DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0123
Facility Carried: BREA CANYON BLVD.
Location : 0.8 MI N/O CENTRAL AVENU
City :
Inspection Date : 10/31/2013
Inspection Type
Routine FC Underwater Special Other
[X]

Bridge Inspection Report

STRUCTURE NAME: BREA CANYON CHANNEL

CONSTRUCTION INFORMATION

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

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN
Inventory Rating: RF=0.97 =>31.4 metric tons Calculation Method: LOAD FACTOR
Operating Rating: RF=1.62 =>52.5 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: (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 Speed: 55 mph
Min. Vertical Clearance: Unimpaired

Rail Code: 0000

Rail Type	Location	Length (ft)	Rail Modifications
Concrete Baluster	Right/Left	242	

DESCRIPTION UNDER STRUCTURE

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

INSPECTION COMMENTARY

SCOPE AND ACCESS
There was 2" of water in the channel; all elements were inspected.

DECK AND ROADWAY
There was 50 cracks or spalls at both sides of concrete baluster railings.

SUPERSTRUCTURE
There was 4 spalls (1' x 8" x 0.5") with exposed rebars at the bottom of in both exterior girders in spans #1 and #3.

SUBSTRUCTURE
There were a spall (1' x 3" x 0.75") and 2 spalls (6" x 3" x 0.75") with exposed rebars at the northwest wing wall.
Also there were 4 vertical cracks at pier walls #2 and #3.

INSPECTION COMMENTARY

RECOMMENDED POSTING
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 load rating is based on BDS computer output dated 7/15/1980.

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
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: 05/06/2010 Action : Sub-Patch spalls Work By: LOCAL AGENCY Status : PROPOSED	EstCost: StrTarget: 2 YEARS DistTarget: EA:	Repair the 3 spalls (1 - 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.
RecDate: 05/06/2010 Action : Railing-Repair Work By: LOCAL AGENCY Status : PROPOSED	EstCost: StrTarget: 2 YEARS DistTarget: EA:	Repair the spalls (100 mm x 50mm x 20 mm0 at the baluster of both rails
RecDate: 05/30/2007 Action : Super-Patch spalls Work By: LOCAL AGENCY Status : PROPOSED	EstCost: StrTarget: 2 YEARS DistTarget: EA:	Repair the 4 spalls (300mm x 200mm x 15mm) with exposed rebars at the bottom of in both exterior girders in spans #1 and #3.

Team Leader : Mikhael T. Zaarour

Report Author : Mikhael T. Zaarour

Inspected By : MT.Zaarour/RR.Morgan

MikhT 12-18-13

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

STRUCTURE INVENTORY AND APPRAISAL REPORT

********** IDENTIFICATION **********

(1) STATE NAME- CALIFORNIA 069
(8) STRUCTURE NUMBER 55C0123
(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- 0.8 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

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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 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)