



DEPARTMENT OF TRANSPORTATION  
Structure Maintenance & Investigations

Bridge Number : 55C0550  
Facility Carried: ALISO CREEK ROAD  
Location : 100' W/O ALICIA PARKWAY  
City :  
Inspection Date : 05/24/2017

## Bridge Inspection Report

Inspection Type

Routine FC Underwater Special Other

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**STRUCTURE NAME:** ALISO CREEK

### CONSTRUCTION INFORMATION

Year Built : 1988 Skew (degrees): 20  
Year Modified: N/A No. of Joints : 0  
Length (m) : 51.8 No. of Hinges : 0

Structure Description: Single span CIP/PS concrete box girder (16 cells) with RC open end diaphragm abutments with monolithic wingwalls, all supported upon concrete piles.

The bridge is widen with a box girder at the north end.

Span Configuration : (W) 170.34 ft (E)

### SAFE LOAD CAPACITY AND RATINGS

Design Live Load: MS-18+MOD OR HS-20+MOD  
Inventory Rating: RF=1.00 =>32.4 metric tons Calculation Method: ASSIGNED (LFD)  
Operating Rating: RF=1.67 =>54.1 metric tons Calculation Method: ASSIGNED (LFD)  
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: (N) 1.00 ft br, 5.00 ft sw, 113.00 ft, 5.00 ft sw, 1.00 ft br (N)  
Total Width: 38.0 m Net Width: 34.5 m No. of Lanes: 9 Speed: 50 mph  
Min. Vertical Clearance: Unimpaired Overlay Thickness: 0.0 inches  
Rail Code: 0000

Rail Type	Location	Length (ft)	Rail Modifications
Type 26	Right/Left	1085	

### DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth, trapezoidal with RC slope protection through the site.

### NOTICE

The bridge inspection condition assessment used for this inspection is based on the American Association of State Highway and Transportation Officials (AASHTO) Bridge Element Inspection Manual 2013 as defined in Moving Ahead for Progress in the 21st Century (MAP-21) federal law. The new element inspection methodology may result in changes to related condition and appraisal ratings on the bridge without significant physical changes at the bridge.

The element condition information contained in this report represents the current condition of the bridge based on the most recent routine and special inspections. Some of the notes presented below may be from an inspection that occurred prior to the date noted in this report. Refer to the Scope and Access section of this inspection report for a description of which portions of the bridge were inspected on this date.

### INSPECTION COMMENTARY

#### SCOPE AND ACCESS

This inspection was performed by walking on the sidewalks and under the span of the superstructure. All elements were visually inspected, a full inspection is performed.

The water in the channel was 5 inches deep and 50 feet wide at time of inspection.

**INSPECTION COMMENTARY****REVISIONS**

The entire quantity of concrete abutments ELI #215 is modified from 93 m to 123 m because the wingwalls are monolithic with the abutments.

**DECK**

There is a loop detector in the concrete deck at the easterly end of the eastbound lanes.  
(see the attached photo no. 2)

**SAFE LOAD CAPACITY**

A Load Rating Summary Sheet dated 03/30/3013 is on file for this structure. The current rating has been assigned in accordance with SM&I procedures.

**ELEMENT INSPECTION RATINGS AND COMMENTARY**

Elem No.	Defect /Prot	Defect	Element Description	Env	Total Qty	Units	Qty in each Condition State			
							St. 1	St. 2	St. 3	St. 4
16			Top Flange-RC	2	1970	sq.m	1720	200	50	0
	1130		Cracking (RC and Other)	2	250		0	200	50	0
(16-1130)										
The concrete deck exhibits several map and transverse cracks at the east Abutment area, up to 0.2 inches wide, 2 feet apart and 50 feet long; and few longitudinal cracks, up to 0.05 inches wide and 5-10 feet long at the west Abutment area. (see the attached photos no. 4 to 6)										
104			Box Girder-PS Conc.	2	104	m	94	10	0	0
	1110		Cracking (PS Conc.)	2	10		0	10	0	0
(104-1110)										
The soffit of the box girder exhibits three longitudinal cracks with white efflorescence at south-east corner; and few longitudinal cracks with white efflorescence with scattered locations, 2-4 feet long. (see the attached photo no. 1)										
215			Abutment-RC	2	123	m	123	0	0	0
(215)										
Monolithic wingwalls are included in the total quantity.										
There were no significant defects noted.										
227			Pile-RC	2	1	ea.	1	0	0	0
(227)										
The pile element is included to indicate the presence of piles on this structure. The piles were not exposed for visual inspection. No indication of pile distress was noted in any substructure element.										
256			Slope Protection	2	2	ea.	2	0	0	0
(256)										
There were no significant defects noted.										
331			Railing-RC	2	104	m	84	20	0	0
	1080		Delamination/Spall/Patched Area	2	15		0	15	0	0
	1130		Cracking (RC and Other)	2	5		0	5	0	0

**ELEMENT INSPECTION RATINGS AND COMMENTARY**

Elem No.	Defect /Prot	Defect	Element Description	Env Qty	Total Qty	Units	Qty in each Condition	State
							St. 1	St. 2
(331-1080)			The south rail exhibits several spalls +/- 4 inches X 4 inches X 1 inch.					
(331-1130)			The south rail exhibits vertical cracks, up to 0.04 inches wide. (see the attached photo no. 3)					

**WORK RECOMMENDATIONS**

RecDate: 03/30/2013

EstCost:

Seal the concrete deck cracks with

Action : Deck-Methacrylate

StrTarget: 2 YEARS

methacrylate.

