

### DEPARTMENT OF TRANSPORTATION

Structure Maintenance & Investigations

Bridge Number : 24C0004

Facility Carried: DILLARD RD : 0.2 MI S OF S.R. 16 Location

City

Inspection Date: 04/18/2007

Bridge Inspection Report

Inspection Type FC Underwater Special Other Routine Х

STRUCTURE NAME: COSUMNES RIVER

CONSTRUCTION INFORMATION

: 106.7

Year Built : 1964 Year Widened: N/A

Length (m)

Skew (degrees): No. of Joints : 0 No. of Hinges: 0

Structure Description: RC T-girders (4), continuous on RC piers, and on RC diaphragm

abutments

:15.5 m, 3 @ 25 m, 15.5 m Span Configuration

69.8

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20

Inventory Rating: 41.7

Calculation Method: LOAD FACTOR metric tons Calculation Method: LOAD FACTOR metric tons

Permit Rating : PPPPP

Operating Rating:

Posting Load : Type 3

Type 3S2 N/A

Type 3-3

N/A

DESCRIPTION ON STRUCTURE

Deck X-Section: 0.3 m br, 0.6 m sw, 8.5 m, 0.6 m sw, 0.3 m br

N/A

Total Width: 10.4 m Net Width: 8.5 m No. of Lanes: 2

Rail Description: Type 2

Rail Code : 1000

Min. Vertical Clearance: Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description: Earth lined, with light rock riprap on abutment slopes.

CONDITION TEXT

REVISIONS

The rating method was changed to "Calculated" per hand and computer calculations in the bridge book.

CONDITION OF STRUCTURE

Minor efflorescence is present in the soffit of the over hangs.

SCOUR

The footing at pier 3 was exposed approximately 2' along its entire length. No undermining was observed.

UNDERWATER INVESTIGATION

The maximum water depth was about 5' at pier 3 at the time of inspection. The footing at pier 3 was not inspected due to the water depth and velocity.

STEEL INVESTIGATION

Printed on: Thursday 08/02/2007 11:05 AM 24C0004/AAAD/10923

### CONDITION TEXT

This bridge is not Fracture Critical and does not have Special Features. It has four steel girders.

ELEI	ELEMENT INSPECTION RATINGS									
F#E1	em ]	Element Description	Env	Total	Units	Qt	y in eac	ch Condi	tion Sta	ate
				Qty		St. 1	St. 2	St. 3	St. 4	St. 5
101	13	Concrete Deck - Unprotected w/ AC Overlay	2	910	sq.m.	910	0	0	0	0
101	110	Reinforced Conc Open Girder/Beam	2	427	m.	427	0	0	0	0
101	210	Reinforced Conc Pier Wall	2	41	m.	41	0	0	0	0
101	215	Reinforced Conc Abutment	2	21	m.	21	0	0	0	0
101	225	Unpainted Steel Submerged Pile	2	52	ea.	52	0	0	0	0
101	333	Other Bridge Railing	2	226	m.	226	0	0	0	0
101	361	Scour	2	1	ea.	0	1	0	0	0

## WORK RECOMMENDATIONS

RecDate: 04/18/2007

Action : Sub-Scour Mitiga StrTarget:

EstCost:

DistTarget:

Bridge is scour critical (10-11-06 BIR).

Local agency should investigate and provide scour mitigation and a POA.

Work By: LOCAL AGENCY Status : PROPOSED

Printed on: Thursday 08/02/2007 11:05 AM

Inspected By :

