or signage are needed to ensure pedestrian visitors do not traverse the project area throughout the construction period.
2. Barricades for unexpected archeological discovery
   a. In the event of an archeological discovery, install barriers as needed to prevent unauthorized entry by workers or others, as directed by the CM (Section 01 35 13).

C. Barriers for Traffic Control

1. During periods of traffic control in or at the entrance to the project site, use temporary barriers such as cones or similar methods to route vehicles as needed (See Section 01 54 00, Traffic Control).

3.3 PROTECTION OF VEGETATION

A. Construction Fencing for Vegetation Protection

1. The Contractor shall install orange Construction Fencing along the perimeter of vegetated areas to be used for access, stockpiling or other construction activities or identify alternative methods to limit vegetation impacts in an approved Access Plan (Section 01 45 00, Environmental Protection).
2. The Contractor shall add Barrier Tape or similar where the trampling by workers is observed or may occur or as requested by the CM to minimize impacts during the work.
3. Follow barrier requirements to protect vegetation.

3.4 BARRIER TAPE

A. Install where directed by CM. Keep a minimum of two rolls on site at all times.

3.5 REMOVAL

A. Completely remove barriers no longer needed when approved by CM.

END OF SECTION 01 56 00

01 57 23 Storm Water Best Management Practices

PART 1 GENERAL

1.1 SUMMARY

A. The work of this section consists of implementing measures to prevent discharges of pollutants, including temporary storm water pollution during construction activities, through compliance with the following Best Management Practices (BMPs) and the projects permits, including the Clean Water Act Section 401 Water Quality Certification and CDFW 1600 Lake and Streambed Alteration Agreement.

1.2 DEFINITIONS [NOT USED]

1.3 SUBMITTALS

A. After contract award and one week before the Pre-Construction Meeting, submit:

1. Water Pollution Control Plan (WPCP)

a) The Contractor shall develop a Water Pollution Control Plan (Plan) in accordance to the project permit condition and will be subject to review and approval. The Plan shall include at a minimum the following:

1) Identify potential pollutants and Project activities that may generate those pollutants;

2) Identify specific best management practices (BMPs) to control those pollutants;

3) Include a map showing locations where BMPs will be employed;

4) Include an inspection protocol to ensure BMPs are in place and functional prior to rain events; and v) Propose a monitoring strategy to demonstrate efficacy of BMPs during rain events and sample receiving waters in the event of pollutant discharge

2. Dewatering and Water Management Plan

a) The Plan shall include an approach for managing tidal inundation from entering the project site and managing shallow groundwater (nuisance water) encountered during construction.

b) The Plan shall follow provisions in Section 01 45 00 – Environmental Protection

c) An example dewatering and water prevention drawing is provided in the plans

3. Spill Prevention and Refueling Plan

b. The Plan shall include a Refueling Plan and shall identify refueling methods and locations.

c. The Plan shall follow provisions in Section 01 45 00 – Environmental Protection.

d. The Refueling shall only occur in areas approved by the CM. Staging and storage areas shall occur only in designated areas: any staging or storage in sensitive habitats will require prior approval from the Construction Manager or Environmental Monitor.

e. The plan shall include providing a spill prevention kit at any location where refueling is conducted.

f. The Plan shall include provisions for preventing, containing, and reporting spills of hazardous materials. If a spill is reportable, the contractor's superintendent shall notify the Humboldt County Department of Emergency Services and the California Department of Toxic Substances Control (DTSC).

g. The Plan shall include:

1) Emergency and After Hours contact list for stormwater and erosion control.

2) The name of the individual who will report any spills or hazardous substance releases and who will follow-up with complete documentation. This individual shall immediately notify the Contracting Officer and the local Fire Department in addition to the legally required Federal, State, and local reporting channels (including the National Response Center 1- 800-424-8802) if a reportable quantity is released to the environment. The plan shall contain a list of the required reporting channels and telephone numbers.

3) The name and qualifications of the individual who will be responsible for implementing and supervising the containment and cleanup.

4) Training requirements for Contractor's personnel and methods of accomplishing the training. The Contractor shall supply the CM with a training sign in sheet and training outline prior to beginning work.

5) Inventory of materials and products expected to be used that may pollute stormwater.

6) A list of materials and equipment to be immediately available at the job site, tailored to cleanup work of the potential hazard(s) identified.

7) The names and locations of suppliers of containment materials and locations of additional fuel oil recovery, cleanup, restoration, and material placement equipment available in case of an unforeseen spill emergency.

8) The methods and procedures to be used for expeditious contaminant cleanup.

1.4 QUALITY ASSURANCE

A. Erosion and Sediment Control Orientation: The contractor shall train all employees to explain applicable requirements for erosion and sediment pollution control from the project's permit requirements.

B. The Contractor's designated Environmental Manager will be responsible for performing daily inspections and the implementation and maintenance of all erosion and sediment control measures as described in the project permits.

PART 2 PRODUCTS

2.1 EROSION CONTROL

A. Contractor will supply erosion control materials (i.e. seed, silt fence, straw wattles, straw bales, etc.) and must have erosion control materials on site for installation on any exposed mineral soil that could be washed into Swain Slough in case of rain.

PART 3 PART 3-EXECUTION

3.1 GENERAL

A. It is the responsibility of the Contractor to minimize erosion and prevent the transport of sediment to sensitive areas. The Contractor shall comply with all requirements in the CDFW 1600 Lake and Streambed Alteration Agreement (LSAA) and the Clean Water Act Section 401 Water Quality Certification. Contractor shall be responsible for all fines and cleanup resulting from violations.

B. Requirements are listed in the project's 401 Water Quality Certification and 1600 LSAA permits. Permit requirements supersede this Section.

3.2 BEST MANAGEMENT PRACTICES

A. Best Management Practices (BMPs) shall include:

1. Erosion control materials (i.e. seed, silt fence, straw wattles, straw bales, etc.) installed on any exposed mineral soil that could be washed Swain Slough in case of rain or high tide. Contractor must install erosion control measures if significant rainfall is predicted within 24 hours to ensure that the project will not violate water quality standards, waste discharge requirements, or permit requirements.
2. Stormwater runoff diversion to be installed immediately up-gradient of excavation areas if significant rainfall that can generate runoff is predicted within 24 hours. CalTrout may implement a wet weather suspension based on weather conditions that result in inability to perform items of work.

END OF SECTION 01 57 23

01 71 23 Field Engineering

PART 1 GENERAL

1.1 SUMMARY

A. SECTION INCLUDES

1. Qualified services
2. Lines and grades
3. Survey of layout and performance
4. Surveying accuracy and tolerances in setting survey stakes

B. RELATED SECTIONS

1. 02 93 50 Woody Debris
2. 31 20 00 Earth Moving
3. 31 37 00 Rock slope protection
4. 32 31 13 Gate
5. 32 31 16 Wire Fences
6. 32 92 19 Seed and Mulch

1.2 MEASUREMENT AND PAYMENT

A. Refer to Section 01 15 00 Measurement and Payment

1.3 SUBMITTALS

A. Detailed stake layout plan prepared professional land surveyor or civil engineer currently licensed or registered in the State of California.

1. Contractor shall submit the detailed stake layout plan to the CM two business days in advance of any portion of a field survey.
2. The plan shall include the stake numbering system and their location of the stakes on the Drawings. The plan shall be submitted electronically.
3. The plan shall reflect the detail necessary to complete the work to the tolerance specified in Related Sections.
4. Staking is required to layout the project for review by the CM and Project Engineer even if GPS-enabled construction equipment is used.

6. If GPS-enabled construction equipment is used, the stake layout plan can be modified accordingly:
    a. Stakes shall be placed at a spacing suitable to layout the general horizontal configuration of the project elements (e.g., curvature of tidal channels, confluence of channels, intersection between project elements).
    b. Contractor shall acknowledge in the plan that standard staking methods will be used if localized changes to project boundaries or project elements are required following initial review or if unexpected conditions occur during earthwork.
    c. Highly visible markers shall be used to delineate features (e.g., lath stakes, pin flags).
    d. Cut and fill depths are not required on stakes.
    e. Features that require delineation for CM and Project Engineer review include, but are not limited to:
        1) Grading boundary
        2) Centerline of channels (drainage swales and tidal channels)
        3) Sill location of pond
        4) Upstream and downstream extents of levee that will be retained
        5) East side (Swain Slough side) of levee toe where levee will be removed
        6) Eco-levee toe
        7) Natural shoreline top and toe
        8) Hummock toe
        9) Haul routes
        10) Culvert inlet and outlet locations

B. If GPS-enabled construction equipment is used:
    1. Include a written description describing how the provided surface is converted from the delivered file format to the converted file format used by the equipment.
    2. Provide a copy of the topographic model file used by the equipment.
    3. Provide a written description of the methodology and protocols used to demonstrate continuous accurate elevation of the GPS enabled equipment (e.g., periodic checks with separate survey equipment, check in on control points, daily reports of survey accuracy from equipment).

C. Grade check survey plan prepared by Contractor. Contractor shall submit the grade check survey plan to the CM 5 business days in advance of the start of grading. The plan shall include methods for confirming grade and the format of grade check data provided to CM and Project Engineer for review (e.g., handwritten/csv/shapefile).

D. Grade check data shall be submitted to the CM for review as project elements are completed. Data shall include:
    1. X, Y, Z coordinates, date/time, and vertical and horizontal precision.
        a. If survey instrument does not record date/time and precision information, this information can be omitted from the submittal with approval from the CM.
    2. Separate surveyed points by subgrade or finish grade either by separating points

into different files or clearly labeling individual points in a point code or description field.

3. All points shall have appropriate codes indicating the feature surveyed and definitions included in submittal.
    a. Example codes and definitions include:
        1) CL: Centerline of channel, pond, top/center of ecolevee, etc.
        2) TOP: break in slope along the top of channel bank or fill (hummock, ecolevee, natural shoreline, etc.)
        3) TOE: break in slope along the toe of channel bank or fill (hummock, ecolevee, natural shoreline, etc.)
        4) GS: Ground surface (not on break in slope)
        5) INV: invert of culvert

1.4 QUALIFIED SERVICES

A. Surveying services shall be performed under the direct supervision of a professional land surveyor or civil engineer currently licensed or registered in the State of California. A civil engineer providing field surveying shall have been registered prior to 1982 or have a current professional land surveyors license in the State of California.

1.5 LINES AND GRADES

A. Reference Points: primary horizontal and vertical control points are indicated on the Contract Drawings. Locate existing survey control monuments shown on the Drawings before beginning the work. Preserve and protect survey control during construction operations. If existing survey control points interfere with the work, secure written permission from CM prior to removing them.

B. Primary control monuments currently on site shall be carefully preserved by the Contractor. In case such monuments are destroyed or damaged, they will be replaced at the CM’s earliest convenience. The Contractor will be charged for the cost of replacing or restoring monuments destroyed or damaged by the Contractor's operations. This charge will be deducted from any monies due or to become due the Contractor.

C. The Contractor shall temporarily suspend work at such points and for such reasonable times as the CM may require for resetting monuments, and the Contractor will not be entitled to any additional compensation or extension of time therefore.

D. All other stakes or markers required to establish the lines and grades required for the completion of the Work shall be the responsibility of the Contractor.

1.6 SURVEYS FOR LAYOUT AND PERFORMANCE

A. Surveying Requirements: Perform all surveys for layout and performance of the Work, reduce the field notes, and make all calculations and drawings necessary to carry out such work. The Contractor shall check the relative positions of all monuments and benchmarks to be used and shall report any damaged or out-of-position monuments to the CM at once. The Contractor shall check such relative positions each time the Contractor uses such monument or benchmark.

B. The Contractor shall be responsible for correctly locating all lines and grades and for performing all measuring as required for the construction and completion of the Work from established reference points and information as shown on the Drawings.

C. Equipment and Personnel: The Contractor's instruments and other survey equipment shall be accurate, suitable for the surveys required in accordance with recognized professional standards, and in proper condition and adjustment at all times.

D. Field Notes and Records: Furnish the original pages of all survey records to the CM at intervals required by the CM. Furnish each field notebook to the CM when filled or completed.

E. Global Positioning Systems (GPS) coverage may be poor in portions of the project area. Other methods of surveying or staking may be required.

F. Use by the CM: The CM may at any time use line and grade points and markers established by the Contractor. The Contractor's surveys are a part of the work and may be checked by the CM at any time. The Contractor shall be responsible for any lines, grades, or measurements which do not comply with specified or proper tolerances, or which are otherwise defective, and for any resultant defects in the work. The Contractor shall conduct resurveys or check surveys to correct errors indicated by review of the field notebooks or by check surveys performed by the CM.

G. Layout the work, establish all necessary markers, benchmarks, grading stakes, and other stakes as required, in accordance with the lines and grades of Drawings and Specifications.

H. Staking/marking shall be complete for CM review and approval at least 24 hours before clearing or grading. Minor adjustments may be made by the CM to accommodate field conditions.

I. Locations and elevations shown on the Drawings are subject to field adjustment by CM before and during construction. After stake installation and before work, Contractor shall meet with CM to review all stakes and make any adjustments to set final construction stakes prior to performing any work in each area of excavation, fill, or grading. Contractor shall execute the work in accordance with the final construction stakes and perform all additional staking necessary to execute the work.

J. Updated design surfaces for use in GPS-enabled construction equipment will not be provided for localized adjustments to staking. Contractor shall use standard staking methods, as needed, to guide earthwork.

K. Work area boundaries will be clearly delineated.

L. Markers

1. Fencing, wood stakes/lath, grade stakes, or stake flags are preferred over paint markers.

2. Paint may be acceptable for certain types of markers where ground cover is bare, but paint specifications and location of application shall be approved by the CM before use.
    a. Type: Water-based acrylic or acrylic-urethane
    b. Paint must be fully cured before coming into contact with water or saturated soil.
    c. Fully cured file shall be inert
    d. VOC < 50 g/L preferred; under 5 g/L is ideal
    e. No heavy metals including, but not limited to lead, cadmium, chromium, copper, or zinc or biocides
    f. No antifungal / antimicrobial additives
    g. No chlorinated solvents
    h. ASTM D4236 non-toxic labeling
    i. No PFAS fluorinated additives

M. The Contractor shall start work only after staking for the affected work is accepted by the CM and Project Engineer and Biologist.

N. The construction survey and staking work may be spot-checked by the CM for accuracy, and unacceptable portions of work may be rejected. The Contractor shall resurvey rejected work, and correct work that is not within the specified tolerances. Acceptance of the construction staking does not relieve the Contractor of responsibility for correcting errors discovered during the work and for bearing all additional costs associated with the error.

O. The Contractor shall remove and dispose of all fencing, flagging, lath, stakes, and other staking material after the project is complete unless the CM specifies otherwise.

P. Locate the work and components of the work accurately, in correct alignment and elevation, as indicated. Check the location of every major element as the work progresses.

Q. The Contractor shall perform all survey, staking, recording of data, and calculations as necessary to construct the project from the initial layout to final completion. Reset stakes as many times as necessary to construct the work.

R. Grade Check Survey data shall be collected by the contractor and submitted to the CM for review on all subgrades, finish grade areas, along access routes outside of the grading boundary, and any areas disturbed by the contractor.

S. Contractor shall not place fill until grade checks on subgrade are approved.

T. Contractor shall not conduct final surface treatments until finish grade is approved.

U. CM and Project Engineer will review the Grade Check Survey within two weekdays of completion of the grade check survey.

V. The Contractor shall not remove access, re-water the site, or remove equipment until the CM concurs that the surveyed portion of the project is complete.

1.7 SURVEYING ACCURACY AND TOLERANCES IN SETTING SURVEY STAKES

A. Surveying Accuracy: Control traverse field surveys and computations, including surveys of main control lines to determine horizontal and vertical alignment of major channel components, shall be done to maximum 0.1 ft or better accuracy.

B. Tolerances: The tolerances generally applicable in setting survey stakes shall be as set forth above. Such tolerances shall not supersede stricter tolerances required by the Contract Drawings or Specifications, and shall not otherwise relieve the Contractor of responsibility for measurements in compliance therewith.

PART 2 PRODUCTS [NOT USED]

PART 3 EXECUTION [NOT USED]

END OF SECTION 01 71 23

01 73 40 Execution

PART 1 GENERAL

1.1 SUMMARY

A. This Section includes specific requirements governing execution of the Work including, but not limited to, the following:

1. Earthwork
2. Wood Installation
3. Starting and adjusting.
4. Protection of installed construction.
5. Correction of the Work.

1.2 RELATED SECTIONS

A. Section 01 45 00 – Environmental Protection

B. Section 01 71 23 – Field Engineering

PART 2 PRODUCTS [NOT USED]

PART 3 EXECUTION

3.1 EXAMINATION

A. Acceptance of Conditions: Examine substrates, areas, and conditions for compliance with requirements for construction or installation tolerances and other conditions affecting performance. Record observations.

1. Verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
2. Proceed with work only after unsatisfactory conditions have been corrected. Proceeding with the Work indicates acceptance of surfaces and conditions.

3.2 COORDINATION WITH UTILITY SERVICE PROVIDERS

A. Coordination with Utility Service Providers: Contact Utility Service providers, sufficiently in advance to avoid delaying the work, to coordinate your portion of the work, testing requirements, inspections, etc.

3.3 PREPARATION

A. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication. Coordinate schedule with construction progress to avoid delaying the Work.

B. Space Requirements: Verify space requirements and dimensions for work activities.

C. Review of Contract Documents and Field Conditions: Immediately on discovery of the need for clarification of the Contract Documents caused by differing field conditions outside the control of the Contractor, submit a request for information to the CM in accordance with Division 01 Specification 01 31 00 “Project Management and Coordination”.

3.4 PROGRESS CLEANING

A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.

B. Site: Maintain Project site free of waste materials and debris.

C. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work.

1. Contractor shall provide progress cleaning that minimizes sources of food, water, and harborage available to pests.
2. No food or food waste shall be stored in disposal containers that are accessible to pests such as raccoons, corvids, or other small wildlife.

D. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.

E. During handling and installation, clean and protect construction in progress and adjoining materials already in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.

F. Clean and provide maintenance on completed construction as frequently as necessary through the remainder of the construction period.

G. Limiting Exposures: Supervise construction operations to assure that no part of the construction completed or in progress is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

H. Final Cleaning: At completion of Work, remove all remaining waste materials, rubbish, tools, equipment, machinery and surplus materials, and clean all exposed surfaces; leave Project clean and ready for occupancy.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

A. Provide final protection and maintain conditions that ensure completed earthwork is without damage or deterioration at time of Substantial Completion.

3.6 CORRECTION OF THE WORK

A. Repair or remove and replace defective construction. Restore damaged substrates and finishes and channel features.

B. Restore permanent facilities used during construction to their specified condition.

C. Remove and replace damaged surfaces that are exposed to view if surfaces cannot be repaired without visible evidence of repair.

END OF SECTION 01 73 40

01 74 19 Construction Waste Management and Disposal

PART 1 GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for the following:

1. Salvaging nonhazardous demolition and construction waste.
2. Recycling nonhazardous demolition and construction waste.
3. Disposing of nonhazardous demolition and construction waste.
4. Preparation and use of a Waste Management Plan.

1.2 DEFINITIONS

A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations. Construction waste includes packaging.

B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.

C. Deconstruction: A process to carefully dismantle or remove and salvage usable materials from structures, as an alternative to demolition. It maximizes the recovery of building materials for reuse and recycling and minimizes the amount of waste going to a landfill. Typical deconstruction includes taking the building apart to reuse lumber, windows, doors, and other materials.

D. Solid Waste: Garbage, debris, sludge, or other discharged material (except hazardous waste) including solid, liquid, semisolid, or contained gaseous materials resulting from domestic, industrial, commercial, mining, or agricultural operations.

E. Debris - Natural: Non-hazardous solid waste generated during the construction, demolition, or renovation of a structure that is plant, tree, or animal matter; or natural geologic material (e.g., cobbles and boulders). A mixture of debris and other material such as soil or sludge is also subject to regulation as debris if the mixture is comprised primarily of debris by volume, based on visual inspection.

F. Debris-manufactured. Non-hazardous solid waste generated during the construction, demolition, or renovation of a structure which exceeds 2.5-inch (60 mm) particle size that is: a manufactured object.

G. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.

H. Environmental Pollution and Damage: The presence of chemical, physical, or biological elements or agents which adversely affect human health or welfare; unfavorably alter ecological balances; or degrade the utility of the environment for aesthetic, cultural, or historical purposes.

I. Garbage: Refuse and scraps resulting from preparation, cooking, dispensing, and consumption of food.

J. Hazardous Materials: Any material that is regulated as a hazardous material in accordance with 49 CFR 173, requires a Safety Data Sheet (SDS) in accordance with 29 CFR 1910.1200, or which during end use, treatment, handling, storage, transportation or disposal meets or has components which meet or have the potential to meet the definition of a Hazardous Waste in accordance with 40 CFR 261.

K. Recycle: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.

L. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.

1.3 PERFORMANCE REQUIREMENTS

A. General: This project shall minimize the creation of construction, deconstruction, and demolition waste. Factors that contribute to waste such as over-packaging, improper storage, ordering error, poor planning, breakage, mishandling, and contamination shall be minimized.

B. Minimize the extent to which natural debris is exported from the site. Leave cut vegetation, small limbs, other natural wood, duff, and similar materials well distributed on site for natural cover and habitat or chipped and used as mulch. Coordinate with the CM for final placement.

C. Salvage /Recycle Requirements: Develop a waste management plan that results in end of Project salvage/recycling for waste generated by the Work. The following waste categories, at a minimum, shall be diverted from a landfill to the extent possible:

1. Clean dimensional wood, palettes
2. Plywood, OSB, and particle board
3. Asphalt
4. Cardboard, paper, packaging, newsprint
5. Wiring
6. Other mixed construction and demolition waste as appropriate

D. If any waste materials encountered during the deconstruction/demolition or construction-phase are found to contain lead, asbestos, PCBs, (such as fluorescent lamp ballasts), or other harmful substances, they are to be handled and removed in accordance with local, state, and federal laws and requirements concerning hazardous waste.

E. The Contractor will ensure that wildlife does not have access to any garbage, debris, or other products that contains organic waste through use of covered, fully wildlife proof dumpsters or other trash receptacles. Open dumpsters are prohibited.

F. Salvage/Recycle Requirements: A project goal is to salvage and recycle as much nonhazardous demolition and construction waste as possible. The contractor shall recycle the following materials:

1. Recycle asphalt removed from road.
2. Recycle wood in good condition.
3. Recycle plywood imported for temporary use.
4. Recycle cardboard used for supplies.
5. Requirements for recycling or waste reduction may be waived if the CM deems

them counterproductive from an environmental standpoint (for instance, if waste would need to be hauled long distances to be recycled, thereby causing a substantial net increase in greenhouse gas emissions).

1.4 SUBMITTALS

A. Waste Management Plan: After award of the contract and prior to the scheduled Preconstruction Conference, the Contractor shall submit a draft Waste Management Plan, per Subsection 2.1, to the CM for approval. Revise and resubmit Plan as required by the CM. Approval of the Contractor's Plan will not relieve the Contractor of responsibility for compliance with applicable environmental regulations.

B. Closeout Submittals

1. With Closeout Submittals, submit a summary worksheet of the Solid Waste Disposal and Diversion based on form in Appendix B of this Section.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Waste Management Meeting: Review the Waste Management Plan in the Pre-Construction Conference and comply with requirements in Division 01 Section 01 31 00 "Project Management and Coordination." Review methods and procedures related to waste management including, but not limited to, the following:

1. Review and discuss waste management plan.
2. Review requirements for documenting quantities of each type of waste and its disposition.
3. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.

PART 2 PRODUCTS

2.1 WASTE MANAGEMENT PLAN

A. Waste Identification: Indicate anticipated types and quantities of demolition and construction waste generated by the Work. Include estimated quantities and assumptions for estimates.

B. Waste Reduction Work Plan: List each type of demolition and construction waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include earthwork materials only if to be hauled to a landfill. Provide estimated quantities. Use checklist and template in Appendix A. Identify:

1. Salvaged Materials for Reuse.
2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations, include list of their names, addresses, and telephone numbers.
3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations, include list of their names, addresses, and telephone numbers.
4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept. Include names, addresses, and telephone numbers.

5. Disposed Materials: Indicate how and where materials will be disposed of. Include name, address, and telephone number of each landfill and incinerator facility.

PART 3 EXECUTION

3.1 PLAN IMPLEMENTATION

A. General: Implement waste management plan as approved by the CM. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during the entire duration of the Contract.

B. Materials handling procedures: Materials to be recycled shall be protected from contamination and shall be handled, stored, and transported in a manner that meets the requirements set by the designated facilities for acceptance.

3.2 SALVAGING DEMOLITION WASTE

A. Salvaged Items for Reuse in the Work:

1. Clean salvaged items.
2. Store items in a secure area until installation.
3. Protect items from damage during transport and storage.
4. Install salvaged items to comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.

B. Salvaged Items for sale and donation: Sales activities are not permitted on Project site.

C. Salvaged Items for Use by Landowner

1. Clean salvaged items.
2. Store items in a secure area until delivery.
3. Transport items to storage area designated by CalTrout.
4. Protect items from damage during transport and storage.

3.3 RECYCLING DEMOLITION AND CONSTRUCTION WASTE, GENERAL

A. General: Recycle paper and beverage containers used by on-site workers.

B. Recycling Receivers and Processors: Preference should be given to local waste haulers that accept co-mingled construction and demolition debris and can document the quantities diverted.

3.4 RECYCLING DEMOLITION WASTE

A. Asphaltic Concrete Paving: Break up and transport paving to asphalt-recycling facility.

B. Wood Materials: Sort and stack members according to size, type, and length. Separate lumber, engineered wood products, panel products, and treated wood materials.

C. Metals: Separate metals by type.

1. Structural Steel: Stack members according to size, type of member, and length.
2. Remove and dispose of bolts, nuts, washers, and other rough hardware.

D. Equipment: Drain tanks, piping, and fixtures. Seal openings with caps or plugs. Protect equipment from exposure to weather.

E. Plumbing Fixtures: Separate by type and size.

F. Piping: Reduce piping to straight lengths and store by type and size. Separate supports, hangers, valves, sprinklers, and other components by type and size.

G. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panelboards, circuit breakers, and other devices by type.

H. Conduit: Reduce conduit to straight lengths and store by type and size.

3.5 RECYCLING CONSTRUCTION WASTE

A. Packaging:

1. Cardboard and Boxes: Break down packaging into flat sheets. Bundle and store in a dry location.
2. Polystyrene Packaging: Separate and bag materials.
3. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project site. For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
4. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.

3.6 DISPOSAL OF WASTE

A. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.

1. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn waste materials.

C. Disposal: Transport waste materials off CalTrout property and legally dispose of them.

3.7 WASTE MANAGEMENT PLAN CHECKLIST

A. Analyze project waste

B. Estimate types and quantities of waste the project will generate at different stages

C. Check to see what can be recycled/reused onsite (wood, soil, rock, concrete, etc.)

D. Decide how you will recycle

E. Can you arrange the job site to accommodate several containers?

F. Do you have the equipment to self haul?

G. How often might you need your containers picked- up?

H. Research recycling options

I. Check out the Construction Recycling Directory

J. Call recyclers and ask them:

1. What materials do you accept?
2. Is co-mingled recycling available?
3. What are my collection options & costs?
4. If I self-haul, can I drop off, and if so, what about tipping fees?
5. Do you provide receipts to track recyclables?
6. Do you set up and provide training?
7. Decide what you will recycle at the jobsite
8. Determine your costs
9. Compare the cost of disposing waste with the cost of recycling

K. Write out the waste management plan

1. Which materials will be salvaged or reused on site
2. Which materials will be recycled
3. How materials will get to the recycler
4. Names of responsible crew member/team
5. Your projected savings

L. Make your program work

1. Start early: Incorporate a recycling program from the start to guarantee success
2. Communicate your waste management plans to crews, subs and suppliers as they come onsite
3. Include recycling requirements in all subcontracts and purchase orders
4. Post quantities of materials reused and recycled
5. Track your savings
6. Encourage suggestions from supervisors and crew
7. Reward employees
8. Make use of available resources and directories
    j. Resources: http://www.sfenvironment.org/recyclewhere

END OF SECTION 01 74 19

01 77 00 Closeout Procedures

PART 1 GENERAL

1.1 SUMMARY

A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:

1. Project Record Drawings.
2. Closeout Submittals.
3. Substantial Completion and Final Inspection.
4. Final Acceptance of the Work.
5. Warranties.

B. Related Requirements:

1. 01 71 23 Field Engineering, particularly sections pertaining to as-builts.

1.2 PROJECT RECORD DRAWINGS

A. See Section 01 71 23 – Field Engineering

1.3 CLOSEOUT SUBMITTALS

A. Submit the following before requesting final inspection:

1. Environmental Record Documents:
   k. Access Plan data on pre-project conditions and repaired conditions per Section 01 45 00 Environmental Protection
   l. Monitoring records of turbidity, water quality, and water elevations, per Section 01 4500 Environmental Protection
   m. Any other environmental monitoring records.
   n. Waste disposal records, per waste disposal plan
2. Terminate and remove temporary facilities from Project site, construction tools, and similar elements.
3. Complete final cleaning requirements.
4. Repair, restore, decompact, regrade and touch-up areas used for access and staging.

1.4 SUBSTANTIAL COMPLETION AND FINAL INSPECTION

A. When earthwork is substantially complete, request a final inspection before equipment fully departs the area.

B. Upon receipt of written request that work in all project areas is substantially complete, the CM will proceed with inspection within 10 days of receipt of request or will advise the Contractor of items that prevent the project from being designated as substantially complete.

C. If, following final inspection, the work is determined to be substantially complete, the CM

will prepare a Punch List to be corrected before final acceptance and issue a Letter of Substantial Completion. Contractor shall complete the work described on the Punch List within 5 work days, as weather permits. If the Contractor fails to complete the work within this time frame, the CM may either replace or correct the work with an appropriate reduction in the contract price or charge for re-inspection costs in accordance with the Inspection of Construction clause of the contract.

D. If, following final inspection, the work is not determined to be substantially complete, CM will notify Contractor in writing. After completing work, Contractor shall request a new final inspection. All re-inspection costs may be charged against the Contractor in accordance with the Inspection of Construction clause of the contract.

1.5 FINAL ACCEPTANCE OF THE WORK

A. Prior to requesting inspection for verification of completion of all outstanding items:

1. After all deficiencies have been corrected, a Letter of Final Acceptance will be issued.

PART 2 PRODUCTS [NOT USED].

PART 3 EXECUTION

3.1 FINAL CLEANING

A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Clean all areas used for staging, access, and work.

1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:

o. Clean Project site and grounds in areas disturbed by construction activities of rubbish, waste material, litter, and other foreign substances.

p. Waste Disposal: Comply with requirements of Division 01 section, “Construction Waste Management and Disposal.”

q. Repair damage on roads or gates.

r. Sweep paved areas. Remove petrochemical spills, stains, and other foreign deposits.

s. Decompact areas impacted by access routes

t. Place chips, duff, erosion control, or other organic material neatly over areas disturbed by access after they have been decompacted, as described in the plans.

u. Remove or distribute any cut vegetation to avoid leaving piles of material on the site, unless directed otherwise by CM.

v. Remove tools, construction equipment, machinery, and surplus material from Project site.

END OF SECTION 01 77 00

APPENDIX C TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

Elk River Estuary: Lower Swain Slough
Humboldt County, California

Prepared by:

Northern Hydrology & Engineering
3101 Concorde Drive Suite H
McKinleyville, CA, 95519

22 May 2026

Table of Specifications

02 41 13 Selective Demolition
02 93 50 Woody Debris
31 20 00 Earth Moving
31 37 00 Rock Slope Protection
32 31 13 Gate
32 31 16 Wire Fences
32 92 19 Seed and Mulch

02 41 13 SELECTIVE DEMOLITION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:

1. Culvert
2. Tide gate structure
3. Concrete bags
4. Fence
5. Water faucet
6. Access

B. Related Sections:

1. 31 20 00 Earth Moving
2. 02 93 50 Woody Debris

C. The work, requirements and provisions described herein shall be done in accordance with the Specifications described in this section (known as Specifications), the Project Drawings (also referred to as plans, drawings, etc.), and the State of California, Department of Transportation Standard Specifications for Construction, current edition (known as Standard Specifications). In cases where there may be conflicting requirements between the Specifications, Project Drawings, and Standard Specifications, the order of priority shall be as follows: Specifications have priority over the Project Drawings, and the Project Drawings have priority over the Standard Specifications.

1.2 SUBMITTALS - NOT USED

1.3 MATERIALS

A. Except for items or materials indicated by Owner to be reused, salvaged, or otherwise indicated to remain on the Owners property, demolished materials shall be removed and legally disposed of at the Contractor’s expense.

B. Materials for removal and reuse:

1. The following materials shall be prepared for reuse at the project site as shown on Drawings:
   a. Salvage trees for reuse in wood structures (see Section 02 93 50 Woody Debris).
   b. Salvage sensitive species see Section 31 20 00 Earth Moving.

C. Materials for removal and disposal:

1. Materials identified for off-site disposal shall be removed from the site and legally

disposed of, including recycling where possible, per Section 01 74 19 Construction Waste Management and Section 31 20 00 Earth Moving.

2. The following materials shall be prepared for removal and disposal at the project site as shown on Drawings:
   a. Culverts and artificial fill
   b. Tide gate structure (pipe, gate, and artificial fill)
   c. Fence
   d. Artificial fill (e.g., rock)
   e. Concrete bags
   f. Existing rock at construction access at Pine Hill Road
   g. Imported materials for temporary construction access

PART 2 PRODUCTS – NOT USED

PART 3 EXECUTION

3.1 EXAMINATION

A. The Contract Documents describing site clearing and demolition activities are based on record information, visible surface features, and limited sub-surface investigations. The Contractor shall conduct a comprehensive survey prior to the submittal of bids to verify the scope of the Work.

3.2 PROTECTION

A. Use water mist, temporary enclosures, and other suitable methods to limit the spread of dust and dirt. Comply with governing environmental protection regulations.

