



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0121
Facility Carried: BREA CANYON BLVD.
Location : 0.4 MI N/O CENTRAL AVENUE
City :
Inspection Date : 10/31/2013
Inspection Type
Routine FC Underwater Special Other
☒

Bridge Inspection Report

STRUCTURE NAME: BREA CANYON CHANNEL

CONSTRUCTION INFORMATION

Year Built : 1920 Skew (degrees): 32
Year Widened: 1929 No. of Joints : 0
Length (m) : 9.1 No. of Hinges : 0

Structure Description: Continuous 2-span CIP/RC deck slab under 1.5 m of fill with an RC pier and RC closed end backfilled strutted abutments. Foundation type is unknown.

Span Configuration : (S) 2 @ 4.1 m (N) c/c

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN
Inventory Rating: RF=1.00 =>32.4 metric tons Calculation Method: LOAD FACTOR
Operating Rating: RF=1.67 =>54.1 metric tons 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: (W) 3.4 m ea, 11 m, 0.9 m ea (E)
Total Width: 17.1 m Net Width: 11.3 m No. of Lanes: 2 Speed: 55 mph
Min. Vertical Clearance: Unimpaired
Rail Code: 0000 Rail Description: (E) MBGR (W) None

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth trapezoidal with heavy bushes and trees in the channel bed.

INSPECTION COMMENTARY

SCOPE AND ACCESS

There was 2' of stagnant water in span #1 (south) and there was 2.5' of dirt accumulated in span #2 (north); all elements were inspected.

DECK AND ROADWAY

The AC roadway was in fair condition.

SUPERSTRUCTURE

There were no significant defects noted on the superstructure elements.

SUBSTRUCTURE

There is a concrete spall (3 m x 0.6 m x 50 mm) at the upstream side of the pier wall in span 1 and delamination area 2 m x 0.5 m at the other face of the pier wall. Probably impacted by debris.

SAFE LOAD CAPACITY

The load rating for this structure is being reviewed by SM&I Rating Branch. An updated Load Rating Summary Sheet will be archived when this review is completed. The current

INSPECTION COMMENTARY

load rating is based on BDS computer output dated 11/21/1979.

ELEMENT INSPECTION RATINGS

Elem No.	Element Description	Env	Total Qty Units	Qty in each Condition State				
				St. 1	St. 2	St. 3	St. 4	St. 5
39	Concrete Slab - Unprotected w/ AC Overlay	2	156 sq.m.	156	0	0	0	0
210	Reinforced Conc Pier Wall	2	17 m.	11	3	3	0	
215	Reinforced Conc Abutment	2	34 m.	34	0	0	0	0
337	Metal Railing (W6X25 Posts)	2	10 m.	10	0	0	0	0

WORK RECOMMENDATIONS

RecDate: 05/18/2012	EstCost:	
Action : Sub-Patch spalls	StrTarget: 2 YEARS	Repair the spall and delamination at the north side of the pier wall west face of the wall 3 m x 0.6 m x 50 mm spall and at the east face of the wall the delamination area 3 m x 0.5 m.
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	
 RecDate: 06/05/2001	 EstCost:	 Clean the channel to improve the water flow. Remove the bushes and the trees in the channel bed within 30 meters of the bridge.
Action : Remove Vegetation	StrTarget: 2 YEARS	
Work By: LOCAL AGENCY	DistTarget:	
Status : PROPOSED	EA:	

CHANNEL X-SECTION

Side : Upstream

Measured From : top of concrete


X-Section Date: 10/31/2013

Location	Horiz (m)	Vert (m)	Comments
Abut 1	0.00	5.00	face of abut wall
	3.20	4.20	
	7.65	2.40	

Team Leader : Mikhael T. Zaarour

Report Author : Mikhael T. Zaarour

Inspected By : MT.Zaarour/RR.Morgan


Mikhael T. Zaarour (Registered Civil Engineer) (Date)

12-18-13



STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME- CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0121
 (5) INVENTORY ROUTE (ON/UNDER)- ON 140000000
 (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- 0.4 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 16.3 SEC
 (17) LONGITUDE 117 DEG 53 MIN 30 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE
 TYPE- SLAB CODE 101
 (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- GRAVEL CODE 8
 B) TYPE OF MEMBRANE- NONE CODE 0
 C) TYPE OF DECK PROTECTION- NONE CODE 0

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

(27) YEAR BUILT 1920
 (106) YEAR RECONSTRUCTED 1929
 (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 4.3 M
 (49) STRUCTURE LENGTH 9.1 M
 (50) CURB OR SIDEWALK: LEFT 0.0 M RIGHT 0.0 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 11.3 M
 (52) DECK WIDTH OUT TO OUT 17.1 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 11.0 M
 (33) BRIDGE MEDIAN- NO MEDIAN 0
 (34) SKEW 32 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 8.5 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 = 93.2
 STATUS
 HEALTH INDEX 91.1
 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- UNKNOWN 0
 (63) OPERATING RATING METHOD- LOAD FACTOR 1
 (64) OPERATING RATING- 54.1
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1
 (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 6
 (68) DECK GEOMETRY 4
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
 (71) WATER ADEQUACY 9
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 0000
 (113) SCOUR CRITICAL BRIDGES U

***** 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 41217
 (115) YEAR OF FUTURE ADT 2030

***** INSPECTIONS *****

(90) INSPECTION DATE 10/13 (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)