Ricardo Fuentes

Registered Civil Engineer

# STRUCTURE INVENTORY AND APPRAISAL REPORT

STATUS   S		**************************************		**************************************
A	- (	1) STATE NAME- CALIFORNIA 069		
(2) HOWANY AGREY DETRICATED (2) HORATY CORD 067 (4) PLACE CODE 0000 (3) COUNTY CORD 067 (4) PLACE CODE 0000 (6) FRATURE INTERSECTED- COSUMENS RIVER (7) FACILITY CARRIED- DILLADE RD (8) LOCATION- 0.2 MI S OF S.R. 16 (8) LOCATION- 0.2 MI S OF S.R. 16 (10) LOCATION- 0.2 MI S OF S.R. 16 (11) MILEPOINT/ALLOMETERPOINT 0.2 MI S OF S.R. 16 (12) LOSS HORAT ROUTE & SURGOUTE 0.2 MI S OF S.R. 16 (13) LAS INVENTORY NOVE & SURGOUTE 0.3 MIRE 2 MIN 2 SEC (17) LONGITUDE 3 SER 2 MIN 27 SEC (17) LONGITUDE 3 SER 2 MIN 27 SEC (18) BORDER BRIDGE STRICTURE NUMBER 0.4 MIN 2 SEC (17) LONGITUDE 3 SER 2 MIN 27 SEC (17) LONGITUDE 12 LEE CODE 8 MIN 29 SEC (17) LONGITUDE 12 LEE CODE 8 MIN 29 SEC (18) BORDER BRIDGE STRICTURE NUMBER 0.0 MIN 25 SEC (19) BORDER BRIDGE STRICTURE NUMBER 0.0 MIN 25 SEC (10) DECK STRUCTURE TYPE ADD MATRIAL ***** (10) DECK STRUCTURE TYPE APPRIMATERIAL ORGANIST CODE 0 (107) DECK STRUCTURE TYPE APPRIMATERIAL ORGANIST CO	(	8) STRUCTURE NUMBER 24C0004		
(3) COUNTY CORE OF (4) PLACE CODE 00000 (6) FEATURE INTERSECTED— COSUMINS KIVER (7) FACTLITY CARRIED— DILLARD RD (9) LOCATION— (12) BASE BIGGRAY NETWORK— NOT ON HET 0 (12) BASE BIGGRAY NETWORK— NOT ON HET 0 (13) LAS INVENTORY NETWORK— NOT ON HET 0 (14) MILEPOINTY/KILOMETERPOINT 0 (15) LANDITUDE 2 SUBBOUTE 2 (16) LAYETUDE 2 SUBBOUTE 2 (17) LONGITUDE 2 121 DEG 09 MIN 39 SEC 2 (18) BORDER BRIDGE STATE CODE 3 SHARE \$ (17) LONGITUDE 121 DEG 09 MIN 39 SEC 2 (18) BORDER BRIDGE STATE CODE 5 SHARE \$ (18) STRUCTURE TYPE AND MATERIAL — COME 05 CODE 0 (19) BORDER BRIDGE STATE CODE 5 SHARE \$ (10) DEFENSATE DATE OF NOT APPLICABLE \$ (10) DEFENSATE DATE OF NOT ON NET 0 (10) MERINGE OF PERFOACH SPANS 0 (10) MERINGE OF SPANS IN NAIN INITY 5 (10) DEFENSATE DATE OF SPANS OF NOT APPLICABLE \$ (10) TYPE— NOT APPLICABLE CODE 1 (10) MERINGE OF SPANS IN NAIN INITY 5 (10) DEFENSATE DATE OF NOT APPLICABLE \$ (10) DEFENSATE DATE OF NOT APPLICABLE \$ (10) DEFENSATE DATE OF NAIN AGENCY 02 (10) DEFENSATE DATE OF NAIN AGENCY 02 (10) DEFENSATE DATE OF NOT NOT ON NET 02 (10) DEFENSATE DATE OF NAIN AGENCY 02 (11) DESCRIPTED NOT NOT NOT NOT ON NET 02 (12) OWNER— COUNTY HIGHWAY AGENCY 02 (13) STRUCTURE TYPE AND MATERIAL — CODE 0 (14) STRUCTURE TYPE AND MATERIAL — NOT APPLICABLE \$ (15) NUMBER OF SERVING SPANS 0 (16) SUBSTRUCTURE TYPE AND MATERIAL — NOT APPLICABLE \$ (17) DEC STRUCTURE OF SPANS 0 (18) MERANDE SUBMER OF SPANS 0 (19) DEFENSE RECORDER SPANS 0 (10) SUBSTRUCTURE OF SPANS 0 (10) SUBSTRUCTURE SPANS 0 (10) SUBSTRUCTURE DATE OF NOT SECOND 0 (10) SUBSTRUCTURE DATE OF NOT SECOND 0 (11) SUBSTRUCTURE DATE OF NOT SECOND 0 (12) SUBSTRUCTURE DATE OF NOT SECOND 0 (13) SUBSTRUCTURE DATE OF NOT SECOND 0 (14) STRUCTURE DATE OF NOT SECOND 0 (15) BALIGE ROWAND NETWORK OF NOT SECOND 0 (16) SUBSTRUCTURE DATE OF NOT SECOND 0 (17) DEFORMED OF NOT SECOND 0 (18) STRUCTURE DATE OF NOT SECOND 0 (19) SPARSS, DETOOR LEMOTH 10 SATE OF NOT SECOND 0 (19) SPARSS, DETOOR LEMOTH 10 SATE O	(	5) INVENTORY ROUTE (ON/UNDER) - ON 1400V5640		
(6) FRATURE INTERSECTED COSUMUS RIVER (7) FACILITY CARRIED— DILLARD RD (10) LOCATION— (11) LOCATION— (12) LOSS CARRIED— (13) LOCATION— (14) LOCATION— (14) RISEPOINT MINORAL NOT ON NET (15) LORS HIGHNY INTROMAL NOT ON NET (16) LANTIDDE (17) LORSITUDE (18) BORDER BRIDGE STATE CODE (18) BORDER BRIDGE STATE CODE (19) BORDER BRIDGE STATE CODE (19) BORDER BRIDGE STATE CODE (19) BORDER BRIDGE STATE CODE (10) BORDER BRIDGE STATE MAIN MINIT (10) BORDER BRIDGE STATE MAIN MINIT (10) BORDER BRIDGE STATE MAIN MINIT (10) BORDER STATE CODE (10) BORDER BRIDGE STATE (10) BORDER BRI	- (	2) HIGHWAY AGENCY DISTRICT 03		PAINT CONDITION INDEX = N/A
Control	(	3) COUNTY CODE 067 (4) PLACE CODE 00000		******** CLASSIFICATION ******** CODE
(104)   HIGHWAY SYSTEM. NOT OR NHS   0   0   10   10   10   10   10   10	. (	6) FEATURE INTERSECTED- COSUMNES RIVER	(112)	NBIS BRIDGE LENGTH- YES Y
113   MILEGRATION			(104)	HIGHWAY SYSTEM- NOT ON NHS 0