3.3 CULVERT AND TIDE GATE STRUCTURE REMOVAL

A. Culverts and tide gate structure shown for removal on Drawings.

3.4 EXISTING ACCESS REMOVAL

A. Remove existing and imported rock, culverts, fabric, and any other materials associated with the existing and temporary construction access from Pine Hill Road, and staging and stockpiling areas to the north and south sites.

3.5 DISPOSAL AND RECYCLING OF DEMOLISHED MATERIALS

A. Transport demolished materials identified for disposal from Owner's property and legally dispose of or recycle material, per Section 01 74 19 Construction Waste Management and Disposal.

END OF SECTION

02 93 50 LARGE WOOD STRUCTURES

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:

1. Salvage trees
2. Large wood structures

B. Related Sections

1. Section 01 45 00 Environmental Protection
2. Section 01 71 23 Field Engineering
3. Section 01 35 13.22 Archeological Protection
4. Section 31 37 00 Rock Slope Protection
5. Section 31 20 00 Earth Moving

C. The work, requirements and provisions described herein shall be done in accordance with the Specifications described in this section (known as Specifications), the Project Drawings (also referred to as plans, drawings, etc.), and the State of California, Department of Transportation Standard Specifications for Construction, current edition (known as Standard Specifications). In cases where there may be conflicting requirements between the Specifications, Project Drawings, and Standard Specifications, the order of priority shall be as follows: Specifications have priority over the Project Drawings, and the Project Drawings have priority over the Standard Specifications.

1.2 SUBMITTALS

A. A detailed plan describing the toppling methods. Information to include:

1. Description of methods to protect the tree and tree roots of the trees that will remain when toppling adjacent trees.
2. Description of methods to reduce the potential breakage of the trunk.

PART 2 PRODUCTS

2.1 MATERIALS

A. ON-SITE MATERIALS

1. Whole trees (trunk with root wad and branches) salvaged on-site shown on Drawings.
2. Small wood consists of smaller diameter trees or woody debris that can be integrated into large wood structures. Small wood may be generated during initial site clearing.
3. Salvaged trees and root wads, and small wood shall be reasonably clean and free of soil and other vegetation.

B. CONTRACTOR-FURNISHED MATERIAL

1. Import pinning logs (also known as log piles):
   a. Length: 30-foot lengths with or without root wads.
   b. Diameter: The pinning log diameter cannot be less than 10 inches or greater than 24 inches anywhere along the length of the log. Diameter does not include bark.
   c. Type: pinning log wood shall be redwood, cedar or spruce unless otherwise approved by the Project Engineer.

PART 3 EXECUTION

A. PREPARATION

1. Contractor shall flag or construct barrier to delineate the tree protection zone (TPZ).
2. TPZ shall be approved by the SWS.
3. No construction activities may occur in the TPZ without approval from SWS.
4. Contractor shall flag trees for salvage. Salvage trees shall be approved by the SWS and CM prior to removal.
5. Installation of large wood structures shall occur after final grade has been achieved and approved by CM.

B. SALVAGE TREES

1. Do not cut tree roots of retained trees that extend beyond the TPZ without SWS approval.
2. Removal of live trees shall use methods that keep the whole tree intact, including the root wad, trunk, and branches to the extent possible. Use methods to prevent the trunk from splitting during removal to maximize reuse potential. Methods of removal shall be approved by CM prior to removal.
3. Do not cut salvage trees after they have been toppled. Retain root wads, trunk, and branches.
4. Remove excess soil from root wad prior to transport.
5. If trimming a portion of the tree is required for transport or installation, approval by the Project Engineer is necessary prior to cutting.
6. Backfill hole after tree is toppled to adjacent ground elevations with Type 1 & 2 material.
   a. Fill in 8-to-12-inch lifts or less.
   b. Tamp to remove air pockets without over-compacting
7. Return any damaged surface to existing grade or finish grade as appropriate.

C. INSTALLATION

1. Layout large wood structure locations, per Section 01 71 23 - Field Engineering prior to the date of construction. Locations/layout shall be reviewed and approved by the Project Engineer prior to installation.
2. Large wood structures will generally be constructed in the locations and

configuration shown on the Drawings and as directed in the field by the Project Engineer.

3. Salvaged tree sizes may vary from those shown on drawings.
4. Field adjustments of large wood structures may be necessary.
5. Small wood less than 12 inches DBH may be integrated into the log structures. Small wood shall be placed so the large wood and pinning logs provide anchoring.
6. Pinning logs (or log piles) will be used to secure the salvaged trees in place.
    a. Pinning log locations will be approved by the Project Engineer prior to installation.
    b. A tip will be cut on the pinning logs prior to pushing or driving the pinning log into the ground.
    c. Pinning logs shall generally be paired on either side of the salvaged tree and angled ~15° from plumb (vertical) so they cross above the trunk and block the tree from floating up and over the top of the pinning logs, as shown on Drawings.
    d. Pinning logs may be driven into the ground with an excavator mounted side grip vibratory pile driver or pushed into the ground with an excavator bucket. Contractor shall demonstrate to the Project Engineer and CM that the pinning log installation technique can achieve the Specification and Drawing requirements.
    e. Install pinning logs to a 20 ft minimum embedment depth as shown on the Drawings. Embedment depth is a vertical measurement from the ground surface to the tip of the pinning log. Shallower installation angles will require longer pinning logs to achieve the same embedment depth.
    f. Pinning logs shall be installed such that they are in contact with the salvaged tree to minimize tree movement.
    g. Pining log tops shall overlap approximately 2- to 3-ft above the tree.
    h. No mechanical fasteners (e.g. cables, bolts) will be used in the construction of the large wood structures.

3.2 TOLERANCES

A. Coordinate with Project Engineer if the log size or shape of a log deviates from the design length, diameter, or shape, such that the installation tolerances cannot be met.

B. Wood

1. Construct horizontal grades within 1 FT of locations shown on the plans and/or coordinated with Project Engineer.
2. Install pinning logs within 0.5 FT of embedment depth per the Drawings and Specifications, and/or as directed by Project Engineer.

3.3 DISPOSAL

A. Excess vegetative debris from tree salvage processes that is not used in the wood structures shall be removed and disposed of offsite.

END OF SECTION

31 20 00 EARTH MOVING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Removing surface debris
2. Removing designated trees, shrubs, and other plant life including invasive vegetation
3. Access enhancement and removal
4. Tidal channel and wetland bench excavation
5. Pond excavation
6. Levee removal and ditch filling
7. Eco-levee fill
8. Natural sediment levee fill
9. Natural shoreline fill
10. Shallow fill (marsh and hummock)
11. Ditch removal
12. Drainage swale
13. Tide Gate
14. Culvert
15. Temporary Stockpiling

B. Related Sections:

1. Section 01 11 00 Summary of Work
2. Section 02 41 13 Selective Demolition
3. Section 01 35 13 Archeological Protection
4. Section 01 45 00 Environmental Protections
5. Section 01 71 23 Field Engineering
6. Section 02 93 50 Woody Debris
7. Section 31 37 00 Rock Slope Protection

C. The work, requirements and provisions described herein shall be done in accordance with the Specifications described in this section (known as Specifications), the Project Drawings (also referred to as plans, drawings, etc.), and the State of California, Department of Transportation Standard Specifications for Construction, current edition (known as Standard Specifications). In cases where there may be conflicting requirements between the Specifications, Project Drawings, and Standard Specifications, the order of priority shall be as follows: Specifications have priority over the Project Drawings, and the Project Drawings have priority over the Standard Specifications.

D. Reference Standards:

1. CALTRANS Standard Specifications, Current Edition
2. CAL-OSHA, Title 8, Section 1590 (e)
3. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction and shall not begin until all those governing authorities have been notified.

1.2 SUBMITTALS

A. Proposed modifications of work that will deviate from the Drawings shall be submitted on planform or cross-sections on the Drawings. All modifications are subject to approval by the Project Engineer.

B. Any completed modifications to work will be shown on the planform or cross-sections in Drawings as appropriate. Drawings showing modifications shall be submitted at the weekly meeting following completion of the modification.

1.3 PROJECT CONDITIONS

A. Unfavorable Weather and Soil Conditions

1. Contractor shall conduct work using equipment that minimizes compaction of Project site soils.
2. Excavating, filling, backfilling, and grading work shall not be performed during weather conditions that might damage or be detrimental to the condition of existing ground, in-progress work, or completed work. When work is interrupted by extreme tides, rain, freezing weather, or other conditions deemed unsuitable by CM, excavating, filling, backfilling, and grading work shall not resume until the site and soil condition (moisture content) are suitable for construction activities and to minimize soil compaction.

PART 2 PRODUCTS

2.1 MATERIALS

A. No material may be imported from an off-site location for use in work areas unless specified in the Specifications or Drawings.

B. A geologic investigation by the Project Geologist identified three soil types (1, 2, and 3) that are expected during excavation (Table 1). These soils have been combined into three general material types (Type 1&2 A, Type 1&2 B, and Type 2&3) by the Project Engineer that are expected to be generated during excavation. Each material type, including ground vegetation scrape (veg scrape) has a priority use (numbered use) and an unacceptable use classification as designated by Project Engineer (Table 2).

C. Veg scrape consists of excavating ground vegetation and root mass with minimal soil excavation below root mass.

D. Type 1&2 A excavated material consists of excavating ground vegetation, root mass, and subsurface soils above 6 ft ground elevation and at the locations shown on the Drawings. Type 1&2 A material targets silts, silty and clayey sands, and clayey silts, and avoids dense medium to high plasticity clays. Type 1&2 A material will be free of roots with diameters greater than 2 inches, root wads, and stumps.

E. Type 1&2 B excavated material consists of excavating ground vegetation, root mass, and subsurface soils to an approximate depth of 6 to 12 inches to firm native soils at the locations shown on the Drawings. Type 1&2 B material targets silts, silty and clayey sands, and low plasticity clay and silty clay, and avoids dense medium to high plasticity clays. Type 1&2 B material will be free of roots with diameters greater than 2 inches, root wads, and stumps.

F. Type 2&3 excavated material consists of excavating clean soil below Type 1&2 A or B excavations to finish grade with channels only as shown on the Drawings or directed in the field. Type 2&3 material targets clayey sands and silts, low plasticity clay and silty clay, and medium to high plasticity clay. Type 2&3 material will be free of vegetation, root masses, and roots with diameters greater than 2 inches, root wads, and stumps.

Table 1. Definition of Project soil types by Project Geologist.

Soil Type	Soil Classification (USCS)
1	Organic silts (ML/OL – contains organics, topsoil) Silts (ML - coarser grain size distribution, low plasticity) Peat (PT) Silty sands (SM)
2	Clayey sands (SC) Clayey silts (ML - finer grain size distribution, low plasticity) Clays and silty clays (CL – low plasticity)
3	Clays CL – medium plasticity CH – high plasticity

Table 2. Definition of Project material types and uses by Project Engineer, except as noted on Drawings.

Material Type	Soil Types	Priority Use (numbered)	Unacceptable Use
Veg Scrape	Ground vegetation and root mass, Minimal subsurface soils	1) Shallow fill	Eco-levee and natural shoreline fill core, Ditch fill
Type 1&2 A	Ground vegetation, root mass, silts, peat, silty sands, clayey sands, clayey silts, and silty clays	1) Natural sediment levee fill, 2) Eco-levee and natural shoreline 6” soil cap, 3) Shallow fill	Eco-levee and natural shoreline fill core, Ditch fill
Type 1&2 B	Ground vegetation, root mass, silts, peat, silty sands, clayey sands, clayey silts, silty clays, and low plasticity clay	1) Eco-levee and natural shoreline 6” soil cap, 2) Shallow fill, 3) Ditch fill	Natural sediment levee fill unless approved by Project Engineer, Eco-levee core and natural shoreline core
Type 2&3	Clayey sands, clayey silts, silty clays, low plasticity clay, medium to high plasticity clay; Minimal ground vegetation or root mass	1) Eco-levee and natural shoreline fill core, 2) Ditch fill, 3) Shallow fill	Natural sediment levee fill, Eco-levee and natural shoreline 6” soil cap

G. Designated types of invasive plants shall be buried in specified locations and depths as shown on Drawings and directed in the field. Other invasive plant types are designated for off haul as shown on Drawings. These invasive plant types shall not be included in any material types.

H. Plastic pipe

1. Contractor is responsible for providing plastic pipe to the sizes as noted in these Specifications and Drawings.
2. Example product is ADS N-12 WT IB Pipe or equal.
3. Prior to purchasing or installing pipe, the contractor shall submit pipe specifications to the CM for approval.
4. High-density polyethylene (HDPE) pipe that meets the following requirements and Standard Specifications:
   a) Shall be dual-walled pipe with a smooth interior and annular exterior corrugations,
   b) 12-to-60-inch diameter pipe shall meet ASTM D3350, except that carbon black content shall not exceed 4%; AASHTO M294, Type S; or ASTM F2306,
   c) Mannings “n” value shall be 0.012.
5. Pipe joints shall be watertight and meet the following requirements:
   a) Material requirements of AASHTO M252, AASHTO M294, or ASTM F2306,

b) Watertight per requirements of ASTM D3212,

c) Gaskets shall meet requirements of ASTM F477,

d) Gaskets shall be factory installed by manufacturer and covered with removable plastic wrap to protect against debris and damage,

e) Joint lubricant from available from manufacturer shall be used on gasket and bell during assembly,

f) Exterior bell wrap installed by manufacture.

6. Pipe interior dimensions are shown on the Drawings.

7. Pipe bedding and initial backfill shall be ¾-inch maximum Class 2 Aggregate Base (Class 2 AB) as defined in the Standard Specifications.

I. Tide Gate - Check Valve

1. Contractor is responsible for providing duckbill check valve to the sizes as noted in these Specifications and Drawings.

2. Example product is Red Valve Tideflex Series TF-2 or equal.

3. Prior to purchasing or installing check valve, the contractor shall submit valve specifications to the CM for approval.

4. The Contractor shall order the appropriate check valves to fit the outside diameter of the HDPE pipe.

5. Check valve shall have low cracking pressure, low head loss, elimination of backflow, will not rust or corrode, and will not warp or freeze open or shut.

6. Dimensions of check valve:

a. Pipe O.D.: ~22 inches; will depend on HDPE pipe diameter

b. Length: ~38 inches; will change based on Pipe O.D.

c. Bill Height: ~27 inches; will change based on Pipe O.D.

d. Cuff Length: ~6 inches; will change based on Pipe O.D.

7. Materials of Construction

a. Duckbill check valve shall be a one piece 100% elastomer construction (e.g., Neoprene, Hypalon) with nylon reinforcement meeting ASTM D2000 standard classification system for rubber products; ASTM D1418 standard practice for rubber and rubber lattices-nomenclature,

b. Mounting Bands shall be ASTM A40 316 Stainless Steel.

PART 3 EXECUTION

3.1 EXAMINATION

A. See Section 01 30 00 - Administrative Requirements: Verification of existing conditions before starting work.

B. Training for archeological protection, soil type identification, invasive vegetation identification, special status species identification shall be completed prior site access and earthwork, as directed by CM.

C. Contractor shall flag vegetation to be salvaged. Salvage extents shall be approved by SWS prior to removal.

D. Contractor shall flag invasive plant patches. Invasive plant extents shall be confirmed by SWS prior to removal.

E. Contractor will define vegetation clearing extents for restoration excavation, fill, temporary haul roads, grading areas, and temporary stockpile placement. Vegetation clearing extents shall be approved by CM and SWS prior to the start of Work.

F. Contractor shall flag the area for ripping outside of the grading boundary and shall be approved by the SWS prior to ripping.

G. All areas outside of the approved Work extents shall not be disturbed.

3.2 PREPARATION

A. See 01 11 00 Summary of work for work near utilities.

1. The existence and location of underground and other utilities indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction affecting the work.
2. The Contractor shall contact Underground Service Alert (USA) (1-800-642- 2444) seven (7) calendar days prior to the start of each ground disturbing phase and shall be responsible for maintaining a valid USA location tag through renewal during the construction. The Contractor shall be responsible to coordinate a utility field meeting with CM at which time the Contractor shall explain the limits and impacts of work that may affect USA member utilities.

B. Before beginning any clearing or grading, the Contractor must inspect the existing facilities in conjunction with the Contract Documents to determine the extent of the Work.

C. Hauling Restrictions: Comply with all legal load restrictions on the hauling of materials or equipment to the Project site. A special permit will not relieve Contractor of liability for damage which may result from moving of equipment. During movement of its vehicles on the roads, the Contractor is responsible for providing safe conditions for other drivers.

D. The Contractor shall keep all waste and contaminants contained in the staging area and shall use wildlife proof trash receptacles with lids. Uneaten human food and trash shall not remain exposed in the work zone or staging area. The Contractor shall ensure that all workers dispose of food scraps, paper wrappers, food containers, cans, bottles, and other trash are deposited in covered or closed trash containers.

3.3 PROTECTION

A. Locate, identify, and protect utilities indicated to remain.

B. Protect existing banks, structures, utilities, fences, pavements, road fill prism and other facilities from damage caused by direct contact, settlement, lateral movement, undermining, washout, slumping and other hazards created by earthwork operations.

C. Protect benchmarks and survey control points from damage or displacement. Provide protective orange fabric fencing around benchmarks and survey control within the limits of the Work.

D. Protect trees, plant growth, and features inside the work areas designated to remain. Provide protective orange fabric fencing around all trees to remain within the limits of the Work.

E. Tree roots may extend into earthwork areas. The Contractor shall provide ongoing observations of earthwork to protect tree roots and shall modify methods as necessary to protect tree roots. Less earthwork may occur than shown on Drawings if there is substantial root structure that needs to be protected or avoided.

F. Contractor shall identify and use methods necessary to ensure excavation does not occur outside of permissible boundaries.

G. Contractor shall take precautions to avoid causing banks to slump during earthwork activities.

H. Materials stockpiled near the Swain Slough or constructed channels shall be isolated from the channel banks such that the channel banks are not disturbed by the placement or removal of the stockpile.

I. Protect existing surface and subsurface features on-site and adjacent to site as follows:

1. Follow guidelines in Drawings and Section 01 11 00 Summary of Work regarding equipment access and excavation in the vicinity of the gas line.
2. Excavation in areas that have or may have underground facilities.
3. In case of damage, notify Owner and CM immediately so that required protective and corrective measures may be taken.
4. Maintain free of damage any structures not indicated to be removed. Any item known or unknown or not properly located that is inadvertently damaged shall be repaired to original condition. All repairs are to be made and paid for by Contractor.
5. Avoid surcharge or excavation procedures which can result in heaving, caving, or slides.

J. Erosion Prevention

1. Protect stockpiles, ditches, banks, embankments, filled, backfilled, and graded areas to prevent erosion until such time as permanent drainage and erosion control measures have been installed.

K. Protecting Graded Areas

1. Protect graded areas from erosion, foot traffic by workers, equipment, stockpiling or any actions which would compact even minor areas of the surface.

L. Repair and reestablish grades to specified tolerances at locations where completed or partially completed surfaces have become eroded, rutted, settled, or where they lose compaction, or become overly compacted, due to subsequent construction operations or weather conditions.

3.4 CLEARING

A. Clear areas required for access to site and execution of Work.

B. Remove trees and shrubs within designated areas following approval of CM.

C. Remove surface debris in designated areas.

3.5 REMOVAL

A. Remove debris, rock, and extracted plant life from designated work areas. Remove materials not designated for stockpiles or reuse from the site and dispose.

B. Invasive plants shall be removed and disposed of as directed on Drawings.

C. Continuously clean-up and remove waste materials from site. Do not allow materials to accumulate on site.

D. Do not burn or bury materials on site. Leave site in clean condition.

3.6 TOLERANCES

A. General excavation and fill

1. Construct vertical grade to +/- 0.25 FT with an average difference of +/- 0.1 FT from numerous data points.
2. Construct horizontal grades within 0.5 FT of locations indicated on drawings.

B. Pipe inverts and pond sill elevation (culverts and tide gate structures)

1. Construct vertical grade to within 0.1 FT of elevations indicated on drawings.
2. Construct horizontal grades within 0.1 FT of locations indicated on drawings.

C. Shallow fill on marsh and hummock

1. Fill elevations shall be a minimum of 6.8 ft and may be as high as 7.2 FT.

D. Hummock

1. Maximum elevation of 8 FT. Height may be reduced if insufficient material is available.
2. Side slopes shall not exceed 10H:1V.

3.7 EXPLOSIVES

A. Explosives are prohibited.

3.8 UTILITIES

A. Abandoned sewers, piping, and other utilities encountered during excavation that are not indicated for demolition shall be removed following approval from CM.

B. Active utility lines encountered, which are not indicated in the Contract Documents, shall be reported immediately to the CM and utility owners. The CM and utility authorities

shall be permitted free access to determine the measures deemed necessary to repair, relocate, or remove the utility.

C. Follow guidelines in Section 01 11 00 Summary of Work regarding equipment access and excavation in the vicinity of the 10-inch diameter gas line and Gas Line Special Access Zone designated on the Drawings.

3.9 DEWATERING

A. Prevent surface water from ponding on prepared subgrades, and from flooding work areas and/or surrounding areas.

B. Conduct dewatering of excavation areas per approved Dewatering and Water Diversion Plan, Section 01 45 00, Environmental Protection. Refer to Drawings for example of a dewatering and water diversion plan.

C. Protect subgrades from softening, undermining, washout, and damage by rain or water accumulation.

D. Reroute surface water runoff away from excavated areas.

E. Accumulated water in excavation areas, from surface or groundwater, shall be removed if it creates unsuitable conditions for earthmoving operations, following an approved Dewatering and Water Diversion Plan, Section 01 45 00 Environmental Protection.

3.10 EXCAVATION

A. Do not excavate or remove any material from the work area which is not within the designated excavation limits, grade lines, or levels.

B. Contractor shall follow OSHA Trench Safety Guidelines.

C. Contractor shall prevent the trench walls from sloughing into trench.

D. Place excavated material at sufficient distance from the edge of excavation so as not to cause cave-ins or bank slides, but in no case closer than 3 ft from the edge of excavations.

E. If a slide, slip-out, washout, settlement, and/or subsidence occurs for any reason during excavation, the area shall be repaired to the pre-disturbance condition.

F. Excavation shall be conducted in a manner to allow materials to be segregated for reuse.

1. The Contractor shall segregate and stockpile sufficient volumes of Type 1&2 A, Type 1&2 B, and Type 2&3 materials for re-use at specified locations shown on the Drawings, prior to co-mingling any material type for shallow fill placement on marsh and hummock areas.
2. A sufficient volume of clean material of the correct material type shall be retained for use in specified locations as shown on the Drawings.

G. Materials identified for disposal off-site shall be kept segregated from materials that are remaining on-site.

H. Except as otherwise indicated, preserve the material below and beyond the lines of excavations. Where excavation is carried below the indicated grade, backfill to the indicated grade as specified using materials shown on Drawings or if not specified, as directed by the CM.

I. Excavation and its restoration, when conducted for convenience of the Contractor, shall be at no additional expense to the Project or Owner.

J. If materials other than Soil Type 1, 2 or 3 are encountered during excavation, stop work at that location and notify the CM.

K. Contact CM if excavation side slope or depth shown on Drawings cannot be met.

L. Buried Logs

1. Buried logs may be relocated or incorporated in large wood structures if the full piece of wood is exposed by the excavation. Placement of the wood shall be coordinated with the Project Engineer.
2. Buried wood that is not fully exposed by the excavation (one or both ends are embedded into the bank) shall not be disturbed, unless approved by the Project Engineer.

M. Provide a gradual transition between adjacent existing grades and new grades.

3.11 FILLING AND BACKFILLING

A. Comply with Compaction Requirements and grade to lines and elevations, as indicated on Drawings.

B. All areas to receive fill or backfill shall be inspected by CM prior to material placement. CM shall be notified 24 hours prior to filling or backfill operations.

C. Comply with material types for each feature or element identified on the Drawings.

D. Prepare ground for fill placement as shown on Drawings and described below.

E. Systematically fill or backfill to allow maximum time for natural settlement and avoid damage or compaction to adjacent grades, or wet and spongy sub-grade soils.

F. For filling depths less than 8 inches, fill can be placed in one continuous lift.

G. For filling depths greater than 8 inches, place fill in 8-to-12-inch maximum depth continuous lifts.

H. Spread lifts and tamp with excavator bucket and/or track-in with 2 to 3 passes maximum with tracked equipment such as dozer or excavator.

I. Comply with the following fill and compaction requirements by material types and feature or element, and as indicated on Drawings:

1. Type 1&2 A or B materials forming natural sediment levee fill, eco-levee 6-inch soil cap, and natural shoreline 6-inch soil cap shall be lightly compacted using

bucket tamping, crane mats, and/or tracked or tracked-in with low bearing pressure tracked equipment. If these surfaces are deemed overly compacted by SWS or CM, contractor shall rip compacted surface 6 inches deep to facilitate revegetation.

2. Type 1&2 B or Type 2&3 materials forming hummocks, shallow fill on marsh, eco-levee and natural shoreline side slopes below (not 6-inch soil cap), and drainage ditch fill shall be lightly compacted using bucket tamping, crane mats, and/or tracked or tracked-in with low bearing pressure tracked equipment. Most of these surfaces will be ripped 12 inches (rip 12) after meeting finish grade.

3. Type 2&3 materials forming the eco-levee and natural shoreline fill core shall be placed in 8-12-inch lifts and tracked or tracked-in with low bearing pressure tracked equipment to achieve the equivalent compaction of undisturbed material (~ 85% compaction). If the surface of the eco-levee core is overly compacted as determined by SWS or CM, contractor shall rip compacted surface 6 inches deep (rip 6) to facilitate revegetation.

J. Ditch Fill

1. Remove surface vegetation and roots prior to fill placement. Minimize depth of excavation and protect road prism and adjacent ground surfaces.
2. If required rip or scarify ground surface prior to fill placement.
3. Fill shall meet design grades and/or adjacent ground elevations such that water no longer concentrates along the ditch alignment.

K. Provide a gradual transition between adjacent existing grades and new grades.

L. If fill placement results in an overly compacted surface, the contractor shall decompact these areas as described in this Specification.

3.12 CULVERT PIPE AND TIDE GATE STRUCTURES

A. The drainage swale bed and banks must be constructed prior to installing culvert pipes.

B. Culvert pipe installation shall be done in accordance with these Specifications, Drawings, Standard Specifications, ASTM D2321, and manufacturer installation guidelines, and as described below:

1. Foundation: It is anticipated that native soil will be suitable foundation material. However, where the trench bottom is unstable, the contractor shall excavate to a depth required by the Project Engineer and replaced with suitable material as specified by the Project Engineer.
2. Bedding: Bedding shall be a minimum thickness of 4 inches and compacted to approximately 95% relative compaction. The bedding material below the pipe and fitting/couplings shall be removed or shaped as necessary, to fully support the full length of the pipe.
3. Initial Backfill: Backfill shall be placed in lifts no greater than 12 inches thick and compacted to 90% relative compaction. Compaction within the haunch zone shall be with 'j' bar or pneumatic 'pogo' stick.
4. Upper Backfill: Backfill above the initial backfill will be with native soils and compacted to 85% or greater relative compaction.

5. Minimum Cover: Minimum cover shall be 18 inches or as indicated on the Drawings.
6. Contractor shall make a reasonable attempt to achieve compaction requirements for bedding and initial backfill zones. Compaction testing is required as directed in this specification At any time, Owner reserves the right to test compaction if contractors work quality warrants.

C. Following installation, the upper backfill will be shaped to blend with the adjacent ground or meet design grade.

D. Bank RSP and rock flow dissipators will be constructed below each tide gate outlet as shown on the Drawings and as directed in the field by CM. Refer to Section 31 37 00, Rock Slope Protection, for construction requirements and additional specifications for the rock flow dissipators. RSP fabric is not required below the rock flow dissipators.

E. Install tide gate duckbill check valve per manufacturers guidelines and requirements.

3.13 FINAL SURFACE TREATMENTS FOR FINISH GRADE

A. After completion of filling or backfilling to design grade, the following final surface treatments will be conducted in the areas indicated on the Drawings to achieve finish grade surfaces.

B. Final surface ripping requirements are as indicated:

1. Rip 6 consists of ripping ground surfaces to a depth of 6 inches,
2. Rip 12 consists of ripping ground surfaces to a depth of 12 inches.
3. Spacing between ripping arms shall be 18 to 24 inches, unless otherwise approved.

C. Rip 6 will be used to rip areas outside of the grading boundary as directed by SWS or CM, to break up the existing ground surface vegetation and root mass.

D. Rip 12 will be used to rip shallow fill areas (marsh and hummock) as directed by SWS or CM, to rip through the fill into the underlying native ground and brink surface vegetation, root mass, and seeds to the surface.

E. Ripping shall be parallel to ground contours, perpendicular to the surface drainage direction, or parallel to channels.

F. Temporary haul routes, access, staging, and stockpiling areas shall be decompacted, or compacted if needed, to achieve similar compaction and elevations to equivalent undisturbed ground. Decompaction consists of

1. Ripping 12 to 18 inches through compacted layers as directed by CM,
2. Additional decompaction requirements such as tilling or plowing may be required to achieve original ground elevations.

G. Depending on ground surface conditions following ripping or decompaction, surface cross tracking or tracking-in with tracked equipment may be required to break up clods and smooth surface as directed by CM.

H. Ripping or decompaction does not need to occur as a continuous treatment. Areas can be ripped or decompacted as they are completed following approval of the CM.

I. Contractor shall avoid operating equipment over areas that have been ripped or decompacted to final grade. If equipment does travel over final grade surfaces, the contractor shall rip or decompact these areas as required and directed by CM.

3.14 SURPLUS MATERIALS

A. Excess excavated material types not required to achieve design grades are to remain on site, and will be used as shallow fill for marsh or hummocks as directed by CM.

B. Excess excavated materials not used for fill or backfill that are different than the soil or material types described in this Specification and Drawings, shall be removed from the site at the contractor's expense.

3.15 TEMPORARY STOCKPILING

A. Place, grade, and shape stockpiles to drain surface water.

B. Temporary stockpile materials to be reused or hauled away, including but not limited to: Type 1-3 material, boulders, artificial fill (if encountered), mulch, etc.

1. Different material types shall be stockpiled separately until all designated material types use for features or elements have been completed,
2. Temporary stockpiles shall be no higher than 6 FT and side slopes no steeper than 2H:1V.

C. Stockpiles shall not occur where there are exposed roots or under the drip lines of trees.

D. Stockpiles shall occur within the grading boundary, staging areas, on haul routes, or areas designated and/or approved by the CM.

3.16 COMPACTION TESTING

A. The Contractor shall engage a qualified third party compaction testing firm to provide compaction testing at the locations described in the section below (Testing Frequency). Testing reports shall be provided to the Construction Manager for review and approval.

B. Relative compaction tests will be made at locations determined by the Construction Manager. When tests indicate that the specified compaction has not been achieved, that portion of the Work shall be reworked until the required density has been attained.

C. The Contractor shall make all necessary excavations for compaction tests. Costs of excavating, backfilling, and compacting in connection with compaction testing shall be borne by the Contractor. Excavations for compaction tests shall be backfilled with native backfill and compacted to the specified density. The Contractor shall engage a qualified testing organization subject to approval by the Construction Manager and pay for all testing in accordance to the specifications. The Contractor shall be required to pay for all required repeat tests in that area until the required results are obtained and including all associated incurred costs.

D. Contractor shall make a reasonable attempt to decompact over-compacted fills placed or haul-routes throughout the wetland. Compaction testing is not required for decompaction. However, Owner reserves the right to test compaction if contractors work quality warrants.

E. All compaction shall be by mechanical means unless the Contractor can demonstrate other means that will accomplish required compaction to the satisfaction of the Construction Manager. Compaction equipment shall be of suitable type and adequate to obtain the densities specified and approved. Compaction equipment shall be operated in strict accordance with the manufacturer's instructions and recommendations. Equipment shall be maintained in such condition that it will deliver the manufacturer's rated compactive effort.

F. Testing Methods:

1. In-place Density: ASTM D1557

2. ASTM D-698 (Standard Proctor)

G. Testing Frequency:

a. Culvert Bedding: Contractor shall demonstrate in the presence of the Construction Manager their method(s) to achieve the specified compaction for bedding shown on the plans by conducting a minimum of two (2) successful and consecutive tests per contractors' desired method and representative of the feature location(s) and fill material(s). Once the method for the bedding materials has demonstrated conformance with the compaction requirements on the plans, the method can then be replicated under the observation of the Construction Manager at other culvert locations with not additional testing.

b. Culvert Backfill: Contractor shall demonstrate in the presence of the Construction Manager their method(s) to achieve the specified compaction for backfill shown on the plans by conducting a minimum of two (2) successful and consecutive tests per contractors' desired method and representative of the feature location(s) and fill material(s). Once the method for the backfill materials has demonstrated conformance with the compaction requirements on the plans, the method can then be replicated under the observation of the Construction Manager at other culvert locations with not additional testing.

H. If, in the opinion of the Construction Manager, required compaction is not being achieved, Contractor will provide reimbursement for re-testing. The Construction Manager shall determine the number and location of tests required. The Contractor shall furnish a backhoe and operator upon request to the testing laboratory, at no cost to CalTrout.

I. Perform additional compacting effort or re-work as required until compaction meets or exceeds requirements.

J. Ensure excavations are safe for testing personnel.

K. Definition:

1. Relative Compaction: In-place density divided by the maximum dry density laboratory compaction expressed as percentage.

END OF SECTION

31 37 00 ROCK SLOPE PROTECTION

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Rock slope protection (RSP) for protection of slopes and grades against erosion.

B. Related Sections:

1. Section 31 00 00 Earthwork.

C. The work, requirements and provisions described herein shall be done in accordance with the Specifications described in this section (known as Specifications), the Project Drawings (also referred to as plans, drawings, etc.), and the State of California, Department of Transportation Standard Specifications for Construction, current edition (known as Standard Specifications). In cases where there may be conflicting requirements between the Specifications, Project Drawings, and Standard Specifications, the order of priority shall be as follows: Specifications have priority over the Project Drawings, and the Project Drawings have priority over the Standard Specifications.

