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

Staff Report - Encroachment Permit No. 18717

California Department of Transportation, District 10
Caltrans Mormon Slough Bridge at State Route 99, San Joaquin County

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1.0 – ITEM

Consider approval of Permit No. 18717.

2.0 – APPLICANT

California Department of Transportation (Caltrans), District 10.

3.0 – LOCATION

The project site is located at the State Route 99 over Mormon Slough in San Joaquin County at PM 17.76. The project site has latitude of 37.94916°N and longitude of -121.23708°E. The site is located within the Board designated regulated streams as per Table 8.1 of Title 23. There are no project levees at or close to the project site. The nearest project levee is approximately 1.77 miles (9,342 feet) north of the project site (see Attachment A for Site Location Map).

4.0 – DESCRIPTION

The project is a part of the Caltrans overall plan to widen the existing State Route 99 from four-lane freeway to eight-lane freeway from PM 15.0 to 18.6 in San Joaquin County. The project described in this report is to widen the existing Mormon Slough Bridge at State Route 99 (Caltrans Bridge No. 29-0119) which falls within the Caltrans overall widening plan. The proposed widening of the Mormon Slough Bridge at State Route 99 will add four lanes by widening the bridge at the shoulders. The proposed widening will match the existing bridge with a cast-in-place reinforced concrete slab structure supported on driven 16-inch octagonal concrete pile extensions. A total of 34 new piles (21 piles at the bents and 13 piles at the abutments) will be added to widen the proposed bridge. The existing four-span bridge is approximately 103 feet long and 106 feet wide. The proposed widening will increase the width to 155 feet. The project consists of widening the west side of the bridge (southbound direction) by varying width from 23.12 feet to 32.84 feet measured along the skew; widening the east side of the

bridge (northbound direction) by 16.85 feet; placing a 5.0 feet long fill approach embankments from the beginning to the end of the bridge consisting of approximately 25 cubic yard (cy) of fill; and constructing wingwalls at both ends of the bridge. Up to 5 feet of excavation beyond the abutment will be required for this project which will be filled with approximately 68 cy of structural backfill (see Attachment C for Project Plan and Profile). No rock slope protection or slope paving of any kind were proposed at this bridge location. However, native weeds will be planted at this location for erosion control. All elevations in this report are based on the NGVD29 vertical datum, and all horizontal coordinates are based on the NAD83 horizontal datum, unless otherwise noted.

5.0 – PROJECT ANALYSIS

The following project analyses were made regarding the Mormon Slough Bridge at State Route 99 (Caltrans Bridge No. 29-0119 R/L).

5.1 – HYDRAULIC ANALYSIS

The hydraulic analysis for the State Route 99 over Mormon Slough Bridge was performed using the one-dimensional hydraulic analysis software, BrEase. The analysis was performed primarily to calculate the water surface elevation (WSE) and the velocity at the proposed bridge location. The Manning's roughness coefficient used in the analysis was 0.034. The analysis was conducted for 100-year discharge of 365 cubic-feet-per-second (cfs) for both existing and with-project conditions.

Based on the analysis, the WSE and velocity for the existing condition at River Station 12.5 (bridge site) are 20.8 feet and 6.5 feet-per-second (fps), respectively. The WSE and velocity for the with-project condition at River Station 12.5 (bridge site) are 20.8 feet and 6.5 fps, respectively. Based on the comparison of the above data, no hydraulic impact due to the project is noticed.

The clearance/freeboard for the 100-year flood event at River Station 12.5 (bridge site) was estimated to be 7.8 feet which conforms to the minimum clearance/freeboard requirement of 3 feet as per Title 23.

The scour potential was assessed in accordance with FHWA Technical Advisory T5140.23, "Evaluating Scour at Bridges", and within current Caltrans guidelines. The existing bridge was determined to be not scour critical. The estimated potential local pier scour was calculated to be 4.0 ft for Piers 2 through 4 at elevation 9.3 ft which has been included in the design.