(12) BASE HURBHAY NEWFORKS NOT ON NET 0 (10) DEFENSE HIGHWAY. NOT STRAINET 0 (12) BASE HURBHAY NEWFORKS NOT NET 0 (13) LES INVENTORY ROUTE & SURGEOUTE 1 (12) DES OF MINISTRUCTURE. NONE EXISTS N (13) LES INVENTORY ROUTE & SURGEOUTE 1 (12) DES OF MINISTRUCTURE. NONE EXISTS N (13) LES INVENTORY ROUTE & SURGEOUTE 1 (12) DES OF MINISTRUCTURE. NOT APPLICABLE STRUCTURE TYPE AND MATERIAL CONCERTS CONT TYPE. THE BEAM CODE 204 (13) STRUCTURE TYPE AND MATERIAL CONCERTS CONT TYPE. THE BEAM CODE 204 (14) STRUCTURE TYPE AND MATERIAL CODE 204 (14) STRUCTURE TYPE AND MAIN INSTIT 5 (5) DECK STRUCTURE TYPE AND MAIN INSTIT 5 (5) SIMPLE OF MARGANER NONE NOT APPLICABLE TYPE AND APPRICABLE CODE 1 (16) WEARING SURFACE DITURTHOUS CODE 6 (17) DECK STRUCTURE TYPE - CIP CONCRETE CODE 1 (16) WEARING SURFACE PUT OF MAIN INSTIT 5 (5) STRUCTURE TYPE - CIP CONCRETE CODE 1 (17) DECK STRUCTURE TYPE - CIP CONCRETE CODE 1 (17) DECK STRUCTURE TYPE - CIP CONCRETE CODE 1 (17) DECK STRUCTURE TYPE - CIP CONCRETE CODE 1 (17) DECK STRUCTURE TYPE - CIP CONCRETE CODE 1 (17) WEAR ROUTE TYPE - CIP CONCRETE CODE 1 (17) DECK STRUCTURE TYPE - CIP CONCRETE CODE 1 (17) WEAR RECONSTRUCTOR TYPE - CIP CONCRETE CODE 1 (17) WEAR RECONSTRUCTURE TYPE - CIP CONCRETE CODE 1 (17) WEAR RECONSTRUCTURE OR OF MARGANER NONE CODE 6 (17) WEAR RECONSTRUCTED 1 (17) WEAR RECONSTRUCTURE OR OND WE STRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WE STRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WE STRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WE STRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WE STRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WEAR RECONSTRUCTURE OR OND WE STRUCTURE OR O		•	(26)	FUNCTIONAL CLASS- MINOR ARTERIAL RURAL 06
(11) BASE HIGHWAY NETWORK NOT ON NET 0 (11) PARALLEL STRUCTURE NOR EXISTS NO. 13 LAS INVENTORY ROUTE & SUBGOURE 121 DEG 0 9 MIN 39 SEC (13) LAS INVENTORY ROUTE & SUBGOURE \$ SHARE \$ (13) LORGITUDE \$ \$ SHARE \$ (14) DEGENER REIDGE STRUCTURE NUMBER \$ (14) DEGENER REIDGE STRUCTURE TYPE APPRIAMENTALL CONCRETE CONT \$ (14) STRUCTURE TYPE NOT APPLICABLE CODE \$ (15) NUMBER OF SPRINGERIAL NOT APPLICABLE TYPE NOT APPLICABLE CODE \$ (16) NUMBER OF SPRINGERIAL NOT APPLI	(1	A STATE OF THE PROPERTY OF THE	(100)	DEFENSE HIGHWAY- NOT STRAHNET 0
(13) LRS INVENDERY ROUTE & SURROUTE (16) LAITURDE (17) LONGITUDE (		The second secon	(101)	PARALLEL STRUCTURE- NONE EXISTS N
161   LANGITUDE			(102)	DIRECTION OF TRAFFIC- 2 WAY 2
(198) BORDER BRIDGE STATE CODE			(103)	TEMPORARY STRUCTURE-
(39) BORDER BEIDER STRUCTURE NUMBER  (39) BORDER BEIDER STRUCTURE NUMBER  ***********************************			(105)	FED.LANDS HWY- NOT APPLICABLE 0
199   BORDER BRIDGE STRUCTURE NUMBER   120   TOLL- ON FREE ROAD   3   121   MAINTAIN-COUNTY HIGHWAY AGENCY   02   122   CMARE   COUNTY HIGHWAY AGENCY   02   123   STRUCTURE TYPE AND MATERIAL   CONCRETE CONT   TYPE   THE BEAM   CODE   204   CMAINTAIN-MININATERIAL   CONCRETE CONT   TYPE   THE BEAM   CODE   CMAINTAIN   CONCRETE CONT   TYPE   NOT APPLICABLE   CODE   CMAINTAIN   COUNTY HIGHWAY AGENCY   CODE   CMAINTAIN   COUNTY   COUNTY HIGHWAY AGENCY   CMAINTAIN   COUNTY   COUNTY HIGHWAY AGENCY   CMAINTAIN   COUNTY   COUNTY   CMAINTAIN   COUNTY   CMAINTAIN   CMAINTAIN   COUNTY   CMAINTAIN   CANDEN   CMAINTAIN   C			(110)	DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(21) MAINTAIN—COUNTY HIGHWAY AGENCY OCAL (22) CAMPER COUNTY HIGHWAY AGENCY OCAL (23) STRUCTURE TYPE AND MATERIAL—CONCRETE CONTY Type. THE BEAM CODE 204  (44) STRUCTURE TYPE APPH:MATERIAL—NOT APPLICABLE CODE TYPE. NOT APPLICABLE CODE TYPE. OTHER TYPE. CIP CONCRETE CODE TYPE. OTHER TYPE. CODE TYPE. OTHER TYPE. CIP CONCRETE CODE TYPE. CIP CONCRETE TYPE. CODE TYPE. OTHER TYPE. CIP CONCRETE CODE TYPE. CIP CONCRETE TYPE. TYPE. CODE TYPE. CIP CONCRETE TYPE. TYPE. CODE TYPE. CODE TYPE. CIP CONCRETE TYPE. TYPE. CIP CONCRETE TYPE. TYPE. CODE TYPE. CIP CONCRETE TYPE. TYPE. CODE TYPE. CIP CONCRETE TYPE. CODE TYPE. CIP CONCRETE TYPE. TYPE. CIP CONCRETE TYPE. TYPE. CODE TYPE. CIP CONCRETE TYPE. TYPE. CIP CONCRETE TYPE. TYPE. CODE TYPE. CIP CONCRETE TYPE. CODE TYPE. CODE TYPE. CODE TYPE. CONCRE			(20)	TOLL- ON FREE ROAD 3
137   STRUCTURE TYPE NAIN HATRETALL   CONCECTE CONT TYPE	(3.	O BONDEN BRIDGE SINGCIONE MODEL	(21)	MAINTAIN- COUNTY HIGHWAY AGENCY 02
TYPE		****** STRUCTURE TYPE AND MATERIAL *******	(22)	OWNER- COUNTY HIGHWAY AGENCY 02
TYPE	(4)			
(45) NUMBER OF SPANS IN MAIN UNIT	(4	4) STRUCTURE TYPE APPR:MATERIAL- NOT APPLICABLE		********** CONDITION ********** CODE
			(58)	DECK 7
