



DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 55C0123  
Facility Carried: BREA CANYON BLVD.  
Location : 0.8 MI N/O CENTRAL AVENUE  
City :  
Inspection Date : 05/18/2012

## Bridge Inspection Report

Inspection Type  
Routine FC Underwater Special Other

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STRUCTURE NAME: BREA CANYON CHANNEL

### CONSTRUCTION INFORMATION

Year Built : 1939	Skew (degrees): 60
Year Widened: N/A	No. of Joints : 0
Length (m) : 28	No. of Hinges : 0

Structure Description: Simply supported 3-span CIP/RC T-beam (5 each) with RC pier walls and with RC open end diaphragm abutments, all supported upon concrete piles.

Span Configuration : (W) 3 @ 9.1 m (E) c/c

### LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN	
Inventory Rating: 31.4 metric tonnes	Calculation Method: LOAD FACTOR
Operating Rating: 52.5 metric tonnes	Calculation Method: LOAD FACTOR
Permit Rating : P P P P P	
Posting Load : Type 3: <u>Legal</u>	Type 3S2: <u>Legal</u> Type 3-3: <u>Legal</u>

### DESCRIPTION ON STRUCTURE

Deck X-Section: (S) 0.3 m br, 0.2 m cu, 9.2 m, 0.2 m cu, 0.3 m br (N)		
Total Width: 10.1 m	Net Width: 9.1 m	No. of Lanes: 2
Rail Description: Concrete Baluster		Rail Code : 0000
Min. Vertical Clearance: Unimpaired		

### DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth trapezoidal, RC rectangular through the site.

### INSPECTION COMMENTARY

#### CONDITION OF STRUCTURE

The vegetations are growing at the edge of the road next to the rails.

There are 4 spalls (300 mm x 200 mm x 15 mm) with exposed rebars at the bottom of in both exterior girders in spans #1 and #3.

There are about 15 cracks (2 mm) and spalls in each side of concrete baluster railings.

There are 3 spalls (300 mm x 75 mm x 20 mm and 2 - 150 mm x 75 mm x 20 mm) with exposed rebars at the northwest wing wall.

There was 200 mm of water in the channel; all elements were inspected.


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
13	Concrete Deck - Unprotected w/ AC Overlay	2	250	sq.m.	250	0	0	0	0
110	Reinforced Conc Open Girder/Beam	2	140	m.	140	0	0	0	0
210	Reinforced Conc Pier Wall	2	40	m.	40	0	0	0	0
215	Reinforced Conc Abutment	2	40	m.	40	0	0	0	0
227	Reinforced Conc Submerged Pile	2	1	ea.	1	0	0	0	0
339	Concrete Railing (aesthetic/masonry)	2	74	m.	74	0	0	0	0

WORK RECOMMENDATIONS

RecDate: 05/18/2012	EstCost:	Remove the vegetations at the edge of the
Action : Remove Vegetation	StrTarget: 2 YEARS	road next to the rails.
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	
RecDate: 05/06/2010	EstCost:	Repair the 3 spalls (1 - 300 mm x 75 mm x
Action : Sub-Patch spalls	StrTarget: 2 YEARS	20 mm and 2 - 150 mm x 75 mm x 20 mm)
Work By: LOCAL AGENCY	DistTarget:	with exposed rebars at the northwest wing
Status : PROPOSED	EA:	wall.
RecDate: 05/06/2010	EstCost:	Repair the spalls (100 mm x 50mm x 20 mm)
Action : Railing-Repair	StrTarget: 2 YEARS	at the baluster of both rails
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	
RecDate: 05/30/2007	EstCost:	Repair the 4 spalls (300mm x 200mm x
Action : Super-Patch spalls	StrTarget: 2 YEARS	15mm) with exposed rebars at the bottom
Work By: LOCAL AGENCY	DistTarget:	of in both exterior girders in spans #1
Status : PROPOSED	EA:	and #3.

Inspected By : MT.Zaarour/A.Shenouda


  
Mikhael T. Zaarour (Registered Civil Engineer)


STRUCTURE INVENTORY AND APPRAISAL REPORT

## \*\*\*\*\* IDENTIFICATION \*\*\*\*\*

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 55C0123  
 (5) INVENTORY ROUTE (ON/UNDER)- ON 1400M0030  
 (2) HIGHWAY AGENCY DISTRICT 12  
 (3) COUNTY CODE 059 (4) PLACE CODE 00000  
 (6) FEATURE INTERSECTED- BREA CANYON CHANNEL  
 (7) FACILITY CARRIED- BREA CANYON BLVD.  
 (9) LOCATION- 0.8 MI N/O CENTRAL AVENUE  
 (11) MILEPOINT/KILOMETERPOINT 0  
 (12) BASE HIGHWAY NETWORK- NOT ON NET 0  
 (13) LRS INVENTORY ROUTE & SUBROUTE  
 (16) LATITUDE 33 DEG 56 MIN 27.5 SEC  
 (17) LONGITUDE 117 DEG 53 MIN 15 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE  
 TYPE- STRINGER/MULTI-BEAM OR GDR CODE 102  
 (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- BITUMINOUS CODE 6  
 B) TYPE OF MEMBRANE- NONE CODE 0  
 C) TYPE OF DECK PROTECTION- NONE CODE 0

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

(27) YEAR BUILT 1939  
 (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 19000  
 (30) YEAR OF ADT 2009 (109) TRUCK ADT 1 %  
 (19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 9.1 M  
 (49) STRUCTURE LENGTH 28.0 M  
 (50) CURB OR SIDEWALK: LEFT 0.2 M RIGHT 0.2 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 9.1 M  
 (52) DECK WIDTH OUT TO OUT 10.1 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 8.2 M  
 (33) BRIDGE MEDIAN- NO MEDIAN 0  
 (34) SKEW 60 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 9.1 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 = 75.4  
 STATUS FUNCTIONALLY OBSOLETE  
 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- MINOR ARTERIAL URBAN 16  
 (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 7  
 (60) SUBSTRUCTURE 7  
 (61) CHANNEL & CHANNEL PROTECTION 8  
 (62) CULVERTS N

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

(31) DESIGN LOAD- UNKNOWN 0  
 (63) OPERATING RATING METHOD- LOAD FACTOR 1  
 (64) OPERATING RATING- 52.5  
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1  
 (66) INVENTORY RATING- 31.4  
 (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 3  
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N  
 (71) WATER ADEQUACY 9  
 (72) APPROACH ROADWAY ALIGNMENT 8  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (113) SCOUR CRITICAL BRIDGES 8

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

(75) TYPE OF WORK- MISC STRUCTURAL WORK CODE 38  
 (76) LENGTH OF STRUCTURE IMPROVEMENT 28 M  
 (94) BRIDGE IMPROVEMENT COST \$282,000  
 (95) ROADWAY IMPROVEMENT COST \$56,400  
 (96) TOTAL PROJECT COST \$473,760  
 (97) YEAR OF IMPROVEMENT COST ESTIMATE 2010  
 (114) FUTURE ADT 41217  
 (115) YEAR OF FUTURE ADT 2029

## \*\*\*\*\* INSPECTIONS \*\*\*\*\*

(90) INSPECTION DATE 05/12 (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)