D. Reference Standards:

1. CALTRANS Standard Specifications, Current Edition
2. CAL-OSHA, Title 8, Section 1590 (e)
3. Any work within the street, highway or right-of-way shall be performed in accordance with the requirement of the governmental agencies having jurisdiction and shall not begin until all those governing authorities have been notified.

1.2 SUBMITTALS

A. RSP gradation and material testing results.

PART 2 PRODUCTS

2.1 MATERIALS

A. Rock

1. Rock shall meet the following requirements for grading when placed in hauling vehicles for delivery to the project site or during manufacture and placement into temporary stockpile. The exact point of acceptance will be determined by the CM.
2. Use the class of rock and the method of placement described in the Drawings.
3. Rock for Method A and B placement shall comply with Table 1.
4. Rock shall meet Table 2 test requirements for quality.
5. Select rock so that shapes provide a stable structure for the required section. If the slope is steeper than 2:1, do not use rounded boulders and cobbles. Angular shaped rock may be used on any RSP slope. Flat or needle shaped rock must not

be used unless the individual rock thickness is greater than 0.33 times the length.

6. Rock shall consist of clean, dense, hard, durable non-friable stone free of organic debris and other deleterious substances.
7. Rock shall be free from structural fractures and defects.
8. Rock shall not contain shale, unsound sandstone, or other material which will disintegrate.
9. Ensure that dirt and fines accumulated from inter-ledge layers or from blasting or handling operation is less than 2 percent by weight.

Table 1. Rock Gradation Requirements for Rock Slope Protection (RSP)

Nominal RSP class by median particle diameter[b]		Nominal median particle weight W50[c,d]	d_{15}[c] (inch)		d_{50}[c] (inch)		d_{100}[c] (inch)
Class[a]	Diameter (inch)		Min	Max	Min	Max	Max
I	6	20 lb	3.7	5.2	5.7	6.9	12.0
II	9	60 lb	5.5	7.8	8.5	10.5	18.0
III	12	150 lb	7.3	10.5	11.5	14.0	24.0
IV	15	300 lb	9.2	13.0	14.5	17.5	30.0
V	18	1/4 ton	11.0	15.5	17.0	20.5	36.0
VI	21	3/8 ton	13.0	18.5	20.0	24.0	42.0
VII	24	1/2 ton	14.5	21.0	23.0	27.5	48.0
VIII	30	1 ton	18.5	26.0	28.5	34.5	48.0
IX	36	2 ton	22.0	31.5	34.0	41.5	52.8
X	42	3 ton	25.5	36.5	40.0	48.5	60.5
XI	46	4 ton	28.0	39.4	43.7	53.1	66.6

[a]For RSP Classes I–VIII, use Class 8 RSP fabric. For RSP Classes IX–XI, use Class 10 RSP fabric.
[b]Intermediate or B dimension (i.e., width) where A dimension is length and C dimension is thickness.
[c]d%, where % denotes the percentage of the total weight of the graded material.
[d]Values shown are based on the minimum and maximum particle diameters shown and an average specific gravity of 2.65. Weight will vary based on specific gravity of rock available for the project.

Table 2 Rock Material Quality Properties for Rock Slope Protection

Property	California Test	Value
Apparent specific gravity	206	2.5 minimum
Absorption	206	4.2% maximum*
Durability index	229	52 minimum*

* Based on the formula listed below, absorption may exceed 4.2 percent if DAR is greater than 10. Durability index may be less than 52 if DAR is greater than 24.
Durability Absorption Ratio (DAR) = Coarse Durability Index/(% Absorption+1)

B. Fabric

1. Fabric must be RSP fabric that complies with the class shown in Table 3.
2. RSP fabric must be permeable, nonwoven, needle-punched geotextile. The fabric must be manufactured from one of the following:
   a. Polyester
   b. Polypropylene
   c. Combined polyester and polypropylene
3. Polymers must be either virgin compounds or clean reworked material. Do not subject virgin compounds to use or processing other than required for initial manufacture. Clean reworked material must be previously processed material from the processor's own production that has been reground, pelletized, or solvated. The fabric must not contain more than 20 percent of clean reworked material by weight. Do not use recycled materials from either post-consumer or post-industrial sources.
4. RSP fabric must comply with Table 4 requirements.

Table 3 Fabric Quality Properties for Rock Slope Protection

Class	Largest rock gradation class used in RSP
8	Classes I - VIII
10	Classes IX - XI

Table 4 RSP Fabric Requirements for Rock Slope Protection

Property	Test Method	Requirement	
		Class 8	Class 10
Mass (min, oz/sq yd)	ASTM D5261	7.5	9.5
Grab breaking load, 1 inch grip in each direction (min, lb)	ASTM D4632	200	250
Apparent elongation in each direction (min, %)	ASTM D4632	50	50
Permittivity (min, sec^{-1})	ASTM D4491	1.0	0.70
Apparent opening size (um (US Sieve))	ASTM D4751	150(100) – 212(70)	
UV resistance, retained grab breaking load, 500 hours (min, %)	ASTM D4355	70	

2.2 APPROVED MATERIAL SOURCES

A. RSP Rock

1. Contractor is responsible for locating acceptable RSP rock as noted in these specifications and the Drawings.
2. Source of RSP rock will require approval from the Project Engineer.

B. RSP Fabric

1. Contractor is responsible for locating acceptable RSP fabric as noted in these specifications and the Drawings.

2. Source of RSP fabric will require approval from the Project Engineer.

PART 3 EXECUTION

3.1 PREPARATION

A. Installation of RSP will occur after grading areas are at design grade and have been approved by the Project Engineer.

3.2 GENERAL

A. Excavate to the grades shown on the Drawings prior to rock placement.

B. Prior to rock placement, install RSP fabric if required.

C. Place to required thickness and grades as shown on the Drawings. Rock shall be placed in a roughly regular surface without large cavities or excess projections above the general lines of the rock layer.

D. Place to full thickness in a single operation to avoid displacing the underlying material.

E. Do not place any stone material on prepared base prior to inspection by the Project Engineer.

F. Replace any displaced material to design grade lines and grades shown.

3.3 FABRIC PLACEMENT

A. If placement of fabric is required, place the fabric before placing slope protection, slope paving, and gabions.

B. Before placing the fabric, the surface of the slope must be free of loose or extraneous material and sharp objects that may damage the fabric.

C. Handle and place the fabric under manufacturer's instructions. Place the fabric loosely on the slope such that it conforms to the surface without damage to the fabric when the cover material is placed.

D. Join the edges of the fabric with either overlapped joints or stitched seams.

E. If the fabric is joined with overlapped joints, the adjacent borders of the fabric must be overlapped by at least 24 inches. Overlap in the same direction that the cover material is placed.

F. If the fabric is joined by stitched seams, stitch with contrasting colored yarn. Use the size and composition of yarn that is recommended by the fabric manufacturer. Use 5 to 7 stitches per inch of seam. The strength of a stitched seam must be the same as that specified for the fabric, except if the stitched seams are oriented up and down a slope, the strength may be reduced to a value that it is at least 80 percent of that specified for the fabric.

G. Do not operate equipment or drive vehicles directly on the fabric.

H. If the fabric is damaged and the Project Engineer determines that it cannot be repaired, replace the fabric.

I. If the Project Engineer determines that the fabric can be repaired, then repair it by covering the damaged area with new fabric. If the repair is made using overlapped joints, the overlap must be at least 3 FT.

3.4 RSP PLACEMENT

A. Placement Method A:

1. Do not place rocks by dumping.
2. All rocks are to be individually placed and secured in position by machine tamping of rock and surrounding support material.
3. Place larger rocks in the bottom of the structure.
4. On each rock, three perpendicular axes can be identified in three dimensions: a short axis, and intermediate axis, and a long axis. In order to produce the most stable and aesthetic appearing revetment, with a relatively uniform rock surface, rock shall be placed with the short axis in a vertical plane parallel to the face of the slope, the intermediate axis perpendicular to the face of the slope, and the long axis horizontal and parallel to the face of the slope.
5. Place foundation course rocks so that they are in contact with the ground surface.
6. For rocks above the foundation course, place them so that each rock has a 3-point bearing on underlying rocks; do not bear them on smaller rocks which may be used for chinking voids.
7. Fill all voids in RSP rock to minimize permeability and flow piping with material specified in Drawings as each layer of rock is placed. It may be necessary to hand tamp stream bed material into voids.

B. Placement Method B:

1. Rocks may be placed by dumping and may be spread in layers by dozers, placed by excavator, or other suitable equipment.
2. Place rocks such that there is a minimum of voids.
3. Place rocks so that larger rocks are in the toe course and on the outside surface of the slope protection.

END OF SECTION

32 31 13 GATE

PART 1 GENERAL

1.1 SUMMARY

A. Section includes:

1. Furnishing and installing galvanized steel tube swing gate, posts, hardware, and accessories.

B. Related Sections:

1. 32 31 16 Wire Fences

C. The work, requirements and provisions described herein shall be done in accordance with the Specifications described in this section (known as Specifications), the Project Drawings (also referred to as plans, drawings, etc.), and the State of California, Department of Transportation Standard Specifications for Construction, current edition (known as Standard Specifications). In cases where there may be conflicting requirements between the Specifications, Project Drawings, and Standard Specifications, the order of priority shall be as follows: Specifications have priority over the Project Drawings, and the Project Drawings have priority over the Standard Specifications.

1.2 SUBMITTALS

A. Product data: Materials, coatings, hardware

PART 2 PRODUCTS

2.1 GATE MATERIALS

A. Steel Tubing

1. Frame: ASTM A500 Grade B or C,
2. Alternative: ASTM F1083 galvanized pipe.

B. Galvanizing

1. Hot-dip galvanize after fabrication per ASTM A123,
2. Hardware per ASTM A153.

C. ¾ inch gravel or similar for bottom of post footing.

2.2 GATE FABRICATION

A. Configuration

1. Type: Single swing gate,

2. Clear opening: 10'-0",
3. Height: Match fence.

2.3 POSTS

A. Gate posts (Steel)

1. Material: Galvanized steel,
   a. Minimum size: 4-inch diameter,
   a. Treatment standard: same as galvanized steel gate.

2.4 HARDWARE, FASTENERS, AND CONNECTORS

A. Fasteners and Connectors:

1. Hot-dip galvanized,
2. Bolts: as recommended for fastener or connector.

B. Hinges

1. Heavy-duty, adjustable, galvanized,
2. Designed for gate weight and cyclic loading,
3. Bolt size as recommended for hinge.

C. Latch

1. Gravity latch or chain latch,
2. Lockable.

PART 3 EXECUTION

3.1 INSTALLATION

A. Install Gate at location indicated on drawing and as directed by CM.

B. Posts and Footings

1. Embed posts minimum 3 FT,
2. Post hole shall have an approximate diameter of 16 to 18 inches,
3. Place approximately 3 inches of ¾ inch minus rock in bottom of post hole prior to placing concrete, and tamp to compact,
4. Concrete footing
   a. 3,000 PSI minimum,
   b. Place concrete in layers,
   c. Tamp each concrete layer to remove air pockets and conform and fully encase post.

C. Post Setting

1. Set posts plumb and aligned,

2. Crown top of concrete to shed water away from post,
3. Maintain minimum 2-inch clearance between posts and surrounding soil at top of footing where feasible.

3.2 ALIGNMENT AND OPERATION

A. Install plumb and true.

B. Gate shall swing freely without binding.

C. Provide full opening without ground interference.

3.3 FIELD QUALITY CONTROL

A. Verify:

1. Smooth operation, proper latch engagement, no sag or misalignment.

END OF SECTION

32 31 16 WIRE FENCES

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Three-strand smooth wire fencing supported by steel T-posts
2. End, corner, and bracing assemblies (Wood)

B. Related Sections:

1. 32 31 13 Gate

C. The work, requirements and provisions embraced herein shall be done in accordance with the Specifications described in this section (known as Specifications), the Project Drawings (also referred to as plans, drawings, etc.), and the State of California, Department of Transportation Standard Specifications for Construction, current edition (known as Standard Specifications). In cases where there may be conflicting requirements between the Specifications, Project Drawings, and Standard Specifications, the order of priority shall be as follows: Specifications have priority over the Project Drawings, and the Project Drawings have priority over the Standard Specifications.

1.2 REFERENCES

A. 382AA OR – Specification NRCS Wildlife Friendly Wire Fence Specification Sheet

PART 2 PRODUCTS

2.1 MATERIALS (ENHANCED FOR CORROSION RESISTANCE)

A. Smooth Wire

1. Type: High-tensile smooth steel wire,
2. Size: 12.5 gauge minimum,
3. Tensile strength: 170,000 PSI, breaking strength 1308 lbs,
4. Coating: minimum class 3 galvanized per ASTM A641, coating weight ≥ 0.80 oz/ft².

B. Line Posts (Steel T-Posts)

1. Type: Steel line posts shall be the “T” type with a welded or riveted anchor plate near the bottom (minimum 18 inches square area) and have suitable corrugations, knobs, studs or grooves for fastening the wire.
2. Weight: Minimum 1.33 lb/ft,
3. Coating: two layers of green enamel coating and a prime coat finish

C. Posts for Fence Brace

1. Pressure treated peeler core wood,
2. Minimum diameter of 5 inches and 8-ft length.

D. Bracing Assemblies

1. Horizontal cross brace:
   a. Pressure treated peeler core wood,
   b. Minimum diameter of 4 inches and 6-ft length.
2. Brace Wire: 9-12 gauge Class 3 galvanized or zinc-aluminum coated.
3. Brace Components: use galvanized fasteners.

E. Fasteners and Accessories

1. T-post clips: class 3 galvanized.
2. Staples:
   a. Heavily galvanized (ASTM A153 Class D) for wood posts,
   b. 9-gauge or heavier and have a minimum length of 1.5 inches.
3. Tensioners: Galvanized inline tensioner.
4. H-brace connector: galvanized lag screws (1/2-inch x 10-inch minimum.

PART 3 EXECUTION

3.1 EXAMINATION

A. Fence alignment may be altered by CM pending property line survey.

B. Fence alignment shall be flagged and approved by CM and landowner or their representative prior to installation.

3.2 INSTALLATION

A. The fence shall be reasonably straight and shall not deviate more than 12 inches between any corner and gate or line brace assembly.

B. Posts and Footings

1. Embedment depth:
   a. Minimum 2 FT for T-posts,
   b. Minimum 3 FT for wood posts.
2. Wood post hole diameter: 8-10 inch for wood post.
3. Hole backfill: native soil excavated from hole, hand tamp each layer to remove air pockets and conform and fully encase post.
4. Spacing:
   a. T-posts: 10 FT on center,
   b. Wood posts: 5 FT on center for corner and end posts.

C. Post Setting:

1. Set posts plumb and aligned.

D. Wire Installation

1. Install three strands at specified heights indicated on Drawings.
2. Tension: 150–200 lbs per strand (avoid overstressing coated wire.
3. Corrosion Control Measures:
   a. Avoid scraping or damaging protective coatings during installation,
   b. Use protective sleeves or guides when tensioning.

E. Connections

1. Minimize dissimilar metals to prevent galvanic corrosion.
2. Where dissimilar metals are unavoidable:
   a. Isolate with non-conductive separators.
3. Pre drill hole for lag screw on H-brace.

3.3 FIELD QUALITY CONTROL

A. Inspect coatings for damage; repair with zinc-rich coating per ASTM A780.

B. Verify uniform tension and alignment.

END OF SECTION

32 92 19 SEED AND MULCH

PART 1 GENERAL

1.1 SUMMARY

A. Seed and mulch specification prepared by SWS.

B. Section includes:

1. Seeding and mulching activities including site preparation, installation, and cleanup.

C. Related Sections:

1. 31 20 00 Earth Moving

D. The work, requirements and provisions described herein shall be done in accordance with the Specifications described in this section (known as Specifications), the Project Drawings (also referred to as plans, drawings, etc.), and the State of California, Department of Transportation Standard Specifications for Construction, current edition (known as Standard Specifications). In cases where there may be conflicting requirements between the Specifications, Project Drawings, and Standard Specifications, the order of priority shall be as follows: Specifications have priority over the Project Drawings, and the Project Drawings have priority over the Standard Specifications.

E. Reference Standards:

1. Plant names: All plant material shall be true to botanical and common name as indicated in: Jepson Flora Project (eds.) 2026. Jepson eFlora, http://ucjeps.berkeley.edu/eflora/.
2. ASTM D7047-04

1.2 SUBMITTALS

A. If seed is procured from a supplier other than the CalTrout selected vendor, the Contractor shall submit the following from the supplier of seed material. This submittal shall be approved by the CM and SWS prior to delivery of any seed on site:

1. Seed source location (i.e., from seed collected from plant stock within Coastal Lowlands 1a of EPA Ecoregion IV or at minimum from Coast Range 1 of EPA Ecoregion III).
2. Description of seed prior to delivery including: species (botanical name and common name) of all plants, minimum percent purity, minimum percent germination, pounds pure live seed of the seed mix, quantities required per contract and available at supplying nursery, supplier name, contact name and number at supplier.

B. Seeding Completion Memo: Upon completion of seeding, Contractor shall submit a memo documenting the final seed quantities by species installed at the Project site.

C. Contractor shall submit the following regarding seeding and mulching:

1. Proposed methods for seeding and mulching.
2. If hydroseed/hydromulching, proof that the tackifier meets the specifications described in this SECTION.
3. Prior to delivery of mulch straw to Project site, submit the name, address, and telephone number of the straw supplier and proof that the straw meets the Specifications described in this SECTION.

1.3 QUALITY ASSURANCE

A. Contractor shall inspect Project site and design plan material to become familiar with any access requirements, access restrictions, and any other site conditions.

B. Contractor shall coordinate with CalTrout's supplier and SWS to schedule inspection and acceptance of seed.

C. Contractor shall appoint a superintendent who shall be onsite for the entire duration of seeding.

D. CalTrout reserves the right for their representatives to make progress inspections and take and analyze samples of materials for conformity to these Specifications at any time.

1.4 STORAGE AND HANDLING

A. Storage: The Contractor shall provide proper storage of the seed.

1. Upon delivery to the Contractor, seed shall be stored cool, clean, dry, and free from other seed sources such as invasive plants or agricultural products. Chemical materials shall not be stored with seed materials. Seed shall not be stored where temperatures exceed 80 degrees Fahrenheit or will be considered defective and shall be replaced at the Contractor's expense.

B. Replacement: Seed which, in the Contractor's possession, has become wet, moldy, or otherwise damaged, will be considered defective and shall be replaced at no expense to CalTrout.

1.5 SEQUENCING, SCHEDULING, AND PROJECT CONDITIONS

A. Sequencing:

1. All earthwork and grading of the site shall be complete per Section 31 20 00 Earth Moving prior to beginning soil preparation for seeding.
2. Timing of soil preparation, seeding, and mulching work shall be coordinated and sequenced with other project work.
3. Seeding shall occur following soil preparation and immediately followed by a mulch application.

B. Scheduling:

1. Contractor shall coordinate delivery of the seed with CalTrout's seed vendor and notify CalTrout a minimum 14-day advance notification prior delivery.
2. Upon delivery of the seed by CalTrout's seed vendor, the Contractor shall assume full responsibility of the seed. If the seed is damaged or stolen while in the possession of the contractor, the seed shall be replaced by the Contractor at no additional expense to CalTrout. While in the possession of the Contractor (on- or off-site), the seed shall be stored in a secured, weatherproof storage container.
3. Seeding shall be performed no earlier than September 15th, preceding grading and soil preparation activities in the designated seed zones identified in Drawings. It is at the Contractor's discretion to determine the precise sequence of work based on (1) access and equipment needs for each element and (2) minimization of impacts to completed components (e.g., damage to seeded areas that may occur from irrigation system and/or plant installation, etc.). No variance to the start date will be allowed unless given in writing by the CM.
4. Seeding shall be completed by October 15th, or as otherwise approved by CalTrout.

C. Conditions:

1. Seeding shall be performed only during periods when beneficial results can be obtained. When conditions are unsatisfactory for seeding treatments, as determined by the CM, the work shall be stopped as directed by the CM. At no time shall the Contractor's equipment be operated during significant rain events or on saturated work areas. The Contractor shall be prepared to seed at the earliest time when all conditions (weather, moisture, temperature, wind) are acceptable.
2. Seed application shall not take place if temperatures are over 90 degrees Fahrenheit.

PART 2 PRODUCTS

2.1 GENERAL

A. Materials not conforming to these Specifications and requirements shall remain the property of Contractor and shall be removed from the job site at no additional cost to CalTrout.

B. Contractor will be furnished seed by CalTrout by September 15th.

2.2 MATERIALS

A. SEED: Seed species and seeding rates shall be applied as specified in following table.

Table 1. Seed Mix

Seed Mix	Seed Mix Description[1]	Acres	Application Rate in Pounds of Pure Live Seed (PLS)/Acre	Total PLS (Pounds)
1	Seed mix 1: Coastal grassland corridor	1.32	13.1	17.3
2	Seed mix 2: Coastal scrub	2.20	9.8	21.5
3	Seed mix 3: Riparian scrub and mesic coastal grassland	3.01	11.3	34.1

Note – Given impurities in seed harvesting and mixing, the actual weight of the vendor delivered seed mix may be greater than the PLS shown in this table.
[1]Seed mix 2 may be substituted with Seed mix 3 when necessary.

B. WATER: Water shall be non-saline, suitable for agricultural use, shall be free of harmful substances that would adversely affect plant growth or vigor.

C. TACKIFIER: Tackifier shall be non-asphaltic, non-toxic to plants and wildlife, and non-staining to rock surfaces. Tackifier shall be in powder form, may be re-emulsifiable, and shall be a processed organic adhesive derivative of Plantago insularis (per ASTM D7047-04) used as a soil binder, manufactured to be suitable for seeding applications.

D. FIBER: Fiber material shall be wood cellulose fiber containing no growth or germination-inhibiting factors. Natural wood cellulose fiber shall have the property of dispersing readily in water and shall have no toxic effect when combined with other material. The homogenous slurry or mixture shall be capable of application with power spray equipment. A green colored dye which is non-injurious to seed growth shall be used. Wood cellulose fiber shall be packaged in new label containers marked by the manufacturer to show the air-dry weight content.

E. STRAW: Straw shall be either rice or wheat derived from irrigated cropland. Straw shall not contain glass, plastic, metal, rocks, or other inorganic material. Straw shall not have been used previously for any other use and shall be certified weed free.

F. BROADCAST SEEDING EQUIPMENT: Equipment access and equipment type must adhere to restrictions in the gas line special access zone. Outside this zone, an all-terrain vehicle (ATV) / tractor mounted or pulled broadcast spreader or “belly grinder” manual type seeder, or CM approved equal, shall be used to broadcast seed.

PART 3 EXECUTION

3.1 FIELD QUALITY CONTROL

A. Contractor shall request and receive approval from CM prior to commencing soil preparation, seeding, and mulching work.

B. Contractor shall inspect Project site and become familiar with access requirements, access restrictions, special access zones, and any other site conditions.

C. Contractor shall notify CM and SWS, in writing, of soil conditions encountered that Contractor considers detrimental to the growth of plant material.

D. When detrimental conditions are uncovered, planting shall be discontinued until instructions to resolve these conditions are received from the CM.

E. Work described in this SECTION shall not be performed during saturated, muddy or frozen conditions.

F. Contractor shall coordinate with CM and SWS to schedule inspections at the following stages:

1. Inspection during soil preparation.
2. Acceptance of soil preparation.
3. Acceptance of seed zone layout/flagging.
4. Inspection during seeding and mulching.
5. Acceptance of seeding and mulching.
6. Final Acceptance per the final section of this specification.

G. Progress inspections: In addition to the inspections specified, CM and SWS may make periodic progress inspections.

H. CalTrout reserves the right to take and analyze samples of materials for conformity to these Specifications at any time.

3.2 SOIL PREPARATION

A. Work in this SECTION shall not commence until:

1. After completion of all earthwork for that area has been completed and approved by the CM and Project Engineer.
2. Contractor has requested and received approval from CM.

B. Soil preparation shall occur in all areas to be seeded as shown on the Drawings. The Contractor shall coordinate with CalTrout to confirm the limits of soil preparation.

C. Soil preparation:

1. Prior to seeding in designated areas the Contractor shall prepare the soil as described in 31 20 00 Earth Moving and as follows:
    a. The Contractor shall review soil preparation areas for presence of rock, debris, chemicals, invasive plants, or other harmful substances and notify the CM if such conditions are observed.
    b. The CM will inspect and approve the soil preparation as adequate. The Contractor will remedy identified areas as needed and no extra payment will be made.

3.3 INSTALLATION

A. Broadcast Seeding

1. General
   a. Contractor may propose hydroseeding application as an alternative to broadcast seeding. Areas and methods shall be submitted to and are subject to CalTrout approval.
   b. Contractor may propose drill seed application as an alternative to broadcast seeding. Areas and methods shall be submitted to and are subject to CalTrout approval.
2. Timing
   a. Seeding shall occur upon completion of soil preparation work and upon request and receipt of approval by CM and SWS.
   b. Seeding shall be completed between 15 September and 15 October, unless otherwise approved by CM and SWS.
   c. Contractor shall coordinate with CalTrout no less than five (5) working days prior to seeding so that CalTrout and/or SWS can be present during seed application.
   d. Work shall be performed only at times when weather conditions at Project site are favorable. No Work shall be performed when wind conditions prohibit uniform distribution of seed unless approved by CM. No Work shall be performed and no equipment shall be operated when soils are saturated.
3. Layout
   a. Seed shall be applied in accordance to the areas shown on Drawings.
   b. Contractor shall flag all seeding areas and SWS Botanist shall approve all areas to be seeded prior to seeding.
   c. Contractor shall limit foot and equipment traffic and storage of supplies in seeded areas.
4. Preparation of Seeding Areas
   a. Soil preparation within seeding areas shall occur prior to broadcast seeding per Sub-Section SOIL PREPARATION.
   b. Clear all areas to be seeded of substantial debris and any other impediments to seed-soil contact.
5. Seed Application
   a. Limit foot traffic or storage of supplies in seeded areas.
   b. Apply the seed mix evenly and at the rates specified in the table in Sub-Section SEED.
   c. Any remaining seed shall be applied evenly to the areas shown on the Drawings.
   d. After the site has been seeded, straw shall be applied per sub-Section STRAW AND TACKIFIER APPLICATION.

B. Straw and Tackifier Application

1. General

a. Contractor may propose hydromulch application as an alternative to blown straw. Areas and methods shall be submitted to and are subject to CM approval.

b. Contractor may propose crimping straw as an alternative to tackifing. Areas and methods shall be submitted to and are subject to CM approval.

2. Timing: Straw and tackifier shall be applied within the same day following approval of seeding by CM.

3. Layout:

a. Straw and tackifier shall be applied to all seeded areas.

b. Straw shall be applied as follows:

1) Straw shall be applied using a mechanical blower or by hand labor at a rate of 2,000 pounds per acre.

2) Straw shall be applied uniformly.

c. Non-asphaltic tackifier shall be applied to straw at a rate of 120 pounds per acre.

d. Fiber shall be applied (with the tackifier) at a rate of 500 pounds per acre.

e. After the final application, Contractor will limit reentry by pedestrian and equipment in treated areas.

3.4 SITE CLEANUP

A. Contractor shall clean up the Project site following soil preparation, seeding, and mulching activities as follows and as directed by CM.

1. Clean work area of all containers, packaging, and other debris resulting from seed installation operations.

2. Dispose of all debris legally at licensed disposal facilities.

3. Remove temporary items.

B. Seeded or mulched areas disturbed by subsequent construction activities shall be re-seeded or re-mulched within five (5) working days of the completion of such activities.

3.5 ACCEPTANCE

A. Acceptance of Work:

1. CalTrout will accept work when all improvements and corrective work have been performed as specified and to the satisfaction of CalTrout and a minimum 50% live vegetative aerial cover from germinated seed in application areas.

END OF SECTION

APPENDIX D GENERAL CONDITIONS

GENERAL CONDITIONS

1. **INDEPENDENT CONTRACTOR.** At all times during the term of this Contract, Contractor shall be an independent contractor and shall not be an employee of CalTrout. Contractor will not be eligible to participate in any welfare or benefit plans of CalTrout. CalTrout shall have the right to control Contractor only with respect to specifying the results to be obtained from Contractor pursuant to this Contract. CalTrout shall not have the right to control how Contractor accomplishes services rendered pursuant to this Contract. Likewise, no relationship of employer and employee is created by this Contract between CalTrout and Contractor or any subcontractor or employee of Contractor. Nothing in this Contract shall be construed as limiting the right of Contractor to engage in Contractor's profession separate and apart from this Contract so long as such activities do not interfere or conflict with the performance by Contractor of the obligations set forth in this Contract. Interference or conflict will be determined at the sole discretion of CalTrout.

2. **STANDARD OF PERFORMANCE AND WORK SPECIFICATIONS.** Contractor shall complete the Work required pursuant to this contract in a manner consistent with currently approved methods and practices in Contractor's field and in accordance with the standards observed by competent practitioners of the profession in which Contractor is engaged in the geographical area in which Contractor practices its profession. Contractor shall furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plants, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the Work. Contractor warrants to CalTrout that all materials and equipment furnished shall be new, free from faults and defects, and of good quality. Additionally, Contractor warrants its work against all deficiencies and defects for the longest period permitted by law. During the term of this warranty, Contractor shall, without delay and at its own expense, provide all materials, parts, and labor that are necessary to repair and/or correct all defects–including but not limited to installation or operational failures in the equipment from any cause–so that said Work will function successfully as originally contemplated. Notwithstanding the foregoing, Contractor shall not be required to bear the expense of correction of any failure in the equipment that is caused by the sole or active negligence or willful misconduct of CalTrout. Should Contractor fail to act promptly or in accordance with this requirement, or should the situation require that repairs or replacements be made before Contractor can be notified, CalTrout may, at its option, make the necessary repairs or replacements or perform the necessary work and Contractor shall pay to CalTrout the actual cost of such repairs. Contractor shall also pay to CalTrout any attorneys' fees incurred to enforce this guaranty.

3. **PERMITS AND COMPLIANCE.** Contractor shall ensure all necessary permits and approvals for the Work have been obtained and will provide CalTrout with copies of all such necessary permits and approvals. Additionally, Contractor shall protect all materials to be used in the Work in accordance with the specifications and shall remove from the project site all debris resulting from performance of the Work no less often than daily. If Contractor fails to remove debris, CalTrout may, after twenty-four (24) hours' notice to Contractor, clean up the site and deduct the cost from the compensation amount. Contractor shall set up, identify, coordinate, provide safe access, and obtain all inspections for its work, as required by any authorized agency or applicable code, prior to covering up work. Contractor shall also keep itself fully informed of and comply with all applicable laws including existing and future state and federal laws and county and municipal ordinances and regulations which in any manner affect those engaged or employed in the Work, or the materials used in the Work, or which in any way affect the conduct of the Work, and all such orders and decrees of bodies or tribunals having any jurisdiction or authority over the same.

4. TIME. Contractor shall devote such time to the Work pursuant to this Contract as may be reasonably necessary for satisfactory performance of Contractor's obligations pursuant to this Contract. Time is of the essence for this Contract. As such, Contractor shall provide CalTrout with scheduling information in a form acceptable to CalTrout, including any changes made by CalTrout in the scheduling of Work. Contractor shall coordinate its Work with that of all other contractors, subcontractors, and suppliers so as not to delay or damage their performance. It is further agreed that in case Contractor fails to complete the Work in all parts and requirements within the term of this Contract, CalTrout shall have the right to extend the term or not, as may seem best to serve the interest of CalTrout; and if CalTrout decides to extend the term then CalTrout shall further have the right to charge to the Contractor, its heirs, assigns or sureties, and to deduct from the payment for the Work, all or any part, as CalTrout may deem proper, of the actual cost of engineering, inspection, superintendence, and other overhead expenses that are directly chargeable to Contract, and which accrue during the period of such extension. If Contractor's work is delayed for any reason, including acts of CalTrout, Contractor's sole remedy shall be an extension of time equal to the period of delay, provided Contractor has given CalTrout written notice of the commencement of delay within forty-eight (48) hours of its occurrence. If CalTrout accepts any work or makes any payment under this Contract after a default by reason of delays, the payment or payments shall in no respect constitute a waiver or modification of any Contract provisions regarding time or completion and liquidated damages.

