

**Meeting of the Central Valley Flood Protection Board
April 27, 2012**

Staff Report

**California Department of Transportation, District 10
New Mariposa Road Off-ramp Bridge over Duck Creek-South Branch,
San Joaquin County**

1.0 – ITEM

Consider approval of Permit No. 18722 (Attachment B).

2.0 – APPLICANT

California Department of Transportation (Caltrans), District 10, San Joaquin County.

3.0 – LOCATION

The project is located at the south of Stockton near the northbound State Highway Route 99 Mariposa Road off-ramp crossing Duck Creek-South Branch (San Joaquin County, see Attachment A).

4.0 – DESCRIPTION

This project is part of Caltrans plan to widen Interstate Highway 99 in the area. Applicant proposes to authorize the construction of a new bridge (Caltrans bridge number 29-C0334) at the intersection of the South Branch of Duck Creek and the new Mariposa Road Northbound off-ramp. The new bridge will have a single-span structure of 51.0 feet long with a width between 55.2 and 68.2 feet (skew).

5.0 – PROJECT ANALYSIS

The overall design of the proposed project, described in Section 4.0, is found to be in compliance with Title 23 standards as described in Sections 5.1 and 5.2 below. The new structure will allow for increased traffic flow through this reach of Highway 99. See Attachment C for the proposed project general plan.

5.1 – Hydraulic Analysis

The model used for the one-dimensional hydraulic analysis was the Hydrologic Engineering Center's River Analysis System (HEC-RAS). The roughness coefficient of 0.034 was used for both existing and proposed conditions. The analysis included a scenario for a 100-yr event with a design flow of 237-cfs based on the Design Flood flows.

According to the modeling results, the water surface elevation (WSEL) during a 100-yr flow will be 25.1 ft, with average velocity of 1.6 ft/s and 3.8 feet of freeboard (see Attachment D). The analysis indicates that scouring is not critical.

The proposed project will convey the design flow without significant impact or damage to either the existing levee or flood plain. The hydraulic impact is negligible on the floodway for the proposed bridge project.

5.2 – Geotechnical Analysis

Staff reviewed the design plans and agreed with the applicant's conclusion that this project does not bear any significant geotechnical impacts on the floodway. All work to be completed will be done in a manner that does not pose a threat to the structural integrity of the channel, structures, or floodway. Earthwork will be completed in compliance with Permit No. 18722 (Attachment B) and Title 23 Standards.

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

The comments and endorsements associated with this project, from all pertinent agencies are shown below:

- The San Joaquin County Flood Control and Water Conservation District endorses the project (see Attachment E).
- The U.S. Army Corps of Engineers 208.10 comment letter has not been received for this application. Staff anticipates receipt of a letter indicating that the USACE District Engineer has no objection to the project, subject to conditions. Upon receipt of the letter, staff will review to ensure conformity with the permit language and incorporate it into the permit as Exhibit A.

7.0 – CEQA ANALYSIS

Board staff has prepared the following CEQA findings:

The Board, as a responsible agency under CEQA, has reviewed Draft Environmental Impact Report/Environmental Assessment (DEIR) (SCH Number: 2002022027, March 2008) and the Final Environmental Impact Report/Environmental Assessment with Finding of No Significant Impact (FEIR) (September 2008) and Mitigation Measures for the South Stockton Six-Lane Project prepared by the lead agency, Caltrans. These documents, including project design, may be viewed or downloaded from the Central Valley Flood Protection Board website at <http://www.cvfpb.ca.gov/meetings/2012/04-27-2012.cfm> under a link for this agenda item. These documents are also available for review in hard copy at the Board and the Caltrans District offices.

Caltrans has determined that the project would not have a significant effect on the environment and certified the project on October 28, 2008 and subsequently filed a Notice of Determination on November 3, 2008 with the State Clearinghouse. Board staff finds that although the proposed project could have a potentially significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. The project proponent has incorporated mandatory mitigation measures into the project plans to avoid identified impacts or to mitigate such impacts to a point where no significant impacts will occur. These mitigation measures are included in the project proponent's FEIR and address impacts to aesthetics, biological resources, paleontological resources, hazards and hazardous materials, emergency services, water quality and storm water runoff, traffic and transportation. The description of the mitigation measures are further described in the adopted FEIR.

