



DEPARTMENT OF TRANSPORTATION
Structure Maintenance & Investigations

Bridge Number : 55C0477
Facility Carried: MASON REGIONAL PRK
Location : 50' s/o University Drive
City :
Inspection Date : 02/07/2018

Bridge Inspection Report

Inspection Type
Routine ☒ FC ☐ Underwater ☐ Special ☐ Other ☐

STRUCTURE NAME: SAND CANYON WASH

CONSTRUCTION INFORMATION

Year Built : 1973 Skew (degrees): 99
Year Modified: N/A No. of Joints : 0
Length (m) : 12.2 No. of Hinges : 0

Structure Description: Triple 12 ft x 9 ft x 50 ft long RC box culvert under about 2 ft of fill and AC surface.

Span Configuration : (S) 3 @ 12 ft (N) clear, normal

SAFE LOAD CAPACITY AND RATINGS

Design Live Load: UNKNOWN
Inventory Rating: RF=1.00 =>32.4 metric tons Calculation Method: FIELD EVAL/ENG JUDGMENT
Operating Rating: RF=1.67 =>54.1 metric tons Calculation Method: FIELD EVAL/ENG JUDGMENT
Permit Rating : PPPPP
Posting Load : Type 3: Legal Type 3S2: Legal Type 3-3: Legal

DESCRIPTION ON STRUCTURE

Deck X-Section: (W) 1.5 ft r, 4 ft sw, 22.5 ft, 6 ft cu med, 11.5 ft, 4 ft sw, 1.5 ft r (E)

Total Width: 14.6 m Net Width: 10.4 m No. of Lanes: 3 Speed: 25 mph
Min. Vertical Clearance: Unimpaired Overlay Thickness: 3.0 inches

Rail Code: 0000

| Rail Type | Location | Length (ft) | Rail Modifications |
|---------------|----------|-------------|--------------------|
| Miscellaneous | Left | 60 | |
| Miscellaneous | Right | 60 | |

DESCRIPTION UNDER STRUCTURE

Channel Description: Natural earth trapezoidal with rock slopes at 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

A routine inspection was performed by Y. Chen and M. Monajemi. The conditions of AC pavement surface and rails on the top of the bridge were inspected by walking along the sidewalks. The culvert could be accessed from both sides, the conditions of the cells

INSPECTION COMMENTARY

were inspected by walking in front of the entrance areas and through all cells. The wash was dry at time of inspection.

SAFE LOAD CAPACITY

The load rating for this structure is being reviewed by SMI Ratings Branch, an updated Load Rating Summary will be archived when this review is complete. The latest Load Rating Summary Sheet prepared by ABME is archived on 12/12/2014 for this structure.

ELEMENT INSPECTION RATINGS AND COMMENTARY

| Elem No. | Defect /Prot | Defect | Element Description | Env | Total Qty | Units | Qty in each State | Condition | State |
|----------|--------------|--------|-------------------------|-----|-----------|-------|-------------------|-----------|-------------|
| | | | | | | | St. 1 | St. 2 | St. 3 St. 4 |
| 241 | | | Culvert-RC | 2 | 45 | m | 35 | 10 | 0 0 |
| | 1130 | | Cracking (RC and Other) | 2 | 10 | | 0 | 10 | 0 0 |

(241-1130)

There are vertical and diagonal cracks up to 0.04 inches wide and 3 feet long in the culvert walls as follows: 5 cracks in Wall 1, 6 cracks in Walls 2 & 3, and 3 cracks in Wall 4.

| | | | | | | | | | |
|-----|--|--|----------------|---|----|---|----|---|-----|
| 332 | | | Railing-Timber | 2 | 32 | m | 32 | 0 | 0 0 |
|-----|--|--|----------------|---|----|---|----|---|-----|

(332)

There were no significant defects noted.

WORK RECOMMENDATIONS

| | | |
|----------------------------|--------------------|---|
| RecDate: 06/08/2011 | EstCost: | Remove and clean the downstream channel |
| Action : Remove Vegetation | StrTarget: 2 YEARS | from live trees and accumulated dirt |
| Work By: LOCAL AGENCY | DistTarget: | |
| Status : PROPOSED | EA: | |

Team Leader : Young Chen

Report Author : Young Chen

Inspected By : Y.Chen/MM.Monajemi

Young Chen (Registered Civil Engineer) 6/12/2018 (Date)



