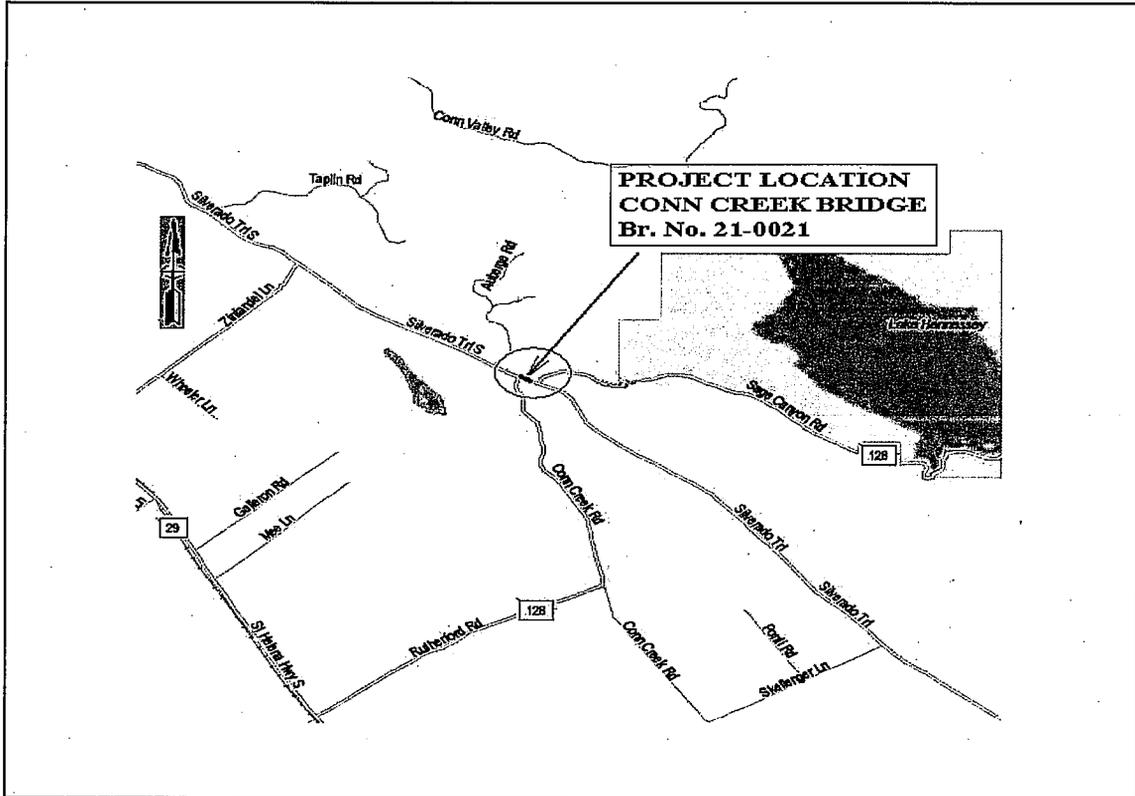


## PROJECT SCOPE SUMMARY REPORT



### In Napa County near Rutherford on Route 128 at Conn Creek Bridge (Br. # 21-0021)

*I have reviewed the right of way information contained in this Project Scope Summary Report and the R/W Data Sheet attached hereto, and find the data to be complete, current and accurate:*

  
MARK L. WEAVER  
DEPUTY DISTRICT DIRECTOR - RIGHT OF WAY AND LAND SURVEYS

APPROVAL RECOMMENDED:

  
KELLY HIRSCHBERG  
PROJECT MANAGER

APPROVED:

  
BIJAN SARTIPI  
DISTRICT DIRECTOR

DATE

9/16/11

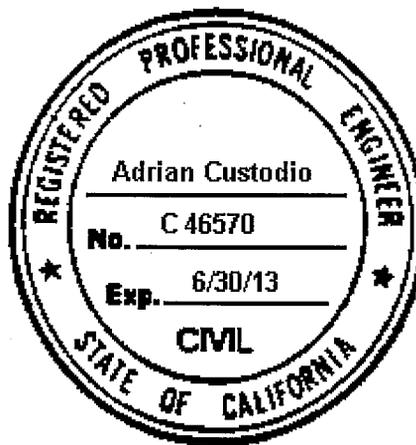
This Project Scope Summary Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

*Adrian S. Custodio*

REGISTERED CIVIL ENGINEER

*Sept. 15, 2011*

DATE



## 1. INTRODUCTION AND BACKGROUND

### Brief Project Description:

This project proposes to replace the Conn Creek Bridge (Br. No 21-0021) in Napa County about 2.8 miles east of Rutherford on State Route 128 on Conn Creek. See the cost estimate for a specific work items included in this project.

<b>Project Limits:</b>	04 - Napa - 128 - R7.4
<b>Capital Costs:</b>	\$5,500,000
<b>Right of way Costs:</b>	\$ 20,000
<b>Funding Source:</b>	201.111
<b>Number of Alternatives:</b>	3
<b>Recommended Alternative:</b>	1- Retrofit the bridge piers 2- Replace the existing bridge 3-No build
<b>Type of Facility:</b>	A concrete bridge structure on two lanes conventional highway
<b>Number of Structures:</b>	1
<b>Anticipated Environmental Determination/Document:</b>	District Categorical Exemption and Exclusion, 401, 404, 1602 permits.
<b>Legal Description</b>	Bridge Scour Mitigation

## 2. RECOMMENDATION

It is recommended that the District approve this PSSR for the proposed structure rehabilitation project to be programmed under SHOPP.

## 3. PURPOSE AND NEED STATEMENT

**Need:** According to the Caltrans Bridge Inspection Report dated 08/09/2010 (See Attachment G), the Conn Creek bridge is labeled as scour critical (Code 2) due to the history of undermining. The stream bed has degraded to such an extent as to expose the footings on Pier 2 and Pier 3. There is a full vertical crack at the center of Pier 3. Previous attempts to temporarily repair with placing grout under spread footing and placing rock riprap around the footing in order to provide support and reduce scouring have failed. Immediate rehabilitation action to secure the structural integrity and enhance the life span of the bridge is needed

**Purpose:** The purpose of this scope summary report is to secure funding and start the PS&E phase of the project with replacing the Conn Creek Bridge as recommended by Structural Division.

#### 4. EXISTING FACILITY, DEFICIENCIES AND TRAFFIC DATA

##### 4A. Roadway Geometric Information

	Facility (1)	Minimum	Through Traffic Lanes (2)			Paved Shoulder Width (3)		Median (4)	Shoulder is a Bicycle Lane (Y/N) (5)	Other Bicycle Lane Width (6)	Bicycle Route (7)	Facilities Adjacent to the Roadbed (8)
	Location	Curve Radius	No. of Lanes	Lane Width	Type (Flex, Rigid, or Composite))	Left	Right	Width	Width	Width	(Y/N)	(Code/Width)
Existing	0-R7.4	Tangent	2	12'	AC	8'	8'	0'	N	N/A	N	Open, farmland and rural community
Proposed	0-R7.4	Tangent	2	12'	AC	8'	8'	0'	N	N/A	N	Open, farmland and rural community
	Min. 3R Stds.	N/A										

##### 4B. Structures Information

Structures	Width Between Curbs				Replace Bridge Railings		Vertical Clearance			Work Identified in STRAIN	Replace Bridge Approach Rail		Replace Bridge Approach Slab	
	Name/No.	Exist	3R Std	Prop	(Y or N)		Exist	3R Std	Prop	(Y or N)	(Y or N)		(Y/N)#	
Conn Creek Bridge No. 21-0021	52 ft to 58 ft	40 ft	52' to 58' Alt 1	58' Alt 2	N Alt 1	Y Alt 2	N/A	N/A	N/A	Y	N Alt 1	Y Alt 2	N Alt 1	Y Alt 2

**4C. Vehicle Traffic Data**

Present Year ADT (2010)

Construction Year ADT: 3600

10-Year ADT: 4000

DHV: 340

20-Year ADT

% Trucks: 5.14

T.I. (10-Year): 8

**Accident Data:**

The Table B accident rates for this segment are as follows

Location	Number of accidents					Accident Rate (acc/mvm*)					
						Actual			Average		
	Total	Fat	Inj	Wet	Dark	Fat	F+I	Total	Fat	F+I	Total
Napa 128 (PM R7.3/R7.51)	6	0	3	0	3	0.000	1.43	2.85	0.031	0.58	1.31

There were a total of 6 accidents during the last 5 year study period with a total accident rate of 2.85 acc/mvm which is higher than the average rate of 1.31 acc/mvm for similar facilities.

The type of collision includes sideswipe (2) (33.3%), broadside (3) (50.0%) and hit object (1) (16.7%). The primary collision factors were failure to yield (2) (33.3%), improper turn (2) (33.3%), other violations (1) (16.7%) and other than driver (1) (16.7%).

\* mvm -- million vehicles mile

## 5. ALTERNATIVES

### 5A. Rehabilitation Strategy:

Replace the existing bridge or retrofit by constructing outrigger bents

### 5B. Design Exceptions:

There are no non-standard design features within project limit.

### 5C. Environmental Compliance:

Categorical Exemption

### 5D. Hazardous waste disposal site required?

Potential exists for presence of aerially deposited lead (ADL) in the soil and unpaved areas adjacent to the highway. Further testing is required during the early stage of PS&E. Depending on the test result, the soil may be

1- Reused in accordance with DTSC variance or

2- Disposed of off-site at a permitted facility in accordance with AB 2784.

Proof of permitted disposal may be required

### 5E. Other Agencies Involved:

Since the project involves working in the creek, permits and or approvals are required from the California Department of Fish & Game, U.S. Army Corps of Engineers, and Regional Water Quality Control Board. All agencies will be contacted in due time.

### 5F. Materials and or disposal site needs and availability?

No

### 5G. Highway planting and irrigation:

Only to replace the vegetation damaged during construction

### 5H. Roadside Design and Management:

No

**5I. Storm Water Compliance:**

A Storm Water Pollution and Prevention Plan (SWPPP) are required for this project. The require costs to implement control measures as stipulated in the special provision SSP 07-345 to prepare and implement SWPPP have been included in the project cost. A 401 Certification is required from the Regional Water Quality Control Board.

**5J. Right of Way:**

A right of way data sheet has been prepared based on the scope of work. Estimated cost information is contained in the Right of Way Data Sheet in Attachment D of this report. There is no additional R/W acquisition required for this project.

**5K. Railroad Involvement:**

There is no railroad involvement

**5L. Salvaging and recycling of hardware and other non-renewable resources:**

Salvageable materials will be utilized to the greatest extent possible

**5M. Prolonged temporary ramp closures:**

There are no ramps in the vicinity of the location.