8.0 – SECTION 8610.5 CONSIDERATIONS

1. Evidence that the Board admits into its record from any party, State or local public agency, or nongovernmental organization with expertise in flood or flood plain management:

The Board will make its decision based on the evidence in the permit application and attachments, this staff report, and any other evidence presented by any individual or group.

2. The best available science that related to the scientific issues presented by the executive officer, legal counsel, the Department or other parties that raise credible scientific issues.

The accepted industry standards for the work proposed under this permit as regulated by Title 23 have been applied to the review of this permit.

3. Effects of the decision on the entire State Plan of Flood Control:

This project does not have significant impacts on the State Plan of Flood Control, as the project does not impair the structural or hydraulic functions of the system.

4. Effects of reasonable projected future events, including, but not limited to, changes in hydrology, climate, and development within the applicable watershed:

There are no foreseeable projected future events that would impact this project.

9.0 – STAFF RECOMMENDATION

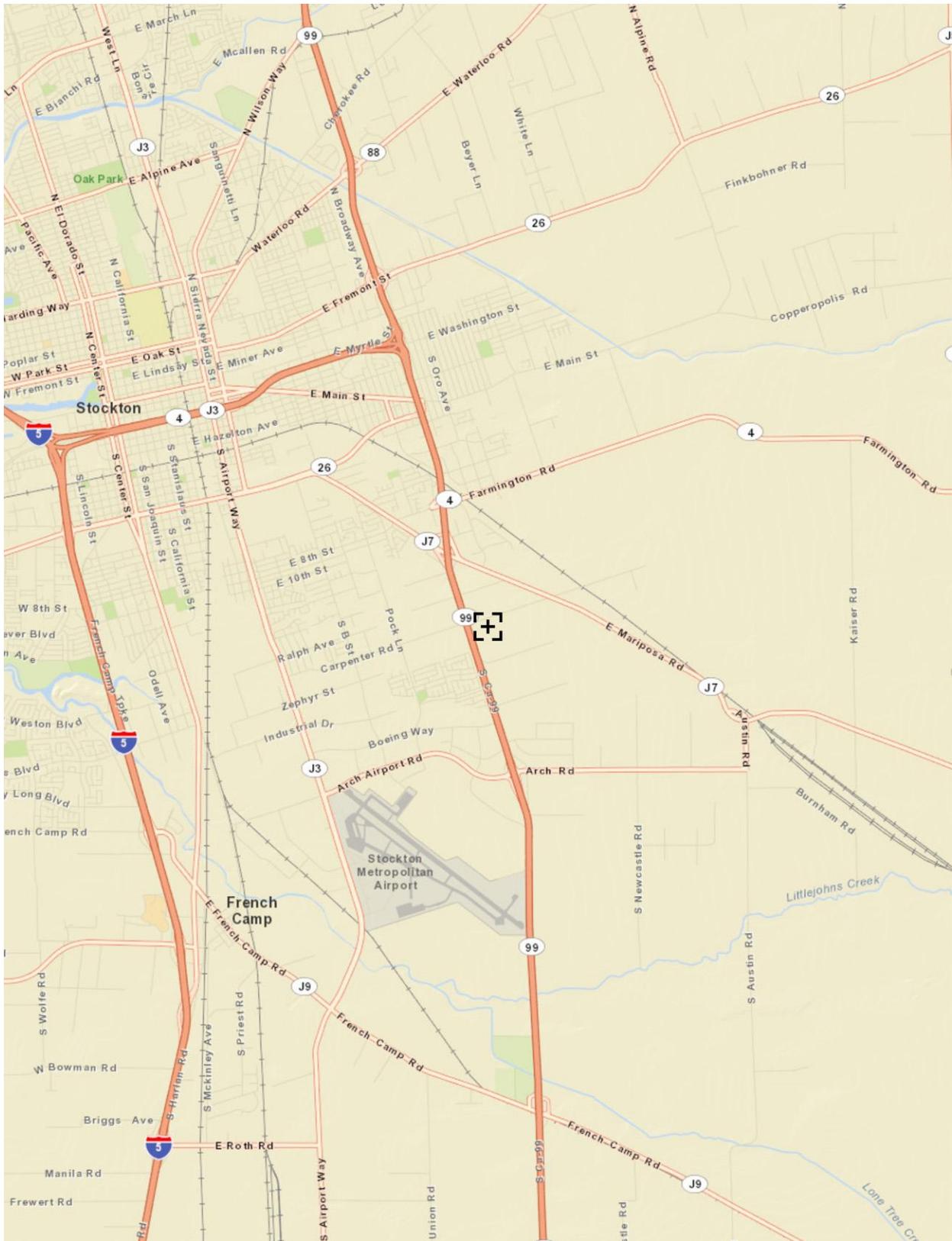
Staff recommends that the Board adopt the CEQA findings and approve the permit, conditioned upon receipt of a U.S. Army Corps of Engineers comment letter indicating that the District Engineer has no objection to the project, subject to conditions, and direct staff to file a Notice of Determination with the State Clearinghouse.

