

MONTEREY COUNTY

PUBLIC WORKS, FACILITIES & PARKS



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DATE: March 29, 2022

TO: All Contractors Submitting Proposal Packages for Request for Proposals (RFP) #10807 Construction Management Services for Robinson Canyon Road Bridge Scour Repair Project (Project) Located in Monterey County, California

ADDENDUM NO. 1

This **Addendum No. 1** to **RFP #10807 Construction Management Services for Robinson Canyon Road Bridge Scour Repair Project (Project)** includes the **Habitat Mitigation and Monitoring Plan dated October 2021** for the Project prepared by TRC for the County of Monterey and **Draft Special Provisions (dated 10/24/2021)** to provide additional information about the proposed Project and scope of this solicitation. Addendum No. 1 includes the following:

- **Draft Special Provisions dated 10/24/2021 (page 2).**
- **Habitat Mitigation and Monitoring Plan dated October 2021 (page 71).**

The signed acknowledgement page of Addendum No. 1 must be signed and submitted with your proposal package.

Proposal packages received without the signed acknowledgement page, will be considered non-responsive.

RECEIPT OF ADDENDUM No. 1, RFP #10807 IS HEREBY ACKNOWLEDGED

Authorized Company Representative Signature

Company Name

Printed Name

Date

- END ADDENDUM No. 1 ~

STATE OF CALIFORNIA
COUNTY OF MONTEREY
PUBLIC WORKS, FACILITIES, AND PARKS

SPECIAL PROVISIONS

ROBINSON CANYON ROAD BRIDGE SCOUR COUNTERMEASURE PROJECT
PROJECT NO. 385165
State Project No: 05930265L
Federal Aid Project No: BHLO-5944(099)

DIVISION I GENERAL PROVISIONS

1 GENERAL

Add to section 1-1.01:

Bid Items and Applicable Sections

Item code	Item description	Applicable section

Replace *Reserved* in Section 1-1.03 with:

1-1.03 SPECIFICATIONS AND PLANS:

The work embraced herein shall be done in accordance with the Standard Specifications and Standard Plans, of 2018, of the State of California, Department of Transportation, and the Revised Standard Specifications and Revised Standard Plans dated April 16, 2021, and in accordance with the following Special Provisions:

In case of conflict between the Standard Specifications and these Special Provisions, the Special Provisions shall take precedence over and be used in lieu of such conflicting portions.

The listing of certain salient sections from the Standard Specifications and these Special Provisions shall not in any way relieve the Contractor of complying with each and every section of the Standard Specifications.

Revisions to the Standard Specifications set forth in these Special Provisions shall be considered as part of the Standard Specifications for the purposes set forth in Section 5-1.02 "Contract Components" of the Standard Specifications. Whenever either the term "Standard Specifications is revised" or the term "Standard Specifications are revised" is used in the Special Provisions, the text or table following the term shall be considered Revised Standard Specifications. In case of conflict between such revisions and the Standard Specifications, the revision shall take precedence over and be used in lieu of the conflicting portions.

1-1.03A INTERPRETATION OF STANDARD SPECIFICATIONS:

For the purpose of this Contract, certain terms or pronouns in place of them used throughout the

Standard Specifications, shall be interpreted as follows: Attention is directed to Section 1, "Definition and Terms," of the Standard Specifications and these Special Provisions:

Replace *Reserved* in Section 1.13 with:

1-1.13 DEFINITIONS:

The following terms defined in Section 1-1.07, "Definitions," of the Standard Specifications shall be interpreted to have the following meaning and intent:

State:	County of Monterey, generally
Department:	Department of Public Works, Facilities, and Parks
Director:	Chair of the Board of Supervisors
Engineer:	Director of Public Works, Facilities, and Parks, acting either directly or through properly authorized agents, such agents acting within the scope of the particular duties entrusted to them.
Highway:	Roadway

1-1.13A DEFINITIONS IN SPECIAL PROVISIONS:

Whenever in the Special Provisions and other Contract documents, the following terms, or pronouns in place of them are used, the intent and meaning shall be interpreted as follows:

Board of Supervisors:	The governing body of the County of Monterey
Caltrans:	California Department of Transportation
County:	The County of Monterey, a political subdivision of the State of California
Clerk of the Board:	The Clerk of the Monterey County Board of Supervisors
Director of Public Works:	Director of Public Works, Facilities, and Parks.
Attorney General:	County Counsel-Risk Manager of Monterey County
Laboratory:	Any established laboratory designated by the Engineer to test materials and work involved in the Contract.
Owner:	County of Monterey
Authorized Material List:	Caltrans prequalified products list
Standard Plans	2018 Standard Plans and Revised Standard Plans of the State of California, Department of Transportation

Standard Specifications	2018 Standard Specifications and Revised Standard Specifications dated April 16, 2021 of the State of California, Department of Transportation
Business day:	Day on the calendar except a Saturday, Sunday, and a holiday
PLAC:	Permits, licenses, agreements, certifications, and approvals

1-1.13B STATE HOLIDAYS:

Attention is directed to definition of **holiday** in Section 1-1.07B "Glossary" of the Standard Specifications.

2 BIDDING

Replace *Reserved* in Section 2-1.05 with:

2-1.05 GENERAL:

The bidder's attention is directed to the provisions in Section 2, "Bidding," of the Standard Specifications and these Special Provisions for the requirements and conditions which he/she/it must observe in the preparation and the submission of the bid.

The Bidder's Bond form mentioned in the last paragraph in Section 2-1.34, "Bidder's Security," of the Standard Specifications will be found in the Bid Form, Book Two. Bidder's security in the form of cashier's check or certified check shall be made payable to the County of Monterey.

In conformance with Public Contract Code Section 7106, a Noncollusion Declaration is included in the Bid Form, Book Two. Signing the Bid shall also constitute signature of the Noncollusion Declaration.

This Contract will require a Class "A" Contractor's license.

Replace *Reserved* in Section 2.1.08 with:

2-1.08 JOB SITE AND DOCUMENT EXAMINATION:

The bidder shall examine carefully the site of the work contemplated, the specifications, and the proposal and Contract forms therefor. The submission of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the general and local conditions to be encountered, as to the character, quality and scope of work to be performed, the quantities of materials to be furnished and as to the requirements of the proposal, plans, specifications and the Contract.

Plans of existing bridges available to the Contractor are reproductions of record documents that may or may not have significant changes noted on working drawings and do not necessarily show normal construction tolerances and variances. Where dimensions of new construction required by this contract are dependent on the dimensions of existing bridges, the Contractor shall verify the controlling field dimensions and shall be responsible for adjusting dimensions of the work to fit

existing conditions.

The submission of a bid shall also be conclusive evidence that the bidder is satisfied as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information was reasonably ascertainable from an inspection of the site as well as from the specifications made a part of the Contract.

All bidder inquiries about the meaning or intent of the Contract Documents submitted to the Engineer shall be in writing. Replies to the inquiries will be in the form of addenda and will be mailed, faxed, or delivered to all parties recorded by the Engineer as having received the bidding documents. Issued addenda shall be considered as part of the Contract Documents. Bidder inquiries received less than ten (10) days prior to the date of bid opening will not be answered. Oral and other interpretations or clarifications will be without legal effect.

The County assumes no responsibility for conclusions or interpretations made by a bidder or Contractor based on the information or data made available by the County. The County does not assume responsibility for representations made by its officers or agents before the execution of the Contract concerning surface or subsurface conditions, unless that representation is expressly stated in the Contract.

No conclusions or interpretations made by a bidder or Contractor from the information and data made available by the County will relieve a bidder or Contractor from properly fulfilling the terms of the Contract.

2-1.08A SUPPLEMENTAL PROJECT INFORMATION:

The County makes the following supplemental project information available at the website

<https://www.co.monterey.ca.us/government/departments-i-z/public-works-facilities-parks/public-works/projects-out-to-bid>

1. Robinson Canyon Road Bridge as-builts
2. Final Geotechnical Engineering Data Report 4-9-2020
3. Location Hydraulic Study signed 02-08-17
4. Bridge Design Hydraulic Study Rev. Dec 2017
5. Volume 2 Technical Reports Final May 2018
 - a) A: Air Quality Modeling Worksheets
 - b) B: Natural Environment Study
 - c) C: Historic Property Survey Report
 - d) D: Geotechnical Engineering Data Report
 - e) E: EDR Radius Map Report With Geocheck
 - f) Water Quality Memorandum
 - g) G: Location Hydraulic Study
 - h) H: Technical Noise Memorandum
 - i) Construction Traffic Analysis
6. Caltrans StdSpecs 2018
7. Caltrans Std Plans 2018
8. Revised Standard Specifications dated April 16, 2021

9. Final Initial Study/Mitigated Negative Declaration May 2018
10. Mitigation, Monitoring and Reporting Plan Dated 9-13-17
11. Permits
12. Habitat Monitoring & Mitigation Plan Draft 10-11-21 (NEED FINAL for SUBMITTAL)
13. Caltrans Construction Site Best Management Practices (BMP) Manual
14. Storm Water Pollution Prevention Plan (SWPPP) and Water Pollution Control Program (WPCP) Preparation Manual
15. CCRWQCB Diversion-Dewatering Guidelines for Applicants II
16. Caltrans Fish Passage Design for Road Crossings
17. CA Salmonid Stream Habitat Restoration Manual (CDFW)
18. Guidelines for Salmonid Passage at Stream Crossings (NMFS)
19. Duckbill-Earth Anchor Brochure
20. Sample Robinson Canyon Dewatering Plan

Replace *Reserved* in Section 2-1.11 with:

2-1.11 SUBCONTRACTORS LIST:

Each bid shall have listed therein the name and address of each Subcontractor to whom the bidder proposes to subcontract portions of the work in an amount in excess of one-half of one percent of his/her/its total bid or \$10,000, whichever is greater, in accordance with the Subletting and Subcontracting Fair Practices Act, commencing with Section 4100 of the Public Contract Code.

The bidder's attention is directed to other provisions of said Act related to the imposition of penalties for a failure to observe its provisions by using unauthorized Subcontractors or by making unauthorized substitutions.

A sheet for listing the Subcontractors, as required herein by law, is included in the Bid.

Replace *Reserved* in Section 2-1.13 with:

2-1.13 DISADVANTAGE BUSINESS ENTERPRISE (DBE):

Replace Section 2-1.12, "Disadvantage Business Enterprise," of the Standard Specifications for Federal Aid Contract with the following:

Under 49 CFR 26.13(b):

The Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted Contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate.

Take necessary and reasonable steps to ensure that DBEs have opportunity to participate in the Contract (49 CFR 26).

To ensure equal participation of DBEs provided in 49 CFR 26.5, the Agency shows a goal for DBEs.

Make work available to DBEs and select work parts consistent with available DBE subcontractors and suppliers.

Meet the DBE goal shown elsewhere in these Special Provisions or demonstrate that you made adequate good faith efforts to meet this goal.

It is your responsibility to verify that the DBE firm is certified as DBE at date of bid opening. For a list of DBEs certified by the California Unified Certification Program, go to: http://www.dot.ca.gov/hq/bep/find_certified.htm.

All DBE participation will count toward the California Department of Transportation's federally mandated statewide overall DBE goal.

Credit for materials or supplies you purchase from DBEs counts towards the goal in the following manner:

- One hundred percent (100%) counts if the materials or supplies are obtained from a DBE manufacturer.
- Sixty percent (60%) counts if the materials or supplies are obtained from a DBE regular dealer.
- Only fees, commissions, and charges for assistance in the procurement and delivery of materials or supplies count if obtained from a DBE that is neither a manufacturer nor regular dealer. 49 CFR 26.55 defines "manufacturer" and "regular dealer."

You receive credit towards the goal if you employ a DBE trucking company that performs a commercially useful function as defined in 49 CFR 26.55(d)(1) through (4) and (6).

a. DBE Commitment Submittal (CT Standard Spec 2-1.12B(2))

Submit the Exhibit 15-G *Construction Contract DBE Commitment* form, included in the Bid book. If the form is not submitted with the bid, remove the form from the Bid book before submitting your bid.

If the DBE Commitment form is not submitted with the bid, the apparent low bidder, the second low bidder, and the third low bidder must complete and submit the DBE Commitment form to the Agency. DBE Commitment form must be received by the Agency no later than 4:00 p.m. on the fifth calendar day after bid opening.

Other bidders do not need to submit the DBE Commitment form unless the Agency requests it. If the Agency requests you to submit a DBE Commitment form, submit the completed form within five (5) calendar days of the request.

Submit written confirmation from each DBE stating that it is participating in the contract. Include confirmation with the DBE Commitment form. A copy of a DBE's quote will serve as written confirmation that the DBE is participating in the contract.

If you do not submit the DBE Commitment form within the specified time, the Agency will find your bid nonresponsive.

b. Good Faith Efforts Submittal

If you have not met the DBE goal, complete and submit the DBE Information - Good Faith Efforts, Exhibit 15-H, form with the bid showing that you made adequate good faith efforts to meet the goal. Only good faith efforts directed towards obtaining participation by DBEs will be considered. If good faith efforts documentation is not submitted with the bid, it must be received by the Agency no later than 4:00 p.m. on the fifth calendar day after bid opening.

If your DBE Commitment form shows that you have met the DBE goal or if you are required to submit the DBE Commitment form, you must also submit good faith efforts documentation within the specified time to protect your eligibility for award of the contract in the event the Agency finds that the DBE goal has not been met.

Good faith efforts documentation must include the following information and supporting documents, as necessary:

1. Items of work you have made available to DBE firms. Identify those items of work you might otherwise perform with your own forces and those items that have been broken down into economically feasible units to facilitate DBE participation. For each item listed, show the dollar value and percentage of the total contract. It is your responsibility to demonstrate that sufficient work to meet the goal was made available to DBE firms.
2. Names of certified DBEs and dates on which they were solicited to bid on the project. Include the items of work offered. Describe the methods used for following up initial solicitations to determine with certainty if the DBEs were interested, and the dates of the follow-up. Attach supporting documents such as copies of letters, memos, facsimiles sent, telephone logs, telephone billing statements, and other evidence of solicitation. You are reminded to solicit certified DBEs through all reasonable and available means and provide sufficient time to allow DBEs to respond.
3. Name of selected firm and its status as a DBE for each item of work made available. Include name, address, and telephone number of each DBE that provided a quote and their price quote. If the firm selected for the item is not a DBE, provide the reasons for the selection.
4. Name and date of each publication in which you requested DBE participation for the project. Attach copies of the published advertisements.
5. Names of agencies and dates on which they were contacted to provide assistance in contacting, recruiting, and using DBE firms. If the agencies were contacted in writing, provide copies of supporting documents.
6. List of efforts made to provide interested DBEs with adequate information about the plans, specifications, and requirements of the contract to assist them in responding to a solicitation. If you have provided information,

identify the name of the DBE assisted, the nature of the information provided, and date of contact. Provide copies of supporting documents, as appropriate.

7. List of efforts made to assist interested DBEs in obtaining bonding, lines of credit, insurance, necessary equipment, supplies, and materials, excluding supplies and equipment that the DBE subcontractor purchases or leases from the prime contractor or its affiliate. If such assistance is provided by you, identify the name of the DBE assisted, nature of the assistance offered, and date assistance was provided. Provide copies of supporting documents, as appropriate.
8. Any additional data to support demonstration of good faith efforts.

The Agency may consider DBE commitments of the second and third bidders when determining whether the low bidder made good faith efforts to meet the DBE goal.

c. Exhibit 15-G - Construction Contract DBE Commitment

Complete and sign Exhibit 15-G *Construction Contract DBE Commitment* included in the contract documents regardless of whether DBE participation is reported.

Provide written confirmation from each DBE that the DBE is participating in the Contract. A copy of a DBE's quote serves as written confirmation. If a DBE is participating as a joint venture partner, the Agency encourages you to submit a copy of the joint venture agreement.)

d. Subcontractor and Disadvantaged Business Enterprise Records

Use each DBE subcontractor as listed on Exhibit 12-B *Bidder's List of Subcontractors (DBE and Non-DBE)* and Exhibit 15-G *Construction Contract DBE Commitment* form unless you receive authorization for a substitution.

The Agency requests the Contractor to:

1. Notify the Engineer of any changes to its anticipated DBE participation
2. Provide this notification before starting the affected work
3. Maintain records including:
 - Name and business address of each first tier subcontractor
 - Name and business address of each DBE subcontractor, DBE vendor, and DBE trucking company, regardless of tier
 - Date of payment and total amount paid to each business

If you are a DBE contractor, include the date of work performed by your own forces and the corresponding value of the work.

Before the 15th of each month, submit a Monthly DBE Trucking Verification form.

If a DBE is decertified before completing its work, the DBE must notify you in writing of the decertification date. If a business becomes a certified DBE before completing its work, the business must notify you in writing of the certification date. Submit the notifications. On work completion, complete a Disadvantaged Business Enterprises (DBE) Certification Status Change, Exhibit 17-O, form. Submit the form within 30 days of contract acceptance.

Upon work completion, complete Exhibit 17-F *Final Report – Utilization of Disadvantaged Business Enterprises (DBE), First Tier Subcontractors*. Submit it within 90 days of contract acceptance. The Agency will withhold \$10,000 until the form is submitted. The Agency will release the amount withheld upon submission of the completed form.

e. Performance of Disadvantaged Business Enterprises

DBEs must perform work or supply materials as listed in the Exhibit 15-G *Construction Contract DBE Commitment* form, included in the Bid.

Do not terminate or substitute a listed DBE for convenience and perform the work with your own forces or obtain materials from other sources without authorization from the Agency.

The Agency authorizes a request to use other forces or sources of materials if it shows any of the following justifications:

1. Listed DBE fails or refuses to execute a written contract based on plans and specifications for the project.
2. You stipulated that a bond is a condition of executing the subcontract and the listed DBE fails to meet your bond requirements.
3. Work requires a contractor's license and listed DBE does not have a valid license under Contractors License Law.
4. Listed DBE fails or refuses to perform the work or furnish the listed materials.
5. Listed DBE's work is unsatisfactory and not in compliance with the contract.
6. Listed DBE is ineligible to work on the project because of suspension or debarment.
7. Listed DBE becomes bankrupt or insolvent.
8. Listed DBE voluntarily withdraws with written notice from the Contract
9. Listed DBE is ineligible to receive credit for the type of work required.
10. Listed DBE owner dies or becomes disabled resulting in the inability to perform the work on the Contract.

11. Agency determines other documented good cause.

Notify the original DBE of your intent to use other forces or material sources and provide the reasons. Provide the DBE with five (5) days to respond to your notice and advise you and the Agency of the reasons why the use of other forces or sources of materials should not occur. Your request to use other forces or material sources must include:

1. One (1) or more of the reasons listed in the preceding paragraph.
2. Notices from you to the DBE regarding the request.
3. Notices from the DBEs to you regarding the request.

If a listed DBE is terminated or substituted, you must make good faith efforts to find another DBE to substitute for the original DBE. The substitute DBE must perform at least the same amount of work as the original DBE under the contract to the extent needed to meet the DBE goal.

The substitute DBE must be certified as a DBE at the time of request for substitution unless the Agency authorizes (1) a request to use other forces or sources of materials or (2) a good faith effort for a substitution of a terminated DBE, the Agency does not pay for work listed on the Exhibit 15-G *Construction Contract DBE Commitment* form unless it is performed or supplied by the listed DBE or an authorized substitute.

Replace *Reserved* in Section 2-1.44 with:

2-1.44 BID OPENING:

The Agency publicly opens and reads bids at the time and place shown on the *Notice to Bidders*.

2-1.44A BID RIGGING:

The U.S. Department of Transportation (DOT) provides a toll-free hotline to report bid rigging activities. Use the hotline to report bid rigging, bidder collusion, and other fraudulent activities. The hotline number is (800) 424-9071. The service is available 24 hours seven (7) days a week and is confidential and anonymous. The hotline is part of the DOT's effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General.

3 CONTRACT AWARD AND EXECUTION

Add to Section 3-1.01:

3-1.01A GENERAL:

The bidder's attention is directed to the provisions in Section 3, "Contract Award and Execution," of the Standard Specifications and these Special Provisions for the requirements and conditions concerning award and execution of Contract.

Replace Section 3-1.04 with:

3-1.04 CONTRACT AWARD:

If the Agency awards the Contract, the award is made to the lowest responsible and responsive bidder.

Bidders who wish to lodge a protest as to the award of the bid must do so before 5:00 p.m. of the fifth business day following the notice of intent to award the Contract. Failure to timely file a written protest shall constitute a waiver of right to protest. Untimely protests will not be accepted or considered. Bid protests must be submitted, in writing, to: MONTEREY COUNTY DEPARTMENT OF PUBLIC WORKS, FACILITIES, AND PARKS TO THE ATTENTION OF THE PROJECT MANAGER/1441 SCHILLING PLACE, 2ND FLOOR, SALINAS CA 93901-2438. Protests may be hand-delivered, mailed certified United States Postal Services (USPS) mail, or E-mail to the attention of the project manager [The Project Manager's E-mail address may be obtained by calling (831) 755-4800]. Bid protests must include the project name and project number, a complete statement describing the basis for the bid protest, including a detailed statement of all legal and factual grounds for the protest, any documentation supporting the protestor's grounds for the protest, and the form of relief requested and the legal basis for such relief. The party lodging the protest must also include their contact information including mailing address, telephone number, and E-mail address.

If a valid protest is timely filed, the Department shall investigate the bid protest. The protested bidder shall have three (3) business days to respond to any Public Works, Facilities & Parks requests to provide additional information. The Department shall respond to the protesting party, stating its finding. The Department Director shall make a recommendation to the Board regarding the bid protest.

The award of the Contract, if it be awarded, will be to the lowest responsible bidder within ninety (90) days after bid opening, whose bid complies with all the requirements prescribed.

In determining the lowest "responsible" Bidder, consideration shall be given to the general competency of Bidder in regard to the work covered by the bid.

The Contract shall be executed by the successful bidder and shall be returned, together with the Contract bonds and insurance certificates, to the MONTEREY COUNTY RESOURCE MANAGEMENT PUBLIC WORKS, FACILITIES AND PARKS so that it is received within ten (10) days, not including Saturdays, Sundays and legal holidays, after the bidder has received the Contract for execution. Failure to do so shall be just cause for forfeiture of the bid guaranty. The executed Contract documents shall be delivered to the following address:

MONTEREY COUNTY DEPARTMENT OF PUBLIC WORKS, FACILITIES, AND PARKS,
1441 SCHILLING PLACE, 2ND FLOOR, SALINAS, CA, 93901-2438.

3-1.05 CONTRACT BONDS (PUB. CONT. CODE 10221 AND 10222):

Replace the second paragraph in Section 3-1.05 with:

2. Performance bond to guarantee the faithful performance of the Contract. This bond must be equal to at least one hundred percent (100%) of the total bid.

The two (2) bonds shall be written by an admitted corporate surety.

Replace Section 3-1.06 with:

3-1.06 CONTRACTOR LICENSE:

The Contractor must be properly licensed as a Contractor from Contract award through Contract acceptance (Public Contract Code § 10164).

Replace *Reserved* in Section 3-1.09 with:

3-1.09 CONTRACTOR REGISTRATION WITH THE DEPARTMENT OF INDUSTRIAL RELATIONS:

Attention is directed to Department of Industrial Relations Contractor registration for public works & facilities project.

Pursuant to Labor Code section 1771.1(a), a Contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any Contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Labor Code Section 1725.5. It is not a violation of this section for an unregistered Contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the Contractor is registered to perform public work pursuant to Labor Code Section 1725.5 at the time the Contract is awarded.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

For Contractor Registration, go to: <http://www.dir.ca.gov/Public-Works/PublicWorks.html>

4 SCOPE OF WORK

Add to Section 4-1.03:

4-1.03A WORK DESCRIPTION

The work to be done consists, in general, of constructing scour countermeasure features at Abutment 1, Pier 2, and Pier 3 of the Robinson Canyon Road Bridge as shown on the plans and described in these special provisions. The work includes but is not limited to clearing and grubbing, grading, access road construction, temporary stream diversion system construction, dewatering, scour

protection construction, traffic control, revegetation planting, and all work required for the items of work indicated in the Construction Contract. Such other items or details, not mentioned above, that are required by the Plans, Standard Specifications, Standard Plans, or these Special Provisions, shall be performed, placed, constructed, or installed.

Add to Section 4-1.05:

4-1.05D BALANCING CHANGE ORDER:

Prior to submitting for the final estimate, a balancing change order adjusting quantities to reflect those actually used during construction will be issued.

Replace *Reserved* in Section 4.1.06A General with:

4-1.06A CHANGED CONDITION:

a. Differing Site Conditions

1. During the progress of the work, if subsurface or latent physical conditions are encountered at the site differing materially from those indicated in the contract or if unknown physical conditions of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in the work provided for in the contract, are encountered at the site, the party discovering such conditions shall promptly notify the other party in writing of the specific differing conditions before the site is disturbed and before the affected work is performed.
2. Upon written notification, the engineer will investigate the conditions, and if it is determined that the conditions materially differ and cause an increase or decrease in the cost or time required for the performance of any work under the contract, an adjustment, excluding anticipated profits, will be made and the contract modified in writing accordingly. The engineer will notify the contractor of the determination whether or not an adjustment of the contract is warranted.
3. No contract adjustment which results in a benefit to the contractor will be allowed unless the contractor has provided the required written notice.
4. No contract adjustment will be allowed under this clause for any effects caused on unchanged work. (This provision may be omitted by the Local Agency, at their option.)

b. Suspensions of Work Ordered by the Engineer

1. If the performance of all or any portion of the work is suspended or delayed by the engineer in writing for an unreasonable period of time (not originally anticipated, customary, or inherent to the construction industry) and the contractor believes that additional compensation and/or contract time is due as a result of

such suspension or delay, the contractor shall submit to the engineer in writing a request for adjustment within seven (7) calendar days of receipt of the notice to resume work. The request shall set forth the reasons and support for such adjustment.

2. Upon receipt, the engineer will evaluate the contractor's request. If the engineer agrees that the cost and/or time required for the performance of the contract has increased as a result of such suspension and the suspension was caused by conditions beyond the control of and not the fault of the contractor, its suppliers, or subcontractors at any approved tier, and not caused by weather, the engineer will make an adjustment (excluding profit) and modify the contract in writing accordingly. The contractor will be notified of the engineer's determination whether or not an adjustment of the contract is warranted.
3. No contract adjustment will be allowed unless the contractor has submitted the request for adjustment within the time prescribed.
4. No contract adjustment will be allowed under this clause to the extent that performance would have been suspended or delayed by any other cause, or for which an adjustment is provided or excluded under any other term or condition of this contract.

c. Significant Changes in the Character of Work

1. The engineer reserves the right to make, in writing, at any time during the work, such changes in quantities and such alterations in the work as are necessary to satisfactorily complete the project. Such changes in quantities and alterations shall not invalidate the contract nor release the surety, and the contractor agrees to perform the work as altered.
2. If the alterations or changes in quantities significantly change the character of the work under the contract, whether such alterations or changes are in themselves significant changes to the character of the work or by affecting other work cause such other work to become significantly different in character, an adjustment, excluding anticipated profit, will be made to the contract. The basis for the adjustment shall be agreed upon prior to the performance of the work. If a basis cannot be agreed upon, then an adjustment will be made either for or against the contractor in such amount as the engineer may determine to be fair and equitable.
3. If the alterations or changes in quantities do not significantly change the character of the work to be performed under the contract, the altered work will be paid for as provided elsewhere in the contract.
4. The term "significant change" shall be construed to apply only to the following circumstances:
 - When the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction; or

Replace *Reserved* in Section 5-1.13E with:

5-1.13E DISADVANTAGE BUSINESS ENTERPRISES (DBE) RECORDS:

Attention is directed to the requirements specified in Section 5-1.13B(1), "General" of the Standard Specifications.

Replace Section 5-1.26 with:

5-1.26 CONSTRUCTION SURVEYS:

The Department is not responsible for placing stakes and marks under Chapter 12, "Construction Surveys", of the Department's Survey Manual. Set any stakes or marks required for this Project, throughout construction. The Engineer will provide the control points identified on the Project Plans.

Verify the accuracy of all construction or construction staking and notify the Engineer of inconsistencies that may affect the lines and grades.

Preserve stakes and marks placed. If the stakes or marks are destroyed, you are responsible to replace them.

Construction Surveys are paid for as Construction Staking.

Add between the 2nd and 3rd paragraphs of Section 5-1.32:

Where [Department](#) -owned areas have been designated for Contractor's use beneath bridge structures, comply with the following:

1. Do not store any of the following beneath structures:
 - 1.1 Explosives or explosive materials
 - 1.2 Flammable or combustible materials
 - 1.3 Incompatible materials, such as chlorine and ammonia, or batteries and fuels, in the same secondary containment facility
2. Material storage may not encroach on any of the following:
 - 2.1 Within 20 feet of any bridge support
 - 2.2 Within 10 feet of any exposed footing or pile cap
 - 2.3 Within a 6-foot minimum clear zone height from the bottom of superstructure to top of material storage
3. Maintain 12-foot minimum width pathways beneath each hinge, bent cap and bridge span allowing manlift vehicle access
4. Do not obstruct drainage systems

Add to the end of Section 5-1.32:

5-1.32A AREAS FOR USE BY CONTRACTOR:

Personal vehicles of your employees must not be parked on the traveled way or shoulders, including sections closed to traffic.

5-1.32B AREAS FOR CONTRACTOR'S USE:

Attention is directed to the requirements specified in Section 5-1.32, "Areas for Use," of the

Standard Specifications and these Special Provisions.

The County right-of-way shall be used only for purposes that are necessary to perform the required work. The Contractor shall not occupy the right-of-way, or allow others to occupy the right-of-way, for purposes that are not necessary to perform the required work.

There should be adequate County owned right-of-way and temporary construction easements provided for the project for the exclusive use of the Contractor within the Contract limits. The contractor shall secure at his/her/its own expense any area required for plant sites, storage of equipment or materials, and/or for other purposes if sufficient area is not available to him/her/it within the Contract limits. Contact information of adjacent property owners will be provided by the Engineer upon request by the Contractor.

Use of the Contractor's work areas and other County owned property shall be at the Contractor's own risk, and the County shall not be held liable for any damage to or loss of materials or equipment located within such areas.

The Contractor shall obtain encroachment permits prior to occupying County owned parcels outside the Contract limits. The required encroachment permits may be obtained from the MONTEREY COUNTY DEPARTMENT OF PUBLIC WORKS, FACILITIES, AND PARKS, 1441 SCHILLING PLACE , 2ND FLOOR, SALINAS, CA 93901-2438.

Residence trailers will not be allowed within the county right-of-way.

The Contractor shall remove all equipment, materials, and rubbish from the work areas and other County owned property, which he/she/it occupies and shall leave the areas in a presentable condition, in accordance with the provisions in Section 4-1.13, "Clean Up," of the Standard Specifications.

Add between the 2nd and 3rd paragraphs of section 5-1.36C(3):

The utilities shown in the following table will not be rearranged. The utilities may interfere with scour countermeasure or access road construction. If you want any of them rearranged or temporarily deactivated, make arrangements with the utility owner.

Utilities Not Rearranged for Scour Countermeasure or Access Road Construction

Utility	Location
AT&T	Underside of bridge, east side
Comcast	Overhead lines and poles, west side
PG&E	Overhead lines and poles, west side

^^

6 CONTROL OF MATERIALS

Add to Section 6-1.01:

6-1.01A GENERAL:

Attention is directed to Section 6, "Control of Materials," of the Standard Specifications and these Special Provisions.

Add to the end of Section 6-1.02:

6-1.02A DEPARTMENT-FURNISHED MATERIALS:

All materials required to complete the work under this Contract shall be furnished by the Contractor, **except as noted on the Plans. (Are Root Wads Provided by the County?)**

6-1.03 LOCAL MATERIALS

Add to Section 6-1.03 of the RSS:

6-1.03B SUBMITALS:

6-1.03B(1) GENERAL

Not Used

6-1.03B(2) WORK PLAN

For local material, such as rock, gravel, earth, structure backfill, pervious backfill, imported borrow, and culvert bedding, obtained from a (1) noncommercial source, or (2) source not regulated under California jurisdiction, submit a local material plan for each material at least 60 days before placing the material. The local material plan must include:

1. Certification signed by you and an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

I am aware local material from a noncommercial source or a source not regulated under CA jurisdiction must be sampled and analyzed for pH and lead and may require sampling and analysis under section 6-1.03B(3) for other constituents of concern based on the land use history. I am aware that local material sources must not contain ADL at concentrations greater than 80 mg/kg total lead or equal to or greater than 5 mg/L soluble lead as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II. I am aware that a maximum quantity of material may be excavated at the site based on the minimum number of samples taken before excavating at the site under section 6-1.03B(3).