5. MEASURE AND PAYMENT

a. *Measurement of Quantities.* Where the Contract provides for payment on a lump sum price basis, the Contractor shall submit a price breakdown to CalTrout immediately after award of the Contract. The price breakdown as agreed upon between the Contractor and CalTrout shall be used for preparing future estimates for partial payments to the Contractor and shall list the major items of Work and a price for each item. Overhead and other general costs and profit shall be prorated to each item so that the total of all items equals the lump sum price. The price breakdown shall be subject to the approval of CalTrout, and Contractor may be required to verify the prices for any or all items. Where the Contract provides for payment on a unit price basis, the quantities of work performed will be computed by CalTrout on the basis of measurements taken by CalTrout. Whenever the estimated quantities of work to be done and materials to be furnished under this contract are shown in any of the documents including the Proposal, they are given for use in comparing bids and the right is especially reserved, except as herein or otherwise specifically limited, to increase or diminish them as may be deemed reasonably necessary or desirable by CalTrout to complete the work contemplated by this contract and such increase or diminution shall in no way violate this Contract, nor shall any such increase or diminution give cause for claims, liability for damage or adjustment to the Contract time bid price.

b. *Scope of Payment.*

i. The Contractor shall accept the compensation provided in the Contract as full payment for furnishing all labor, materials, tools, equipment, and incidentals necessary to the completed work and for performing all work contemplated and embraced under the Contract; also for loss or damage arising from the nature of the work, or from the action of the elements, or from any unforeseen difficulties which may be encountered during the prosecution of the work until the acceptance by CalTrout and for all risks of every description connected with the prosecution of the work, also for all expenses incurred in consequence of the suspension or discontinuance of the work as provided in the Contract; and for completing the work according to the specifications and plans. Neither the payment of any estimate nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material.

ii. No compensation will be made in any case for loss of anticipated profits. Increased or decreased work involving supplemental agreements will be paid for as provided in such agreements.

c. *Progress Estimate.* At least ten (10) days before each progress payment falls due (but not more often than once a month), the Contractor will submit to CalTrout a partial payment estimate filled out and signed by the Contractor covering the work performed during the period covered by the partial pay estimate and supported by such data as CalTrout may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to CalTrout, as will establish CalTrout's title to the material, and equipment and protect its interest therein, including, applicable insurance. CalTrout will within seven (7) days after receipt of each partial payment estimate either proceed to process payment or return the estimate to the Contractor indicating in writing its reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial pay estimate. Payroll certification forms provided by the Contractor and fully executed shall be filed with CalTrout at the time of submission of each partial payment estimate and also when the claim for final payment is submitted. Wage Report forms shall be completed and submitted as set forth in these General Conditions.

d. *Progress Payments.*

i. The Contractor is made aware that this Contract is funded in whole or in part through an agreement with State and Federal funding agencies, which pay in arrears for work completed.

ii. Contractor shall submit a partial payment request for the tasks performed during the invoice period along with an indication of the percent of the work that is complete that is consistent with the bid items to CalTrout and any other information needed to enable CalTrout to comply with the conditions of the Grant Agreements attached to the Contract as **Exhibit E**.

iii. CalTrout will review all partial payments upon receipt of an undisputed, properly submitted progress estimate from the Contractor.

iv. Any payment request determined not to be a proper payment request suitable for payment shall be returned to the Contractor as soon as practicable but not later than thirty (30) days after receipt. A request returned pursuant to this paragraph shall be accompanied by a document setting forth in writing the reasons why the payment request is not proper.

v. CalTrout will pay the Contractor ninety percent (90%) of the amount of each progress estimate within thirty (30) days of receiving payment from the project funder(s). Contractor should allow for ninety (90) to one hundred and twenty days (120) days after the date of approval of the progress estimate by the funder, before receiving payment (depending on date submitted). All undisputed retention will be released as a final payment to Contractor no sooner than thirty (30) days following approval of the work by CalTrout's funding sources and acceptance of the work by CalTrout.

vi. When, in the judgment of CalTrout, the work is not proceeding in accordance with the provisions of the Contract, or when in its judgment the total amount of the work done since the last estimate amounts to less than $1,000, no pay estimate will be prepared and no progress payment will be made.

vii. No progress estimate or payment shall be considered to be an approval or acceptance of any work, materials, or equipment. Estimated amounts and values of work done and materials and equipment furnished will be conformed with actual amounts and values as they become available in subsequent progress estimates, progress payments and the final estimate and payment. All estimates and payments will be subject to correction in subsequent progress estimates and payments and the final estimate and payment.

viii. CalTrout requires that any payments due to Subcontractors for a portion of the work satisfactory completed shall be made by Contractor to Subcontractors within fifteen (15) days of CalTrout's payment to Contractor. Failure to make such payments in a timely fashion may result in CalTrout issuing future progress payments by joint check to the Contractor and Subcontractors.

ix. It is mutually agreed between the parties to the Contract that no payments made under the Contract, including progress payments and the final payment, shall be evidence of the performance of the Contract, either wholly or in part, and no payment shall be construed to be an acceptance of any defective or incomplete work or improper materials.

e. *Retention Proceeds; Withholdings; Disbursements.* Notwithstanding other requirements of these General Conditions, Section 7107 of the California Public Contract Code shall govern as to retention proceeds; withholding and ultimate disbursement of funds.

f. *Liens and Stop Notices.* The Contractor agrees to keep the work, the site of the Work and all monies held by CalTrout free and clear of all liens and stop notices related to labor and materials furnished in connection with the Work, if permitted by law. Furthermore, the Contractor waives any right it may have to file any type of lien or stop notice in connection with the Work. Notwithstanding anything to the contrary contained in the Contract Documents, if any such lien or stop notice is filed or there is evidence to believe that lien or stop notice may be filed at any time during the progress of the Work or within the duration of this Contract, CalTrout may refuse to make any payment otherwise due the Contractor or may withhold any payment due the Contractor a sum sufficient in the opinion of CalTrout to pay all obligations and expenses necessary to satisfy such lien or stop notice. CalTrout may withhold such payment unless or until the Contractor, within ten days after demand therefore by CalTrout, shall furnish satisfactory evidence that the indebtedness and any lien or stop notice in respect thereof has been satisfied, discharged and released of record, or that the Contractor has legally caused such lien or stop notice to be released of record pending the resolution of any dispute between the Contractor and any person or persons filing such lien or stop notice. If the Contractor shall fail to furnish such satisfactory evidence within ten (10) days of the demand therefore, CalTrout may discharge such indebtedness and deduct the amount thereof, together with any and all losses, costs, damages and attorneys' fees suffered or incurred by CalTrout from any sum payable to the Contractor under the Contract documents, including but not limited to final payment and retained percentage. This Section shall be specifically included in all Subcontracts and purchase orders entered into by the Contractor.

g. *Final Acceptance and Date of Completion.* Whenever the Contractor shall deem all work under this Contract to have been completed in accordance therewith, it shall so notify CalTrout in writing, and CalTrout shall promptly ascertain whether the work has been satisfactorily completed and, if not, shall advise the Contractor in detail and in writing of any additional work required. When all the provisions of the Contract have been fully complied with to the satisfaction of CalTrout, it shall proceed with all reasonable diligence to determine accurately the total value of all work performed by the Contractor at the

prices set forth in the Contract or fixed by Change Orders, and the total value of all extra work, all in accordance with the Contract. CalTrout will then certify to said final estimate and to the completion of the work, and will file copies thereof with CalTrout and the Contractor. The date of completion shall be the date upon which CalTrout makes its formal written acceptance of the work.

h. *Final Payment.* Within ten (10) days after the date of completion, CalTrout will file in the Office of the County Recorder, a Notice of Completion of the work herein agreed to be done by the Contractor. On the expiration of thirty-five (35) days after the recordation of such Notice of Completion the difference between said final estimate and all payments theretofore made to the Contractor shall be due and payable to the Contractor upon receipt of funding by CalTrout from funding agencies and subject to any requirements concerning the furnishings of a maintenance bond, and excepting only such sum or sums as may be withheld or deducted in accordance with the provisions of this Contract. All prior certifications, upon which partial payments may have been made, being merely estimates, shall be subject to correction in the final certificate.

i. *Final Release.* Final payment to the Contractor in accordance with the final estimate is contingent upon the Contractor furnishing CalTrout with a signed written release of all claims against CalTrout arising by virtue of the Contract. Disputed Contract claims in stated amounts may be specifically excluded by the Contractor from the operation of the release. The release shall be in substantially the following form:

Waiver and Release Upon Final Payment

The undersigned has been paid in full by CalTrout for all labor, services, equipment and material furnished to CalTrout on the_____ improvements located at _____, California, and does hereby waive and release CalTrout, its officers, agents, and employees, from all claims and liability to the Contractor arising out of, or in any way connected with, the Contract, except for the disputed contract claims specified below:
Notice of disputed claim
Amount of Claim $_____
Dated: _____
_____(Name of Contractor)
By: (Title)

Any payment, however, final or otherwise shall not release the Contractor or its sureties from obligations under the Contract Documents or Performance and Payment (Labor and Materials) Bonds.

j. *Right to Withhold Payments.*

i. In addition to all other rights and remedies of CalTrout hereunder and by virtue of the law, CalTrout may withhold or nullify the whole or any part of any partial or final payment to such extent as may reasonably be necessary to protect the Contract Manager from loss on account of: (i) Defective work not remedied, irrespective of when any such work be found to be defective; (ii) Claims or liens filed or reasonable evidence indicating probable filing of claims or liens including, but not limited to claims under Sections 1775, 1776, or 1777.7 of the Labor Code; (iii) Failure of the Contractor to make payments properly for labor, materials, equipment, or other facilities, or to Subcontractors and/or suppliers; (iv) A reasonable doubt that the work can be completed for the balance then unearned; (v) A reasonable doubt that the Contractor will complete the work within the agreed time limits; (vi) Costs to CalTrout resulting from failure of the Contractor to complete the work within the proper time; or (vii) Damage to work or property; (viii) Damage to another contractor; (ix) Performance of work in

violation of the terms of the Contract Documents; (x) Where work on unit items is substantially complete, but lacks cleanup and/or other corrections ordered by CalTrout, amounts shall be deducted from the unit prices in partial payment estimates to amply cover such cleanup and correction; (xi) Failure to file required Equal Opportunity and Affirmative Action forms, if required.

ii. Whenever CalTrout shall, in accordance herewith, withhold any monies otherwise due the Contractor, written notice of the amount withheld and the reasons therefore will be given the Contractor. After the Contractor has corrected the enumerated deficiencies, the Contract Manager will promptly pay to the Contractor the amount so withheld. When monies are withheld to protect CalTrout against claims or liens of mechanics, material men, Subcontractors, etc., CalTrout may at its discretion permit the Contractor to deliver a surety bond in terms and amount satisfactory to CalTrout, indemnifying the CalTrout against any loss or expense, and upon acceptance thereof by CalTrout, CalTrout shall release to the Contractor monies so withheld.

k. *Waiver of Interest.* CalTrout shall have no obligation to pay and the Contractor hereby waives the right to recover interest with regard to monies which CalTrout is required to withhold by reason of judgment, order, statute or judicial process.

l. *Satisfaction of Claims and Liens.* Neither the final payment nor any part of the retained percentage shall become due until the Contractor, if required, shall deliver to CalTrout, a complete release of all liens and claims arising out of this Contract, or receipts in full in lieu thereof and, if required in either case, an affidavit that so far as it has knowledge or information the releases and receipts include all the labor and material for which a lien or claim could be filed; but the Contractor may, if any Subcontractor refuses to furnish a release or receipt in full, furnish a bond satisfactory to CalTrout, to indemnify CalTrout against any lien or claim. If any lien or claim remains unsatisfied after all payments are made, the Contractor shall refund to CalTrout all monies that the latter may be compelled to pay in discharging such a lien, or claim, including all costs and reasonable attorneys' fees.

6. CHANGES IN WORK.

a. Contractor shall make no changes in the Work without written direction or approval from CalTrout. Contractor shall not be compensated for any change made without any such written direction or approval. No changes in the Work covered by this Contract will exonerate any surety or any bond given in connection with this Contract.

b. If CalTrout directs the Contractor in writing to make changes in the Work that materially affect the cost of performing the Work, the Contract price will be based on one of the following:

i. Where the work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities involved in the changed Work;
ii. By establishment of new unit prices and quantities involved in the changed Work;
iii. By a combination of existing and new unit prices and related quantities for the changed Work; or
iv. By mutual acceptance of a lump sum.

If CalTrout directs the Contractor in writing to make changes in the Work that Contractor demonstrates materially affect the time required to perform the work, then CalTrout will make a reasonable adjustment to the Contract Term.

7. CLAIMS. If any dispute shall arise between CalTrout and Contractor regarding performance of the Work, or any alleged change in the Work, Contractor shall give notice to CalTrout at least forty-eight

(48) hours prior to the time that the Contractor commences performance of the work giving rise to the potential claim for additional compensation. The written notice of potential claims shall set forth the reasons for which the Contractor believes additional compensation will or may be due; the nature of the costs involved; and, insofar as possible, the amount of the potential claim. If such notice is not given, the Contractor shall be barred from making any such claim for extra compensation.

CalTrout will, within a reasonable time after submission of the Contractor's claim, make decisions in writing on all claims of the Contractor. All such decisions of CalTrout shall be final unless the Contractor shall within ten (10) days after receipt of CalTrout's decision, file with CalTrout a written protest, stating clearly and in detail the basis thereof. Such protest will be forwarded promptly to the William Matsubu, CalTrout North Coast Director, who will inform Alan Roesberry (Chief Administrative Officer) if the potential dispute amount exceeds $10,000 and receive approval from CAO or Finance Director within 24 hours. The CAO or Finance Director will issue a decision upon each protest, and the CAO or Finance Director's decision will be final. Pending such decision, the Contractor shall proceed with its work in accordance with the determination or instructions of CalTrout. It is hereby agreed that the Contractor's failure to protest CalTrout's determination or instructions, within ten (10) days from and after CalTrout's determinations or instructions, shall constitute a waiver by the Contractor of all rights to further protest, judicial or otherwise.

It is the intention of this Section that the differences between the parties, arising under and by virtue of the Contract, be brought to the attention of CalTrout at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that it shall have no right to additional compensation for any claim that may be based on any act, failure to act, event, thing, or occurrence for which no written notice of potential claim as herein required was timely filed.

In an emergency affecting the safety of life, or of the Work, or of adjoining property, the Contractor, without special or instruction or authorization from CalTrout, is hereby permitted to act at the Contractor's discretion to prevent such threatened loss or injury, and it shall so at without appeal if so instructed or authorized, Any compensation claimed by the Contractor on account of emergency work shall be determined as specified herein. Should CalTrout deem an emergency condition to exist, the Contractor shall immediately do those things and take those steps ordered by CalTrout. The decision of CalTrout in this respect shall be final and conclusive. Any claims for compensation made by the Contractor on account of emergency work shall be determined as specified herein.

8. **COOPERATION AND CARE.** Should construction be under way by CalTrout, other agencies, or other contractors within or adjacent to the limits of the Work specified or should work of any other nature be underway by forces within or adjacent to said limits, the Contractor shall cooperate with all such other contractors or other forces to the end that any delay or hinderance of their work will be avoided. CalTrout reserves the right to perform other or additional work at or near the project site (including material sources) at any time, using other forces. Until the final acceptance of the Work performed pursuant to this Contract, the Contractor shall have the charge and care of the Work and of the materials to be used therein, including materials for which partial payment has been received. CalTrout shall not be held responsible for the care or protection of any material or parts of the Work prior to final acceptance.

9. **DIFFERING SITE CONDITIONS.** The Contractor shall promptly, and before the following conditions are disturbed, notify CalTrout in writing of any:

   a. Material that the Contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with provisions of existing law;

   b. Subsurface or latent physical conditions at the site differing materially from those indicated by information about the site made available to bidders prior to deadline for submitting bids, or to the Contractor prior to entering this Contract, if the contract was not competitively bid; or

c. Unknown physical conditions at the sire of any unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Contract.

CalTrout shall promptly investigate the conditions, and if it finds that such conditions do materially so differ, or so involve hazardous waste, and cause in increase or decrease in the Contractors cost of, or the time required for, performance of any part of the Work, then CalTrout shall issue a change order under the provisions described in the Contract Documents. No claim of the Contractors under this section shall be allowed unless the Contractor has given notice required in the Contract Documents. In the event a dispute arises between CalTrout and the Contractor as to whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, Contractor shall not be excused from completing the Work. The Contractor shall proceed with all work to be performed under the Contract. The Contractor shall retain all rights provided either by this Contact or by law which pertain to the resolution of disputes and protests.

10. **CONTRACTOR NO AGENT.** This Contract does not confer upon Contractor the right to bind CalTrout by contract or otherwise, except as specifically directed by CalTrout's Executive Officer. Except as CalTrout may specify in writing, Contractor shall have no authority, express or implied, to act on behalf of CalTrout or as an agent of CalTrout.

11. **BENEFITS AND TAXES.** Contractor shall not have any claim under this Contract or otherwise against CalTrout for seniority, vacation time, vacation pay, sick leave, personal time off, overtime, health insurance, medical care, hospital care, insurance benefits, social security, disability, unemployment, workers compensation, or employee benefits of any kind. Contractor shall be solely liable for and obligated to directly pay all applicable taxes, including, but not limited to, federal and state income taxes, and in connection therewith Contractor shall indemnify and hold CalTrout harmless from all liability that CalTrout may incur because of Contractor's failure to pay such taxes. CalTrout shall have no obligation whatsoever to pay or withhold any taxes on behalf of Contractor.

12. **ASSIGNMENT PROHIBITED.** No party to this Contract may assign any right or obligation pursuant to this Contract. Any attempted or purported assignment of any right or obligation pursuant to this Contract shall be void and of no effect. However, contractor is entitled to subcontract such portions of the Work to be performed under this Contract as provided by the Contract.

13. **PERSONNEL.** Contractor shall assign only competent personnel to complete the Work pursuant to this Contract. If CalTrout, in its sole discretion, at any time during the term of this Contract, desires the removal of any such persons, Contractor shall, immediately upon receiving notice from CalTrout of such desire of CalTrout, cause the removal of such person or persons.

14. **COMPLIANCE WITH LAWS.**

a. *In General.* Contractor shall comply with the common law and all laws, ordinances, codes, and regulations of governmental agencies (including federal, state, municipal, and local governing bodies) as applicable to the performance of the Work hereunder, including, but not limited to, all provisions of the Occupational Safety and Health Act of 1979 as amended, all applicable provisions of the Labor Code, and the Immigration Reform and Control Act of 1986.

b. *Licenses and Permits.* Contractor represents and warrants to CalTrout that it has all licenses, permits, qualifications, and approvals of whatsoever nature that are legally required for Contractor to practice its profession. Contractor represents and warrants to CalTrout that Contractor shall, at its sole cost and expense, keep in effect at all times during the term of this Contract any licenses, permits, and approvals which are legally required for Contractor to practice its profession. Contractor's attention is directed to Business and Professions Code Section 7000 et seq. concerning the licensing of contractors. At the time Contractor submits its bid to CalTrout (if applicable) and all times Contractor is performing the Work, Contract shall have a valid license

issued by the Contractors State License Board in the classification required for the Work. Contractor and all subcontractors shall be licensed in accordance with the laws of this State and any contractor or subcontractor not so licensed is subject to penalties imposed by such laws.

c. *Funding Agency Requirements*. Contractor shall comply with or provide documentation necessary for CalTrout to comply with any applicable requirements contained in the Grant Agreement(s) attached to the Contract as **Exhibit F**.

d. *Discrimination Prohibited.* During the performance of this Contract, Contractor shall not unlawfully discriminate, harass, or allow harassment against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical disability (including HIV and AIDS), mental disability, medical condition, marital status, age (over 40), sex, sexual orientation, or use of family care leave, medical care leave, or pregnancy disability leave. Contractor shall take affirmative action to ensure that the evaluation and treatment of their employees and applicants for employment are free from such discrimination and harassment. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Contractor shall comply with the provisions of the Fair Employment and Housing Act (Gov. Code §12990 (a-f) et seq.) and applicable regulations (California Code of Regulations, Title 2, Section 7285 et seq.). The regulations of the Fair Employment and Housing Commission regarding Contractor Nondiscrimination and Compliance (Chapter 5 of Division 4 of Title 2 of the California Code of Regulations) are incorporated into this Contract by reference and made a part hereof as if set forth in full. Contractor shall give written notice of its obligations under this non-discrimination clause to labor organizations with which Contractor has a collective bargaining or other agreement and shall post in conspicuous places available to employees and applicants for employment notice setting forth the provisions of this section. Contractor agrees to put a substantially similar term in any subcontract it executes with another entity related to performance of this Contract.

15. DOCUMENTS AND RECORDS.

a. *Property of CalTrout.* All reports, data, maps, models, charts, studies, surveys, photographs, memoranda, or other written documents or materials prepared by Contractor pursuant to this Contract shall become the property of CalTrout upon completion of the work to be performed hereunder or upon termination of this Contract. The Contractor agrees not to use for Contractor's own benefit or divulge to any third party, during the term of this Contract or at any time thereafter, the subject matter, any proprietary, internal, or confidential information belonging to CalTrout. All documents, materials, and records of a finished nature, including but not limited to final plans, specifications, video, or audio tapes, photographs, computer data, software, reports, maps, electronic files, and films, and any final revisions, prepared or obtained in the performance of this Contract, shall be delivered to and become the property of CalTrout, and Contractor further agrees that upon the expiration or sooner termination of this Contract, Contractor will deliver to CalTrout all proprietary or confidential information belonging to CalTrout. Contractor agrees to promptly disclose to CalTrout all discoveries, improvements, inventions, and proprietary data conceived or developed by the Contractor in performing services under this Contract, and agrees to execute such documents, disclose and deliver all information and data, and do all the other things which may be necessary or in the opinion of CalTrout reasonably desirable in order to effect transfer of ownership in or to impart a full understanding of such discoveries, improvements, inventions, and proprietary data to CalTrout and to no others.

b. *Standards for Financial Management System.* Contractor and all subcontractors shall maintain fiscal control and accounting procedures which are sufficient to:

i. Permit preparation of reports required by 2 CFR 200 and statutes authorizing the grant funding this Contract.

ii. Permit tracing of funds to a level of expenditures adequate to establish that such funds have not been used in violation of the restrictions and prohibitions of applicable statutes.

A requirement to this effect shall be placed in all subcontracts related to performance of work under this Agreement.

c. *Retention of Records*. Contractor and its subcontractors shall establish and maintain records pertaining to this Contract. Contractor's and subcontractors' accounting systems shall conform to generally accepted accounting principles, and all records shall provide a breakdown of total costs charged under this contract, including properly executed payrolls, time records, invoices, and vouchers. Contractor shall permit CalTrout and its authorized representatives to inspect and examine Contractor's books, records, accounts, and all data relevant to this Contract at any reasonable time for the purpose of auditing and verifying statements, invoices, or bills submitted by Contractor pursuant to this contract and shall provide such assistance as may be reasonably required during such inspection. Until the expiration of five years after the furnishing of any services pursuant to this Contract, Contractor shall retain and make available to CalTrout or any party designated by CalTrout, upon written request by CalTrout, this Contract, and such books, documents and records of Contractor (and any books, documents, and records of any subcontractor(s)) that are necessary or convenient for audit purposes to certify the nature and extent of the reasonable cost of services to CalTrout.

d. *Auditor Access.* Contractor agrees that auditors of NOAA, or their designated representatives, have the right to examine Contractor's records relative to the goods, services, equipment, materials, supplies, or other assistance provided to CalTrout for the Work. Contractor agrees to allow the auditors access to such records during normal business hours and to allow interviews of employees who might reasonably have information related to such records.

16. **CONFIDENTIAL INFORMATION.** Contractor shall hold any confidential information received from CalTrout while performing this Contract in trust and confidence and will not reveal such confidential information to any person or entity, either during the term of the Agreement or at any time thereafter. Upon expiration of this Contract, or termination as provided herein, Contractor shall return materials which contain any confidential information to CalTrout. Contractor may keep one copy for its confidential file. For purposes of this paragraph, confidential information is defined as all information disclosed to Contractor that relates to CalTrout's past, present, and future activities, as well as activities under this Contract. Contractor acknowledges that a breach of the provisions in this paragraph may cause substantial harm to CalTrout for which monetary damages will not provide a total and adequate remedy. Accordingly, in addition to any other remedy available at law or equity, CalTrout will be entitled to preliminary and permanent injunctions restraining Contractor from performing or continuing to do any act in violation of this paragraph without showing or proving actual damage as a result thereof.

17. **DISCLOSURE REQUIREMENTS.** As applicable, any document or written report prepared in whole or in part pursuant to this Contract shall contain a disclosure statement indicating that the document or written report was prepared through a Federal Grant Agreement. The disclosure statement shall include the Grant Agreement number and dollar amount of all Grant Agreements and subcontracts relating to the preparation of such documents or written reports. The disclosure statement shall be contained in a separate section of the document or written report. If the Contractor is required to prepare multiple documents or written reports, the disclosure statement may also contain a statement indicating that the total Grant Agreement amount represents compensation for multiple documents or written reports.

18. **RESPONSIBILITY OF CONTRACTOR.** Contractor shall take all responsibility for the Work, shall bear all losses and damages directly or indirectly resulting to Contractor, to any subcontractor, to CalTrout, to CalTrout officers and employees, or to Parties designated by CalTrout, on account of the performance or character of the Work, unforeseen difficulties, accidents, occurrences, or other causes predicated on active or passive negligence of Contractor or of any subcontractor, or predicated on the willful misconduct of Contractor or of any subcontractor.

19. INSPECTION AND PROTECTION OF WORK

a. Contractor shall make the Work accessible at all reasonable times for inspection by CalTrout and others needed for acceptance of elements of the bridge project requiring inspection, and of the bridge as the Project. Contractor shall, at the first opportunity, inspect all material and equipment delivered to the jobsite by others to be used or incorporated in the Contractor's Work and give prompt notice of any defect therein. Contractor assumes full responsibility to protect the Work done hereunder until final acceptance by CalTrout.

b. When the Work is completed, Contractor shall request, in writing, a final inspection. Within ten (10) days of the receipt of such request, CalTrout shall make a final inspection. The Contractor or its representatives may be present at the final inspection. The purpose of such final inspection shall be to determine whether the Work has been completed in accordance with the Contract Documents, including all change orders and all interpretations and instructions previously issued.

20. UTILITY FACILITIES

a. Contractor shall protect from damage any utility facilities that are to remain in place, be installed, relocated, or otherwise rearranged.

b. If Contractor while performing the Work discovers utility facilities not previously identified in the Contract Documents, Contractor shall immediately notify CalTrout and the utility provider.

c. If Contractor is required to repair damage not due to the Contractor's failure to exercise reasonable care, and remove or relocate existing main or trunk line utility facilities, it shall be compensated under the Changes section of this Exhibit (Section 6), including payment for costs associated with equipment on the Project necessarily idled during such work.

d. Contractor will not be entitled to damages or additional payment for delays caused solely by the failure of CalTrout, or the utility provider, to provide for removal or relocation of existing main or trunk line utility facilities not identified in the Contract Documents, except for costs associated with equipment necessarily idled during such work.

e. Contractor shall not be assessed liquidated damages for delay in completing the Work solely attributable to the failure of CalTrout, or utility provider, to provide for removal or relocation of existing main or trunk line utility facilities not indicated in the Contract Documents with reasonable accuracy.

f. Attention is directed to the possible existence of underground facilities not known to CalTrout, or in a location different than the Parties presumed. The Contractor shall take all steps reasonably necessary to ascertain the exact location of all underground facilities prior to doing work that may damage such facilities or interfere with their service, including but not limited to calling USA utility locator service.

21. ENVIRONMENTAL QUALITY. Contractor shall comply with all applicable standards, orders, or requirements issued under Section 306 of the Clean Air Act, Title 42 U.S.C. 1857(h), Section 508 of the Clean Air Act, Title 33 U.S.C. 1368, Executive Order 11738, and Title 40 CFR part 15; and any applicable CEQA and/or 401 Certification terms.

22. INDEMNIFICATION. Contractor and CalTrout agree that CalTrout, its employees, agents, and officials shall, to the fullest extent permitted by law, be fully protected from any loss, injury, damage, claim, lawsuit, cost, expense, attorneys' fees, litigation costs, defense costs, court costs, or any other cost arising out of or in any way related to the performance of this Contract. Accordingly, the provisions of this indemnity provision are intended by the Parties to be interpreted and construed to provide the fullest protection possible under the law to CalTrout. Contractor acknowledges that CalTrout would not enter this Contract in the absence of the commitment of Contractor to indemnify and protect CalTrout as set forth below.

a. *Construction.* To the fullest extent allowed by law, Contractor shall defend, indemnify, and hold harmless CalTrout, its employees, agents, and officials, from any liability, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses, or costs (including, without limitation, costs and fees of litigation) of any kind whatsoever without restriction or limitation, resulting from injury to or death sustained by any person (including Contractor's employees and subcontractors), or damage to property of any kind, or any other injury or damage whatsoever, which injury, death or damage arises out of or is in any way connected with Contractor's negligent performance of the Work, except that said indemnity shall not be applicable to injury, death, or damage to property arising from the sole or active negligence or willful misconduct of CalTrout, its employees, agents, and officials. In instances where CalTrout's sole negligence accounts for only a percentage of the liability involved, the obligation of Contractor will be for that entire portion of percentage of liability not attributable to the sole negligence of CalTrout.

b. *Contractor Obligation.* Contractor shall be obligated to immediately defend, with counsel approved by CalTrout, any suit or action brought against CalTrout, its employees, agents, and officials, founded upon any claim of injury to or death sustained by any person (including Contractor's employees and subcontractors), or damage to property of any kind, or any other injury or damage whatsoever, which injury, death, or damage arises out of or is in any way connected with the performance of the Work, whether or not liability is established. If it is finally adjudicated that liability was caused by the sole or active negligence or willful misconduct of an indemnified party, Contractor may submit a claim to CalTrout for reimbursement of reasonable attorneys' fees and defense costs. This indemnification and duty to defend shall extend to claims asserted after termination of this Contract for whatever reason.

c. *Scope of Contractor Obligation.* The obligations of Contractor under this or any other provision of this Contract will not be limited by the provisions of any workers' compensation act or similar act and are not limited to the amount of any insurance proceeds. Contractor expressly waives its statutory immunity under such statutes or laws as to CalTrout, its employees and officials. Acceptance of insurance certificates and endorsements required under this Contract does not relieve Contractor from liability under this indemnification provision, and this indemnification shall apply whether or not such insurance policies are applicable to the damages or claims for damage subject to this indemnification provision.

d. *Subcontractors.* Contractor agrees to obtain executed indemnity agreements with provisions identical to those set forth here in this section from each and every subcontractor, subtier contractor, or any other person or entity involved by, for, with, or on behalf of Contractor in the performance or subject matter of this Contract. In the event Contractor fails to obtain such indemnity obligations from others as required here, Contractor agrees to be fully responsible according to the terms of this section.

e. *In General.* This obligation to indemnify and defend CalTrout as set forth herein is binding on the successors, assigns, or heirs of Contractor and shall survive the termination of this Contract. Notwithstanding any other provision in this Contract, Contractor shall reimburse CalTrout for reasonable attorneys' fees or other costs incurred in enforcing the provisions of this Section 21. In addition to any remedy authorized by law, as much of the money due Contractor under and by virtue of this Contract as shall be considered necessary by CalTrout, may be retained by CalTrout until disposition has been made of any suits or claims for damage. CalTrout and Contractor shall timely notify each other of the receipt of any third-party claim relating to the contract. CalTrout shall be entitled to recover its reasonable costs incurred in providing such notification.

23. DEFAULT AND REMEDIES.

a. *Events of default.* Each of the following shall constitute an event of default hereunder:

i. Failure to perform any obligation under this Contract and failure to cure such breach immediately upon receiving notice of such breach, if the breach is such that CalTrout determines the health, welfare, or safety of the public is immediately endangered; or

ii. Failure to perform any obligation under this Contract and failure to cure such breach within fifteen (15) days of receiving notice of such breach, if the breach is such that CalTrout determines that the health, welfare, or safety of the public is not immediately endangered, provided that if the nature of the breach is such that CalTrout determines it will reasonably require more than fifteen (15) days to cure, Contractor shall not be in default if Contractor promptly commences the cure and diligently proceeds to completion of the cure.

b. *Remedies upon default.* Upon any Contractor default, CalTrout shall have the right to immediately suspend or terminate the Contract, contract with another party to perform this Contract and/or seek damages including incidental, consequential and/or special damages to the full extent allowed by law.

c. *No Waiver*. Failure by CalTrout to seek any remedy for any default hereunder shall not constitute a waiver of any other rights hereunder or any right to seek any remedy for any subsequent default.

24. LIQUIDATED DAMAGES. If Contractor fails to complete the Work required within the Contract Time, CalTrout will assess liquidated damages in the amount of $5,200 per day for each day of unexcused delay in achieving Final Completion, and such liquidated damages may be deducted from Caltrout's payments due or to become due to Contractor under this Contract.

25. TERMINATION

a. Should Contractor fail within five (5) working days from receipt of CalTrout's written notice to correct any contractual deficiencies, including but not limited to failure to perform the Work in accordance with the Contract Documents, failure to comply with the directions of CalTrout, or failure to pay its creditors, CalTrout may terminate this Contract for default. Following a termination for default, CalTrout shall have the right to take whatever steps it deems necessary to correct and complete the work and charge the cost thereof to Contractor, who shall be liable for the full cost of CalTrout's corrective action, including reasonable overhead, administrative costs, and attorneys' fees. Upon any Contractor default, CalTrout shall not only have the right to immediately suspend or terminate the Contract, but may also contract with another party to perform this Contract and/or seek damages including incidental, consequential and/or special damages to the full extent allowed by law.

b. CalTrout may at any time terminate the Contract at CalTrout's convenience upon ten (10) days written notice to Contractor; in the event of termination for convenience, Contractor shall recover only the amount due under the contract for Work completed to the date of termination in accordance with the Contract Documents, less amounts paid to date. Contractor shall not be entitled to any claim or lien against CalTrout for any additional compensation or damages in the event of such termination.

c. If CalTrout terminates Contractor for cause, and if it is later determined that the termination was wrongful, such default termination shall automatically be converted to and treated as a termination for convenience. In such event, Contractor shall be entitled to receive only the amounts payable under this section, and Contractor specifically waives any claim for any other amounts or damages, including, but not limited to, any claim for consequential damages or lost profits.

26. BONDS. Contractor, at its own cost and expense, shall furnish:

a. A performance bond in favor of CalTrout, individually or as a co-obligee, in the following amounts: for faithful performance, one hundred percent (100%) of the contract value. The

bond shall provide that Contractor shall well and truly perform the “contract,” rather than “work contracted to be done.” If the latter is used, the bond may be rejected.

b. A payment bond in favor of CalTrout, individually or as a co-obligee, for labor and materials, for one hundred percent (100%) of the contract value.

Any bond furnished shall be executed by an admitted corporate surety insurer licensed in the State of California.

CalTrout shall not disburse to the Contractor payment for obligations incurred by Contractor or subcontractor of the Contractor until the Contractor submits to CalTrout a lien release corresponding to the work invoiced (and complies with other prerequisites to payment under this Contract).