10.0 – LIST OF ATTACHMENTS

- A. Location Map
- B. Draft Permit No. 18722
- C. Project’s Foundation and General Plan
- D. Hydraulic Summary Table and Profile
- E. Letter of Endorsement

| | |
|-----------------------|---|
| Report Preparation: | Sergio Guillen, P.E., Atkins |
| Design Review: | Sungho Lee, Ph D. |
| Environmental Review: | James Herota, E.S. |
| Document Review: | David R. Williams, P.E. – Senior Engineer, WR Eric Butler, P.E. – Supervising Engineer, WR |

ATTACHMENT A – LOCATION MAP





DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18722 BD

This Permit is issued to:

Caltrans
2015 E. Shields Avenue, Ste 100
Fresno, California 93726

Construct a new cast-in-place concrete slab bridge (Br No.29-0334) at the intersection of the South Branch of Duck Creek and the new Mariposa Road Northbound off-ramp. The project is located at the new Mariposa Road Northbound off-ramp crossing Duck Creek South Branch, east of State Highway Route 99, Assessor's Parcel No. 179-550-04, in the City of Stockton, in San Joaquin County. (Section , T , R , MDB&M, San Joaquin County Flood Control and Water Conservation District, Duck Creek, San Joaquin County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project as described above.

(SEAL)

Dated: _____

Executive Officer

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Central Valley Flood Protection Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Central Valley Flood Protection

Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Central Valley Flood Protection Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Central Valley Flood Protection Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 18722 BD

THIRTEEN: All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of the Central Valley Flood Protection Board.

FOURTEEN: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance.

FIFTEEN: The permittee shall contact the Department of Water Resources, Inspection Branch by telephone, (916) 574-0609, and submit the enclosed postcard to schedule a preconstruction conference. The permittee shall also contact the Central Valley Flood Protection Board's Construction Supervisor at (916) 574-2646 for quality assurance inspection. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

SIXTEEN: The Central Valley Flood Protection Board and Department of Water Resources shall not be held liable for any damages to the permitted encroachment(s) resulting from flood fight, operation, maintenance, inspection, or emergency repair.

SEVENTEEN: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

EIGHTEEN: The permittee shall be responsible for repair of any damages to the project levee and other flood control facilities due to construction, operation, or maintenance of the proposed project.

NINETEEN: The permittee shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California, including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages related to the Central Valley Flood Protection Board's approval of this permit, including but not limited to claims filed pursuant to the California Environmental Quality Act. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

TWENTY: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend, indemnify, and hold the Central Valley Flood Protection Board and the State of California; including its agencies, departments, boards, commissions, and their respective officers, agents, employees, successors and assigns (collectively, the "State"), safe and harmless, of and from all claims and damages arising from the project undertaken pursuant to this permit, all to the extent allowed by law. The State expressly reserves the right to supplement or take over its defense, in its sole discretion.

