



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0122
Facility Carried: BREA CANYON BLVD.
Location : 0.6 MI N/O CENTRAL AVENUE
City :
Inspection Date : 05/06/2010

Bridge Inspection Report

Inspection Type

Routine ☒ FC ☐ Underwater ☐ Special ☐ Other ☐

STRUCTURE NAME: BREA CANYON CHANNEL

CONSTRUCTION INFORMATION

Year Built : 1930 Skew (degrees): 45
Year Widened: N/A No. of Joints : 0
Length (m) : 18.9 No. of Hinges : 0

Structure Description: Simply supported 2-span CIP/RC T-beam (5 each) with an RC pier wall and with RC open end diaphragm abutments, all supported upon concrete piles.

Span Configuration : (W) 2 @ 9.1 m (E) c/c

LOAD CAPACITY AND RATINGS

Design Live Load: M-13.5 OR H-15
Inventory Rating: 25.6 metric tonnes Calculation Method: LOAD FACTOR
Operating Rating: 42.8 metric tonnes Calculation Method: LOAD FACTOR
Permit Rating : PPPPP
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

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.

CONDITION TEXT

CONDITION OF STRUCTURE

The west end post of north is damaged; there are two 20 mm wide vertical cracks from top to the bottom of footing. It may cause by vehicular hit.

There are about 20 cracks (2 mm) and small spalls in each side of concrete baluster railings.

There is tree growing in the south side of the pier seat.

There is about 300 mm of water in both spans; all elements were inspected.

ELEMENT INSPECTION RATINGS

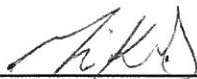
F#Elem	Element Description	Env	Total Units	Qty in each Condition State				
				Qty	St. 1	St. 2	St. 3	St. 4 St. 5
101 13	Concrete Deck - Unprotected w/ AC Overlay	2	170 sq.m.	170	0	0	0	0
101 110	Reinforced Conc Open Girder/Beam	2	95 m.	95	0	0	0	0

F#Elem	Element Description	Env	Total	Units	Qty in each Condition State					
				Qty	St. 1	St. 2	St. 3	St. 4	St. 5	
101 210	Reinforced Conc Pier Wall	2	14	m.	14	0	0	0	0	
101 215	Reinforced Conc Abutment	2	28	m.	24	4	0	0	0	
101 227	Reinforced Conc Submerged Pile	2	1	ea.	1	0	0	0	0	
101 256	Slope Protection	2	2	ea.	2	0	0	0	0	
101 339	Concrete Railing (aesthetic/masonry)	2	58	m.	0	40	16	2		

WORK RECOMMENDATIONS

RecDate: 05/06/2010	EstCost:	Repair the spalls (100 mm x 75 mm x 20
Action : Railing-Repair	StrTarget: 2 YEARS	mm) in both side of concrete baluster
Work By: LOCAL AGENCY	DistTarget:	railings.
Status : PROPOSED	EA:	
 RecDate: 05/30/2007	 EstCost:	 Repair the damaged rail.
Action : Railing-Repair	StrTarget: 2 YEARS	The west end post of north is damaged;
Work By: LOCAL AGENCY	DistTarget:	there are two 20mm wide vertical cracks
Status : PROPOSED	EA:	from top to the bottom of footing. It may
		cause by vehicular hit.
		There are about 20 cracks or spalls in
		each side of concrete baluster railings.
 RecDate: 05/30/2007	 EstCost:	 Remove the tree that is growing in the
Action : Remove Vegetation	StrTarget: 2 YEARS	south side of the pier seat.
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	

Inspected By : A.Shenouda/MT.Zaarour



Registered Civil Engineer



STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME- CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0122
 (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- 0.6 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 23.5 SEC
 (17) LONGITUDE 117 DEG 53 MIN 26 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE
 TYPE- TEE BEAM CODE 104
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
 TYPE- OTHER/NA CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 2
 (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 1930
 (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 20000
 (30) YEAR OF ADT 2000 (109) TRUCK ADT 1 %
 (19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 9.1 M
 (49) STRUCTURE LENGTH 18.9 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) 9.1 M
 (33) BRIDGE MEDIAN- NO MEDIAN 0
 (34) SKEW 45 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 *****

SUFFICIENCY RATING = 69.6
 STATUS FUNCTIONALLY OBSOLETE
 HEALTH INDEX 98.5
 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 6
 (61) CHANNEL & CHANNEL PROTECTION 8
 (62) CULVERTS N

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

(31) DESIGN LOAD- M-13.5 OR H-15 2
 (63) OPERATING RATING METHOD- LOAD FACTOR 1
 (64) OPERATING RATING- 42.8
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1
 (66) INVENTORY RATING- 25.6
 (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 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 18.9 M
 (94) BRIDGE IMPROVEMENT COST \$184,000
 (95) ROADWAY IMPROVEMENT COST \$36,800
 (96) TOTAL PROJECT COST \$309,120
 (97) YEAR OF IMPROVEMENT COST ESTIMATE 2010
 (114) FUTURE ADT 41217
 (115) YEAR OF FUTURE ADT 2029

***** INSPECTIONS *****

(90) INSPECTION DATE 05/10 (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)