2. Land use history of the local material location and surrounding property
3. Sampling protocol
4. Number of samples per volume of local material
5. QA and QC requirements and procedures
6. Qualifications of sampling personnel
7. Stockpile history
8. Name and address of the analytical laboratory that will perform the chemical analyses
9. Analyses that will be performed for lead and pH
10. Other analyses that will be performed for possible hazardous constituents based on:
 - 10.1. Source property history
 - 10.2. Land use adjacent to source property

10.3. Constituents of concern in the ground water basin where the job site is located

The plan must be sealed and signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State.

If the plan requires revisions, the Engineer provides comments. Submit a revised plan within 7 days of receiving comments. Allow 7 days for the review.

6-1.03B(3) ANALYTICAL TEST RESULTS

At least 15 days before placing local material, submit analytical test results for each local material obtained from a noncommercial source or a source not regulated under CA jurisdiction. The analytical test results must include:

1. Certification signed by an engineer who is registered as a civil engineer in the State or a professional geologist licensed as a professional geologist by the State stating:

The analytical testing described in the local material plan has been performed. I performed a statistical analysis of the test results using the US EPA's ProUCL software with the applicable 95 percent upper confidence limit. I certify that the material from the local material source is suitable for unrestricted use at the job site, it has a pH above 5.0, does not contain soluble lead in concentrations equal to or greater than 5mg/l as determined by the Waste Extraction Test (WET) Procedures, 22 CA Code of Regs § 66261.24(a)(2) App II, does not contain lead in concentrations above 80 mg/kg total lead, is free from all other contaminants identified in the local material plan, and will comply with the job site's basin plan and water quality objectives of the RWQCB.

2. Chain of custody of samples
3. Analytical results no older than 1 year
4. Statistical analysis of the data using US EPA's ProUCL software with a 95 percent upper confidence limit
5. Comparison of sample results to hazardous waste concentration thresholds and the RWQCB's basin plan requirements and water quality objectives for the job site location

6-1.03B(4) SAMPLE AND ANALYSIS

Sample and analyze local material from a (1) noncommercial source or (2) source not regulated under CA jurisdiction:

1. Before bringing the local material to the job site
2. As described in the local material plan
3. Under US EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)

The sample collection must be designed to generate a data set representative of the entire volume of proposed local material.

Before excavating at the (1) noncommercial material source or (2) a source not regulated under CA jurisdiction, collect the minimum number of samples and perform the minimum number of analytical tests for the corresponding maximum volume of local material as shown in the following table:

Minimum Number of Samples and Analytical Tests for Local Material

Maximum volume of imported borrow (cu yd)	Minimum number of samples and analytical tests
< 5,000	8
5,000–10,000	12 for the first 5,000 cu yd plus 1 for each additional 1,000 cu yd or portion thereof
10,000–20,000	17 for the first 10,000 cu yd plus 1 for each additional 2,500 cu yd or portion thereof
20,000–40,000	21 for the first 20,000 cu yd plus 1 for each additional 5,000 cu yd or portion thereof
40,000–80,000	25 for the first 40,000 cu yd plus 1 for each additional 10,000 cu yd or portion thereof
> 80,000	29 for the first 80,000 cu yd plus 1 for each additional 20,000 cu yd or portion thereof

Do not collect composite samples or mix individual samples to form a composite sample.

Analyze the samples using the US EPA's ProUCL software with a 95 percent upper confidence limit. All chemical analysis must be performed by a laboratory certified by the SWRCB's Environmental Laboratory Accreditation Program (ELAP).

The analytical test results must demonstrate that the local material:

1. Is not a hazardous waste
2. Has a pH above 5.0
3. Has an average total lead concentration, based upon the 95 percent upper confidence limit, at or below 80 mg/kg
4. Is free of possible contaminants identified in the local material plan
5. Complies with the RWQCB's basin plan for the job site location
6. Complies with the RWQCB's water quality objectives for the job site location

6-1.03C LOCAL MATERIAL MANAGEMENT:

Do not place local material until authorized.

If the Engineer determines the appearance, odor, or texture of any delivered local material suggests possible contamination, sample and analyze the material. The sampling and analysis is change order work unless (1) hazardous waste is discovered or (2) the analytical test results indicate the material does not comply with section 6-1.03B(3).

Dispose of noncompliant local material at an appropriately permitted CA Class I, CA Class II or CA Class III facility. You are the generator of noncompliant local material.

Replace *Reserved* in Section 6-1.04A with:

6-1.04A BUY AMERICA:

Furnish steel and iron materials to be incorporated into the work with certificates of compliance and certified mill test reports. Mill test reports must indicate where the steel and iron were melted and manufactured. Steel and iron materials must be produced in the U.S. except:

1. Foreign pig iron and processed, pelletized, and reduced iron ore may be used in

the domestic production of the steel and iron materials [60 Fed Reg 15478 (03/24/1995)];

2. If the total combined cost of the materials does not exceed the greater of 0.1 percent of the total bid or \$2,500, materials produced outside the U.S. may be used.

Production includes:

1. Processing steel and iron materials, including smelting or other processes that alter the physical form or shape (such as rolling, extruding, machining, bending, grinding, and drilling) or chemical composition;
2. Coating application, including epoxy coating, galvanizing, and painting, that protects or enhances the value of steel and iron materials.

Attention is directed to Section 6-1.04, "Buy America," of the Standard Specifications and these Special Provisions.

Replace Section 6-1.06 of the RSS for Section 6-1 with:

6-1.06 BUY CLEAN CALIFORNIA ACT

6-1.06A Summary

The materials or products shown in the following table are subject to the Buy Clean California Act (Pub Cont Code § 3500 et seq.):

Material or product	Material specifications
Carbon steel rebar ^a	Section 52-1.02B, "Bar Reinforcement" Excludes epoxy-coated or galvanized reinforcement uses.
Structural steel ^b	Section 55-1.02D(1), "General," – Structural Steel and Other Materials tables and Section 99, "Building Construction." For hot-rolled, plate or hollow products.
Flat glass ^c	Section 99, "Building Construction"
Mineral wool board insulation ^d	Section 99, "Building Construction"

^aFor each mill providing 20,000 pounds or more on the project

^bFor each mill providing 5,000 pounds or more on the project

^cFor each manufacturer providing 2,000 square feet or more on the project

^dFor each manufacturer providing 4,000 square feet or more on the project

For product category rules for applicable materials or products, go to the METS website. Use the product category rule in effect on the date of bid opening unless otherwise authorized. An environmental product declaration is not required for a material or product for either of the following conditions:

1. Applicable product category rule has expired without replacement as of the bid opening date.
2. Applicable product category rule was issued less than 100 days before the bid opening date.

For projects with a bid opening date from December 1, 2019, through May 31, 2021, with total bid over \$1 million and 175 or more original working days, submit an environmental product declaration as an informational submittal for each applicable material or product. Submit each environmental product declaration within 15 days of initial installation of the material or product. For projects with a bid opening date after May 31, 2021, with total bid over \$1 million and 175 or more original working days, submit an environmental product declaration for each applicable material or product. Submit an environmental product declaration for each applicable material or product at least 15 days before scheduled installation. The global warming potential of each applicable material or product as evidenced by its environmental product declaration shall not exceed the maximum acceptable global warming potential values established by the Department of General Services. Do not install the applicable material or product until the submittal is authorized. The maximum acceptable global warming potential for each category of material or product is published on the Department of General Services website at: <https://www.dgs.ca.gov/>.

6-1.06B Definitions

environmental product declaration: Independently verified document created and verified under International Organization for Standardization (ISO) 14025 for Type III environmental declarations that identifies the global warming potential emissions of the facility-specific material or product through a product stage life cycle assessment.

product category rule: Program operator established rule based on the science of life cycle assessment that governs the development of the environmental product declaration for the material or product.

product stage: Boundary of the environmental product declaration that includes (1) raw material supply, (2) transportation processes, and (3) processing operations, including operations such as melting, mixing, fabrication, finishing, curing, cooling, trimming, packaging and loading for transport delivery. Commonly referred to as a "cradle-to-gate" life cycle assessment.

program operator: Independent agency that supervises and confirms the full environmental product declaration development process under ISO 14025.

raw material supply: Upstream processes which can include allocations, extraction, refinement, reclamation, handling and processing of the constituents used in producing the material or product.

transportation processes: Includes transportation of raw, reclaimed or recycled material constituents from the supplier to the gate of the manufacturer, producer or fabricator. Includes transport of related waste products.

6-1.06C Submittals

At least 15 days before submitting environmental product declarations, you must register on the Department's Data Interchange for Materials Engineering. Follow the registration process at: <https://dime.dot.ca.gov/>

Submit environmental product declarations for applicable materials or products to the Department's Data Interchange for Materials Engineering and provide PDF copies to the Engineer. Carbon steel rebar or structural steel environmental product declarations must be mill produced.

Immediately notify the Engineer if a program operator has determined their product category rule does not allow for development of a facility-specific environmental product declaration for an applicable material or product. Include written correspondence from the program operator. If the Engineer determines the development of a facility-specific environmental product declaration for an applicable material or product cannot be achieved, no environmental product declaration will be required for that specific material or product.

6-1.06D Quality Assurance

Not Used

Add to Section 6-2.01C:

6-2.01C(1) DEPARTMENT AUTHORIZED MATERIAL LIST:

The Department maintains list of Authorized Materials List. The Engineer shall not be precluded from sampling and testing products on the list of Authorized Materials List.

The manufacturer of products on the list of Authorized Materials List shall furnish the Engineer a Certificate of Compliance in conformance with the provisions in Section 6-2.03C, "Certificates of Compliance," of the Standard Specifications for each type of product supplied.

For those categories of materials included on the list of Authorized Materials List, only those products shown within the listing may be used in the work. Other categories of products, not included on the list of Authorized Materials List, may be used in the work provided they conform to the requirements of the Standard Specifications and as approved by the engineer.

For the Authorized Material Lists, go to: <http://www.dot.ca.gov/aml/>

Replace *Reserved* in Section 6-2.01G with:

6-2.01G QUALITY ASSURANCE :

The Agency uses a Quality Assurance Program (QAP) to ensure a material is produced to comply with the Contract.

You may examine the records and reports of tests the Agency performs if they are available at the job site.

Schedule work to allow time for QAP.

Replace *Reserved* in Section 6-2.01H with:

6-2.01H RELATIVE COMPACTION:

Wherever relative compaction is specified to be determined by Test Method No. California 216 or Test Method No. California 231 the relative compaction will be determined by Test Method No. California 231.

Add to paragraph 6 of Section 6-2.03A:

If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the Contractor and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors shall pay not less than the Federal minimum wage rate, which most closely approximates the duties of the employees in question.

Replace *Reserved* in Section 7-1.02K(6)(g) with:

7-1.02K(6)(g) PAYROLL RECORDS:

The Contractor's attention is directed to Section 7- 1.02K(3), "Certified Payroll Records (Labor Code 1776)," of the Standard Specifications, and to the provisions of Labor Code, Section 1776 (Stats. 1978, Chapter 1249). The Contractor shall be responsible for the compliance with these provisions by his/her/its Subcontractors. The Contractor shall furnish the Engineer with certified payrolls and statement of benefits.

Replace Section 7-1.02K(6)(j)(iii) of the RSS with:

In accordance with Monterey Bay Unified Air Pollution Control District, written notification is required 10 working days prior to commencement of any demolition activity.

Replace Section 7-1.02M(3) with:

7-1.02M(3) SURFACE MINING AND RECLAMATION ACT:

Attention is directed to the Surface Mining and Reclamation Act of 1975, commencing in Public Resources Code, Mining and Geology, Section 2710, which establishes regulations pertinent to surface mining operations.

Material from mining operations furnished for this project shall only come from permitted sites in compliance with the Surface Mining and Reclamation Act of 1975. For the list of permitted sites, go to the Department of Conservation, Division of Mine Reclamation website.

The requirements of this section shall apply to all materials furnished for the project, except for acquisition of materials in conformance with Section 4-1.04, "Use of Materials Found on the Job Site," of the Standard Specifications.

Add to Section 7-1.04:

7-1.04A PUBLIC SAFETY:

The Contractor shall provide for the safety of traffic and the public in conformance with the

provisions in Section 7-1.04, "Public Safety," and Section 7-1.03, "Public Convenience" of the Standard Specifications and these Special Provisions.

Add to Section 7-1.05:

7-1.05D INDEMNIFICATION AND INSURANCE:

Attention is directed to Section 7-1.05, "Indemnification" of the Standard Specifications and Section 7-1.06 "Insurance," of the Revised Standard Specifications and these Special Provisions.

Add to Section 7-1.06 of the RSS:

In addition to all the requirements in Section 7-1.06D(2) "Liability Limits/Additional Insured," of the Revised Standard Specifications, the following additional requirements shall be met. An Additional Insured Endorsement to the Contractor's Liability insurance policy naming the County of Monterey, their officers, agents, consultants, and employees as additional insured's in the form approved by the County of Monterey shall also be furnished. A copy of the approved endorsement form may be obtained from the County of Monterey at the address to obtain bid packages as shown in the Notice to Bidders. The insurance afforded to the additional insured is primary insurance and if the additional insured has other insurance that might be applicable to any loss, the amount of this insurance shall not be reduced or prorated due to the existence of such other insurance.

The Contractor's insurer agrees to waive subrogation claims against the County of Monterey, their officers, agents, and employees.

Evidence of insurance (Contractual Liability insurance and Additional Insured Endorsement) in compliance with the requirements herein shall be furnished to the County of Monterey by the Contractor with the Certificate of Insurance in the form as approved by the County of Monterey. A copy of the approved certificate form may be obtained from the County of Monterey at the address to obtain bid packages as shown in the Notice to Bidders. Certificates of insurance shall, without any qualification thereto, contain the following statement:

Should any of the described policies be canceled, modified, or reduced in limits before the expiration date thereof, the issuing company will mail thirty days advance written notice to the named certificate holders.

The insurance shall be issued by a company or companies authorized to transact business in the State of California and shall have a rating of at least A- VII in accordance with the current Best's rating.

Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Contractor for liability in excess of such coverage, nor shall it preclude the State of California or County of Monterey from taking such other actions as are available to them under any other provision of this Contract (except retainage of money due to the Contractor) or otherwise in law.

Nothing in the Contract is intended to create the public or any member thereof a third-party beneficiary hereunder, nor is any term and condition or other provision of the Contract intended to establish a standard of care owed to the public or any member thereof.

Prior to the execution of this Agreement by the County, Contractor shall file certificates of insurance with the County Administrative Office Contracts/Purchasing Division and with the County Resource Management Agency, Chief of Public Works, showing that the Contractor has in effect the insurance required by this Agreement. The Contractor shall file a new or amended certificate of insurance promptly after any change is made in any insurance policy that would alter the information of the certificate then on file. Acceptance or approval of insurance shall in no way modify or change the indemnification clause in this Agreement, which shall continue in full force and effect.

7-1.06J WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY INSURANCE:

Attention is directed to Section 7-1.06C, "Workers' Compensation and Employer's Liability Insurance," of the Standard Specifications.

Replace Section 7-1.11B with:

7-1.11B(1) FORM FHWA -1273 REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONTRACTS:

"Section VI. Subletting or Assigning the Contract" does not apply since this project is off the NHS.

Replace the 1st paragraph in Section 7-1.11C with:

7-1.11C FEMALE AND MINORITY GOALS:

To comply with Section II, "Nondiscrimination," of "Required Contract Provisions Federal-Aid Construction Contracts," the following are for female and minority utilization goals for Federal-aid construction Contracts and subcontracts that exceed \$10,000:

Replace Section 7-1.11D with:

7-1.11D FEDERAL TRAINEE PROGRAM:

For the Federal training program, the number of trainees or apprentices is 0.

This section applies if a number of trainees or apprentices is specified in the Special Provisions.

As part of your equal opportunity affirmative action program, provide on-the-job training to develop full journeymen in the types of trades or job classifications involved.

You have primary responsibility for meeting this training requirement.

If you subcontract a Contract part, determine how many trainees or apprentices are to be trained by the subcontractor.

Include these training requirements in your subcontract.

Where feasible, twenty five percent (25%) of apprentices or trainees in each occupation must be in their first year of apprenticeship or training.

Distribute the number of apprentices or trainees among the work classifications on the basis of your needs and the availability of journeymen in the various classifications within a reasonable recruitment area.

Before starting work, submit to the County of MONTEREY:

1. Number of apprentices or trainees to be trained for each classification
2. Training program to be used
3. Training starting date for each classification

Obtain the County of MONTEREY approval for this submitted information before you start work. The County of MONTEREY credits you for each apprentice or trainee you employ on the work who is currently enrolled or becomes enrolled in an approved program.

The primary objective of this section is to train and upgrade minorities and women toward journeyman status. Make every effort to enroll minority and women apprentices or trainees, such as conducting systematic and direct recruitment through public and private sources likely to yield minority and women apprentices or trainees, to the extent they are available within a reasonable recruitment area. Show that you have made the efforts. In making these efforts, do not discriminate against any applicant for training.

Do not employ as an apprentice or trainee an employee:

1. In any classification in which the employee has successfully completed a training course leading to journeyman status or in which the employee has been employed as a journeyman.
2. Who is not registered in a program approved by the US Department of Labor, Bureau of Apprenticeship and Training.

Ask the employee if the employee has successfully completed a training course leading to journeyman status or has been employed as a journeyman. Your records must show the employee's answers to the questions.

In your training program, establish the minimum length and training type for each classification. The County of MONTEREY and the Federal Highway Administration (FHWA) approves a program if one of the following is met:

1. It is calculated to:
 - Meet equal employment opportunity responsibilities.
 - Qualify the average apprentice or trainee for journeyman status in the classification involved by the end of the training period.
2. It is registered with the United States Department of Labor, Bureau of Apprenticeship and Training, and it is administered in a way consistent with the equal employment responsibilities of Federal-aid highway construction Contracts.

Obtain the State's approval for your training program before you start work involving the classification covered by the program.

Provide training in the construction crafts, not in clerk-typist or secretarial-type positions. Training is allowed in lower level management positions such as office engineers, estimators, and timekeepers if the training is oriented toward construction applications. Training is allowed in the laborer classification if significant and meaningful training is provided and approved by the division office. Off-site training is allowed if the training is an integral part of an approved training program and does not make up a significant part of the overall training.

The County of MONTEREY reimburses you eighty cents per hour of training given an employee on this Contract under an approved training program:

1. For on-site training.
2. For off-site training if the apprentice or trainee is currently employed on a Federal-aid project and you do at least one of the following:
 - Contribute to the cost of the training
 - Provide the instruction to the apprentice or trainee
 - Pay the apprentice's or trainee's wages during the off-site training period
3. If you comply with this section.

Each apprentice or trainee must:

1. Begin training on the project as soon as feasible after the start of work involving the apprentice's or trainee's skill.
2. Remain on the project as long as training opportunities exist in the apprentice's or trainee's work classification or until the apprentice or trainee has completed the training program.

Furnish the apprentice or trainee with:

1. Copy of the program you will comply with in providing the training.
2. Certification showing the type and length of training satisfactorily completed.

Maintain records and submit reports documenting your performance under section 7-1.11D.

Add to the end of Section 7:

7-1.12 TITLE VI ASSURANCES

During the performance of this Agreement, the Contractor, for itself, its assignees and successors in interest (hereinafter collectively referred to as Contractor) agrees as follows:

(1) Compliance with Regulations: CONTRACTOR shall comply with the regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the REGULATIONS), which are herein incorporated by reference and made a part of this Agreement.

(2) Nondiscrimination: CONTRACTOR, with regard to the work performed by it during the AGREEMENT, shall not discriminate on the grounds of race, color, sex, national origin, religion, age, or disability in the selection and retention of sub-applicants, including procurements of materials and leases of equipment. CONTRACTOR shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the agreement covers a program set forth in Appendix B of the Regulations.

(3) Solicitations for Sub-agreements, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by CONTRACTOR for work to be performed under a Sub-agreement, including procurements of materials or leases of equipment, each potential sub-applicant or supplier shall be notified by CONTRACTOR of the CONTRACTOR'S obligations under this Agreement and the Regulations relative to

nondiscrimination on the grounds of race, color, or national origin.

(4) Information and Reports: CONTRACTOR shall provide all information and reports required by the Regulations, or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the California Department of Transportation or FHWA to be pertinent to ascertain compliance with such Regulations or directives. Where any information required of CONTRACTOR is in the exclusive possession of another who fails or refuses to furnish this information, CONTRACTOR shall so certify to the California Department of Transportation, and/or the FHWA as appropriate, and shall set forth what efforts CONTRACTOR has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of CONTRACTOR's noncompliance with the nondiscrimination provisions of this Agreement, the California Department of Transportation shall impose such Agreement sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

- (a) withholding of payments to CONTRACTOR under the Agreement within a reasonable period of time, not to exceed 90 days; and/or
- (b) cancellation, termination or suspension of the Agreement, in whole or in part.

(6) Incorporation of Provisions: CONTRACTOR shall include the provisions of paragraphs (1) through (6) in every sub-agreement, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

CONTRACTOR shall take such action with respect to any sub-agreement or procurement as the California Department of Transportation or FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance, provided, however, that, in the event CONTRACTOR becomes involved in, or is threatened with, litigation with a sub-applicant or supplier as a result of such direction, CONTRACTOR may request the California Department of Transportation enter into such litigation to protect the interests of the State, and, in addition, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

Add to the end of Section 7:

7-1.13 USE OF UNITED STATES-FLAG VESSELS

The CONTRACTOR agrees -

1. To utilize privately owned United States-flag commercial vessels to ship at least fifty percent (50%) of the gross tonnage (computed separately for dry bulk carries, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this Contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.
2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated "on board" commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (1) of

130310	Rain Event Action Plan

The adjustment provision in Section 4-1.05 “Changes and Extra Work” and Section 9-1.06 “Changed quantity Payment Adjustments” of the Standard Specifications shall not apply to the above items.

Such other items or details, not mentioned above, that are required by the Plans, Standard Specifications, or these Special Provisions, shall be performed, placed, construc

Add to the end of the 1st paragraph of Section 9-1.16B:

Submit a schedule of values for each lump sum item on the Bid Item List.

Replace *Reserved* in Section 9-1.16E(6) with:

9-1.16E(6) PROGRESS PAYMENTS AND PAYMENTS AFTER CONTRACT ACCEPTANCE:

Attention is directed to Section 9-1.16, “Progress Payments,” and 9-1.17 “Payment After Contract Acceptance,” of the Standard Specifications and these Special Provisions.

In lieu of Section 9-1.16C, “Materials On Hand,” of the Revised Standard Specifications, the following shall be inserted:

No progress payment will be made for any materials on hand which are furnished but not incorporated in the work.

Replace Section 9-1.22 with:

9-1.22 ARBITRATION:

Section 9-1.22, "Arbitration," as defined in the Standard Specifications, is deleted from this Contract. In lieu of arbitration, the following shall apply (from the Public Contract Code):

- A. Application of article; inclusion of article in plans and specifications (Public Contract Code Section 20104):
 - 1a. This article applies to all public works and facilities claims of three hundred seventy-five thousand dollars (\$375,000) or less which arise between a Contractor and the County of Monterey.
 - 1b. This article shall not apply to any claims resulting from a Contract between the Contractor and the County of Monterey when the public agency has elected to resolve any disputes pursuant to Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, of the Public Contract Code).
 - 2a. "Public Work" has the same meaning as in Section 1101 of the Public Contract Code but does not include any work or improvement contracted for by the state or the Regents of the University of California.

- 2b. "Claim" means a separate demand by the Contractor for (A) a time extension, (B) payment of money or damages arising from work done by or on behalf of the Contractor pursuant to the Contract for a public work and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (C) an amount the payment of which is disputed by the local agency.
3. The provisions of this article or a summary thereof shall be set forth in the plans or specifications for any work, which may give, rise to a claim under this article.
4. This article applies only to Contracts entered into on or after January 1, 1991.

B. Claims; requirements (Public Contract Code Section 20104.2):

For any claim subject to this article, the following requirements apply:

1. The claim shall be in writing and include the documents necessary to substantiate the claim. Claims must be filed on or before the date of final payment. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims.
- 2a. For Claims of less than fifty thousand dollars (\$50,000), the local agency shall respond in writing to any written claim within 45 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the local agency may have against the claimant.
- 2b. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.
- 2c. The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 15 days after receipt of the further documentation or within a period of time no greater than that taken by the claimant in producing the additional information, whichever is greater.
- 3a. For claims of over fifty thousand dollars (\$50,000) and less than or equal to three hundred seventy-five thousand dollars (\$375,000), the local agency shall respond in writing to all written claims within 60 days of receipt of the claim, or may request, in writing, within 30 days of receipt of the claim, any additional documentation supporting the claim or relating to defenses or claims the local agency may have against the claimant.
- 3b. If additional information is thereafter required, it shall be requested and provided pursuant to this subdivision, upon mutual agreement of the local agency and the claimant.

- 3c. The local agency's written response to the claim, as further documented, shall be submitted to the claimant within 30 days after receipt of the further documentation, or within a period of time no greater than that taken by the claimant in producing the additional information or requested documentation, whichever is greater.
 4. If the claimant disputes the local agency's written response, or the local agency fails to respond within the time prescribed, the claimant may so notify the local agency, in writing, either within 15 days of receipt of the local agency's response or within 15 days of the local agency's failure to respond within the time prescribed, respectively, and demand an informal conference to meet and confer for settlement of the issues in dispute. Upon a demand, the local agency shall schedule a meet and confer conference within 30 days for settlement of the dispute.
 5. If following the meet and confer conference the claim or any portion remains in dispute, the claimant may file a claim pursuant to Chapter 1 (commencing with Section 900) and Chapter 2 (commencing with Section 910) of Part 3 of Division 3.6 of Title 1 of the Government Code. For purposes of those provisions, the running of the period of time within which a claim must be filed shall be tolled from the time the claimant submits his or her written claim pursuant to Section 915(a) of the Government Code until the time the claim is denied, including any period of time utilized by the meet and confer conference.
- C. Procedures for civil actions filed to resolve claims (Public Contract Code Section 20104.4): The following procedures are established for all civil actions filed to resolve claims subject to this article:
1. Within 60 days, but no earlier than 30 days, following the filing or responsive pleadings, the court shall submit the matter to nonbinding mediation unless waived by mutual stipulation of both parties. The mediation process shall provide for the selection within 15 days by both parties of a disinterested third person as mediator, shall be commenced within 30 days of the submittal, and shall be concluded within 15 days from the commencement of the mediation unless a time requirement is extended upon a good cause showing to the court.
 - 2a. If the matter remains in dispute, the case shall be submitted to judicial arbitration pursuant to Chapter 2.5 (commencing with Section 1142.10) Title 3 of Part 3 of the Code of Civil Procedure, notwithstanding Section 1142.11 of that code. The Civil Discovery Act of 1986 Article 3 (commencing with Section 2016) of Chapter 3 of Title 3 of Part 4 of the Code of Civil Procedure) shall apply to any proceeding brought under this subdivision consistent with the rules pertaining to judicial arbitration.
 - 2b. In addition to Chapter 2.5 (commencing with Section 1142.10) of Title 3 of Part 3 of the Code of Civil Procedure, (A) arbitrators shall, when possible, be experienced in construction law, and (B) any party appealing an arbitration award who does not obtain a more favorable judgment shall, in addition to payment of costs and fees under that chapter, also pay the attorney's fees on appeal of the other party.

D. Payment by local agency of undisputed portion of claim; interest on arbitration award or judgment (Public Contract Code Section 2104.6):

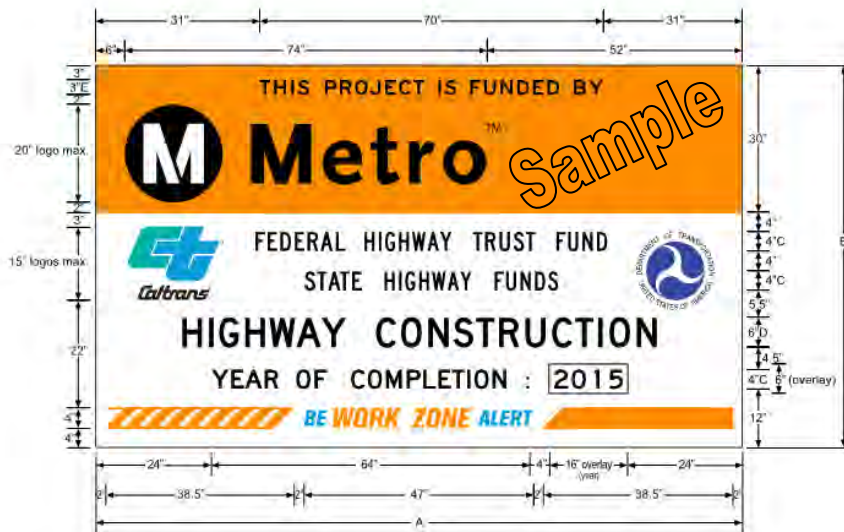
1. The County of Monterey shall not fail to pay money as to any portion of a claim that is undisputed except as otherwise provided in the Contract.
2. In any suit filed under Public Contract Code Section 20104.4, Monterey County shall pay interest at the legal rate on any judgment. The interest shall begin to accrue the date the suit is filed in a court of law.

DRAFT - NOT FOR CONSTRUCTION

Partner funding agency	Height dimension of pictograph with notes
FHWA	15"
Caltrans	15"
Monterey County	20"

DRAFT - NOT FOR CONSTRUCTION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION



NOTES:

1. Provided dimensions are for the 132"x78" sign panel.
 For the 96"x60" sign panel, multiply each horizontal dimension of the 132"x78" sign panel by approximately 0.728 and each vertical dimension by approximately 0.769. Adjust spacing as needed.
 For the 48"x30" sign panel, multiply each horizontal dimension of the 132"x78" sign panel by approximately 0.364 and each vertical dimension by approximately 0.385. Adjust spacing as needed.
2. See Special Provisions for applicable project and fund type messages, and specify when ordering.
3. Specify the year of completion on the overlay when ordering. See Special Provisions.

C47A (CA)

ENGLISH UNITS

A	B
132	78
96	60
48	30

COLORS: LEGEND - BLACK

- BACKGROUND - WHITE AND FLUORESCENT ORANGE
- CT LOGO: PANTONE #299 BLUE AND PANTONE #326 TURQUOISE
- FHWA LOGO: PANTONE #2747 BLUE
- BE WORK ZONE ALERT RIBBON: PANTONE #299 BLUE AND ORANGE
- SEE VECTOR GRAPHIC FILES FOR CT, FHWA, AND BE WORK ZONE ALERT GRAPHICS
- FUNDING AGENCY GRAPHICS IN HEADER (TO BE SUPPLIED BY FUNDING AGENCY)
- ALL COLORS TO BE RETROREFLECTIVE, EXCEPT FOR BLACK

8/9/19

Add to the end of section 13-3.01A:

This project's risk level is [2](#).

Add between the 4th and 5th paragraphs of section 13-3.01C(2)(a):

The following RWQCBs will review the authorized SWPPP:

1. [Central Coast Region 3](#)

Replace Section 13-12 with:

13-12 TEMPORARY CREEK DIVERSION SYSTEMS

13-12.01 GENERAL

13-12.01A Summary

Section 13-12 includes specifications for constructing, maintaining, reconstructing, and removing temporary creek diversion system (TCDS), and restoring creek bed to original condition. The temporary diversion system is used to divert upstream water flows to allow construction in a dry or dewatered location.