TWENTY-ONE: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of the Central Valley Flood Protection Board and Department of Water Resources, at the permittee's or successor's cost and expense.

TWENTY-TWO: The permittee shall provide supervision and inspection services acceptable to the Central Valley Flood Protection Board. A professional engineer registered in the State of California shall certify that all work was inspected and performed in accordance with submitted drawings, specifications, and permit conditions.

TWENTY-THREE: Upon completion of the project, the permittee shall submit as-built drawings to: Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Suite Rm 256, Sacramento, California 95821.

TWENTY-FOUR: No construction work of any kind shall be done during the flood season from November 1 to April 15 without prior approval of the Central Valley Flood Protection Board.

TWENTY-FIVE: At all times during construction, at least one lane of the levee crown roadway shall be kept clear for vehicular access.

TWENTY-SIX: A temporary bench mark, set to a known datum, shall be placed at the project site during construction.

TWENTY-SEVEN: All cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-EIGHT: Temporary staging, formwork, stockpiled material and/or equipment shall not remain in the floodway during the flood season from November 1st to April 15.

TWENTY-NINE: The work area shall be restored to the condition that existed prior to start of work.

THIRTY: Trees, brush, sediment, and other debris shall be kept cleared from the bridge site and disposed of outside the floodway to maintain the design flow capacity and flowage area.

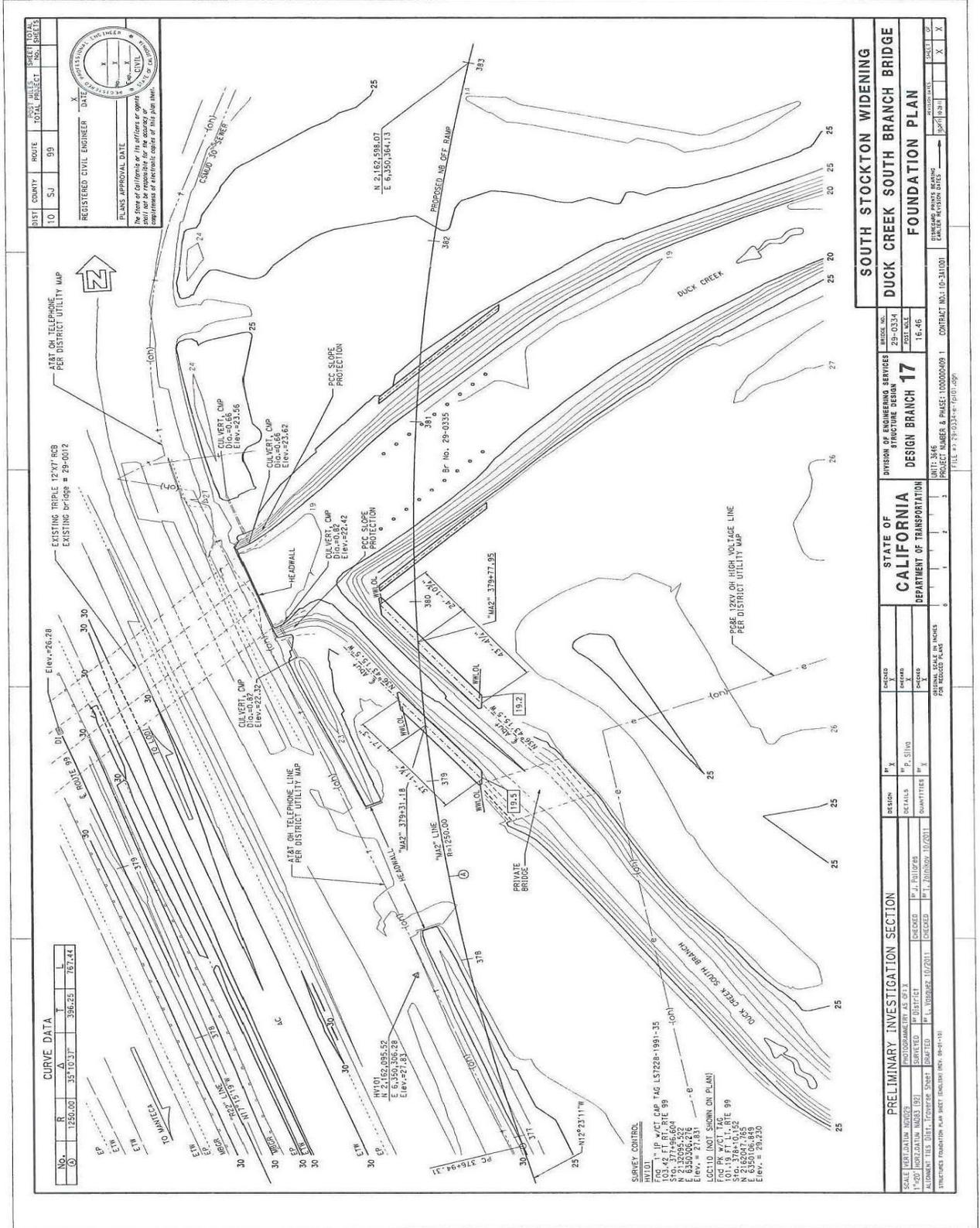
THIRTY-ONE: If the bridge is damaged to the extent that it may impair the channel or floodway capacity, it shall be repaired or removed prior to the next flood season.