**5N. Recycled Materials:**

Recycled materials will be utilized to the greatest extent possible

**5O. What are the consequences of not doing this entire project?**

The scouring problem has reached a level of urgency, and further scouring will undermine the bridge foundation to the point that will render the bridge to become unstable and eventually non functional.

**5P. List all alternatives studied, cost, reasons not recommended, etc.:**

***Alternative one: Retrofit the bridge piers***

The existing bridge pier walls are on spread footing and as the scour deepens there is a settlement at the piers, which will crack the deck slabs. Therefore, if the existing piers are not retrofitted, the existing slab bridge can be destabilized.

According to the Office of Structures, the preferred method to retrofit the bridge is to replace the existing pier walls with outriggers composed of pile shafts installed on both sides of the pier wall next to the edge of deck.

***Alternative two: Replace the existing bridge***

The replacement structure can be built with a two span precast prestressed structure instead of the three span structure that is similar to the existing bridge. The superstructure slab can also be built with precast prestressed slabs. Use of the precast slabs can shorten the construction time. Prestressed slabs are required to minimize the depth of the superstructure and also to maximize the freeboard. The pier wall shall be supported on piles to mitigate the scour potential. The abutments shall also be on piles.

The bridge can be rebuilt in two stages. In each staged construction it is assumed that two traffic lanes can be accommodated.

***Alternative three: No build***

This alternative will do nothing to mitigate the scouring problem. As mentioned on the Bridge Inspection Report, the scouring problem is at a critical stage and if immediate action is not taken to address the problem, the bridge structural integrity will be compromised.

The preferred alternative is "Alternative two", which is to replace the existing bridge. The reasons are numerous:

- 1 - The bridge can be replaced with just one pier in the creek instead of the existing two piers. This will create less obstruction for the flow of water and less location for scour potential.
- 2 - The superstructure can be designed for the latest vehicle loading specifications (Load and Resistance Factor Design). The existing bridge was designed based on older specifications (Load Factor Design) and different vehicle loadings.
- 3 - A bridge deck barrier and its connection to the bridge deck can be designed for the latest specifications. If the barriers were to be replaced for the existing bridge, the connection to the bridge deck could be difficult to implement due to higher impact loading in the new specifications.
- 4 - The existing abutments are on spread footing. Although the abutments have tolerable scour potential, the new abutments can be constructed on piles and the scour potential would not be an issue.
- 5 - A new bridge can be designed for the latest seismic design criteria.

## **6. TRANSPORTATION MANAGEMENT**

### **6A. Transportation Management Plan**

A TMP for this project will be refined during the PS&E phase which will be supported by detailed traffic studies to evaluate traffic operations, hours of work and noise effects. The need for lane closures during off-peak or night hours will be identified (see Attachment F).

### **6B. Vehicle Detection Systems**

Various TMP elements, such as portable Changeable Message Signs and CHP Construction Zone Enhanced Enforcement Program (COZEEP), will be utilized to improve and minimize delays to the traveling public (see Attachment F)

## **7. ENVIRONMENTAL DETERMINATION/DOCUMENT**

Environmental issues for this project are addressed in the Categorical Exemption/Categorical Exclusion Determination (see Attachment C).

Date Approved: Sept. 14, 2011

**8. FUNDING/SCHEDULING**

**Proposed funding          SHOPP**

**8A. Cost Estimate:**

STRAIN and other Structural Work (by Structure)		<u>Yes/No</u>	<u>Cost</u>
(A)	Replace	Yes	\$3,400,000.00
(B)	Rehab	No	_____
	(a) Deck		_____
	(b) Superstructure		_____
	(c) Substructure		_____
	(d) Joints		_____
	(e) Bearings		_____
	(f) Other		_____
(C)	Scour Correction	Yes	\$100,000.00
(D)	Painting	No	_____
(E)	Widening	No	_____
(F)	Rail Replacement	No	_____
(G)	Strengthen	No	_____
(H)	Seismic Retrofit	No	_____
(I)	Vertical Clearance Adjustment	No	_____
(J)	Drainage Rehab	Yes	\$100,000.00
(K)	Other	No	_____
<b>STRUCTURE COSTS SUBTOTALS</b>			<b>\$3,600,000.00</b>

**District Work**

(A) Traffic Control	Yes	\$320,000.00
(B) Pavement (include remove and replace)	No	_____
(C) Bridge Approach Slab	Yes	\$170,000.00
(D) Bridge Approach Guardrail	Yes	\$150,000.00
(E) Drainage Adjustment and Rehab	No	_____
(F) Rock Slope Protection	Yes	\$150,000.00
(G) Utility Relocation	No	_____
(H) Railroad Agreements	No	_____
(I) Right of Way	No	_____
(J) Environmental Compliance	Yes	\$200,000.00
(K) Storm water Compliance	Yes	\$70,000.00
(L) Roadside Management		
Gore Area Pavement	No	_____
Pavement beyond Gore Area	No	_____
Miscellaneous Paving	No	_____
Maintenance Vehicle Pull outs	No	_____
Off-Freeway Access	Yes	\$200,000.00
Roadside Facilities	No	_____
(K) Miscellaneous	Yes	\$200,000.00
<b>DISTRICT COST SUBTOTALS</b>		<b>\$1,460,000.00</b>
<b>30% Contingency</b>		<b>\$440,000.00</b>
<b>TOTAL DISTRICT COST</b>		<b>\$1,900,000</b>

---

**TOTAL CAPITAL COST** **\$5,500,000.00**

**R/W COST** **\$20,000.00**

**TOTAL COST (CURRENT)** **\$5,520,000.00**

**TOTAL COST (ESCALATED TO FY  
14/15)** **\$6,209,000.00**

**PROJECT SUPPORT COST** **\$2,200,000.00**

**TOTAL PROJECT COST** **\$8,409,000.00**

**8B. Project Support:**

	PROJECT SUPPORT COMPONENTS								
	PA&ED 0 Phase		Design 1 Phase		Right of Way 2 Phase		Construction 3 Phase		Total
	Dist	DES	Dist	DES	Dist	DES	Dist	DES	
Estimated PY's	0	0	3	3	0.9	0	2.8	3	12.7
Estimated PS \$'s	\$0	\$0	\$525K	\$525K	\$150K	0	\$475K	\$525K	\$2,200K
Estimated PYE \$'s (\$1000's)	0	0	0	0	0	0	0	0	0
Total \$'s	\$0	\$0	\$525K	\$525K	\$150K	0	\$475K	\$525K	\$2,200K

**8C. Project Schedule:**

Milestones	Delivery Date (Month, Day, Year)
PA & ED	9/16/2011
Project PS&E	7/01/2014
Right of way Certification	7/01/2014
Ready to List	11/01/2014
Approve Contract	1/02/2015
Contract Acceptance	2/02/2015
End Project	12/30/2017

**9. FEDERAL COORDINATION**

This project is not eligible for funding under the Federal Highway Administration (FHWA)/California Department of Transportation (Caltrans) Stewardship Agreement executed on September 4, 2001.

**10. SCOPING TEAM FIELD REVIEW ATTENDANCE ROSTER:**

See Attachment H

Date 05/05/2011

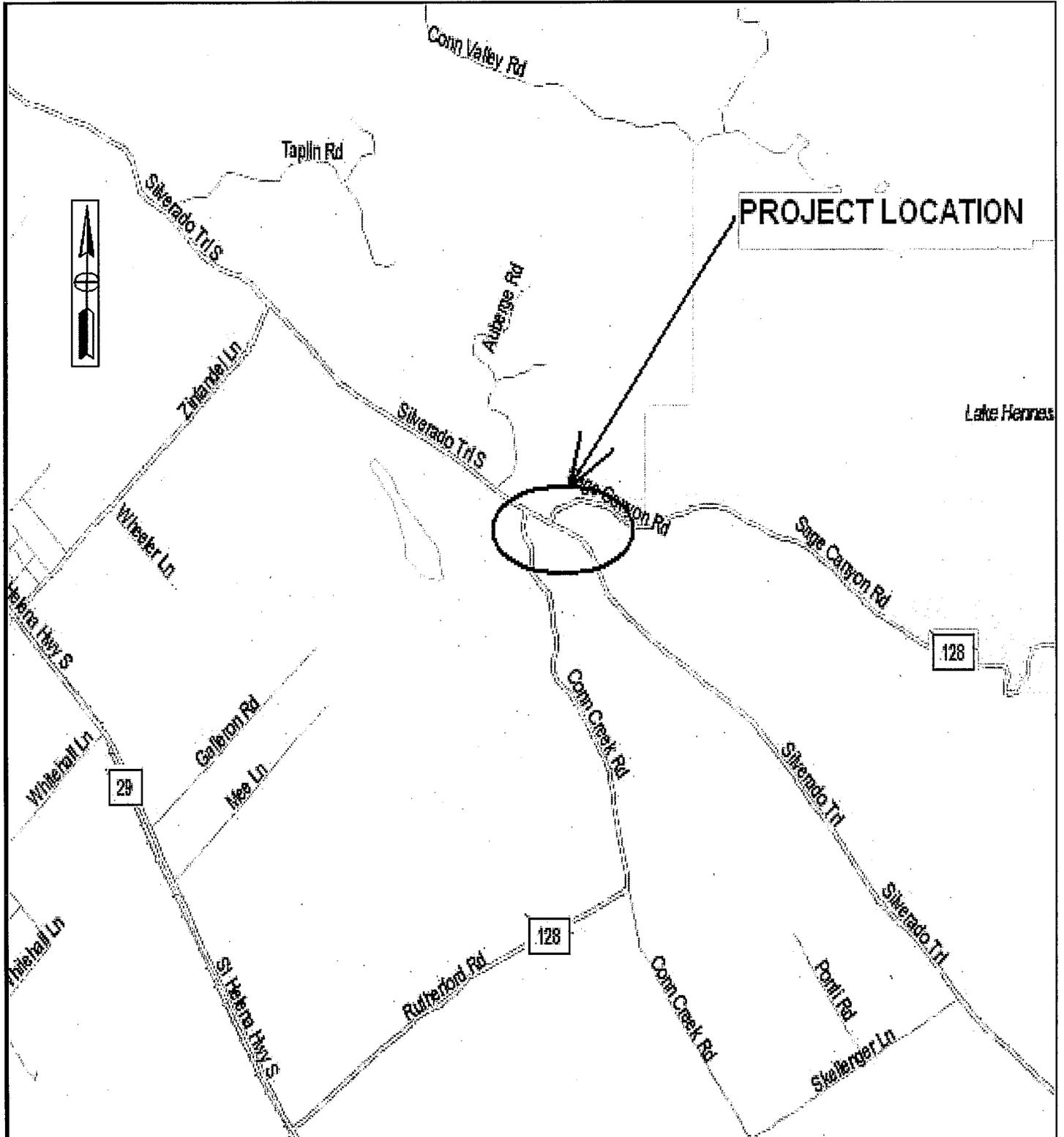
## 11. REVIEWS

Scoping team field review attendance roster (see Attachment H).