13-12.01B Definitions

Not Used

13-12.01C Submittals

Submit a certificate of compliance for:

1. [Pipe Material](#)
2. [Gravel Gradations](#)
3. [Gravel Bags](#)
4. [Minor Cofferdam Materials](#)
5. [Plastic Sheeting](#)

13-12.01C(1) Temporary Creek Diversion System Plan

Within 20 days of Contract approval, submit 3 copies of the Temporary Creek Diversion System Plan (TCDSP). The TCDSP must include:

1. Installation and removal process, including equipment, platforms for equipment, and access locations.
2. Anticipated flow rates.
3. Calculations supporting the sizing of piping, channels, pumps, or other conveyance by using FHWA HY-8 or other equivalent method. Calculate the discharge water flow rate and velocity anticipated where it discharges on any erodible surface, so its conveyance does not cause erosion within the project or at the discharge to the water body. Temporary culverts attached to banks, walls, or other locations must be designed to hold the full weight of the culvert at capacity and restrain the culvert for any expected hydraulic forces.
4. Plans showing locations of diversion, including layouts, cross sections, and elevations.
5. Materials proposed for use, including MSDS if applicable.
6. Operation and maintenance procedures for the TCDS.
7. Restoration plans showing before and after conditions, including photos of existing conditions for areas disturbed during the installation, operation, and removal of the TCDS.
8. Monitoring and reporting plan to ensure applicable water quality objectives are met. This includes schedule of work including Temporary BMP implementation as part of the Construction Site BMP strategy, and SWPPP or WPCP as applicable. Use with section 13-3.01A.
9. Details of the pumping system, if used, including power source, debris handling, fish screens, and monitoring requirements.
10. Fish passage plan, following the Caltrans Fish Passage Design for Road Crossings, CA Department of Fish and Wildlife (CDFW), CA Salmonid Stream Habitat Restoration Manual, and National Marine Fisheries Service (NMFS), Guidelines for Salmonid Passage at Stream Crossings, as required by the applicable PLACs.
11. The TCDS design must demonstrate how it will comply with section 13-12.03A, water tightness, and prevent seepage.
12. Contingency plan to remove workers, equipment, materials, fuels, and any other work items that will cause pollution or violation of PLACs during a rain event out of the flow area. Develop the contingency plan for when a 12-inch freeboard cannot be maintained and overtopping of the coffer dams may occur.

If revisions are required, the Engineer notifies you of the date when the review stopped and provides comments. Submit a revised TCDS within 15 days of receiving the comments. The Department's review resumes when a complete TCDS has been resubmitted.

Submit an electronic copy on a read-only CD, DVD, or other Engineer-authorized data storage device and 4 printed copies of the authorized TCDS.

If the RWQCB or other regulatory agency requires review of the authorized TCDS, the Engineer submits it to the RWQCB for review and comment. If the Engineer orders changes to the TCDS based on the RWQCB's comments, submit a revised TCDS within 10 days.

All submittals which include plans, specifications, and calculations must be sealed and signed by a civil engineer registered in the State.

13-12.01D Quality Assurance

Not Used

13-12.02 MATERIALS

13-12.02A Gravel

Gravel must:

1. Be river run gravel obtained from a river or creek bed with gradation of 100 percent passing a 3/4 inch sieve and 0% passing a 3/8 inch sieve
2. Be clean, hard, sound, durable, uniform in quality, and free of any detrimental quantity of soft, thin, elongated or laminated pieces, disintegrated material, organic matter, or other deleterious substances
3. Be composed entirely of particles that have no more than 1 fractured face
4. Have a cleanliness value of at least 85, as determined by California Test 227

13-12.02B Impermeable Plastic Membrane

Impermeable plastic membrane must be:

1. Single ply, commercial quality, polyethylene with a minimum thickness of 10 mils complying with ASTM D2103. You must use stronger plastic membrane if required as part of design to resist hydraulic forces.
2. Free of holes, punctures, tears or other defects that compromise the impermeability of the material.
3. Suitable for use as an impermeable membrane.
4. Resistant to UV light, retaining a minimum grab breaking load of 70 percent after 500 hours under ASTM D4355.

13-12.02C Gravel-Filled Bags

13-12.02D Plastic Pipes

Plastic pipe must comply with section 61-3.01 and must:

1. Be clean, uncoated, in good condition free of rust, paint oil dirt or other residues that could potentially contribute to water pollution
2. Be adequately supported for planned loads
3. Use watertight joints under section 61-2.01.
4. Be made of a material or combination of materials that are suitable for clean water and which do not contain banned, hazardous or unlawful substances
5. For temporary pipes not reused on the project you may use the following materials:
 - 5.1. PVC closed-profile wall pipe must comply with ASTM F1803
 - 5.2. PVC solid wall pipe must comply with ASTM D3034, ASTM F679, AWWA C900, AWWA C905, or ASTM D2241 and cell class 12454 defined by ASTM D1784
 - 5.3. HDPE solid wall pipe must comply with AASHTO M 326 and ASTM F714
 - 5.4. Polyethylene large-diameter-profile wall sewer and drain pipe must comply with ASTM F894

13-12.02E Rock

Rock layer must comply with the table titled *Rock Gradation for 7-inch-thick Layer* in section 72-4.02.

13-12.03 CONSTRUCTION

13-12.03A General

Construction, use and removal of the TCDS is restricted to the time period from [July 1](#) to [October 15](#). If the work cannot be completed during the initial restricted time period [ending October 15](#), remove TCDS, restore the creek to original flow condition, and reconstruct the TCDS after [July 1](#) of the following year. No work is allowed within the stream except during the restricted time period.

Do not use motorized equipment or vehicles in areas of flowing or standing water for the construction or removal of the TCDS in compliance with section 13-4.03.

Remove vegetation to ground level and clear away debris.

Place temporary or permanent fill as allowed by PLACs.

Place rock at outlet of diversion pipe under section 72-4.03, except motorized vehicles and equipment must not be used in areas of flowing or standing water.

Do not construct or reconstruct TCDS if the 72-hour forecasts predict a 50 percent or greater chance of rain in the project area.

Stop all work and remove all material and equipment from the creek between upstream and downstream cofferdams if the 72-hour forecasts predict a 50 percent or greater chance of rain in the project area and the predicted rainfall is estimated to produce a flow rate exceeding the design capacity of the TCDS.

If the required freeboard cannot be maintained and overtopping may occur, implement contingency plan to remove all workers, equipment, and potential sources of pollution from the dry working area of the creek bed.

The TCDS must be constructed within the temporary impact footprint as described in the environmental commitments.

Lap and join joints between the edges of impermeable plastic membrane with commercial-quality waterproof tape with minimum 4-inch lapping at the edges.

Seal openings or penetrations through the impermeable plastic membrane with commercial quality waterproof tape.

The TCDS must be water tight to keep the work area dry for construction and prevent the creation of pollutants. Maintain all portions of the TCDS and fix leaks as soon as they are discovered.

Contact water agencies that discharge to the construction area to ensure that unexpected water is not discharged during construction which could compromise the TCDS.

13-12.03B Maintenance

Maintain the TCDS to provide a minimum freeboard of 12 inches between the water surface and the impermeable top of the cofferdams.

Do not discharge runoff from existing or proposed drainage systems into the dry work area between the cofferdams. Runoff from these systems may be connected to the diversion pipe or conveyed by pipes downstream of the cofferdam.

Prevent leaks in the TCDS. Provide seepage pumps as necessary and keep the work area dry to prevent the creation of sediment-laden water.

Repair holes, rips and voids in the impermeable plastic membrane with commercial-quality waterproof tape. Replace impermeable plastic membrane when patches or repairs compromise the impermeability of the material.

Repair TCDS within 24 hours after the damage occurs.

Prevent debris from entering the TCDS and receiving water.

Remove and immediately replace gravel, gravel-filled bags, impermeable plastic membrane, or plastic pipes contaminated by construction activities.

Remove sediment deposits and debris from the TCDS as needed. If removed sediment is deposited within project limits, it must be stabilized and not subject to erosion by wind or water, under sections 19-1.01 and 19-2.03 B.

13-12.03C Removal

When no longer required, remove all components of TCDS. Return the creek bed and banks to the original condition.

Do not excavate the native creek material. Backfill ground disturbance, including holes and depressions caused by the installation and removal of the TCDS with gravel. Maintain the original line and grade of the creek bed.

13-12.04 PAYMENT

Not Used

^^

14 ENVIRONMENTAL STEWARDSHIP

14-1.02 ENVIRONMENTALLY SENSITIVE AREA

Add to the end of Section 14-1.02:

An ESA exists on this project.

Before starting job site activities, install [temporary high visibility fence](#) to protect the ESA and mark its boundaries.

Install signs 100 feet apart along the length and at the ends of the [temporary high visibility fence](#) identifying the area as an ESA. Place the top of each sign flush with the top of the [temporary high visibility fence](#).

The signs must:

1. Be weatherproof and fade-proof
2. Be from 8-1/2 to 11 inches high and from 11 to 14 inches wide
3. Have the following message in black letters: [Ordinary High Water Mark \(Wetlands\)](#).

The message must be legible from a distance of 20 feet by persons with 20/20 vision or vision corrected to 20/20.

The signs may be made of laminated printed paper attached to an inflexible weatherproof backer board.

7. Insert the type of barrier.

Attach the signs to the [temporary high visibility fence](#) with tie wire or locking plastic fasteners. Maintain the signs until Contract acceptance.

Limited access to the ESA is allowed for [biological monitoring, water sampling, gravel embankment for access, or release of encroaching wildlife](#). Notify the Engineer 3 business days or less before the planned entry date. Any other access to the ESA is prohibited.

14-6.03 SPECIES PROTECTION

Add to the 1st paragraph of section 14-6.03A:

This project is within or near habitat for the regulated species shown in the following table:

Regulated Species

California Red Legged Frog
Western Pond Turtle
Two Striped Garter Snake
Monterey Big Eared Woodrat
South-Central Coast Steelhead

This project includes the sensitive habitats shown in the following table:

Sensitive Habitats

Carmel River
Jurisdictional Areas
Wetlands
Riparian Areas
California Red Legged Frog Habitat
Alnus rhombifolia Forest alliance association
Riverine Habitat

Add to section 14-6.03A:

[Construction Contractor to use](#) the protocols for the corresponding regulated species shown in the following table:

Regulated species name	Protocol
California Red Legged Frog Western Pond Turtle Two Striped Garter Snake Monterey Big Eared Woodrat South-Central Coast Steelhead	<p>Verify no wildlife is present near equipment prior to operation.</p> <p>Notify the Contractor Supplied Biologist 45 days in advance of any construction activities</p> <p>Notify engineer and construction staff when environmental awareness training sessions are scheduled.</p> <p>Immediately notify the Contractor Supplied Biologist if any wildlife is observed on site.</p> <p>Notify Contractor Supplied Biologist of work that will need to be monitored including but not limited to exclusion installation and work within designated buffer zones, any vegetation removal, re-vegetation, and dewatering activities..</p> <p>Prior to nesting season begins, exclusionary measures such as netting and visual deterrents will be installed and will be routinely inspected and kept in good repair until construction is complete and the excusion devices are removed.</p>

Monitor regulated species according to the schedule shown in the following table:

Monitoring type	Schedule
Vehicle Inspection for wildlife	Daily
Tree Inspection for nests	Prior to tree removal
Inspection for nests in vegetation	Prior to vegetation removal
Exclusionary measures (Netting, etc.)	Daily (Feb 1 to Aug 31)

Replace the 2nd paragraph of section 14-6.03B with:

The Department anticipates nesting or attempted nesting by migratory and nongame birds from [February 15](#) to [August 31](#).

Add to section 14-6.03C:

Regulated fish are anticipated adjacent to bridge no. [44C 0017](#). Implement the following protection measures:

1. Install exclusionary material, a cofferdam, or a combination of both
2. Provide a Contractor-supplied biologist to relocate the fish if relocation is allowed

Relocate the regulated fish as soon as possible to a location with suitable habitat at least [200](#) feet [downstream](#) of the work area.

Handle regulated fish to minimize stress by:

1. Keeping the fish in water to the maximum extent possible during relocation
2. Keeping the fish in cool, shaded, and aerated water while in captivity
3. Protecting the fish from excessive noise, handling, temperature variation, jostling, or overcrowding while in captivity
4. Removing the fish from water only when releasing them
5. Segregating young-of-year salmonids into separate containers from older salmonids and other aquatic predators

Exclusion material must be [.25](#) inch stretched mesh.

Exclude fish from the work area in the following sequence:

1. Install exclusion materials and remove as many fish as possible
2. Install a cofferdam or water bypass
3. Gradually dewater the work area
4. Remove the remaining fish using one or a combination of seining, baited minnow traps, and dip net and hand removal

Maintain exclusion material and cofferdams such that regulated fish are prevented from entering the work area.

The pump screen's approach velocity must not exceed [.33](#) feet per second.

Replace the list in the 2nd paragraph of section 14-6.03D(1) with:

1. [Prior to construction, conduct a bird survey to ensure that the project Authority is in compliance with the Migratory Bird Treaty Act \(MBTA\)](#)
2. [Clear work area prior to vegetation removal](#)
3. [Monitor regulated species within the project area.](#)
4. [Ensure that construction activities do not result in the take of regulated species.](#)
5. [Ensure that construction activities comply with PLAC's.](#)
6. [Immediately notify the Engineer of any take of regulated species or violation of a biological resource PLAC.](#)
7. [Conduct environmental training to construction and maintenance personnel to describe regulated species, habitat, and ESA sensitive areas.](#)

8. Identify, verify, and oversee the placement and installation of brightly colored fencing to protect sensitive habitat.
9. During ground disturbing activities, monitor for reptiles and other small wildlife and relocate in a safe place outside of exclusionary fencing
10. Prior to vegetation removal, survey the work area for Monterey Big Eared Woodrat nests and if found, disassemble by hand or with hand tools and remove from work area and stack where accessible to the woodrats.
11. Be on site during dewatering or river diversions and assist the Construction Contractor on the implementation, placement, and removal, of the dewatering and diversion devices and to capture and relocate stranded steelhead.

Add to section 14-6.03D(1):

A Contractor-supplied biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task. The biologist must have experience that complies with the requirements shown in the following table:

Specialized activity/species	Requirements
<u>California Red Legged Frog</u>	<u>Must be an approved USFWS biologist to handle any activities with this species.</u>

Within 30 days before starting job site activities, submit protocols for species protection surveys. Use protocols required in the PLACs. Survey the job site for regulated species and submit a preconstruction survey report within 2 days before starting work.

The preconstruction survey report must include one of the following:

1. Detailed observations and locations where regulated species were observed
2. Statement that no regulated species were observed
3. Relevant Photos
4. GPS Locations and mapping of covered area
5. Datapoints of any significant observations.
6. Field datasheets
7. Names of Surveyors
8. Dates of Surveys
9. Any other pertinent Data found from the Surveys.

Submit an initial monitoring report as an informational submittal within 12 hours after starting ground-disturbing activities.

Submit monitoring reports according to the following schedule:

Monitoring type	Report schedule
Dewatering and Diversion Structures	Weekly
Special Status Species	Weekly
Reptiles and Small Wildlife	Weekly
Steelhead	Prior, Bi-Weekly, and After Construction

Submit a biological resource incident report within [24](#) hours of the incident.

The incident report must include:

1. Description of any take of regulated species or any violation of a biological resource
PLAC
2. Species name and number taken
3. Details of required notifications with contact information
4. Corrective actions proposed or taken
5. Disposition of taken species

Submit a final monitoring report no later than [20](#) days after completion of the project. If the report requires revisions, the Department provides comments. Submit a revised report within 7 days of receiving comments. The final monitoring report must be a cumulative report including:

1. Start and end dates of construction
3. Species protection measures and implementation details
5. Assessment of the effectiveness of the species protection measures in mitigating project impacts
6. Recommendations for improving species protection measures

Replace *Reserved* in section 14-12.04 with:

14-12.04 PERMIT LIMITS ON CONSTRUCTION WITHIN THE RIVER CHANNEL:

Attention is directed to “Section 14 Environmental Stewardship” of the Standard Specifications and “Environmentally Sensitive Area” and “Temporary Fence (Type ESA)” of these special provisions. Prior to beginning work, the boundaries of the Environmental Sensitive Areas (ESA) will be delineated by the Engineer in the field. The Contractor shall install the temporary fence

19 EARTHWORK

Replace Section 19-2.03D(2) with:

19-2.03D(2) TOPSOIL

Section 19-2.03D(2) includes specifications for excavation, handling, and placing topsoil. Excavate the top 7 inches of topsoil within the limits of re-vegetation as shown on the Planting Plans. Include leaf litter and extraneous organic matter in the excavation.

Place the topsoil at the top of the slope. If there is insufficient space at the top of the slope and an alternative location is not shown, submit an alternative location to the Engineer. If stockpiling of topsoil is ordered, excavate, and stockpile the topsoil until the topsoil is placed in its final position. If an alternative location is required to stockpile topsoil as directed by the Engineer, this work is change order work.

Place and spread the topsoil where shown in its final position to a uniform layer thickness within the limits of replanting and as directed by the Engineer. Mix topsoil with chipped vegetative material if authorized. Compact the topsoil finished surface uniformly using track-mounted equipment run perpendicular to slope contours. Section 19-5.03C does not apply to topsoil compaction.

If you stockpile topsoil, stockpiles must:

1. Not be higher than 5 feet
2. Not be covered with a material that will stop air circulation, increase soil temperatures, or harm beneficial biological activity and resident seeds
3. Be marked with signs and flags as *Topsoil*

Replace Section 19-11 with:

19-11 GRAVEL EMBANKMENT

19-11.01 GENERAL

19-11.01A Summary

Section 19-11 includes specifications for constructing gravel embankment. Gravel embankment is to be used for any portion of access within the ordinary high water mark (OHWM) of the river.

19-11.01B Definitions

Not Used

19-11.01C Submittals

Submit certificates of compliance for gravel gradation and gravel shape. Submit test data for gravel cleanliness.

19-11.01D Quality Assurance
Not Used

19-11.02 MATERIALS

Gravel [must meet the requirements of Section 13-12.02A](#) gravel of these special provisions:

19-11.03 CONSTRUCTION

Construct gravel embankment under section 19-6.

19-11.04 PAYMENT

Payment for gravel embankment will be per section 19-6.04.
^^

20 LANDSCAPE

Replace “Reserved” in section 20-1.01B with:

Noxious weeds: Any species of plant that is, or is liable to be, troublesome, aggressive, intrusive, detrimental, or destructive to agriculture, silviculture, or important native species, and difficult to control or eradicate, as designated by the county and the California Department of Food and Agriculture (CDFA), under 3 CA Code of Regs § 4500 et seq.

Noxious weeds of concern that are prevalent within the right of way include:

Scientific Name	Common Name	Cal-IPC Invasiveness Rank
<i>Carduus pycnocephalus</i>	Italian thistle	Moderate
<i>Carpobrotus edulis</i>	Highway iceplant	High
<i>Conium maculatum</i>	Poison hemlock	Moderate
<i>Cotoneaster</i> species	Cotoneaster	Moderate
<i>Foeniculum vulgare</i>	Sweet fennel	Moderate
<i>Hirschfeldia incana</i>	Shortpod mustard	Moderate
<i>Mentha pulegium</i>	Pennyroyal	Moderate
<i>Oxalis pes-caprae</i>	Bermuda buttercup	Moderate
<i>Rumex acetosella</i>	Sheep sorrel	Moderate

Replace the 2nd paragraph of section 20-1.02B with:

On-site water supply for watering and irrigation is not available. Make arrangements for supplying nonpotable water for watering and irrigation. Recycled water must be adequately oxidized and disinfected water that receives at least tertiary level treatment under 22 CA Code of Regs § 60301 et seq.

Replace the 1st paragraph of section 20-1.03C(3) with:

Control non-native invasive plants and noxious weeds by the use of pesticides, hand-pulling, or mowing.

Add to the 2nd paragraph of section 20-1.03C(3):

If pesticides are used, apply pesticides directly onto weeds by spot spray or brush application to

prevent overspray.

Add to section 20-1.03C(4):

Before removing any poison hemlock, cotoneaster, or sweet fennel under section 20-1.03C(3), cover seed pods or seed heads with clear plastic bags, and secure tightly to prevent seed dispersal. Ensure that plastic bags remain intact through disposal.

Replace section 20-3.01B(2)(b)(i) with:

Take cuttings from healthy, vigorous plants within the Carmel River watershed at a location specified by the Engineer. Make cuts with sharp, clean tools. Cuts shall be clean and shall shape the tree. Branch cuts shall not be flush with the trunk; approximately a quarter of an inch shall remain on the branch. Do not take more than 33 percent of an individual plant and not more than 50 percent of the plants in an area.

Cuttings shall be stripped of leaves and immediately stored in 5-gallon buckets filled halfway to the top with water. The poles shall be stored with the bud up and the rooting-end immersed in water. Do not allow cuttings to dry or wither.

Plant cuttings within 2 days of being cut.

Replace item 2 in the list in the 2nd paragraph of section 20-3.01B(2)(b)(iii) with:

From 48 to 60 inches in length

Replace item 3 in the list in the 2nd paragraph of section 20-3.01B(2)(b)(iii) with:

From 1/2 to 2 inches in length

Add to the 1st paragraph of section 20-3.01C(1):

Apply root stimulant to:

1. Cuttings

Replace 4th paragraph in section 20-3.02C(2) with:

If present, weedy material shall be scraped away from an area a minimum of 3 ft by 3 ft directly around the planting location. Planting holes may be either dug by hand or augured with a handheld auger. Holes shall be twice the depth of the root ball and 1.5 times the width.

Replace section 20-3.02C(3)(d)(ii) with:

Plant willow cuttings between December 1 and March 1 unless otherwise directed by the Engineer.

Planting holes for willow cuttings shall be made perpendicular to the ground line and shall be formed with a steel bar or excavated by use of an auger, post hole digger, or similar tool. Plant holes will be large enough to receive cuttings such that the cuttings may be planted to the proper depths without damage to the bark, approximately 3-feet in depth and 4 inches in diameter. If the soil in and around the plant hole is not wet prior to planting, the holes shall be irrigated prior to planting.

If rock or other hard material prohibits the excavation of the planting holes, excavate new holes and backfill the unused holes.

A root stimulant will be applied to the willow cuttings immediately prior to planting. The stimulant will be applied in conformance with the printed instructions of the root stimulant manufacturer.

Willow cuttings shall be positioned in the planting holes with approximately 2/3 of the cutting below finished grade. The cuttings will have a minimum of 3 to 5 bud scars exposed above the planting hole. After planting, the plant holes will be backfilled with excavated material and tamped to remove air pockets without damaging the cutting's bark. Cuttings shall be watered immediately after planting.

The Engineer shall inspect the planting site during and after installation and may request changes in materials of planting techniques prior to approval. Live poles shall be inspected by the Engineer prior to installation. The Engineer shall have the right to reject poles that do not comply with these planting specifications.

Replace section 20-3.02C(3)(d)(v) with:

Plant container plants between November 15 and March 1. Do not distribute more plants than can be planted and watered on that day.

Plants shall be thoroughly irrigated when in the container directly prior to planting. Do not plant plants in soil that is too wet, too dry, not properly amended as described, or in an unsatisfactory condition for planting.

The side of the planting holes shall be scarified, watered-in, and allowed to drain before the plants are placed in the holes. Soil removed when the planting hole is created will be thoroughly broken up, used as backfill, and completely watered-in.

Plants shall be placed with the roots untangled and laid out in the planting hole to promote good root growth and prevent plants from becoming root bound. Roots shall be adequately protected at all times from sun and/or drying winds.

Plants shall be set in the planting hole so that the crown of the root ball is 1/2 inch above finished grade. The crown of the plant shall not be depressed.

A watering basin approximately 2 ft in diameter with a 3-inch berm shall be provided around each plant or cluster of plants.

Each plant shall be individually watered to reach the lower roots (12 inches) at the time of planting. The approximate amount of water applied shall be based on the size of the plant and determined in the field.

Water plants immediately after planting. Apply water until the backfill soil around and below the roots or ball of earth around the roots of each plant is thoroughly saturated. If watering with a hose, use a nozzle, water disbursement device, or pressure reducing device. Do not allow the full

force of the water from the open end of the hose to fall within the basin around any plant. Several consecutive watering cycles may be necessary to thoroughly saturate the soil.

Add to section 20-4.01A:

This project has a Type 2 plant establishment period. The plant establishment period will be 1 year.

Add to section 20-4.03A:

If irregular or uneven areas appear within hydroseed areas, restore to a smooth and even appearance. Reseed hydroseed seed areas as ordered. Comply with section 21-1.03E. Reseeding hydroseed areas is change order work.

Remove trash on a semi-annual basis. All trash removed from the planting areas shall be disposed of at an appropriate off-site location.

Replace section 20-4.03D with:

Control non-native invasive species and noxious weeds around the installed plants and in hydroseed areas in early spring, late spring, and mid-summer. Weed control shall consist of weeding inside the watering basins and weeding immediately around plants. Weed control shall be implemented using hand or mechanical removal techniques unless the weed infestation is so severe that herbicide application is necessary. Weed control activities shall be timed to occur just prior to the flowering period of non-native invasive species and noxious weeds to prevent seed development and dispersal. Before removing any poison hemlock, cotoneaster, or sweet fennel, cover seed pods or seed heads with clear plastic bags, and secure tightly to prevent seed dispersal. Ensure that plastic bags remain intact through disposal.

If herbicide application is necessary, it shall be accomplished in accordance with the following standards:

1. Only the use of United States EPA-approved herbicides suitable for aquatic settings (e.g. Rodeo, Aquamaster, or other herbicides(s) approved for use in aquatic settings) shall be permitted.
2. All herbicide use shall be subject to the prior approval of the Regional Water Quality Control Board.
3. Herbicide shall be applied by a licensed applicator.
4. No spraying shall be permitted if wind speed exceeds 3 miles per hour to prevent airborne transfer of herbicide.
5. Once non-native invasive species and noxious weeds are determined to be under control, hand-removal techniques shall be the primary method of control.
6. All non-native plant material removed from the mitigation areas shall be disposed of at an appropriate off-site location.

Replace section 20-4.03G with:

Irrigate plants with a tank truck, temporary/mobile water buffalo, or similar method. If watering with a hose, use a nozzle, water disbursement device, or pressure reducing device. Do not allow the full force of the water from the open end of the hose to fall within the basin around any plant.

The overall size of the office shall be 700 square feet minimum, and it shall be furnished with doors and windows capable of being locked. The office shall be partitioned to provide two private offices of not less than 115 square feet each and a conference area of not less than 180 square feet. The private offices shall be provided with a lockable closet and at least 25 feet of 1 foot wide shelving located as directed by the Engineer and two portable bookcases, each with a minimum of three four-foot long shelves.

If the office is a trailer, the perimeter of the office area shall be secured by a 6 foot high chain link fence. The Contractor shall provide a lockable gate and lock assembly with 2 keys. Title to the trailer and provided contents shall remain with the Contractor. The Contractor shall provide the Engineer with a copy of written permission or agreement to place the Resident Engineer trailer on private property unless such private property is within the project temporary construction easement or right of way as shown on the plans.

The office shall be furnished with three parking spaces (within the above chain link fence or contiguous to the office building); 2 desks capable of being locked; one drafting table; one 3 feet by 6 feet table; 6 standard chairs; 3 desk chairs with arms; one drafting stool; one dry plain paper copying machine with automatic feed and collator capable of making letter size (8 ½"x11"), legal size (8 ½"x 14"), and ledger size (11"x17") copies together with sufficient paper and materials for 1000 copies per month; 2 four-drawer legal size filing cabinets; 1 plan rack; one refrigerator; one fire extinguisher; one first-aid kit (bandages, gauze, etc.); bottled drinking water, restroom (24 square feet minimum) equipped with toilet and sink with hot and cold running water, soap, and paper products; 3 telephone lines (two for telephones, and one for computer modem); 2 telephones capable of rollover ring; and one full-feature telephone answering machine. The office shall be furnished with a room air conditioner/heat pump with a capacity to maintain 75 degree temperature during summer or winter month use.

The refrigerator shall have a freezer no smaller than 3 cubic feet and a refrigerated compartment no smaller than 12 cubic feet.

The Contractor shall provide, not less than weekly, office cleaning service including waste paper/trash removal, floor cleaning, and rest room maintenance to the satisfaction of the Engineer.

The Contractor shall provide for the Engineer's exclusive possession and use a complete computer system with two computers connected to a laser printer. The Contractor shall maintain and repair the computer system. The Engineer may use the furnished computer hardware, software, and instruction manuals for any purposes relating to the project. Before delivery and setup of the computer system, the Contractor shall submit to the Engineer for approval a detailed list of all computer hardware and software the Contractor proposes to furnish.

The computer hardware and software furnished by the Contractor shall be compatible with his project scheduling software and the project management and administration needs of the Engineer for the project and shall include instruction manuals and other documentation normally provided with the software.

The Contractor shall furnish, install, set up, maintain, and repair the computer hardware and software ready for use within a week after the office is made available to the Engineer.

All computer hardware and software furnished shall remain the property of the Contractor and shall be removed by the Contractor upon acceptance of the contract when no claims involving

contract progress are pending. When contract claims involving contract progress are pending, computer hardware or software shall not be removed until the final estimate has been submitted to the Contractor. If, before the final estimate has been submitted to the Contractor, the Contractor requests relief of maintenance of the Resident Engineer's Office and if such a request is approved by the Engineer, the Contractor shall relocate the computer system to another location, within the County limits, designated by the Engineer.

Equipment furnished shall be for the Engineer's sole use and of standard quality and new or like new in appearance and function. The office shall be installed and ready for occupancy no later than twenty working days after the notice to proceed. Monthly telephone bills shall be paid by the Contractor and reimbursed by contract change order with a 15 percent markup allowed.

The contract lump sum price paid for "Resident Engineer Office" shall include full compensation for furnishing and installing the "Resident Engineer's Office" as specified, maintaining until the final estimate has been approved by the Engineer, and removing the office, utility connections including bottled water service, furnishings, computer system, office equipment, office supplies, and utility billings (except for monthly telephone costs as provided above) as specified in these Special Provisions and as directed by the Engineer.

Payment for "Resident Engineer's Office" shall be made as follows:

- A. At such time as installation and setup are complete (ready to occupy/use), including computer system and software, then 25 percent payment for "Resident Engineer's Office" shall be made.
- B. At such time as fifty percent of the work is completed, an additional 50 percent (total 75 percent) payment for "Resident Engineer's Office" shall be made.
- C. At such time as one hundred percent of the work is accepted, then the final 25 percent (total 100 percent) payment for "Resident Engineer's Office" shall be made.

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DIVISION VIII MISCELLANEOUS CONSTRUCTION
72 SLOPE PROTECTION

Add to the end of Section 72-2.03C:

Place native material and plants above RSP as shown on the plans.

Replace Section 72-7 with:

72-7 ARTICULATED CONCRETE BLOCK (ACB) SYSTEMS

72-7.01 GENERAL

72-7.01A SUMMARY

Section 72-7 includes specifications for furnishing all labor, materials, equipment, and incidentals required for, and performing all operations in connection with, the installation of Articulated Concrete Block (ACB) system in accordance with the lines, grades, design, and dimensions shown on the Contract Drawings and as specified herein.

Articulated Concrete Blocks including blocks, cables, and fittings must conform to ASTM D6684, Standard Specification for Materials and Manufacture of Articulated Concrete Block Revetment System.

72-7.01B SUBMITTALS

Prior to construction, Contractor must submit evidence of full-scale hydraulic testing in accordance with ASTM D-7277, and if necessary, Factor of Safety (FoS) calculations in support of the proposed ACB system stamped and signed by a Professional Engineer licensed to practice in the state. The Contractor must also submit an appropriate geotextile, selected for the site being protected on the basis of the gradation and permeability of the surface soils.