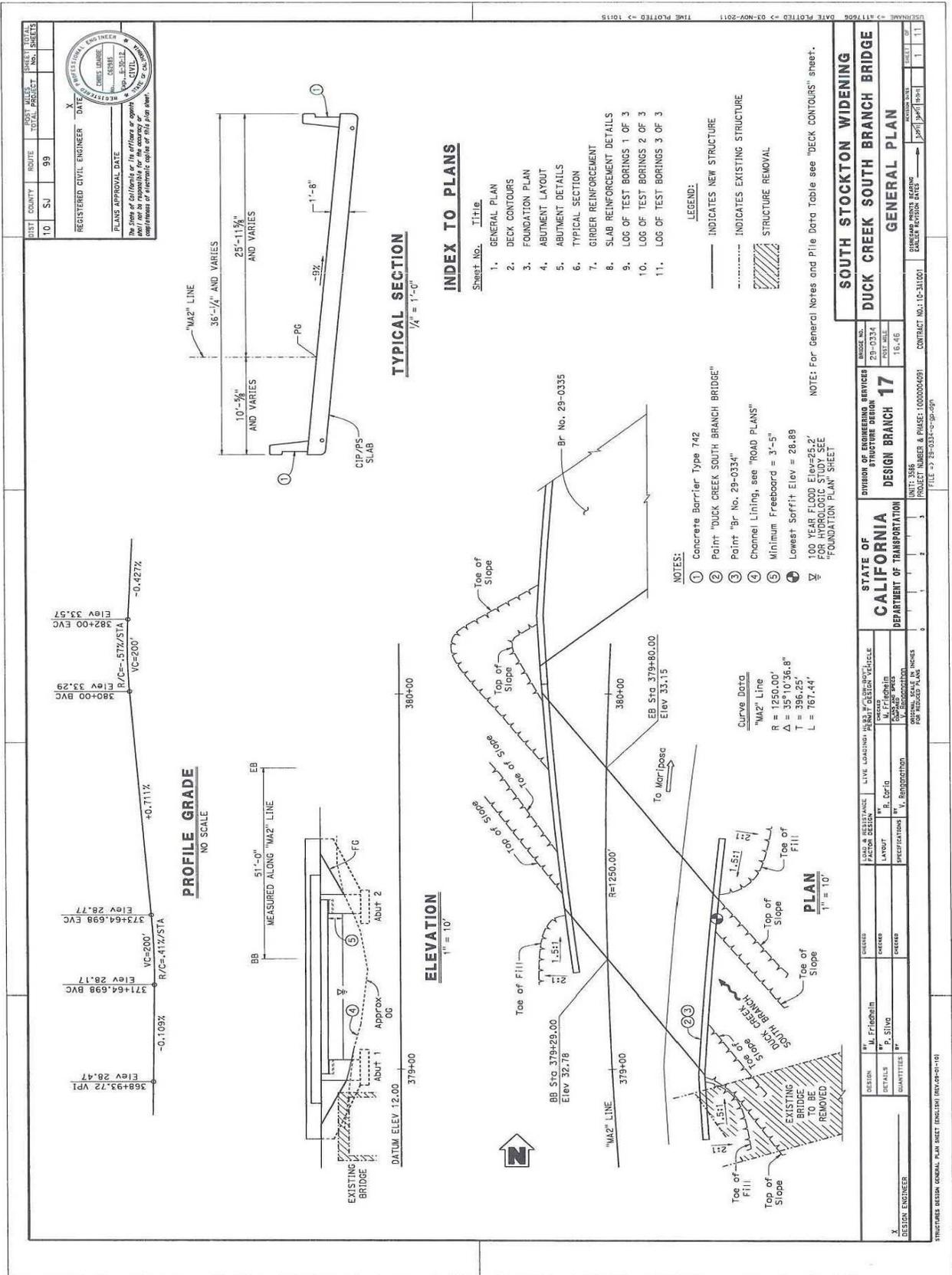
THIRTY-TWO: All debris generated by this project shall be disposed of outside the adopted plan of flood control and/or the flood control project works.