Project Reviewed by:		
District Maintenance	<u>Fuk Nyan Kurniawan</u>	Date <u>9/15/11</u>
District Safety	<u>Phillipe Van</u>	Date <u>9/15/11</u>
HQ Division of Design	<u>Mike Thomas</u>	Date <u>9/15/11</u>
HQ Program Advisor	<u>Takako Fujioka</u>	Date <u>9/15/11</u>
FHWA	<u>N/A</u>	Date _____
Others	<u>N/A</u>	Date _____

## 12. ATTACHMENTS

- A. Location Map
- B. Structural Advance Planning and Study and Cost Estimate Certification Form
- C. Categorical Exemption/Categorical Exclusion Form
- D. Right of Way Data Sheet
- E. Storm Water Data Report
- F. TMP Data Sheet
- G. Bridge Inspection Report
- H. Field Review Attendance Roster



**PROJECT LOCATION**

**LOCATION MAP**

BRIDGE SCOUR MITIGATION  
 ON ROUTE 128 AT CONN CREEK BRIDGE  
 Br. No. 21-0021

EA 1G430K

PROJECT ID 0412000126

COUNTY	RTE	PM	DATE
NAPA	128	R7.4	9/10/2011

## Memorandum

*Flex your power!  
Be energy efficient!*

To: Tung Ly, Branch Chief  
Special Projects  
DISTRICT 4 Design South

Date: September 1, 2011

File: 04-NAP-128 PM R7.4  
EA 04-1G430K  
Conn Creek Bridge  
Br. No. 21-21

From: Brian Mori   
Bridge Design Branch 8  
Office of Bridge Design West  
Structure Design  
Division of Engineering Services MS 9-4F/8I

Subject: Advance Planning Study Transmittal

Attached is the Advance Planning Study for the above referenced project as submitted to the Division of Engineering Services by your request memo dated August 23, 2011.

There are two alternatives in the APS request. The first alternative is to retrofit the existing bridge to mitigate the potential scour at the piers. The retrofit consists on constructing outriggers with piles shafts at each end of the pier walls next to the edge of deck. The piles shafts extend to the deck level and they are linked by a bentcap beam built just below the deck slab and sandwiching the existing pier wall. The bentcap is prestressed and the existing pier wall and the footing below the bentcap removed after the completion of the bentcap. The scour potential at the abutments is small, so no additional retrofit is required.

Barrier replacement for Alternative #1, the retrofit alternative, was not included since that specific request was not received at the time of the APS analysis. No in depth analysis on the feasibility of the barrier replacement was completed due to a lack of time, but the rough estimate of \$110,000 is given purely for the purpose of capturing the additional cost.

The second alternative is to replace the existing bridge with a two span precast prestressed slab bridge. The pier and the abutments are supported on piles to mitigate the scour potential.

The estimated construction costs for Alternatives #1 and #2, including 10% time-related overhead, 10% mobilization and 40% contingencies, are as follows:

Alternative	Estimated Cost	Working Days
#1 Retrofit with Outriggers w/o Barrier Upgrade	\$ 1,300,566	50 days
#2 Replace with Precast Prestressed Slab Bridge	\$ 3,326,000	140 days

Tung Ly - District 4  
September 1, 2011  
Page 2

For Alternative #1, the retrofit alternative, assume 5 days per pileshaft to construct and then 25 days per bentcap to construct. Assume that one traffic lane closure is required for the construction of each pileshaft. Additional construction days will be required for the barrier replacement, which was not included in the number of working days shown in the table.

For Alternative #2, the replacement alternative, approximately 140 days will be required for the construction of the bridge, assuming that there are no environmental requirements. Two stage construction is assumed with two traffic lanes at each stage.

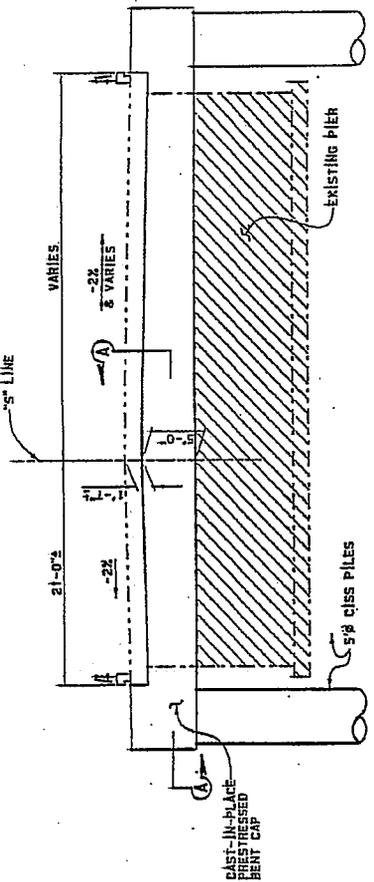
If you have any questions or if you need additional information regarding this study, please contact Yong-Pil Kim at (916) 227-8428 or Brian Mori at (916) 227-8859.

#### Attachments

- C: DWIGHT MANLULU, Project Coordinating Engineer MS 9-5/11G
- OFELIA ALCANTARA, Bridge Design Office Chief MS 9-4/11G
- MAJID MADANI, Technical Liaison Engineer MS 9-1/5C
- H. JAVIER CHAVEZ, Structure Aesthetics Branch Chief MS 9-3/1H
- PETE WHITFIELD, Structure Maintenance & Investigations MS 9-1/9I
- STEVE NG, Structure Hydraulics MS 9-1 room 104
- JOHN BABCOCK, Structure Construction Assistant Deputy Division Chief MS 9-2/11H
- TIM POKRYWKA, Geotechnical Services MS 5
- STEVE JAQUES, Preliminary Investigation - North MS 61

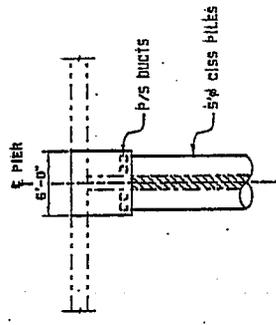
PROJECT NO.	04	NO.	12B	SCALE	AS SHOWN
-------------	----	-----	-----	-------	----------

**LEGEND**  
 - - - - Existing Structure  
 - - - - New Construction  
 - - - - Portion of existing pierwall to be removed



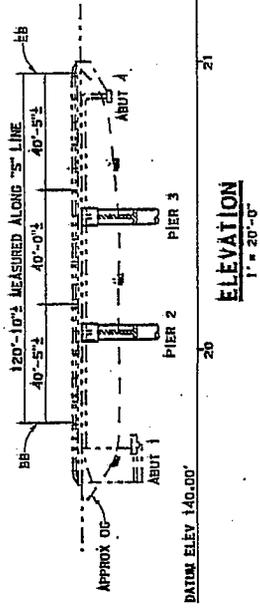
**TYPICAL SECTION AT PIERS**  
 3/4" = 1'-0"

**NOTES:**  
 1. Temporary and partial closure of traffic lanes required for the construction of the pile shafts.  
 2. It is assumed that existing barriers need not be upgraded.  
 3. It is assumed that existing abut, spans need not be strengthened for higher load carrying capability.

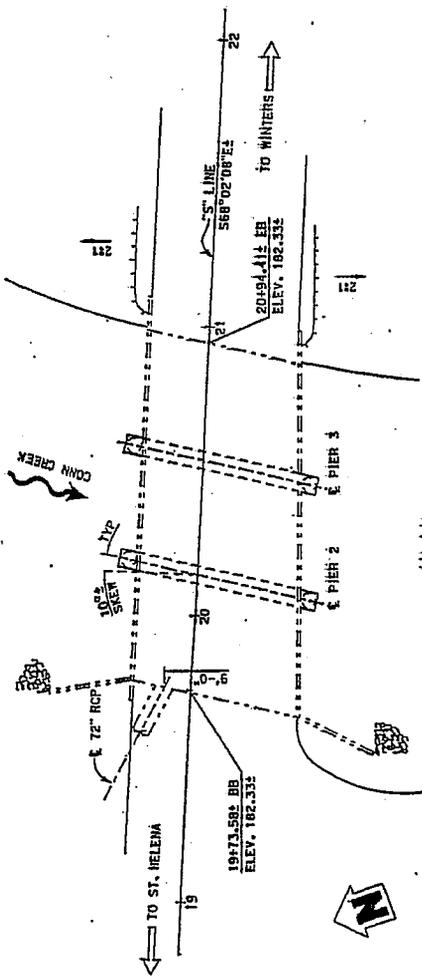


**SECTION A-A**  
 3/4" = 1'-0"

DATE OF ESTIMATE	08/24/11
BRIDGE REMOVAL	0
STRUCTURE BEPH	1-7.3
LENGTH	120'-10"
WIDTH	VARIES
AREA	6,935 SF
COST/SOFT (INCLUDING 10% MOBILIZATION & 25% CONTINGENCY)	
TOTAL COST	



**ELEVATION**  
 1" = 20'-0"



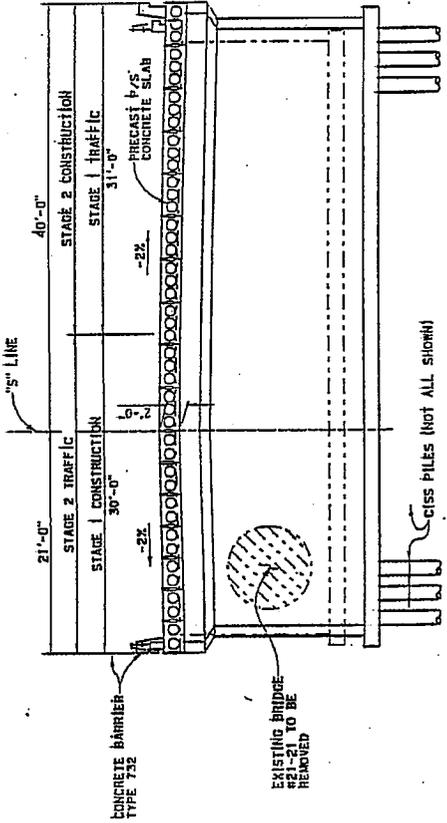
**PLAN**  
 1" = 20'-0"

DESIGNED BY	Yong-Pil Kim	DATE	08/24/11
DRAWN BY	Carlo Concino	DATE	08/24/11
CHECKED BY	Brian Morl	DATE	08/24/11
APPROVED	Brian Morl	DATE	08/24/11
FILE #	RECESS		