The following project specific hydraulic requirements are to be utilized:

Location		Upstream	Upstream Face	Downstream Face	Downstream
River Station		1034.6	664.4 BR U	664.4 BR D	569
Channel Discharge (cfs)	Q	23,650	23,650	23,650	23,650
Cross section average velocity (fps)	V _{avg}	6.3	5.7	5.4	7.0
Maximum velocity (fps)	V _{des}	7.4	7.7	7.0	8.3
Hydraulic radius (ft)	R	12.1	10.3	12.2	13.1
Maximum depth (ft)	y	24.6	24.5	25.2	22.2
Side slope	V:H	N/A	1.7:1	1.6:1	N/A
Average bed slope	S _o	0.0016	0.0209	-0.0305	0.0401
Slope of energy grade line	S _f	0.0023	0.0018	0.0013	0.0041
Channel top width	T	312	257	265	250
Radius of curvature	R _c	N/A	N/A	N/A	N/A
Rc/T	R _c /T	N/A	N/A	N/A	N/A
Bend coefficient	K _b	N/A	N/A	N/A	N/A

The Contractor must furnish manufacturer's certificates of compliance for ACB/mats, revetment cable, geotextile, and any revetment cable fittings and connectors. The Contractor must also furnish the manufacturer's specifications, literature, and shop drawings for the layout of the mats, installation and safety instructions, and any recommendations, if applicable, that are specifically related to the project.

72-7.01C QUALITY ASSURANCE

Materials must be handled in such a manner as to ensure delivery to the site in sound, undamaged condition. Materials delivered to the site must be inspected for damage, unloaded and stored with the minimum of handling. Material shall be kept free of dirt and debris.

Storage must be in accordance with manufacturer's requirements. Suppliers must own and operate their own manufacturing facility.

Supplier must submit a list of five (5) comparable projects, in terms of size and applications, in the United States, where the satisfactory performance of the specific ACB system can be verified after a minimum of five (5) years of service life.

Supplier's representative must be available for a pre-installation meeting a minimum of two weeks prior to starting the work of this section.

The manufacturer of the ACBs/mats must provide design and construction advice during the design and initial installation phases of the project when required or as necessary, at the discretion of the Engineer. The ACB supplier must provide, at a minimum, one full day or two half-days of on-site project support upon request.

Installer Qualifications: Minimum 2-year experience installing similar products.

72-7.01D ACCEPTABLE MANUFACTURERS:

1. Basalite
605 Industrial Way
Dixon, CA 95620-9779
Phone: 707-678-1901
1201 Golden State Boulevard
Selma, CA 93662
Phone: 559-896-1649

2. Contech Engineered Solutions
9025 Centre Pointe Drive
West Chester, OH 45069
Phone: 1-800-338-1122
info@conteches.com

Substitution must be approved by the engineer.

72-7.02 MATERIALS

72-7.02A GENERAL

All ACB mats must be prefabricated as an assembly of concrete blocks having specific hydraulic capacities and laced with revetment cables. The ACB system may also be assembled on-site by hand-placing the individual units either with or without subsequent insertion of cables.

The ACB mats must be placed on a filter fabric as specified herein. The filter fabric will not

be permanently affixed or otherwise adhered to the blocks or mats; i.e., the filter fabric must be independent of the block system.

72-7.02B ARTICULATED CONCRETE BLOCKS

1. Manufacturing must conform to the current version of ASTM D-6684, *Standard Specification for Materials and Manufacture of Articulated Concrete Block (ACB) Revetment Systems*.
2. Cementitious Materials - Materials shall conform to the following applicable ASTM specifications:
 - 2.1 Portland Cements - Specification C 150, for Portland Cement.
 - 2.2 Blended Cements - Specification C 595, for Blended Hydraulic Cements.
 - 2.3 Hydrated Lime Types - Specification C 207, for Hydrated Lime Types.
 - 2.4 Pozzolans - Specification C 618, for Fly Ash and Raw or Calcined Natural Pozzolans for use in Portland Cement Concrete.
 - 2.5 Aggregates – Specification C 33, for Concrete Aggregates, except that grading requirements shall not necessarily apply.
3. Casting: The ACB units must be produced using a dry cast method.
4. Physical Requirements: At the time of delivery to the work site, the ACB units must conform to the physical requirements prescribed in the table below.

PHYSICAL REQUIREMENTS

Compressive Strength Net Area Min. psi		Water Absorption Max. lb/ft ³	
Avg. of 3 units	Individual Unit	Avg. of 3 units	Individual Unit
4,000	3,500	9.1	15.1

5. Visual Inspection
 - 5.1 All units must be sound and free of defects which would interfere with the proper placement of the unit, or which would impair the performance of the system.
 - 5.2 Cracks exceeding 0.25 inches in width and/or 1.0 inch in depth shall be deemed grounds for rejection. Chipping resulting in a weight loss exceeding 5% of the average weight of a concrete unit shall be deemed grounds for rejection.
 - 5.3 Blocks rejected prior to delivery from the point of manufacture must be replaced at the manufacturer's expense. Blocks rejected at the job site must be repaired with structural grout or replaced upon request at the expense of the Contractor.
 - 5.4 The owner shall be afforded access to the relevant manufacturing facility or facilities, if desired, in order to inspect and/or sample the ACB units from lots ready for delivery prior to release for delivery to the job site.

72-7.02C REVETMENT CABLES AND FITTINGS

1. Polyester Revetment Cable and Fittings

- 1.1 Revetment cable must be constructed of high tenacity, low elongating, and continuous filament polyester fibers. Cable must consist of a core construction comprised of parallel fibers contained within an outer jacket or cover.
- 1.2 The size of the revetment cable must be selected such that the minimum acceptable strength is at least five (5) times that required for lifting of the mats, in accordance with ASTM D-6684 paragraph 5.5.2. This design must include a reduction factor for splicing of 60%, unless a larger factor can be substantiated by laboratory testing.
- 1.3 The revetment cable must exhibit resistance to most concentrated acids, alkalis and solvents. Cable must be impervious to rot, mildew and degradation associated with marine organisms. The materials used in the construction of the cable must not be affected by continuous immersion in fresh or salt water.
- 1.4 Selection of cable and fittings must be made in a manner that ensures a safe design factor for mats being lifted from both ends, thereby forming a catenary. Consideration must be taken for the bending of the cables around hooks or pins during lifting. Fittings such as sleeves and stops must be aluminum and washers must be plastic unless otherwise shown on the Contract Drawings.

2. Galvanized Steel Revetment Cable and Fittings

- 2.1 Revetment cable must be constructed of preformed galvanized aircraft cable (GAC). The cables must be made from individual wires and strands that have been formed during the manufacture into the shape they have in the finished cable.
- 2.2 Cable must consist of a core construction comprised of seven (7) wires wrapped within seven (7) or nineteen (19) wire strands.
- 2.3 The size of the revetment cable must be selected such that the minimum acceptable strength is at least five (5) times that required for lifting of the mats, in accordance with ASTM D-6684 paragraph 5.5.2. This design must include a reduction factor for splicing of 75%, unless a larger factor can be substantiated by laboratory testing.
- 2.4 The revetment cable must exhibit resistance to mild concentrations of acids, alkalis, and solvents. Fittings such as sleeves and stops must be aluminum, and the washers must be galvanized steel or plastic. Furthermore, depending on material availability, the cable type (7x7 or 7x19) can be interchanged while always ensuring the required factor of safety for the cable.
- 2.5 Selection of cable and fittings must be made in a manner that ensures a safe design factor for mats being lifted from both ends, thereby forming a catenary. Consideration must be taken for the bending of the cables around hooks or pins during lifting. Fittings such as sleeves and stops shall be aluminum and washers must be plastic unless otherwise shown on the Contract Drawings.

72-7.02D FILTER FABRIC

1. Filter fabric must be RSP Fabric (Class 8) conforming to section 96-1.02I.
2. The filter fabric will not be permanently affixed or otherwise adhered to the blocks or mats; i.e., the filter fabric must be independent of the block system.

3. Handle and place the fabric under manufacturer's instructions and as indicated herein.

72-7.03 CONSTRUCTION

72-7.03A SUBGRADE PREPARATION

1. All subgrade preparation must be performed in accordance with the current version of ASTM D 6884, *Standard Practice for Installation of Articulated Concrete Block (ACB) Revetment Systems*.
2. The slope must be graded to a smooth plane surface to ensure that intimate contact is achieved between the slope face and the geotextile (filter fabric), and between the geotextile and the entire bottom surface of the individual ACBs. All slope deformities, roots, grade stakes, and stones which project normal to the local slope face must be re-graded or removed. No holes, "pockmarks", slope board teeth marks, footprints, or other voids greater than 0.5 inch in depth normal to the local slope face will be permitted. No grooves or depressions greater than 0.5 inches in depth normal to the local slope face with a dimension exceeding 1.0 foot in any direction will be permitted. Where such areas are evident, they must be brought to grade by placing compacted homogeneous material.
3. Excavation and preparation for all termination trenches or aprons must be done in accordance with the lines, grades and dimensions shown in the Contract Drawings. The termination trench hinge-point at the top of the slope must be uniformly graded such that no dips or bumps greater than 0.5 inches over or under the local grade occur. The width of the termination trench hinge-point must also be graded uniformly to ensure intimate contact between all ACBs and the underlying grade at the hinge-point.
4. Immediately prior to placing the filter fabric and ACB mats, the prepared subgrade must be inspected. No fabric or blocks will be placed thereon until that area has been approved by the engineer.

72-7.03B PLACEMENT OF GEOTEXTILE FILTER FABRIC

1. All placement and preparation must be performed in accordance with the current version of ASTM D 6884, *Standard Practice for Installation of Articulated Concrete Block (ACB) Revetment Systems*. Filter fabric will be placed within the limits of ACBs shown on the Contract Drawings.
2. Place filter fabric according to section 72-1.03. The filtration geotextile will be placed directly on the prepared area, in intimate contact with the subgrade, and free of folds or wrinkles. The geotextile will not be walked on or disturbed when the result is a loss of intimate contact between the ACB and the geotextile or between the geotextile and the subgrade. The geotextile filter fabric will be placed so that the upstream strip of fabric overlaps the downstream strip. The longitudinal and transverse joints will be overlapped at least two (2) feet for dry installations and at least three (3) feet for below-water installations. The geotextile will extend at least one (1) foot beyond the

top and bottom revetment termination points. If ACBs are assembled and placed as large mattresses, the top lap edge of the geotextile must not occur in the same location as joints between ACB mats unless the space is concrete filled.

72-7.03C PLACEMENT OF THE ACBS/MATS

1. ACB placement and preparation must be performed in accordance with the current version of ASTM D 6884, *Standard Practice for Installation of Articulated Concrete Block (ACB) Revetment Systems*. ACB block/mats will be constructed within the specified lines and grades shown on the Contract Drawings.
2. Field installation must be consistent with the way the system was installed in preparation for hydraulic testing pursuant to the current version of ASTM D 7277, *Standard Test Method for Performance Testing of Articulated Concrete Block (ACB) Revetment Systems for Hydraulic Stability in Open Channel Flow*. Any external restraints, anchors, or other ancillary components (such as synthetic drainage mediums) must be employed as they were during testing; e.g., if the hydraulic testing installation utilized a drainage layer, then the field installation must also utilize a drainage layer. This does not preclude the use of other section components for other purposes, e.g., a geogrid for strengthening the subgrade for vehicular loading, or an intermediate filter layer of sand to protect very fine-grained native soils.
3. The subgrade must be prepared in such a manner as to produce a smooth plane surface prior to placement of the ACBs or mats. No individual block within the plane of placed ACBs will protrude more than 0.5 inch. ACBs must be flush and develop intimate contact with the subgrade section. Proposed hand placing is only to be used in limited areas or manufacturers' mat layout drawings.
4. If assembled and placed as large mattresses, the ACB mats must be attached to a spreader bar or other approved device to aid in the lifting and placing of the mats in their proper position by the use of a crane or other approved equipment. The equipment used must have adequate capacity to place the mats without bumping, dragging, tearing or otherwise damaging the underlying fabric. The mats will be placed side-by-side and/or end-to-end so that the mats abut each other or be connected with a concrete joint as shown on the plans. Mat seams or openings between mats greater than two (2) inches will be backfilled with 4000 psi. non-shrink grout, concrete or other approved material. Gaps between adjacent mats must not exceed three (3) inches. Whether placed by hand or in large mattresses, distinct changes in grade that result in a discontinuous revetment surface in the direction of flow will require backfill at the grade change location so as to produce a continuous surface.
5. Termination trenches will be backfilled and compacted flush with the top of the blocks. The integrity of the trench backfill must be maintained so as to ensure a surface that is flush with the top surface of the ACBs for its entire service life. **Termination trenches will be backfilled as shown on the Contract Drawings.** Backfilling and compaction of trenches will be completed in a timely fashion. No more than 500 linear feet of placed ACBs with non-completed termination trenches will be permitted at any time.

6. The cells or openings in the ACBs will be backfilled and compacted with native material and planted as shown on the plans. Backfilling and compaction will be completed in a timely manner so that no more than 500 square feet of exposed mats exist at any time.

72-7.04 PAYMENT

[Not Used](#)

**Replace Section 72-18 with:
72-18 LARGE WOODY DEBRIS**

72-18.01 GENERAL

72.18.01A Summary

Section 72.18 includes specifications for constructing the large woody debris (LWD) system.

Comply with Section 72-2 for rocks.

72.18.01B Definitions

Not Used

72.18.01C Submittals

Submit the following:

1. Samples of logs with rootwads and footer logs: Logs with rootwads and footer logs must be approved before importation to the site. Submit five 5" X 7" color photographs of the logs, including a person for scale, 10 days before commencing work on the LWD features. Do not use pressure treated or otherwise chemically treated logs.
2. Samples of rocks: Rocks for use with the LWD features must be approved before importation to the site. Submit five 5" X 7" color photographs of at least 3 of the rocks, including a person for scale, 10 days before commencing work on the LWD features.
3. Delivery ticket with each load of imported rocks.

72.18.02 MATERIALS

72.18.02A General

Inspect materials delivered to the site for damage. Unload and store materials with the minimum of handling. Material must be kept free of dirt and debris.

Storage must conform to manufacturer's requirements.

72.18.02B Rocks

Rocks can be composed of a variety of rock types typically used in construction, such as igneous rocks (granite, diorite, basalt) or massive sedimentary rock (limestone, sandstone).

Rocks cannot have cracks, bedding planes, or other weaknesses.

Rocks cannot have cracks filled, or healed, with calcite.

72.18.02C Log Spurs with Root Wads

Log spurs with root wads must have a minimum diameter of 12-inches when measured 4-feet back from rootwad. Root wads must have a diameter between 6 and 10 feet.

Logs must be taken from hardwood species of trees including coast redwood, Douglas fir, live oak or other oak species, and cannot be sourced from an area with documented occurrences of Sudden Oak Death.

Logs must not have weaknesses such as cracks and splits through more than 25 percent of the log diameter.

72.18.02C Footer Logs

Footer log must have a minimum diameter of 12-inches throughout. Logs must be taken from hardwood species of trees including coast redwood, Douglas fir, live oak or other oak species, and cannot be sourced from an area with documented occurrences of Sudden Oak Death. Logs must not have weaknesses such as cracks and splits through more than 25 percent of the log diameter.

72.18.02D Log Anchors

Log anchors must be aluminum Foresight Duckbill Anchor 138-DB or equal anchor providing at least 5,000 lbs holding force in normal soil.

72.18.02D Aircraft Cable

Aircraft cable must be black plastic coated and galvanized and very flexible. It must have a minimum diameter of 5/16 -inch and a minimum breaking strength of 9,800 pounds.

72.18.03 CONSTRUCTION

72.18.03A General

Coordinate with the Engineer so that the Engineer is present during the placement of the first LWD.

72.18.03B Installation of LWD System

Placement of the LWD system must be such that the top of log matches the location shown. Placement may be by hand or mechanically.

Anchor the log such that the aircraft cables are embedded in at least 5-ft native material, providing at least 5,000 lbs of anchor holding force. Place holes so that the cables and anchors are not visible when finished grading is complete.

Place the rocks by mechanical means. Do not dump rocks. Rocks must make firm contact with adjacent rocks and logs.

Backfill remaining voids around log and rocks with fill matching the fill used in the rock slope protection.



Habitat Mitigation and Monitoring Plan

October 2021

Robinson Canyon Road Bridge Scour Countermeasure Project

Prepared For:

County of Monterey
California

Prepared By:

TRC
Irvine, California



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1.0 Introduction

The County of Monterey Department of Public Works, Facilities, and Parks (County) in cooperation with the Caltrans District 5 plans to conduct the Robinson Canyon Road Bridge Scour Countermeasure Project (Project) along the Carmel River in Monterey County, approximately 8.5 river miles upstream from the Pacific Ocean (Figure 1, *Project Location and Vicinity*; see Appendix A for all figures). To address erosion and scour damage along the south bank of the Carmel River, an articulated concrete block mat along with rock slope protection will be installed primarily within white alder grove vegetation and riverine habitat. Both the concrete block mat and rock slope protection will be backfilled with one foot of native material. A temporary access road, emanating from a staging area (within an existing ruderal area) at the northwest corner of the bridge, will be constructed through white alder grove vegetation leading to the active channel of the Carmel River where the scour repair activities will occur (Figure 2, *Impacts on Aquatic Resources*). Construction will impact jurisdictional aquatic resources and riparian habitat on both sides of the bridge. To mitigate for these impacts a Habitat Mitigation and Monitoring Plan (HMMP, Plan) has been prepared and is detailed in the following sections.

The Project is a scour countermeasure project and is designed to improve and stabilize the Carmel River channel and banks in this area and the associated aquatic environment. Thus, through its stabilization function, the Project is not considered a typical transportation or construction project but rather an improvement project that would result in benefits to this dynamic aquatic environment. The use of articulated concrete block mat, rock slope protection, and woody debris (see Section 1.3) will ensure that the overall ecological functions of this area would not be compromised, but rather enhanced and stabilized over time. The Project uses materials that maintain healthy channel hydrologic function while mimicking natural streambed conditions, per National Marine Fisheries Service (NMFS) requirements. The Project will support unobstructed river flow and minimize scour potential while enhancing habitat for native endangered wildlife (steelhead and red-legged frog). The NMFS Biological Opinion stated that the project would not likely result in jeopardy to steelhead or destruction or adverse modification of critical steelhead habitat.

Compensatory mitigation for permanent and temporary impacts to aquatic jurisdictional resources will be achieved by following this Plan. The purpose of this Plan is to comply with anticipated permit requirements. Once approved the Plan will meet the Army Corps of Engineers (USACE) requirements for authorization under Section 404 of the Clean Water Act, Central Coast Regional Water Quality Control Board (RWQCB)'s requirements for Water Quality Certification, and California Department of Fish and Wildlife (CDFW) Streambed Alteration Agreement (1602) provisions for the Project. The restoration effort will also contribute to the restoration of designated Critical Habitat for both the south-central California coast Distinct Population Segment steelhead (*Oncorhynchus mykiss irideus*) and California red-legged frog (*Rana draytonii*), which are both federally listed as Threatened and California state Species of Special Concern. As stated in Caltrans' *Programmatic Biological Opinion for Projects Funded or Approved under the Federal Highway Administration's Federal Aid Program (8-8-10-F-58)*, if Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas will not be included in the amount of total habitat permanently disturbed.

The Plan provides for the mitigation of impacted wetland and riparian areas due to construction and tree removal. The Plan also includes the following:

- proposed methods for the replanting of vegetation,
- the maintenance and monitoring of the mitigation, and
- the performance criteria that must be met at the conclusion of the monitoring schedule.

Table A provides a summary of project-related impacts to jurisdictional aquatic resources. Temporary and permanent impacts by land cover type are presented in Table B. Table C provides a summary of riparian trees that will be removed; Appendix C gives an inventory of each tree and its size (diameter at breast height in inches). Table D provides a summary of mitigation types and ratios. This HMMP shall be reviewed and approved by the USACE, CDFW, and RWQCB prior to implementation.

Table A: Impacts to Jurisdictional Aquatic Resources

Waters of the United States (Type)	Acreage in the BSA	Permanent Project Impacts (Acres)	Temporary Project Impacts (Acres)
Wetland Waters	0.23	0	0.09
Non-wetland Waters	1.10	0.09	0.28
Total	1.33	0.09	0.37
CDFW 1602 Jurisdiction	2.52	0.16	0.88
RWQCB Jurisdiction*	2.52	0.16	0.88

Source: LSA, TRC
 BSA = Biological Study Area
 CDFW = California Department of Fish and Wildlife
 *RWQCB jurisdiction was assumed the same as CDFW

Table B: Impacts to Land Cover Types

Vegetation/Land Cover Type	Acreage within the BSA	Permanent Impact (acres)	Temporary Impact (acres)
White alder grove	1.83	0.07	0.51
Riverine	0.69	0.09	0.37
Ruderal	2.20	0.02	1.85
Developed	1.36	0.08	0.28
Total	6.08	0.256	3.00

Source: LSA, TRC
 BSA = Biological Study Area

Table C: Summary of Riparian Trees Likely to be Removed

Scientific Name	Common Name	Quantity ¹			
		5 to ≤ 18 in dbh	19 to ≤ 24 in dbh	> 24 in dbh	Total
<i>Alnus rhombifolia</i>	White Alder	6	0	0	6
<i>Platanus racemosa</i>	Western Sycamore	3	0	0	3
<i>Populus trichocarpa</i>	Black Cottonwood	12	8	1	21
<i>Quercus agrifolia</i>	Coast Live Oak	6	1	1	8
<i>Salix</i> sp.	Willow	14	0	0	14

¹ Size ranges based on Santa Clara County Planning Office (2010) Guidelines for Tree Protection and Preservation for Land Use

Applications. See Overview of Mitigation Components section below for more information.

Source: Monterey County Resource Management Agency, Department of Public Works

Figure 2 illustrates temporary and permanent impacts to delineated aquatic resources within the project Biological Study Area (BSA). Figure 3, *Maximum Extent of Tree Impacts*, depicts riparian tree removals within the BSA.

The County proposes to implement the mitigation presented in this document to compensate for temporary and permanent impacts associated with the proposed scour countermeasure project. Due to the project's relatively small size, minimal impacts, and overall hydrologic and ecologic benefits, mitigation for temporary and permanent impacts have been proposed at a 1:1 ratio. Table D provides a summary of mitigation components.

Table D: Mitigation for Project Impacts

Mitigation Type	Mitigation Description	Mitigation Ratio
Temporary Impact Restoration (Rehabilitation/ Enhancement)	0.51 ac of temporarily impacted Riparian Zone (white alder grove) will be rehabilitated (about 0.51 ac) and enhanced (about 0.13 ac) on-site following completion of project construction	1:1 restoration-to-impact
	0.28 ac of temporarily impacted Stream Channel (Non-Wetland Waters) will be rehabilitated on-site following completion of project construction	
	0.09 ac of temporarily impacted Wetland will be rehabilitated on-site following completion of project construction	
	1.85 ac of temporarily impacted Ruderal area will be revegetated with upland native species on-site following completion of project construction	
Permanent Impact Restoration (Rehabilitation/ Enhancement)	0.07 ac of permanently impacted Riparian Zone (white alder grove) will be rehabilitated (0.03 ac RSP) and enhanced (0.04 ac ACB) on-site following completion of project construction	1:1 restoration-to-impact
	0.09 ac of permanently impacted Stream Channel (Non-Wetland Waters) will be enhanced on-site following completion of project construction	
	0.02 ac of permanently impacted Ruderal area will be revegetated with upland native species on-site following completion of project construction	
Native Tree Replacement (Rehabilitation)	Native riparian trees removed will be replaced at a 3:1 ratio. On-site replacement will be maximized; however, an off-site location will be necessary to meet mitigation requirements. (Figure 5, Table C, Appendix C)	3:1 planting-to-impact

ac = acre(s)

Jurisdictional aquatic resources within the project site consist of delineated stream channel, in-channel emergent wetland, and associated riparian vegetation. The primary riparian and wetland habitats within the project footprint include low terrace emergent hydrophytic vegetation and white alder and red willow forest, with surrounding upland areas in the BSA limited to ruderal and developed landscapes. Figure 4, *Land Cover Types Within Biological Study Area*, provides an illustration of native and other communities within the BSA. The Natural Environment Study (NES) (Caltrans 2017a) and Biological Assessment (Caltrans 2017b) provide additional information regarding the biological conditions and biological resource impacts associated with the proposed project.

1.1 Watershed Profile

Much of the information in this profile was obtained from the Carmel River Watershed Assessment and Action Plan (CRTF 2017), published originally in 2005 by the Carmel River Watershed Conservancy through a grant from the State Water Resources Control Board. In addition, the Natural Environment Study (Caltrans 2017a) and Biological Assessment (Caltrans 2017b) provided Project particulars; these documents also describe aquatic resources and environmental conditions at the Project site in detail.

The Carmel River is 248 miles long with a watershed of approximately 254 square miles (CRTF 2017). It originates in the Santa Lucia Mountains, eventually discharging into the Pacific Ocean just south of Carmel-by-the-Sea. The watershed is a highly dynamic system, and experiences large seasonal variability in flow and sediment transport, including large winter storm events. A significant storm event has the potential to impact onsite restoration activities if planted vegetation has not had time to fully establish. In addition, low flow events during the dry season may impact newly planted vegetation if the plants are not properly irrigated.

While the upper watershed is less impacted, the lower watershed has experienced decline due to human activities. In the lower ten river miles, especially, impacts from water extraction are concentrated, and intensive management efforts are required; this section of the river is considered “functional at-risk” (MPWMD 2004). Functional at-risk indicates that the river reach is at risk of becoming non-functional without human intervention. The Project area is 8.4 river miles northeast from the Carmel River’s mouth and is therefore within the reach of the river considered at-risk and with reduced ecological functions. The reduced functioning of the lower Carmel River is the cumulative result of many factors, including: groundwater pumping, damming of the Carmel River, manual breaching of the Carmel Estuary sand bar, nonpoint source pollution from developed areas (particularly within the 100-year floodplain), and constraints on natural river processes by human infrastructure (e.g., levees, bridges, etcetera).

Despite the negative effects of human influence on the river, the Carmel River provides significant habitat for many at-risk species and other wildlife; those of most concern for this project include south-central California coast Steelhead Distinct Population Segment (DPS) (*Oncorhynchus mykiss irideus*), California red-legged frog (*Rana draytonii*), western pond turtle (*Emys marmorata*), and two-striped garter snake (*Thamnophis hammondi*). Both south-central coast steelhead and red-legged frog have been observed within the Project area; western pond turtle and two-striped garter snake may occur within the Project area.

The intent of this Project is to prevent further scour and erosion at the Robinson Canyon Road Bridge. Also, in addition to implementing standard construction Best Management Practices, the County proposes to backfill scour protection structures with one foot of seeded native material. These measures will prevent sedimentation downstream and provide native habitat onsite. The County will also be installing several pieces of large woody debris to provide habitat for steelhead and red-legged frog. Non-native animals will be removed during construction monitoring; non-native plants within the impact zones will be removed during the five-year restoration period. Although there will be a temporary negative impact to the site, it is anticipated that the cumulative impact to the site and watershed will be positive.

This Project will also assist in the support of two high priority action items listed in the Carmel River Watershed Assessment and Action Plan (CRTF 2017): 1) Add large or small woody debris to the river channel, and 2) Remove non-native vegetation in watershed.

1.2 Natural Communities

Biological conditions of the study area are detailed in the Natural Environment Study (Caltrans 2017a) and Biological Assessment (Caltrans 2017b). However, a review of the communities within the BSA is provided below for reference.

- **White Alder Grove** (*Alnus rhombifolia* Forest Alliance [*Alnus rhombifolia*-*Salix laevigata* Association])
The white alder grove consists of the riparian corridor located on both sides of the Carmel River, totaling 1.83 acres. Vegetation within this mixed tree canopy woodland alliance includes white alder (*Alnus rhombifolia*), black cottonwood (*Populus trichocarpa*), red willow (*Salix laevigata*), arroyo willow (*S. lasiolepis*), western sycamore (*Platanus racemosa*), California bay laurel (*Umbellularia californica*), coast live oak (*Quercus agrifolia*), and an understory comprised of field horsetail (*Equisetum arvense*), manroot (*Marah fabacea*), poison hemlock (*Conium maculatum*), California blackberry (*Rubus ursinus*), hoary nettle (*Urtica dioica* ssp. *holosericea*), snowberry (*Symphoricarpos mollis*), French broom (*Genista monspessulana*), and poison oak (*Toxicodendron diversilobum*). The mixed tree canopy association with *S. laevigata* qualifies the white alder grove as a natural community of special concern.
- **Riverine**
Riverine habitat is generally characterized as unvegetated open water, defined by bed and bank, conveying perennial flows. Approximately 0.69 acre of riverine habitat associated with the live channel of the Carmel River occurs in the BSA.
- **Ruderal**
Ruderal areas within the BSA consist of the southeast, southwest, and northeast corners of the BSA, totaling 2.20 acres. Within the ruderal communities in the northeast and southeast portions of the BSA, there are solitary mature sycamore, oak, and black cottonwoods. The ruderal area along the southeast portion of the BSA contains a strip of landscaped (planted) Monterey pines. Understory in the ruderal areas is primarily comprised of weedy grasses and forbs.
- **Developed**
Developed areas within the BSA consist of Robinson Canyon Road, the existing bridge structure, a private residence on the southwest portion of the BSA, where two mature eucalyptus trees are present, and a parking area in the southeast portion of the BSA, totaling 1.36 acres.

1.3 Mitigation Goals

The overall objective of this HMMP is to provide no net loss of area or function of wetland and non-wetland aquatic resources, and to provide additional aquatic resource functions to compensate for permanent impacts and the temporal loss of habitat values. The County proposes to restore permanent impacts to trees within the *Alnus rhombifolia* Forest Alliance at a minimum

3:1 ratio. In addition, the *Alnus rhombifolia* Forest Alliance, Riverine, and upland areas temporarily and permanently impacted during construction will be restored to preconstruction contours where necessary and revegetated with native species at a 1:1 ratio. At this ratio, there is not enough area on the project site where trees can be planted to meet mitigation requirements. Therefore, an off-site mitigation site has been proposed to meet the 3:1 ratio. This site has been evaluated and approved to serve as a mitigation site by the County and the Resource Conservation District of Monterey County (RCDMC).

With implementation of BIO measures 4 through 14 (Caltrans 2017a), no compensatory mitigation is proposed for impacts to wetland and non-wetland waters under Army Corps of Engineers (USACE) jurisdiction. The area of impact within the Ordinary High-Water Mark (OHWM) is small, and the area of temporary disturbance will be restored to the natural stream channel elevation and grade when construction is finished. In addition, the streambed of the Carmel River is a dynamic system and vegetation in the streambed periodically changes depending on flood events and low-flow periods. Mitigation is proposed for the following impacts (Table D; Figure 5, *Restoration Plan*; Appendix B):

- 0.51 ac of temporarily impacted Riparian Zone will be restored on-site. Restoration will occur within the channel/banks, floodplain, and upper floodplain/upland zones. These areas will be reseeded with a native riparian seed mix (including several native grasses not currently present at the site) and replanted with a diverse mix of native shrubs, vines, and trees. In an attempt to diversify the site, a California bay and California blackberries (*Rubus ursinus*) will also be planted even though these species are not currently present on-site. Therefore, these 0.51 acres of temporary impacts are proposed to be rehabilitated (about 0.38 ac) and enhanced (about 0.13 ac), per USEPA/USACE regulatory definitions (Section 1.4 below).
- 0.28 ac of temporarily impacted Stream Channel (Non-Wetland Waters) will be restored on-site. Restoration of the stream channel will primarily consist of returning the channel to its original contours. However, a few plantings may occur along the northern channel. Therefore, these 0.28 acres of temporary impacts are proposed to be rehabilitated, per USEPA/USACE regulatory definitions.
- 0.09 ac of temporarily impacted Wetland will be restored on-site. These wetland areas are low terrace wetlands and consist of resilient herbs such as willowherb (*Epilobium ciliatum*) and field mint (*Mentha arvensis*). Because the Carmel River is a naturally dynamic system, the location and nature of these wetlands periodically change depending on flood events and low-flow periods. Therefore, natural revegetation along with restoration of the stream channel is proposed as the best restoration plan for these wetlands. Therefore, these 0.09 acres of temporary impacts are proposed to be rehabilitated, per USEPA/USACE regulatory definitions.
- 1.85 ac of temporarily impacted upland Ruderal area will be reseeded with native species on-site. Because this area is not part of an aquatic system, it does not fall under USEPA/USACE regulatory definitions.