THIRTY-THREE: The mitigation measures approved by the CEQA lead agency and the permittee are found in its Mitigation and Monitoring Reporting Program (MMRP) adopted by the CEQA lead agency. The permittee shall implement all such mitigation measures.

THIRTY-FOUR: The permittee shall comply with all conditions set forth in the letter from the Department of the Army dated XXXX, 2012, which is attached to this permit as Exhibit A and is incorporated by reference.

ATTACHMENT C – PROJECT'S FOUNDATION AND GENERAL PLAN





DATE PLOTTED => 03-NOV-11
TIME PLOTTED => 10:15

STRUCTURE DESIGN GENERAL PLAN SHEET (INCLUDE) (REV.04-10)

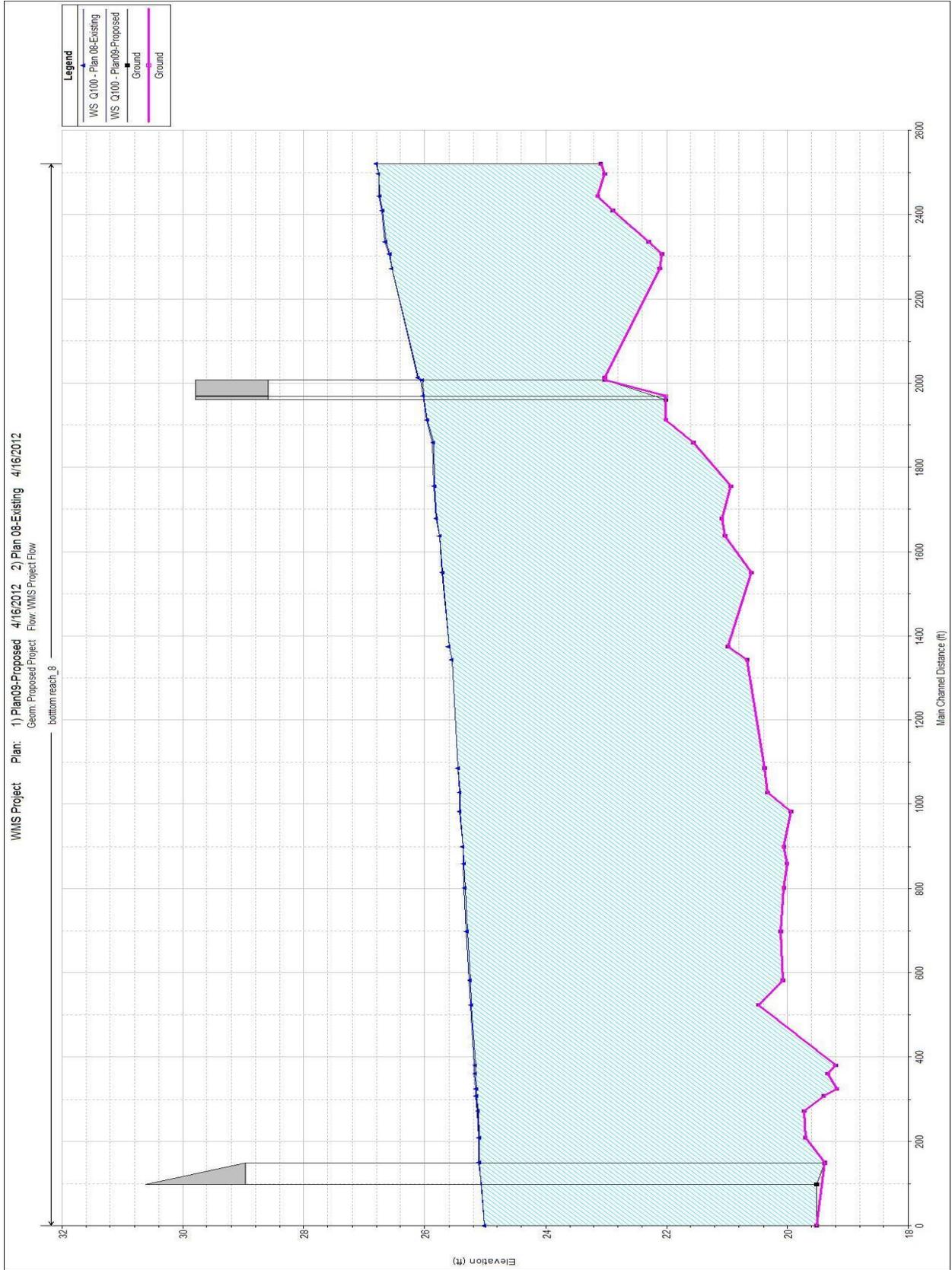
ATTACHMENT D – HYDRAULIC SUMMARY TABLE AND PROFILE

Branch Creek, Br. No. 29-0334

| | WSEL | Average Velocity | Available Freeboard |
|---------------------------|---------|------------------|---------------------|
| 100-year flood 237 cfs | 25.1 ft | 1.6 fps | 3.8 ft |

