DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0122
Facility Carried: BREA CANYON BLVD.
Location : 0.6 MI N/O CENTRAL AVENU
City :
Inspection Date : 10/31/2013

Bridge Inspection Report

Inspection Type

Routine	FC	Underwater	Special	Other
X				

STRUCTURE NAME: BREA CANYON CHANNEL

CONSTRUCTION INFORMATION

Year Built : 1930
Year Widened: N/A
Length (m) : 18.9

Skew (degrees): 45
No. of Joints : 0
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

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: M-13.5 OR H-15
Inventory Rating: RF=0.79 =>25.6 metric tons Calculation Method: LOAD FACTOR
Operating Rating: RF=1.32 =>42.8 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	190	

DESCRIPTION UNDER STRUCTURE

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

INSPECTION COMMENTARY

SCOPE AND ACCESS
There was about 1' of water in both spans; all elements were inspected.

DECK AND ROADWAY
The MBGR transition section at the southwest corner was damaged.
The west end post of north was damaged; there are two 1" wide vertical cracks from top to the bottom of footing. It may cause by vehicular hit.
There were 26 cracks or small spalls in southside and 30 cracks or small spalls in northside of concrete baluster railings.

SUPERSTRUCTURE
There were no significant defects noted on the superstructure elements.

SUBSTRUCTURE

INSPECTION COMMENTARY

There was a tree growing at the top of the southside pier wall. And there was three vertical cracks in the wall.

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 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	170	sq.m.	170	0	0	0	0
110	Reinforced Conc Open Girder/Beam	2	95	m.	95	0	0	0	0
210	Reinforced Conc Pier Wall	2	14	m.	14	0	0	0	0
215	Reinforced Conc Abutment	2	28	m.	24	4	0	0	0
227	Reinforced Conc Submerged Pile	2	1	ea.	1	0	0	0	0
256	Slope Protection	2	2	ea.	2	0	0	0	0
339	Concrete Railing (aesthetic/masonry)	2	58	m.	0	40	16	2	

WORK RECOMMENDATIONS

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 75 mm x 20 mm) in both side of concrete baluster railings.

RecDate: 05/30/2007
Action : Railing-Repair
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Repair the damaged rail.
The west end post of north is damaged; there was 1" wide vertical cracks from top to the bottom of footing. It may cause by vehicular hit.
There are about 56 cracks or spalls in the concrete baluster railings.

RecDate: 05/30/2007
Action : Remove Vegetation
Work By: LOCAL AGENCY
Status : PROPOSED

EstCost:
StrTarget: 2 YEARS
DistTarget:
EA:

Remove the tree that is growing in the south side of the pier seat.
And at the edge of the roadway. (removed)

Team Leader : Mikhael T. Zaarour

Report Author : Mikhael T. Zaarour

Inspected By : MT.Zaarour/RR.Morgan

MKWS 12-18-13

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

STRUCTURE INVENTORY AND APPRAISAL REPORT

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

(1)	STATE NAME- CALIFORNIA	069
(8)	STRUCTURE NUMBER	55C0122
(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-	0.6 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	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	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

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	SUFFICIENCY RATING =	69.7
	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	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)