27. **DISPUTE RESOLUTION**. The Parties shall make a good faith effort to settle any dispute or claim arising under this Contract. If the Parties fail to resolve such disputes or claims, they shall submit them to nonbinding mediation in California at shared expense of the Parties for at least eight (8) hours of mediation. If mediation does not arrive at a satisfactory result, arbitration, if agreed to by all Parties, or litigation may be pursued. In the event any dispute resolution processes are involved, each party shall bear its own costs and attorneys’ fees.

28. **LITIGATION**. If any litigation is commenced between Parties to this Contract concerning any provision hereof or the rights and duties of any person in relation thereto, except as otherwise provided in this Contract, each party shall bear its own attorneys' fees and costs.

29. **JURISDICTION AND SEVERABILITY**. This Contract shall be administered and interpreted under the laws of the State of California. If any part of this Contract is found to conflict with applicable laws, such part shall be inoperative, null and void insofar as it conflicts with said laws, but the remainder of this Contract shall be in full force and effect.

30. **PARTIES IN INTEREST.** This Contract is entered only for the benefit of the Parties executing this Contract and not for the benefit of any other individual, entity or person.

31. **WAIVER**. Neither the acceptance of Work or payment for Work pursuant to this Contract shall constitute a waiver of any rights or obligations arising under this Contract. The failure by CalTrout to enforce any of Contractor's obligations or to exercise CalTrout's rights shall in no event be deemed a waiver of the right to do so thereafter.

APPENDIX E PERMIT CONDITIONS

PERMIT INDEX — Master List

#	Permit Name	Permit Type	Issuing Agency	Permit / Authorization #	Permittee	Effective Date	Expiration / Termination Date
1	Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW Restoration Management Permit	CA Dept. of Fish and Wildlife	RMP 2026-0019-R1	California Trout (Darren Mierau)	4/15/2026	4/15/2036. Written request to extend term of RMP if unable to complete Covered Activities by Termination Date.
2	CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	CA Coastal Commission	CDP No. 1-25-0781	California Trout	4/17/2026	4/17/2028 (if dev. not commenced)
3	Humboldt County CUP - Elk River Estuary Restoration (PLN-2025-19393)	County Conditional Use Permit	Humboldt County Planning Commission	PLN-2025-19393 / Resolution 26-009	California Trout, Inc. (Attn: Darren Mierau)	3/7/2026	3/6/2029
4	Humboldt Bay Harbor District Permit (2025-05)	Harbor District Permit	Humboldt Bay Harbor, Recreation and Conservation District	Permit No. 2025-05	California Trout (Darren Mierau)	1/8/2026	1/8/2027 (extendable annually up to 10 yrs total)
5	NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	401 Water Quality Certification / WDR	North Coast Regional Water Quality Control Board	WDID 1B25164WNHU (Order WQ 2022-0048-DWQ)	California Trout (Darren Mierau)	1/13/2026	10/31/2031
6	USFWS Programmatic Biological Opinion (PBO) - Elk River Estuary	Federal ESA Section 7 Programmatic Biological Opinion	U.S. Fish and Wildlife Service	Service file No. 2022-0005149-S7 (Project-specific Section 7(a)(2) Review Form executed 1/30/2026)	California Trout (Darren Mierau)	1/30/2026 (project-specific concurrence)	See PBO terms; coverage tied to project schedule (through ~10/31/2031)
7	NMFS Biological Opinion No: WCRO-2025-03119	Federal ESA Section 7 Programmatic Biological Opinion	National Marine Fisheries Service	No: WCRO-2025-03119	California Trout (Darren Mierau)	4/7/2026	12/31/2037
8	USACE Section 404 Permit (Pending)	Section 404 Clean Water Act Permit	U.S. Army Corps of Engineers	Pending	California Trout (Darren Mierau)	Pending	Pending

All Permits Work Periods

Permit Type	Agency	Topic	Period (Months)	Notes
CDFW Restoration Management Permit	CDFW	Covered Species Relocation Window	June 15 – October 15	Relocation/movement out of harm's way of Covered Species shall only occur between June 15 and October 15 of each year. CDFW staff may approve changes in writing.
CDFW Restoration Management Permit	CDFW	Northern Red-legged Frog Work Window	June 15 – October 15	Covered Activities within waterways and wetlands with potential to support northern red-legged frog breeding generally limited to this window to avoid disturbance to breeding frogs.
CDFW Restoration Management Permit	CDFW	Bat Tree Removal Window	September 1 – October 15	Trees may be removed outside seasonal periods of bat activity (Sept 1 – Oct 15), unless surveys/two-step removal performed.
CDFW Restoration Management Permit	CDFW	Nesting Bird Avoidance	Outside March 15 – August 15	Activities that could impact nesting birds shall occur outside the bird nesting season (March 15 – August 15) to the extent possible.
Coastal Development Permit	CA Coastal Commission	In-Water Construction Window	July 1 – October 15	Most work occurs during regulated in-water construction season (July 1 – Oct 15) when stream flows are lowest. Work windows may be adjusted for tidal conditions.
Coastal Development Permit	CA Coastal Commission	Possible Extension of In-Water Work	Through October 31	If no rain is forecast and with regulatory approval, construction may be extended through October 31.
Coastal Development Permit	CA Coastal Commission	Nesting Bird Avoidance	Outside March 15 – August 15	Vegetation/tree removal to be conducted outside nesting season (March 15 – Aug 15). Nesting birds may delay construction start until after nesting season (~Aug 15).
Coastal Development Permit	CA Coastal Commission	Vegetation/Tree Removal (Pre-Nesting)	Outside in-water season (pre-construction)	Pre-construction or maintenance activities outside the wetted channel, such as tree removal to prevent nesting, may occur outside the in-water work season.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	Wood Creek Phase 111 - Construction Timing (USFWS PBO)	June 15 – October 15	Most construction activities will occur within the regulated in-water construction season, typically June 15 through October 15, when streamflows are at annual minimum. Extension to October 31 possible with regulatory authorization if no rain forecast.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	Bird Nesting Season (BRE WIL-3)	Outside March 15 – August 15	Pre-construction bird nest survey required for ground disturbance/vegetation removal/structure modification during March 15 – August 15. Surveys within 7 days of activity. No-disturbance buffer (50–500 ft) until young have fledged.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	Bat Maternity Season (BRE WIL-4)	May 1 – August 31	Maternity season — assessment required before tree/structure removal of high-quality roost.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	Bat Torpor Season (BRE WIL-4)	November 1 – March 31	Torpor season — assessment required before tree/structure removal of high-quality roost.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	Northern Red-legged Frog Work Window (BRE WIL-2)	June 15 – October 31	Modification of waterways/wetlands with standing water that have potential to support breeding will be limited to June 15 – October 31. Outside breeding period (Nov 1 – June 14): surveys required.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	NW Pond Turtle In-Water Work Avoidance (WPT-3)	Avoid October 1 – March 31	For in-water/dewatering work, avoid Oct 1 – Mar 31. For overwintering habitat work, avoid Oct 1 – Mar 31 unless WEF installed prior to Oct 1.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	NW Pond Turtle Nesting Avoidance (WPT-3)	Avoid May 15 – July 31	Within 500 m (1604.4 ft) of suitable nesting habitat, avoid disturbing nesting adult females May 15 – July 31 unless WEF installed prior to May 15.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	NW Pond Turtle Detection Window (WPT-2)	April 1 – September 30	Highest probability of detection in aquatic habitat. (May 1 – Aug 31 above 3,500 ft elevation). Outside this window, also search upland habitat Oct 1 – Mar 31.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Coastal Development Permit	Invasive Plant Stockpile Restriction	Outside flood season (Nov – April)	Stockpiling of invasive plant materials prohibited during flood season (typically November to April). Removal within 15 days of initial stockpile creation outside flood season.
Humboldt County CUP (PLN-2025-19393)	County Conditional Use Permit	In-Water Construction Window	June 15 – October 15	Most construction activities occur within regulated in-water construction season (June 15 – Oct 15) when stream flows are at annual minimum. Equipment works from streambank and within dewatered channel.
Humboldt County CUP (PLN-2025-19393)	County Conditional Use Permit	Possible Extension of In-Water Work	Through October 31	If no rain is forecast, construction activities may be extended through October 31 with regulatory agency authorization.
Humboldt County CUP (PLN-2025-19393)	County Conditional Use Permit	Bird Nesting Season Avoidance	Outside ~March 15 – August 15	Presence of nesting birds in project area may delay initiation of construction until after nesting season (~August 15). Tree removals may take place prior to bird nesting season to preclude nesting (i.e., outside in-water season).
Humboldt County CUP (PLN-2025-19393)	County Conditional Use Permit	Pre-construction Tree Removal	Outside in-water season (pre-construction)	Pre-construction or maintenance activities outside the wetted channel, such as tree removals to preclude nesting, may take place outside the construction season.
NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	401 Water Quality Certification / WDR	Project Construction Period	June 2026 – October 2031	Project Time Frame: Start June 2026, Completion October 2031.
NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	401 Water Quality Certification / WDR	Annual Work Season	June 15 – October 15	Work Season June 15 – October 15, with option for variance/extension with written approval from Regional Water Board.

All Permits Work Periods

Permit Type	Agency	Topic	Period (Months)	Notes
NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	401 Water Quality Certification / WDR	Sediment Stockpile Time Limit	Maximum 365 days	Temporarily stockpiled sediment shall NOT be placed within jurisdictional wetlands more than one year (365 days); shall not result in permanent conversion of wetlands to uplands.
NMFS Biological Opinion No: WCRO-2025-03119	NMFS Biological Assessment page 21	In-Water Construction Window	June 15 through October 15	If no rain is forecast, construction activities may be extended through October 31 with regulatory agency authorization.

NOTIFICATIONS — All Permits

Permit	Agency / Contact	Phase	Completed ?	When to Notify	What For / Details
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Pre-construction		At least 30 days before commencing Project activities that could result in take of Covered Species	Submit name, qualifications, business address, telephone number, and email of Designated Biologist(s). CDFW provides written approval/denial within 7 business days.
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW / NOAA / USFWS	Construction		At least 1 week prior to capture and relocating Covered Species	Notify NOAA, USFWS, and CDFW staff to provide CDFW the opportunity to monitor fish relocation.
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW (James Ray)	Construction		At least 5 business days prior to Covered Species relocation/movement out of harm's way	Notify the CDFW contact for the RMP (James Ray).
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW (James Ray)	Construction		Immediately upon discovery	If any dead or injured individuals of Covered Species are found (during relocation or otherwise), contact James Ray at (707) 502-5565 or James.Ray@wildlife.ca.gov.
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW Conservation Engineering	Pre-construction		[REPORT] At least 3 months prior to beginning implementation of each Project phase	Submit Basis of Design (BOD) Report of 90% engineering design plans for review and acceptance.
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Construction		[REPORT] Monthly Report (and prior to starting next month of sampling)	Report incidental take of larval longfin smelt and tidewater goby during macroinvertebrate community monitoring activities.
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Post-construction		[REPORT] Reporting - Annually by January 15	Submit written annual report of Project activities and results, including relocation summary, monitoring summary, take table (Exhibit 2), and California Native Species Field Survey forms.
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Construction		At least 60 days prior to Termination Date	Written request to extend term of RMP if unable to complete Covered Activities by Termination Date.
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Construction		Prior to changing Designated Biologist	Obtain CDFW written approval in advance if Designated Biologist must be changed.
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC Executive Director	Pre-construction		[REPORT] At least 60 days prior to commencement of construction of each phase	Submit Final Plans (electronic + paper copy) for review and written approval. Plans prepared by licensed professional, substantially conforming to 65% design plans dated 10/8/25; include Water Pollution Control Plan and final signage plans.
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC Executive Director	Pre-construction		[REPORT] At least 60 days prior to commencement of grazing/browsing in restored areas	Submit Grazing Plan for review and approval describing goals, triggers, timing, livestock numbers, water quality/erosion protections, fencing, monitoring, and adaptive management.
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC Executive Director	Pre-construction		[REPORT] At least 60 days prior to commencement of burning vegetation	Submit Burn Plan for review and approval; burns must be low intensity, outside special status plant blooming/fruiting seasons, on allowable burn days per North Coast Unified AQMD.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Native American Tribes (NAHC list)	Pre-construction		At least 30 days prior to commencement of construction of each phase	Notify tribal representatives in writing/email/phone; invite tribal monitors; arrange archaeological monitor presence for ground-disturbing activities. Evidence of notification available to Executive Director on request.
CDP 1-25-0781 (CalTrout Elk River Estuary)	County Coroner / NAHC / CCC Executive Director	Construction		Within 24 hours of discovery of human remains; CCC within 5 calendar days	Notify county coroner within 24 hrs; if Native American, NAHC contacted within 24 hrs (Health & Safety Code §7050.5). Notify CCC Executive Director within 5 calendar days of NAHC notification.
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC Executive Director	Pre-construction		[REPORT] Prior to commencement of construction of each phase	Submit Debris Disposal Plan (phase-specific) and copies of all landowner access agreements. Submit evidence of other required authorizations (NCRWQCB, CDFW, USFWS, etc.) prior to commencement of construction.
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC Executive Director	Post-construction		[REPORT] Reporting - Annually by January 31	Submit annual monitoring reports summarizing monitoring results (vegetation, aquatic, oyster pilot, fisheries), comparison to reference areas, and adaptive management recommendations. Minimum 3-year monitoring or until success criteria met.
CDP 1-25-0781 (CalTrout Elk River Estuary)	NMFS and CA Coastal Commission	Post-construction		[REPORT] Reporting - Annually as part of post-construction reporting	Oyster Pilot Project annual summary: deployment locations, substrate performance, observed recruitment, adaptive adjustments, and recommendation to continue/modify/discontinue the pilot.
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Field Office / Action Agency	Post-construction		[REPORT] Reporting - By December 1 annually (until success criteria met)	Submit Post-Construction Report Form (Appendix B in USFWS PBO). If ongoing revegetation/species monitoring, report annually until success met. Standard: 60% absolute cover.
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Field Office	Construction		Within 48 hours of any injury/mortality of listed species	Notify all injury or mortality of listed species to USFWS Field Office within 48 hours. Use Post-Construction Report Form to document actual incidental take.
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Resident Agent in Charge (Sacramento 916-569-8444 or LA 310-328-1516)	Construction		Upon locating dead/injured/sick endangered species	Immediately Notify USFWS Law Enforcement and prompt notification to nearest USFWS Field Office. Care taken to preserve specimens for analysis. Written notification within 48 hours including date/time/GPS location.
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Field Office	Pre-construction	Completed	[REPORT] At least 30 days prior to project construction	Submit USFWS-Approved Biologist resume(s) for species handling/relocation activities for review and approval (Section 7(a)(2) Review Form coverage).
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Field Office (concurrent w/ Section 7(a)(2) Form OR ≥60 days before construction)	Pre-construction	Completed	[REPORT] At least 60 days prior to construction (or with Section 7(a)(2) submittal)	Submit Covered Species translocation plan (capture/handling/translocation methods, sites, post-translocation monitoring). Early submission facilitates timely review.

NOTIFICATIONS — All Permits

Permit	Agency / Contact	Phase	Completed?	When to Notify	What For / Details
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Field Office	Pre-construction	Completed	[REPORT] At least 60 days prior to construction (concurrent w/ Section 7(a)(2) Form)	Submit Reptile Rescue and Relocation Plan (NW pond turtle) and Fish Capture and Relocation Plan (tidewater goby).
CDP 1-25-0781 (CalTrout Elk River Estuary)	Regulatory Agencies (within 24 hours)	Construction		Within 24 hours of any leak or spill	Notify regulatory agencies within 24 hours of any hazardous material leaks or spills. Stop work, follow spill response plan, arrange repair and cleanup by qualified individuals.
CDP 1-25-0781 (CalTrout Elk River Estuary)	OES State Warning Center: (800) 852-7550 or (916) 845-8911	Construction		Following accidental discharge of reportable quantity hazardous material	First call 911, then OES, then State/Regional Board within 24 hours. Per Cal. Wat. Code § 13271.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Applicable agencies	Construction		Within 24 hours of herbicide application	Pesticide application reports completed within 24 hours and submitted to applicable agencies. Wind/weather data monitored and reported.
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Field Office	Construction		Within 24 hours of suspected disease observation	Any suspected observations of disease (turtle-shell, respiratory) in western pond turtles or other turtles reported to USFWS within 24 hours and before relocating any pond turtle.
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Field Office	Construction		Within 7 days of completion of fish capture/relocation	USFWS-Approved Biologist reports number of individuals observed/relocated, size, capture/release locations, injury/mortality, and dates.
CDP 1-25-0781 (CalTrout Elk River Estuary)	USFWS Field Office	Construction		Immediately - if 10% take limit reached for tidewater goby	If 10% take limit (injury/mortality) of captured tidewater goby reached, stop work in tidewater goby habitat and contact USFWS Field Office.
CDP 1-25-0781 (CalTrout Elk River Estuary)	Approving Water Board	Post-construction		[REPORT] Reporting - Annually - revegetation monitoring (min. 2 years)	Project proponent prepares summary report of monitoring results and recommendations at conclusion of each monitoring year. Min. 2 years monitoring.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Planning Division - Andrew Whitney, Associate Planner (707-268-3735, awhitney2@co.humboldt.ca.us)	Construction/ Post-construction		If project needs minor changes or major modifications	Review and approval by the Planning Division required. Application for changes/modifications must be filed with applicable fees.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Planning Division	Construction/ Post-construction		Before permit expiration date (if conditions cannot be met in time)	Apply for an extension. Extension applications must be submitted with appropriate fees before permit expiration. If permit expires, a new permit application is required.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Planning Division	Post-construction		Prior to expiration date - for each permit condition	Submit proof of completion for each condition. Consolidate proof of completion for all conditions into one package for efficient staff review.
Humboldt County CUP (PLN-2025-19393)	All applicable federal, state, and local agencies	Pre-construction		Before starting project	Obtain all necessary approvals from other agencies. Additional federal, state, or local regulatory requirements may apply, including any mitigation monitoring.
Humboldt County CUP (PLN-2025-19393)	Qualified Archaeologist + Tribal Historic Preservation Officer(s)	Construction		Immediately upon discovery of cultural resources during construction	Cease all work in immediate area and within 50-ft buffer; contact archaeologist and Tribal Historic Preservation Officer(s) to evaluate discovery and develop treatment plan in consultation with applicant and lead agency.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Coroner — 707-445-7242	Construction		Immediately upon discovery of human remains	California Health and Safety Code §7050.5 requires Coroner be contacted immediately. If remains are Native American, Coroner contacts Native American Heritage Commission per PRC §5097.98.
Humboldt County CUP (PLN-2025-19393)	Archival Repositories (Cal Poly Humboldt Library, Humboldt County Historical Society, Humboldt County Library, Northwest Information Center)	Pre-construction		Prior to demolishing any structures in Prior Ranch (Cluster 6)	Provide evidence that mitigation documentation has been completed and submitted for archival curation at the four named regional repositories.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Building Department	Pre-construction		Prior to filling/excavation exceeding 50 cubic yards	Apply for and obtain grading permit.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Building Department	Pre-construction		Prior to removal of any structure over 120 sq ft	Secure demolition permit.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Department of Environmental Health	Pre-construction		Prior to destroying or installing any wells	Secure appropriate well permits.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Public Works	Pre-construction		Prior to construction entrances on County roads	Apply for and obtain encroachment permit for all permanent and temporary construction entrances on County-maintained roads (Elk River Rd, Humboldt Hill Rd, Pine Hill Rd, Zanone Rd, Showers Rd). See Public Works Memo dated 12/2/2025.
Humboldt County CUP (PLN-2025-19393)	Humboldt County Planning Division	Pre-construction		[REPORT] Prior to issuance of grading permit	Submit drainage and flood control monitoring/maintenance plan.
Humboldt Bay Harbor District Permit (2025-05)	Humboldt Bay Harbor District	Construction		Prior to material change in activity plan/scope	Permittee shall request a permit revision if activity plan and scope materially change.
Humboldt Bay Harbor District Permit (2025-05)	Humboldt Bay Harbor District	Construction		Prior to permit termination date (1/8/2027)	Application for extension must be filed prior to the Permit termination date if work cannot be completed within the time granted.
Humboldt Bay Harbor District Permit (2025-05)	Wiyot Tribe Cultural Department	Construction		Immediately upon discovery of archeological/cultural features	If archeological or cultural features/materials are unearthed, all work in the immediate vicinity shall halt until Permittee has contacted the Wiyot Tribe Cultural Department and significance has been evaluated to satisfaction of the Wiyot Tribe. Mitigation measures provided to Wiyot Cultural Director for review.

NOTIFICATIONS — All Permits

Permit	Agency / Contact	Phase	Completed ?	When to Notify	What For / Details
Humboldt Bay Harbor District Permit (2025-05)	County Coroner / California State Native American Heritage Commission	Construction		Immediately upon discovery of human remains	If human remains are exposed, comply with CA Health and Safety Code §7050.5 — no further disturbance until County Coroner has made findings per CA Public Resources Code §5097.98.
Humboldt Bay Harbor District Permit (2025-05)	Humboldt Bay Harbor District	Construction		Upon any violation of permit conditions	Board of Commissioners may revoke this Permit at any time upon a finding of a violation of any condition by the Permittee.
NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	NCRWQCB - Jake Shannon (707) 576-2673; NorthCoast@waterboards.ca.gov	Construction		[REPORT] Per Order section XIII.B and Attachment D	Follow notification and reporting requirements per Order WQ 2022-0048-DWQ section XIII.B and Attachment D. Use Reporting and Notification Cover Sheet (Attachment D); signed by authorized representative meeting Attachment E signatory requirements. Submit electronically to NorthCoast@waterboards.ca.gov. Include project name and WDID No. 1B25164WNHU.
NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	NCRWQCB - NorthCoast@waterboards.ca.gov	Post-construction		[REPORT] Upon Project completion	Applicant must notify Regional Water Board once Project is complete with a final report in order to request termination of annual billing.
NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	NCRWQCB	Construction		Prior to extending work season beyond October 15	Variance or extension of work season (June 15 – October 15) requires written approval from the Regional Water Board.
NMFS Biological Opinion No: WCRO-2025-03119	NMFS - Matt Goldsworthy (707-357-1338, Matt.Goldsworthy@noaa.gov)	Pre-construction		Prior to fish relocation activities during construction	Ensure qualified biologists with expertise in anadromous salmonid biology conduct fish relocation. CalTrout will ensure all biologists working on the Project are qualified to conduct fish relocation in a manner which minimizes all potential risks to salmonids. (RPM 1, T&C 1.a)
NMFS Biological Opinion No: WCR	NMFS - Matt Goldsworthy (707-357-1338, Matt.Goldsworthy@noaa.gov)	Construction		As soon as possible upon finding any dead or injured salmonids	Biologist shall contact Matt Goldsworthy at 707-357-1338 or Matt.Goldsworthy@noaa.gov as soon as possible to review activities resulting in take and determine if additional protective measures are required. Retain all salmonid mortalities in sealed plastic bag labeled with date, location, and fork length; freeze as soon as possible. Frozen samples retained by biologist until specific instructions provided by NMFS. Biological samples may not be transferred to anyone other than NMFS Northern California Office in Arcata, CA without prior written approval. (RPM 1, T&C 1.c)
NMFS Biological Opinion No: WCR	NMFS - Matt.Goldsworthy@noaa.gov	Post-construction		[REPORT] Annually by December 31 (each year until 2037 or when monitoring activities stop)	USACE shall provide a written annual report to NMFS via email to Matt.Goldsworthy@noaa.gov. Report shall summarize any observations regarding injury or mortality of ESA-listed salmonid species during construction activities and summarize the construction work completed. (RPM 3, T&C 3.a)

SPECIES CONDITIONS — All Permits

Permit	Agency	Condition #	Topic	Requirement	Pre-construction	Construction	Post-construction
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 1	Adherence to All Measures	Permittee shall adhere to all of the standard and modified measures that Permittee selected from the USFWS PBO, and measures that are adopted in the NMFS BO, and that Permittee submitted to CDFW as supplemental information as part of the Permittee's RMP application on February 25, 2026. These documents, as well as a document titled Elk River Estuary (Planning Area 1) Restoration Project: Invasive Plant Management Plan (October 2025) submitted to CDFW as part of the Permittee's RMP application on February 24, 2026, are incorporated herein by reference.	x	x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 2	Project Design Criteria	Permittee shall submit to CDFW for review and acceptance a Basis of Design (BOD) Report of the 90% engineering design plans for all components of each Project phase at least three months prior to beginning implementation of that phase (BOD Report Documentation). Permittee is not authorized to begin any Covered Activities from a given Project phase until the BOD Report Documentation has been reviewed and accepted by CDFW Conservation Engineering staff. Any subsequent changes to submitted plans shall be accepted by CDFW Conservation Engineering staff in writing. At a minimum the BOD Report Documentation shall address the following components for each project phase: a.Tide gate and culvert analyses supporting fish passage conditions and flood mitigation functions across the full range of tidal conditions, (see CA Salmonid Stream Habitat Restoration Manual Chapter IX, XII; NOAA 2022 Fisheries West Coast Region Anadromous Salmonid Passage Design Manual, including Appendix A), b.Geological/geotechnical information supporting earthwork, structure design, and implementation specifications, c.Updated hydraulic analyses supporting design channel dimensions and grade relevant to habitat function and potential impacts to infrastructure, d.Design basis for tidal pond configurations, depths, and sill elevations supporting species utilization and service life maximization, e.Basis for planted salt marsh and wetland vegetation zonation relevant to factors such as elevation, hydrology, and salinity,Page 20 of 38 f.Risk-based design criteria and stability analyses for large wood project elements (see CDFW Fish Bulletin 184, 2024; USBR ACOE National Large Wood Manual, 2016), g.Analyses demonstrating design performance relevant to predicted future sea level rise (see NOAA 2022 Fisheries West Coast Region Guidance to Improve the Resilience of Fish Passage Facilities to Climate Change).	x		
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 3	Designated Biologist(s)	The Permittee shall retain one or more Designated Biologist(s) with expertise in the areas of Covered Species biology, including handling, collecting, and relocating Covered Species, Covered Species habitat relationships, and biological monitoring of Covered Species in riverine, tidal marsh, floodplain, and riparian habitats. Permittee shall submit to CDFW in writing the name, qualifications, business address, telephone number, and email address of the Designated Biologist(s) at least 30 days before commencing Project activities that could result in take of the Covered Species. CDFW shall provide written approval or denial of proposed Designated Biologist(s) within seven business days of receiving this information. Permittee shall also obtain CDFW written approval in advance if the Designated Biologist(s) must be changed. Permittee shall allow the Designated Biologist to communicate freely with CDFW. Permittee shall ensure that non-disclosure agreements or clauses that restrict communication with CDFW do not exist in any contracts or agreements between Permittee and Designated Biologist(s) related to the Project except as necessary to protect proprietary technology or proprietary information unrelated to fish and wildlife.	x	x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 4	Restoration Work Monitoring	The Designated Biologist(s) shall conduct a pre-implementation briefing to personnel involved in implementing Project Covered Activities prior to the initiation of work. The briefing shall review all Covered Species and the applicable avoidance and protection measures. The Designated Biologist(s) shall implement any necessary pre-implementation nesting bird or bat surveys, dewatering activities, Covered Species relocation activities consistent with approved relocation plans, and be present for substantial clearing and grubbing components of the Project to ensure that incidental take of Covered Species is minimized.	x	x	
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 5	Movement of Covered Species	This RMP authorizes the Designated Biologist to capture, temporarily possess, and relocate Covered Species to reduce harm or mortality in connection with otherwise lawful Project activities. When moving Covered Species out of harm's way, Permittee shall relocate the individuals of the Covered Species to a safe, suitable location in the Project Area as near as reasonably practicable to the location at which they are originally found. Relocation of Covered Species for the purposes of moving out of harm's way shall only be permitted pursuant to the Fish Removal and Relocation Plan (Sections 4 - 5.4) in the NMFS Biological Assessment, and the Tidewater Goby Removal and Dewatering Plan and Reptile Relocation Plan (Attachments 3 and 9) in the USFWS PBO submitted to CDFW as part of the RMP application.	x	x	
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 5a	Fish Exclusion/ Dewatering/Relocation	Covered Fish Species Exclusion, Dewatering, and Relocation Plan. Adhere to fish exclusion/dewatering/relocation measures in NMFS BA Sections 4-5.4 and USFWS PBO Att. 3 (Tidewater Goby). Covered Fish Species: coho salmon, Chinook salmon, longfin smelt, coastal cutthroat trout, steelhead trout, tidewater goby, Pacific lamprey. Notify NOAA, USFWS, CDFW one week prior to capture/relocation.	x	x	
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 5b	Amphibian & Reptile Relocation	Covered Amphibian and Reptile Species Relocation Plan (northern red-legged frog and northwestern pond turtle). Adhere to USFWS PBO Att. 9 Reptile Relocation Plan and BRA WIL-2. Northern red-legged frog work generally limited to June 15 – October 15. Survey suitable habitat prior to disturbance; relocate individuals/egg masses or implement no-disturbance buffer. Resurvey if work ceases >7 consecutive days.	x	x	
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 5c	Work Period - Species Relocation	Work Period. Relocation/movement out of harm's way of Covered Species shall only occur between June 15 and October 15 of each year. CDFW staff may approve changes in writing without formal amendment.		x	
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 5d	CDFW Notification - Relocation	Notify CDFW of Covered Species Relocation. Permittee shall notify the CDFW RMP contact at least 5 business days prior to Covered Species relocation/movement out of harm's way.	x	x	

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Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 6	Mortality/Injury Reporting	If any dead or injured individuals of the Covered Species are found, whether during relocation/movement out of harm's way, or otherwise, Permittee shall contact CDFW staff James Ray by phone or email immediately at (707) 502-5565 or James.Ray@wildlife.ca.gov. CDFW staff will coordinate with NOAA's NMFS or USFWS to review the activities resulting in take and to determine if additional protective measures are required.		x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 7	Nesting Bird Protection	Permittee shall adhere to the Nesting Bird Protection Measures outlined in Section 1.5, WIL-3 of the Elk River Estuary (Planning Area 1) Restoration Project: Biological Resources Assessment (Attachment 3) as submitted to CDFW as part of the RMP application package, with the following modifications: a. Activities that could impact nesting birds, such as ground disturbance,vegetation removal, and structure modification/removal shall occur outside of the bird nesting season (defined as March 15–August 15) to the extent possible. b.If activities that could impact nesting birds are not feasible outside of the bird nesting season, a bird nest survey shall be conducted prior to disturbance activities. c.Surveys shall occur within seven days of the activity, and if implementation activities at a given location cease for more than seven days during the breeding season, and there is potential for nesting birds to reoccupy habitat at that site, the biologist shall resurvey the area prior to resuming implementation activities. d.If active nests (nests containing eggs or young) protected by the California Fish and Game Code 3503, 3503.5, or 3513 are identified, a no-disturbance buffer zone shall be established around the nest using flagging, fencing, and/or signage as appropriate. The buffer shall be determined by a Designated Biologist in coordination with CDFW based on-site specific topography, ambient conditions, and sensitivity of the bird, typically ranging from 50 to 500 feet, depending on the species. No implementation activities shall occur within the buffer zone until a Designated Biologist has determined that the young have fledged or that implementation activities within the buffer zone are not disturbing the nesting birds.	x	x	
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	II. 8	Bat Protection Measures	Permittee shall adhere to the Bat Protection Measures outlined in Section 1.5, WIL-4 of the Elk River Estuary (Planning Area 1) Restoration Project: Biological Resources Assessment (Attachment 3) as submitted to CDFW as part of the RMP application package, with the following modifications: Prior to any tree removal, a Designated Biologist shall conduct a habitat assessment for bats, unless otherwise approved in writing by CDFW. The habitat assessment shall be conducted at least two weeks prior to tree removal and shall include a visual inspection of potential roosting features (e.g., cavities, crevices in wood and bark, exfoliating bark for colonial species, suitable canopy for foliage roosting species). If suitable habitat trees are found, they shall be flagged or otherwise clearly marked. Trees may be removed outside seasonal periods of bat activity (September 1-October 15), or if: a) a Designated Biologist conducts night emergence surveys or completes visual examination of roost features that establish absence of roosting bats, or b) presence of bats is presumed, or documented during the surveys described above, and removal using the two-step removal process detailed below occurs. Two-step tree removal shall be conducted over two consecutive days as follows: 1) the first day (in the afternoon), under the direct supervision and instruction by a Designated Biologist with experience conducting two-step tree removal, limbs and branches shall be removed by a tree cutter using chainsaws only. Limbs with cavities,crevices, or deep bark fissures shall be avoided, and 2) the second day the entire tree shall be removed.	x	x	
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	III.1.a	Vegetation Monitoring	Monitoring – Monitoring of native plant community response to enhancement and restoration actions and invasive plant control shall be conducted according to the scope, methods, and performance standards in the Elk River Estuary (Planning Area 1) Restoration Project: Vegetation and Aquatic Monitoring Plan (Stillwater Sciences, October 2025, Attachment 4) as submitted to CDFW as part of the RMP application package.			x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	III.1.b	Fish & Macroinvertebrate Monitoring	Monitoring – Monitoring of Covered Fish species, fish community, and aquatic macroinvertebrate community shall be conducted according to the scope, methods, and performance standards in the Final Elk River Stewardship Monitoring Framework document, a draft of which was submitted to CDFW as part of the RMP application. The Final Elk River Stewardship Monitoring Framework shall be submitted to CDFW for concurrence prior to initiation of fish and aquatic macroinvertebrate monitoring activities.			x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	III.1.c	Incidental Take Reporting	Incidental take of larval longfin smelt and tidewater goby during macroinvertebrate community monitoring activities shall be reported to CDFW on a monthly basis and prior to starting the next month of sampling activity. CDFW staff will review the activities resulting in take, and in the case of tidewater goby will coordinate with USFWS, to determine if additional protective measures are required.			x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - Coho Salmon	Phase 1: 135 juveniles captured / ≤7 mortalities. Phase 2: 495 juveniles / ≤25 mortalities. Phase 3: 2,183 juveniles / ≤109 mortalities. Monitoring: 900 juveniles annually for 10 years / ≤20 mortalities.		x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - Longfin Smelt	Phase 1: 20 adult/juv captured / ≤2 mortalities. Phase 2: 4 / 0 mortalities. Phase 3: 2 / 0 mortalities. Monitoring: 2 adult/juv annually (0 mortality); 21 larval (mortality of 21).		x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - Chinook Salmon	Phase 1: 12 juveniles / ≤1 mortality. Phase 2: 44 / ≤2 mortalities. Phase 3: 194 / ≤10 mortalities. Monitoring: 240 juveniles annually / mortality of 2.		x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - Steelhead Trout	Phase 1: 24 juveniles / ≤1 mortality. Phase 2: 88 / ≤4 mortalities. Phase 3: 388 / ≤20 mortalities. Monitoring: 190 juveniles annually / mortality of 3.		x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - Coastal Cutthroat Trout	Phase 1: 6 adult/juv / ≤1 mortality. Phase 2: 22 / ≤1 mortality. Phase 3: 97 / ≤5 mortalities. Monitoring: 31 annually / mortality of 2.		x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - Tidewater Goby	Phase 1: 100 / ≤5 mortalities. Phase 2: 50 / ≤2 mortalities. Phase 3: 25 / ≤1 mortality. Monitoring: 26 annually / 1 mortality; 13 larval / mortality of 13.		x	x