5.2 – GEOTECHNICAL ANALYSIS

The project site is located within the Sacramento Valley of the Great Valley Geomorphic Province. Most of the surface of the Great Valley is covered by Recent and Pleistocene alluvium deposits. Sediments eroded from the Sierra Nevada and the Coast Ranges were deposited on the floodplains and bottomlands as the mountain streams greatly decrease their velocity in the long flat valley (Harden, 1998). According to the “Geologic Map of the San Francisco-San Jose Quadrangle, California,” the area was mapped as the Modesto Formation (Qm), which is predominantly composed of Pleistocene sand, clay and silt alluviums deposited by streams and rivers.

According to the As-Built Log of Test Borings (LOTB), the subsurface soils for the Mormon Slough Bridge at State Route 99 (Caltrans Bridge No. 29-0119 R/L) generally consisted of both granular and cohesive soils. The granular soils consisted of medium dense to dense clayey sand, poorly graded sand with silt/clay and silty sand. The cohesive soils consisted of medium stiff, stiff, very stiff and hard lean clay, lean clay with sand, sandy lean clay and sandy silt. The groundwater elevation measured during the subsurface investigation was -27.9 feet.

The nearest known active fault to the site is the Great Valley Fault (Fault ID No. 25) which is capable of producing an earthquake magnitude of 6.7 Mw. This fault is located southwest of the bridge site. This fault is referred to as a reverse fault with a dip of 15 degrees. The estimated peak ground motion acceleration for 5 percent probability of exceedance in 50 years (equivalent return period of 975 years) was 0.29g. Based on the subsurface soils, ground water level and the calculated ground motion acceleration, the potential for liquefaction at the site was determined minimal. Based on the analysis, the potential for ground rupture due to fault movement was also determined insignificant.

Geotechnical analyses recommended that the proposed Mormon Slough Bridge at State Route 99 may be supported on driven 16-inch diameter precast octagonal concrete piles at both abutment and bent locations. This pile design included the 4.0 feet of local scour estimated by the hydraulic analysis. The geotechnical analyses also indicated that the site was determined to be non-corrosive to the concrete pile foundations.

6.0 – AGENCY COMMENTS AND ENDORSEMENTS

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

- A non-Fed letter from the U. S. Army Corps of Engineers (USACE) is expected for this project which will be incorporated in the permit as Exhibit A.

- The San Joaquin County Flood Control & Water Conservation District has endorsed this application with conditions which has been incorporated in the permit as Exhibit B.