STRUCTURE DESIGN BRANCH	8
ALTERNATIVE 1	PLANNING STUDY
CONN CREEK BRIDGE (RETROFIT)	
BRIDGE NO. 21-21	UNIT 1955
SCALE: 1" = 20'-0", 3/4" = 1'-0"	PROJECT NUMBER & PHASE: 10-0306
CONTRACT NO. 11	

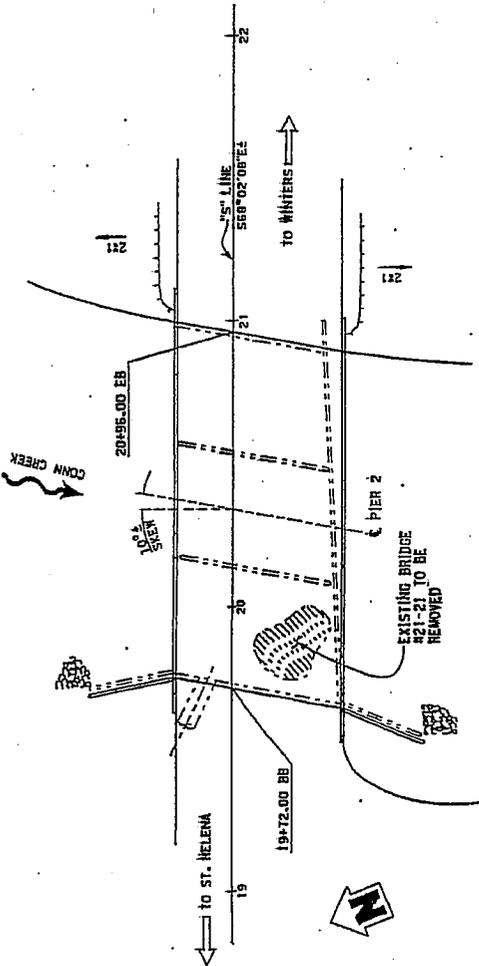
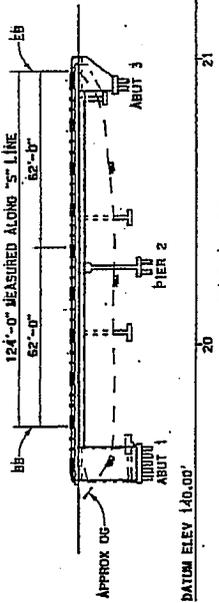
PROJECT NUMBER	04	NO. OF SHEETS	128	SHEET NO.	X
----------------	----	---------------	-----	-----------	---

Legend:  
 - - - - Existing Structure  
 - - - - New Construction



DATE OF ESTIMATE	08/24/11
BRIDGE NUMBER	21-21
STRUCTURE DEPTH	174'-0"
LENGTH	51'-0"
WIDTH	17584 SF
AREA	
COST/SQFT INCLUDING 10% MOBILIZATION & 25% CONTINGENCY	
TOTAL COST	

NOTE:  
 2 Traffic lanes will be open during each staged construction.



DESIGNED BY	Yong-Pil Kim	DATE	08/24/11
DRAWN BY	Carlo Conelmo	DATE	08/24/11
CHECKED BY	Brian Mori	DATE	08/24/11
APPROVED	Brian Mori	DATE	08/24/11
FILE #	REQUEST		

STRUCTURE DESIGN BRANCH	8
ALTERNATIVE 2	
PLANNING STUDY	
CONN CREEK BRIDGE (REPLACE)	
BRIDGE NO. 21-21	0111.393
SHEET 11-20-07, 11-1-07	PROJECT NUMBER & PHASE ICD#
	CONTRACT NO. 13

**PID COST ESTIMATE CERTIFICATION (CERT) FORM (V.2—March 2, 2010)**

DIST-UNIT-CO-RTE-PM	04-0698-Nap-128-R7.4	1) Initial: <u>LSJ</u> Date: <u>9/15/11</u> DDD of Transportation Planning and Local Assistance, Maintenance, or Operations  2) Initial: <u>JL</u> Date: <u>9/15/11</u> DDD of Design
DIST-EA	04-1G430K	
PROJECT DESCRIPTION	Bridge Scour Mitigation	
PROGRAM TYPE	20.10.201.111	
PROGRAM FISCAL YEAR	FY 14/15	
ESCALATED PROGRAM COST	\$5,500,000	
NUMBER OF WORKING DAYS	140	

PROJECT ROLE	PRINTED NAME	SIGNATURE
Project Engineer (QC)	Adrian Custodio	<i>Adrian S. Custodio</i>
Design Senior (QA)	Tung Ly/ <del>Kam Leung</del>	<i>[Signature]</i>
Project Manager	Kelly Hirschberg	<i>Kelly Hirschberg</i>
Design Office Chief (QA)	Lawrence Jones	<i>[Signature]</i>
Design Division Chief (QA) (South, North, East Region)	Skip Sowko	<i>[Signature]</i> DDG to approve CERT for all regional projects in 2 days.

DATE	WBS	PROJECT DELIVERABLE	COST ESTIMATE
9/16/11	150	PID (Current)	\$5,500,000
9/16/11	180	PA&ED	\$5,500,000

		Briefly provide details below.
Quality Control	<b>Assumptions</b> How did assumptions about location (e.g., terrain, distance to construction site, etc.), relative availability of materials, weather conditions, etc. influence the cost estimate? What other elements influenced the estimate?	The project site is located on a highway on a creek and there is an access to bring in construction equipment and materials to the project site. Staging will be no problem. However, the time construction window is limited to between June-October or when the creek is dry which may cause the construction to take 2-3 years to complete.
	<b>Source of Unit Prices</b> What factors were considered to determine unit prices of major items? Provide EAs of projects considered, unit prices and quantities used. Add specialty items and costs as appropriate. Provide TRO cost.	The main item – Structure Costs – is to be paid by lump sum. The breakdown of the cost is the following: -Replace Bridge \$3,400,000 -Scour Correction (Riprap) \$100,000 -Drainage Rehab \$100,000 District estimate of structure cost \$3,600,000
	<b>Traffic Management Plan Data Sheet (day v. night)</b> Summarize information on the data sheet (e.g., number of signs, public outreach component, night work, etc.).	A lump sum of \$320,000 will be spent for Traffic Control. These includes: (\$ N/A) Traffic Control System, (\$ N/A) Construction Area Signs, (\$10,000) Changeable Message Signs, (\$ N/A) Maintain Traffic, (\$2000) Public Information and (\$40,000) COZEED.
	<b>Risk Management Plan</b> Identify major risks relating to the development and management of the project and mitigation measures.	The project location is on a creek. No utility facility needs to be relocated. The risk in the management of cost estimate could be an additional minimum of \$40,000 for R/W acquisition as mentioned in Constructability Review as shown below. As for the rest, the risk in the management of cost estimate is minimal.
	<b>Escalation Factors Used</b> Justify if escalation rate is less than 5%. Provide mid-year of Construction and escalation rate.	An escalation factor of 5% is used until construction begins during the FY 2014-2015.
	<b>Contingencies</b> Justify if less than 25%.	A 30% contingency is used with the total cost on the roadway portion and 40% contingency is used with the structure cost.
	<b>DES Structures, Estimate and Quantities</b> From APS provide a name of a preparer of calculations, estimate assumptions (type of structure, cost per square foot), date calculated, name of checker, and date checked.	The preparer of structures cost estimate was Yong-Pil Kim who finalized his estimate on 9/1/2011. Brian Mori of HQ Structure Design is the reviewer and verified the the calculations on 9/1/2011. Dist. 4 Design estimates the bridge costs \$450/sqft. This includes demolition of the old bridge, cost of the new bridge with new barriers included plus 40% contingency. <i>see attachment</i>
Quality	<b>Constructability Review</b> What is the assumed construction method and what risks are associated with that method? Indicate when reviews occurred and major findings.	Constructability commented on 9/13/11 to realign the new bridge to facilitate staging, maximize construction efficiency and minimize detour traffic disruptions. The risk is to spend a minimum of \$40,000 for real estate acquisition.
	<b>Value Analysis Required? Yes/No</b> List target date.	This was not performed in the study. VA study may be done during the early part of the PS&E stage.

	<b>DES Structural Liaison Review</b> <i>List date, conclusions of Review, and name of reviewer.</i>	Brian Mori, the DES Structure Liaison reviewer, submitted the advance planning study (APS) transmittal memo to us on 9/1/2011 and the report contains the cost estimates of 2 alternatives: (1) the bridge retrofit and (2) replace the bridge. The recommendation as to which alternative to choose came from Yong-Pil Kim after a discussion with him over the phone. His recommendation was to "replace the bridge" and it came by email on Sept. 12, 2011.
	<b>Independent Estimate Performed? Yes/No</b> <i>List target date.</i>	No
	<b>Kam Leung, District Cost Estimating Coordinator (DCEC)</b> <i>Comments and Resolution.</i>	He said to use the PID Cost CERT. His advise was followed by Design.
<b>Status</b>	<b>Next cost estimate update (provide month and year)</b> <i>Annual cost update is required.</i>	Probably in September 2012 when the PS&E is in progress.

**CATEGORICAL EXEMPTION/ CATEGORICAL EXCLUSION DETERMINATION FORM**

04 Napa 128                      R7.41                      0G430K/00  
 Dist.-Co.-Rte. (or Local Agency)      P./M/P.M.                      E.A. (State project)                      Federal-Aid Project No. (Local project)/ Proj. No.

**PROJECT DESCRIPTION:**

(Briefly describe project, purpose, location, limits, right-of-way requirements, and activities involved.)

Caltrans proposes to replace the existing Conn Creek bridge (BR # 21-0021) on Napa 128 at PM R7.41. The new bridge will have 4-6 CISS columns supporting the new bridge deck with a minimum clear deck width of 40 feet and a length of approximately 124 feet. The installation of the CISS piles will be in the dry. The existing bridge structure will be removed. There will be no impacts to Steelhead but consultation with NOAA Fisheries with respect to the Steelhead Designated Critical Habitat.

This CE may be amended as more detailed construction information is developed.

**CEQA COMPLIANCE** (for State Projects only)

Based on an examination of this proposal, supporting information, and the following statements (See 14 CCR 15300 et seq.):

- If this project falls within exempt class 3, 4, 5, 6 or 11, it does not impact an environmental resource of hazardous or critical concern where designated, precisely mapped and officially adopted pursuant to law.
- There will not be a significant cumulative effect by this project and successive projects of the same type in the same place, over time.
- There is not a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances.
- This project does not damage a scenic resource within an officially designated state scenic highway.
- This project is not located on a site included on any list compiled pursuant to Govt. Code § 65962.5 ("Cortese List").
- This project does not cause a substantial adverse change in the significance of a historical resource.