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Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - Pacific Lamprey	Phase 1: 2 / 0 mortalities. Phase 2: 2 / 0 mortalities. Phase 3: 100 / ≤5 mortalities. Monitoring: all individuals encountered may be pursued/captured / 0 mortalities.		x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - Northern Red-legged Frog	All individuals encountered may be pursued/captured. ≤10 total mortalities annually combined from implementation and monitoring.		x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	Table: Take Limit	Authorized Take - NW Pond Turtle	All individuals encountered may be pursued/captured. ≤5 total mortalities annually combined from implementation and monitoring.		x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	BOT-1	Special-status Plants	Special-status Plants. All special-status plant species documented within graded construction footprint will be salvaged and/or seed harvested. Planting contractor will reseed and/or translocate salvaged plant material as directed by qualified botanist. Other occurrences flagged and avoided to extent possible.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	BOT-2	Sensitive Natural Communities	Sensitive Natural Communities/Native Vegetation. Ground disturbance and vegetation clearing and/or trimming will be confined to the minimum amount necessary to facilitate Project implementation. If possible, viable native plants within the Project design footprint will be salvaged for reuse and relocated at suitable elevation grades during the revegetation stage of construction.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	BOT-3	Invasive Plant Control	Invasive Plant Control. • Measures to prevent the spread of invasive weeds and pathogens will be taken, including, where appropriate, inspecting equipment for soil, seeds, and vegetative matter; cleaning equipment; utilizing weed-free materials and native seed mixes for revegetation; and disposing properly of soil and vegetation. • Invasive plant material from Project construction activities will be disposed of as described in the Elk River Estuary (Planning Area 1) Restoration Project: Invasive Plant Management Plan prepared by Stillwater Sciences and attached to the CDP application package. • Any imported fill material, soil amendments, gravel, or other material required for construction or restoration activities that will be placed within the upper 12 inches of the ground surface will be certified free of weed seeds and plant material. • To minimize the spread of plant pathogens that can reduce plant establishment success, nursery stock procured for revegetation efforts will be sourced from plant nurseries that follow best management practices to produce clean nursery stock free of Phytophthora and other soilborne disease. Standard BMPs are available online at: http://phytosphere.com/BMPsnursery/Index.htm	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	AQU-1	Eelgrass Beds Protection	Aquatic Eelgrass Beds. • Disturbance in and adjacent to eelgrass beds may be required to connect new tidal channels to the mainstem Elk River or Swain Slough and removal of channel adjacent berms. Disturbance will be limited to the minimum necessary. • If used during construction, a barge positioned in open water will avoid grounding or anchoring in eelgrass habitat if feasible. • Construction activities will avoid shading established eelgrass beds for long periods of time (i.e., greater than 12 hours daily). • If necessary, a floating surface boom will be positioned to capture any floating surface debris in open waters.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	AQU-2	Fish Work Window	Work window for fish. To protect the most vulnerable life stages of special-status fish species with the potential to occur within PA 1, all in-channel work will be restricted to the permitted in-water work period between June 15 and October 15. Work extensions may be requested from regulatory agencies through October 31, pending weather. This seasonal work window correlates to the period of the year when special-status fish species are least likely to occur within PA 1.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	AQU-3	Fish Protection - NMFS/USFWS	Fish. Measures to protect all special-status fish during construction will comply with NMFS Biological Opinion and USFWS Statewide Restoration Programmatic Biological Opinion.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	WIL-1	Wildlife Protection - General	Wildlife.• Injured wildlife will be transported to the nearest wildlife rehabilitation facility (Humboldt Wildlife Care Center near Arcata, California), at the discretion of the monitoring biologist. • All trash and waste items (including microtrash) generated by Project activities will be properly contained and removed from the work area at the end of each workday to prevent attracting wildlife. • Trenches, holes, or open ends of pipes will be covered, equipped with escape ramps, or elevated to a minimum of three feet above the ground if left overnight. Open trenches or holes will be inspected for trapped wildlife every morning prior to work. If any wildlife species are documented, and have the potential to be affected, the qualified wildlife biologist will be notified immediately.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	WIL-2	Amphibians/ Reptiles Protection	Amphibians/Reptiles. • Northwestern pond turtle: Measures will comply with the USFWS Programmatic Biological Opinion. • Work window and pre-construction surveys for northern red-legged frog. Modification of waterways and wetlands with standing water that have the potential to support northern red-legged frog breeding will be limited to the period of the year between June 15 and October 31 to avoid disturbance to breeding northern red-legged frogs, or a biologist will survey suitable habitat prior to disturbance to confirm no individuals and egg masses are present during the initiation of Project construction or, if present, relocate individuals and egg masses to nearby suitable habitat and/or implement a no-disturbance buffer until the threat on the species has lifted. For construction activities within suitable habitat outside of the breeding period (November 1 through June 14) will also be surveyed in a similar manner. If Project construction activities at a given location cease for more than seven consecutive days, and there is potential for special-status species to reoccupy habitat at that site, the biologist will resurvey the area prior to resuming construction.	x	x	

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CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	WIL-3	Nesting Bird Protection	Birds - Pre-construction nesting survey.For areas where ground disturbance, vegetation removal, and/or structure modification/removal occurs during the bird breeding season (March 15–August 15) a pre-construction bird nest survey will be conducted. Surveys will occur within 7 days of the activity, and if construction activities at a given location cease for more than 7 days during the breeding season, and there is potential for special-status species to reoccupy habitat at that site, the biologist will resurvey the area prior to resuming construction activities. If active nests (nests containing eggs or young) protected by the Migratory Bird Treaty Act are identified, a no-disturbance buffer zone will be established around the nest using flagging, fencing, and/or signage as appropriate. The buffer will be determined by a qualified biologist in coordination with CDFW based on site-specific topography, ambient conditions, and sensitivity of the bird, typically ranging from 50 to 500 feet, depending on the species. No construction activities will occur within the buffer zone until a qualified biologist has determined that the young have fledged or that construction activities within the buffer zone are not disturbing the nesting birds.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	WIL-4	Bat Protection Measures	Bats - Tree removal.Prior to tree removal, a bat biologist will conduct a bat habitat assessment to identify trees with high-quality crevice-roosting habitat (e.g., tree cavities, basal hollows, loose or peeling bark, larger snags) to be retained, when feasible. • If a high-quality roost tree will be removed during the maternity season (May 1 through August 31) and/or torpor season (November 1 through March 31), a biologist will assess the potential for a day roost through visual inspection or emergence survey. If a colony is documented, then the tree will not be felled until the colony has left. If a survey or inspection is infeasible due to existing site conditions, a biologist will recommend site-specific means to modify and disturb the habitat to allow bats, if present, to wake and leave the roost prior to tree felling. These disturbances may include (1) modifying habitat conditions such as removing smaller non-habitat trees at least a day prior to removing habitat trees; (2) creating a vibrational disturbance over the course of a few minutes with a chainsaw, knocking the tree with a sledgehammer, using equipment to shake the tree, or removing the tree in pieces (sections or limbs) over the course of a few days; (3) changing the structure of the potential roost by lifting bark to modify temperature, wind, light, and precipitation; and/or (4) using ultrasound deterrents. • If a high-quality roost tree is removed outside of the sensitive maternity and/or torpor season, then a contractor will create a vibrational disturbance over the course of a few minutes prior to removing the tree (as described above) to allow individuals to leave, if present. • Structure removal. If a structure is to be removed during the maternity season (May 1 through August 31) and/or torpor season (November 1 through March 31), a qualified bat biologist will examine the structure through appropriate day inspection and/or evening emergence survey to confirm no day-roosting bats are present.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); CDFW RMP; Humboldt County CUP	CCC, County, and CDFW	BIO-1	Environmental Awareness Training	Environmental Awareness Training. Prior to the initiation of Project construction activities, a qualified biologist will provide all contractors and equipment operators a worker environmental awareness training to educate them on the environmental resources of the Project. Training will include information about environmental permits for the Project and the consequences of noncompliance. Personnel will be informed regarding the identification, life history, habitat requirements, and avoidance and minimization measures for all special-status species and sensitive natural communities with the potential to occur within or immediately adjacent to the construction footprint. Training will also include information on state and federal laws protecting biological resources. Personnel will be informed of the procedures to follow should special-status species be encountered or disturbed. This training will be conducted prior to construction.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	SPM-1	Preconstruction Surveys	Preconstruction Surveys. If special-status plants are present and/or special-status terrestrial animal species habitat is present (e.g., stationary habitat such as burrows, bird nests, cavities for bats, etc.), where appropriate, based on project-specific requirements, a qualified, agency-approved biologist with experience on the identification of all applicable life stages of the special-status species will conduct reconnaissance-level preconstruction surveys and implement additional measures, as appropriate, to protect the species from construction-related disturbance before work begins. The intent of the survey is to assess current species habitat and use locations in the project area immediately prior to construction. Special-status plant species surveys shall be conducted in the appropriate blooming period, as applicable, prior to the start of construction for proper plant identification. If construction activities cease for more than five consecutive days, and there is potential for special-status species to re-occupy the site, the agency-approved biologist will re-survey the project area and implement measures, as appropriate. A project proponent can choose to assume animal species presence, forgo preconstruction surveys, and implement additional protection measures, as appropriate, to protect special status species from construction-related disturbance. Additional species guild-specific pre-construction requirements are described below and may supersede this general species protection measure, as applicable.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	SPM-2	ESA/Wildlife Exclusion Fencing	Environmentally Sensitive Areas and/or Wildlife Exclusion. Monitoring, flagging, and/or fencing will be used to minimize disturbance to environmentally sensitive areas (e.g., waters and wetlands). This measure augments GPM-7 (see PEIR Appendix E), which applies to sensitive aquatic resources. If fencing is used: ♦ The agency-approved biologist or resource specialist will determine the location of the fencing prior to the start of construction (e.g., between active work area(s) and sensitive resources). ♦ Fencing will remain in place throughout the duration of the construction activities, and will be inspected and maintained regularly by the agency-approved biologist or resource specialist until completion of the project. ♦ Repairs to the fencing will be made within 24 hours of discovery. ♦ Fencing will be removed when all construction equipment is removed from the site, and the area cleared of debris and trash, and returned to natural conditions.	x	x	

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CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	SPM-3	Construction Work Windows	Species Protection Construction Work Windows. Construction work windows may be required, depending on whether or not the project involves in-water construction and/or whether special-status species have potential to occur onsite.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	SPM-4	Species Capture/Handling/Translocation	Species Capture, Handling and Translocation. Special-status species capture, handling, and translocation will only be conducted by an agency-approved biologist(s). Required permitting will be needed prior to any capture, handling, and relocation. If translocation of special-status species is needed, the project proponent will prepare a special-status species translocation plan to be reviewed and approved by the agency(ies), as appropriate, prior to project implementation. The plan will include capture and translocation methods, translocation site, and post translocation monitoring, if applicable. If capture, handling, and translocation is necessary due to dewatering activities, refer to the protective measures for Dewatering Activities, under general protection measure IWW 6 and follow the agency-approved translocation plan.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	SPM-5	Entrapment Prevention	Special-Status Species Entrapment Prevention. All excavated, steep-walled holes or trenches will be covered with appropriate covers (e.g., thick metal sheets or plywood) at the end of each workday. Covers will be placed so that trench edges are fully sealed with rock bags, sand, or other appropriate material. Alternatively, one or more escape ramps such as fill dirt or wood planking will be installed at an angle no greater than 30 degrees, to allow wildlife to escape. Before holes or trenches are filled, sealed, or collapsed, the holes or trenches will be thoroughly inspected for trapped animals. Any animals discovered will be allowed to escape voluntarily or will be relocated by an agency-approved biologist.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	SPM-6	Airborne Noise Reduction	Airborne Noise Reduction. Equipment, including noise abatement systems, will be maintained in good working order. If construction noise has the potential to adversely affect special-status species, the project proponent will include site specific measures for construction activities to minimize impacts. Muffler (or spark arrester) damage must be promptly remedied, to the degree practicable, to meet sound attenuation standards.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-1	Wildlife Passage Design	Wildlife Passage Design. For projects that include the installation, repair, or replacement of permanent or temporary fencing (e.g., security, landscape, or privacy fencing) fencing will be designed to allow for permeability; it will incorporate a minimum 6-inch gap with a one-way ramp or door at regular intervals to allow for special-status amphibian species to disperse between upland and breeding habitat. This measure is not applicable to the Environmentally Sensitive and Wildlife Exclusion Area fencing/flagging specified as part of construction activities to protect habitats or exclude wildlife from the work areas (see SPM-2, above). Facilities such as curbs, drainages, culverts, and fence “footers” will be designed with gradually sloped sides or intermittent gaps to facilitate wildlife movement.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-2	Rain Event Limitations	Rain Event Limitations To the maximum extent practicable, construction activities will be restricted to periods of low rainfall (less than 1” per 24-hour period) and periods of dry weather (with less than a 50% chance of rain). During these restricted periods, under no circumstances will construction activities occur between 30 minutes prior to sunset and 30 minutes after sunrise (i.e., no night work during rain events). If rain exceeds 0.5 inch during a 24-hour period, work will cease until no further rain is forecast. Construction activities halted due to precipitation may resume when precipitation ceases and the National Weather Service 72-hour weather forecast indicates less than a 50% chance of 0.5 inch of rain or less during a 24-hour period. Prior to construction activities resuming, an agency-approved biologist will inspect the project area and all equipment/materials for the presence of special-status amphibians.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-3	Amphibian Pre-Construction Survey	Pre-Construction Survey. If covered amphibians are known or assumed to be present, no more than 24 hours prior to the date of initial ground disturbance and vegetation clearing, an agency-approved biologist will walk within the project site to investigate all potential areas that could be used by the special-status amphibians for feeding, breeding, sheltering, movement, and other essential behaviors. If a special-status amphibian species is encountered during the survey the project proponent will refer to and follow procedures described below in AMP-11 and AMP-12 for passively allowing the species to move out of the work area or actively relocating the species out of harm’s way. Proposed projects that may need to actively relocate amphibians out of harm’s way will require the project proponent to submit a project-specific species relocation plan for agency review and approval, as described in AMP-12.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-4	Disease Prevention/Decontamination	Disease Prevention and Decontamination. To prevent disease conveyance among work sites during project implementation, the agency-approved biologist will ensure that the decontamination protocols described in CDFW, Aquatic Invasive Species Disinfection/Decontamination Protocols (CDFW 2016, or latest version) will be implemented prior to gear and equipment arriving at or moving between work sites and will be followed at all times. A copy of the code of practice must be available at the project site.	x	x	

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CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-5	General Protection Measures	Lighting. In addition to GCM-3, Construction Hours (see general protection measures in Appendix E), artificial lighting at a project site will be prohibited to the maximum extent practicable during the hours of darkness, except when necessary for driver or pedestrian safety.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-6	Vegetation Clearing & Grubbing	Clearing and Grubbing Vegetation. The agency-approved biologist will be present during all vegetation clearing and grubbing activities in areas within the currently occupied range of special-status amphibians where suitable habitat is present. Prior to vegetation removal, the agency-approved biologist will thoroughly survey the area for these species (see measure AMP-3). Vegetation in sensitive areas will either be cleared with handheld motorized tools (e.g., weed eaters, chainsaws) or by hand pulling, or an agency-approved biologist will walk in front of vegetation clearing equipment. Where dense brush occurs (e.g., blackberry, periwinkle), the biologist may direct an equipment operator to lift and shake dense vegetation with an excavator or backhoe so that the biologist can look underneath and search for amphibians. Tree stumps and roots will be left in place where possible to avoid any ground disturbance and preserve refugia habitat, with the exception of non-native invasive plants that could propagate from remaining vegetative material. Native branches, leaf litter, mulch, woody debris, and other vegetative trimmings may be retained and spread on site to enhance habitat as appropriate.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-7	Pump Screen Requirements	Pump Screens. If a water body is to be temporarily dewatered by pumping, intakes will be completely screened consistent with NMFS (1997) and CDFW (2001) screening guidelines, or latest updates to those guidelines. The intake will be placed in a perforated bucket or other method to attenuate suction to prevent special-status amphibians from entering the pump system. Water will be returned to the water body when diversions or coffer dams are removed and flow is restored. If no diversion or coffer dams were used during dewatering, the water body will be allowed to refill naturally from precipitation, runoff, or hydrological processes refilling the water body naturally.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-8	Non-native Invasive Species Removal	Removal of Non-native Invasive Species. Removal of any individuals of non-native invasive species (e.g., bullfrogs, non-native crayfish, non-native fishes) is encouraged as practicable to facilitate conditions for project success. The project proponent is responsible for ensuring that these activities comply with the California Fish and Game Code. Suspected hybrids will not be removed without specific authorization from appropriate agency(ies).		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-9	Erosion Control Materials	Placement of Suitable Erosion Control Material. To prevent amphibians from becoming entangled, trapped, or injured, erosion control materials with plastic or synthetic monofilament netting will not be used. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine, or other similar fibers. Following site restoration, erosion control materials, such as straw wattles, will not block the movement of special-status amphibians.		x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-10	Species Encounters Protocol	Encounters with Species. Each encounter with a special-status amphibian will be treated on a case-by-case basis. If any life stage of the special-status amphibian species is found and these individuals may potentially be killed or injured by work activities, the following will apply: ♦ If a special-status amphibian is detected in the project area, work activities within 50 feet of the individual that may potentially be harmed, injured, or killed will cease immediately and the agency-approved biologist will be notified. Based on the professional judgment of the agency-approved biologist, if project activities can be conducted without harming or injuring the species, it may be left at the location of discovery and monitored by the agency-approved biologist. All project personnel will be notified of the finding and at no time will work occur within 50 feet of a species without agency-approved biologist present. ♦ Where practicable, contact with the special-status amphibian will be avoided and it will be allowed to move out of the potentially hazardous situation of its own volition. Allowing a special-status amphibian to move out of the potentially hazardous situation of its own volition may not be appropriate for multi-day projects because they could stay or move back into the project site. If there is an immediate hazard or if there is no suitable, accessible habitat nearby for the amphibian to relocate to, it will be moved following approved handling protocol (see AMP-11).		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	AMP-11	Amphibian Handling Protocol	Species Observations and Handling Protocol. If a special-status species does not or cannot leave the work area, the agency-approved biologist will implement the species observation and handling protocols outlined below for the various species' guilds. Separate permits are needed prior to any capture, handling, and relocation of special-status species. Only agency-approved biologists will participate in activities associated with the capture, handling, relocation, and monitoring of a special-status amphibian. In addition to measures described in AMP-5 (which refers to CDFW [2016] decontamination protocols), to prevent the spread of pathogens among sites, special care should be taken to prevent transferring potential pathogens among individual animals.		x	

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CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	REP-1	Reptile Pre-Construction Survey	Pre-Construction Survey. An agency-approved biologist will conduct pre-construction surveys for the target reptile species within 72 hours prior to any initial ground disturbance within all suitable habitat within or adjacent to the project site and accessible to the project proponent, to identify locations where special-status reptiles may be present, evaluate current activity status in the project area, and protect the species and its habitat from avoidable construction-related disturbance. The intent of this survey is to assess current special-status reptile habitat and use locations in the project area immediately prior to construction. Preconstruction surveys may be phased across a construction site if construction in different areas will occur at different times; only areas where disturbance is imminent need be surveyed. The project area will be re-inspected by the agency-approved biologist whenever a lapse in construction activity of 5 days or greater has occurred.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	REP-2	Reptile Work Windows	Environmentally Sensitive and Wildlife Exclusion Area. Prior to the start of construction, SPM-2, Environmentally Sensitive and Wildlife Exclusion will be implemented.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	REP-3	Reptile Handling Protocol	Clearing and Grubbing Vegetation. An agency-approved biologist will be present during all vegetation clearing and grubbing activities in areas where the special-status reptiles are confirmed to occur, or where measures are being implemented based on presence of suitable habitat. Prior to vegetation removal, the agency-approved biologist will thoroughly survey the area for these species. Vegetation in sensitive areas will be cleared by handheld motorized tools (e.g., weed eaters, chainsaws) or hand pulling unless alternate methods are proposed by the project proponent and approved by agency(ies). Tree stumps and roots will be left in place where possible to avoid any ground disturbance and preserve refugia habitat, with the exception of non-native invasive plants that could propagate from remaining vegetative material. Native branches, leaf litter, mulch, woody debris, and other vegetative trimmings may be retained and spread on site to enhance habitat as appropriate.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	REP-4	Reptile Entrapment Prevention	Prohibited Use of Rodenticides. No rodenticides used at project site during construction in areas supporting suitable habitat for special-status reptiles.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	REP-5	Reptile Habitat Restoration	Species Observations and Encounters. Each proposed project with the potential to encounter a special-status reptile species will submit a rescue and relocation plan to agency(ies) for review and approval prior to initiating construction. General guidance to be considered during plan development is as follows: 1) leave the uninjured animal if it is not in danger, or 2) move the animal to a nearby location if it is in danger as described in REP-6, Species Handling and Relocation, below. These options are further described as follows: ♦ When a special-status reptile is encountered in the project area, the priority is to stop all activities in the surrounding area that have the potential to result in the harm, injury, or death of the individual. The agency-approved biologist then needs to assess the situation to select the course of project that will minimize adverse effects to the individual. ♦ Avoid contact with the animal and allow it to move out of the project footprint and hazardous situation on its own to a safe location. This guidance only applies to situations where an animal is encountered while moving through habitat and under conditions that will allow it to escape. This does not apply to animals that are uncovered or otherwise exposed or in areas where there is not enough adjacent habitat to support the life history of the special-status reptiles if they move outside the construction footprint. ♦ Avoidance is the preferred option if the animal is not moving or is within some sort of burrow or other refugia. In this case, the area will be well marked for avoidance by construction and an agency-approved biologist will be assigned to the area when work is taking place nearby. If avoidance is not practicable or safe for the special-status reptile, the project proponent will implement REP-6, below.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	REP-6	Reptile Relocation Plan	Species Handling and Relocation. A special-status reptile will only be captured and relocated when it is the only option to prevent its death or injury, and after all attempts to avoid interaction of the species have been exhausted as described in REP-6, Species Observation and Encounters. Project-specific rescue and relocation plans will be approved by the agency(ies) prior to starting construction. General guidance for handling and relocation is as follows: ♦ If appropriate habitat is located immediately adjacent to the capture location, then the preferred option is short distance relocation to that habitat. A snake will not be moved outside of the area where it could have traveled on its own. Captured snakes will be released in appropriate cover as close to their capture location as possible for their continued safety. Under no circumstances will an animal be relocated to another property without the owner's written permission. It is the project proponent's responsibility to arrange for that permission. ♦ The release locations must be pre-identified in the project-specific rescue and relocation plan approved by the agency(ies); they will depend on where the individual was found and the opportunities for nearby release. In most situations the release location is likely to be into the mouth of a small burrow, other suitable refugia, or suitable habitat. ♦ Only agency-approved biologists for the project can capture special-status reptiles.	x	x	

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CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	BIRD-1	Habitat Protection	Habitat Assessment: A habitat assessment will be conducted by a qualified biologist to determine whether suitable habitat (e.g., including foraging, nesting, and dispersal habitat) for the special-status bird(s) occurs in the project area, as applicable. If suitable habitat for special-status species is identified in the project area and the proposed project may affect suitable habitat, the project proponent will implement measures BIRD-2 through 5 in areas with suitable habitat. Alternatively, the project proponent may propose to conduct surveys and/or monitoring to confirm presence or absence of the species.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	BIRD-2	Habitat Protection	Nest Protection Work Window: Project activity in known or potentially occupied migratory bird habitat will be conducted outside of the nesting season to the maximum extent practicable. If project activities must occur during the nesting season see BIRD-5.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	BIRD-3	Habitat Protection	Work Area Limits: Work site boundaries in suitable habitat will be clearly marked with flagging or other visible materials, which will be removed at the conclusion of the project.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	BIRD-4	Habitat Protection	Site Access Restrictions: If the site conditions allow, access to work sites in occupied habitat will be by foot travel, otherwise heavy equipment will be allowed within suitable nesting habitats only with the presence of an agency-approved biologist. Access routes and work areas will be limited to the minimum amount necessary to achieve the project goals.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	BIRD-5	Bird Protection	Monitoring. If project activities must occur during the nesting season, pre-construction nest surveys will be conducted by an agency-approved biologist, buffers will be established to protect active nests, and disturbance in the vicinity of active nests will be monitored to ensure that it does not disrupt an active nest.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	MAM-1	Habitat Protection	Conduct Habitat Assessment. Prior to construction, an agency-approved biologist will conduct a habitat assessment in potentially suitable habitat within the project footprint to determine presence of special-status mammals or their sign (e.g., scat, guano, tail drags and tracks, skeletal remains in owl pellets, etc.). The habitat assessment surveys will be conducted within 2 years, and at least 14 days prior to the start of construction or ground disturbing activities. If no burrows or sign of special-status mammals are detected, no further measures will be required.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	MAM-2	Habitat Protection	Avoidance Areas. Based on the results of the habitat assessment, in areas where special-status mammals are believed to be present based on observations (e.g., signs of presence, burrows), non-disturbance zones will be established prior to construction or ground disturbing activities.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	MAM-3	Livestock Fencing	Use of Handheld Tools. If exclusion fencing will be installed, vegetation in active work areas outside of the exclusion areas will be trimmed and cleared to the ground using handheld tools (which can include handheld motorized equipment, such as weed whackers or mowers) to the maximum extent practicable, under the supervision of an agency-approved biologist, to discourage presence of species in the construction area.	x	x	

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CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	MAM-4	Habitat Protection	Species Trapping and Relocating. If the minimum avoidance zone cannot be maintained and the agency-approved biologist believes activities will disturb or destroy habitat (e.g., collapse burrows) or may otherwise adversely affect these special-status mammal species, then an agency-approved biologist may be required to implement a trap and release program at the agency's discretion. Project-specific guidance on trapping, temporary holding, release location, and release method will be required by the agency prior to the start of trapping.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	MAM-5	Reporting	Reporting Requirements. Agencies will be notified within 24 hours if any individual special-status species is captured. The date; time of capture; specific location (GPS coordinates); and approximate size, age, and health of the individual will be recorded and provided in both hard copy and digital format to the agency(ies) within 2 weeks of the conclusion of the protective trap-and-release operation. The agency(ies) will be notified within 24 hours if any special-status mammal species is found injured or dead. A written notification will also be prepared by the project proponent after verbal notification to the agency(ies). The report will include the date, time, and location of the discovered animal/carcass; cause of injury or death; and any other pertinent information. All dead and preserved specimens will be submitted to the appropriate agency(ies) upon request. Salvaged animals will be kept cooled or frozen until delivered.		x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	INVERT-1	Pump Screen Requirements	Implement California Freshwater Shrimp Measures. Implement the following measures for projects that include suitable habitat that could be occupied by California freshwater shrimp, as applicable. ♦ Work Window. No work is permitted during wet weather or where saturated ground conditions exist; if a 60 percent chance of a 0.5 inch of rain or more within a 24-hour period is forecast, then operations will cease until 24 hours after rain has ceased. ♦ Site Restrictions. New access routes requiring tree removal and grading will be limited to the extent practicable. Access routes will not be along the top of the stream bank but relatively perpendicular (45 to 90 degrees is acceptable) to the bank. ♦ Pre-Construction Survey. Agency-approved biologist will conduct surveys of suitable habitat in the project area for presence of the California freshwater shrimp in the work area 24 hours prior to any vegetative clearing work, dewatering, or ground-disturbing activities. ♦ Capture and Relocation: If California freshwater shrimp must be temporarily excluded from portions of the project area during in-water work, a project-specific capture and relocation plan must be submitted to the agency(ies) for review and approval. ♦ Habitat Protection: Design project to achieve no net loss of large woody debris in the active (wetted) channels. Trees may be removed for access routes for construction equipment. If trees need to be removed from other portions of the project site, willows over 3 inches in diameter at breast height will be left in place as is practicable and the canopy cover provided by hardwoods or conifers will not be reduced unless necessary for access or other unforeseen circumstance. ♦ Rehabilitate Disturbed Habitat: The stream bank will be planted with species which will enhance the year-round habitat value of the stream edge by providing adequate shelter, stability, complexity and food production potential for California freshwater shrimp. ♦ Dewatering: Minimize the potential for California freshwater shrimp to be entrained during dewatering activities. Pump intakes will be placed away from complex vegetated banks that may contain habitat for California freshwater shrimp. Screens will be used during dewatering in accordance with IWW-6, Dewatering/Diversion, following CDFW (2001) and NMFS (1997) criteria for fry-sized salmonids.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	INVERT-3	Habitat Protection	Implement Valley Elderberry Longhorn Beetle Protocol. Implement the following measures for projects that include suitable habitat that could be occupied by valley elderberry longhorn beetle (VELB), as applicable. ♦ For the VELB, the project proponent will be required to follow the Protection Measures presented in the May 2017 FWS Framework for Assessing Impacts to the Valley Elderberry Longhorn Beetle or the most updated version of this guideline document (USFWS 2017).	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	INVERT-4	Vegetation Monitoring	Implement Butterfly Protection Measures. The following general butterfly protection measures apply to all special-status butterfly species and their habitat, as applicable. ♦ Site Restrictions: Access routes, staging areas, and total project footprint within butterfly habitat will be limited to the minimum necessary to achieve the project goal. ♦ Biological Monitor: Biological monitoring will be overseen by an agency-approved biologist. During the adult flight season of special-status butterfly species, an /agency-approved biologist will be present when construction activities occur in or within 150 feet of suitable habitat (dispersal habitat as well as areas containing the larval host plant and adult food plants). ♦ Environmentally Sensitive Areas: Any larval food or host plants found within 300 feet of the project footprint will be clearly marked and will be avoided to the maximum extent practicable. Prior to any ground-disturbing or vegetation removal activities, the edge of the work area near any larval food or host plants will be clearly marked to prevent workers and vehicles from entering this area. ♦ Dust Control: The agency-approved biologist will ensure that dust is controlled by construction personnel by periodically watering down areas within 100 feet of special-status butterfly habitat, as necessary. Watering down the construction area will prevent dirt from becoming air borne and accumulating on larval host plants and adult food source plants for special-status butterflies.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	FISH-1	Fish Pre-Construction Survey	Habitat Disturbance Avoidance and Minimization. Disturbance to aquatic habitat for special-status fish species will be avoided and/or minimized to the maximum extent practicable unless the purpose of the project is to provide overall benefits to the species and the benefits are greater than any temporary impacts to habitat.	x	x	

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CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	FISH-2	Fish Work Windows	Habitat Assessment and Surveys. For projects that may result in impacts to aquatic habitat within the range of special-status fish species, no less than 30 days prior to construction of the project, the project proponent will evaluate the potential for special-status fish species to be present in the project area. The evaluation may be based on existing information if sufficiently available, or the project proponent may conduct a habitat assessment or focused survey for those species, if appropriate. The habitat assessment and/or survey will be conducted in potentially suitable aquatic habitat within 300 feet of the project area. The agency-approved biologist will conduct the habitat assessment and/or fish survey and will adhere to the standards provided in the CDFW California Salmonid Stream Habitat Restoration Manual 4th Edition Volume I: Section IV (CDFW 2010) or most current regulatory agency guidance document. If special-status fish species are observed during the survey or the habitat is otherwise potentially occupied, based on the results of the habitat assessment or existing information, the project proponent will implement FISH-3, Fish Capture and Relocation, as described below.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	FISH-3	Fish Exclusion & Relocation	Fish Capture and Relocation. For projects that require dewatering or other work in suitable habitat for the special-status fish species, if fish capture and relocation would be the most protective approach to managing fish during construction, then a fish capture and relocation plan will be developed and submitted to NMFS, USFWS, and/or CDFW, as applicable, for approval. The plan will describe the biologist qualifications, capture methods, capture and relocation work areas, and reporting requirements including details in the list below. If capture and relocation is not feasible or would not be the most protective approach to managing fish in the work area (e.g., if dewatering is not needed or appropriate; or if fish are in a large, unconfined water body), other methods to protect covered fish species (e.g., timing restrictions around season and tide, or bubble curtains) should be detailed in a plan and submitted to FWS for approval. ♦ This plan will incorporate the latest agency guidance relating to the capture and relocation of fish, as applicable. ♦ Procedures for decontamination of any equipment used in the capture and relocation of fish will be identified. ♦ Prior to the implementation of capture and relocation activities, relocation (or release) sites will be identified by the agency-approved biologist based on proximity, access, habitat suitability, and potential to be affected by construction-related disturbance. Suitable habitat for relocation site(s) will be within the same watershed/sub-watershed fish were originally captured. ♦ Fish relocation will only be conducted (or led) by an agency-approved biologist. If an agency-approved biologist is needed, the project proponent will submit the biologist's qualifications to the appropriate agency office for approval 30 days prior to project construction. The biologist will have knowledge and experience in fish biology and ecology, fish/habitat relationships, and biological monitoring, and handling, collecting, and relocating fish or other relevant experience. ♦ Residual surface water associated with the diverted or dewatered habitat will be monitored or sampled for the presence of fish by an agency-approved biologist as soon as the waters are isolated. If a special-status fish is observed in the isolated habitat, they will be immediately captured and relocated to the suitable habitat outside of the construction area, but within the same watershed/sub-watershed, by the agency-approved biologist in accordance with the	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	FISH-4	Fish Dewatering Requirements	Reporting. An agency-approved biologist will provide a written summary of work performed (including biological survey and monitoring results), protection measures implemented (e.g., use of biological monitor, flagging of work areas, erosion and sedimentation controls) and supporting photographs of each stage to the appropriate agency office. Furthermore, the documentation describing surveys and re location efforts (if appropriate) will be completed in accordance with the requirements of FISH-3: Fish Capture and Relocation.		x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	PLANT-1	Special-status Plants	Habitat Assessment and Surveys. If the project area can potentially support special-status plant species, an agency-approved biologist will conduct a survey for special-status plant species within 1 year prior to commencement of ground-disturbing activities. Surveys should follow USFWS's General Rare Plant Survey Guidelines (USFWS 2002); and CDFW's Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (2018) or their most recent equivalents.	X		
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, CDFW, and NCRWQCB	PLANT-6	General Protection Measures	Herbicide Application, Clearing, and Ground Disturbance. If mechanical removal is not effective, or could damage sensitive habitats, limited herbicide application may occur as noted below and in accordance with General Protection Measures VHDR-6 through VHDR-8 (PDEIR Appendix E), wind speed limitations during herbicide application. ♦ To avoid impacts to other special-status species (non-vernal pool species), the following protections will be applied: • Application of herbicide will occur during dry conditions (no precipitation), to the maximum extent practicable. • Backpack and hand-held herbicide application, if applied in dry conditions, is prohibited within 5 feet of any special-status plant. Protect special-status plants from herbicide drift (e.g., cover with plastic when spraying or use a wick applicator). • Broadcast and power spray herbicide application is prohibited; and • Ground disturbing activities are prohibited within 5 feet of senesced annual and perennial plants and within 10 feet of perennial plants. Ground disturbance should occur outside of the dripline of any woody species identified for avoidance.	x	x	

