
Bridge Inspection Records Information System

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State of California
Department of Transportation

**Division of Maintenance
Structures Maintenance & Investigations**



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0520L
Facility Carried: W/B SNTA MRGTA PWY
Location : 0.2 MI E ALICIA PARKWAY
City :
Inspection Date : 12-JUN-01
Inspection Type

Bridge Inspection Report

Routine ☒ Group A ☐ Underwater ☐ Special ☐ Other ☐

Name : ARROYO TRABUCO

CONSTRUCTION INFORMATION

Year Built : 1991
Year Widened : N/A
Length (m) : 367.9
Skew (degrees): 99
No. of Joints : 0
No. of Hinges : 1

Description of Structure : Continuous 7 span CIP/PS concrete box girder (8 cells) with RC two column bents and RC open end seat abutments, all supported upon steel piles (except the most westerly bent is supported upon a spread footing).

Span Configuration : (W) 42.7 m, 5 @ 56.1 m, 42.7 m (E) c/c

LOAD CAPACITY AND RATINGS

Design Live Load : MS - 18 + MOD OR HS - 20 + MOD
Inventory Rating : 32.6 metric tons
Operating Rating : 53.5 metric tons
Permit Rating : PPPPP
Posting Load : Type 3 N/A english tons
Calculation Method : LOAD FACTOR
Calculation Method : LOAD FACTOR
Type 3S2 N/A english tons
Type 3-3 N/A english tons

DESCRIPTION ON STRUCTURE

Bridge width : (S) 0.5 m br, 13.4 m min & varies, 1.5 m sw, 0.3 m br (N)
Total Width : 15.8 m
Net Width : 13.40 m
Rail Description : (S) Type 25; (N) Type 26 Railing
Min. Vertical Clearance : Unimpaired
No. of Lanes : 3
Rail Code : 1110

DESCRIPTION UNDER STRUCTURE

Channel Description : Natural earth trapezoidal ravine.

REVISIONS

(RAIL RATINGS): (New): 1110, (Old): 1111. The termini of the barrier approach guard railings are not to current standards.

CONDITION OF STRUCTURE

There are 10 mm offsets in the railings at the hinge and at the abutments. (0)

The westerly joint assembly is breaking up in lane #4.

Otherwise, the structure is in good condition.

MISCELLANEOUS

Vehicular parking is at the northwest quadrant.

ELEMENT LEVEL INSPECTION RATINGS

F#	Elem	Element Description	Env	Total Units Quantity	Qty in each Condition State	St. 1	St. 2	St. 3	St. 4	St. 5
01 12		Concrete Deck - Bare	2	3130 sq.m.		3130	0	0	0	0
01 104		P/S Conc Closed Web/Box Girder	2	368 m.		368	0	0	0	0
01 205		Reinforced Conc Column or Pile Extension	2	12 ea.		12	0	0	0	0
01 215		Reinforced Conc Abutment	2	40 m.		40	0	0	0	0
01 303		Assembly Joint/Seal (modular)	2	60 m.		57		3	0	0
01 312		Enclosed/Concealed Bearing	2	3 ea.		0	3	0	0	0

Bridge No.: 55C0520L Location: 0.2 MI E ALICIA PARKWAY Inspection Date: 12-JUN-01

F#	Element Description No.	Env	Total Units Quantity	Qty in each Condition State				
				St. 1	St. 2	St. 3	St. 4	St. 5
01 321	Reinforced Conc Approach Slab w/ or w/o AC Ovly	2	6 ea.	6	0	0	0	
01 331	Reinforced Conc Bridge Railing	2	732 m.	732	0	0	0	0

WORK RECOMMENDATIONS

Repair the westerly joint assembly in lane #4.

Item#	Rec. Date	Work By	Work Id.	Prog. Method	Cost
1	05-JAN-1999	Other	40520L99005X		

Inspected By : M. Ogata

M. Ogata
Registered Civil Engineer



CC : TMRut
Orange County

Bridge No.: 55C0520L Location: 0.2 MI E ALICIA PARKWAY Inspection Date: 12-JUN-01

STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME - CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0520L
 (5) INVENTORY ROUTE(ON/UNDER) - ON 140 0W458N
 (2) HIGHWAY AGENCY DISTRICT 12
 (3) COUNTY CODE 059 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED - ARROYO TRABUCO
 (7) FACILITY CARRIED - W/B SNTA MARGTA PWY
 (9) LOCATION - 0.2 MI E ALICIA PARKWAY
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK - NOT ON NET 0
 (13) LRS INVENTORY ROUTE & SUBROUTE
 (16) LATITUDE 33 DEG 38 MIN 13 SEC
 (17) LONGITUDE 117 DEG 36 MIN 57 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN: MATERIAL - PRSTR CONC CONT
 TYPE - BOX BEAM OR GDR - MULTIPLE CODE 6 05
 (44) STRUCTURE TYPE APPR: MATERIAL -
 TYPE - CODE
 (45) NUMBER OF SPANS IN MAIN UNIT 7
 (46) NUMBER OF APPROACH SPANS 0
 (107) DECK STRUCTURE TYPE CIP CONCRETE CODE 1
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:
 A) TYPE OF WEARING SURFACE - CONCRETE CODE 1
 B) TYPE OF MEMBRANE - NONE CODE 0
 C) TYPE OF DECK PROTECTION - NONE CODE 0