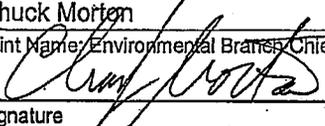
**CALTRANS CEQA DETERMINATION**

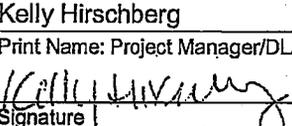
Exempt by Statute. (PRC 21080[b]; 14 CCR 15260 et seq.)

Based on an examination of this proposal, supporting information, and the above statements, the project is:

**Categorically Exempt. Class 1c** (PRC 21084; 14 CCR 15300 et seq.)

**Categorically Exempt. General Rule exemption.** [This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (CCR 15061[b][3])]

Chuck Morten  
 Print Name: Environmental Branch Chief  
  
 Signature                      Date      9/14/2011

Kelly Hirschberg  
 Print Name: Project Manager/DLA Engineer  
  
 Signature                      Date      9/14/2011

**NEPA COMPLIANCE**

In accordance with 23 CFR 771.117, and based on an examination of this proposal and supporting information, the State has determined that this project:

- does not individually or cumulatively have a significant impact on the environment as defined by NEPA and is excluded from the requirements to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS), and
- has considered unusual circumstances pursuant to 23 CFR 771.117(b) (<http://www.fhwa.dot.gov/heap/23cfr771.htm-sec.771.117>).

In non-attainment or maintenance areas for Federal air quality standards, the project is either exempt from all conformity requirements, or conformity analysis has been completed pursuant to 42 USC 7506(c) and 40 CFR 93.

**CALTRANS NEPA DETERMINATION**

**Section 6004:** The State has been assigned, and hereby certifies that it has carried out, the responsibility to make this determination pursuant to Chapter 3 of Title 23, United States Code, Section 326 and a Memorandum of Understanding (MOU) dated June 7, 2007, executed between the FHWA and the State. The State has determined that the project is a Categorical Exclusion under:

- 23 CFR 771.117(c): activity (c) ( )
- 23 CFR 771.117(d): activity (d) ( )
- Activity \_\_\_\_\_ listed in the MOU between FHWA and the State

**Section 6005:** Based on an examination of this proposal and supporting information, the State has determined that the project is a CE under Section 6005 of 23 U.S.C. 327.

NA  
 Print Name: Environmental Branch Chief  
 Signature                      Date

NA  
 Print Name: Project Manager/DLA Engineer  
 Signature                      Date

Briefly list environmental commitments on continuation sheet. Reference additional information, as appropriate (e.g., air quality studies, documentation of conformity exemption, FHWA conformity determination if Section 6005 project; §106 commitments; §4(f); §7 results; Wetlands Finding; Floodplain Finding; additional studies; and design conditions). Revised September 15, 2008

TO: Office of Special Projects

Date 9/13/2011  
Dist 4 Co Nap Rte 128  
PM R7.4

Attention: Tung Ly  
District Branch Chief

EA 1G430K (No EFIS# yet)

From: ENID LAU  
Right of Way Resource Manager

Alternative #2 Replace Bridge  
D.S. #5996

Subject: Current Estimated Right of Way Costs

We have completed an estimate of the right of way costs for the above referenced project based on maps we received from you on August 25, 2011 and the following assumptions and limiting conditions:

- 1. The mapping did not provide sufficient detail to determine the limits of the right of way required.
- 2. The transportation facilities have not been sufficiently designed so our estimator could determine the damages to any of the remainder parcels affected by the project.
- 3. Additional right of way requirements are anticipated, but are not defined due to the preliminary nature of the early design requirements.
- 4. This estimate does not include \$ \_\_\_\_\_ right of way costs previously incurred on the project, which may affect the total project right of way costs for programming purposes.
- 5. We have determined there are no right of way functional involvements in the proposed project at this time, as designed.

Right of Way Lead Time will require a minimum of 6 months after we begin receiving final right of way requirements (PYPSCAN node No. 224), necessary environmental clearance has been obtained, and freeway agreements have been approved. From the date of receipt of final right of way requirements (PYPSCAN node No. 265), we will require a minimum of 4 months prior to the date of certification of the project. Shorter lead times will require either more right of way resources or an increased number of condemnation suits to be filed. Either of these actions may reflect adversely on the District's other programs or our public image generally.

  
Right of Way Resource Manager

Attachments:

- Right of Way Data Sheet – Page One (always required)
- Right of Way Data Sheet – All Pages (required when interest in real property is being acquired)
- Utility Information Sheet
- Railroad Information Sheet

ATTACHMENT D  
Page 1 of 6

**RIGHT OF WAY DATA SHEET**

TO: Office of Special Projects

Date 9/8/2011 D.S. # 5996  
 Dist. 04 Co. Nap Rte 128 PM R7.4  
 EA 04-1G430K (04 )

ATTN: TUNG LY

Project Description: Construct Outrigger Bents/Replace Bridge

SUBJECT: Right of Way Data - Alternate No. 2

1. Right of Way Cost Estimate:

	Current Value (Future Use)	Escalation Rate	Escalated Value
A. Acquisition, including Excess Lands, Damages, and Goodwill	<u>\$0.00</u>	%	<u>\$0.00</u>
Project Permit Fees			<u>\$10,000.00</u>
Grantor's Access Cost			<u>\$0.00</u>
B. Utility Relocation (State Share)	<u>\$10,000.00</u>	%	<u>\$10,000.00</u>
C. Railroad (from page 6)			<u>\$0.00</u>
D. Relocation Assistance	<u>\$0.00</u>	%	<u>\$0.00</u>
E. Clearance Demolition	<u>\$0.00</u>	%	<u>\$0.00</u>
F. Title and Escrow Fees	<u>\$0.00</u>	%	<u>\$0.00</u>
G. TOTAL ESCALATED VALUE			<u>\$20,000.00</u>
H. Construction Contract Work	<u>\$0.00</u>		

2. Anticipated Date of Right of Way Certification \_\_\_\_\_

3. Parcel Data:

Type	Dual/Appr	Utilities	RR Involvements	
X _____		U4-1 _____	None	<u>.X</u>
A _____		-2 _____	C&M Agrmt	_____
B _____		-3 _____	Svc Cont.	_____
C _____		-4 _____	Design	_____
D _____		U5-7 <u>5</u>	Const.	_____
E <u>XXXX</u>		-8 _____	Lic/RE/Clauses	_____
F <u>XXXX</u>		-9 _____		
Misc R/W Work				
RAP Displ				<u>0</u>
Clear Demo				<u>0</u>
Const. Permits				<u>0</u>
Condemnation				<u>0</u>
Total	<u>0</u>			

Areas: Right of Way

No. Excess Parcels \_\_\_\_\_

Excess \_\_\_\_\_

Enter PMCS Screens

9/9/11

By

Alpach

Enter AGRE Screen (Railroad Data Only) \_\_\_\_\_

By

**ATTACHMENT D**

4. Are there any major items of construction contract work? Yes  No  (If yes, explain)
5. Provide a general description of the right of way and excess lands required(zoning, use, major improvements critical or sensitive parcels, etc.).  
No right of way required.
6. Is there an effect on assessed valuation? (If yes explain)  
Yes  Not Significant  No
7. Are utility facilities or rights of way affected? Yes  No   
If yes, attach Utility Information Sheet Exhibit 01-01-05;
8. Are railroad facilities or rights of way affected? Yes  No   
If yes, attach Railroad Information Sheet Exhibit 01-01-06;
9. Were any previously unidentified sites with hazardous waste and/or material found?  
Yes  None evident   
(If yes, attach memorandum per Procedural Handbook Volume 1, Section 101.011)
10. Are RAP displacements required? Yes  No   
(If yes, provide the following information)  
No. of single family \_\_\_\_\_ No. of business/non profit \_\_\_\_\_  
No. of multi-family \_\_\_\_\_ No. of farms \_\_\_\_\_  
Based on Draft / Final Relocation Impact Statement / Study dated \_\_\_\_\_, it is anticipated that sufficient replacement housing will / will not be available without Last Resort Housing.
11. Are material borrow and / or disposal sites required? Yes  No   
(If yes, explain)
12. Are there potential relinquishments / abandonments? Yes  No   
(If yes, explain)
13. Are there any existing and/or potential Airspace sites? Yes  No   
(If yes, explain)

14. Are there Environmental Mitigation costs? Yes  No   
(If yes, explain)  
Per Adrian Custodio, Design Engineer, several permits may be required for this project.

15. Indicate the anticipated Right of Way schedule and lead time requirements. (Discuss if District proposes less than PMCS lead time and / or if significant pressures for project advancement are anticipated.)

PYPSCAN lead time (from Regular R/W to project certification) 6 months.

16. Is it anticipated that all Right of Way work be performed by CALTRANS staff?  
Yes  No  (If no, discuss)

**Assumptions and Limiting Conditions**

- This data sheet was completed without a hazardous waste/materials report.
- Information on this data sheet was based on maps provided by Tung Ly on 8/25/2011

Evaluation Prepared By: Renata Frey

Right of Way: Name Renata Frey Date 9/8/11

Railroad: Name Porter Date 9-3-11

Utilities: Name John Dalton Date 9/8/11  
for: Sunesh Dhanmani

Recommended for Approval:

William G. Paul  
Right of Way Capital Cost Coordinator

I have personally reviewed this Right of Way Data Sheet and all supporting information. It is my opinion that the probable Highest and Best Use, estimated values, escalation rates, and assumptions are reasonable and proper subject to the limiting conditions set fourth, and find this Data Sheet complete and current.

[Signature]  
for Chief, RW Appraisal Services

Date 9/9/11

cc: Program Manager  
Project Manger

UTILITY INFORMATION SHEET

1. Utility owners located within project limits:  
PG&E - Gas & Electric, AT&T, County of Napa
  
2. Facilities potentially impacted by project (if known, include Owners(s) & facility type(s)):  
PG&E - Gas & Electric, AT&T, County of Napa - Water, Sewer
  
3. Anticipated Workload:  

<u>  X  </u>	Utility Verification required
<u>  X  </u>	Positive Identification
<u>      </u>	Utility Relocation
<u>      </u>	Other (Specify)
  
4. Additional information concerning anticipated utility involvements (includes limiting conditions and a narrative addressing likelihood that conflicts will occur);

           Involves possible relocation of electric transmission facilities  
(If X'd, Data sheet should be forwarded to environmental)

5. PMCS input information

- U4-1        Owner Expense Involvements
- U4-2        State Expense Involvements  
(Conventional, No Fed Aid)
- U4-3        State Expense Involvements  
(Freeway, No Fed Aid)
- U4-4        State Expense Involvements  
(Conventional or Freeway, Fed Aid)
  
- U5-7.   5   Verifications - without involvements
- U5-8        Verifications - 50% involvements
- U5-9        Verifications resulting in involvements

NOTE: The sum of U-4's must equal the sum of 1/2 of the U5-8's and all of the U5-9's.