The minimum soffit elevation for the proposed structure is 28.9 feet. The structure will have a waterway area of 149.4 square feet, which is adequate for the 100-year discharge.

ATTACHMENT D – HYDRAULIC SUMMARY TABLE AND PROFILE





SAN JOAQUIN COUNTY
**FLOOD CONTROL & WATER
 CONSERVATION DISTRICT**

P. O. BOX 1810
 1810 EAST HAZELTON AVENUE
 STOCKTON, CALIFORNIA 95201
 TELEPHONE (209) 468-3000
 FAX NO. (209) 468-2999

THOMAS M. GAU
 DIRECTOR OF PUBLIC WORKS
 FLOOD CONTROL ENGINEER

December 20, 2011

Central Valley Flood Protection Board
 3310 El Camino Avenue
 Sacramento, California 95821

Attention: Floodway Protection Section

SUBJECT: CENTRAL VALLEY FLOOD PROTECTION BOARD PERMIT APPLICATION
 OF THE CALIFORNIA STATE DEPARTMENT OF TRANSPORTATION (CALTRANS)
 TO CONSTRUCT A NEW BRIDGE AT THE INTERSECTION OF DUCK CREEK
 SOUTH BRANCH AND THE NEW MARIPOSA ROAD NORTHBOUND OFF-RAMP,
 ASSESSOR'S PARCEL NO. 179-550-04