STRUCTURE INVENTORY AND APPRAISAL REPORT

***** IDENTIFICATION *****

(1) STATE NAME- CALIFORNIA 069
 (8) STRUCTURE NUMBER 55C0477
 (5) INVENTORY ROUTE (ON/UNDER)- ON 140000000
 (2) HIGHWAY AGENCY DISTRICT 12
 (3) COUNTY CODE 059 (4) PLACE CODE 00000
 (6) FEATURE INTERSECTED- SAND CANYON WASH
 (7) FACILITY CARRIED- MASON REGIONAL PRK
 (9) LOCATION- 50' s/o University Drive
 (11) MILEPOINT/KILOMETERPOINT 0
 (12) BASE HIGHWAY NETWORK- NOT ON NET 0
 (13) LRS INVENTORY ROUTE & SUBROUTE
 (16) LATITUDE 33 DEG 39 MIN 25.54 SEC
 (17) LONGITUDE 117 DEG 49 MIN 53.14 SEC
 (98) BORDER BRIDGE STATE CODE % SHARE %
 (99) BORDER BRIDGE STRUCTURE NUMBER

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

(43) STRUCTURE TYPE MAIN:MATERIAL- CONCRETE
 TYPE- CULVERT CODE 119
 (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- NOT APPLICABLE CODE N
 (108) WEARING SURFACE / PROTECTIVE SYSTEM:
 A) TYPE OF WEARING SURFACE- NOT APPLICABLE CODE N
 B) TYPE OF MEMBRANE- NOT APPLICABLE CODE N
 C) TYPE OF DECK PROTECTION- NOT APPLICABLE CODE N

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

(27) YEAR BUILT 1973
 (106) YEAR RECONSTRUCTED 0000
 (42) TYPE OF SERVICE: ON- HIGHWAY-PEDESTRIAN 5
 UNDER- WATERWAY 5
 (28) LANES:ON STRUCTURE 03 UNDER STRUCTURE 00
 (29) AVERAGE DAILY TRAFFIC 300
 (30) YEAR OF ADT 2010 (109) TRUCK ADT 1 %
 (19) BYPASS, DETOUR LENGTH 199 KM

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

(48) LENGTH OF MAXIMUM SPAN 3.7 M
 (49) STRUCTURE LENGTH 12.2 M
 (50) CURB OR SIDEWALK: LEFT 1.2 M RIGHT 1.2 M
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 10.4 M
 (52) DECK WIDTH OUT TO OUT 14.6 M
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 10.4 M
 (33) BRIDGE MEDIAN- CLOSED (NO BARRIER) 2
 (34) SKEW 99 DEG (35) STRUCTURE FLARED NO
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 6.9 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 = 76.7

STATUS

HEALTH INDEX 94.9

PAINT CONDITION INDEX = N/A

***** CLASSIFICATION ***** CODE

(112) NBIS BRIDGE LENGTH- YES Y
 (104) HIGHWAY SYSTEM- NOT ON NHS 0
 (26) FUNCTIONAL CLASS- LOCAL URBAN 19
 (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 N
 (59) SUPERSTRUCTURE N
 (60) SUBSTRUCTURE N
 (61) CHANNEL & CHANNEL PROTECTION 8
 (62) CULVERTS 6

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

(31) DESIGN LOAD- UNKNOWN 0
 (63) OPERATING RATING METHOD- FIELD EVAL/ENG JUD 0
 (64) OPERATING RATING- 54.1
 (65) INVENTORY RATING METHOD- FIELD EVAL/ENG JUL 0
 (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 6
 (68) DECK GEOMETRY 2
 (69) UNDERCLEARANCES, VERTICAL & HORIZONTAL N
 (71) WATER ADEQUACY 9
 (72) APPROACH ROADWAY ALIGNMENT 6
 (36) TRAFFIC SAFETY FEATURES 0000
 (113) SCOUR CRITICAL BRIDGES 8

***** PROPOSED IMPROVEMENTS *****

(75) TYPE OF WORK- SUP/SUB REHAB CODE 35
 (76) LENGTH OF STRUCTURE IMPROVEMENT 12.2 M
 (94) BRIDGE IMPROVEMENT COST \$114,000
 (95) ROADWAY IMPROVEMENT COST \$22,800
 (96) TOTAL PROJECT COST \$191,520
 (97) YEAR OF IMPROVEMENT COST ESTIMATE 2017
 (114) FUTURE ADT 368
 (115) YEAR OF FUTURE ADT 2036

***** INSPECTIONS *****

(90) INSPECTION DATE 02/18 (91) FREQUENCY 48 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)