ESTIMATED STATE SHARE OF COSTS \$           10000          

Prepared by: Suresh Dharmani

by:   
Right of Way Utility Coordinator

  9/8/11    
Date



Dist-County-Route: 04-NAPA-128  
 Post Mile Limits: R7.4  
 Project Type: Bridge Replacement  
 Project ID (or EA): (1G430K)  
 Program Identification: 40-50-201-111

Phase:  PID  
 PA/ED  
 PS&E

Regional Water Quality Control Board(s): San Francisco Bay RWQCB (R-2)

Is the Project required to consider Treatment BMPs? Yes  No   
 If yes, can Treatment BMPs be incorporated into the project? Yes  No

If No, a Technical Data Report must be submitted to the RWQCB at least 30 days prior to the projects RTL date. List RTL Date: 9/2014

Total Disturbed Soil Area: 0.07 ac Risk Level: 2

Estimated: Construction Start Date: 11/15/2014 Construction Completion Date: 12/15/2016  
 Notification of Construction (NOC) Date to be submitted: TBD in PS&E Phase

Erosivity Waiver Yes  Date: \_\_\_\_\_ No   
 Notification of ADL reuse (if Yes, provide date) Yes  Date: TBD No   
 Separate Dewatering Permit (if yes, permit number) Yes  Permit # TBD No

This Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the date upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Adrian S. Custodio 9/14/11  
 Adrian Custodio, Registered Project Engineer/Landscape Architect Date

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

Kelly Hirschberg 9/14/2011  
 Kelly Hirschberg, Project Manager Date  
Robert W. Braga 9/15/2011  
 Bob Braga, Designated Maintenance Representative Date  
Alex McDonagh 09/14/2011  
 For David Yam, Designated Landscape Architect Representative Date  
Norman Gonsalves 09/14/2011  
 Norman Gonsalves/Regional Design SW Coordinator or Designee Date

[Stamp Required for PS&E only]

---

## STORM WATER DATA INFORMATION

### 1. Project Description

- This is the bridge replacement project for the Conn Creek Bridge (Br #21-0021) in Napa County. It is located in Rutherford on Route 128 in Post Mile (PM) R7.4.
- The existing concrete bridge was built in 1973 and classified as "scour critical" in latest Structures Replacement and Improvement Needs (STRAIN) report that determined the replacement of the Conn Creek Bridge as it is structurally deficient.
- The proposed project is to replace the existing bridge with a two span concrete slab bridge. The piers and the abutments will be supported on piles to mitigate the scour potential.
- Pre-cast prestressed concrete will be used for the construction of the bridge which eliminates the need to erect false work in the creek.
- The construction of the bridge will take approximately 140 days, Two stages construction is assumed with two traffic lanes at each stage.
- The bridge will be constructed during dry season and a temporary water diversion system is not considered for this project at this stage.
- The total disturbed soil area (DSA) is approximately .07 ac., and includes areas for construction, access, and staging.
- There will be no net added impervious area and reworked area is about 0.15 ac.
- This project is located in MS4 area in City of Napa in Napa County.

### 2. Site Data and Storm Water Quality Design Issues (refer to Checklists SW-1, SW-2, and SW-3)

- The site is located within the San Pablo hydrologic unit, Napa River hydrologic area, and undefined hydrologic sub-area. The watershed area is about 266735 acres.
- The direct receiving water body within the project limit is Conn Creek.
- The ultimate receiving water bodies for this project are Napa River, Carquinez Strait and San Pablo Bay ,, They are all in 303(d) Listed Waterbodies.
- Napa River is 303(d) listed for nutrients, pathogens, and sedimentation/siltation.
- The primary pollutant of concern for this project is sediment.
- Carquinez Strait and San Pablo Bay are in TMDL (Total Maximum Daily Load) regulatory for Mercury.
- 401 certification is required under Water Quality Certification from RWQCB, which is related to the construction of the Conn Creek Bridge.
- Currently, San Francisco Bay RWQCB will require Permanent Treatment BMPs for the projects which require 401 permit.



Climate

- The rainy season for the project area is October 15 to April 15 and the mean annual precipitation is 32.7 inches (Caltrans Water Quality Planning Tools).

Land Use

- The project is located within predominantly agricultural area (vineyard).

Right of Way

- Caltrans would need to acquire additional right-of-way for this project.

Topography.

- The existing terrain within the project area is a flat terrain.

Soil Information

- The soil formation within the project area are consist of 85 percent riverwash material and 15 percent Cortina Very gravelly loam with 0 to 5 percent slopes, both with moderate to high infiltration rates (Hydrologic Group B according to Soil Survey NRCS).

Groundwater

- Groundwater level expected to be close to the visible water line at the creek within stream zone and slightly higher in creek sides. Ground water level will be fluctuated during seasonal or subsurface changes. The ground water elevations will be measured later during site geotechnical investigation.

Aerially Deposited Lead (ADL)

- Aerially Deposited Lead (ADL) will unlikely be encountered within the project limits.

Environmentally Sensitive Area

- Environmentally Sensitive Areas (ESAs) will be identified through the project limit. The aim of the project will be to avoid and minimize work within ESAs area. Appropriate erosion control and construction site BMPs will be utilized to avoid and minimize the impacts. Any unpreventable impacts will be mitigated for this project. ESA fencing will be placed where needed to protect ESAs area during construction activities.

Local Agency Requirements/Concerns

- There are currently no local agency requirement or concern.

**3. Regional Water Quality Control Board Agreements**

- The San Francisco Bay Regional Water Quality Control Board (RWQCB-2) has water quality jurisdiction of the project.
- Section 401 requires a water quality certification from the State Board or Regional Board when a 404 permit from the Army Corps of Engineers is needed. Since this project will



need a 404 permit and involves work directly in Conn Creek, a 401 certification will be required from the San Francisco Bay RWQCB, RB-2.

- Construction activities involving bridge removal and replacement is expected to encounter ground water, seepage (i.e. dry weather flows) or which may involve non-storm water discharges requiring dewatering. The need of dewatering permit will be evaluated during the PS&E phase. Other permit requires for the project include a Section 1602 from the California Department of Fish and Games.
- San Francisco RWQCB requires all projects that increase impervious surface and/or reconstruct the existing impervious area (reworked area) to assess the feasibility of post construction permanent Treatment BMPs as a condition of the 401 Water Quality Certification process.

#### 4. Proposed Design Pollution Prevention BMPs to be used on the Project.

##### Downstream Effects Related to Potentially Increased Flow

- The proposed project will not increase the impervious area and will not impact to. Velocity and volume of downstream flow.
- Hydro seeding and erosion control products will be used to minimize erosion potential of the site.
- Currently, drainage from the project is allowed to discharge through the existing inlet directly to the main river.
- The majority of runoff from the new bridge deck and approaches will be treated by biofiltration strips and natural infiltration into unpaved portion of the right of way ( Soil in Hydrologic group A).
- Preservation of Existing Vegetation, Checklist DPP-1, Parts 1 and 5
- Existing vegetation will be preserved when feasible. However because the project involves bridge replacement, part of the existing vegetation will be impacted. The area will be cleared consists mostly of trees and bushes. The trees and vegetated area that exempt from clearing and grubbing should be protected by means of proper fencing.

#### 5. Proposed Permanent Treatment BMPs to be used on the Project

- The Targeted Design Constituents (TDCs) are nitrate, nutrients, and sedimentation/siltation. Sediment is the most of the concern among the constituents resulting from the project.
- The treatment strategy for the project is to incorporate BMPs that are effective in removal of sediment.
- The approved Treatment BMPs in order of preference based on load reduction (performance) for sedimentation/siltation and lifetime costs for the device, excluding right-of-way, are (1) Infiltration Devices; (2) Austin Sand Filter, Delaware Filter, Wet Basin; (3) Detention Device, Biofiltration Strip, MCTT, and (4) Biofiltration Swale. The processes of evaluating the selected BMPs in the order of preference are based on site constraints, technical feasibility, relative effectiveness, and cost/benefit ratio.



- At this stage, the project will incorporate a total of 2 biofiltration strips each one about 130 ft long and will be placed along sides of the bridge approaches.
- The unpaved portion of the project limits also will act as a natural infiltration device. with the soil belongs to Hydrologic group A, Excessively Drained (NRCS Soil Survey) (
- The proposed Treatment BMPs will treat a road surface area of approximately 0.15 acres, which provides 100% treatment for reworked area.

#### Dry Weather Diversion, Checklist T-1, Parts 1 and 3

- Dry weather diversion might be considered, during excavation of riverbanks.

#### Infiltration Devices - Checklist T-1, Parts 1 and 4

- Infiltration Basins are not incorporated into this project because of the lack of area necessary for Infiltration Basins.
- Infiltration trenches will be considered as one of the feasible options for treatment BMPs. Because of the high percolation rates of natural ground within the project limits However this matter will be contingent on the imminent regulation of San Francisco Bay RWQCB and the constraint of ground excavation.
- Detention Devices, Checklist T-1, Parts 1 and 5
- Detention devices were considered technically infeasible because insufficient right of way is available to propose Detention Devices.

#### Gross Solids Removal Devices (GSRDs), Checklist T-1, Parts 1 and 6

- As the Conn Creek within the project limits is not on the 303(d) list for trash or does not have a TMDL for trash, GSRDs are not required for the project.

#### Traction Sand Traps, Checklist T-1, Parts 1 and 7

- Traction sand traps are not required for this project as traction sand and other traction enhancing substances are not applied to the roadways. The climate at the project site does not necessitate the application of traction sand.

#### Media Filters, Checklist T-1, Parts 1 and 8

- Insufficient right of way is available to propose Media Filters. In addition, Delaware Filters are considered infeasible because of local agency's vector control issues with standing water.

#### Multi-Chambered Treatment Trains (MCTTs), Checklist T-1, Parts 1 and 9

- The Multi-Chamber Treatment Train is most appropriately used to treat storm water runoff from a critical source area (e.g., vehicle service area, parking area, paved storage area, or fueling station). No such areas are located within the project area.



- Insufficient right of way is available to propose MCTTs. Furthermore, MCTTs are considered infeasible because of local agency's vector control issues.

#### Wet Basins, Checklist T-1, Parts 1 and 10

- Insufficient right of way is available to propose Wet Basins. Besides, Wet Basins are considered infeasible because of local agency's vector control issues, not enough permanent source of water available in sufficient quantities to maintain the permanent pool, and no naturally occurring wetlands.