- 0.07 ac of permanently impacted Riparian Zone (white alder grove) will be restored on-site. Approximately one foot of native soil will be backfilled over permanent impacts (articulated concrete block (ACB) and rock slope protection (RSP)). A native riparian seed mix (including several native grasses not currently present at the site) will be sown over the ACB and RSP. A mix of native trees and shrubs, including California blackberry (not currently present at the site) will also be planted over the RSP. No trees will be planted on the ACB. Therefore, these 0.07 acres of permanent impacts are proposed to be rehabilitated (0.03 ac RSP) and enhanced (0.04 ac ACB), per USEPA/USACE regulatory definitions.
- 0.09 ac of permanently impacted Stream Channel (Non-Wetland Waters) will be restored on-site. Approximately one foot of native soil will be backfilled over permanent impacts (RSP). A native riparian seed mix (including several native grasses not currently present at the site) will be sown over the RSP. A mix of native trees and shrubs, including California blackberry (not currently present at the site) will also be planted over the RSP. In addition, several pieces of large woody debris will be anchored to the RSP to provide refuge and habitat for steelhead and red-legged frog. Therefore, due to the replacement of stream channel habitat with riparian habitat and placement of woody debris habitat in the channel, these 0.09 ac of permanent impact are proposed to be enhanced, per USEPA/USACE regulatory definitions.
- 0.02 ac of permanently impacted Ruderal area will be reseeded with upland native species on-site. This impact area is part of the ACB, and therefore will be backfilled with one foot of native soil before reseeded. Because this area is not part of an aquatic system, it does not fall under USEPA/USACE regulatory definitions.
- Native riparian trees removed will be replaced at a 3:1 ratio (Table E). On-site plantings will be maximized by planting trees at approximately 12-foot spacing. However, off-site mitigation will also be necessary (Section 1.6.4). Replacement trees will be planted on the banks, floodplain, and upper floodplain. The planting of replacement trees is proposed as rehabilitation, per USEPA/USACE regulatory definitions.

This Plan will provide direction for implementation of the revegetation, maintenance, and performance standards for establishing restoration success for project impacts (Table D).

1.4 Terms

In 2008, the U.S. Environmental Protection Agency (USEPA) and the USACE jointly developed regulations revising and clarifying requirements for compensatory mitigation (Federal Register, 2008). The objective of compensatory mitigation is to offset environmental losses resulting from unavoidable impacts to waters of the U.S. authorized by permitting. Compensatory mitigation may be performed using the methods of restoration, establishment, or preservation. Definitions of each type (USEPA, 2020) is provided below:

- **Restoration** means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.
 - **Re-establishment** means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.
 - **Rehabilitation** means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function but does not result in a gain in aquatic resource area.
- **Establishment**

Establishment is the creation of new wetlands. Establishment means the manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area and functions.
- **Enhancement**

Enhancement involves the manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s) but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area. This would include diversifying plantings or some other modification that improves the wetland.
- **Preservation**

Preservation is the least preferred of the mitigation types and means the removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

1.5 Responsible Parties

The applicant and owner of the Project is the County. They will retain the responsibility for the success of the mitigation and remain in compliance with the provisions of the Plan for the proposed five-year maintenance and monitoring period. A qualified native plant Restoration Contractor will perform the planting and maintenance. A Restoration Ecologist or Qualified Biologist (Biologist) will perform the monitoring and reporting.

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Other parties involved include the following:

- California State Water Resources Control Board – review and approval of the Mitigation Plan
- California Department of Transportation (Caltrans) – Lead Federal Agency
- California Department of Fish and Wildlife (CDFW) – review and approval of the restoration Plan, permitting
- United States Army Corps of Engineers (USACE) – review and approval of the Mitigation Plan, permitting

1.6 Overview Of Mitigation Components

The following subsections provide an overview of each mitigation component.

1.6.1 Temporary Impact Restoration

Upon completion of the project, the Carmel River channel, banks, and riparian buffer areas will be returned to their original contours and conditions to the greatest extent possible. The upland ruderal areas will be also returned to original contours, and conditions will be improved with native plantings and removal of invasives and nonnatives. All constructed ramps into the river channel for the temporary access road, construction mats, and other temporary material used for construction shall be removed. Native riparian trees and shrubs will be planted within the impacted Riparian Zone. Custom native seed mixes will also be applied to the impacted areas. Appendix B contains recommended native plant and seed palettes for all Project restoration activities. The planted and seeded areas will be maintained and monitored for a period of 5 years or until native and nonnative vegetation cover performance criteria are achieved and regulatory agencies have authorized that the mitigation goals have been met.

1.6.2 Permanent Impact Restoration

Upon completion of the project, approximately one foot of native material will be backfilled over the permanent impacts ((articulated concrete block (ACB) and rock slope protection (RSP)). The ACB will be sown with a native upland seed mix in its upper zone and a native riparian and rock slope protection seed mix in the lower zone. The RSP will be sown with the riparian and rock slope protection seed mix and planted with a mix of native container plants and willow cuttings (trees, shrubs, and vines). In addition, four installments of large woody debris, including root wads, will be anchored to the RSP. Woody debris plans were approved by the NMFS. The planted and seeded areas will be maintained and monitored for a period of 5 years or until native and nonnative vegetation cover performance criteria are achieved and regulatory agencies have authorized that the mitigation goals have been met.

1.6.3 Onsite Compensatory Native Tree Planting and Revegetation Plan

The County proposes a 3:1 like-kind replacement ratio for removed trees, per the Natural Environment Study (Caltrans 2017a). The plantings will be installed within the impacted areas of the delineated CDFW waters shown on Figure 2, in areas where trees have been removed (Figure 5, *Restoration Plan*). To maximize the number of trees planted, most replacement trees will be spaced every 12 feet on center, except for arroyo willow (*Salix lasiolepis*) cuttings, which will be spaced every 8 feet on center. Replacement plantings will not be installed in areas where they will interfere with future maintenance activities, where the plantings will not receive sufficient light, or in non-impacted areas.

Some areas where mitigation trees will be planted experience extreme natural water fluctuations from flooding of the river. At the time of installation, with approval from the onsite Biologist, willow mats may be used in place of willow cuttings in these areas.

The total on-site and off-site replacement trees are summarized in Table E below. To increase diversity at the site and replicate temporarily impacted habitat, native shrubs and vines will also be planted in the understory of the replacement trees and a custom Riparian & Rock Slope Protection seed mix will be applied to the landscape surrounding the compensatory tree plantings (Figure 5, Appendix B). The installed trees will be maintained and monitored for a period of 5 years. Appendix C provides a table and plans for the trees to be removed.

1.6.4 Off-Site Compensatory Native Tree Planting and Revegetation Plan

The County proposes to pay an in-lieu fee to compensate for the remaining 91 replacement trees. The fee will be administered by the RCDMC to plant trees within the Carmel River watershed where they deem most beneficial. Two project locations are currently under consideration; however other sites may also be considered. Both sites are within the Carmel River watershed. Palo Corona Park is owned by the Monterey Peninsula Regional Park District (MPRPD). It is in the former Rancho Canada Golf Course along the Carmel River. There are locations at this site where riparian trees can be reestablished, and a large area is planned for riparian planting in a pending master plan. The site is located approximately 5 miles west from the Project site in the Carmel River watershed. Nearby is another potential location, the site of the Carmel River Floodplain Restoration and Environmental Enhancement Project (CRFREE). This site is about 0.5 mile from the river mouth on both sides of State Route 1. This project would eventually result

in the restoration of approximately 100 acres of floodplain. CRFREE is also currently in the planning and design phase.

Table E: Total Replacement Trees by Species

Scientific Name	Common Name	Trees Removed	On-Site Replacement Trees	Total Replacement Trees Needed (3:1 Ratio)	Off-Site Replacement Trees
<i>Alnus rhombifolia</i>	White Alder	6	10	18	8
<i>Platanus racemosa</i>	Western Sycamore	3	6	9	3
<i>Populus trichocarpa</i>	Black Cottonwood	21	6	63	57
<i>Quercus agrifolia</i>	Coast Live Oak	8	3	24	21
<i>Salix</i> sp.	Willow	14	NA	42	1*
<i>Salix laevigata</i>	Red Willow	NA	7	NA	NA
<i>Salix lasiolepis</i>	Arroyo Willow	NA	33	NA	NA
<i>Umbellularia californica</i>	California Bay*	0	1	NA	NA
	Total Trees	52	66	156	91

*California bay added to plans to increase habitat structure and diversity on-site. The on-site California bay is included in calculations for off-site willow replacement trees; however, this may be changed at the RCDMC's discretion.

2.0 Scope of Work

All labor and materials (including water, seed, and plant material) necessary to complete the work summarized below shall be provided by a qualified contractor retained by the County. Because temporary and permanent impacts are being mitigated similarly, the scope of work for rehabilitation and enhancement efforts has been summarized under one heading. On-site native tree replacement is also covered below. Native tree plantings at the off-site restoration area must meet the same planting and establishment guidelines as on-site replacement trees.

2.1 Temporary Impact, Permanent Impact, and Native Tree Rehabilitation and Enhancement Efforts

- All areas of temporary disturbance will be restored to pre-construction conditions to the maximum extent possible. All temporary access ramps or other materials only needed during project construction will be removed from project site upon completion of construction.
- Specified container plants/willow mats/cuttings within the temporary and permanent impact areas will be installed to guarantee 90 percent survival rate of all installed container plants for 120 days post installation and 80 percent for 5 years following installation. Additional plantings may be established at the discretion of the Restoration Contractor to meet the survival requirements.
- The specified seed mixes within the temporary impact and permanent impact restoration areas will be hydroseeded/hand-seeded after container

plant installation.

- The temporary impact and permanent impact restoration areas will be maintained for a minimum of 5 years or until the performance standards are fulfilled and approved by agency personnel.

2.2 Inspections

Regularly scheduled monitoring inspection by the Biologist must be conducted for each phase of work listed below and shall be done more frequently, if necessary, to ensure that the BSA site satisfies these specifications. The phases of work include:

- Re-contouring temporary impact areas
- Marking container plant/cutting locations in temporary and permanent impact areas
- Auguring of container plant/cutting holes (prior to planting) in temporary and permanent impact areas
- Planting of container plants/cuttings in temporary and permanent impact areas
- After container plants/cutting planting in temporary and permanent impact areas
- Hydroseeding or hand seeding in temporary and permanent impact areas
- Monthly during the 120-day establishment period
- At least quarterly during the 5-year maintenance period

2.3 Site Preparation

2.3.1 Resource Protection

Sanitation Best Management Practices (BMPs) will be performed to prevent foreign soil and/or nonnative species from entering the mitigation areas via boots, tools, and vehicle tires. Project gear and equipment off-site or from in-designated locations shall be decontaminated. Decontamination shall be performed by hosing the items off or cleaning them with a stiff-bristle brush before the start of work and/or spraying boot soles and tools with a bleach solution to prevent spread of diseases such as *Phytophthora*. Prior to on-site delivery, container plants shall be free of Argentine ants; if found with the ants, they shall be removed from the BSA site.

2.3.2 Erosion Control

Following significant rainfall events, installation of nonvegetative erosion control measures such as sandbags, rice straw wattles, silt fence may be used at the discretion of the Biologist, particularly within the area of temporary disturbance.

The Restoration Contractor shall be liable to conduct all erosion control for the entire contract period to maintain a maximum survival rate of the restored plant communities. Erosion control measures may include, but are not limited to:

- 1) Conducting non-vegetative erosion control measures (e.g. rice straw wattles), as needed. Straw wattles shall be certified weed-free, made of

natural-fiber, biodegradable material (with a netting of at least 8 inches in diameter). They will be installed along the slope following the manufacturers' specifications.

- 2) Repairing any damaged plants, ruts, and washouts.

2.3.3 Irrigation

At the Restoration Contractor's discretion and expense, a temporary irrigation system may be installed, except within or immediately adjacent to the active streambed, to prevent plant loss in periods of dry conditions. Other watering methods such as water trucks and hoses can be used. Supplemental irrigation may be used to establish newly installed plantings but shall be done sparingly, for the vegetation does not require additional watering in normal circumstances. Installation, inspection, maintenance, and removal of the irrigation system and use of any irrigation materials shall be determined by the Restoration Contractor. No impurities, excess chlorine, or salts shall be present in all water used for irrigation. County approval of all irrigation water sources is required.

2.4 Installation

Approval must be granted by the Biologist prior to implementation of all Project materials and modifications.

2.4.1 Container Plants/Cuttings

Container plants (mostly native trees and shrubs) shall be installed within the temporary and permanent impact restoration areas in accordance with the performance criteria. Willow and other native shrub/tree cuttings will be obtained within 5 miles of the planting areas or purchased from locally grown stock. Other native plant seeds and cuttings will either be collected locally or purchased from local sources (e.g., Monterey, Santa Cruz, and San Luis Obispo County nurseries). The genetic source of all plants will be within 20 miles of the BSA site, if possible, and from a similar microclimate regime. That way, the probability of successful revegetation is high, for the plants are likely to be genetically homogeneous and share ecological conditions. On the other hand, for widespread herbaceous species that are expected to be genetically homogenous, ensuring the consistency of plant sources is less important; thus, stock may be obtained from commercial sources upon approval from the Biologist. Cuttings may be planted either individually or grouped in wattles.

Prior to planting, the Biologist will inspect all container plants, making decisions about plant substitution and alternative genetic sources, and ensuring that they are in healthy condition. Healthy plants shall have a good root to shoot ratio of approximately 2:1. Roots should be young and fill the container but not wrapped around the sides of the container (excessively root-bound). If plants seem to be incapable of surviving for 120 days post installation, the Biologist will either replace or have them regrown for installation during the following growing season. Container plants will be requested at least 2 weeks before the scheduled planting season and installed within 10 days upon delivery. Until being planted, all new container plants shall be stored away from areas vulnerable to heat, frost, wind and/or excessive moisture.

Please refer to Appendix B for the list of recommended container plant/cutting species within each zone of the Project BSA. Substitutions or alterations may be made under the supervision of the Biologist and shall be reported in the As-Built and annual monitoring reports. Survival of container plants and tree plantings will be measured through horticultural monitoring but restoration/re-establishment success will be estimated based on the cover and diversity criteria discussed further below.

2.4.2 *Planting Locations and Layout*

White alder, black cottonwood, red willow, and other trees will be planted in areas that are similar to their native topography and habitat (Figure 5). Planting areas will be outside the edges of the bridge deck, where they will be exposed to light levels suitable for growth. Planting areas will not be in areas where they could interfere with future maintenance operations.

Once the planting layout has been approved by the Biologist, auguring holes may begin. Container plant locations may be identified and marked with color-coded flagging by the Restoration Contractor. The Restoration Contractor must carefully consider the microclimate requirements of each species when choosing planting locations. All pin flags shall be removed following the 120-day establishment period.

2.4.3 *Seed*

Seed shall be sown at the temporary impact and permanent impact restoration areas. Most of the Project BSA will be seeded by hand; however, some upland areas may be hydroseeded at the discretion of the Restoration Contractor. The seed information can be found in the recommended species to be installed, in Appendix B; the rates of seeding and amount of bulk seed to be installed can be adjusted based on the available information on “Pure Live Seed” (PLS), the percentage purity, and percentage germination at the discretion of the Biologist.

The Biologist shall determine final seeding rates and substitute the recommendations with other plant species as needed and shall report them in the As-Built and annual monitoring reports.

All seed shall be purchased from local nurseries experienced with the propagation of native species or collected from local stock. Nurseries should be located within Monterey County (preferred) or adjacent counties. If collected, seed must be from a similar microclimate regime and within a 20 mile radius of the Project site, if available. All seeds must be stored so that they remain viable. All decisions regarding seed substitution or alternative sources are subject to approval by the Biologist.

2.4.4 *Other Materials*

All other materials relevant to the Project shall be provided by the Restoration Contractor subject to the approval of the Biologist.

2.5 *Installation Techniques*

2.5.1 *Container Planting Method*

Adequate precautions and proper site maintenance shall be performed to ensure the maximum survivability of plants. Plantings shall be installed under the supervision of the Biologist and may be adjusted as needed to adapt to specific site conditions including slope, soils, and other specific criteria. Individual plant locations shall be marked in the field with pin flagging and reviewed by the Biologist. Each species shall be spaced in a manner similar to its naturally occurring habitat and the nearby vegetation as well as in compliance with specifications, as follows (Figure 6, *Planting Detail*):

- Any weedy material shall be removed from an area directly surrounding the planting location (five-foot radius).
- All planting holes for 1-gallon plants or larger shall be augured at a depth twice that of the plant's container and 1.5 times the width of the rootball and have roughened-surfaces on vertical sides.
- Plants shall be thoroughly irrigated while in the container prior to planting and after planting is complete in an area. This will ensure soil compaction and moisture is optimal for the greatest chance of survivability.
- Planting holes shall be filled with water and allowed to drain prior to plants being placed in the holes. Soil removed from the hole will be broken up and used to backfill the hole.
- Plants shall be placed with the roots untangled in the hole to promote good root growth and to prevent plants from becoming root bound.
- During planting, exposed roots of plants shall be protected at all times from becoming dried out by the sun or wind.
- After planting, the crowns of the root balls shall be 0.5 inch above finish grade when backfilled with soil.
- A watering basin approximately 24 inches in diameter shall be created around each plant. If a circular planting basin cannot be made due to the steepness of the slope, an ovoid basin, with an average area of 3 square feet, shall be constructed that follows the contour of the slope. The basin will have the soil level both inside and outside the same and not be a depression in the soil, at the same time maintaining the berm above grade.
- During installment, each plant shall be watered separately and sufficiently to allow for the water to reach the lower roots. Excess watering and potential formation of erosion rills shall be avoided to prevent soil from getting washed away from the roots and/or burying the root crown.
- All empty plant containers shall be cleared away from the Project areas and not left overnight.

2.5.2 Cuttings Collection and Planting Method

The following guidelines discuss how to collect willow and other shrub/tree cuttings for immediate use:

- Cuttings shall be collected within 48 hours of anticipated installment. Cuttings not planted within 48 hours of collection shall be disposed appropriately or stored in water

for a maximum of two weeks before planting.

- Cuttings shall have healthy stems, be free of insect or physical damage and be obtained from vigorous, dormant plants.
- Cuttings will be inspected to ensure that they are free of invasive shot-hole borer or other pest damage.
- Collection of cuttings shall be less than 50 percent of the plants per given area, and limited to a maximum of 15 percent of an individual plant. For dioecious plants, an appropriate mix of male and female plants will be removed. Cuttings shall be approximately 24- 48 inches in length and 0.5 to 1 inch in diameter.
- The top of each cutting shall be cut square above a leaf bud and the base cut below a leaf bud at an angle of approximately 45 degrees with sharp, clean tools.
- All leaves and branches shall be trimmed from the cuttings, flush with the stem.
- Prior to planting, cuttings shall be soaked in well oxygenated water. Cuttings that are allowed to dry shall not be used.

2.5.3 Hydroseeding Technique

If required, hydroseeding shall be implemented in two stages, as follows:

1. First Application
 - 150 pounds per acre (lbs/acre) of 100 percent long-strand wood fiber (no tackifier)
 - Specified seed
2. Second Application
 - 2,000 lbs/acre of 100 percent long-strand wood fiber (no tackifier)
 - 150 lbs/acre Ecology Control “M” binder

Special care must be taken to avoid damage to plantings or established native plants, for instance covering plants with mulch, breaking stems, or breaking plant material with hoses.

All hydroseed mixing shall be conducted in a clean tank, rinsed at least three times in the presence of the Biologist. A source of clean water and a washout area where rinsing can legally take place should be found in coordination with the Restoration Contractor. A built-in continuous agitation and recirculation system, along with a discharge system, shall be prepared to produce homogeneous slurry, apply slurry to the designated areas at a continuous and uniform rate.

While the engine is running at half-throttle, add water to the tank to start the slurry preparation. Once the water level has reached the height of the agitator shaft, recirculation shall be in optimal conditions for adding the seed and fertilizer. When the tank is at minimum 30 percent filled with water, the long strand wood fiber shall be added. Once the tank is completely full, homogeneous slurry shall be created, and consequently spraying shall commence.

Spraying shall be done in a sweeping motion and in an arched stream to allow for uniform and complete spray coverage of target species. Spraying should be performed carefully to prevent

damages such as coating with mulch, direct spray, and drag, and special care must be taken if damage occurs, at the discretion of the Biologist.

The tanks must be empty at each stage of hydroseeding. Slurry mixture still remaining within 1 hour after mixing shall be replaced at the Restoration Contractor's expense. In addition, the Restoration Contractor shall be responsible for all cost resulting from repair or replacement of bare, sparse, or damaged areas. Once application is complete, activities on the mulch layer shall be avoided.

2.5.4 Hand Seeding Technique

Hand seeding shall be performed by broadcasting the specified seed mix combined with bran at a 2:1 ratio by volume over the specified area. Then, using a flexible landscape rake or equivalent, the Restoration Contractor shall lightly rake (but not cover) the seed into the soil.

2.6 Maintenance

Maintenance of the mitigation areas must be accomplished in accordance with the following specifications until performance standards are met.

In the first 120 days post establishment period, regular maintenance of areas of plant installment must be conducted to ensure the likelihood of successful establishment. Following the 120-day establishment period, a thorough inspection of the mitigation areas (excluding the stream re-establishment areas) shall be conducted, and dead container plants, trees, or cuttings within the mitigation areas shall be recorded and submitted to the Restoration Contractor. If survivorship criteria are not met, dead or missing plantings will be replaced during the next planting season. Adjustments to species or planting locations may be made if the Biologist determines species mortality was caused by unsuitable hydrology.

2.6.1 Weed Control and Targeted Invasive Control Strategy

Weed control measures shall be conducted in the planted/seeded mitigation areas to reduce natural resource competition. The frequency of the measures will vary based on the amount of weed seed present in the soil and weather and working conditions. The following weeding guidelines shall be followed continuously within the planted/seeded mitigation areas:

- Non-native weed cover, excluding annual grasses (which are not considered invasive according to the performance criteria), must be kept below 10 percent. Throughout the maintenance period of the restored riparian/wetland habitat, all nonnative plant species will be removed.

The coverage of the weeds (excluding annual grasses) at the seed dispersal phase must not exceed 5 percent of the planted/seeded mitigation areas.

2.6.1.1 Methods of Removal

Herbicide application shall be performed to the minimum extent necessary upon written authorization of the Biologist (refer to "Herbicide Treatment Guidelines" below). No weed-whipping or string-line trimmers shall be permitted within the mitigation areas without the written

authorization of the Biologist. Herbicides shall be applied carefully to prevent any potential damages to native plants; in case of native plant losses, replacement shall be made in the next growing season. All nonnative vegetation (excluding annual grasses) at the seed dispersal phase shall be removed from the site. Nonnative vegetation without seed and unlikely to reproduce may be left at the site as mulch.

2.6.1.2 Herbicide Treatment Guidelines

To apply an unrestricted herbicide (e.g., Roundup Pro, Rodeo, Aquamaster), the Restoration Contractor must possess the appropriate licenses (issued by the State of California, registered in Monterey County, and be of current status) and have undergone documented herbicide application training. In aquatic situations, Restoration Contractor may only use a United States Environmental Protection Agency-approved, glyphosate- or imazapyr-based systemic herbicide approved for aquatic use. If surfactants are required, Restoration Contractor may only use non-ionic chemicals that are approved for aquatic use. With a Pest Control Adviser (PCA) recommendation, Telaar may be used for control of perennial pepperweed, but no other pre-emergent herbicides may be used. The primary methods of application will include:

- Foliar Spray Application
- Foliar Wick Application
- Stump Treatment

Areas to be used for tree replacement shall have invasive species removed prior to tree planting. A zone extending in an approximately five-foot radius from the location where trees are to be planted shall be cleared of invasive weedy species.

All sprays shall contain a dye such as Blazon Blue, Tracer, or Signal to help prevent overspray. The dye shall be mixed with the herbicide at no more than half the rate specified on the label (one quarter the rate will usually suffice).

Biologist must not spray herbicides when wind speed exceeds 5 miles per hour, or under weather conditions (including lower wind velocities or variable wind conditions) that will allow drift. Spraying should not occur during periods of flow or if precipitation is forecasted within the upcoming 24 hours.

Herbicides should be applied using a hand-held sprayer, or alternatively the sponge application, and not be applied at excessive speed or pressure in order to minimize potential drift associated with hand-held sprayer application. Misting, dripping, drifting, or splashing of the herbicide solution should be avoided, as even small amounts can cause severe injury or damage to non-target plants. A shield (guard, cones, plastic, cardboard etc.) or a drift control agent or retardant can be used to prevent drift. When spraying, combinations of pressure and nozzle type that will result in splatter or fine mist likely to drift should be avoided. Nozzles producing droplets of 1/16 inch or greater are preferred since the droplets will fall instead of drift. Pesticide applicators should use a low- pressure and a large nozzle orifice to minimize the number of small droplets. Herbicides should be applied at a low range psi (about 15 to 30 psi), depending on nozzle design, to minimize off-target application. Spray coverage of the target plant should be uniform and complete.

Protection and avoidance of nontargeted native vegetation is required during herbicide application. Any native vegetation lost within the mitigation areas due to herbicide application shall be replaced during the following planting season at the direction of the Biologist.

2.6.2 Erosion Control

Temporary, low impact erosion control devices, such as straw bales, silt fencing, and sand bags, may be installed to prevent siltation of the stream. To minimize the risk of ensnaring and strangling wildlife, only coir rolls, erosion control mats or blankets, straw or fiber wattles, or similar erosion control products composed entirely of natural-fiber, biodegradable materials may be used. “Photodegradable” or other plastic erosion control materials should not be used. Once sufficient vegetation cover has developed to prevent erosion, any temporary erosion control devices will be removed.

The Restoration Contractor shall be responsible for all erosion control maintenance required for the entire term of the contract. Erosion control shall include, but not be limited to: (1) continuation of nonvegetative erosion control, as necessary; and (2) repair of damaged plants, ruts, and washouts.

2.6.3 Pest Control

Insect and herbivore damage control, such as fencing and/or caging plants, shall be approved by the Biologist. No poisons or rodenticides shall be used in the Project BSA.

Tree plantings shall be surveyed annually for invasive insects and disease, and results shall be recorded in the annual reports. Control options, including but not limited to trimming and removal of diseased individuals, and pesticide treatments at the discretion of the Biologist, will be considered if feasible.

2.6.4 Irrigation

The Restoration Contractor shall be responsible for the installation, inspection, maintenance, and removal (if constructed) of any irrigation system throughout the mitigation areas. Municipal water may be used to fill tanks on-site and used to irrigate plantings.

2.6.5 Litter Removal/Site Maintenance

All trash and other debris (both nonvegetative and certain specified vegetative debris from weeding) shall be removed from the Project site throughout the mitigation efforts.

2.6.6 Pruning and Leaf Litter Removal

Unless pruning or leaf litter removal is a part of a maintenance effort (e.g., pest control or drainage maintenance), all dead plant material shall be left in place to advance the HMMP’s goal of replicating a naturally occurring habitat.

2.6.7 Fertilizer

Fertilizers shall not be used on the Project site during the maintenance period without approval from the Biologist.

2.7 Remedial Measures

The purpose of remedial measures is to address unsuccessful mitigation efforts resulting from potential introduction of nonnative species, failure of the installed plant palette, or severe weather conditions and natural disasters. Remedial measures include additional weed eradication, dead or diseased plant replacement/removal (at the direction of the Biologist), and/or reseeding. Such actions will be implemented in a timely manner upon the identification of problems with the goal of meeting the performance standards. The Biologist shall pre-approve the genetic source of all remedial seed and plants to maintain the genetic integrity of the ecosystem.

In the event the plantings have not met the performance standards developed for the Project, the County will prepare a report analyzing the failure and identify an appropriate corrective action and schedule for implementing the corrective action. This report would be submitted to the federal and state agencies involved in approving the performance of the Project (i.e. USACE, CDFW, and RWQCB).

3.0 Performance Standards

The goal for all on-site and off-site mitigation areas is to compensate for the loss of impacted functions and values associated with the delineated aquatic resources and riparian areas within the Project impact sites. The vegetative cover values and stream functions demonstrated in the performance standards correspond to the resource values of the impact area. Additionally, the mitigation will provide a net gain of riparian zone jurisdictional areas and improved habitat for south-central California coast steelhead and California red-legged frog.

One year following the installation of native plant species (e.g., one year following as-built conditions), mitigation area performance will be assessed every year through Year 5, until final performance criteria are achieved, or upon approval of the USACE, RWQCB, and CDFW.

3.1 Baseline Conditions Report

Prior to restoration, a baseline conditions report will be prepared and will keep track of the extent of native and nonnative vegetation present within each re-establishment area, including the understory, shrub/mid-story, and over-story/tree canopy layers, and the current flow regime through the BSA. In following years, the baseline report will serve to measure the success of re-establishment. During the baseline report surveys, permanent photo points will be established to qualitatively monitor the vegetation community's progress at the site and a survey of targeted invasive weeds will be conducted.

3.2 Performance Criteria for Rehabilitation and Enhancement Efforts

Annual monitoring is planned for 5 years following mitigation efforts. At both on-site and off-site mitigation areas, monitoring will occur in the late spring/early summer to capture the vegetation community during the height of its growth. At each site, percent absolute cover by species will be estimated based on a minimum of four randomly placed one-meter square (or round) quadrats established during the first monitoring season and two stratified-random 25-meter point intercept

transects. Monitoring plots will be located randomly within planting zones and habitats so that the restoration area is well-represented. Within the on-site location, at least one plot will be established within the wetland areas in the stream channel to ensure they are regenerating naturally; however, due to the dynamic nature of the river system, the location of this plot may change over time. Once the following criteria are satisfied at both the on-site and off-site mitigation locations, temporary and permanent impact restoration will be considered complete.

1. Eighty percent of plantings must be maintained in good health for 5 years following installation. Replacement plants will be installed the following growing season if any container plant is determined to not be in good health during any monitoring surveys. For trees, “good health” shall be defined as follows:
 - a) the tree is free from major structural defects
 - b) the tree is free from symptoms of disease and stress
 - c) new growth is observed throughout the tree relative to prior surveys
2. Planted native species (and/or native recruitments) show continued growth and survival without supplemental irrigation or other human assistance (e.g., maintenance, weeding, or reseeded).
3. Minimal invasive plant encroachment on the restoration site (on-site location). Non-natives should comprise less than 10% of absolute cover. Non-natives with a Cal IPC inventory rating of high should not individually comprise greater than about 1% absolute cover. Invasive plants with a high rating currently identified in the BSA include: freeway iceplant (*Carpobrotus edulis*), fennel (*Foeniculum vulgare*), English ivy (*Hedera helix*), and French broom (*Genista monspessulana*).

3.3 Agency Confirmation

Upon submittal of the final annual monitoring reports (refer to Reporting Requirements section below), a site visit will be conducted by the USACE, RWQCB, and CDFW to confirm the completion of the compensatory mitigation effort. The site visit may be waived by the agencies after review and approval of the final monitoring reports. The compensatory mitigation will not be considered complete without written confirmation that success criteria have been achieved; thus, maintenance and monitoring of the mitigation areas shall be continued until agency approval has been granted.

3.4 Adaptive Management Plan

In some instances, mitigation plantings do not meet performance standards. This can be caused by poor maintenance, weather conditions, shading from surrounding vegetation, trespassing and disturbance, and other unforeseen problems. In the event the plantings have not met the performance standards developed for the Project, the County will prepare a report analyzing the failure and identify an appropriate corrective action and schedule for implementing the corrective action. This report would be submitted to the federal and state agencies involved in approving the performance of the Project (i.e. USACE, CDFW, and RWQCB).

As monitoring progresses, any trends toward not meeting the performance criteria should be recognized by the end of year 3. If there is a huge discrepancy between the year 3 performance criteria and actual conditions, then remedial measures will be developed. If the remedial

measures are inadequate or do not work as planned, then discussions will be held with the regulatory agencies to determine if alternate off-site location(s) would be more conducive to the success of mitigation efforts. Depending on the circumstances, other measures could be proposed based on-site observations. If all the involved parties feel like the performance criteria could be met over an extended period of time then additional years of monitoring may be added to the monitoring protocol. However, any new plantings will have to be monitored with the same survival and growth requirements as the initial plantings. If wetland monitoring following the proposed protocols is not providing an adequate evaluation of the performance criteria, then an alternative assessment method will be followed.