(107) DECK STRUCTURE TYPE— CIP CONCRETE CODE 1 (108) WEARING SURFACE / PROTECTIVE SYSTEM:  A) TYPE OF DECK PROTECTIVE SYSTEM:  A) TYPE OF DECK PROTECTION— NONE CODE 0 (B) TYPE OF DECK PROTECTION— NONE CODE 0 (C) YEAR BUILT 1964 (G) YEAR RECONSTRUCTED 0000 (G) OPERATING RATING METHOD— LOAD FACTOR 1 (G6) INVENTORY RATING— 69.8 (G7) BRIDGE POSTING— EQUAL TO OR ABOVE LEGAL LOADS 5 (G8) LANES:ON STRUCTURE 0 20 UNDER STRUCTURE 0 00 (G9) AVERAGE DAILY TRAFFIC 3300 (G0) YEAR OF ADT 2007 (109) TRUCK ADT 10 % (G6) INVENTORY RATING— DEEM, NO RESTRUCTURE 0 00 (G9) AVERAGE DAILY TRAFFIC 3300 (G0) YEAR OF ADT 2007 (109) TRUCK ADT 10 % (G6) INVENTORY RATING— DEEM, NO RESTRUCTURE 0 00 (G7) STRUCTURE LEGAL LOADS 5 (G7) STRUCTURE LEVALUATION 6 (G7) STRUCTURE LEVALUATION 6 (G8) DECK GEOMETRY 4 (G7) STRUCTURAL EVALUATION 6 (G8) DECK GEOMETRY 4 (G7) WINDERCLEAR NET— NO THEND 10 NO (G7) TARFFIC SAFETY FEATURES 1000 (G7) APPROACH ROADWAY WIDTH CURB TO CURB 8.5 M (G7) STRUCTURAL EVALUATION 6 (G8) DECK GEOMETRY 4 (G7) WINDERCLEAR NET— NO THEND 10 NO (G7) TARFFIC SAFETY FEATURES 1000 (G7) APPROACH ROADWAY WIDTH CURB TO CURB 8.5 M (G7) STRUCTURE LEGAL CASE SAFETY FEATURES 1000 (G7) TARFFIC SAFETY FEATURE INSPECTION 5 (G7) TYPE OF WORK— CODE 10 NO	(4	5) NUMBER OF SPANS IN MAIN UNIT 5	(59)	SUPERSTRUCTURE 7
(109) WEARING SURFACE / PROTECTIVE SYSTEM:  A) TYPE OF WEARING SURFACE- BITUMINOUS CODE 6 B) TYPE OF DEWARING SURFACE- BITUMINOUS CODE 0 C) TYPE OF DEWARING SURFACE- NONE CODE 0 C) TOTAL FOR THE STORY RATING METHOD- LOAD FACTOR 1 C) SURFACTION METHOD LOAD FACTOR 1 C) SURFACTORY RATING METHOD- LOAD FACTOR 1 C) SURFACTION FACTORY RATING M	(4	6) NUMBER OF APPROACH SPANS 0		
(108) WEARING SURFACE / PROTECTIVE SYSTEM: A) TYPE OF WEARING SURFACE - BITUMINOUS CODE 6 B) TYPE OF MEMBRANE - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF DECK PROTECTION - NONE CODE 0 C) TYPE OF SERVICE: ON - HIGHWAY 1 1 C) WINDER - WATERWAY 5 C) CODE 0 C) WEAR RECONSTRUCTURE 0 0 0000 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3300 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3300 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3300 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3000 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3000 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3000 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3000 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3000 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEARAGE DAILY TRAFFIC 3000 C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 10 % C) WEAR OF ADT 2007 (109) TRUCK ADT 2007 (109) TR	(10	7) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1		·
A			(62)	CULVERTS
CODE				****** LOAD RATING AND POSTING ****** CODE
CODE	I	-	(31)	DESTGN LOAD- MS-18 OR HS-20 5
**************************************	(	C) TYPE OF DECK PROTECTION- NONE CODE 0		
1964   1974   1974   1974   1974   1974   1974   1974   1974   1975		******** AGE AND SERVICE *********		_
66   YEAR RECONSTRUCTED	(27	7) YEAR BUILT 1964		
1		- San Carlotte Control of the Contro		
CARRESTON STRUCTURE   02 UNDER STRUCTURE   00	,42	2) TYPE OF SERVICE: ON- HIGHWAY 1		
ALMSS:ON STRUCTURE   O2   UNDER STRUCTURE   O3		UNDER- WATERWAY 5		
(30) YEAR OF ADT 2007 (109) TRUCK ADT 10 % ****************** APPRAISAL ************************************	(28	B) LANES:ON STRUCTURE 02 UNDER STRUCTURE 00	(/	
(19) BYPASS, DETOUR LENGTH 6 KM  ***********************************	(29	O) AVERAGE DAILY TRAFFIC 3300		
**************************************	(30	)) YEAR OF ADT 2007 (109) TRUCK ADT 10 %		********* APPRAISAL ********* CODE
(48) LENGTH OF MAXIMUM SPAN 25.0 M (49) STRUCTURE LENGTH 106.7 M (50) CURB OR SIDEWALK: LEFT 0.6 M RIGHT 0.6 M (51) BRIDGE ROADWAY WIDTH CURB TO CURB 8.5 M (52) DECK WIDTH OUT TO OUT 10.4 M (33) APPROACH ROADWAY WIDTH (W/SHOULDERS) 10.7 M (33) BRIDGE MEDIAN- NO MEDIAN 0 (75) TYPE OF WORK- CODE (47) INVENTORY ROUTE MIN VERT CLEAR 99.99 M (40) INVENTORY ROUTE TOTAL HORIZ CLEAR 8.5 M (55) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M (56) MIN LAT UNDERCLEAR RFF- NOT H/RR 0.00 M (56) MIN LAT UNDERCLEAR RT REF- NOT H/RR 0.00 M (111) PIER PROTECTION- CODE (39) NAVIGATION VERTICAL CLEARANCE 0.0 M (111) PIER PROTECTION- CODE (39) NAVIGATION VERTICAL CLEARANCE 10.0 M (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M (100) MAUGATION HOR IZONTAL CLEARANCE 10.0 M (111) VEATORY OF MAXIMUM SPAN 10.0 M (112) PARK OF FUTURE ADT 20.0 M (113) STRUCTURE & HORIZONTAL CLEARANCE 10.0 M (114) FUTURE ADT 20.0 M (115) INVENTORY ROUTE MIN VERT CLEAR 10.0 M (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M (117) WATER ADEQUACY (118) APPROACH ROADWAY ALIGNMENT 6 (36) TRAFFIC SAFETY FEATURES 1000 (37) TYPE OF WORK- CODE (75) TYPE OF WORK-	(19	) BYPASS, DETOUR LENGTH 6 KM		
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### DEPARTMENT OF TRANSPORTATION