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

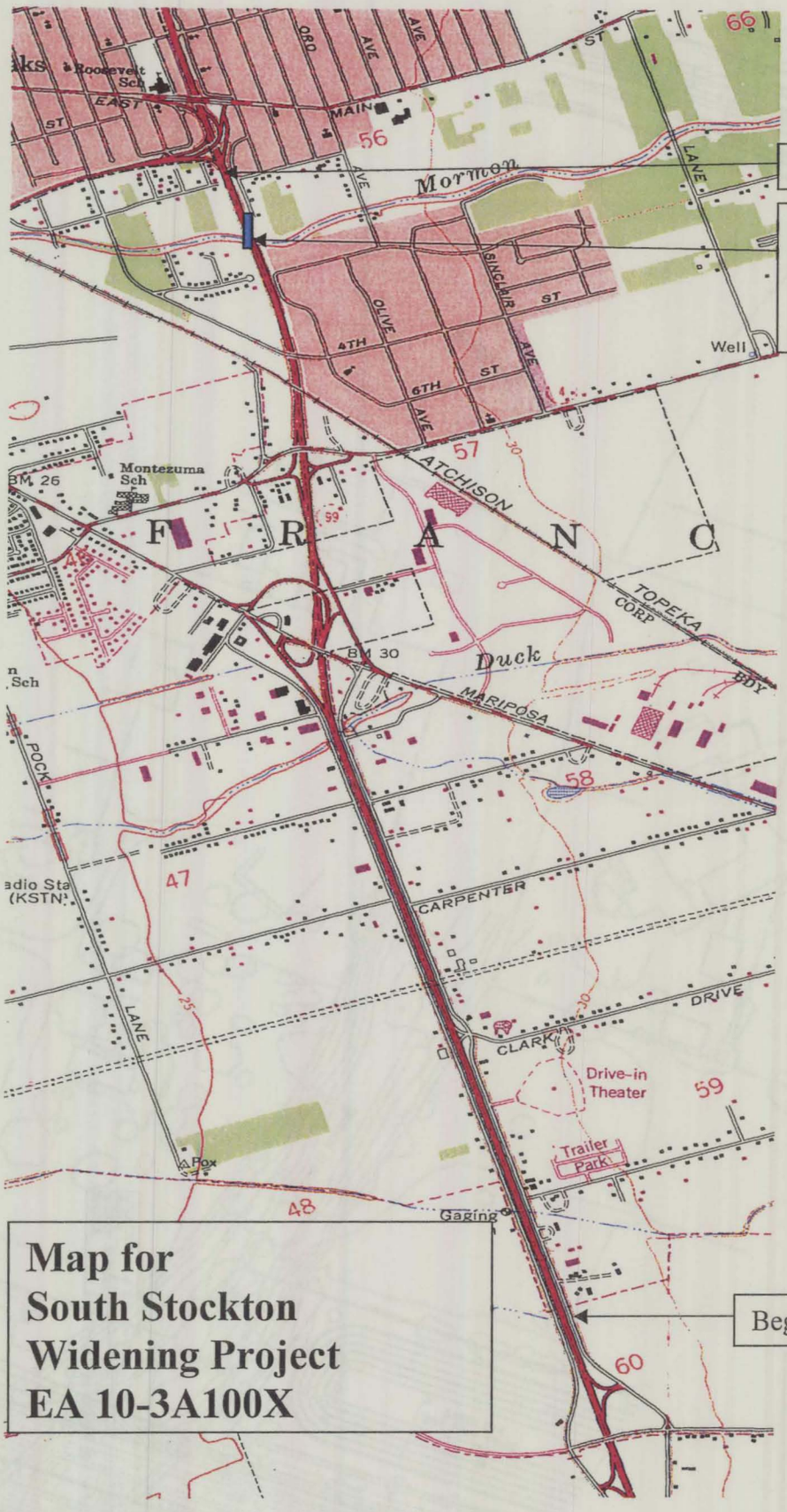
Staff recommends the Board to adopt the CEQA Findings, approve Permit No. 18717 (Attachment B), and direct the Executive Officer to take necessary actions to execute the permit and file a Notice of Determination with the State Clearinghouse.

10.0 – LIST OF ATTACHMENTS

A. Site Location Map
B. Draft Permit No. 18717
C. Project Plan and Profile

Technical Review:	Sergio Guillen, PE, Atkins
Staff Recommendations:	Deb Biswas, PhD, PE
Environmental Review:	Andrea Mauro, ES
Document Review:	David R. Williams, PE – Senior Engineer
	Len Marino, PE – Principal Engineer

ATTACHMENT - A



ATTACHMENT - B

DRAFT

STATE OF CALIFORNIA
THE RESOURCES AGENCY

THE CENTRAL VALLEY FLOOD PROTECTION BOARD

PERMIT NO. 18717 BD

This Permit is issued to:

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

Widen the existing State Route 99 cast-in-place reinforced concrete slab bridge crossing Mormon Slough (Caltrans Bridge No. 29-0119). Both the east side and west side of the bridge will be widened. The project is located at the State Route 99 crossing of Mormon Slough approximately 1100 feet south of the Main Street off-ramp, in the City of Stockton. This portion of Mormon Slough is located in portions of Section 58 and 68 of the C.M. Weber grant. (Section , T , R , MDB&M, San Joaquin County Flood Control and Water Conservation District, Mormon Slough, 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.

ATTACHMENT - B

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. 18717 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 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.

FIFTEEN: 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.

SIXTEEN: The mitigation measures approved by the CEQA lead agency and the permittee are found in the Final Initial Study/Mitigated Negative Declaration adopted by the CEQA lead agency. The permittee shall implement all such mitigation measures.

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

EIGHTEEN: 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.

NINETEEN: 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.

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

TWENTY-ONE: Temporary staging, formwork, stockpiled material, equipment, and temporary buildings shall not remain in the floodway during the flood season from November 1 to April 15.

TWENTY-TWO: Prior to start of any demolition and/or construction activities within the floodway, the applicant shall provide the Central Valley Flood Protection Board with two sets of layout plans for any and all temporary, in channel cofferdam(s), gravel work pad(s), work trestle(s), scaffolding, piles, and/or other appurtenances that are to remain in the floodway during the flood season from November 1 through April 15.