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

(27) YEAR BUILT 1991
 (106) YEAR RECONSTRUCTED 0000
 (42) TYPE OF SERVICE: ON - HIGHWAY-PEDESTRIAN 5
 UNDER - WATERWAY 5
 (28) LANES: ON STRUCTURE 03 UNDER STRUCTURE
 (29) AVERAGE DAILY TRAFFIC 20000
 (30) YEAR OF ADT 1999 (109) TRUCK ADT 1%
 (19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 56.1 M
 (49) STRUCTURE LENGTH 367.9 M
 (50) CURB OR SIDEWALK: LEFT .2 M RIGHT 0 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 13.4 M
 (52) DECK WIDTH OUT TO OUT 15.8 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 29.3 M
 (33) BRIDGE MEDIAN - NO MEDIAN 0
 (34) SKEW 99 DEG (35) STRUCTURE FLARED YES
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 13.4 M
 (53) MIN VERT CLEAR OVER BRIDGE RDWY 99.99 M
 (54) MIN VERT UNDERCLEAR REF - NOT H/RR 0 M
 (55) MIN LAT UNDERCLEAR RT REF - NOT H/RR 0 M
 (56) MIN LAT UNDERCLEAR LT 0 M

***** NAVIGATION DATA *****

(38) NAVIGATION CONTROL - NOT APPLICABLE CODE N
 (111) PIER PROTECTION - NOT REQUIRED CODE 1
 (39) NAVIGATION VERTICAL CLEARANCE 0 M
 (116) VERT-LIFT BRIDGE NAV MIN VERT CLEAR 0 M
 (40) NAVIGATION HORIZONTAL CLEARANCE 0

***** SUFFICIENCY RATING = 81.7 *****

STATUS =

HEALTH INDEX = 99.7

***** 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 - LEFT STRUCTURE L
 (102) DIRECTION OF TRAFFIC - 1 WAY 1
 (103) TEMPORARY STRUCTURE -
 (105) FEDERAL LANDS HIGHWAY - NOT APPLICABLE 0
 (110) DESIGNATED NATIONAL NETWORK - NOT ON NET 0
 (20) TOLL - ON FREE ROAD 3
 (21) MAINTAIN - COUNTY HIGHWAY AGENCY 2
 (22) OWNER - COUNTY HIGHWAY AGENCY 2
 (37) HISTORICAL SIGNIFICANCE - NOT ELIGIBLE 5

***** CONDITION ***** CODE

(58) DECK 7
 (59) SUPERSTRUCTURE 8
 (60) SUBSTRUCTURE 7
 (61) CHANNEL & CHANNEL PROTECTION 8
 (62) CULVERTS N

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

(31) DESIGN LOAD - MS - 18 + MOD OR HS - 20 + MOD 6
 (63) OPERATING RATING METHOD - LOAD FACTOR 1
 (64) OPERATING RATING - 53.5
 (65) INVENTORY RATING METHOD - LOAD FACTOR 1
 (66) INVENTORY RATING - 32.6
 (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 7
 (68) DECK GEOMETRY 5
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
 (71) WATER ADEQUACY 9
 (72) APPROACH ROADWAY ALIGNMENT 8
 (36) TRAFFIC SAFETY FEATURES 1110
 (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 40000
 (115) YEAR OF FUTURE ADT 2019

***** INSPECTIONS *****

(90) INSPECTION DATE 06/01 (91) FREQUENCY 24 MO
 (92) CRITICAL FEATURE INSPECTION: (93) CFI DATE
 A) FRACTURE CRIT DETAIL - NO -1 MO A)
 B) UNDERWATER INSP - NO -1 MO B)
 C) OTHER SPECIAL INSP - NO -1 MO C)

Bridge Number 55C-520 L

Location 12 - Ora - FAS W458-Cr
Dist.-Co.-Rte.-City

Date of Investigation August 7, 1996

TYPE OF INVESTIGATION/REPORT

BIENNIAL X DAMAGE
CATEGORY A OTHER
UNDERWATER OFFICE

Name ARROYO TRABUCO (Santa Margarita Parkway westbound, 0.2 mile east of Alicia Parkway)

CONDITION RATINGS:

Element Level Inspection (ELI) form attached.

Channel & Channel Protection

8

CONDITION OF STRUCTURE:

There are light longitudinal cracks in concrete deck. Otherwise, condition of structure is good.

WORK RECOMMENDED:

None.