#### 6. Proposed Temporary Construction Site BMPs to be used on Project

- This project requires implementing a Water Pollution Control plans (WPC). Potential water quality impacts will be reduced to the Maximum Extent Practicable (MEP) through proper implementation of WPC and inclusion of Standard Special Provisions (SSPs) for Temporary Construction Site BMPs into the project.
- The overall site risk level has been determined to be Level 2. Two monitoring locations will be needed for this project and are identified on the project plans.
- The project working days will be specified in the order of work specification for this project at the PS&E phase.
- The R factor in the risk level determination calculation is dependent on project duration. If the project duration is changed at any time prior to project completion, the R factor will change and the project risk level must be recalculated. Monitoring quantities and costs may have to be adjusted if the project risk level changes.
- The construction site BMP strategy for this project will consist of: soil stabilization measures, sediment control measures and non-storm water management measures.

#### Soil Stabilization

- Soil stabilization BMPs will be applied to protect soil from erosion and disturbance.
- The following soil stabilization measures could be considered for this project:

Temporary cover, temporary fence (Type ESA and high visibility plastic fence), hydraulic mulch, hydro-seeding, soil binders, geotextiles, straw mulch, preservation of existing vegetation, erosion control blankets and rock slope protection.

#### Sediment Control

- Sediment control BMPs will be installed to prevent loose soil and suspended solids from getting into the creek.
- The following sediment control measures could be considered for this project:

Temporary silt fence, temporary fiber rolls, temporary gravel bag berm, temporary sand bag barrier, straw bail barrier, check dam, sediment/desilting basin and sediment trap.

These measures should minimize sediment from DSAs traveling to Conn creek.



Non-storm Water Management and Material management measures

- As mentioned before this project will involve works of bridge demolitions and reconstruction of bridge components with concrete materials. Therefore the following construction site non-storm water management, waste management and materials pollution measures could be considered for this project:
- Dewatering, temporary stream crossing, clear water diversion, sediment tracking control, vehicle/equipment operations.
- Waste management: spill prevention/control, solid waste management, hazardous waste management, concrete, liquid waste management.
- Material handling Managements, vehicle and equipment operations, water conservation practices and wind erosion control.

Dewatering

- Dewatering will likely be conducted because of the encountering ground water and likelihood of encountering seepage water from riverside slopes during construction.

Construction Site Management

- Construction site management will be deployed for this project and involves controlling potential sources of water pollution before these pollutants come in to contact with storm water systems or watercourses.
- Selection and quantification of appropriate construction site BMPs will be incorporated into the contract items in PS &E phase.

Maintenance BMPs (Drain Inlet Stenciling)

- Drainage Inlets Stenciling will not be required for this project.



Required Attachments

- Vicinity Map
- Evaluation Documentation Form (EDF)
- Sediment Risk Level Determination

Supplemental Attachments

*Note: Supplement Attachments are to be supplied during the SWDR approval process; where noted, some of these items may only be required on a project-specific basis.*

- Project Plan



**TRANSPORTATION MANAGEMENT PLAN DATA SHEET  
(Preliminary TMP Elements and Costs)**

Co/Rte/P  
M NAP-128-PM R7.4 EA 1G430K Project Engineer Adrian Custodio  
Project Limit In Napa County near Rutherford on Conn Creek Bridge (Br.#21-0021)  
Project Description Structure Rehab

1) Public Information

- a. Brochures and Mailers \$ \_\_\_\_\_
- b. Press Release \_\_\_\_\_
- c. Paid Advertising \$ \_\_\_\_\_
- d. Public Information Center/Kiosk \$ \_\_\_\_\_
- e. Public Meeting/Speakers Bureau \_\_\_\_\_
- f. Telephone Hotline \_\_\_\_\_
- g. Internet, E-mail \_\_\_\_\_
- h. Notification to impacted groups  
(I.e. bicycle users, pedestrians with disabilities, others...)
- i. Others \$2,000

2) Traveler Information Strategies

- a. Changeable Message Signs (Fixed) \$ \_\_\_\_\_
- b. Changeable Message Signs (Portable) \$10,000
- c. Ground Mounted Signs \$ \_\_\_\_\_
- d. Highway Advisory Radio \$ \_\_\_\_\_
- e. Caltrans Highway Information Network (CHIN) \_\_\_\_\_
- f. Detour maps (i.e. bicycle, vehicle, pedestrian...etc)
- g. Revised Transit Schedules/maps \_\_\_\_\_
- h. Bicycle community information \_\_\_\_\_
- i. Others \_\_\_\_\_

3) Incident Management

- a. Construction Zone Enhanced Enforcement  
Program (COZEEP) \$40,000
- b. Freeway Service Patrol \$ \_\_\_\_\_
- c. Traffic Management Team \_\_\_\_\_
- d. Helicopter Surveillance \$ \_\_\_\_\_
- e. Traffic Surveillance Stations  
(Loop Detector and CCTV) \$ \_\_\_\_\_
- f. Others \$ \_\_\_\_\_

## TMP Data Sheet (cont.)

4) Construction Strategies

- a. Lane Closure Chart
- b. Reversible Lanes
- c. Total Facility Closure
- d. Contra Flow
- e. Truck Traffic Restrictions \$ \_\_\_\_\_
- f. Reduced Speed Zone \$ \_\_\_\_\_
- g. Connector and Ramp Closures
- h. Incentive and Disincentive \$ \_\_\_\_\_
- i. Moveable Barrier \$ \_\_\_\_\_
- \_\_\_\_\_ \$ \_\_\_\_\_
- k. Others \$ \_\_\_\_\_

5) Demand Management

- a. HOV Lanes/Ramps (New or Convert) \$ \_\_\_\_\_
- b. Park and Ride Lots \$ \_\_\_\_\_
- c. Rideshare Incentives \$ \_\_\_\_\_
- d. Variable Work Hours
- e. Telecommute
- f. Ramp Metering (Temporary Installation) \$ \_\_\_\_\_
- g. Ramp Metering (Modify Existing) \$ \_\_\_\_\_
- h. Others \$ \_\_\_\_\_

6) Alternate Route Strategies

- a. Add Capacity to Freeway Connector \$ \_\_\_\_\_
- b. Street Improvement (widening, traffic signal...  
etc) \$ \_\_\_\_\_
- c. Traffic Control Officers \$ \_\_\_\_\_
- d. Parking Restrictions
- e. Others \$ \_\_\_\_\_

7) Other Strategies

- a. Application of New Technology \$ \_\_\_\_\_
- e. Others \$ \_\_\_\_\_

**TOTAL ESTIMATED COST OF TMP ELEMENTS = \$52,000.00**

PREPARED BY Marisa M-Kleiber DATE 9/2/2011

APPROVAL RECOMMENDED BY Shein Lin DATE 9/2/2011

*California Department of Transportation  
Division of Maintenance*

*Structure Maintenance and Investigations*

---

**B**<sub>RIDGE</sub>

**I**<sub>NSPECTION</sub>

**R**<sub>ECORDS</sub>

**I**<sub>NFORMATION</sub>

**S**<sub>YSTEM</sub>

---

The requested documents have been generated by BIRIS.

These documents are the property of the California Department of Transportation and should be handled in accordance with Deputy Directive 55 and the State Administrative Manual.

Records for "Confidential" bridges may only be released outside the Department of Transportation upon execution of a confidentiality agreement.



DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 21 0021  
Facility Carried: STATE ROUTE 128  
Location : 04-NAP-128-R7.41  
City :  
Inspection Date : 08/09/2010

### Bridge Inspection Report

#### Inspection Type

Routine	FC	Underwater	Special	Other
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**STRUCTURE NAME:** CONN CREEK

#### CONSTRUCTION INFORMATION

Year Built : 1973	Skew (degrees): 10
Year Widened: N/A	No. of Joints : 0
Length (m) : 36.9	No. of Hinges : 0

Structure Description: Three span continuous RC slab structure on pier wall and diaphragm type abutment at Abutment 4 and a strutted type abutment at Abutment 1. All founded on spread footings.

Span Configuration : 3 @ 12.2 m

#### LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20	Calculation Method: LOAD FACTOR
Inventory Rating: 55.4 metric tonnes	Calculation Method: LOAD FACTOR
Operating Rating: 92 metric tonnes	
Permit Rating : PFFFF	
Posting Load : Type 3; <u>Legal</u>	Type 3S2; <u>Legal</u> Type 3-3; <u>Legal</u>

#### DESCRIPTION ON STRUCTURE

Deck X-Section: 0.3 m br, 15.4 m, 0.3 m br		
Total Width: 16.0 m	Net Width: 15.4 m	No. of Lanes: 2
Rail Description: Type 9-11		Rail Code : 0000
Min. Vertical Clearance: Unimpaired		

#### DESCRIPTION UNDER STRUCTURE

Channel Description: Sand, gravel and cobbles.

#### CONDITION TEXT

##### HISTORY

Methacrylate was placed on the bridge deck on 11/2003 under EA 04-443594 to mitigate the deck cracks. These cracks were documented in prior reports as light pattern and moderate transverse deck cracks over Piers 2 and 3.

This structure has a history of scour problems. In 1995, Bent 2 was undermined and subsequently repaired by placing rock protection around the bent. See photos 1 and 2. The Structures Hydraulics branch has proposed a check dam as a permanent solution to the scour problems.

##### REVISIONS

Item 36 a&b (Traffic Safety Features): Code was changed from 1 to because the speed limit is 55 MPH and this is a Type 9-11 bridge rail. Reference December 2000 Caltrans Bridge Rail Handbook.

##### CONDITION OF STRUCTURE

No water was in the channel at the time of this investigation and all of the visible elements were inspected.

No Type "P" Horizontal Clearance Markers were observed at either end of the bridge.

Printed on: Tuesday 09/21/2010 01:26 PM

21 0021/AAAJ/19170

ATTACHMENT G  
Page 2 of 5

**CONDITION TEXT**

There are a few transverse soffit cracks with efflorescence in the closure pour.

The channel bottom on the Span 3 side of Pier 3 is approximately 3 m higher than the channel bottom on the Span 2 side of Pier 3.

**SCOUR**

The hydraulics report dated 20/07/07 determined that this structure is scour critical due to the history of undermining of the spread footing at Pier 2.

Pier 2: The upstream end of the footing, exposed in 2006, is now covered. On the Span 1 side, the top of the footing is exposed along the downstream 1/3 of the pier. On the Span 2 side of Pier 2, the base of the pier is armored with 2 ton rock. There are voids in the rock protection which are filled in with fine sand and gravel along the downstream half of the pier.

Pier 3: On the Span 2 side, the downstream 2/3 of the footing is exposed. Maximum vertical exposure is 0.3 m at the midpoint of the exposed area, tapering to zero exposure at either end. The area undermined in 2006 has been backfilled with concrete. On the Span 3 side, the footing is not exposed.