TWENTY-THREE: Debris that may accumulate on the permitted encroachment(s) and related facilities shall be cleared off and disposed of outside the floodway after each period of high water.

TWENTY-FOUR: All debris generated by this project shall be disposed of outside the floodway.

TWENTY-FIVE: 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-SIX: Fill material shall be placed only within the area indicated on the approved plans.

TWENTY-SEVEN: Backfill material for excavations shall be placed in 4- to 6-inch layers and compacted to at least the density of the adjacent, firm, undisturbed material.

TWENTY-EIGHT: Density tests by a certified materials laboratory will be required to verify compaction of backfill within the regulated channel.

TWENTY-NINE: Except with respect to activities expressly allowed under this permit, the work area shall be restored to the condition that existed prior to start of work.

THIRTY: The permittee shall provide supervision and inspection services acceptable to the Central

ATTACHMENT - B

Valley Flood Protection Board.

THIRTY-ONE: The permittee shall submit as-built drawings to the Department of Water Resources' Flood Project Inspection Section upon completion of the project.

THIRTY-TWO: In the event that bank erosion injurious to the adopted plan of flood control occurs at or adjacent to the permitted encroachment(s), the permittee shall repair the eroded area and propose measures, to be approved by the Central Valley Flood Protection Board, to prevent further erosion.

THIRTY-THREE: The permitted encroachment(s) shall not interfere with operation and maintenance of the present or future flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of the Central Valley Flood Protection Board or Department of Water Resources. If the permittee does not comply, the Central Valley Flood Protection Board may modify or remove the encroachment(s) at the permittee's expense.

THIRTY-FOUR: 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.

THIRTY-FIVE: The permittee shall be responsible for securing any necessary permits incidental to habitat manipulation and restoration work completed in the flood control project, and will provide any biological surveying, monitoring, and reporting needed to satisfy those permits.

THIRTY-SIX: 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.

THIRTY-SEVEN: The bridge piers and bents shall be constructed parallel to the direction of streamflow.

THIRTY-EIGHT: Drainage from the bridge shall not be discharged into the streambank.

THIRTY-NINE: Plans showing all construction facilities such as temporary staging, coffer dams, and falsework which shall remain in a floodway during November 1 to April 15, must be submitted to the board for approval prior to installation of these facilities.

FORTY: All construction facilities such as temporary staging, coffer dams, and falsework must be designed to prevent bank erosion during normal streamflows and maintain maximum channel capacity during November 1 to April 15.

FORTY-ONE: The soffit of the bridge shall be no lower than that of the widened bridge.

FORTY-TWO: Bridge piers and bents placed within the floodway to support a widened portion of the existing bridge shall be constructed in line with the existing bents and piers.

ATTACHMENT - B

FORTY-THREE: A letter from the U. S. Army Corps of Engineers dated _____ indicating that the project does not impact a federally constructed project is attached to this permit for reference as Exhibit A.

FORTY-FOUR: The permittee shall comply with all conditions set forth in the letter from the San Joaquin County Flood Control & Water Conservation District dated October 19, 2011, which is attached to this permit as Exhibit B and is incorporated by reference.

EXHIBIT-B

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

October 19, 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 WIDEN THE STATE HIGHWAY ROUTE 99 BRIDGE CROSSING MORMON SLOUGH

Gentlemen:

Reference is made to the Central Valley Flood Protection Board (Board) Permit Application (Permit) of Caltrans to widen the existing State Highway Route 99 cast-in-place reinforced concrete slab bridge (Bridge No. 29-0119) crossing Mormon Slough (Project). The Project consists of: (a) Widening the west side of the bridge (southbound direction) varies from 23.124 feet to 32.842 feet measured along the skew; (b) widening the east side of the bridge (northbound direction) 16.854 feet; (c) the total bridge length of 154.167 feet and a total bridge thickness of 1.25 feet; (d) five-feet-long fill approach embankments for the beginning and end of the bridge, consisting of approximately 25 cubic yards, which is included in the HEC-RAS modeling.