Structure Maintenance & Investigations

Bridge Number : 24C0004

Facility Carried: DILLARD RD Location

: 0.2 MI S OF S.R. 16

City

Inspection Date: 10/11/2006

Inspection Type

Bridge Inspection Report

Routine FC Underwater Special Other Х

STRUCTURE NAME: COSUMNES RIVER

CONSTRUCTION INFORMATION

Year Built : 1964 Year Widened: N/A : 106.7 Length (m)

Skew (degrees): 0 No. of Joints: 0

No. of Hinges :

Structure Description: RC T-girders (4), continuous on RC piers, and on RC diaphragm

abutments

Span Configuration :15.5 m, 3 @ 25 m, 15.5 m

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20

Inventory Rating: 41.7 metric tons Calculation Method: LOAD FACTOR

Operating Rating: 69.8 metric tons Calculation Method: LOAD FACTOR

N/A

Permit Rating : PPPPP

Posting Load : Type 3

N/A

Type 3S2

Type 3-3

N/A

DESCRIPTION ON STRUCTURE

Deck X-Section: 0.3 m br, 0.6 m sw, 8.5 m, 0.6 m sw, 0.3 m br

Total Width: 10.4 m

Net Width: 8.5 m No. of Lanes: 2

Rail Description: Type 2

Rail Code : 1000

Min. Vertical Clearance: Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description: Earth lined, with light rock riprap on abutment slopes.

### CONDITION TEXT

HISTORY

The 2/22/74 report referred to debris accumulation at upstream end of Pier 3. The same kind of debris problems were reported repeatedly till the 2/11/91 report indicated the top and about 1' of the sides of the footing at Bent 3 are exposed. The 3/19/93 indicated the structure at Piers 2 and 3 should be monitored for possible scour and undermining at this location. The 11/16/01 through 4/18/07 reports have given the structure an Element Level Inspection 361 Code, Scour Smart flag with Condition State of 2: "Scour exists at the bridge site and if left unchecked could adversely impact the structural integrity of the bridge".

The 4/18/07 bridge report indicates on the attached SIA sheet (page 3 of 3) that the National Bridge Inventory (NBI) Item 113 Code, scour rating is currently a "5" but, there is no historical documentation within the Department of Structures Hydraulics showing the reasons of changing from "U" to "5" or when the bridge was asssessed with a "5".

REVISIONS

The National Bridge Inspection (NBI) Item 113 Code has been revised from 5 to 3.

SCOUR

This report addresses hydraulic issues only. The structure's scour potential has been assessed in accordance with the FHWA Technical Advisory T5140.23, "Evaluating Scour at

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24C0004/AAAC/11328

### CONDITION TEXT

Bridges". The NBI Item 113 Code, "Vulnerability to Scour", is changed to 3: "Bridge is scour critical: bridge foundations determined to be unstable for assessed or calculated scour conditions; scour within limits of footing or piles".

Structure Hydraulics conducted a field investigation on 10/11/06, made an upstream channel cross-section measurement at the bridge and the following observations were made during this field investigation.