SPECIES CONDITIONS — All Permits

Permit	Agency	Condition #	Topic	Requirement	Pre-construction	Construction	Post-construction
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	ASP-1	Habitat Protection	Qualifications of the Qualified Biologist and USFWS-Approved Biologist Biological monitoring and construction oversight will be provided by biologists at two different experience levels, depending on the activity. These two levels are described in this measure, below. In general, the Qualified Biologist will complete many tasks across species for a Proposed Restoration Project, and the USFWS-Approved Biologist will only be required for specific tasks that require additional species expertise. In some cases, the Qualified Biologist(s) may work under the guidance, direction, or supervision of the USFWS-Approved Biologist. Because the qualifications for the USFWS-Approved Biologist exceed those for the Qualified Biologist, any activity indicated as appropriate for the Qualified Biologist may also be completed by a USFWS-Approved Biologist. – Qualified Biologist: The Qualified Biologist is required to meet certain qualifications, as confirmed by the Project Proponent. Résumé review by the USFWS is not required for the Qualified Biologist. Minimum qualifications for the Qualified Biologist include a bachelor's degree in biological or environmental science, natural resources management, or related discipline; field experience in the habitat types that may occur at the project site; familiarity with the Covered Species (or closely related species) that may occur at the project site; and prior preconstruction survey, construction monitoring, or construction oversight experience (if and as relevant to the activity to be conducted). – USFWS-Approved Biologist: For some Covered Species, additional qualifications may be required for biologists who would be responsible for species handling or relocation. These activities would be completed by the USFWS-Approved Biologist when required by the protection measures. Resume(s) for the USFWS-Approved Biologist(s) with experience in the identification of all life stages and ecology of the applicable Covered Species (or closely related species) and their critical habitat will be submitted to the USFWS Field Office for review and approval at least 30 days prior to any activity for which the protection measures indicate that a USFWS-Approved Biologist is required. Because species handling and relocation of some species for proposed restoration projects would be authorized by USFWS through issuance of	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	WPT-1	NW Pond Turtle Pre-Construction Survey	A Qualified Biologist will survey and flag the work area for suitable overwintering habitat (e.g. leaf litter layer under trees and shrubs) or nesting habitat to avoid. Any flagging used must be removed after work is completed. Project personnel will be advised to avoid disturbance in these areas unless site-specific conservation measures allow work to be conducted in these areas to minimize or avoid disturbance. To the extent feasible, logs or rocks will not be moved or otherwise disturbed to avoid impacts to turtles utilizing these objects as cover. If such features must be moved, the biologist will visually inspect these features prior to and during moving to ensure turtles are not present. The biologist will also ensure any work materials do not create dispersal barriers to pond turtle. If a pond turtle is found in the work area during construction, work will stop until the individual(s) leave the area on their own volition. Workers should be vigilant to avoid turtles on roadways and be made aware of the potential for hatchling dispersal. Workers must also visually check for turtles (particularly hatchlings) under vehicles and equipment prior to moving them and allow the turtles to leave the area on their own volition before moving vehicles or equipment. Vehicles should stay on designated roads where feasible and if overland travel is needed in suitable habitat where there is a possibility of dispersing hatchlings, a monitor may be required.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	WPT-2	NW Pond Turtle Monitoring	Before construction activities occur, a Qualified Biologist will search all suitable aquatic habitat in the project area a minimum of three times during appropriate weather conditions (e.g. sunny periods between 8am to 12pm, and from 3pm until an hour before dusk; air temperatures 55.0-90.0 degrees Fahrenheit; wind speeds less than 12.0 mph). Surveys will occur when western pond turtles are most likely to be detected in aquatic habitat: – For the northwestern pond turtle, the highest probability of detection is from April 1 to September 30 (May 1 to August 31 at elevations above 3,500 feet). If work will occur outside of this window, a Qualified Biologist will also search upland habitat between October 1 and March 31 (September 1 to April 30 at elevations above 3,500 feet). In areas where western pond turtles are known to occur or could be present, follow current guidance for visual encounter surveys in the Visual Encounter Survey Protocol for Western Pond Turtles developed by the Oregon Native Turtle Working Group (ODFW 2020). If surveys are not conducted or do not follow USFWS-approved methods, assume western pond turtles are present in suitable aquatic and upland habitat. Inquire with local USFWS Field Office on western pond turtle data records and if surveys have been completed in the project area.	x		

SPECIES CONDITIONS — All Permits

Permit	Agency	Condition #	Topic	Requirement	Pre-construction	Construction	Post-construction
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	WPT-3	Amphibians/Reptiles Protection	For project areas where the northwestern pond turtle are known or assumed to occur, avoid work during the following windows: • For project activities that involve in-water/dewatering work, work will be avoided from October 1 to March 31. • For project activities within 500 meters (1604.4 feet) of suitable nesting habitat (i.e. sunny, open grasslands and ruderal habitat or bare soil), avoid disturbing nesting adult females from May 15 to July 31 unless wildlife exclusion fencing has been installed around all suitable nesting habitat within the proposed project footprint prior to the start of the nesting season (i.e., prior to May 15). Monitoring can be substituted for fencing. • For project activities in overwintering habitat (e.g. muddy pond bottoms), work will be avoided from October 1 to March 31 unless wildlife exclusion fencing has been installed around all suitable overwintering habitat within the proposed project footprint prior to the start of the overwintering season (i.e., prior to October 1). Alternatively, if installation of wildlife exclusion fencing around all overwintering habitat is not feasible, then all suitable overwintering cover (e.g. leaf litter layer, woody debris) will be removed from the project footprint before overwintering begins (i.e., prior to October 1), and will be maintained daily free of suitable overwintering cover. A qualified biologist will also search all mammal burrows for overwintering western pond turtles and move them out of harm's way. The qualified biologist then may collapse the burrows to prevent their usage by overwintering western pond turtles. • For project activities in aestivation habitat (e.g., upland habitat (e.g. leaf litter) within 500 meters (1,604.4 feet) of suitable aquatic habitat), work will be avoided when nearby seasonal aquatic habitat is dry unless wildlife exclusion fencing has been installed around all suitable aestivation habitat within the proposed project footprint before nearby seasonal aquatic habitats dry up. Monitoring can be substituted for fencing. Work windows may be modified via completion of the ESA Section 7(a)(2) Review Form and local Field Office approval.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	WPT-4	NW Pond Turtle	Environmentally Sensitive Areas and Wildlife monitoring will be used to protect western pond turtles and will be implemented in coordination with a Qualified Biologist.	x	x	
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	WPT-5	NW Pond Turtle Nesting Protection	Western pond turtles will only be captured and relocated when it is the only option to prevent injury or mortality, and after all attempts to avoid interaction with the species have been used. If necessary to avoid injury or mortality, relocation of western pond turtles will be conducted by a Qualified Biologist. Western pond turtle relocation will be conducted as described in a USFWS-approved reptile relocation plan submitted by the Project Proponent to the local USFWS Field Office concurrently with the ESA Section 7(a)(2) Review Form or at least 60 days before construction. Early submission facilitates timely USFWS review and approval and helps avoid project delays. • Avoid and minimize transfer of diseases (e.g. turtle-shell disease, respiratory disease). The Qualified Biologist will wear disposable nonlatex or rubber gloves when handling individual turtles to inhibit transmission of disease. Any suspected observations of disease such as respiratory or turtle-shell disease in western pond turtles or any other species of turtle at the project site will be reported to the USFWS within 24 hours and before relocating any western pond turtle. If any western pond turtle or other turtle species in the project site test positive or are suspected of turtle-shell disease, then all turtles at the project site will be considered to be potentially infected. All equipment and clothing will be decontaminated and dried completely prior to and after use at an aquatic project site to prevent disease transmission between water bodies. • Western pond turtles will be released within a few hours of capture. Individuals will be kept in containers with high sides, such as 5-gallon (18.9 liter) plastic buckets or 10-gallon (37.9 liter) storage tubs. Place a lid or piece of cloth over the top to darken the container. Keep captured western pond turtles out of direct sunlight because overheating is possible in a short time. • The Qualified Biologist will capture and relocate the western pond turtle the shortest distance possible to a location that contains similar suitable habitat and that will not be affected by activities associated with the project. No western pond turtles will be relocated more than 500 meters or to a different watershed to prevent disorientation and the spread of diseases.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	WPT-6	NW Pond Turtle Habitat Protection	Maintain existing basking structures (e.g. logs, rocks, shorelines, emergent vegetation, algal mats, and substrate adjacent to aquatic habitat whenever possible. Avoid planting trees and shrubs that would shade suitable basking habitat and maintain an open riparian canopy to allow sufficient solar exposure for basking. Install basking structures as necessary for any basking habitat that is removed.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	TIGO-1	Tidewater Goby Protection	Tidewater Goby Capture and Relocation. By USFWS-Approved Biologist per FISH-3. Transport in separate containers from larger fish to avoid predation. Seining/dipnetting preferred; electrofishing as needed. 1/8" seine and dip nets between block nets. Take limit: ≤10% injury/mortality of captured individuals.		x	

SPECIES CONDITIONS — All Permits

Permit	Agency	Condition #	Topic	Requirement	Pre-construction	Construction	Post-construction
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	IWW-7	In-Water Work - Fish Protection	Fish and other aquatic species will be excluded from occupying the area to be dewatered by blocking the stream channel above and below with fine-meshed block nets or screens, based on the site conditions, while cofferdams and other diversion structures are being installed. Block net mesh will be sized to ensure that aquatic species upstream or downstream do not enter the areas proposed for dewatering. Mesh will be no greater than 1/8-inch diameter. The bottom of the net must be completely secured to the channel bed. Block nets or screens must be checked at least twice daily at the beginning and end of the workday and cleaned of debris to permit free flow of water. Block nets or screens will be placed and maintained throughout the dewatering period at the upper and lower extent of the areas where aquatic species will be removed. Net placement is temporary and will be removed once dewatering has been accomplished, or construction work is complete for the day. Pump intakes will be covered with mesh, in accordance with the requirements of current NMFS fish screening criteria, to prevent potential entrainment of fish or other aquatic species that could not be removed from the area to be dewatered. The pump intake will be checked periodically for impingement of fish or other aquatic species. All work will comply with the CDFW Fish Screening Criteria (CDFW 2001) or NMFS Fish Screening Criteria for Anadromous Salmonids (NOAA 2022).		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	ASP-4	Anadromous Salmonid Protection	Covered Species Entrapment Prevention. All steep-walled holes/trenches covered at end of each workday. Edges sealed with rock bags/sand OR escape ramps ≤30°. Pipes capped or stored above ground. Inspect before filling/moving. Animals released voluntarily or relocated by USFWS-approved biologist.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); USFWS PBO; CDFW RMP	CCC, USFWS, and CDFW	Tidewater Goby Take	Authorized Take - Tidewater Goby	Authorized Take Limits: Tidewater goby — ≤10% of captured/relocated individuals may be injured/killed per project. NW pond turtle — ≤20 adults/juveniles and ≤30 hatchlings injury/mortality annually; ≤2% per pond; ≤25 acres temp / 2 acres permanent nesting habitat loss annually.		x	
Humboldt County CUP (PLN-2025-19393)	County	A.2	Vegetation Monitoring	Permittee shall implement the Vegetation and Aquatic Resources Monitoring Plan (Attachment 1E to staff report) as amended as required by CEQA, NEPA, ESA, and other applicable federal/state/local regulatory statutes.	x	x	x
Humboldt County CUP (PLN-2025-19393)	County	A.7	Monitoring Requirements	Permittee shall adhere to the performance standards and monitoring methods in the Vegetation and Aquatic Resources Monitoring Plan (Attachment 4C to Staff Report).	x	x	x
Humboldt County CUP (PLN-2025-19393)	County	A.8	Reporting Requirements	Permittee shall adhere to the Avoidance and Minimization Measures found in the "Final Technical Report — Biological Resources Evaluation for the Elk River Estuary (Planning Area 1) Restoration Project" October 2025, prepared by Stillwater Sciences, Attachment 4D to staff report.	x	x	x
NMFS Biological Opinion No: WCRO-2025-03119	NMFS	Salmonid Take	Authorized Take - Salmonids	Total limit of disturbed channel cannot exceed 6,250 feet		x	
NMFS Biological Opinion No: WCRO-2025-03120	NMFS	1.a,b	salmonid care	a. Qualified biologists with expertise in the areas of anadromous salmonid biology shall conduct fish relocation activities associated with construction. Caltrout will ensure that all biologists working on the Project are qualified to conduct fish relocation in a manner which minimizes all potential risks to salmonids. b. Salmonids shall be handled with extreme care and kept in water to the maximum extent possible during rescue activities. All captured fish must be kept in cool, shaded, and aerated water protected from excessive noise, jostling, or overcrowding or potential predators any time they are not in the stream, and fish will not be removed from this water except when released. Captured salmonids will be relocated as soon as possible to an instream location in which suitable habitat conditions are present to allow for adequate survival for transported fish and fish already present. Fish will be distributed between multiple areas if biologists judge that overcrowding may occur in a single area.		x	
NMFS Biological Opinion No: WCRO-2025-03121	NMFS	2. a.	Access	a. The Corps and Caltrout shall allow any NMFS employee(s) or any other person(s) designated by NMFS, to accompany field personnel to visit the project site during activities described in this opinion.	x	x	x

EROSION & WATER QUALITY CONDITIONS — All Permits

Permit	Agency	Condition	Topic	Requirement	Pre-constructio	Construction	Post-Construction
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP+A3:E4	CCC, Regional Board, and CDFW	WQHM-3	Erosion & Sediment Control	Erosion and Sediment Control Measures. For projects that do not require coverage under a NPDES permit per GPM WQHM-2, the project proponent will develop and implement erosion and sediment control measures (or plan), which will include appropriate BMPs to reduce the potential release of water quality pollutants to receiving waters. BMPs may include the following measures: • Employ tackifiers, soil binders, or mulch as appropriate for erosion control. • Install sediment control measures, such as straw bales, silt fences, fiber rolls,or equally effective measures, at repair areas adjacent to stream channels, drainage canals, and wetlands, as needed. Sediment control measures will be monitored during and after each storm event for effectiveness.Modifications, repairs, and improvements to sediment control measures will be made as needed to protect water quality. • No sediment control products will be used that include synthetic or plasticmonofilament or cross-joints in the netting that are bound/stitched (such as straw wattles, fiber rolls, or erosion control blankets), and which could trap snakes, amphibians, and other wildlife.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, Regional Board, and CDFW	WQHM-1	Staging Area Setbacks	Staging Areas and Stockpiling of Materials and Equipment. Staging, storage, and stockpile areas must be outside of waters of the state. To the extent feasible, staging will occur on access roads or other previously disturbed upland areas, such as developed areas, paved areas, parking lots, areas with bare ground or gravel, and areas clear of vegetation, to avoid aquatic habitats and limit disturbance to surrounding habitats. Similarly, all maintenance equipment and materials (e.g., road rock and project spoil) will be restricted to the existing service roads, paved roads, or other determined designated staging areas. See GPM-10 for more details regarding protection measures for materials storage. Staging areas will be established for equipment storage and maintenance, construction materials, fuels, lubricants, solvents, and other possible contaminants in coordination with resource agencies. Staging areas will have a stabilized entrance and exit and will be located at least 100 feet from bodies of water unless site-specific circumstances do not provide such a setback, in such cases the maximum setback possible will be used. If an off-road site is chosen and if special-status species are potentially present, the Biological Monitor will survey the selected site to verify that no aquatic resources would be disturbed by staging activities. Stockpiling of materials, portable equipment, vehicles and supplies (e.g., chemicals), will be restricted to the designated construction staging areas. If rain is predicted in the forecast during the dry season, and stockpiled soils will remain exposed and unworked for more than 7 days, then erosion and sediment control measures must be used. If there is a high-wind scenario (to be defined by the approving Water Board as appropriate for an individual project site), then soils will be covered at all times. During the wet season, no stockpiled soils will remain exposed, unless properly installed and maintained erosion and sediment controls are in place on and around the stockpile. Temporary stockpiling of material onsite will be minimized. Stockpiled material will be placed in upland areas far enough away from aquatic habitats that these materials cannot discharge to a water of the state. Exceptions to the language in Regional Board SRGO WQHM-1 to accommodate the unique conditions of the project site and to reduce impacts to wetlands include the following: • Temporary stockpiles of sediment re-use materials, which are excavated material from within waters of the state and will be reused to enhance wetlands and aquatic habitats within waters of the state will be placed within the Contractor Use area near the area they are excavated from, or near the sediment re-use area to reduce the impacts of excessive movement of sediment around the site. • Stockpiles of materials that are actively being installed for culverts, bridges, tide gates, etc will occur adjacent to the installation location. • In project areas where suitable staging areas do not exist, areas designated for sediment re-use will be filled to a suitable		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, Regional Board, and CDFW	WQHM-3	Erosion Control Plans	For projects that do not require coverage under an NPDES permit per WQHM-2, the Project Proponent will include appropriate BMPs, and a rain even action plan if seasonal rain during the construction period might occur, to reduce the potential release of water quality pollutants to receiving waters. The BMPs will be included in the Project Specific Water Pollution Control Plan that will be completed by the contractor prior to construction. BMPs may include the following measures: – Install erosion control measures, such as straw bales, silt fences, fiber rolls, or equally effective measures, at riparian areas adjacent to stream channels, drainage canals, and wetlands, as needed. Erosion control measures will be monitored during and after each storm event for effectiveness. Modifications, repairs, and improvements to erosion control measures will be made as needed to protect water quality. – Erosion control products that include synthetic or plastic monofilament or cross-joints in the netting that are bound/stitched (e.g., straw wattles, fiber rolls, or erosion control blankets) and could trap snakes, amphibians, and other wildlife will not be used.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary); NCRWQCB 401 WQ Certification (WDID 1B25164WNHU); CDFW RMP	CCC, Regional Board, and CDFW	WQHM-4	Hazardous Maerials Management/ Spill Response Plan	Hazardous Materials Management and Spill Response Plan. As part of the SWPPP or Erosion Control Plan (WQHM-3), project proponent will prepare and implement a hazardous materials management and spill response plan. Project proponent will ensure that any hazardous materials are stored at the staging area(s) with an impermeable membrane between the ground and hazardous material and that the staging area is designed to prevent the discharge of pollutants to groundwater and runoff water. Project proponent will stop work, follow the spill response plan, and arrange for repair and clean up by qualified individuals of any fuel or hazardous waste leaks or spills. (See WQHM-6. Accidental Discharge of Hazardous Materials for accidental discharges of a reportable quantity of a hazardous material, sewage, or an unknown material.) Project proponent will notify regulatory agencies within 24 hours of any leaks or spills. Project proponent will properly contain and dispose of any unused or leftover hazardous products off-site. Project proponent will use and store hazardous materials, such as vehicle fuels and lubricants, in designated staging areas located away from stream channels and wetlands, according to local, state, and federal regulations, as applicable.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	SC-5	Debris Disposal Plan	Phase-specific Debris Disposal Plan for excess soil and debris not re-used; identifies authorized disposal sites and removal schedule. Submit prior to commencement of construction of each phase.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC, County, and CDFW	BIO-2	Site Practices for Temporary Impact Areas	Heavy equipment/vehicles restricted to existing access roads/staging areas. Construction materials in designated staging. Erosion control as needed; only non-monofilament wildlife-safe fabrics. Equipment cleaned of oil/lubricants/coolants/hydraulic fluid/soil/debris OUTSIDE wetland/waterways.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC, County, and CDFW	BIO-2 (cont)	Refueling/Equipment Maintenance	No refueling/oil/coolant changes within waterways (except portable generators with secondary spill containment). Drip pans/absorbent blankets used. Spill cleanup kits onsite during refueling.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC, County, and CDFW	BIO-3	Spill Communication Plan	Spill Communication Plan developed by implementation contractor and implemented if construction causes any material hazardous/toxic to aquatic life to enter wetland/waterways. Agencies consulted regarding cleanup procedures.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, Regional Board, and CDFW	GPM-7	Environmentally Sensitive Areas	Monitoring/flagging/fencing to minimize disturbance to environmentally sensitive areas. Agency-approved fencing compatible with species jurisdiction. Inspected/maintained; repairs within 24 hours; removed at project completion.	x	x	x

EROSION & WATER QUALITY CONDITIONS — All Permits

Permit	Agency	Condition	Topic	Requirement	Pre-constructio	Construction	Post-Construction
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, Regional Board, and CDFW	GPM-10	Equipment Maintenance and Materials Storage	Vehicle traffic will be confined to existing roads and the proposed access route(s). All machinery must be in good working condition, showing no signs of fuel or oil leaks. Oil, grease, or other fluids will be washed off at designated wash stations prior to equipment entering the construction site. Inspection and evaluation for the potential for fluid leakage will be performed daily during construction. Where possible, and where it would not result in greater impact to aquatic resources, no equipment refueling, or fuel storage will take place within 100 feet of a body of water. All fuel and chemical storage, servicing, and refueling will be done in an upland staging area or other suitable location (e.g., barges) with secondary containment to prevent spills from traveling to surface water or drains. Project proponents will establish staging areas for equipment storage and maintenance, construction materials, fuels, lubricants, solvents, and other possible contaminants in coordination with resource agencies. Staging areas will have a stabilized entrance and exit and will be located in upland areas to the extent possible and at least 100 feet from bodies of water unless site-specific circumstances do not provide such a setback or would result in further damage to sensitive resources, in which case the maximum setback possible will be used. Fluids will be stored in appropriate containers with covers and properly recycled or disposed of offsite. Machinery stored on site will have pans or absorbent mats placed underneath potential leak areas as a precautionary measure to further reduce the potential for impact from an unintended or previously undetectable leak.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, Regional Board, and CDFW	GPM-11	Material Disposal	All refuse, debris, unused materials, and supplies that cannot reasonably be secured will be removed daily from the project work area and deposited at an appropriate disposal or storage site. All construction debris will be removed from the work area immediately on project completion.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, Regional Board, and CDFW	GPM-12	Fugitive Dust Reduction	To reduce dust, construction vehicles will be speed-restricted to 20 mph when traveling on nonpaved surfaces. Stockpiled materials susceptible to wind-blown dispersal will be covered with plastic sheeting or other suitable material to prevent movement of the material. During construction, water (e.g., trucks, and portable pumps with hoses) or other approved methods will be used to control fugitive dust. Dust suppression activities must not result in a discharge to waterbodies.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, Regional Board, and CDFW	GPM- 15	Revegetate Disturbed Areas	All temporarily disturbed areas will be decompacted and seeded/planted with an assemblage of native riparian, wetland, and/or upland plant species suitable for the area. The applicant will develop a revegetation plan. Plants for revegetation will come primarily from active seeding and planting, or from natural recruitment where applicable. Plants imported to the restoration areas will come from local stock. Only native plants (genera) will be used for restoration efforts. Certified weed-free native mixes and mulch will be used for any restoration planting or seeding. Revegetation activities in and adjacent to waterbodies and other aquatic habitat suitable for Covered Species will commence after construction activities at a site are complete.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC, USFWS, and CDFW	REP- 4	Prohibited Use of Rodenticides	No rodenticides will be used at the project site during construction in areas that support suitable habitat for the Covered reptiles.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	IWW-1	Appropriate In-Water Materials	Selection and use of gravels, cobble, boulders, and instream woody materials in streams, and other materials (e.g., oyster shells, other substrates) for reef/bed restoration will be performed to avoid and/or minimize adverse impacts to aquatic Covered Species and their habitats. On-site gravels will be screened and sorted; Gravels imported from a commercial source will be clean-washed and of appropriate size. As necessary to protect Covered Species, placement will be overseen by a Qualified Biologist; implementation timing will be determined based on the least amount of overlap (or impact on) all sensitive biological resources that may be affected, and the timing of their use of the receiving area. Imported gravel from outside the project watershed will not be from a source known to contain historical hydraulic gold mine tailings, dredger tailings, or mercury mine waste or tailings, unless the gravel is tested for mercury and other toxins. The gravel must meet low concentration thresholds and fall within acceptable limits approved by the USFWS. Materials that may foul or degrade spawning gravels (e.g., sand or soil eroding from sandbag or earthen dams) will be managed to avoid release and exposure in salmonid streams. Oyster shells or other substrates for reef/bed restoration will be cured and inspected to be free of pathogens and/or nonnative species.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	IWW-2	In-Water Vehicle Selection and Work Access	If work requires that equipment enter wetlands or below the banks of a Water of the US, equipment with low ground pressure will be used to minimize soil compaction. Low-ground-pressure heavy equipment mats will be used, if needed to lessen soil compaction. Hydraulic fluids in mechanical equipment working in the waters of the United States or any other aquatic habitat suitable for Covered Species will not contain organophosphate esters. The amount of time this equipment is stationed, working, or traveling in the waters of the United States or other aquatic habitat suitable for Elk River Estuary (Planning Area 1) Restoration Project - 12624303 7 Covered Species will be minimized. All equipment will be removed from the aquatic feature during nonwork hours or returned to the staging area approved through the ESA Section 7(a)(2) Review Form process in the aquatic feature.		x	

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Permit	Agency	Condition	Topic	Requirement	Pre-constructio	Construction	Post-Construction
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	IWW-3	In-Water Placement of Materials/Operation of Equipment	Material used for bank stabilization or in-water restoration will minimize discharge sediment or other forms of waste to waters of the United States or other aquatic habitat suitable for Covered Species. Construction will occur from the top of the stream bank, on a ground protection mat underlain with filter fabric, or a barge. All materials placed in streams, rivers, or other waters will be nontoxic. Any combination of wood, plastic, cured concrete, steel pilings, or other materials used for in-channel structures will not contain coatings or treatments, or consist of substances toxic to aquatic organisms (e.g., zinc, arsenic, creosote, copper, other metals, pesticides, or petroleum-based products) that may leach into the surrounding environment in amounts harmful to aquatic organisms. Except for the following conditions, equipment must not be operated in standing or flowing waters without site-specific approval from the USFWS Field Office: – All construction activities must be effectively isolated from water flows, to minimize the potential for runoff. This may be accomplished by working in the dry season or dewatering the work area in the wet season. – When work in standing or flowing water is required, structures for isolating the in-water work area and/or diverting the water flow must not be removed until all disturbed areas are cleaned and stabilized. The diverted water flow must not be contaminated by construction activities. – All open-flow temporary diversion channels must be lined with filter fabric or other appropriate liner material to prevent erosion. Structures used to isolate the in-water work area and/or divert the water flow (e.g., cofferdam or geotextile silt curtain) must not be removed until all disturbed areas are stabilized.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	IWW-4	In-Water Staging Areas and Use of Barges	Where appropriate and practical, barges will be used to stage equipment and construct the project, to reduce noise, traffic disturbances, and effects on terrestrial vegetation. When barge use is not practical, construction equipment and plant materials will be staged in staging areas approved through the ESA Section 7(a)(2) Review Form process. Existing staging sites, maintenance toe roads, and crown roads will be used for project staging and access to avoid affecting previously undisturbed areas. For projects that involve in-water work for which boats and/or temporary floating work platforms are necessary, buoys will be installed so that moored vessels will not beach on the shoreline and anchor lines will not drag. Moored vessels and buoys will not be within 25 feet of vegetated shallow waters.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	IWW-5	Cofferdam Construction	Cofferdam Construction. Cofferdams may be installed both upstream and downstream, and along portions of the cross section of a channel or other waterway if necessary to isolate the extent of the work areas. When feasible, construction of cofferdams will begin in the upstream area and continue in a downstream direction, allowing water to drain and allowing fish and aquatic wildlife species to leave (under their own volition), from the area being isolated by the cofferdam, prior to closure. The flow will then be diverted only when construction of the upstream dam is completed and the work area has been naturally drained of flow, at this point, the downstream dam, if necessary, would be completed and then flow would be diverted around the work area. Cofferdams and stream diversion systems will remain in place and fully functional throughout the construction period. In order to minimize adverse effects to aquatic species, stream diversions will be limited to the shortest duration necessary to complete in-water work. In-water cofferdams will only be built from materials such as sandbags, plastic, clean gravel (possibly wrapped in impermeable material), rubber bladders, vinyl, steel, or earthen fill, in a manner that minimizes siltation and/or turbidity. Sandbags may only be used to build cofferdams upstream of spawning gravels when filled with clean gravel (or other material acceptable to the approving Water Board). Where possible, cofferdams should be pushed into place. If pile driving (sheet piles) is required, vibratory hammers should be used and impact hammer should be avoided. If necessary, the footing of the cofferdam will be keyed into the channel bed at an appropriate depth to capture the majority of subsurface flow needed to dewater the streambed. When cofferdams with bypass pipes are installed, debris racks will be placed at the bypass pipe inlet in a manner that minimizes the potential for fish impingement and/or entrapment. As needed and where feasible, bypass pipes will be monitored for accumulation of debris. All accumulated debris will be removed. When appropriate, cofferdams will be removed so surface elevations of water impounded above the cofferdam will not be reduced at a rate greater than one inch per hour. Cofferdams in tidal waters should be removed during the lowest possible tide and in slack water to the extent feasible to minimize disturbance and turbidity. This will minimize the probability of fish and other aquatic species stranding as the area upstream becomes dewatered. All dewatering/diversion facilities will be installed such that natural flow is maintained upstream and downstream of project areas. An area may need to be dewatered for long enough to allow special-status species to leave on their own before final clearance surveys and construction can begin.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	IWW-6	Dewatering/Diversion	Dewatering/Diversion. The area to be dewatered will encompass the minimum area necessary to perform construction activities. The project proponent will provide a dewatering plan with a description of the proposed dewatering structures, and appropriate types of BMPs for the installation, operation, maintenance, and removal of those structures. The period of dewatering/diversion will extend only for the minimum amount of time needed to perform the restoration activity and to allow special-status species time to leave on their own before final clearance surveys and construction can begin. Where feasible and appropriate, dewatering/diversion will occur via gravity-driven systems, and where water is pumped from within the construction area, it should be pumped to upland areas (where feasible) and to a location where it can infiltrate without return flows to the watercourse. Dewatering/diversion will be designed to avoid direct and preventable indirect mortality of fish and other aquatic species. If special-status fish species may be present in the area to be dewatered, a fish capture and relocation plan will be developed and implemented for review and approval by appropriate agencies (e.g., CDFW, NMFS, USFWS, as applicable). Stream flows will be allowed to gravity flow around or through the work site using temporary bypass pipes or culverts. Bypass pipes will be sized to accommodate, at a minimum, twice the expected construction-period flow, to not increase stream velocity, and will be placed at stream grade. Conveyance pipe outlet energy dissipaters will be installed to prevent scour and turbidity at the discharge location. When use of gravity-fed dewatering is not feasible and pumping is necessary to dewater a work site, a temporary siltation basin and/or use of silt bags may be required. Silt fences or mechanisms to avoid sediment input to the flowing channel will be installed adjacent to flowing water. Water pumped or removed from dewatered areas will be conducted in a manner that does not contribute turbidity to nearby receiving waters. Where possible, pumps will be refueled in an area well away from the stream channel. Fuel absorbent mats will be placed under the pumps while refueling. Equipment working in the stream channel or within 25 feet of a wetted channel will have a double (i.e., primary and secondary) containment system for diesel and oil fluids. All work will comply with the CDFW Fish Screening Criteria (CDFW 2001) and NMFS Fish Screening Criteria for Anadromous Salmonids (NMFS 1997). Pump intakes will be covered with mesh per the requirements of current fish screening criteria to prevent potential entrainment of fish or other aquatic species that could not be removed from the area to be dewatered. The pump intake will be checked periodically for impingement of fish or other aquatic species. Diverted flows must be of sufficient quality and quantity, and of appropriate temperature, to support existing fish and other aquatic life both above and below the diversion. Pre-project flows must be restored to the affected surface water body upon completion of work at that location. Where diversions are planned, contingency plans will be developed that include oversight for		x	