Gentlemen:

Reference is made to the Central Valley Flood Protection Board Permit Application (Permit) of Caltrans (Permittee) to construct a new 55.2-foot to 68.2-foot-wide (skew) cast-in-place concrete slab bridge (Bridge No. 29-0334) at the intersection of the Duck Creek South Branch and the new Mariposa Road Northbound off-ramp. The project consists of the following: (a) the new bridge will have a span of 51 feet; (b) a total bridge thickness of 1.67 feet; (c) a 12-foot lane, an eight-foot right shoulder, and a four-foot left shoulder; and (d) the new fill approach embankments have been included in the HEC-RAS modeling.

The project is located at the new Mariposa Road Northbound off-ramp crossing of Duck Creek South Branch, east of State Highway Route 99, Assessor's Parcel No. 179-550-04, in the City of Stockton, in San Joaquin County.

The San Joaquin County Flood Control and Water Conservation District (District) has reviewed the Board's Permit Application of the Permittee and endorses the project subject to the following conditions:

1. The District shall not be responsible for the maintenance of the facilities specified in this Permit.
2. The District shall not be held liable for damage(s) to the permitted encroachment(s) due to the District's operation, maintenance, flood fight, inspection, or emergency repairs.
3. The Permittee or the Successors-In-Interest shall be responsible for the modification or possible removal of the facilities, as requested by the District, if required for any future flood control plans at the sole cost and expense of the Permittee or the Successors-in-Interest.
4. The Permittee shall be liable for any damage to Duck Creek South Branch that may occur as a result of this project.
5. The project shall be constructed in accordance with the plans submitted with the application on November 14, 2011. Any revisions to the project will require the submittal of the revised plans to the District for review and approval.
6. No work shall be allowed in the Duck Creek South Branch channel between November 1st and April 15th without prior approval of the Central Valley Flood Protection Board and the District.

Central Valley Flood Protection Board
PERMIT APPLICATION OF CALTRANS
TO CONSTRUCT A NEW BRIDGE AT
THE INTERSECTION OF DUCK CREEK
SOUTH BRANCH AND THE NEW
MARIPOSA ROAD NORTHBOUND OFF-RAMP
ASSESSOR'S PARCEL NO. 179-550-04

7. The Permittee or Successors-in-Interest shall keep the encroachments properly maintained in accordance with applicable current or future local, State, and Federal standards.
8. The lowest horizontal bridge member shall be a minimum of three feet above the 100-year flood water surface elevation.
9. The Permittee or Successors-in-Interest shall be responsible for maintenance of the Duck Creek South Branch segment between the northbound off-ramp and Duck Creek to meet the maintenance standards to which the Federal and the State require the District to adhere.
10. Access roads shall be kept open for maintenance at all times.
11. Backfill material, within the channel or within 25 feet of the top of bank, shall be placed in four-to-six-inch layers with approved material and compacted to a minimum of 90 percent relative compaction as per ASTM D-1557.
12. Drainage from the bridge shall not be discharged onto Duck Creek South Branch banks or channel.
13. Stockpiled materials, coffer dams, and construction equipment shall be removed from the floodway prior to November 1st.
14. The Permittee shall restore the Duck Creek South Branch's invert and banks to the condition that existed prior to commencement of work.
15. Future maintenance of the improvements free from obstructions, erosion and/or siltation shall be the ongoing responsibility of the Permittee or Successors-in-Interest.
16. Upon completion of the project, the Permittee shall submit a hard copy and an electronic copy in AutoCAD and PDF format of the as-built drawings to:

San Joaquin County Flood Control and Water Conservation District
1810 East Hazelton Avenue
Stockton, CA 95205

If there are any questions regarding these comments, please contact me at (209) 953-7617.

Sincerely,



JOHN I. MAGUIRE
Engineering Services Manager

JIM:SS:to
FM-11L019-T1