The channel bed was composed of earth, sand and cobbles with some shrubs and trees at both sides banks. The Abutments slopes were covered with light rock riprap. Heavy drift and debris were accumulated in front and around Pier 4. Water was flowing through the Spans 2 and 3 with low velocity and maximum depth of 5'. A Portion of the piles cap at Pier 2 and the full length at Pier 3 were exposed.

This evaluation is based on the maintenance information reports, available as-built plans printed from the Bridge Inspection Records Information System (BIRIS) and the results of the field investigation conducted by the Structure Hydraulics team on 10/11/06.

A comparison of the present channel cross-section with available historical channel cross-sections taken in 1972 and after shows that the channel bottom elevation (thalweg) has substantially degraded (10 ft) since the bridge was built (see attached plotted historical cross-sections at the bridge).

The scour calculations, analysis and review evaluations revealed that the structure is potentially scour critical. Since the estimated scour potential scour (this includes potential local scour, future potential channel degradation and future potential channel migration) at Piers 2, 3 and 4 were significantly deeper than the allowable scour elevations, we consulted with other Caltrans sections, Structure Analysis and Geotechnical Support.

Geotechnical Support, in a letter dated May 8,2007, indicated the as-built Log of Test Borings (LOTBs) shows that the site-specific geology consists of recent stream alluvial deposits. The alluvial material consists of loose to medium dense silty sand, sandy silt, gravelly silty sand and silt underlain by very dense very fine sand, clayey silt and hard to very hard silty clay to clayey silt. This material is considered not scour resistant and thence for the predicted scour elevation the existing steel H-piles at the piers will not be able to support the required unfactored axial loads in compression under the potential scour. Therefore the structure is considered to be scour critical at this time.

#### MISCELLANEOUS

The hydraulic integrity of the structure will likely remain stable as long as the Local Agency continues with proper channel maintenance at the bridge. This channel has a history of drift and debris accumulation at upstream end of Piers and significant channel degradation. In order to minimize the lateral forces on the substructure, the Local Agency should clean out the channel periodically or as needed and engineer mitigation for estimate future scour elevation.

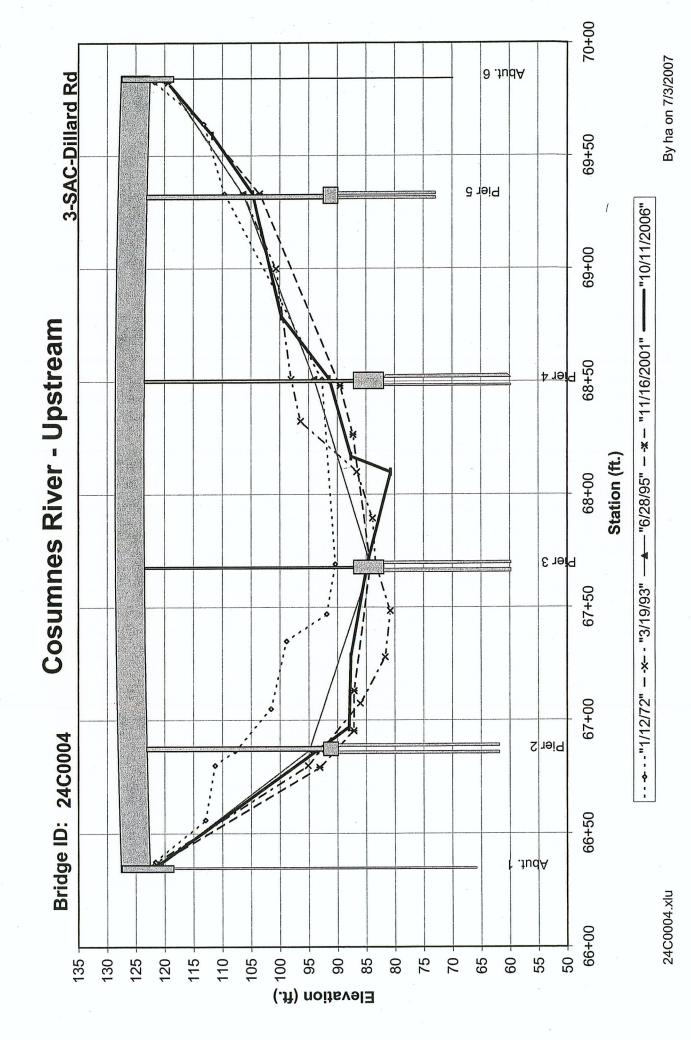
#### RECOMMENDATIONS

We recommend the local agency investigate and provide scour mitigation at the bridge site. Furthermore, a Federal Highway Administration mandate requires local agencies to provide a Plan of Action (POA) for all scour critical bridges. We recommend that the local agency develop and implement a POA.

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CHANNEL X-SECTION			
Side : Upstream Measured From :top of Concrete	e rail (0.7	3m)	X-Section Date: 10/11/2006
Location	Horiz(m)	Vert(m)	Comments
Abutment 1	0.38	2.68	Face Abut. 1
Pier 2	0.00	11.28	C/L of P2
P2	3.05	12.95	Edge of water
P2	12.50	13.11	mid-span 1
Pier 3	0.00	14.17	C/L of P3
P3	0.30	13.35	top of footing
P3	12.50	15.30	mid-span 2
P3	14.63	13.20	Edge of water
Pier 4	0.00	12.04	C/L of P4
P4	8.53	9.45	mid span 3
Pier 5	0.00	7.83	C/L P5
P5	7.92	5.64	mid-span 4
Abutment 6	-0.38	3.05	Face Abut. 6

Inspected By : H. Azizi Registered Civil Engineer



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# DEPARTMENT OF TRANSPORTATION

