



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0371
Facility Carried: SEGERSTROM-SLATER
Location : 0.3 MI. W/O HARBOR BLVD.
City :
Inspection Date : 05/16/2012
Inspection Type
Routine FC Underwater Special Other
☒

Bridge Inspection Report

STRUCTURE NAME: SANTA ANA RIVER CHANNEL

CONSTRUCTION INFORMATION

Year Built : 1974 Skew (degrees): 13
Year Widened: 1982 No. of Joints : 2
Length (m) : 100 No. of Hinges : 0

Structure Description: Continuous 5-span CIP/RC T-beam (10 each) with RC pier walls and RC open end seat abutments, all supported upon concrete piles.

Span Configuration : (W) 16.5 m, 3 @ 21.9 m, 16.5 m (E) c/c

LOAD CAPACITY AND RATINGS

Design Live Load: MS-18 OR HS-20
Inventory Rating: 59 metric tonnes Calculation Method: LOAD FACTOR
Operating Rating: 98.2 metric tonnes Calculation Method: LOAD FACTOR
Permit Rating : P P P P P
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (S) 0.1 m br, 1.5 m sw, 19.5 m, 1.5 m sw, 0.1 m br (N)
Total Width: 23.2 m Net Width: 19.5 m No. of Lanes: 4
Rail Description: Type 11 (Misc). Rail Code : 1000
Min. Vertical Clearance: Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description: RC trapezoidal.

INSPECTION COMMENTARY

CONDITION OF STRUCTURE

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

There are 2 spalls (200 mm x 100 mm x 20 mm) with exposed rebars at the inside face of south rail 15 m and 21 m from west end and many small spalls at the inside face of both rails.

There are unsealed transverse cracks in the deck that are moderate in size (0.5 - 2 mm) and density (300 mm spacing).

There are few transverse hairline cracks with light white efflorescence in span 2.

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
12	Concrete Deck - Bare	2	2320	sq.m.	2320	0	0	0	0
110	Reinforced Conc Open Girder/Beam	2	1000	m.	1000	0	0	0	0
210	Reinforced Conc Pier Wall	2	96	m.	96	0	0	0	0
215	Reinforced Conc Abutment	2	48	m.	48	0	0	0	0
227	Reinforced Conc Submerged Pile	2	104	ea.	104	0	0	0	0
256	Slope Protection	2	2	ea.	2	0	0	0	0
302	Compression Joint Seal	2	40	m.	40	0	0	0	0
304	Open Expansion Joint	2	100	m.	100	0	0	0	0
312	Enclosed/Concealed Bearing	2	2	ea.	2	0	0	0	0
335	Other Bridge Railing	2	200	m.	200	0	0	0	0
358	Deck Cracking	2	1	ea.	0	0	1	0	0
359	Soffit of Concrete Deck or Slab	2	1	ea.	0	1	0	0	0

WORK RECOMMENDATIONS

RecDate: 05/16/2012

Action : Railing-Repair

Work By: LOCAL AGENCY

Status : PROPOSED

EstCost:

StrTarget: 2 YEARS

DistTarget:

EA:

Repair the 2 spalls (200 mm x100 mm x 20 mm) with exposed rebars at the inside face of south rail 15 m and 21 m from west end and many small spalls at the inside face of both rails.

RecDate: 06/07/2007

Action : Deck-Methacrylate

Work By: LOCAL AGENCY

Status : PROPOSED

EstCost:


StrTarget: 2 YEARS

DistTarget:

EA:

Seal the deck with methacrylate.

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 55C0371
 (5) INVENTORY ROUTE(ON/UNDER)- ON 1400M0290
 (2) HIGHWAY AGENCY DISTRICT 12
 (3) COUNTY CODE 059 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED- SANTA ANA RIVER CHANNEL
 (7) FACILITY CARRIED- SEGERSTROM-SLATER
 (9) LOCATION- 0.3 MI. W/O HARBOR BLVD.
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK- NOT ON NET 0
 (13) LRS INVENTORY ROUTE & SUBROUTE
 (16) LATITUDE 33 DEG 42 MIN 32.3 SEC
 (17) LONGITUDE 117 DEG 55 MIN 32 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE CONT
 TYPE- TEE BEAM CODE 204
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA
 TYPE- OTHER/NA CODE 000
 (45) NUMBER OF SPANS IN MAIN UNIT 5
 (46) NUMBER OF APPROACH SPANS 0
 (107) DECK STRUCTURE TYPE- CIP CONCRETE CODE 1
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:
 A) TYPE OF WEARING SURFACE- NONE CODE 0
 B) TYPE OF MEMBRANE- NONE CODE 0
 C) TYPE OF DECK PROTECTION- NONE CODE 0

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

(27) YEAR BUILT 1974
 (106) YEAR RECONSTRUCTED 1982
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
 UNDER- WATERWAY 5
 (28) LANES:ON STRUCTURE 04 UNDER STRUCTURE 00
 (29) AVERAGE DAILY TRAFFIC 30000
 (30) YEAR OF ADT 2012 (109) TRUCK ADT 1 %
 (19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 21.9 M
 (49) STRUCTURE LENGTH 100.0 M
 (50) CURB OR SIDEWALK: LEFT 1.5 M RIGHT 1.5 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 19.5 M
 (52) DECK WIDTH OUT TO OUT 23.2 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 20.1 M
 (33) BRIDGE MEDIAN- NO MEDIAN 0
 (34) SKEW 13 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 19.5 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 *****

SUFFICIENCY RATING = 94.2
 STATUS
 HEALTH INDEX 100.0
 PAINT CONDITION INDEX = N/A

***** CLASSIFICATION *****

(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 *****

(58) DECK 5
 (59) SUPERSTRUCTURE 7
 (60) SUBSTRUCTURE 7
 (61) CHANNEL & CHANNEL PROTECTION 9
 (62) CULVERTS N

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

(31) DESIGN LOAD- MS-18 OR HS-20 5
 (63) OPERATING RATING METHOD- LOAD FACTOR 1
 (64) OPERATING RATING- 98.2
 (65) INVENTORY RATING METHOD- LOAD FACTOR 1
 (66) INVENTORY RATING- 59
 (70) BRIDGE POSTING- EQUAL TO OR ABOVE LEGAL LOADS 5
 (41) STRUCTURE OPEN, POSTED OR CLOSED- A
 DESCRIPTION- OPEN, NO RESTRICTION

***** APPRAISAL *****

(67) STRUCTURAL EVALUATION 7
 (68) DECK GEOMETRY 7
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
 (71) WATER ADEQUACY 9
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 1000
 (113) SCOUR CRITICAL BRIDGES 8

***** 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 47242
 (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)