Work By: LOCAL AGENCY

DistTarget:

Status : PROPOSED

EA:

Team Leader : Ashraf Shenouda

Report Author : Ashraf Shenouda

Inspected By : A.Shenouda/KD.Henderson

Ashraf Shenouda (Registered Civil Engineer) (Date)



**STRUCTURE INVENTORY AND APPRAISAL REPORT**

## \*\*\*\*\* IDENTIFICATION \*\*\*\*\*

(1) STATE NAME- CALIFORNIA 069  
 (8) STRUCTURE NUMBER 55C0550  
 (5) INVENTORY ROUTE (ON/UNDER) - ON 140000000  
 (2) HIGHWAY AGENCY DISTRICT 12  
 (3) COUNTY CODE 059 (4) PLACE CODE 00000  
 (6) FEATURE INTERSECTED- ALISO CREEK  
 (7) FACILITY CARRIED- ALISO CREEK ROAD  
 (9) LOCATION- 100' W/O ALICIA PARKWAY  
 (11) MILEPOINT/KILOMETERPOINT 0  
 (12) BASE HIGHWAY NETWORK- PART OF NET 1  
 (13) LRS INVENTORY ROUTE & SUBROUTE 000000000000  
 (16) LATITUDE 33 DEG 33 MIN 19.74 SEC  
 (17) LONGITUDE 117 DEG 43 MIN 07.56 SEC  
 (98) BORDER BRIDGE STATE CODE % SHARE %  
 (99) BORDER BRIDGE STRUCTURE NUMBER

## \*\*\*\*\* STRUCTURE TYPE AND MATERIAL \*\*\*\*\*

(43) STRUCTURE TYPE MAIN:MATERIAL- PRESTRESS CONC  
 TYPE- BOX BEAM OR GIRDER - MULTI CODE 505  
 (44) STRUCTURE TYPE APPR:MATERIAL- OTHER/NA  
 TYPE- OTHER/NA CODE 000  
 (45) NUMBER OF SPANS IN MAIN UNIT 1  
 (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 1988  
 (106) YEAR RECONSTRUCTED 0000  
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5  
 UNDER- WATERWAY 5  
 (28) LANES:ON STRUCTURE 09 UNDER STRUCTURE 00  
 (29) AVERAGE DAILY TRAFFIC 25915  
 (30) YEAR OF ADT 2011 (109) TRUCK ADT 1 %  
 (19) BYPASS, DETOUR LENGTH 3 KM

## \*\*\*\*\* GEOMETRIC DATA \*\*\*\*\*

(48) LENGTH OF MAXIMUM SPAN 50.0 M  
 (49) STRUCTURE LENGTH 51.8 M  
 (50) CURB OR SIDEWALK: LEFT 1.5 M RIGHT 1.5 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 34.5 M  
 (52) DECK WIDTH OUT TO OUT 38.0 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 34.5 M  
 (33) BRIDGE MEDIAN- NO MEDIAN 0  
 (34) SKEW 20 DEG (35) STRUCTURE FLARED YES  
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 34.5 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 = 92.3  
 STATUS  
 HEALTH INDEX 95.4  
 PAINT CONDITION INDEX = N/A

## \*\*\*\*\* CLASSIFICATION \*\*\*\*\* CODE

(112) NBIS BRIDGE LENGTH- YES Y  
 (104) HIGHWAY SYSTEM- ROUTE ON NHS 1  
 (26) FUNCTIONAL CLASS- OTHER PRIN ART URBAN 14  
 (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- MS-18+MOD OR HS-20+MOD 6  
 (63) OPERATING RATING METHOD- ASSIGNED (LFD) A  
 (64) OPERATING RATING- 54.1  
 (65) INVENTORY RATING METHOD- ASSIGNED (LFD) A  
 (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 7  
 (68) DECK GEOMETRY 5  
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N  
 (71) WATER ADEQUACY 8  
 (72) APPROACH ROADWAY ALIGNMENT 8  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (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 46252  
 (115) YEAR OF FUTURE ADT 2035

## \*\*\*\*\* INSPECTIONS \*\*\*\*\*

(90) INSPECTION DATE 05/17 (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)



## ALISO CREEK

100' W/O ALICIA PARKWAY

05/24/2017 [AAAK]

55C0550

### 107 - PHOTO-Super-Damage/Deterioration



Photo No. 1

The soffit of the box girder has 3 longitudinal cracks with white efflorescence.

### 102 - PHOTO-Deck-Damage/Deterioration



Photo No. 2

loop detector in the deck at east end at eastbound lanes.



## ALISO CREEK

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55C0550

### 119 - PHOTO-Rail-Damage/Deterioration



Photo No. 3

Vertical cracks at the south rail.

### 102 - PHOTO-Deck-Damage/Deterioration



Photo No. 4

Map cracks at the east end, up to 0.2 inches wide.



# ALISO CREEK

100' W/O ALICIA PARKWAY

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55C0550

## 102 - PHOTO-Deck-Damage/Deterioration



Photo No. 5

Map cracks at the east end, up to 0.2 inches wide.

## 102 - PHOTO-Deck-Damage/Deterioration



Photo No. 6

Map cracks at the east end, up to 0.2 inches wide.