Structure Maintenance & Investigations

Bridge Number : 24C0004

Facility Carried: DILLARD RD : 0.2 MI S OF S.R. 16 Location

City

Inspection Date : 16-NOV-01

Inspection Type

Bridge Inspection Report

Special Other Routine Group A Underwater X

### Name : COSUMNES RIVER

## CONSTRUCTION INFORMATION

: 1964 Year Built Year Widened : N/A Length (m) : 106.7

Skew (degrees): 0 No. of Joints: 0 No. of Hinges: 0

Description of Structure: RC T-girders (4), continuous on RC piers, and on RC diaphragm abutments

Span Configuration : 15.5 m, 3 @ 25 m, 15.5 m

### LOAD CAPACITY AND RATINGS

Design Live Load: MS - 18 OR HS - 20

Inventory Rating: 41.7 metric tons Operating Rating: 69.8 metric tons

Calculation Method: LOAD FACTOR Calculation Method : LOAD FACTOR

Permit Rating : PPPPP

: Type 3 N/A english tons Posting Load

Type 3S2 N/A english tons

Type 3-3 N/A english tons

### DESCRIPTION ON STRUCTURE

Bridge width: 0.3 m br, 0.6 m sw, 8.5 m, 0.6 m sw, 0.3 m br

Total Width: 10.4 m Net Width: 8.50 m No. of Lanes: 2

Rail Description : Type 2

Min. Vertical Clearance: Unimpaired

Rail Code : 1000

### DESCRIPTION UNDER STRUCTURE

Channel Description: Earth lined, with light rock riprap on abutment slpoes

### CONDITION OF STRUCTURE

The AC surfacing is failing along the wheel lines, in several locations throughout the bridge deck.

Heavy berry vines are growing adjacent to Abutment 1 and under Span 1.

An underwater Type "A" (wade/probe) investigation was performed at Pier 3. The maximum water depth was 1.0 m, and no significant defects were observed (see SCOUR).

A stream cross section was performed during this investigation. A comparison to the previous cross section on file could not be performed (1995 cross section could not be found).

### SCOUR

The footing at Pier 3 is exposed 0.6 m, along its entire length. No undermining was observed.

ELE	MENT	LEVEL INSPECTION RATINGS							
F#	Eler	mElement Description	Env	Total Units Quantity	St. 1	Qty in eac St. 2	ch Conditi St. 3	on State St. 4	St. 5
01	13	Concrete Deck - Unprotected w/ AC Overlay	2	910 sq.m.	0	910	0	0	0
01	110	Reinforced Conc Open Girder/Beam	2	427 m.	427	0	0	0	0
01	210	Reinforced Conc Pier Wall	2	41 m.	41	0	0	0	0
01	215	Reinforced Conc Abutment	2	21 m.	21	0	0	0	0
01	225	Unpainted Steel Submerged Pile	2	52 ea.	52	0	0	0	0
01	333	Other Bridge Railing	2	226 m.	226	0	0	0	0
01	361	Scour	2	1 ea.	0	1	0		-

Inspection Date: 16-NOV-01 Location: 0.2 MI S OF S.R. 16 Bridge No.: 24C0004 WORK RECOMMENDATIONS Remove AC surfacing, and grind AC approaches to level as necessary. Prog. Method Cost Rec. Date Work By Work Id. Item# 1 40004X01320X County Agency 16-NOV-2001 Kill and remove berry vines growing adjacent to Abutment 1 and under Span 1. Prog. Method Work By Work Id. Cost Item# Rec. Date 40004X01320X 16-NOV-2001 County Agency Analyze river flow and place appropriate size boulders to prevent further scour at Pier 3. Prog. Method Cost Work Id. Work By Rec. Date 3 40004X01320X County Agency 16-NOV-2001 PROFESSIONAL

No. 52555

Registered Civil Engineer

cc : Nick Burmas, Hydraulics

Inspected By : Frank Martin

FEB 2 6 2002

Bridge No.: 24C0004 Location: 0.2 MI S OF S.R. 16

Inspection Date: 16-NOV-01

CHANNEL X-SECTION					
Side : Upstream				X-Section Date :	16-NOV-01
Measured From : top of co	ncrete rail				
Location	Horiz(m)	Vert(m)	Comments		
Face of Abutment 1	0.80	2.60			
Pier 2	13.50	11.35			
	18.40	13.20	break in grade		2 3
	23.80	13.25	edge of water surface		
Pier 3	40.80	14.20	thalweg		
	58.40	13.30	edge of water surface		
Pier 4	65.00	12.60			
Pier 5	90.90	8.20			
Face of Abutment 6	105.90	3.20			

