



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

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Bridge Number : 55C0637
Facility Carried: CROWN VALLEY PKWY
Location : 0.5 MI E/O MARGUERITE PW
City :
Inspection Date : 02/22/2011

Bridge Inspection Report

Inspection Type

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

STRUCTURE NAME: ARROYO TRABUCO

CONSTRUCTION INFORMATION

Year Built : 2000	Skew (degrees): 0
Year Widened: 2005	No. of Joints : 2
Length (m) : 238	No. of Hinges : 0

Structure Description: Continuous 4-span CIP/PS concrete box girder (5 cells) with RC 2-column bents and RC closed end backfilled cantilever abutments, all supported upon 610 mm diameter (abutments) and 3050 mm diameter (bents) CIDH concrete piles.

Span Configuration : (W) 51.3 m, 67.0 m, 67.0 m, 51.3 m (E) c/c

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18+MOD OR HS-20+MOD	
Inventory Rating: 32.4 metric tonnes	Calculation Method: NO RATING ANALYSIS
Operating Rating: 54.1 metric tonnes	Calculation Method: NO RATING ANALYSIS
Permit Rating : PPPPP	
Posting Load : Type 3: Legal	Type 3S2: Legal
	Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (N) 0.3 m br, 1.5 m sw, 16.6 m, 1.5 m median, 1.5 m sw, 0.3 m br (S)
Total Width: 34.5 m Net Width: 34.5 m No. of Lanes: 7
Rail Description: (N) 26 conc.; (S) 26 conc. Rail Code : 0110
Min. Vertical Clearance: Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth canyon.

CONDITION TEXT

REVISIONS

The bridge ownership was corrected in the request from the city by email send date 12/13/2010.

NBI items 4, 21, and 22 change from City of Mission Viejo to the County of Orange.

CONDITION OF STRUCTURE

There are 40 mm horizontal displacement toward north between the deck and approaches noticed at four corners of the rail.

The middle I beam in joint seal assembly is twisted at Abutment 1 eastbound, and the middle I beam in joint seal assembly is broken at Abutment 5 eastbound.

There is water leaking from weep hole #4 from the south in span #1 and #4.

ELEMENT INSPECTION RATINGS

Elem No.	Element Description	Env	Total		Qty in each Condition State				
			Qty	Units	St. 1	St. 2	St. 3	St. 4	St. 5
12	Concrete Deck - Bare	2	5117	sq.m.	5117	0	0	0	0
104	P/S Conc Closed Web/Box Girder	2	476	m.	476	0	0	0	0
205	Reinforced Conc Column or Pile Extension	2	9	ea.	9	0	0	0	0
215	Reinforced Conc Abutment	2	76	m.	76	0	0	0	0
252	Cast-In-Drilled Hole Concrete Pile	2	1	ea.	1	0	0	0	0
256	Slope Protection	2	2	ea.	2	0	0	0	0
303	Assembly Joint Seal - Modular Type	2	76	m.	75	0	1	0	0
312	Enclosed/Concealed Bearing	2	1	ea.	1	0	0	0	0
321	Reinforced Conc Approach Slab w/ or w/o AC Ovly	2	14	ea.	14	0	0	0	0
331	Reinforced Conc Bridge Railing	2	500	m.	500	0	0	0	0

WORK RECOMMENDATIONS

RecDate: 04/24/2006

Action : Joints-Repair/Clean

Work By: LOCAL AGENCY

Status : PROPOSED

EstCost:


StrTarget: 2 YEARS

DistTarget:

EA:

Weld back (repair) the sheared off middle steel bar of the joint seal assembly at the eastbound abutment 5, lane #2, and repair the torn neoprene. Remove and clean out all dirt and debris in all joint seals.

Inspected By : MT.Zaarour


 Mikhael T. Zaarour (Registered Civil Engineer)


STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME- CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0637
 (5) INVENTORY ROUTE (ON/UNDER)- ON 150000000
 (2) HIGHWAY AGENCY DISTRICT 12
 (3) COUNTY CODE * 059 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED- ARROYO TRABUCO
 (7) FACILITY CARRIED- CROWN VALLEY PKWY
 (9) LOCATION- 0.5 MI E/O MARGUERITE PWY
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK- PART OF NET 1
 (13) LRS INVENTORY ROUTE & SUBROUTE 000000000000
 (16) LATITUDE 33 DEG 33 MIN 46.78 SEC
 (17) LONGITUDE 117 DEG 39 MIN 04.91 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- PRSTR CONC CONT
 TYPE- BOX BEAM OR GIRDER - MULTI CODE 605
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
 TYPE- OTHER/NA CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 4
 (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 2000
 (106) YEAR RECONSTRUCTED 2005
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
 UNDER- WATERWAY 5
 (28) LANES:ON STRUCTURE 07 UNDER STRUCTURE 00
 (29) AVERAGE DAILY TRAFFIC 33160
 (30) YEAR OF ADT 2011 (109) TRUCK ADT 1 %
 (19) BYPASS, DETOUR LENGTH 20 KM

***** GEOMETRIC DATA *****

(48) LENGTH OF MAXIMUM SPAN 67.0 M
 (49) STRUCTURE LENGTH 238.0 M
 (50) CURB OR SIDEWALK: LEFT 1.5 M RIGHT 1.5 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 34.5 M
 (52) DECK WIDTH OUT TO OUT 34.5 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 34.5 M
 (33) BRIDGE MEDIAN- CLOSED (NO BARRIER) 2
 (34) SKEW 0 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 18.2 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- NOT APPLICABLE CODE N
 (111) PIER PROTECTION- CODE
 (39) NAVIGATION VERTICAL CLEARANCE 0.0 M
 (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR M
 (40) NAVIGATION HORIZONTAL CLEARANCE 0.0 M

***** SUFFICIENCY RATING *****

SUFFICIENCY RATING = 84.0
 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- OTHER PRIN ART URBAN 14
 (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- COUNTY HIGHWAY AGENCY 02
 (22) OWNER- COUNTY HIGHWAY AGENCY 02
 (37) HISTORICAL SIGNIFICANCE- NOT ELIGIBLE 5

***** CONDITION ***** CODE

(58) DECK 7
 (59) SUPERSTRUCTURE 8
 (60) SUBSTRUCTURE 7
 (61) CHANNEL & CHANNEL PROTECTION 9
 (62) CULVERTS N

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

(31) DESIGN LOAD- MS-18+MOD OR HS-20+MOD 6
 (63) OPERATING RATING METHOD- NO RATING ANALYSIS 5
 (64) OPERATING RATING- 54.1
 (65) INVENTORY RATING METHOD- NO RATING ANALYSIS 5
 (66) INVENTORY RATING- 32.4
 (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 7
 (68) DECK GEOMETRY 9
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
 (71) WATER ADEQUACY 9
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 0110
 (113) SCOUR CRITICAL BRIDGES 8

***** 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
 (114) FUTURE ADT 59170
 (115) YEAR OF FUTURE ADT 2028

***** INSPECTIONS *****

(90) INSPECTION DATE 02/11 (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)