4.0 Monitoring And Reporting

4.1 Monitoring Requirements

To ensure that the mitigation area satisfies these specifications, it will be evaluated regularly for a period of five years or until agency approval has been granted. Native tree plantings at the off-site restoration area must meet the same monitoring guidelines as on-site replacement trees.

The post-installation monitoring program will include:

- A minimum of six permanent photograph points will be established for long-term recording of site conditions.
- Survival, establishment, and general conditions of plantings will be monitored following the 120-day establishment period.
- General compliance of the mitigation area will be measured against permit requirements.
- Qualified Biologists will document wildlife species presence during site visits and include the information in the annual report.
- Quantitative vegetation data will be collected in spring/summer of each monitoring year. Percent cover by species will be measured based on data along at least two 25-meter point intercept transects and three one-meter square (or round) quadrats.
- Qualitative data on the stream re-establishment areas with respect to inundation and the impacted stream channel will be gathered. However, no quantitative vegetation data will be collected in this region.
- Qualitative data will be collected quarterly and may include rapid assessment (relevé) of native and nonnative vegetation cover, species composition, and general condition of the mitigation area. Tree health will also be evaluated during these surveys.
- Memoranda (memos) will be prepared by a Biologist on a quarterly basis. The memos will document the quarterly field visits as well as general ecological observations and maintenance recommendations. The memos will be included in the site inspections and annual reports for the County and the Restoration Contactor review.
- California Natural Diversity Database (CNDDB) forms and relevant maps will be submitted by a Qualified Biologist upon observing of any special-status species on or adjacent to the mitigation area, and the forms will be included in quarterly and annual reports.

- Before the start of restoration work, a survey of targeted invasive weeds will be conducted in the mitigation area. Locations will be mapped, and population numbers estimated. This information will be included in the baseline conditions report described above.
- An experienced Biologist who is qualified to assess the performance of the mitigation effort and recommend corrective measures as needed shall monitor and assess the mitigation site.

4.2 Reporting Requirements

The following sections discuss post-construction reporting in the form of an As-Built report and annual reporting that will take place annually. The County or County's Biologist will be responsible for fulfilling on-site reporting requirements. The RCDMC will be responsible for fulfilling off-site reporting requirements.

As-Built Reports

Within approximately 90 days of completing the installation, the Biologist will submit an As-Built Report, documenting the installation process and any deviations from the HMMP.

Annual Reports

Formal annual reports will be submitted by the Biologist to the County and the USACE, RWQCB, and CDFW by December 31 of each year (following the installation/As-Built year) until the performance objectives are fulfilled. The reports shall discuss the evaluation of the mitigation area.

Each annual report will include the following:

- A summary of quarterly site observations.
- A description of the existing condition of each mitigation area, discussing the vegetation composition (including weed species) and precipitation and stream flow conditions.
- A description of the maintenance activities (including revegetation and weed removal) and the time record of each activity.
- A summary of the qualitative and quantitative data and tables of assessment performance status data.
- A summary of wildlife species (including special status species/ their signs) observations.
- A discussion of any Project site problems and adaptive, corrective, and/or remedial measures (e.g., weed control and trash removal) employed.
- A mitigation site map, including habitat types, transect/quadrat locations, photo station locations, etc., as needed.
- Photo documentation at specified photo stations.

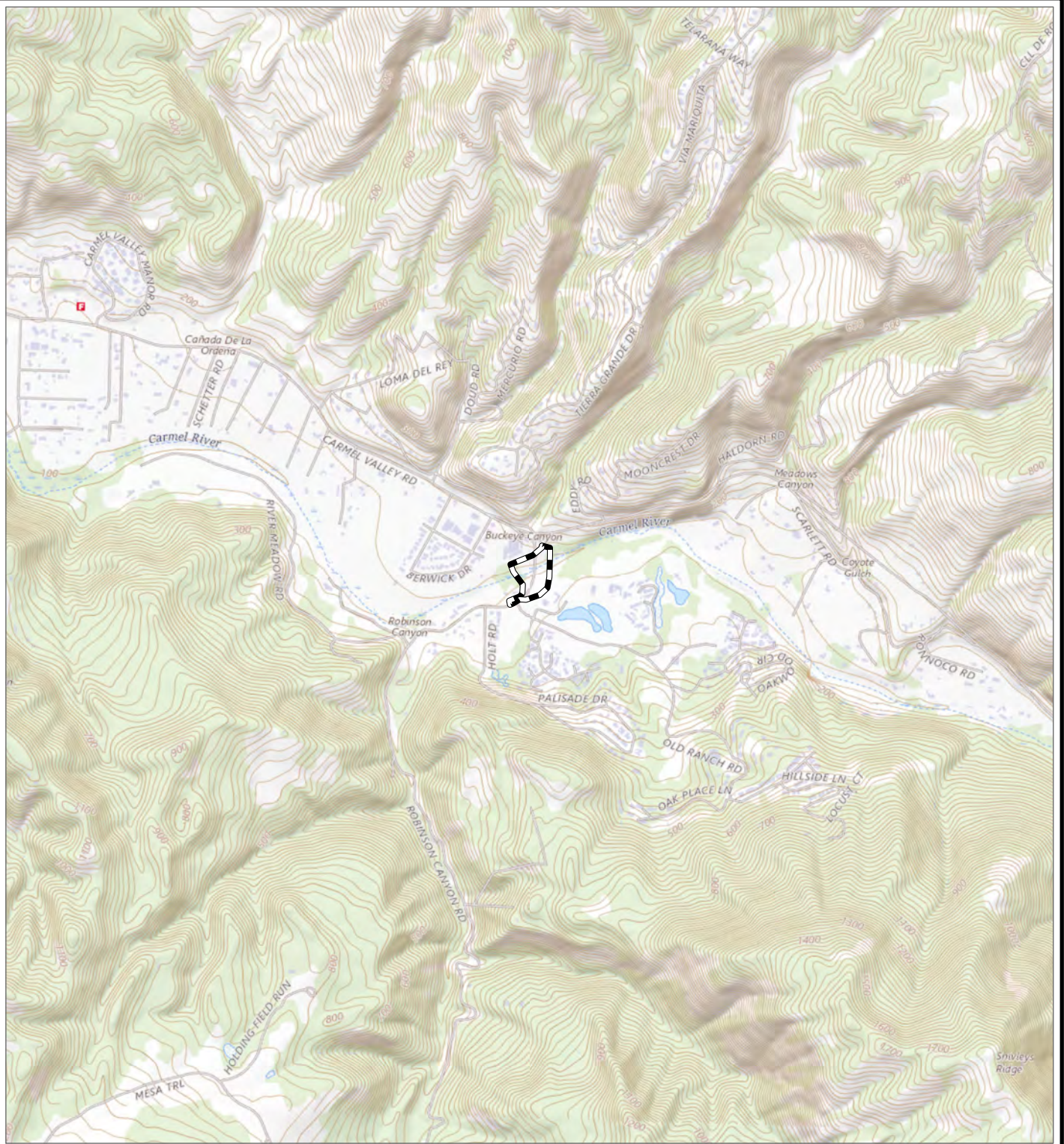
5.0 References



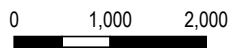
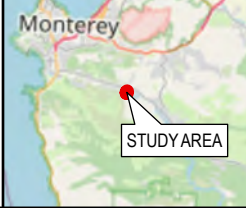

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APPENDIX A FIGURES

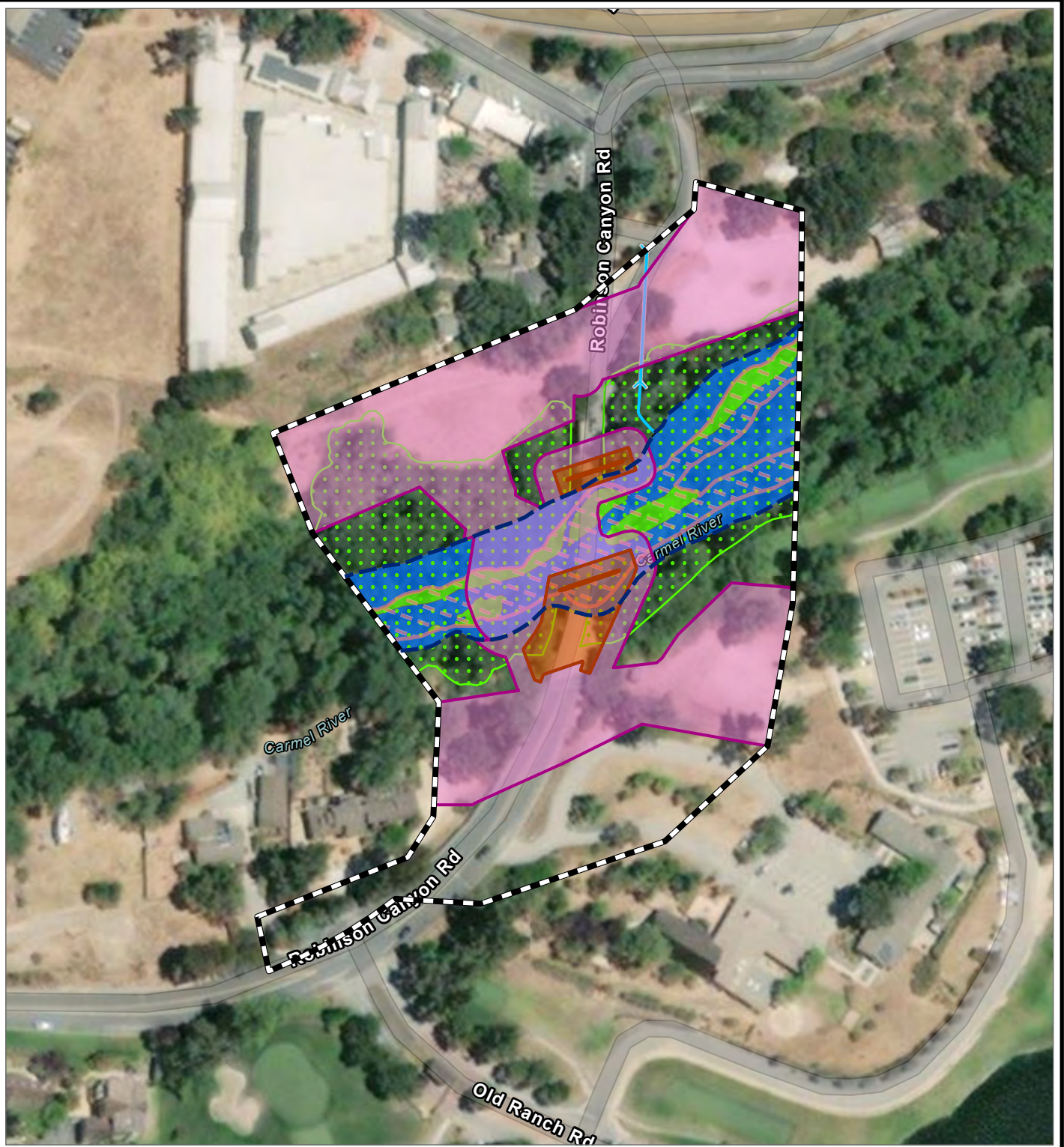
1. Project Location
2. Impacts on Aquatic Resources
3. Maximum Extent of Tree Removals
4. Land Cover Types
5. Container Plant Planting Detail

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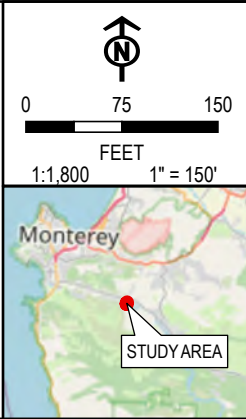


 BIOLOGICAL STUDY AREA	  FEET 1:24,000 1" = 2,000'	PROJECT: COUNTY OF MONTEREY ROBINSON CANYON BRIDGE	
BASE MAP: ESRI/TNM "USGS TOPO". DATA SOURCES: TRC, ESRI		TITLE: PROJECT LOCATION AND VICINITY	
DRAWN BY: R. SPRING		PROJ. NO.: 226649	
CHECKED BY: T. HARTWIG		FIGURE 1	
APPROVED BY: M. IMBRIANI			
DATE: OCTOBER 2021		17911 VON KARMAN AVENUE SUITE 400 IRVINE, CA 92614 PHONE: 949.727.7348	
		FILE: ROBINSON_CANYON.APRX	

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA IV FIPS 0404 FEET; MAP ROTATION: 0
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CHANNEL	NON-WETLAND WATERS (1.08 AC)
CULVERT	BIOLOGICAL STUDY AREA
OHWM	PERMANENT IMPACT AREA
LOW-FLOW CHANNEL	TEMPORARY IMPACT AREA
CDFW WATERS	
WETLANDS (0.23 AC)	



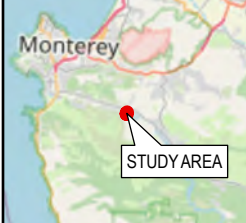
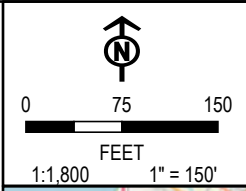
PROJECT:		COUNTY OF MONTEREY ROBINSON CANYON BRIDGE	
TITLE:		IMPACTS ON AQUATIC RESOURCES	
DRAWN BY:	R. SPRING	PROJ. NO.:	226649
CHECKED BY:	T. HARTWIG	FIGURE 2	
APPROVED BY:	M. IMBRIANI		
DATE:	OCTOBER 2021		
		17911 VON KARMAN AVENUE SUITE 400 IRVINE, CA 92614 PHONE: 949.727.7348	
FILE:	ROBINSON_CANYON.APRX		

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
 DATA SOURCES: TRC, LSA, ESRI

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA IV FIPS 0404 FEET; MAP ROTATION: 0
 -- SAVED BY: RNJORDAN ON 10/21/2021 09:12:43 AM; FILE PATH: T:\1-PROJECTS\MONTEREY COUNTY\226649 ROBINSO CANYON\2-APPR\ROBINSON_CANYON.APRX; LAYOUT NAME: FIGURE 3 MAXIMUM EXTENT OF TREE IMPACTS 8.5X11P



- TREE - REMOVAL
- TREE - SURVEYED
- BIOLOGICAL STUDY AREA
- CUT
- FILL
- ESA FENCE
- ACCESS ROAD
- CONSTRUCTION STAGING AREA
- PERMANENT IMPACT AREA



PROJECT:		COUNTY OF MONTEREY ROBINSON CANYON BRIDGE	
TITLE:		MAXIMUM EXTENT OF TREE IMPACTS	
DRAWN BY:	R. SPRING	PROJ. NO.:	226649
CHECKED BY:	T. HARTWIG	FIGURE 3	
APPROVED BY:	M. IMBRIANI		
DATE:	OCTOBER 2021		
		17911 VON KARMAN AVENUE SUITE 400 IRVINE, CA 92614 PHONE: 949.727.7348	
FILE:	ROBINSON_CANYON.APRX		

BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.
 DATA SOURCES: TRC, LSA, ESRI

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA IV FIPS 0404 FEET; MAP ROTATION: 0
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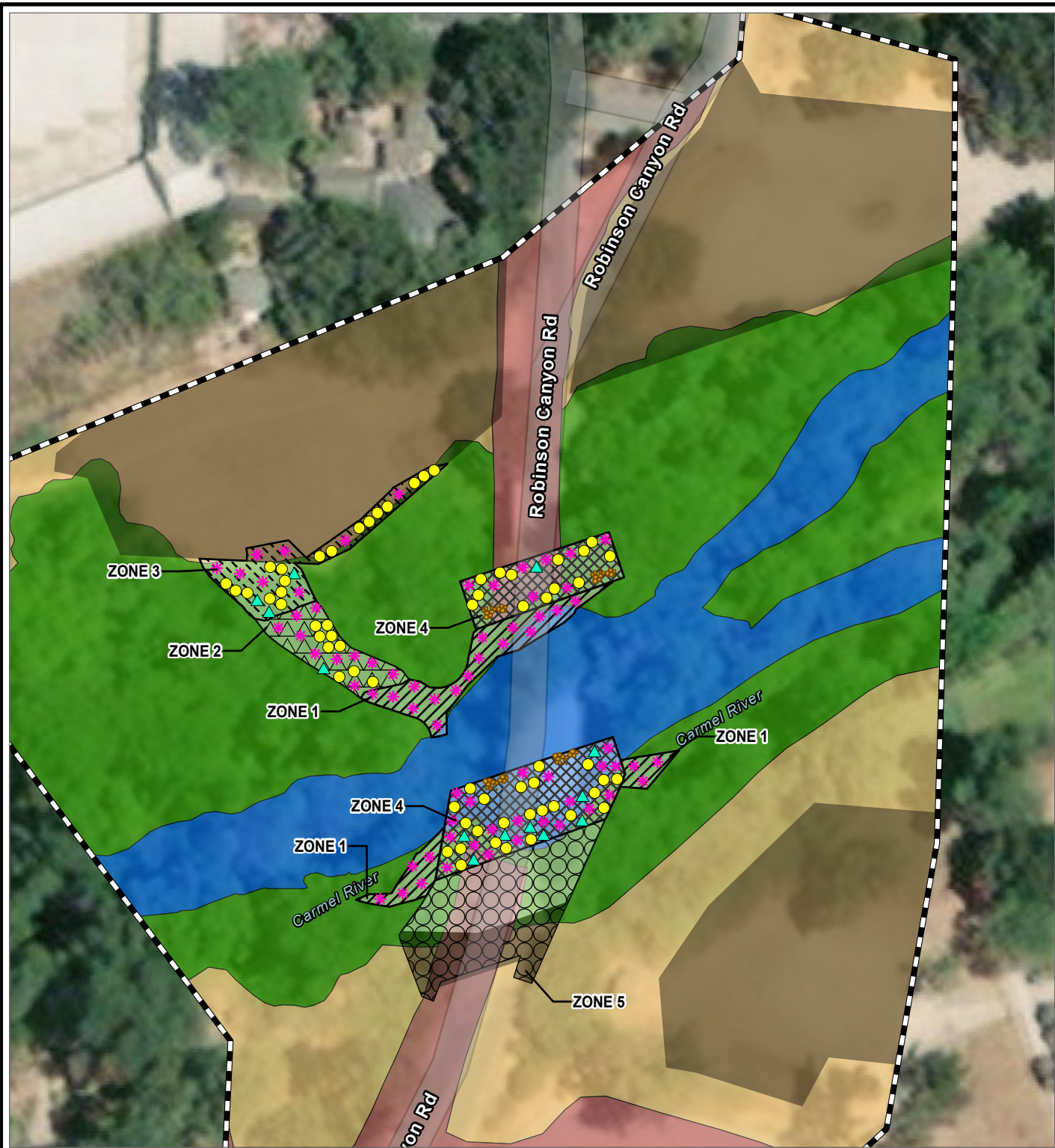


	BIOLOGICAL STUDY AREA
	ALNUS RHOMBIFOLIA FOREST ALLIANCE (1.83 AC) (ALNUS RHOMBIFOLIA-SALIX LAEVIGATA ASSOCIATION)
	DEVELOPED (1.36 AC)
	RIVERINE (0.69 AC)
	RUDERAL (2.20 AC)
	OHWM
	ACCESS ROAD
	CONSTRUCTION STAGING AREA
	PERMANENT IMPACT AREA
	TEMPORARY IMPACT AREA
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER. DATA SOURCES: TRC, LSA, ESRI	

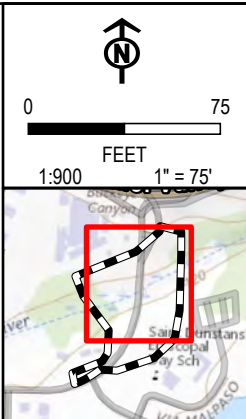
0 75 150
 FEET
 1:1,800 1" = 150'

PROJECT:		COUNTY OF MONTEREY ROBINSON CANYON BRIDGE	
TITLE:		LAND COVER TYPES WITHIN BIOLOGICAL STUDY AREA	
DRAWN BY:	R. SPRING	PROJ. NO.:	226649
CHECKED BY:	T. HARTWIG	FIGURE 4	
APPROVED BY:	M. IMBRIANI		
DATE:	OCTOBER 2021	17911 VON KARMAN AVENUE SUITE 400 IRVINE, CA 92614 PHONE: 949.727.7348	
FILE:	ROBINSON_CANYON.APRX		

COORDINATE SYSTEM: NAD 1983 STATEPLANE CALIFORNIA IV FIPS 0404 FEET; MAP ROTATION: 0
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BIOLOGICAL STUDY AREA	PLANT TYPE
PLANTING LIMITS	SHRUB
ZONE 1 - CHANNEL/BANKS	TREE
ZONE 2 - FLOODPLAIN	VINE
ZONE 3 - UPPER FLOODPLAIN/ UPLAND	LARGE WOODY DEBRIS
ZONE 4 - ROCK SLOPE PROTECTION	VEGETATION COMMUNITIES / LAND USES
ZONE 5 - ARTICULATED CONCRETE BLOCK	ALNUS RHOMBIFOLIA FOREST ALLIANCE
SEED MIX	DEVELOPED
RIPARIAN SEED MIX	RIVERINE
UPLAND SEED MIX	RUDERAL
BASE MAP: ESRI "WORLD IMAGERY" ONLINE SERVICE LAYER.	
DATA SOURCES: TRC, LSA, ESRI	



PROJECT:		COUNTY OF MONTEREY ROBINSON CANYON BRIDGE	
TITLE:		RESTORATION PLAN	
DRAWN BY:	R. JORDAN	PROJ. NO.:	226649
CHECKED BY:	T. HARTWIG	FIGURE 5	
APPROVED BY:	M. IMBRIANI		
DATE:	OCTOBER 2021		
		17911 VON KARMAN AVENUE SUITE 400 IRVINE, CA 92614 PHONE: 949.727.7348	
FILE:	ROBINSON_CANYON.APRX		

APPENDIX B

RECOMMENDED MITIGATION AREA PLANT AND SEED PALETTES PLANTING PLAN SHEETS

RECOMMENDED WETLAND PLANT AND SEED LISTS

Table B-1: Wetland Container Plants

Zone Number	Zone Type	Common Name	Scientific Name	Container Size
1	Channel/ Banks Plant Palette (114 FT to 117 FT)	White Alder	<i>Alnus rhombifolia</i>	5-Gallon Treepot
		Sycamore	<i>Platanus racemosa</i>	5-Gallon Treepot
		Black Cottonwood	<i>Populus trichocarpa</i>	5-Gallon Treepot
		Red Willow	<i>Salix laevigata</i>	Cutting
		Arroyo Willow	<i>Salix lasiolepis</i>	Cutting
		Western Goldenrod	<i>Euthamia occidentalis</i>	1- Gallon
		Mugwort	<i>Artemisia douglasiana</i>	Plugs or Deepots
		Horsetail	<i>Equisetum arvense</i>	Plugs or Deepots
2	Floodplain Plant Palette (117 FT to 127 FT)	White Alder	<i>Alnus rhombifolia</i>	5-Gallon Treepot
		Sycamore	<i>Platanus racemosa</i>	5-Gallon Treepot
		Black Cottonwood	<i>Populus trichocarpa</i>	5-Gallon Treepot
		Red Willow	<i>Salix laevigata</i>	Cutting
		Arroyo Willow	<i>Salix lasiolepis</i>	Cutting
		California Blackberry	<i>Rubus ursinus</i>	1- Gallon
		Blue Elderberry	<i>Sambucus nigra</i>	1- Gallon
		Snowberry	<i>Symphoricarpos mollis</i>	1- Gallon
		Clematis	<i>Clematis ligusticifolia</i>	1- Gallon
3	Upper Floodplain/ Upland Plant Palette (127 FT to Top of Bank)	Sycamore	<i>Platanus racemosa</i>	5-Gallon Treepot
		Black Cottonwood	<i>Populus trichocarpa</i>	5-Gallon Treepot
		Coast Live Oak	<i>Quercus agrifolia</i>	5-Gallon Treepot
		California Bay	<i>Umbellularia californica</i>	5-Gallon Treepot
		Spreading Gooseberry	<i>Ribes divaricatum</i>	1- Gallon
		California Blackberry	<i>Rubus ursinus</i>	1- Gallon
		Blue Elderberry	<i>Sambucus nigra</i>	1- Gallon
		Snowberry	<i>Symphoricarpos mollis</i>	1- Gallon
		Clematis	<i>Clematis ligusticifolia</i>	1- Gallon
4	Rock Slope Protection Plant Palette	Arroyo Willow	<i>Salix lasiolepis</i>	Cutting
		California Blackberry	<i>Rubus ursinus</i>	1- Gallon
		Snowberry	<i>Symphoricarpos mollis</i>	1- Gallon
		Clematis	<i>Clematis ligusticifolia</i>	1- Gallon
5	Articulated Concrete Block Plant Palette	Mugwort	<i>Artemisia douglasiana</i>	Plugs
		Clematis	<i>Clematis ligusticifolia</i>	Plugs
		California Blackberry	<i>Rubus ursinus</i>	Plugs
		Snowberry	<i>Symphoricarpos mollis</i>	Plugs

Source: Robinson Canyon Road Bridge Scour Project Planting Plan, Wreco and Monterey County Resource Management Agency, August 2020

Table B-2: Wetland Seed List

Planting Area	Common Name	Scientific Name	Pounds Per Acre
Riparian & Rock Slope Protection	Mugwort	<i>Artemisia douglasiana</i>	2.0
	Tufted Hairgrass	<i>Deschampsia caespitosa</i>	0.75
	Creeping Wildrye	<i>Elymus triticoides</i>	10.0
	California Poppy	<i>Eschscholzia californica</i>	0.25
	Small Fescue	<i>Festuca microstachys</i>	1.0
	Meadow Barley	<i>Hordeum brachyantherum</i>	10.0
Upland	Western Yarrow	<i>Achillea millefolium</i>	0.25
	Deerweed	<i>Acmispon glaber</i>	0.5
	Mugwort	<i>Artemisia douglasiana</i>	1.0
	California Brome	<i>Bromus carinatus</i>	8.0
	Blue Wildrye	<i>Elymus glaucus</i>	6.0
	California Poppy	<i>Eschscholzia californica</i>	1.25
	Meadow Barley	<i>Hordeum brachyantherum</i>	8.0
	Bicolored Lupine	<i>Lupinus bicolor</i>	5.0
	Melic Grass	<i>Melica imperfecta</i>	1.5
Purple Needlegrass	<i>Stipa pulchra</i>	9.0	

Source: Robinson Canyon Road Bridge Scour Project Planting Plan, Wreco and Monterey County Resource Management Agency, August 2020

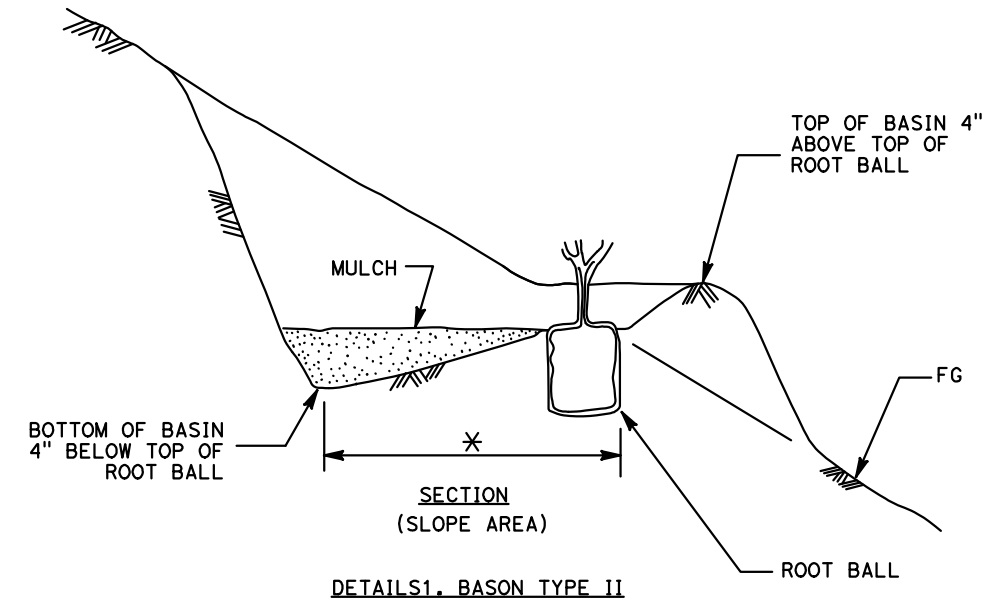
*Note: The species, sizes, and amounts of container plants needed for the restoration effort is subject to refinement and approval by the Biologist. Likewise, the total bulk pounds required for the seeding effort is contingent upon the total amount of acreage receiving seed; the total acreage of the mitigation areas to be planted/seeded will be confirmed by the Biologist prior to installation.