### STRUCTURE INVENTORY AND APPRAISAL REPORT

	STRUCTURE IN	VENTORY	AND APPRAISA	L REPORT
(1)	**************************************	******		**************************************
		24C0004		STATUS =
		0V5640		HEALTH INDEX = 94.19
)	HIGHWAY AGENCY DISTRICT	03		*********** CLASSIFICATION ************************************
50000	COUNTY CODE 067 (4) PLACE CODE	00000	(112)	NBIS BRIDGE LENGTH - YES Y
	FEATURE INTERSECTED - COSUMNES RIVER		(104)	HIGHWAY SYSTEM - NOT ON NHS 0
	FACILITY CARRIED - DILLARD RD		(26)	FUNCTIONAL CLASS - MINOR ARTERIAL RURAL 06
	LOCATION - 0.2 MI S OF S.R. 16		(100)	DEFENSE HIGHWAY - NOT STRAHNET 0
		0	(101)	PARALLEL STRUCTURE - NONE EXISTS N
	MILEPOINT/KILOMETERPOINT		(102)	DIRECTION OF TRAFFIC - 2 WAY 2
	BASE HIGHWAY NETWORK - NOT ON NET	0	(103)	TEMPORARY STRUCTURE -
	LRS INVENTORY ROUTE & SUBROUTE	27 000	(105)	FEDERAL LANDS HIGHWAY -
	LATITUDE 38 DEG 29 MIN		(110)	DESIGNATED NATIONAL NETWORK - NOT ON NET 0
(17)	LONGITUDE 121 DEG 09 MIN		(20)	TOLL - ON FREE ROAD 3
(98)	BORDER BRIDGE STATE CODE % SHARE	8	(21)	MAINTAIN - COUNTY HIGHWAY AGENCY 2
(99)	BORDER BRIDGE STRUCTURE NUMBER			OWNER - COUNTY HIGHWAY AGENCY 2
	******** STRUCTURE TYPE AND MATERIAL ***	*****	2. 7	HISTORICAL SIGNIFICANCE - NOT ELIGIBLE 5
(43)	STRUCTURE TYPE MAIN: MATERIAL - CONCRETE CONT		(5.7	
(43)	TYPE - TEE BEAM CODI	2 04		****** CODE
		2 04	(58)	DECK 6
(44)	STRUCTURE TYPE APPR: MATERIAL - OTHER			SUPERSTRUCTURE 7
(45)	TYPE - OTHER CODI		,	SUBSTRUCTURE 6
2	NUMBER OF SPANS IN MAIN UNIT	5	,	CHANNEL & CHANNEL PROTECTION 7
5. (5.)	NUMBER OF APPROACH SPANS	0		CULVERTS N
(107)	DECK STRUCTURE TYPE CIP CONCRETE	CODE 1	(02)	CONVENTIO
(108)	WEARING SURFACE / PROTECTIVE SYSTEM:			******* LOAD RATING AND POSTING ******* CODE
A)	TYPE OF WEARING SURFACE - BITUMINOUS	CODE 6	(31)	DESIGN LOAD - MS - 18 OR HS - 20 5
B)	TYPE OF MEMBRANE - NONE	CODE 0		OPERATING RATING METHOD - LOAD FACTOR 1
C)	TYPE OF DECK PROTECTION - NONE	CODE 0	matter total	OPERATING RATING - 69.8
	************* AGE AND SERVICE *******			
	YEAR BUILT	1964		INVENTORY RATING - 41.7
1	YEAR RECONSTRUCTED	0000	(70)	BRIDGE POSTING - Equal to or above legal loads 5
1	TYPE OF SERVICE: ON - HIGHWAY	1	(41)	STRUCTURE OPEN, POSTED OR CLOSED -
	UNDER - WATERWAY	5		DESCRIPTION - OPEN, NO RESTRICTION
(28)	LANES: ON STRUCTURE 02 UNDER STRUCTU			****** *** APPRAISAL *********** CODE
	AVERAGE DAILY TRAFFIC	2440	1683	
(30)	YEAR OF ADT 1998 (109) TRUCK ADT	10%		STRUCTURAL EVALUATION 6
(19)	BYPASS, DETOUR LENGTH	6 KM		DECK GEOMETRY 4
	**************************************	*****		UNDERCLEARANCES, VERTICAL & HORIZONTAL N
(48)	LENGTH OF MAXIMUM SPAN	25 M		WATER ADEQUACY 9
		106.7 M	(72)	APPROACH ROADWAY ALIGNMENT 6
	STRUCTURE LENGTH CURB OR SIDEWALK: LEFT .6 M RIGHT	.6 M	(36)	TRAFFIC SAFETY FEATURES 1000
		8.5 M	(113)	SCOUR CRITICAL BRIDGES U
	BRIDGE ROADWAY WIDTH CURB TO CURB			******* PROPOSED IMPROVEMENTS *********
	DECK WIDTH OUT TO OUT	10.4 M		
	APPROACH ROADWAY WIDTH (W/SHOULDERS)	10.7 M		TYPE OF WORK - CODE
	BRIDGE MEDIAN - NO MEDIAN	0		LENGTH OF STRUCTURE IMPROVEMENT
	SKEW 0 DEG (35) STRUCTURE FLARED	NO		BRIDGE IMPROVEMENT COST
		99.99 M	•	ROADWAY IMPROVEMENT COST
	INVENTORY ROUTE TOTAL HORIZ CLEAR	8.5 M		TOTAL PROJECT COST
	MIN VERT CLEAR OVER BRIDGE RDWY	99.99 M	(97)	YEAR OF IMPROVEMENT COST ESTIMATE
(54)	MIN VERT UNDERCLEAR REF - NOT H/RR	0 M	(114)	FUTURE ADT 4100
(55)	MIN LAT UNDERCLEAR RT REF - NOT H/RR	99.9 M	(115)	YEAR OF FUTURE ADT 2010
(56)	MIN LAT UNDERCLEAR LT	0 M		**************************************
	**************************************	*****	(00)	
	•			The second secon
		CODE 0		
	PIER PROTECTION -	CODE		FRACTURE CRIT DETAIL - NO -1 MO A)
	NAVIGATION VERTICAL CLEARANCE	0 M		UNDERWATER INSP - NO -1 MO B)
	VERT-LIFT BRIDGE NAV MIN VERT CLEAR	М	C)	OTHER SPECIAL INSP - NO -1 MO C)
(40)	NAVIGATION HORIZONTAL CLEARANCE	0		



PROFILE: Looking West, 06B-Sac2-22



ROADWAY: Looking North 03-Sac-Co.Rd., Br#24C0004, Cosumnes River, 11-15-01, 06B-Sac2-20