The Project is located at the State Highway Route 99 crossing of Mormon Slough, approximately 1,100 feet south of the State Highway Route 99 Main Street off-ramp, in San Joaquin County.

The San Joaquin County Flood Control and Water Conservation District (District) has reviewed the Board's Permit Application of Caltrans (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 Permittee or the Successors-in-Interest sole cost and expense.

4. The Permittee shall be liable for any damage to Mormon Slough that may occur as a result of this Project.

5. The Project shall be constructed in accordance with the plans dated August 2, 2011 submitted with the Application on August 17, 2011. Any revisions to the Project will require submittal of revised plans to the District for review and approval.

6. No work shall be allowed in the Mormon Slough channel between November 1st and April 15th without prior approval of the Central Valley Flood Protection Board and the District.

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 piles shall be constructed parallel to the direction of flow, and in line with the existing supports.

9. Stockpiled materials, coffer dams, and construction equipment shall be removed from the floodway prior to November 1st.

10. The Permittee shall restore the Mormon Slough's invert and banks to the condition that existed prior to commencement of work.

11. Future maintenance of the improvements free from obstructions, erosion, and/or siltation shall be the ongoing responsibility of the Permittee or Successors-in-Interest.

12. 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, California 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-11J020-T2

ATTACHMENT - C

DRAFT SPS&E

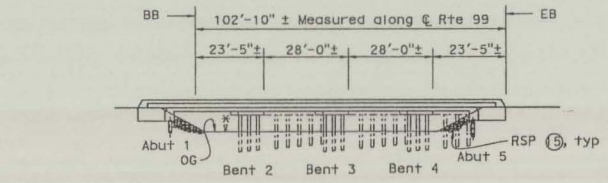
DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	SJ	99			

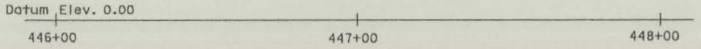
REGISTERED CIVIL ENGINEER — X — DATE

PLANS APPROVAL DATE

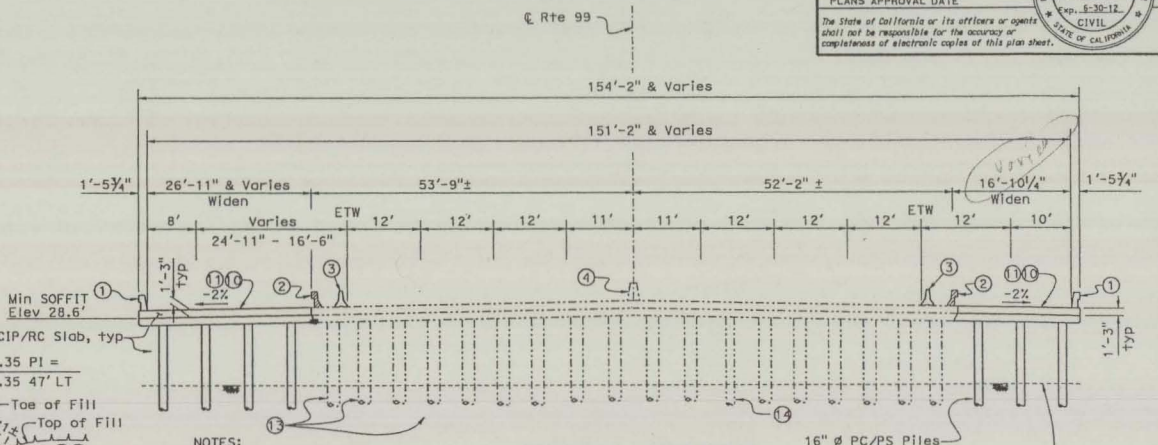
REGISTERED PROFESSIONAL ENGINEER — Chris Udarbe — No. C62985 — Exp. 6-30-12 — CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.