NOTES:

1. THE SCOPE OF WORK INCLUDES INSTALLING PLANT MATERIAL AS WELL AS MAINTENANCE, IRRIGATION, MONITORING, AND REPORTING FOR THE PLANT ESTABLISHMENT PERIOD. THE PLANT ESTABLISHMENT PERIOD BEGINS WHEN THE ENGINEER HAS ACCEPTED THE INSTALLATION OF ALL PLANT MATERIAL IN WRITING AND PROVIDED A PLANT ESTABLISHMENT PERIOD TO START DATE. THE PLANT ESTABLISHMENT PERIOD SHALL BEGIN AFTER PLANTS HAVE BEEN INSTALLED, AND SHALL EXTEND FOR A PERIOD OF FIVE YEARS OR AS REQUIRED BY REGULATORY AGENCY PERMITS. THE PLANT ESTABLISHMENT PERIOD ENDS WHEN PERFORMANCE STANDARDS FOR VEGETATION SURVIVAL AND COVER HAVE BEEN MET AND DEMONSTRATED TO THE SATISFACTION OF REGULATORY AGENCIES.
2. DISTURBED PORTIONS OF THE CARMEL RIVER CHANNEL AND BANKS WILL BE REPLANTED WITH NATIVE SPECIES, INCLUDING LOCALLY-HARVESTED WILLOW AND COTTONWOOD CUTTINGS, NURSERY CONTAINER STOCK, AND NATIVE SEED MIX.
3. WILLOW AND COTTONWOOD CUTTINGS AS WELL AS CONTAINER STOCK WILL BE PLANTED WITHIN THE SOIL-FILLED RIP RAP.
4. PLANTS AND SEED SHALL BE THE SPECIES, SIZE, FORM, AND QUANTITY AS SPECIFIED ON THE PLANS. PLANTING QUANTITIES SHOULD BE ADJUSTED AS NEEDED TO ENHANCE UNDISTURBED RIPARIAN AREAS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING QUANTITIES PRIOR TO ARRANGING FOR DELIVERY OF ALL PLANTS.
5. PLANTS MUST BE PROTECTED FROM SUN, WIND, AND DEHYDRATION DURING TRANSPORT AND STORAGE AT THE SITE. ALL NURSERY STOCK SHALL BE PLACED IN A PROTECTED LOCATION ON SITE UPON DELIVERY. PLANTS SHALL BE PROTECTED FROM DESICCATION, HARSH WEATHER CONDITIONS (INCLUDING FROST AND WIND) AND MECHANICAL DAMAGE.
6. THE CONTRACTOR SHALL STAKE OUT THE BOUNDARIES OF THE PLANTING ZONES AS DEPICTED ON THE PLANS. INDIVIDUAL CONTAINERIZED PLANT LOCATIONS SHALL BE MARKED USING COLORED AND LABELED PIN FLAGS (WITH THE COLORS AND LABELS REPRESENTING EACH SPECIES). BEFORE PLANTING MAY BEGIN, THE LAYOUT MUST BE APPROVED BY THE ENGINEER.
7. FOLIAGE PROTECTORS SHALL BE PLACED AROUND ALL INSTALLED NURSERY CONTAINER STOCK.
8. KEEP CONTRACT AREAS FREE OF WEEDS BY CULTIVATING, HOING, OR HAND PULLING DURING THE PLANT ESTABLISHMENT PERIOD. THE WEEDING METHODS SHALL NOT DAMAGE VOLUNTEER NATIVE WOODY VEGETATION, INSTALLED PLANTS, OR EXISTING NATIVE VEGETATION. WEEDING SHALL BE CONDUCTED FOLLOWING MANUAL HAND WEEDING. PESTICIDES OR HERBICIDES MAY BE USED TO CONTROL WEEDS IF ALLOWED BY REGULATORY AGENCY PERMITS.
9. THE CONTRACTOR WILL IRRIGATE THE NATIVE PLANTINGS WITH USE OF A WATER TRUCK, TEMPORARY/MOBILE WATER BUFFALO, TEMPORARY DRIP IRRIGATION SYSTEM, OR SIMILAR METHOD. PLANTS SHALL BE IRRIGATED DURING THE MONTHS OF APRIL THROUGH OCTOBER. AS A GENERAL GUIDELINE, PLANTS SHOULD BE WATERED ONCE PER WEEK DURING THE FIRST YEAR, ONCE EVERY TWO WEEKS DURING THE SECOND YEAR, AND ONCE EVERY THREE WEEKS DURING THE THIRD YEAR, OR AS NEEDED TO ENSURE SURVIVAL OF PLANTINGS. ADAPTIVE MANAGEMENT PRACTICES SHALL BE UTILIZED BY THE CONTRACTOR, AS NEEDED, TO ENSURE PLANT SURVIVORSHIP. THE CONTRACTOR WILL BE RESPONSIBLE FOR PURCHASING THE WATER NEEDED FOR IRRIGATION.
10. TO COMPENSATE FOR PLANT MORTALITY, THE CONTRACTOR IS REQUIRED TO ACQUIRE AND INSTALL ADDITIONAL PLANTS IN THE FIRST YEAR OF ESTABLISHMENT IF SURVIVORSHIP OF THE CONTAINERIZED PLANTS FALL BELOW 100% OF THE ORIGINAL NUMBER INSTALLED. PLANTS SHALL BE FREE OF EXCESSIVE DEAD OR DYING BRANCHES AND BRANCH TIPS, WITH FOLIAGE OF NORMAL DENSITY, SIZE, AND COLOR. REPAIR AND/OR REPLACE AT NO ADDITIONAL COST TO THE CITY ALL PLANT MATERIALS EXHIBITING CONDITIONS WHICH ARE DETERMINED AS UNACCEPTABLE DUE TO WORKMANSHIP BY CONTRACTOR. CONTRACTOR WILL NOT BE HELD RESPONSIBLE FOR FAILURES DUE TO VANDALISM AND NATURAL DISASTER, SUCH AS FIRE OR SEVERE FLOODING. A REPLACEMENT PLANTING PLAN SHALL BE PREPARED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO IMPLEMENTATION. ADAPTIVE MANAGEMENT STRATEGIES SHALL BE EMPLOYED TO DETERMINE THE CAUSE OF DEATH AND THE BEST SUITED SPECIES FOR REPLACEMENT FOR THOSE PLANTS THAT PERISHED. THE REPLACEMENT PLANTS SHALL BE THE SAME SPECIES.
11. MONITORING AND REPORTING DURING THE PLANT ESTABLISHMENT PERIOD WILL BE PERFORMED ACCORDING TO THE REQUIREMENTS SPECIFIED IN REGULATORY AGENCY PERMITS. MONITORING WOULD BE PERFORMED BY A BIOLOGIST OR BOTANIST FAMILIAR WITH PLANT SPECIES NATIVE TO CARMEL RIVER AND MONTEREY COUNTY
12. ALL WORK WOULD BE CONDUCTED IN ACCORDANCE WITH THESE SPECIFICATIONS OR AS OTHERWISE REQUIRED BY REGULATORY AGENCY PERMITS IN ORDER TO MEET ESTABLISHED SUCCESS CRITERIA FOR VEGETATION SURVIVAL AND COVER, AS APPLICABLE.

CONTAINER STOCK SPECIFICATIONS (DETAIL 1)

1. CONTAINER STOCK WILL BE INSTALLED BY HAND AND SUBJECT TO THE FOLLOWING CONDITIONS:
 - a) CONTAINER STOCK PLANT MATERIAL WILL BE PICKED UP NO MORE THAN FIVE DAYS PRIOR TO PLANTING.
 - b) ALL PLANTING HOLES SHALL BE DUG TO EQUAL THE DEPTH AND 1.5 TIMES THE WIDTH OF THE ROOTBALL OR RHIZOME.
 - c) 1/2 TABLESPOON OF 14-14-14 SLOW RELEASE FERTILIZER SHALL BE PLACED AT THE BOTTOM OF THE PLANTING HOLE.
 - d) THE PLANT WILL BE PLACED IN THE HOLE, THEN THE HOLE SHALL BE FILLED HALF-WAY WITH SOIL AND FIRMLY TAMPED AROUND THE ROOT BALL. THE PLANTING WILL THEN BE IRRIGATED. AFTER IRRIGATION, THE HOLE WILL BE COMPLETELY FILLED WITH SOIL THEN IRRIGATED A SECOND TIME.
 - e) AFTER THE SOIL HAS BEEN FIRMLY TAMPED AROUND THE ROOTBALL AND IRRIGATED, THE CROWN OF THE ROOTBALL SHALL BE AT THE SURROUNDING FINISH GRADE OF THE SLOPES.



* BASIN AREA EQUIVALENT TO 12" DIA

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Submitted by: M. IMBRIANI Design Engineer C.E. No. 36834	
DESIGN BY: C. STAPELMANN	CHKD BY:
DRAWN BY: M. ORNELAS-ZAMORES	CHKD BY:
SPECIFICATIONS WRITTEN BY:	CHKD BY:
Approval Recommended by: Deputy Public Works Director, Engineering	



1243 ALPINE RD SUITE 108
WALNUT CREEK, CA 94596



NO.	DATE	REVISION DESCRIPTION	APPROVED




COUNTY OF MONTEREY
DEPT. OF PUBLIC WORKS,
FACILITIES & PARKS

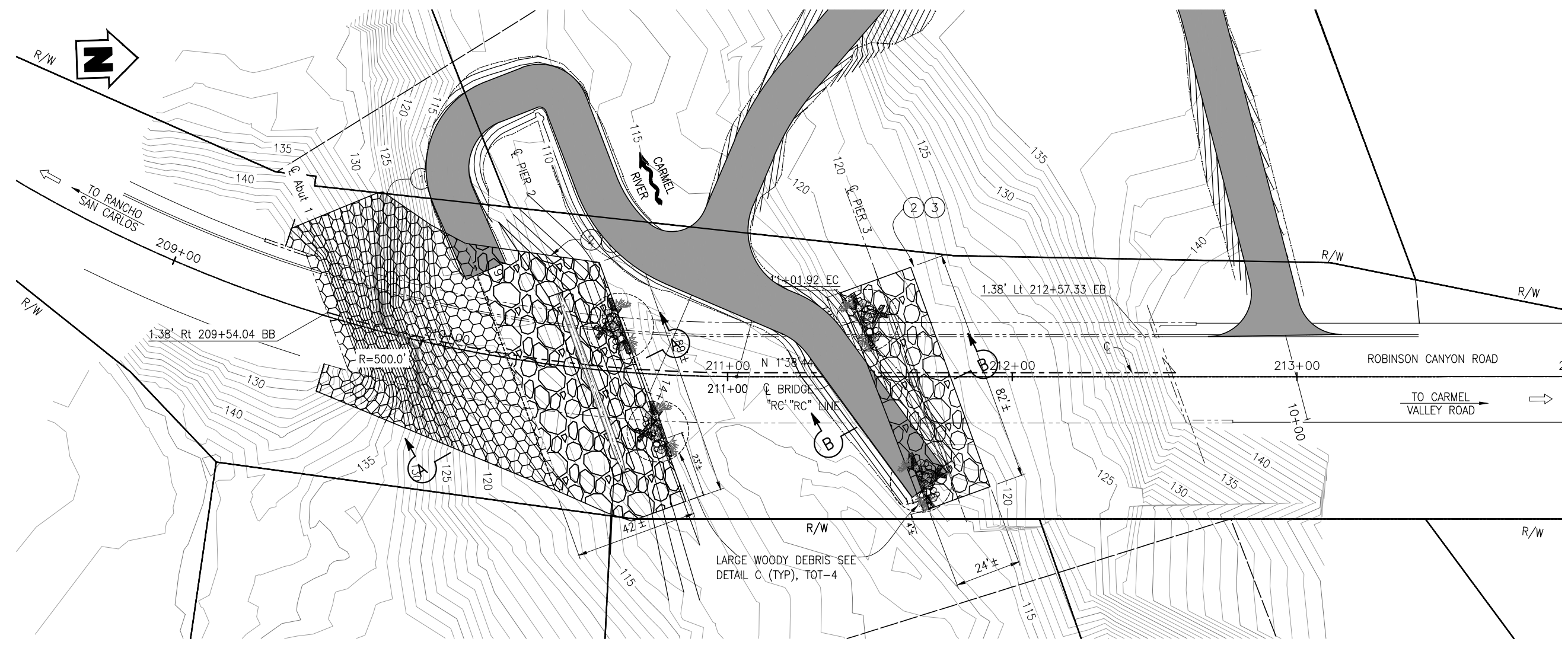
1441 SCHILLING PLACE
SALINAS, CALIFORNIA 93901
(831) 755-4800/FAX (831) 755-4958

ROBINSON CANYON ROAD BRIDGE SCOUR PROJECT PLANTING PLAN			
FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503			
DATE 9-10-2021	FILE	PROJECT NO. 385165	SHEET 1
SCALE AS NOTED		CONTRACT NO.	
			OF 11 SHEETS

SHEET NUMBER	TOTAL SHEETS
14	23

- LEGEND:**
- INDICATES EXISTING STRUCTURE (OVERHEAD)
 - ~ INDICATES DIRECTION OF FLOW
 - ← INDICATES DIRECTION OF TRAFFIC
 - ① ARTICULATED CONCRETE BLOCK (ACB) MAT
 - ② NATIVE MATERIAL OVER RSP, TYP W/ WILLOW STAKES
 - ③ NATIVE BACKFILL MIXED W/ RSP
 -  LARGE WOODY DEBRIS - LOG SPURS W/ ROOT WADS, FOOTER LOG, ANCHOR STONES, AND 2' DIAMETER ROCK

- NOTES:**
1. ALL DIMENSIONS SHOWN ARE ±.
 2. FOR SECTIONS A-A AND B-B AND DETAIL C SEE "LARGE WOODY DEBRIS DETAILS NO. 2" SHEET
 3. FOR SECTIONS D-D AND E-E SEE "LARGE WOODY DEBRIS DETAILS NO. 3" SHEET



PLAN
1"=20'

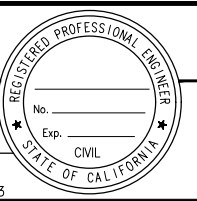
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P-2


Submitted by: C. SEWELL Design Engineer C.E. No. 64807	
DESIGN BY: J. ABRAMS	CHKD BY:
DRAWN BY: M. DU	CHKD BY:
SPECIFICATIONS WRITTEN BY:	CHKD BY:
Approval Recommended by: _____ Deputy Public Works Director, Engineering	



1243 ALPINE RD SUITE 108
WALNUT CREEK, CA 94596

NO.	DATE	REVISION DESCRIPTION	APPROVED



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SALINAS, CALIFORNIA 93901
(831) 755-4800/FAX (831) 755-4958

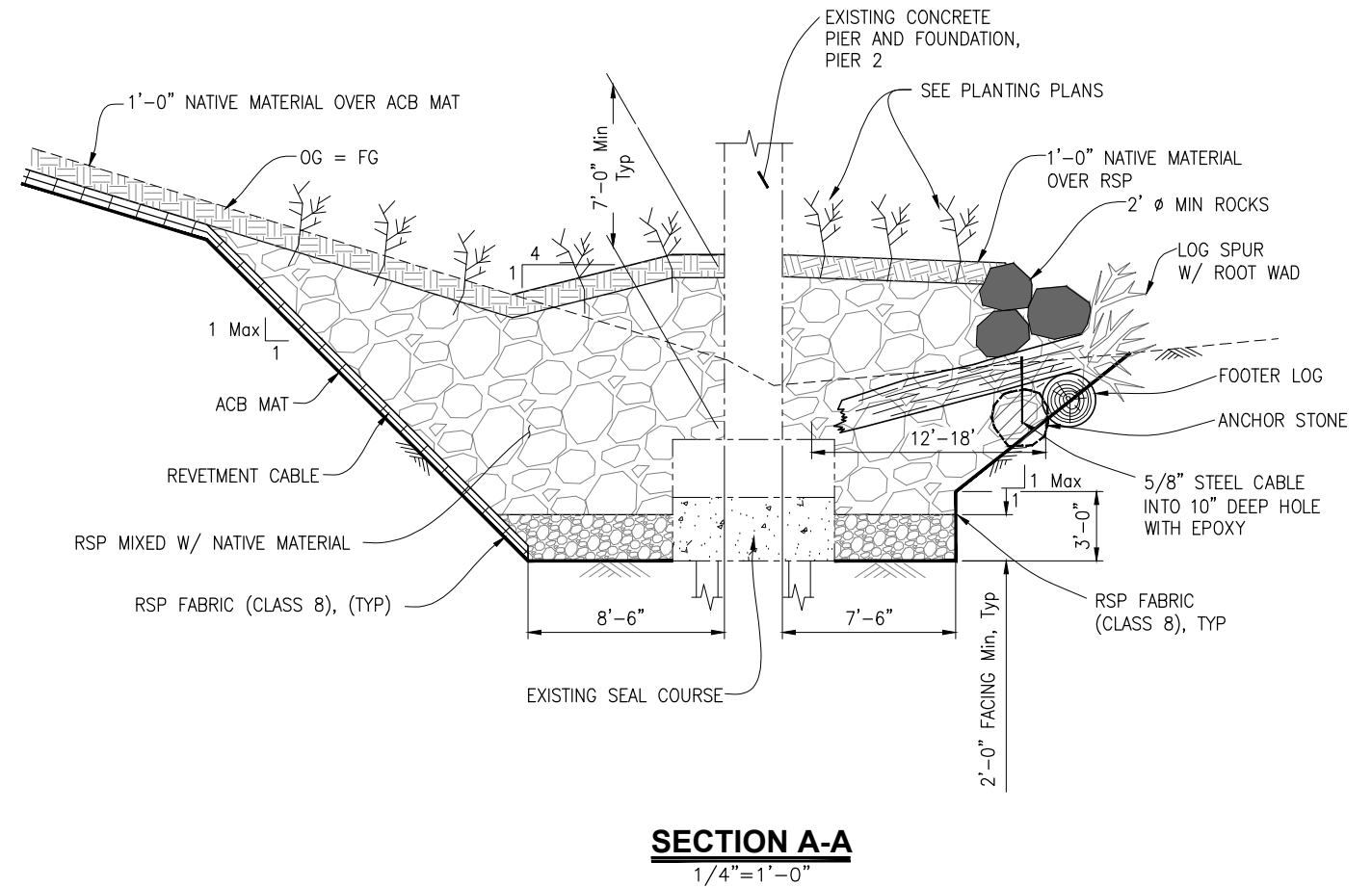
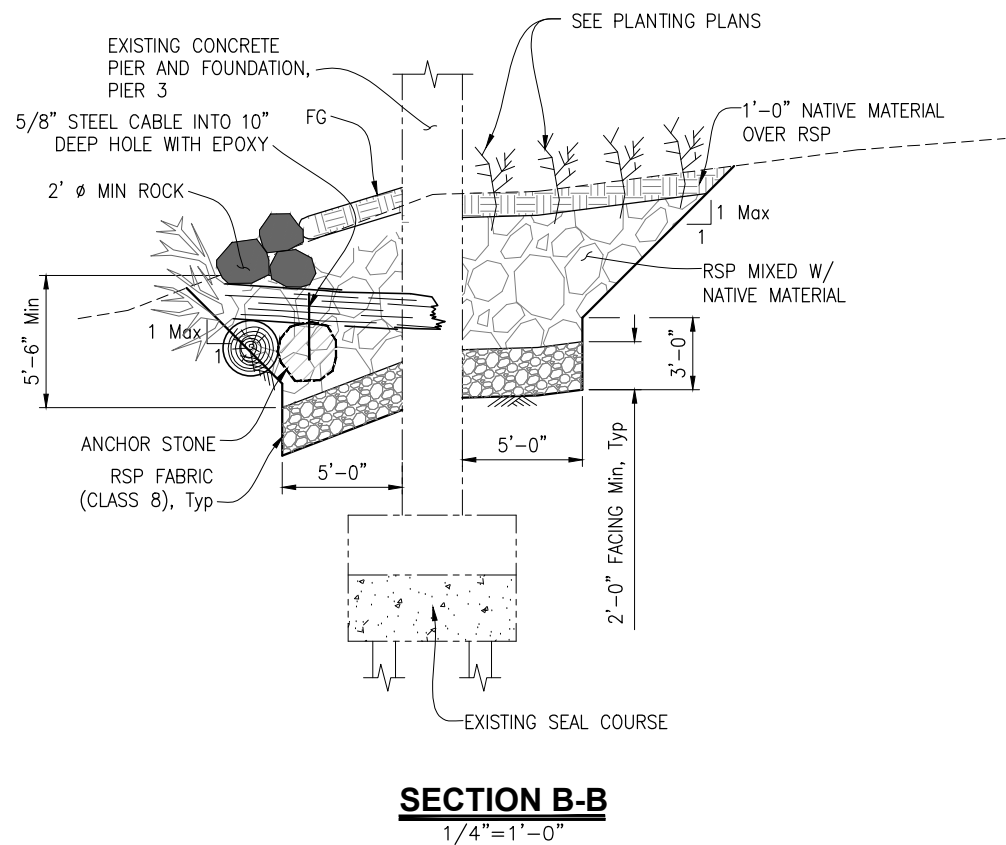
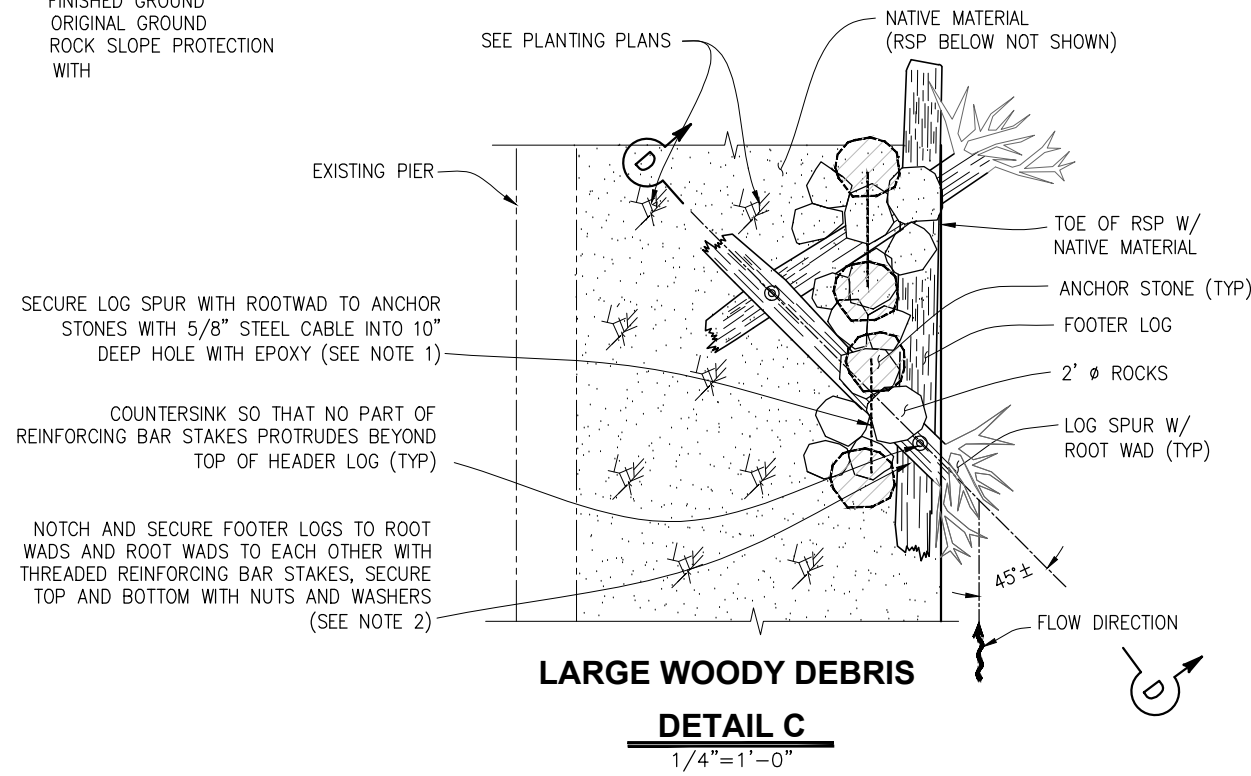
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FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRIDGE NO. 503			
DATE 09-10-21	FILE	PROJECT NO. 385165	SHEET 2
SCALE AS NOTED	CONTRACT NO.		OF 1 SHEETS

ABBREVIATIONS:

ACB ARTICULATED CONCRETE BLOCK
 MAX MAXIMUM
 FG FINISHED GROUND
 OG ORIGINAL GROUND
 RSP ROCK SLOPE PROTECTION
 W/ WITH

NOTES:

1. FILL HOLE APPROXIMATELY 2/3 FULL WITH EPOXY AND INSERT CABLE INTO HOLE UNTIL IT REACHES BOTTOM.
2. CUT NOTCHES AT THE LOCATION WHERE THE ROOTWAD OVERLAPS THE HEADER LOGS TO ENSURE A STABLE JOINT.
3. ANCHOR STONES SHALL BE 3/4 TON ROCK.

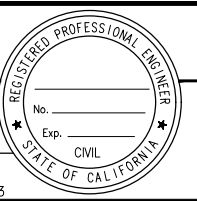


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Submitted by: C. SEWELL Design Engineer C.E. No. 64807	
DESIGN BY: J. ABRAMS	CHKD BY:
DRAWN BY: M. DU	CHKD BY:
SPECIFICATIONS WRITTEN BY:	CHKD BY:
Approval Recommended by: _____ Deputy Public Works Director, Engineering	

1243 ALPINE RD SUITE 108
 WALNUT CREEK, CA 94596

ORIGINAL SCALE IN INCHES
 FOR REDUCED PLANS

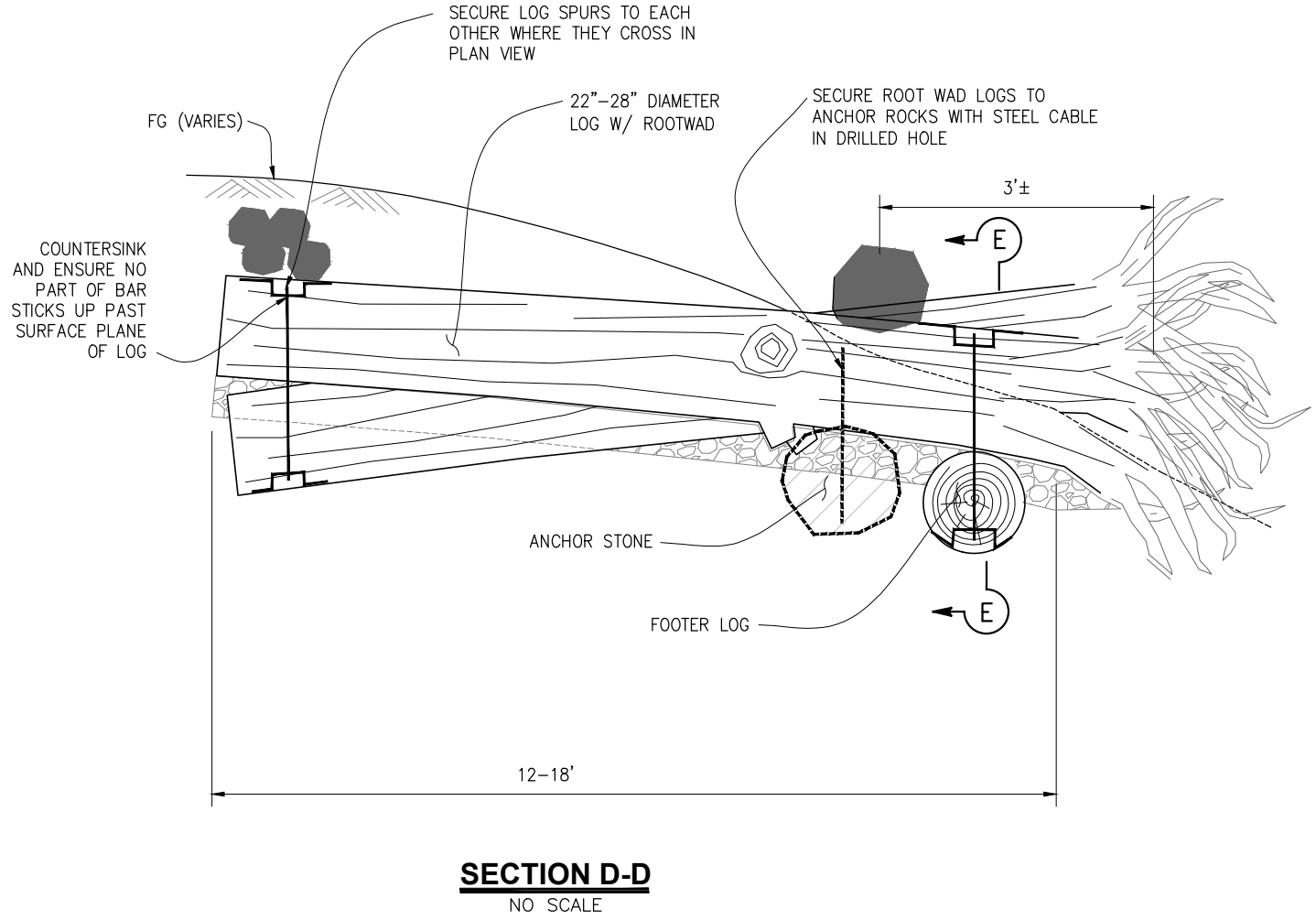


NO.	DATE	REVISION DESCRIPTION	APPROVED

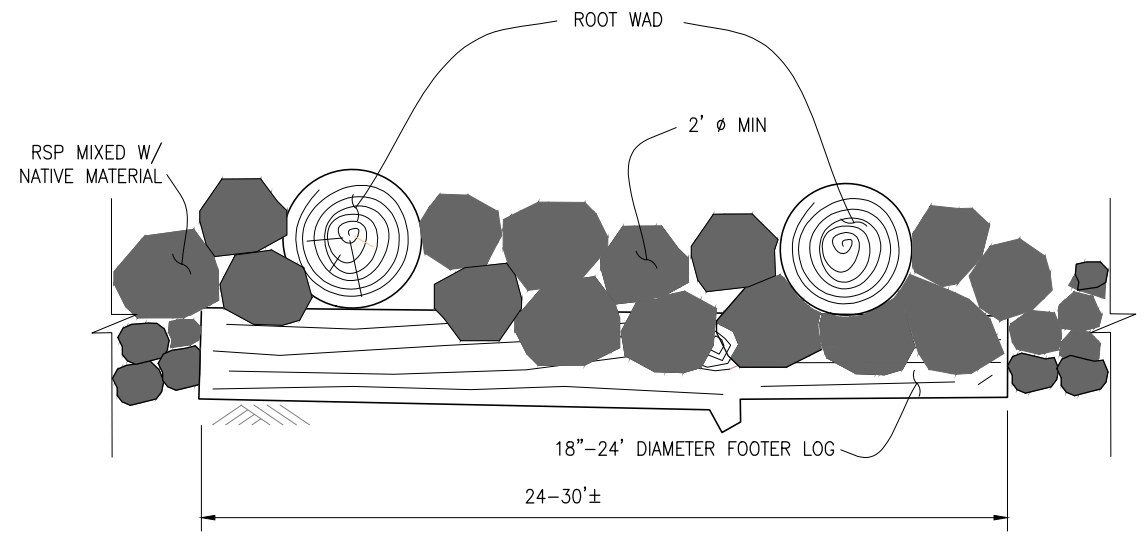
COUNTY OF MONTEREY
 DEPT. OF PUBLIC WORKS,
 FACILITIES & PARKS

1441 SCHILLING PLACE
 SALINAS, CALIFORNIA 93901
 (831) 755-4800/FAX (831) 755-4958

ROBINSON CANYON ROAD BRIDGE SCOUR PROJECT LARGE WOODY DEBRIS DETAILS NO. 2			
FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRIDGE NO. 503			
DATE 09-10-21	FILE	PROJECT NO. 385165	SHEET 3
SCALE AS NOTED	CONTRACT NO.		OF 1 SHEETS



SECTION D-D
NO SCALE



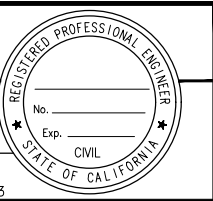
LARGE WOODY DEBRIS
SECTION E-E
NO SCALE

C:\Projects\2013\1619\1619_Robinson_Cyn_Rd\Drawings\Revs_Plan_1-3.dwg Layout Tab: P-4 Sep 09, 2021 - 2:24pm Davis-Hirsh


Submitted by: C. SEWELL Design Engineer C.E. No. 64807	
DESIGN BY: J. ABRAMS	CHKD BY:
DRAWN BY: M. DU	CHKD BY:
SPECIFICATIONS WRITTEN BY:	CHKD BY:
Approval Recommended by: _____ Deputy Public Works Director, Engineering	



1243 ALPINE RD SUITE 108
WALNUT CREEK, CA 94596

NO.	DATE	REVISION DESCRIPTION	APPROVED






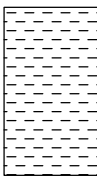


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







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ROBINSON CANYON ROAD BRIDGE SCOUR PROJECT LARGE WOODY DEBRIS DETAILS NO.3			
FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRIDGE NO. 503			
DATE 09-10-21	FILE	PROJECT NO. 385165	SHEET 4
SCALE AS NOTED	CONTRACT NO.		OF 1 SHEETS

ZONE 1 – CHANNEL/BANKS PLANT PALETTE (114 FT TO 117 FT)

SYMBOL	COMMON NAME	SCIENTIFIC NAME	CONTAINER SIZE	SPACING (FEET ON CENTER)	NUMBER OF PLANTS
TREES					
	WHITE ADLER	ALNUS RHOMBIFOLIA	5-GALLON TREEPOT	12	7
	SYCAMORE	PLATANUS RACEMOSA	5-GALLON TREEPOT	12	3
	BLACK COTTONWOOD	POPULUS TRICHOCARPA	5-GALLON TREEPOT	12	3
	RED WILLOW	SALIX LAEVIGATA	CUTTING	12	4
	ARROYO WILLOW	SALIX LASIOLEPS	CUTTING	8	3
SHRUBS					
	WESTERN GOLDENROD	EUTHAMIA OCCIDENTALIS	1-GALLON	2	FIELD FIT
	MUGWORT	ARTEMISIA DOUGLASIANA	PLUGS OR DEEPOTS	2	
	HORSETAIL	EQUISETUM ARVENSE	PLUGS OR DEEPOTS	2	

ZONE 2 – FLOODPLAIN PLANT PALETTE (117 FT TO 127 FT)

SYMBOL	COMMON NAME	SCIENTIFIC NAME	CONTAINER SIZE	SPACING (FEET ON CENTER)	NUMBER OF PLANTS
TREES					
	WHITE ADLER	ALNUS RHOMBIFOLIA	5-GALLON TREEPOT	12	3
	SYCAMORE	PLATANUS RACEMOSA	5-GALLON TREEPOT	12	1
	BLACK COTTONWOOD	POPULUS TRICHOCARPA	5-GALLON TREEPOT	12	1
	RED WILLOW	SALIX LAEVIGATA	CUTTING	12	3
	ARROYO WILLOW	SALIX LASIOLEPS	CUTTING	8	2
SHRUBS					
	CALIFORNIA BLACKBERRY	RUBUS URSINUS	1-GALLON	6	4
	BLUE ELDERBERRY	SAMBUCUS NIGRA	1-GALLON	6	3
	SNOWBERRY	SYMPHORICARPOS MOLLIS	1-GALLON	6	2
VINE					
	CLEMATIS	CLEMATIS LIGUSTICIFOLIA	1-GALLON	6	1

Drawing name: C:\Projects\2021\17151919 Robinson_Cyn_Rd\Drawings\Reveg_P-5-11.dwg Layout Tab: P-5 Sep 10 2021 3:47pm Davis-Horvath

Submitted by: **M. IMBRIANI**
Design Engineer C.E. No. 36634

DESIGN BY: **C. STAPELMANN** CHKD BY: _____

DRAWN BY: **M. ORNELAS-ZAMORES** CHKD BY: _____

SPECIFICATIONS WRITTEN BY: _____ CHKD BY: _____

Approval Recommended by: _____
Deputy Public Works Director, Engineering



1243 ALPINE RD SUITE 108
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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



NO.	DATE	REVISION DESCRIPTION	APPROVED



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(831) 755-4800/FAX (831) 755-4958










**ROBINSON CANYON ROAD BRIDGE
SCOUR PROJECT
PLANTING PLAN**

FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503





DATE 9-10-2021	FILE	PROJECT NO. 385165	SHEET 5
SCALE AS NOTED		CONTRACT NO.	