**MISCELLANEOUS**

This bridge has a NBI 113 coding of 2 for scour critical. On this date, a few cross section elevations were measured in the field and compared to the previous stream section dated 08/24/06. No significant differences were noted in the elevations.

<b>ELEMENT INSPECTION RATINGS</b>								
F#Elem	Element Description	Env	Total Units	Qty in each Condition State				
				Qty	St. 1	St. 2	St. 3	St. 4
101 38	Concrete Slab - Bare	2	610 sq.m.	610	0	0	0	0
101 210	Reinforced Conc Pier Wall	2	34 m.	34	0	0	0	0
101 215	Reinforced Conc Abutment	2	34 m.	34	0	0	0	0
101 220	Reinforced Conc Submerged Pile Cap/Footing	2	2 ea.	2	0	0	0	0
101 333	Other Bridge Railing	2	86 m.	85	1	0	0	0
101 358	Deck Cracking	2	1 ea.	1	0	0	0	0
101 361	Scour	2	1 ea.	0	1	0	0	0

**WORK RECOMMENDATIONS**

<p>RecDate: 08/09/2010                  Action : Bridge-Install Sign                  Work By: BRIDGE CREW                  Status : PROPOSED</p>	<p>EstCost: \$1,000                  StrTarget: 2 YEARS                  DistTarget:                  EA:</p>	<p>Install Type "P" Horizontal Clearance                  Markers on all four corners of the                  bridge.</p>
<p>RecDate: 08/24/2006                  Action : Sub-Scour Mitigate                  Work By: STRAIN                  Status : PROGRAMMED</p>	<p>EstCost: \$30,000                  StrTarget: 2 YEARS                  DistTarget:                  EA: 1F290</p>	<p>A hole downstream of the bridge is moving                  upstream and has undermined the                  downstream end of the Pier 3 footing.                  Countermeasures are urgently needed. Fill                  the void under the Pier 3 footing with                  grout and place 1/2 T rock armoring with                  RSP fabric across the entire channel                  width along the downstream edge of the                  PCC slab and along the exposed side of                  the Pier 3 footing to a height 2 ft above                  top of footing in Span 2. Use RSP fabric                  underlayment under rock at both                  locations. Estimated quantity is 250 cu</p>

WORK RECOMMENDATIONS

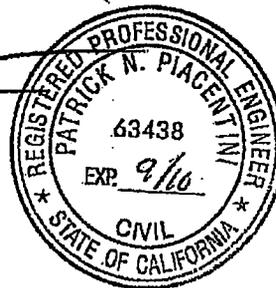
yd; estimated cost is \$30,000.

RecDate: 09/21/1995      EstCost:    \$120,000    CONSTRUCT CHECK DAM.  
 Action : Sub-Scour Mitigate    StrTarget:    2 YEARS  
 Work By: STRAIN                    DistTarget:  
 Status : INITIATED                EA:            1G430

<u>CHANNEL X-SECTION</u>			
Side : Upstream	X-Section Date: 08/09/2010		
Measured From : Top of Rail			
Location	Horiz (m)	Vert (m)	Comments
Abutment 1	0.00	3.86	Face of Abutment
	4.00	4.26	Change of Slope
	7.00	5.20	Change of Slope
Pier 2	12.00	5.40	Center Line of Pier 2
	16.00	5.75	
	22.00	5.24	Change of Slope
Pier 3	24.00	4.30	Center Line of Pier 3
	28.00	3.40	
Abutment 4	36.00	1.40	Face of Abutment

Inspected By : M.Bergman/P.Piacentini

Registered Civil Engineer



**STRUCTURE INVENTORY AND APPRAISAL REPORT**

\*\*\*\*\* IDENTIFICATION \*\*\*\*\*

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 21 0021  
 (5) INVENTORY ROUTE (ON/UNDER)- ON 131001280  
 (2) HIGHWAY AGENCY DISTRICT 04  
 (3) COUNTY CODE 055 (4) PLACE CODE 00000  
 (6) FEATURE INTERSECTED- CONN CREEK  
 (7) FACILITY CARRIED- STATE ROUTE 128  
 (9) LOCATION- 04-NAP-128-R7-41  
 (11) MILEPOINT/KILOMETERPOINT 7.41  
 (12) BASE HIGHWAY NETWORK- NOT ON NET 0  
 (13) LRS INVENTORY ROUTE & SUBROUTE  
 (16) LATITUDE 38 DEG 29 MIN 13 SEC  
 (17) LONGITUDE 122 DEG 24 MIN 20 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

\*\*\*\*\* STRUCTURE TYPE AND MATERIAL \*\*\*\*\*

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE CONT  
 TYPE- SLAB CODE 201  
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA  
 TYPE- OTHER/NA CODE 000  
 (45) NUMBER OF SPANS IN MAIN UNIT 3  
 (46) NUMBER OF APPROACH SPANS 0  
 (107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1  
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:  
 A) TYPE OF WEARING SURFACE- NONE CODE 0  
 B) TYPE OF MEMBRANE- NONE CODE 0  
 C) TYPE OF DECK PROTECTION- NONE CODE 0

\*\*\*\*\* AGE AND SERVICE \*\*\*\*\*

(27) YEAR BUILT 1973  
 (106) YEAR RECONSTRUCTED 0000  
 (42) TYPE OF SERVICE: ON- HIGHWAY 1  
 UNDER- WATERWAY 5  
 (28) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00  
 (29) AVERAGE DAILY TRAFFIC 1230  
 (30) YEAR OF ADT 1997 (109) TRUCK ADT 3 %  
 (19) BYPASS, DETOUR LENGTH 18 KM

\*\*\*\*\* GEOMETRIC DATA \*\*\*\*\*

(48) LENGTH OF MAXIMUM SPAN 12.2 M  
 (49) STRUCTURE LENGTH 36.9 M  
 (50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 15.4 M  
 (52) DECK WIDTH OUT TO OUT 16.0 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 12.2 M  
 (33) BRIDGE MEDIAN- NO MEDIAN 0  
 (34) SKEW 10 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 16.0 M  
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M  
 (54) MIN VERT UNDERCLEAR REF- NOT H/RR 0.00 M  
 (55) MIN LAT UNDERCLEAR RT REF- NOT H/RR 0.0 M  
 (56) MIN LAT UNDERCLEAR LT 0.0 M

\*\*\*\*\* NAVIGATION DATA \*\*\*\*\*

(38) NAVIGATION CONTROL- NO CONTROL CODE 0  
 (1.11) PIER PROTECTION- CODE  
 (39) NAVIGATION VERTICAL CLEARANCE 0.0 M  
 (1.16) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M  
 (40) NAVIGATION HORIZONTAL CLEARANCE 0.0 M

\*\*\*\*\* SUFFICIENCY RATING = 93.9 \*\*\*\*\*

STATUS  
 HEALTH INDEX 100.0  
 PAINT CONDITION INDEX = N/A

\*\*\*\*\* CLASSIFICATION \*\*\*\*\* CODE

(112) NBIS BRIDGE LENGTH- YES Y  
 (104) HIGHWAY SYSTEM- NOT ON NHS 0  
 (26) FUNCTIONAL CLASS- MAJOR COLLECTOR RURAL 07  
 (100) DEFENSE HIGHWAY- NOT STRAHNET 0  
 (101) PARALLEL STRUCTURE- NONE EXISTS N  
 (102) DIRECTION OF TRAFFIC- 2 WAY 2  
 (103) TEMPORARY STRUCTURE-  
 (105) FED.LANDS.HWY- NOT APPLICABLE 0  
 (110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0  
 (20) TOLL- ON FREE ROAD 3  
 (21) MAINTAIN- STATE HIGHWAY AGENCY 01  
 (22) OWNER- STATE HIGHWAY AGENCY 01  
 (37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5

\*\*\*\*\* CONDITION \*\*\*\*\* CODE

(58) DECK 7  
 (59) SUPERSTRUCTURE 7  
 (60) SUBSTRUCTURE 6  
 (61) CHANNEL & CHANNEL PROTECTION 4  
 (62) CULVERTS N

\*\*\*\*\* LOAD RATING AND POSTING \*\*\*\*\* CODE

(31) DESIGN LOAD- MS-18 OR HS-20 5  
 (63) OPERATING RATING METHOD- LOAD FACTOR 1  
 (64) OPERATING RATING- 92  
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1  
 (66) INVENTORY RATING- 55.4  
 (70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5  
 (41) STRUCTURE OPEN, POSTED OR CLOSED- A  
 DESCRIPTION- OPEN, NO RESTRICTION

\*\*\*\*\* APPRAISAL \*\*\*\*\* CODE

(67) STRUCTURAL EVALUATION 6  
 (68) DECK GEOMETRY 9  
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N  
 (71) WATER ADEQUACY 6  
 (72) APPROACH ROADWAY ALIGNMENT 4  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (1.13) SCOUR CRITICAL BRIDGES 2

\*\*\*\*\* PROPOSED IMPROVEMENTS \*\*\*\*\*

(75) TYPE OF WORK- CODE  
 (76) LENGTH OF STRUCTURE IMPROVEMENT M  
 (94) BRIDGE IMPROVEMENT COST  
 (95) ROADWAY IMPROVEMENT COST  
 (96) TOTAL PROJECT COST  
 (97) YEAR OF IMPROVEMENT COST ESTIMATE  
 (1.14) FUTURE ADT 2095  
 (1.15) YEAR OF FUTURE ADT 2029

\*\*\*\*\* INSPECTIONS \*\*\*\*\*

(90) INSPECTION DATE 08/10 (91) FREQUENCY 24 MO  
 (92) CRITICAL FEATURE INSPECTION: (93) CFI DATE  
 A) FRACTURE CRIT DETAIL- NO MO A)  
 B) UNDERWATER INSP- NO MO B)  
 C) OTHER SPECIAL INSP- NO MO C)

Nap-128 May 5, 2011 Meeting

Attendance Sheet

Name	Office	Phone #
1. Adrian Custodio	Special Projects	286-5004
2. TOM SIANG	HYDRAULICS	286-4855
3. FukNyan Kurniawan	MTBE	286-5213
4. Daniel Haile	Special Projects	622-8834
5. Charlotte Cahin	Hydraulics	510 286.4879
6. CHUCK MORTON	MAINTENANCE	576 286 5016
7. Kelly Hirschberg	PM	(510) 286-4425
8. LARRY JONES	DESIGN	(510) 286-5080
9. GINGER Lu		916 227 8230
10. Tony Nedwick	Street-Hyd	(916) 227-8852
11. Scott Davis	SM&I	916-227-0279

ATTACHMENT H