EROSION & WATER QUALITY CONDITIONS — All Permits

Permit	Agency	Condition	Topic	Requirement	Pre-constructio	Construction	Post-Construction
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	IWW-8	Removal of Diversion and Barriers to Flow	Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that will allow flow to resume with the least disturbance to the substrate and consideration of turbidity levels. Alteration of creek beds will be minimized to the maximum extent possible; any imported material that is not part of the project design will be removed from stream beds upon completion of the project		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	VHDR-1	Avoidance of Vegetation Disturbance	The Project Proponent will minimize the amount of soil, terrestrial vegetation, emergent vegetation, and submerged vegetation (e.g., eelgrass and kelp in marine areas, or submerged aquatic vegetation in freshwater areas) disturbed during project construction and completion by using methods creating the least disturbance to vegetation. Disturbance to existing grades and native vegetation, the number of access routes, the size of staging areas, and the total area disturbed by the project will be limited to the extent of all temporary and permanent impacts, as defined by the final project design. All roads, staging areas, and other facilities will be placed to avoid and limit disturbance to aquatic habitat suitable for Covered Species (e.g., streambank or stream channel, and riparian habitat). Existing ingress or egress points will be used and/or work will be performed either from the top of the banks, from barges on the waterside of the stream or levee bank, or from dry gravel beds. Existing native vegetation will be retained as practicable, emphasizing the retention of shade-producing and bank-stabilizing trees and brush with greater than 6-inch-diameter branches or trunks. Vegetation disturbance and soil compaction will be minimized by using low-ground-pressure equipment that has a greater reach than or exerts less pressure per square inch on the ground than other equipment.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	VHDR-2	Native and Invasive Vegetation Removal Materials and Methods	All invasive plant species (e.g., those rated as invasive by the Cal-IPC, or local problem species) will be removed from the project site as practicable, using locally and routinely accepted management practices. Invasive plant material will be destroyed using approved protocols and disposed of at an appropriate upland disposal or compost area. Invasive plant materials stockpiled at sites known to experience flash flooding outside the flood season will be removed within 15 days of the initial creation of the stockpile, to contain the potential spread of invasive plant material. Stockpiling of invasive plant materials is prohibited during the flood season (typically November to April). • When practicable, nonnative plants will be removed when flowers or seeds are not present. If flowers or seeds are present and have the potential for seed to be widely dispersed during removal (e.g., Spanish broom [Spartium junceum] and eupatory [Ageratina adenophora]), the flowering head will be removed and placed in a container for disposal prior to removal. • Whenever practicable, nontarget vegetation will be protected to minimize the creation of exposed ground and potential for re-colonization of nonnative plants. A botanist will be consulted prior to any restoration implementation and during preparation of restoration plans. • Where appropriate, barriers will be installed to limit illegal off-highway vehicle activity following removal of nonnative vegetation along roadways. Examples of barriers are large rocks, soil berms, and cut vegetation. • To the extent practicable, crews in known or assumed occupied habitat for Covered Species will minimize multiple stream crossings for nonnative plant removal from both streambanks simultaneously (e.g., during a work period, an individual will conduct activities along one streambank for the entire stretch before initiating activities on the opposing bank). Stream crossings will use existing features such as bridges and boulders to avoid boots in the water, as much as feasible.		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ	CCC, NCRWQCB, and CDFW	VHDR-3	Revegetation Materials, Methods, Erosion Control & Monitoring	Site contours returned to preconstruction or approved enhanced design. Native plants from local stock; weed-free mixes. Erosion control fabrics: only non-monofilament wildlife-safe; slit for plant growth; exclusion netting removed after 2 yrs. Monitor minimum 2 years; success = 60% absolute cover.			x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	VHDR-3	Revegetation Materials and Methods	On completion of work, site contours will be returned to preconstruction conditions or designed to provide increased biological and hydrological functions. Where disturbed, topsoil will be conserved for reuse during restoration, to the extent practicable. Native plant species comprising a diverse community structure (plantings of both woody and herbaceous species, if both are present) that follow a plant species palette approved through the ESA Section 7(a)(2) Review Form process will be used for revegetation of disturbed and compacted areas, as appropriate. Any area barren of vegetation as a result of project implementation will be restored to a natural state by mulching, seeding, planting, or other means, with native trees, shrubs, willow stakes, erosion control native grass seed mixes, or herbaceous plant species, following completion of project construction. Restoration planning for these areas should include steps to prevent colonization by nonnative species, including recolonization by any nonnative plant species that occupied the site prior to project implementation. Irrigation may also be required to ensure survival of containerized shrubs or trees or other vegetation, depending on rainfall. If irrigation is used, all irrigation materials will be removed once no longer needed. Soils that have been compacted by heavy equipment will be decompacted by shallow or deep ripping, if necessary to allow for revegetation at project completion as heavy equipment exits the construction area.			x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	VHDR-4	Revegetation Erosion Control Materials and Methods	If erosion control fabrics are used in revegetated areas, they will be slit in appropriate locations to allow for plant root growth. Only non-monofilament, wildlife-safe fabrics will be used. All exclusion netting/caging placed around plantings will be removed after 2 years or sooner.			x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	VHDR-5	Revegetation Monitoring and Reporting	All revegetated areas will be maintained and monitored for a minimum of 2 years after replanting is complete, or until success criteria are met, to ensure that the revegetation effort is successful. The standard for success is 60% cover compared to pre-project conditions at the project site or at least 60% cover compared to an intact, local reference site. If an appropriate reference site or pre-project conditions cannot be identified, success criteria will be developed for review and approval on a project-by-project basis, based on the specific habitat impacted and known recovery times for that habitat and geography. The Project Proponent will prepare a summary report of the monitoring results and recommendations on December 1 each year. The report will be provided to the respective USFWS Field Office (copy the Lead Action Agency).			x

EROSION & WATER QUALITY CONDITIONS — All Permits

Permit	Agency	Condition	Topic	Requirement	Pre-constructio	Construction	Post-Construction
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	VHDR-6	General Herbicide Use	Chemical control of invasive plants and animals will only be used when other methods are determined to be ineffective or would create greater environmental impacts than chemical control. Herbicide use will be evaluated on a project-by-project basis, with consideration of (and preference given toward) IPM strategies wherever possible. See University of California statewide IPM Program for guidance documents (http://ipm.ucanr.edu/index.html). Broadcast spraying, including the use of aerial drones, may be used if it provides greater application accuracy and access. Any chemical considered for control of invasive species must be approved for use in California; its application must adhere to all regulations, in accordance with the California Environmental Protection Agency (CEPA 2011 or most recent version); and it must be applied by a licensed applicator under all necessary state and local permits. Herbicides will be used only in a context where all treatments are considered, and various methods are used individually or in concert to maximize the benefits while reducing undesirable effects and applying the lowest legal effective application rate, unless site-specific analysis determines that a lower rate is needed to reduce nontarget impacts. Only the minimum area necessary for effective control will be treated. Whenever feasible, reduce vegetation biomass by mowing, cutting, or grubbing it before applying herbicide to reduce the amount of herbicide needed. Within 25 feet of any Water of the US, only formulations approved by the United States Environmental Protection Agency for aquatic use will be used. Soil-activated herbicides can be applied as long as directions on the label are followed. To limit the opportunity for surface water contamination with herbicide use, all projects will have a minimum buffer for ground-based broadcast application of 100 feet, and the minimum buffer with a backpack sprayer is 15 feet (aerial application is not included in the Proposed Action). The licensed Applicator will follow recommendations for all California restrictions, including wind speed, rainfall, temperature inversion, and ground moisture for each herbicide used. In addition, herbicides will not be applied when rain is forecast to occur within 24 hours, or during a rain event or other adverse weather conditions (e.g., snow, fog). Herbicide adjuvants are limited to water or nontoxic or practically nontoxic vegetable oils and agriculturally registered, food grade colorants (e.g., Dynamark U.V. [red or blue], Aquamark blue, or Hi-Light blue) to be used to detect drift or other unintended exposure to waterways. Any herbicides will be transported to and from the worksite in tightly sealed waterproof carrying containers. The licensed	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	VHDR-7	Herbicide Application Planning	Written chemical application, monitoring, and reporting prescriptions will be provided to each Project Proponent from a certified Pest Control Advisor (PCA) (CEPA 2011). The PCA will ensure that legal, appropriate, and effective chemicals are used, with appropriate methodologies. Field scouting must be done before application; the licensed Applicator (CEPA 2011) must be on site to lead all applications and will adhere to the PCA prescription and standard protection measures for application. Prior to field scouting or application, the PCA should receive Environmental Awareness Training (see GPM-4, Environmental Awareness Training) for the project so that they are aware of Covered Species and habitats present at the project site. The PCA monitoring prescription should address timing necessary to evaluate and report target species efficacy as well as any nontarget plant and animal effects. As applicable, Best Management Practices for Wildland Stewardship: Protecting Wildlife When Using Herbicides for Invasive Plant Management (Cal-IPC 2015 or the most recent version) will be followed. If the guidance cannot be followed as applicable, then a project specific IPM Plan will also be submitted with the ESA Section 7(a)(2) Review Form.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	VHDR-8	Herbicide Application Reporting	The licensed applicator will keep a record of all plants/areas treated; amounts and types of herbicides used; and dates of application as well as other monitoring elements prescribed by the PCA in VHDR-7; pesticide application reports must be completed within 24 hours of application and submitted to the applicable agencies for review. Wind and other weather data will be monitored and reported for all application reports. Below is a description of the known toxicity of herbicides proposed for use under this programmatic. If other herbicides are proposed for use by a Project Proponent, a complete effects analysis must be submitted along with the ESA Section 7(a)(2) Review Form to allow USFWS to determine if application of the herbicide(s) can be covered under the PBO. • 2,4-D amine: Acts as a growth-regulating hormone on broad-leaf plants, being absorbed by leaves, stems and roots, and accumulating in a plant's growing tips. Requires a 15-foot buffer when hand applied, and a 50-foot buffer when applied using a backpack sprayer. • Aminopyralid: A relatively new selective herbicide first registered for use in 2005. Used to control broadleaf weeds. Acute toxicity tests show aminopyralid to be practically nontoxic, with aquatic invertebrates showing more sensitivity. • Chlorsulfuron: Used to control broadleaf weeds and some annual grasses. Readily absorbed from the soil by plants. Does not bioaccumulate in fish. • Clethodim: A post emergence herbicide for control of annual and perennial grasses. Not allowed for broadcast application; allowed for hand application and backpack sprayer, both with a 50-foot buffer. • Clopyralid: A relatively new and very selective herbicide. Toxic to some members of only three plant families. Very effective against knapweeds, hawkweeds, and Canada thistle. Allowed up to the waterline (for hand application) but requires a 100-foot buffer for broadcast application. Only one treatment per year allowed. • Dicamba: Used to control broadleaf weeds, brush, and vines. Broadcast application NOT allowed due to drift issues. Leaves and roots absorb dicamba and it moves through the plant.	x	x	x

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CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	CCC, NCRWQCB, and CDFW	AIR-1	Air Quality / Dust Control	Proponents of restoration projects permitted under the Order and their construction contractors shall implement the following measures to minimize conflicts between project construction and applicable air quality plans: · Use equipment and vehicles that comply with CARB requirements and emission standards for on-road and off-road fleets and engines. New engines and retrofit control systems should reduce NOX and PM emissions from diesel-fueled on-road and off-road vehicles and equipment. · Minimize idling times, either by shutting equipment off when not in use or by reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure, Title 13, Section 2485 of the California Code of Regulations). Clear signage should be posted for construction workers at all entrances to the site. · Maintain all equipment in proper working condition according to the manufacturer's specifications. · Use electric equipment when possible. Use lower emitting alternative fuels to power vehicles and equipment where feasible. · Use low–volatile organic · All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. · All haul trucks transporting soil, sand, or other loose material off-site shall be covered. · All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. · All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). · All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.		x	
NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	Regional Board	NOA p.4	Vegetation/Habitat/Disposal/Restoration Measures	Apply and adhere to VHDR-1 through VHDR-8 — Vegetation, Habitat, Disposal (Above rows 26-34), and Restoration Protection Measures GPM1-15 (Other conditions sheet) WQHM-1 (modified) through WQHM-6 (top of sheet); IWW-1 through IWW-8; (Above)	x	x	x
NCRWQCB 401 WQ Certification (WDID 1B25164WNHU)	Regional Board	NOA p.4	Sediment Reuse / Stockpile Restrictions	Temporary stockpiles placed within contractor use area near excavation/sediment re-use area. Stockpiled sediment shall notremain within jurisdictional wetlands more than 365 days; shall NOT result in permanent conversion of wetlands to uplands. Where staging areas don't exist, sediment re-use areas may be filled, used as staging during construction window, then restored to design grade and planted at end of construction.		x	

ALL OTHER CONDITIONS — All Permits

Permit	Agency	Condition	Topic	Condition / Requirement	Pre-construction	Construction	Post-Construction
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	I.5	Project Area Access	Permittee shall provide CDFW reasonable access to the Project Area and cooperate fully with CDFW's efforts to verify compliance with or effectiveness of the RMP.	x	x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	I.7	Permittee Responsible for Authorized Personnel	Permittee is responsible for actions of non-permitted individuals assisting with management and monitoring activities.	x	x	x
Elk River Estuary RMP (RMP 2026-0019-R1)	CDFW	I.8	Documentation at Project Area	Permittee or Designated Biologist shall have a copy of this RMP in their possession when undertaking permitted activities.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	Std Cond 1	Notice of Receipt and Acknowledgment	Permit not valid and development shall not commence until a copy signed by permittee/agent acknowledging receipt and acceptance of terms is returned to the Commission office.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	Std Cond 2	Expiration	If development has not commenced, the permit will expire two years from the date of Commission vote (4/17/2026). Development pursued diligently and completed in reasonable time. Extension application must be made prior to expiration date.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	Std Cond 3	Interpretation	Any questions of intent/interpretation of any condition will be resolved by the Executive Director or the Commission.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	Std Cond 4	Assignment	The permit may be assigned to any qualified person, provided assignee files an affidavit accepting all terms and conditions.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	Std Cond 5	Terms Run with the Land	Terms and conditions are perpetual and bind all future owners and possessors of the subject property.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	Special Cond 6	Trail Signage & Parking Lot Fencing	Prior to commencement of signage/trail amenities development, submit final plans for signage and fencing. Include nature study signage per Exhibit 7; visually compatible with surroundings; to-scale elevation plans; materials/colors; site plans; sign content (nature study + tsunami safety); installation schedule.	x		
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	Special Cond 10	Minor Changes	Permittee shall undertake development in conformance with all terms/conditions including ED-approved plans. Proposed changes require either CDP amendment or, if ED determines no amendment legally required, ED approval if changes are reasonable, necessary, and do not adversely impact coastal resources.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary)	CCC	Special Cond 11	Assumption of Risk / Indemnity	Applicant acknowledges site may be subject to flooding, erosion, earth movement hazards; assumes all risks; waives claims against Commission; agrees to indemnify and hold harmless the Commission, officers, agents, employees from any liability arising from such hazards.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-1	Receipt and Copies of All Permits and Authorizations	Receipt and Copies of All Permits and Authorizations: Work will not begin until all necessary permits and authorizations have been received (e.g., USACE, USFWS, NMFS, State and Regional Boards, CDFW). The project proponent will ensure that a readily available copy of the applicable agency permits and authorizations (e.g., USFWS Biological Opinion, NMFS Biological Opinion, Section 404 permit, etc.) is maintained by the construction foreman/manager on the project site for the duration of project activities.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-2	Construction Work Windows	Construction work windows may be required to avoid impacts to aquatic resources/beneficial uses during wet season. Project proponents must follow applicable Regional Board's construction work windows unless otherwise approved.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-3	Construction hours/ lighting	Construction Hours. Construction activities will generally be limited to daylight hours, to the extent feasible. If nighttime construction is necessary, including in tidally influenced waters where tides may limit daylight access and work schedules, all project lighting (e.g., staging areas, equipment storage sites, roadway, and construction footprint) will be selectively placed and directed onto the roadway or construction site and away from aquatic habitats. Light glare shields will be used to reduce the extent of illumination into aquatic habitats. If the work area is near surface waters, the lighting will be shielded so that it does not shine directly into the water		x	
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-4	Environmental Awareness Training	For projects occurring where Covered Species are likely to be present, prior to engaging existing or new personnel in construction activities, new construction personnel will participate in environmental awareness training conducted by a Qualified Biologist. Construction personnel will be informed regarding the identification, potential presence, habitat requirements, legal protections, avoidance and minimization measures, and applicable protection measures for Covered Species with the potential to occur in or immediately adjacent to the project site. Construction personnel will be informed of the procedures to follow should a Covered Species be encountered during construction activities. For projects where the Qualified Biologist is not regularly on the project site, training may be provided in an online/virtual meeting. For projects that may continue over an extended duration and require excessive training events, a training video developed under the supervision of the Qualified Biologist may be used to train new personnel, as long as a Qualified Biologist is available by phone to answer questions about the training or to answer questions that may arise during construction.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-5	Environmental Monitoring	Where appropriate and based on project-specific requirements, a Qualified Biologist(s) will perform site clearance at the beginning of each day and will monitor construction activities throughout the day in, or immediately adjacent to, sensitive resources and/or Covered Species habitat (including critical habitat as applicable), as necessary. The Qualified Biologist will confirm that all applicable protection measures are implemented during project construction. The Qualified Biologist will have the authority to stop any work if they determine that any permit requirement is not fully implemented or if it is necessary to protect Covered Species, consistent with the information provided in a signed ESA Section 7(a)(2) Review Form by the USFWS Field Office to cover the proposed project by the PBO. The Qualified Biologist will prepare and maintain a biological monitoring log of construction site conditions and observations, which will be kept on file.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-6	Work Area and Speed Limits	Construction work and materials staging will be restricted to the smallest area practicable in designated work areas, routes, staging areas, temporary interior roads, or the limits of existing roadways. Prior to initiating construction or grading activities, brightly colored fencing or flagging or other practical means will be erected to demarcate the limits of the project activities, including the boundaries of designated staging areas; ingress and egress corridors; stockpile areas for spoils disposal, soil, and materials; and equipment exclusion zones. Flagging or fencing will be maintained in good repair for the duration of project activities. Posted speed limits on public roadways will be adhered to and speeds will be limited to 20 miles per hour (mph) in the project area on unpaved surfaces and unpaved roads (to reduce dust and soil erosion), or in areas where Covered Species have the potential to occur. Speeds greater than 20 mph may be permitted in the project area where Covered Species are not expected to occur (e.g., in areas where Covered Species have been excluded) and there is no risk of generating excessive dust (e.g., surfaces are paved, saturated, or have been treated with other measures to prevent dust).	x	x	x

ALL OTHER CONDITIONS — All Permits

Permit	Agency	Condition	Topic	Condition / Requirement	Pre-construction	Construction	Post-Construction
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-8	Prevent Spread of Invasive Species	The spread or introduction of nonnative, invasive plant and animal species will be avoided. When practicable, nonnative invasive plants in the project areas will be removed and properly disposed of in a manner that will not promote their spread. Equipment will be cleaned of any sediment or vegetation at designated wash stations before entering or leaving the project area, to avoid spreading pathogens or nonnative invasive species. Activities that create new habitat for nonnative invasive species will be avoided. Isolated infestations of nonnative invasive species identified in the project area will be treated with weed management methods at an appropriate time, to prevent further formation of seed and destroy viable plant parts and seed. Wash sites must be in confined areas that limit runoff to any surrounding habitat, and on a flat grade. Upland areas will use rice straw or invasive species-free local slash/mulch for erosion control; the remainder of the project area will use certified, weed-free erosion control materials. Mulch must be certified weed-free. Construction supervisors and managers will be educated on weed identification and the importance of controlling and preventing the spread of invasive weeds. Guidelines within the Aquatic Invasive Species Decontamination Protocols (CDFW 2022) include: – If decontamination is not done on site, transport contaminated equipment in sealed plastic bags and keep separate from clean gear. – Gear may be dedicated for a specific field site but should be left on site and be cleaned when moved off site. – Sets of field gear may be rotated in and out of field per cleaning cycle. – When practical, begin work upstream and work downstream. This avoids transporting aquatic invasive species to non-infested upstream areas. Disinfectant methods include: – Place used gear in a freezer, thawing, immersing gear in saltwater solution for 10 minutes, rinsing, and hanging to dry. –	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-9	Practices to Prevent Pathogen Contamination	The Project Proponent will review and implement restoration design considerations and best management practices (BMPs) to help prevent pathogen contamination, as published by the “Working Group for Phytophthoras in Native Habitats” (www.calphytos.org), when there is a risk of introduction and spread of plant pathogens in site plantings. The Project Proponent will review and implement decontamination protocols to prevent the spread of pathogens among amphibians or other aquatic animals when working in aquatic habitats that may support native amphibians. Gear and equipment that may contact water will be cleaned and decontaminated to prevent the spread of chytrid fungus.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-13	Trash Containment and Removal	During project activities all trash, especially food-related refuse that may attract potential predators or scavengers, will be properly contained in sealed containers, removed from the work site, and disposed of daily.	x	x	x
CDP 1-25-0781 (CalTrout Elk River Estuary) / NCRWQCB 401 WQ Certification (WDID 1B25164WNHU), CDFW RMP	CCC, NCRWQCB, and CDFW	GPM-14	Project Cleanup after Completion	Work pads, temporary falsework, and other construction items will be removed from the 100-year floodplain by the end of the construction window. Removal of materials must not result in discharge to waterbodies.	x	x	x
Humboldt Bay Harbor District Permit (2025-05)	Harbor District	Cond 2	Other Agency Approvals	All work authorized by this Permit is subject to the approval of the following public agencies as applicable: (A) California Coastal Commission; (B) North Coast Regional Water Quality Control Board; (C) California Department of Fish and Wildlife; (D) United States Army Corps of Engineers. Permittee shall fully comply with all regulations and conditions imposed by these agencies.	x	x	
Humboldt Bay Harbor District Permit (2025-05)	Harbor District	Cond 3	SWRCB PEIR Mitigation	Mitigation measures described in the State Water Resources Control Board Restoration Projects Statewide Order PEIR Consolidated Final, as applicable, are made conditions of this permit by reference.	x	x	x
Humboldt Bay Harbor District Permit (2025-05)	Harbor District	8	Navigation - No Unreasonable Interference	There shall be no unreasonable interference with navigation by the work herein authorized.		x	
Humboldt Bay Harbor District Permit (2025-05)	Harbor District	9	Public Access to Navigable Waters	No attempt shall be made by the Permittee to interfere or forbid the full and free use by the public of all navigable waters at or adjacent to the work.	x	x	x
CDP 1-25-0781 (CalTro	CCC	S.C. III-3a	Livestock Fencing	Protection of ESHAs - Livestock Fencing. Permanent wildlife-friendly livestock exclusion fencing installed around restoration areas (except where rivers/dense vegetation prevent it). Buffer of 100 ft from rivers/streams where feasible.			x

USACE PERMIT CONDITIONS:

GENERAL CONDITIONS:

1. The time limit for completing the work authorized ends on May 31, 2036. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. For your convenience, a copy of the water quality certification is provided as enclosure 2. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

7. You understand and agree that, if future operations by the United States require the removal, relocation or other alteration of the structure or work authorized herein, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, you will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

SPECIAL CONDITIONS:

1. To remain exempt from the prohibitions of Section 9 of the Endangered Species Act, the non-discretionary Terms and Conditions for incidental take of federally-listed tidewater goby (*Eucyclogoblus newberryi*), SONCC coho salmon (*Oncorhynchus kisutch*), NC steelhead trout (*Oncorhynchus mykiss irideus*), CC Chinook salmon (*Oncorhynchus tshawytscha*), and Southern DPS green sturgeon (*Acipenser medirostris*) shall be fully implemented as stipulated in the enclosed PBO form from USFWS (enclosure 3), the

August 29, 2022 California Statewide Restoration PBO (https://www.spn.usace.army.mil/Portals/68/docs/regulatory/BOs/Prog/USFWS_PBO_CA_Restoration_2022.08.29.pdf), and the NMFS BO titled "Re: Endangered Species Act Section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for the Elk River Estuary Enhancement (Planning Area 1) Project in Eureka, California (Corps File No. SPN-2022-00301)", dated April 7, 2026 (pages 7-10 of enclosure 4). Project authorization under the NWP is conditional upon compliance with the mandatory terms and conditions associated with incidental take. Failure to comply with the terms and conditions for incidental take, where a take of a federally-listed species occurs, will constitute an unauthorized take and non-compliance with the NWP authorization for your project. USFWS and NMFS are, however, the authoritative federal agencies for determining compliance with the incidental take statement and for initiating appropriate enforcement actions or penalties under the Endangered Species Act.

2. The NOAA Office for Coastal Management initiated consultation with the NMFS to address project related impacts to Essential Fish Habitat. The conservation recommendations outlined on page 12 in enclosure 4 shall be fully implemented as stipulated.

3. All work occurring below the plane of ordinary high water shall be confined to the low-flow period, during summer months to avoid excessive sedimentation of creek waters.

4. Should any buried archaeological materials be uncovered during project activities, such activities shall cease within 100 feet of the find. Prehistoric archaeological indicators include: obsidian and chert flakes, and chipped stone tools; bedrock outcrops and boulders with mortar cups; ground stone implements (grinding slabs, mortars, and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of bone and fire affected stones. Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells and dumps, and old trails. The Corps and consulting tribes shall be notified of the discovery and a professional archaeologist shall be retained by the permittee to evaluate the find and recommend appropriate mitigation measures. Proposed mitigation measures shall be submitted to the Corps for approval, and project-related activities shall not resume within 100 feet of the find until all approved mitigation measures have been completed to the satisfaction of the Corps.

5. All staging, maintenance, and storage of heavy machinery shall be conducted in such a location and manner that no fuel, oil, or other petroleum products may run off or be washed by rainfall into the water.

6. All appropriate best management practices shall be implemented throughout the project site to help minimize sediment disturbance and suspension within the water.

7. Equipment shall access tidal areas only during low tide.

8. If flowing water is present in the project reach, the creekbed shall be initially dewatered through the installation of a by-pass pipe and sandbag cofferdams upstream and downstream of the project reach. The by-pass pipe shall be sufficiently sized to avoid any decrease in flow velocity at its inlet or outlet. The dewatering process shall be performed in a manner to minimize any disruption or alteration of normal water flow

downstream of the project.

A post construction report shall be submitted 45 days after the conclusion of construction activities. The report shall document construction activities and contain as-built drawings (if different from drawings submitted with application) and include before and after photos.

APPENDIX F FEDERAL PROVISIONS

ADDENDUM TO CONSTRUCTION CONTRACTS RECEIVING FEDERAL FUNDING

In addition to the provisions in the Contract and its exhibits, Contractor agrees to comply with all of the following provisions, as applicable, as required by 2 CFR Part 200 Appendix II to Part 200—Contract Provisions for non-Federal Entity. In the event of a conflict with other provisions in this Contract that address the same or a similar requirement, the provisions that are stricter and impose the greater duties upon Contractor shall apply.

A. If this value of this Contract is more than **$250,000** (the Simplified Acquisition Threshold amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council as authorized by 41 U.S.C. section 1908), the following provision applies:

Remedies for Breach. In addition to all other remedies included in this Contract, Contractor shall, at a minimum, be liable to CalTrout for all foreseeable damages it incurs as a result of Contractor violation or breach of the terms of this Contract. This includes without limitation any costs incurred to remediate defects in Contractor's services and/or the additional expenses to complete Contractor's services beyond the amounts agreed to in this Contract, after Contractor has had a reasonable opportunity to remediate and/or complete its services as otherwise set for in this Contract. All remedies provided for in this Contract may be exercised individually or in combination with any other remedy available hereunder or under applicable laws, rules, and regulations. The exercise of any remedy shall not preclude or in any way be deemed to waive any other remedy.

B. If this Contract constitutes a "**federally assisted construction contract**," as defined in 41 C.F.R. § 60-1.3, the following provision applies:

EQUAL EMPLOYMENT OPPORTUNITY. During the performance of this Contract, Contractor agrees as follows:

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

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

(ii) The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(iii) The Contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a

part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the Contractor's legal duty to furnish information.

(iv) The Contractor will send to each labor union or representative of workers with which he has a collective bargaining Contract or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(v) The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(vi) The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(vii) In the event of the Contractor's noncompliance with the nondiscrimination clauses of this Contract or with any of the said rules, regulations, or orders, this Contract may be canceled, terminated, or suspended in whole or in part and the Contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(viii) The Contractor will include the provisions of this section in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The Contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance.

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

C. **DAVIS-BACON ACT & COPELAND "ANTI-KICKBACK" ACT.** If this Contract is a construction contract in excess of $2,000, the following provisions apply:

i. Davis-Bacon Act. Contractor must comply with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations (29 C.F.R. Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, Contractor must pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, Contractor must pay wages not less than once a week. The decision to award this Contract is expressly conditioned upon the acceptance of the wage determination. CalTrout will report all suspected or reported violations to the Federal awarding agency.

ii. Copeland "Anti-Kickback" Act.

a. *Contractor.* The Contractor shall comply with 18 U.S.C. § 874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. Part 3 as may be applicable, which are incorporated by reference into this Contract. As provided by the those provisions, Contractor is prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled.

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

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

D. **CONTRACT WORK HOURS AND SAFETY STANDARDS ACT (40 U.S.C. 3701-3708).** If the value of this Contract is $100,000 or more and the Contract involves the employment of mechanics or laborers, the following provision applies:

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

ii. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (i) of this section, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, Contractor and subcontractor(s) shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (i) of this section, in the sum of $31 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (i) of this section.

iii. Withholding for unpaid wages and liquidated damages. CalTrout shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the Contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (ii) of this section.

iv. Subcontracts. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (i) through (iii) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The Contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (i) through (iv) of this section.

E. **CLEAN AIR ACT (42 U.S.C. 7401-7671q.) and the FEDERAL WATER POLLUTION CONTROL ACT (33 U.S.C. 1251-1387), as amended.** If the value of this Contract is more than $150,000, Contractor must comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to CalTrout, the Federal awarding agency, and the Regional Office of the Environmental Protection Agency (EPA). Contractor will include these requirements in each subcontract exceeding $150,000 that is, in whole or in part, federally funded.

F. **DEBARMENT AND SUSPENSION.** (Executive Orders 12549 and 12689). If the value of this Contract is more than $25,000, or if this Contract requires the approval of the federal funding agency, the following provision applies:

i. This Contract is a covered transaction for purposes of 2 C.F.R. Part 180 and 2 C.F.R. Part 3000. As such, the Contractor is required to verify that none of the Contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).

ii. The Contractor must comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.

iii. By signing this Addendum, Contractor certifies that to the best of its knowledge and belief, that it and its principals are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

iv. Contractor's certification is a material representation of fact relied upon by CalTrout. If it is later determined that the Contractor did not comply with 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C, in addition to remedies available to the CalTrout, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.

v. The Contractor agrees to comply with the requirements of 2 C.F.R. Part 180, subpart C and 2 C.F.R. Part 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

G. **PROCUREMENT OF RECOVERED MATERIALS.** If Contractor is a non-Federal entity that is a state agency or agency of a political subdivision of a state, it must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds $10,000 or the value of the quantity acquired by the preceding fiscal year exceeded $10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

H. **BYRD ANTI-LOBBYING AMENDMENT (31 U.S.C. 1352**). Contractors that apply or bid for an award of $100,000 or more must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

I. **BID GUARANTEES AND BONDS.** In accordance with 2 CFR § 200.325, if this Contract exceeds the Simplified Acquisition Threshold, Contractor must satisfy the following minimum bid guarantee and bonding requirements:

i. A bid guarantee equivalent to five percent of the bid price. The "bid guarantee" must consist of a firm commitment such as a bid bond, certified check, or other negotiable instrument accompanying a bid as assurance that the bidder will, upon acceptance of the bid, execute such contractual documents as may be required within the time specified.

ii. A performance bond on the part of the Contractor for 100 percent of the contract price. A "performance bond" is one executed in connection with a contract to secure fulfillment of all the contractor's obligations under such contract.

iii. A payment bond on the part of the Contractor for 100 percent of the contract price. A "payment bond" is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided for in the contract.

J. **DISADVANTAGED BUSINESSES.** Contractor agrees to take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Affirmative steps must include:

i. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;

ii. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;

iii. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;

iv. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and

v. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

K. **ACCESS TO RECORDS.** The following access to records requirements apply to this Contract:

i. The Contractor agrees to provide CalTrout, the Federal funding agency, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this Contract for the purposes of making audits, examinations, excerpts, and transcriptions.

ii. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.

iii. The Contractor agrees to provide the Federal funding agency or its authorized representatives access to construction or other work sites pertaining to the work being completed under the Contract.

L. **DOMESTIC PREFERENCES FOR PROCUREMENTS.** As appropriate and to the extent consistent with the law, the Contractor should, to the greatest extent practicable under a federal award, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States, as further specified in 2 C.F.R. section 200.322, which is fully incorporated into the Contract by this reference, including, but not limited to, iron, aluminum, steel, cement, and other manufactured products, as specified therein. The requirements of 2 C.F.R. section 200.322 must be included in all subcontracts and purchase orders for work or products under the federal award. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

M. **Program Fraud and False or Fraudulent Statements or Related Acts.** The Contractor acknowledges that 31 U.S.C. Ch. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this Contract.

N. If this value of this Contract is more than **$100,000,** Contractor, and its lower tiers, must sign and submit the following certification to CalTrout:

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Contracts

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the

undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative Contract, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative Contract.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative Contract, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative Contracts) and that all subrecipients shall certify and disclose accordingly.

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

The Contractor, [INSERT CONTRACTOR NAME], a [ENTITY TYPE], certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Ch. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.

_____

Signature of Contractor's Authorized Official

_____

Name and Title of Contractor's Authorized Official

_____

Date

IN WITNESS WHEREOF, Contractor agrees to the terms of this Addendum.

[Contractor]

Name _____

Date _____

Signature _____

Tax ID _____

Mailing Address _____

State/City/Zip _____ Phone_____

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