OF 11 SHEETS

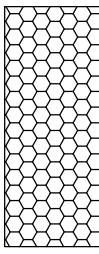
ZONE 3 – UPPER FLOODPLAIN/UPLAND PLANT PALETTE (127 FT TO TOP OF BANK)

SYMBOL	COMMON NAME	SCIENTIFIC NAME	CONTAINER SIZE	SPACING (FEET ON CENTER)	NUMBER OF PLANTS
TREES					
	SYCAMORE	PLATANUS RACEMOSA	5-GALLON TREEPOT	12	2
	BLACK COTTONWOOD	POPULUS TRICHOCARPA	5-GALLON TREEPOT	12	2
	COAST LIVE OAK	QUERCUS AGRIFOLIA	5-GALLON TREEPOT	12	3
	CALIFORNIA BAY	UMBELLULARIA CALIFORNICA	5-GALLON TREEPOT	12	1
SHRUBS					
	SPREADING GOOSEBERRY	RIBES DIVARICATUM	1-GALLON	6	5
	CALIFORNIA BLACKBERRY	RUBUS URSINUS	1-GALLON	6	6
	BLUE ELDERBERRY	SAMBUCUS NIGRA	1-GALLON	6	3
	SNOWBERRY	SYMPHORICARPOS MOLLIS	1-GALLON	6	4
VINE					
	CLEMATIS	CLEMATIS LIGUSTICIFOLIA	1-GALLON	6	3

ZONE 4 – ROCK SLOPE PROTECTION PLANT PALETTE

SYMBOL	COMMON NAME	SCIENTIFIC NAME	CONTAINER SIZE	SPACING (FEET ON CENTER)	NUMBER OF PLANTS
TREES					
	ARROYO WILLOW	SALIX LASIOLEPS	CUTTING	8	28
SHRUBS					
	CALIFORNIA BLACKBERRY	RUBUS URSINUS	1-GALLON	6	22
	SNOWBERRY	SYMPHORICARPOS MOLLIS	1-GALLON	6	12
VINE					
	CLEMATIS	CLEMATIS LIGUSTICIFOLIA	1-GALLON	6	10

ZONE 5 – ARTICULATED CONCRETE BLOCK PLANT PALETTE

SYMBOL	COMMON NAME	SCIENTIFIC NAME	CONTAINER SIZE	SPACING (FEET ON CENTER)	NUMBER OF PLANTS
	MUGWORT	ARTEMISIA DOUGLASIANA	PLUGS	3	FIELD FIT
	CLEMATIS	CLEMATIS LIGUSTICIFOLIA	PLUGS	3	
	CALIFORNIA BLACKBERRY	RUBUS URSINUS	PLUGS	3	
	SNOWBERRY	SYMPHORICARPOS MOLLIS	PLUGS	3	

Drawing name: C:\Projects\2021\151519 Robinson_Cyn_Rd\Drawings\Reveg_P-5-11.dwg Layout Tab: P-6 Sep 10 2021 3:46pm Davis, Horeff


Submitted by: **M. IMBRIANI**
Design Engineer C.E. No. 36634

DESIGN BY: **C. STAPELMANN** CHKD BY: _____


DRAWN BY: **M. ORNELAS-ZAMORES** CHKD BY: _____

SPECIFICATIONS WRITTEN BY: _____ CHKD BY: _____

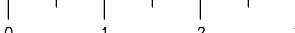
Approval Recommended by: _____
Deputy Public Works Director, Engineering



1243 ALPINE RD SUITE 108
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ORIGINAL SCALE IN INCHES
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NO.	DATE	REVISION DESCRIPTION	APPROVED



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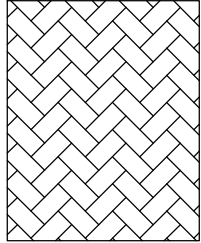
**ROBINSON CANYON ROAD BRIDGE
SCOUR PROJECT
PLANTING PLAN**

FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503

DATE 9-10-2021	FILE	PROJECT NO. 385165	SHEET 6
SCALE AS NOTED		CONTRACT NO.	

OF 11 SHEETS

SEED MIX – RIPARIAN & ROCK SLOPE PROTECTION

SYMBOL	COMMON NAME	SCIENTIFIC NAME	POUNDS PLS PER ACRE
	MUGWORT	ARTEMISIA DOUGLASIANA	2.0
	TUFTED HAIRGRASS	DESCHAMPSIA CAESPITOSA	0.75
	CREEPING WILDRYE	ELYMUS TRITICOIDES	10.0
	CALIFORNIA POPPY	ESCHSCHOLZIA CALIFORNICA	0.25
	SMALL FESCUE	FESTUCA MICROSTACHYS	1.0
	MEADOW BARLEY	HORDEUM BRACHYENTHERUM	10.0

SEED MIX – UPLAND

SYMBOL	COMMON NAME	SCIENTIFIC NAME	POUNDS PLS PER ACRE
	WESTERN YARROW	ACHILLEA	0.25
	DEERWEED	ACMISPON GLABER	0.5
	MUGWORT	ARTEMISIA DOUGLASIANA	1.0
	CALIFORNIA BROME	BROMUS CARINATUS	8.0
	BLUE WILDRYE	ELYMUS GLAUCUS	6.0
	CALIFORNIA POPPY	ESCHSCHOLZIA CALIFORNICA	1.25
	MEADOW BARLEY	HORDEUM BRACHYENTHERUM	8.0
	BICOLORED LUPINE	LUPINUS BICOLOR	5.0
	MELIC GRASS	MELICA IMPERFECTA	1.5
	PURPLE NEEDLEGRASS	STIPA PULCHRA	9.0

Drawing name: C:\Projects\2021\151919 Robinson_Cyn_Rd\Drawings\Reveg_P-5-11.dwg Layout Tab: P-7 Sep 10/2021 3:47pm Davis-Horvath


Submitted by: **M. IMBRIANI**
Design Engineer C.E. No. 36634

DESIGN BY: **C. STAPELMANN** CHKD BY:

DRAWN BY: **M. ORNELAS-ZAMORES** CHKD BY:

SPECIFICATIONS WRITTEN BY: CHKD BY:

Approval Recommended by: _____
Deputy Public Works Director, Engineering



1243 ALPINE RD SUITE 108
WALNUT CREEK, CA 94596



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FOR REDUCED PLANS



NO.	DATE	REVISION DESCRIPTION	APPROVED



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**ROBINSON CANYON ROAD BRIDGE
SCOUR PROJECT
PLANTING PLAN**

FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503

DATE 9-10-2021	FILE	PROJECT NO. 385165	SHEET 7
SCALE AS NOTED	CONTRACT NO.		OF 11 SHEETS



MATCH LINE (SEE P-8)

PLAN
1"=20'

NOTES:
1. ALL DIMENSIONS SHOWN ARE ±.

- LEGEND:**
- INDICATES EXISTING STRUCTURE (OVERHEAD)
 - ~ INDICATES DIRECTION OF FLOW
 - ← INDICATES DIRECTION OF TRAFFIC

- LARGE WOODY DEBRIS - LOG SPURS W/ ROOT WADS, FOOTER LOG, ANCHOR STONES, AND 2" DIAMETER ROCK
- RIPARIAN & RSP SEED MIX (SEE P-6)
- UPLAND SEED MIX (SEE P-6)

Submitted by: M. IMBRIANI Design Engineer C.E. No. 36634	
DESIGN BY: C. STAPELMANN	CHKD BY:
DRAWN BY: M. ORNELAS-ZAMORES	CHKD BY:
SPECIFICATIONS WRITTEN BY:	CHKD BY:
Approval Recommended by: Deputy Public Works Director, Engineering	

1243 ALPINE RD SUITE 108
WALNUT CREEK, CA 94596

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

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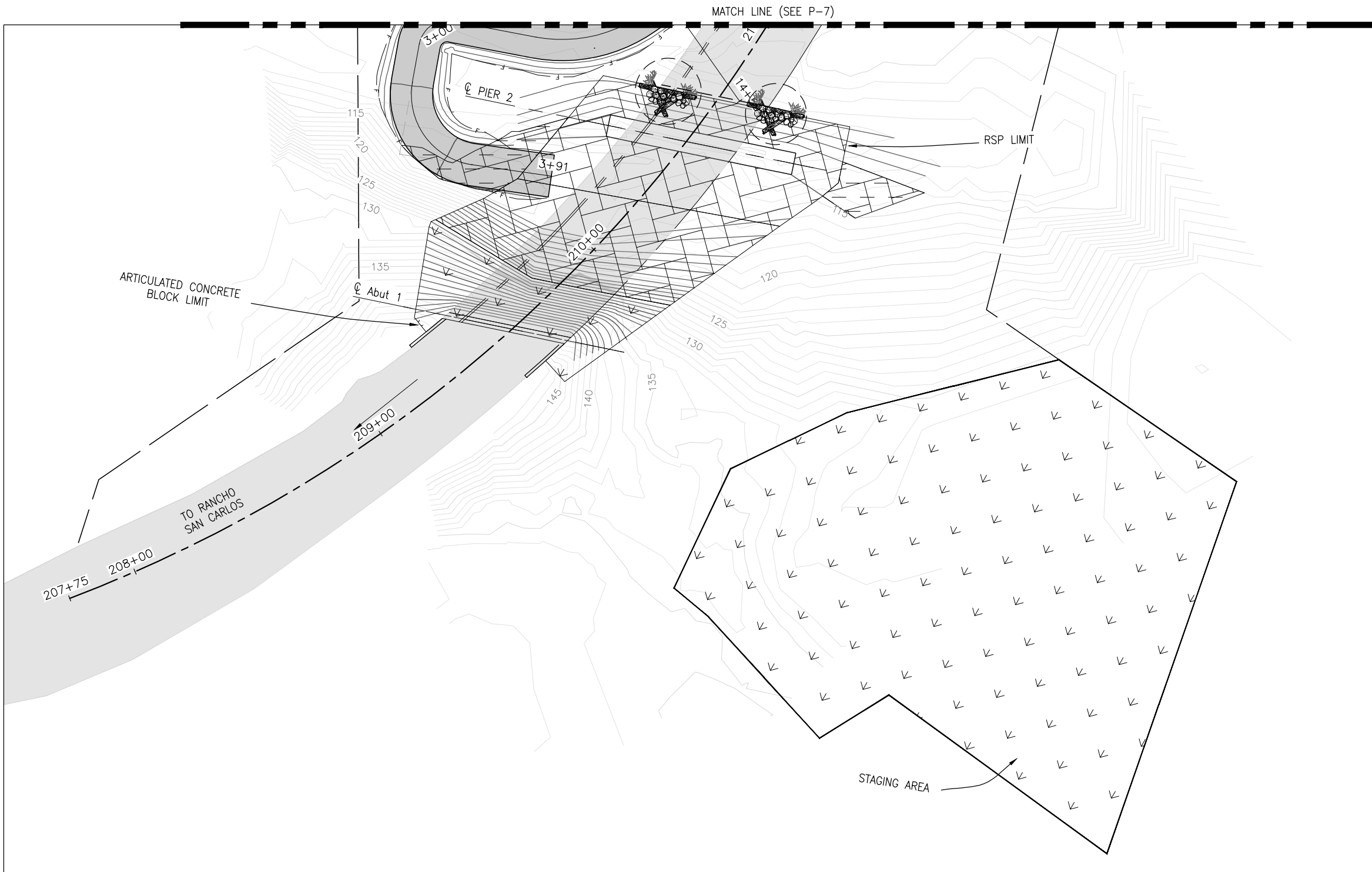
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ROBINSON CANYON ROAD BRIDGE SCOUR PROJECT PLANTING PLAN			
FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503			
DATE 9-10-2021	FILE	PROJECT NO. 385165	SHEET 8
SCALE AS NOTED	CONTRACT NO.		OF 11 SHEETS

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- LEGEND:**
- INDICATES EXISTING STRUCTURE (OVERHEAD)
 - INDICATES DIRECTION OF FLOW
 - INDICATES DIRECTION OF TRAFFIC

- LARGE WOODY DEBRIS - LOG SPURS W/ ROOT WADS, FOOTER LOG, ANCHOR STONES, AND 2" DIAMETER ROCK
- RIPARIAN & RSP SEED MIX (SEE P-6)
- UPLAND SEED MIX (SEE P-6)

PLAN
1"=20'

- NOTES:**
1. All DIMENSIONS SHOWN ARE ±.

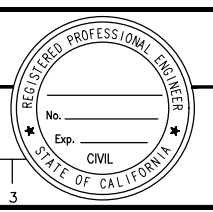
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Submitted by: M. IMBRIANI Design Engineer C.E. No. 36634	
DESIGN BY: C. STAPELMANN	CHKD BY:
DRAWN BY: M. ORNELAS-ZAMORES	CHKD BY:
SPECIFICATIONS WRITTEN BY:	CHKD BY:
Approval Recommended by: Deputy Public Works Director, Engineering	

1243 ALPINE RD SUITE 108
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ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

0 1 2 3



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ROBINSON CANYON ROAD BRIDGE SCOUR PROJECT PLANTING PLAN			
FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503			
DATE 9-10-2021	FILE	PROJECT NO. 385165	SHEET 9
SCALE AS NOTED	CONTRACT NO.		OF 11 SHEETS



PLAN
1"=20'

- LEGEND:**
- INDICATES EXISTING STRUCTURE (OVERHEAD)
 - INDICATES DIRECTION OF FLOW
 - INDICATES DIRECTION OF TRAFFIC



- ZONE 1 PLANTING PALETTE (SEE P-4)
- PLANTING ZONE BOUNDARIES (ZONE 1, 2, 3, and 4; SEE P-4 AND P-5)
- ZONE 5 - ARTICULATED CONCRETE BLOCK PLANT PALETTE (SEE P-5)

- NOTES:**
1. ALL DIMENSIONS SHOWN ARE ±.

P-10

Submitted by: M. IMBRIANI Design Engineer C.E. No. 36634	
DESIGN BY: C. STAPELMANN	CHKD BY:
DRAWN BY: M. ORNELAS-ZAMORES	CHKD BY:
SPECIFICATIONS WRITTEN BY:	CHKD BY:
Approval Recommended by: Deputy Public Works Director, Engineering	

1243 ALPINE RD SUITE 108
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ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

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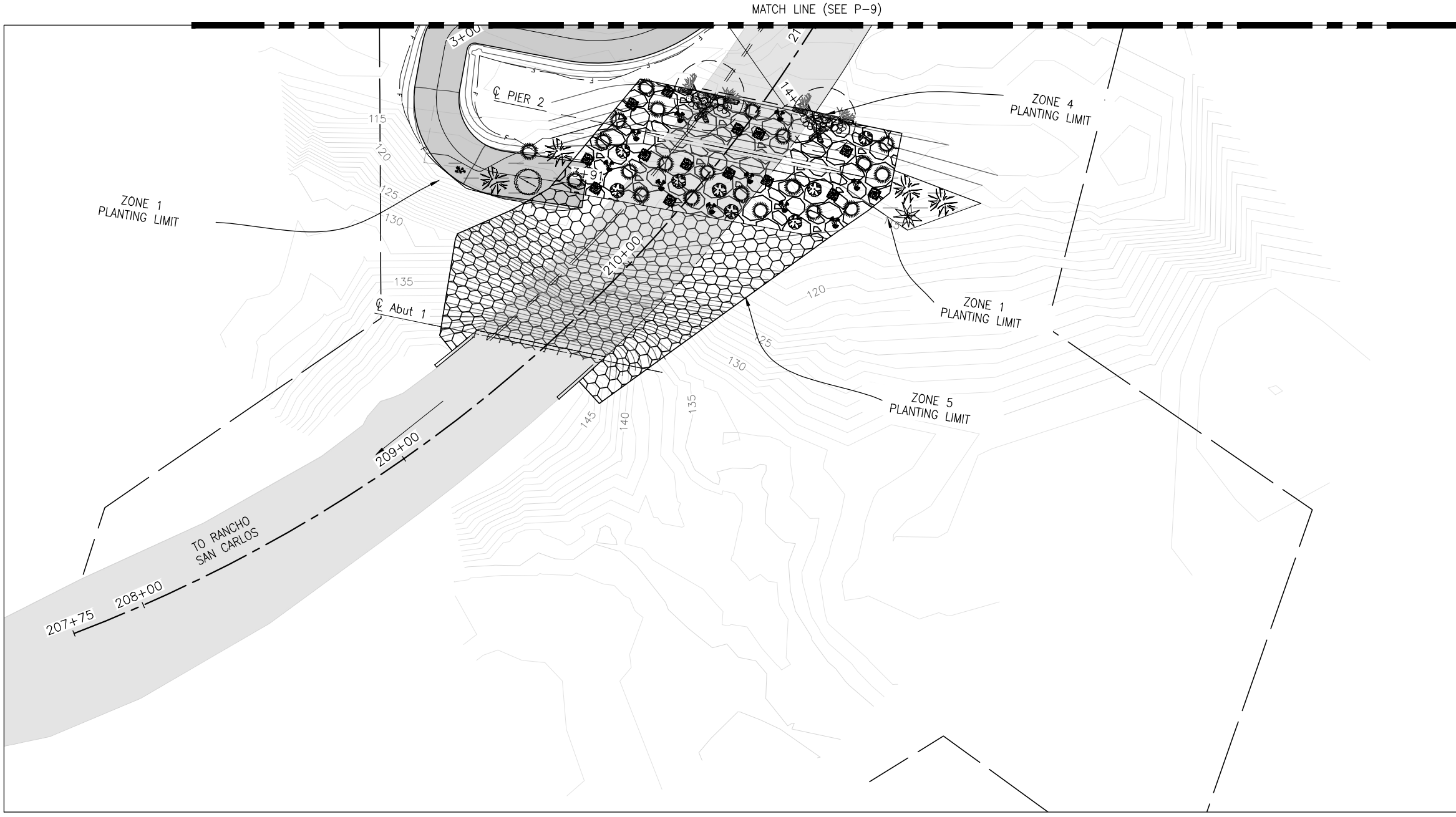
NO.	DATE	REVISION DESCRIPTION	APPROVED
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ROBINSON CANYON ROAD BRIDGE SCOUR PROJECT PLANTING PLAN			
FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503			
DATE 9-10-2021	FILE	PROJECT NO. 385165	SHEET 10
SCALE AS NOTED	CONTRACT NO.		OF 11 SHEETS

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PLAN
1"=20'

LEGEND:
 INDICATES EXISTING STRUCTURE (OVERHEAD)
 INDICATES DIRECTION OF FLOW
 INDICATES DIRECTION OF TRAFFIC

LARGE WOODY DEBRIS - LOG SPURS W/ ROOT WADS, FOOTER LOG, ANCHOR STONES, AND 2' DIAMETER ROCK
 ZONE 1 PLANTING PALETTE (SEE P-4)
 PLANTING ZONE BOUNDARIES (ZONE 1, 2, 3, and 4; SEE P-4 AND P-5)
 ZONE 5 - ARTICULATED CONCRETE BLOCK PLANT PALETTE (SEE P-5)

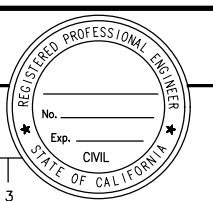
NOTES:
 1. ALL DIMENSIONS SHOWN ARE ±.

P-11

Submitted by: M. IMBRIANI Design Engineer C.E. No. 36634	
DESIGN BY: C. STAPELMANN	CHKD BY:
DRAWN BY: M. ORNELAS-ZAMORES	CHKD BY:
SPECIFICATIONS WRITTEN BY:	CHKD BY:
Approval Recommended by: Deputy Public Works Director, Engineering	

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS



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ROBINSON CANYON ROAD BRIDGE SCOUR PROJECT PLANTING PLAN			
FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503			
DATE 9-10-2021	FILE	PROJECT NO. 385165	SHEET 11
SCALE AS NOTED		CONTRACT NO.	
OF 11 SHEETS			

Drawing name: G:\Projects\2015\15019 Robinson_Cyn_Rd\Drawings\Revs P-5-11.dwg Layout Tab: P-11 Sep 10 2021 3:54pm Davis_Horeff

APPENDIX C

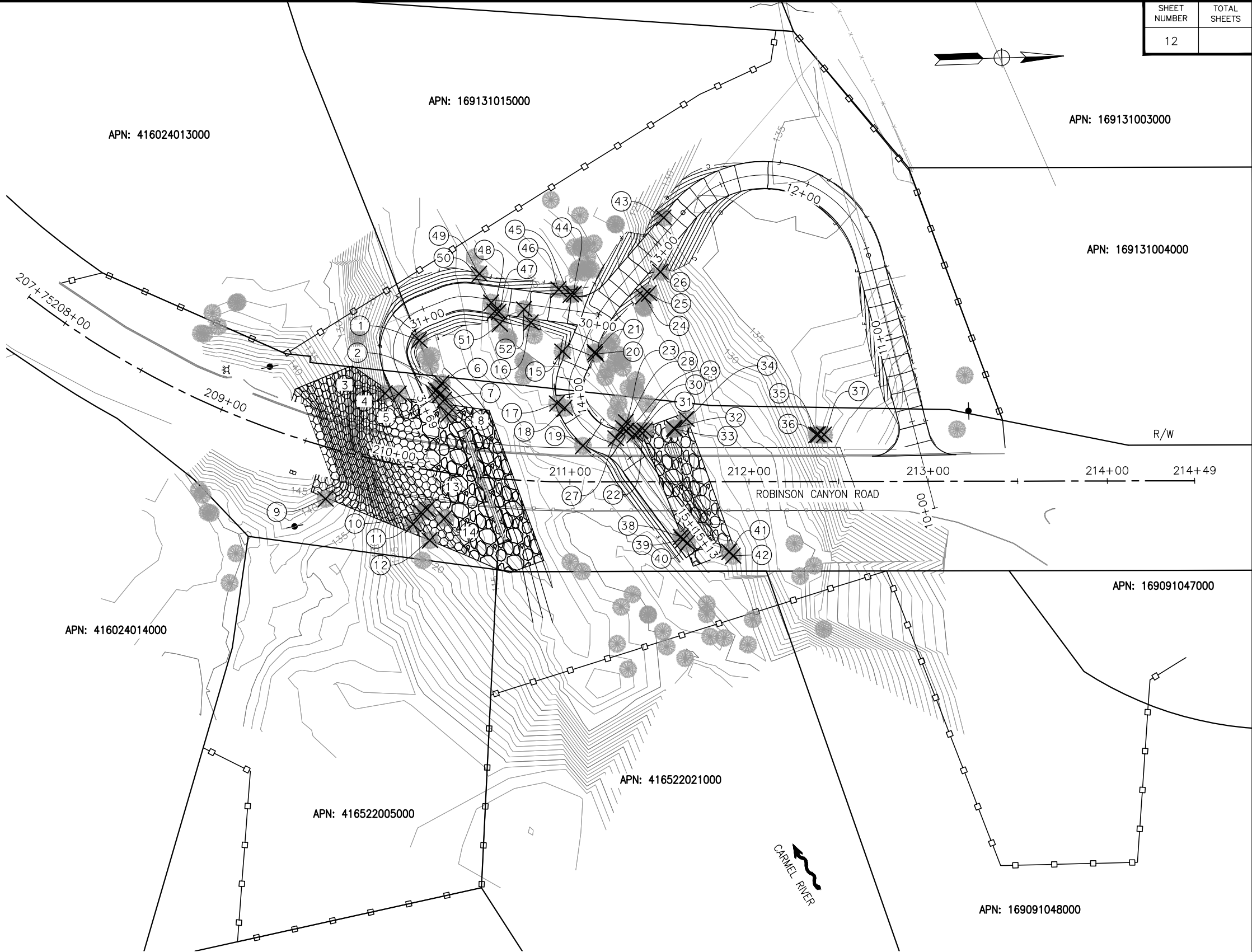
TREE REMOVAL RATIOS TABLE TREE REMOVAL PLAN SHEETS

Table C-1. Trees Likely to be Removed

Tree Number	Size	Common Name	Scientific Name
1	8"	Willow	<i>Salix sp.</i>
2	6"	Willow	<i>Salix sp.</i>
3	10"	Black Cottonwood	<i>Populus trichocarpa</i>
4	16"	White Alder	<i>Alnus rhombifolia</i>
5	8"	Willow	<i>Salix sp.</i>
6	6"	Willow	<i>Salix sp.</i>
7	10"	Willow	<i>Salix sp.</i>
8	14"	Willow	<i>Salix sp.</i>
9	20"	Coast Live Oak	<i>Quercus agrifolia</i>
10	10"	Sycamore	<i>Platanus racemosa</i>
11	14"	Black Cottonwood	<i>Populus trichocarpa</i>
12	10"	Western Sycamore	<i>Platanus racemosa</i>
13	14"	Black Cottonwood	<i>Populus trichocarpa</i>
14	14"	Black Cottonwood	<i>Populus trichocarpa</i>
15	16"	Black Cottonwood	<i>Populus trichocarpa</i>
16	12"	Western Sycamore	<i>Platanus racemosa</i>
17	10"	Willow	<i>Salix sp.</i>
18	16"	Willow	<i>Salix sp.</i>
19	6"	White Alder	<i>Alnus rhombifolia</i>
20	10"	Willow	<i>Salix sp.</i>
21	10"	Black Cottonwood	<i>Populus trichocarpa</i>
22	24"	Black Cottonwood	<i>Populus trichocarpa</i>
23	18"	Black Cottonwood	<i>Populus trichocarpa</i>
24	12"	Coast Live Oak	<i>Quercus agrifolia</i>
25	14"	Coast Live Oak	<i>Quercus agrifolia</i>
26	8"	Coast Live Oak	<i>Quercus agrifolia</i>
27	12"	Willow	<i>Salix sp.</i>
28	6"	Black Cottonwood	<i>Populus trichocarpa</i>
29	12"	Black Cottonwood	<i>Populus trichocarpa</i>
30	24"	Black Cottonwood	<i>Populus trichocarpa</i>
31	18"	Black Cottonwood	<i>Populus trichocarpa</i>
32	24"	Black Cottonwood	<i>Populus trichocarpa</i>
33	24"	Black Cottonwood	<i>Populus trichocarpa</i>
34	10"	Coast Live Oak	<i>Quercus agrifolia</i>
35	12"	Coast Live Oak	<i>Quercus agrifolia</i>
36	12"	Coast Live Oak	<i>Quercus agrifolia</i>
37	30"	Coast Live Oak	<i>Quercus agrifolia</i>

Tree Number	Size	Common Name	Scientific Name
38	16"	Black Cottonwood	<i>Populus trichocarpa</i>
39	22"	Black Cottonwood	<i>Populus trichocarpa</i>
40	22"	Black Cottonwood	<i>Populus trichocarpa</i>
41	36"	Black Cottonwood	<i>Populus trichocarpa</i>
42	22"	Black Cottonwood	<i>Populus trichocarpa</i>
43	6"	Willow	<i>Salix sp.</i>
44	8"	Willow	<i>Salix sp.</i>
45	6"	Willow	<i>Salix sp.</i>
46	22"	Black Cottonwood	<i>Populus trichocarpa</i>
47	6"	Willow	<i>Salix sp.</i>
48	14"	White Alder	<i>Alnus rhombifolia</i>
49	18"	White Alder	<i>Alnus rhombifolia</i>
50	18"	White Alder	<i>Alnus rhombifolia</i>
51	14"	White Alder	<i>Alnus rhombifolia</i>
52	8"	Black Cottonwood	<i>Populus trichocarpa</i>

TREE NUMBER (No.)	SIZE	TYPE
1	8"	WILLOW
2	6"	WILLOW
3	10"	COTTONWOOD
4	16"	ALDER
5	8"	WILLOW
6	6"	WILLOW
7	10"	WILLOW
8	14"	WILLOW
9	20"	OAK
10	10"	SYCAMORE
11	14"	COTTONWOOD
12	10"	SYCAMORE
13	14"	COTTONWOOD
14	14"	COTTONWOOD
15	16"	COTTONWOOD
16	12"	SYCAMORE
17	10"	WILLOW
18	16"	WILLOW
19	6"	ALDER
20	10"	WILLOW
21	10"	COTTONWOOD
22	24"	COTTONWOOD
23	18"	COTTONWOOD
24	12"	OAK
25	14"	OAK
26	8"	OAK
27	12"	WILLOW
28	6"	COTTONWOOD
29	12"	COTTONWOOD
30	24"	COTTONWOOD
31	18"	COTTONWOOD
32	24"	COTTONWOOD
33	24"	COTTONWOOD
34	10"	OAK
35	12"	OAK
36	12"	OAK
37	30"	OAK
38	16"	COTTONWOOD
39	22"	COTTONWOOD
40	22"	COTTONWOOD
41	36"	COTTONWOOD
42	22"	COTTONWOOD
43	6"	WILLOW
44	8"	WILLOW
45	6"	WILLOW
46	22"	COTTONWOOD
47	6"	WILLOW
48	14"	ALDER
49	18"	ALDER
50	18"	ALDER
51	14"	ALDER
52	8"	COTTONWOOD



LEGEND

- TREE TO BE REMOVED
- TREE TO REMAIN

PLAN
1"=30'

**100% SUBMITTAL
NOT FOR CONSTRUCTION** TR-1

Drawing name: H:\2649 Robinson Canyon Road Bridge\Sheets\TR-1.dwg Layout Tab: TR-1 Sep 01 2021 4:02pm ajmbrian

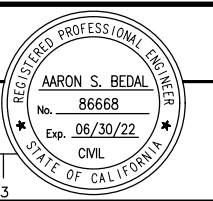
Submitted by: M. IMBRIANI Design Engineer C.E. No. 36634	
DESIGN BY: D. LOCKETT	CHKD BY: J. CONKLIN
DRAWN BY: D. LOCKETT	CHKD BY: J. CONKLIN
SPECIFICATIONS WRITTEN BY: J. CONKLIN	CHKD BY: M. IMBRIANI
Approval Recommended by: _____ Deputy Public Works Director, Engineering	

TRC

10680 White Rock Rd., Suite 100
Rancho Cordova, California 95670

ORIGINAL SCALE IN INCHES
FOR REDUCED PLANS

0 1 2 3



NO.	DATE	REVISION DESCRIPTION	APPROVED
▲			
▲			
▲			
▲			
▲			
▲			

COUNTY OF MONTEREY
RESOURCE MGMT. AGENCY,
DEPT. OF PUBLIC WORKS

168 WEST ALISAL STREET
SALINAS, CALIFORNIA 93901
(831) 755-4800/FAX (831) 755-4958

ROBINSON CANYON ROAD BRIDGE SCOUR PROJECT TREE REMOVAL PLAN			
FEDERAL PROJECT NO. BHLO-5944(099) COUNTY BRDG NO. 503			
DATE 09-01-21	FILE	PROJECT NO. XXXX	SHEET 12
SCALE 1"=30'		CONTRACT NO.	
		OF 22 SHEETS	