M. Hadi Behrooj ^{HAH}
By G. P. Balinghasay
G. P. Balinghasay

GPB:cd
cc: TMRut
Orange County



SUPPLEMENTARY BRIDGE REPORT

DS-M19 (REV. 2/93)

Bridge Number 55C-520 L

Location 12 - Ora - FAS W458-Cr
Dist.-Co.-Rte.-City

Date of Investigation June 24, 1994

TYPE OF INVESTIGATION/REPORT

BIENNIAL	<u>X</u>	DAMAGE	___
CATEGORY A	___	OTHER	___
UNDERWATER	___	OFFICE	___

Name ARROYO TRABUCO (Santa Margarita Parkway westbound, 0.2 mile east of Alicia Parkway)

CONDITION RATINGS:

Condition ratings of all bridge elements are shown on the PONTIS DATA FORM (Attachment A).

Channel & Channel Protection

8

CONDITION OF STRUCTURE:

There are several hairline cracks in soffit of the box girder in hinge area. Otherwise the structure is in good condition.

WORK RECOMMENDED:

None.

M. H. Behrooj *MHB*

By

S. A. Zanganeh
S. A. Zanganeh

SAZ:cd
cc: CDHarris
Orange County

M. H. Behrooj

CH1777



INFORMATION ONLY - NOT FOR UPDATE

BRIDGE NUMBER	FRAME	INSPECTION DATE
55C0520L	01	062494
1	9	11 16

SCOUR CRITICAL	NO
CATEGORY A	NO
FRACTURE CRITICAL	NO
ELIGIBLE FOR RAIL UPGRADE	NO
UNDERWATER INSPECTION	NO

DISTRICT _____ 12
COUNTY _____ ORA
ROUTE _____
POSTMILE _____
NAME _____

[illegible]

BY: 822

BRIDGE REPORT

14W24

Bridge No. 55C - 520 L

DS-M56 (REV. 1/91)

Location 12 - Ora - FAS W458-Cr
Dist Co Rte City

Date of Investigation June 12, 1992

Name ARROYO TRABUCO (Santa Margarita Parkway westbound, 0.2 mile east of Alicia Parkway)

Lat. 33° - 38.3'N Long. 117° - 36.8'W

Custodian County of Orange Owner County of Orange

STRUCTURAL DATA AND HISTORY

Year Built 1991 By County of Orange Contract No. Unknown

Designed by: McDaniel Engineering Co. Plans Avail. @ DOS

Description:

Seven span continuous cast-in-place prestressed concrete box girder (varies 5 to 8 cells) supported by reinforced concrete "V" column bents and open end RC seated abutments, all on steel piles except bent 2 (from west) which is on spread footing.

Spans (W) 140', 5 @ 184', 140' (E)

Length 1,207' NBIS Bridge Length Yes Skew Varies 22° to 30° Rt

Number of Intermediate Joints: @Hinges 1 @Bents None

Maximum Column/Pier Height: (Less than 20') (20'-29') (30' & Over) X

Design Live Load HS 20-44 & Alt. & Permit Design Method Load Factor

DESCRIPTION - ON STRUCTURE

Bridge Width (S) 1.8' br. 44' min/64' max, 5' sw, 1' br (N) (varies on west end)

Total Width 52' min Net Width 44' min Lanes 3 Tracks None

Median None (S) Type 25. (N) Type 26
Rail Type with tubular handrail

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Vert. Clearance over deck Unimpaired Appr. Rdwy. Width 96'

Deck Type 1 Wearing Surface/Prot. Sys. 100 Concrete/None

Alignment

DESCRIPTION - UNDER STRUCTURE

Roadway Section None

Clearances: Road: Vert. Horiz. Lt. ; Rt.

Lanes Tracks

Facilities Crossed Arroyo Trabuco (L 02)

June 12, 1992

DESCRIPTION - HYDRAULICS

Channel Open natural ravine

Navigable: Yes ☐ No ☒ Clearances: Vert.

Horiz.

Pier/Abutment Protection (For Navigation) ☐

TRAFFIC INFORMATION

	DECK	YEAR	UNDER	YEAR
Average Daily Traffic & Year :	Est. 15,000	1992	N	
Average Daily Traffic (Future) :	Est. 20,000	2010	N	
Average Daily Trucks (% OF ADT) :	1%		N	
Bypass Detour Length:	1 mile		N	
Shell Route:	No		No	
Functional Classification :	07		N	
LOAD RATINGS:	Inventory	HS 20	Operating	HS 33
	Permit	PPPPP	Computation	Method Min. by design

CONDITION RATINGS:

Deck	8	Superstructure	8	Substructure	8
Channel & Channel Protection	8	Culvert	N	Widenable	Yes

APPRAISAL RATINGS:

Waterway Adequacy	9	Approach Roadway Alignment	8
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Date of Revisions

CONDITION OF STRUCTURE:

A few minor cracks and leaching are noted in soffit of the box girder near the hinge.

The structure is new and is in good condition.

Henry Ma

HM:cd

cc: INagai (2)
County of Orange