ELEVATION
1" = 20'

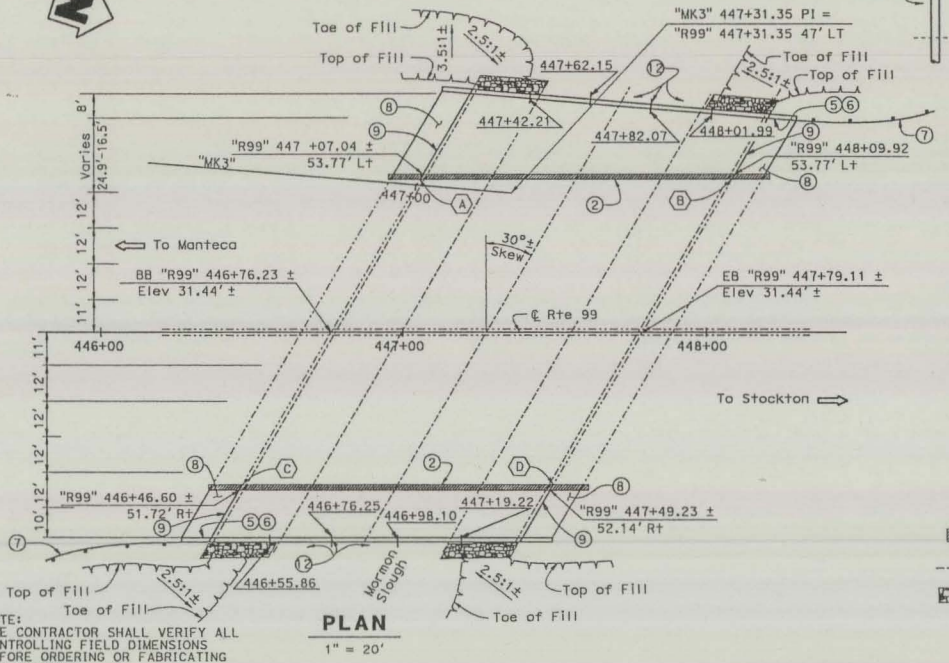


TYPICAL SECTION
1" = 10'

NOTES:
1. Concrete Barrier Type 736
2. Remove Concrete Barrier Type 25 (MOD)
3. Temporary Rail (Type K)
4. Existing Concrete Barrier Type 60A
5. Paint "Br. No. 29-0119"
6. Paint "Mormon Slough Bridge"
7. MBGR, see "Road Plan"
8. Approach slab, N(3D)
9. Joint Seal
10. Polyester concrete overlay
11. Match existing grade and cross slope
12. 3" x 12" Scupper drain
13. Existing Pile Extensions that have been retrofitted
14. Existing Pile Extensions to be retrofitted
15. Abutment slope protection, see "Road Plans"

Indicates limits of removal. Bridge removal (Portion), LOCATION M.
Indicates existing structure
Indicates rock slope protection, see "ROADWAY PLANS".

* 100 Yr HW Elev = 20.8'
For Hydrologic summary see "FOUNDATION PLAN" sheet.



PLAN
1" = 20'

A	"R99" +06.00 51.81' Lt
B	"R99" +08.59 52.01' Lt
C	"R99" +47.67 49.97' Rt
D	"R99" +39.57 69.00' Rt

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY T. Bui	CHECKED I. Cherniogia	LOAD & RESISTANCE FACTOR DESIGN	LIVE LOADING: HL93 W/"LOW-BOY" PERMIT DESIGN VEHICLE			
DETAILS	BY T. Bui	CHECKED I. Cherniogia	LAYOUT	BY T. Bui	CHECKED I. Cherniogia		
QUANTITIES	BY T. Win	CHECKED J. Lee	SPECIFICATIONS	BY V. Rengahathan	PLANS AND SPECS COMPARED B. Letcher		

X
DESIGN ENGINEER

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
STRUCTURE DESIGN
DESIGN BRANCH 17

BRIDGE NO. 29-0119
POST MILE 16.70

SOUTH STOCKTON WIDENING
MORMON SLOUGH BRIDGE (WIDEN)
GENERAL PLAN

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS: 0 1 2 3

UNIT: 3586
PROJECT NUMBER & PHASE: 10000004091
CONTRACT NO.: 3A1001

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES | SHEET | OF
9-30-11 | 9-30-11 | 9-30-11 | 1 | 16

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REV.09-01-10)

FILE => 29-0119-a-gp.dgn

USERNAME => s1123913 DATE PLOTTED => 09-SEP-2011 TIME PLOTTED => 12:19