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# 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 : 55C0148  
Facility Carried: WARNER AVE  
Location : 0.1 MI W HARBOR BLVD  
City :  
Inspection Date : 05-JUN-01

**Bridge Inspection Report**

Inspection Type

Routine ☒ Group A ☐ Underwater ☐ Special ☐ Other ☐

**Name : SANTA ANA RIVER CHANNEL**

CONSTRUCTION INFORMATION

Year Built : 1961  
Year Widened : 1969  
Length (m) : 77.4

Skew (degrees): 9  
No. of Joints : 0  
No. of Hinges : 2

Description of Structure : Continuous six span CIP/RC T-beam (9 each) with RC pier walls and RC open end diaphragm abutments, all supported upon concrete piles.

Span Configuration : (W) 10.4 m, 4 @ 14.0 m, 10.4 m (E) c/c

LOAD CAPACITY AND RATINGS

Design Live Load : MS - 18 OR HS - 20

Inventory Rating : 32.6 metric tons

Operating Rating : 55.3 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) 0.1 m br, 2 @ 3.5 m, 1.6 m cu med, 2 @ 3.5 m, 0.1 m br (N)

Total Width : 23.2 m

Net Width : 21.20 m

No. of Lanes : 5

Rail Description : MBGR

Rail Code : 0000

Min. Vertical Clearance : Unimpaired

DESCRIPTION UNDER STRUCTURE

Channel Description : RC trapezoidal.

REVISIONS

The structure has been retrofitted seismically. The restrainer cables are no longer visible.

CONDITION OF STRUCTURE

Unsealed cracks exist in the concrete deck which are of moderate size or density. (0)

Otherwise, the structure is in good condition.

MISCELLANEOUS

Vehicular access into the channel is from the southwest quadrant.

ELEMENT LEVEL INSPECTION RATINGS

| F#     | Elem | Element Description              | Env | Total Units<br>Quantity | Qty in each Condition State |       |       |       |       |
|--------|------|----------------------------------|-----|-------------------------|-----------------------------|-------|-------|-------|-------|
| No.    |      |                                  |     |                         | St. 1                       | St. 2 | St. 3 | St. 4 | St. 5 |
| 01 12  |      | Concrete Deck - Bare             | 2   | 1630 sq.m.              | 1630                        | 0     | 0     | 0     | 0     |
| 01 110 |      | Reinforced Conc Open Girder/Beam | 2   | 693 m.                  | 693                         | 0     | 0     | 0     | 0     |
| 01 210 |      | Reinforced Conc Pier Wall        | 2   | 120 m.                  | 120                         | 0     | 0     | 0     | 0     |
| 01 215 |      | Reinforced Conc Abutment         | 2   | 48 m.                   | 48                          | 0     | 0     | 0     | 0     |
| 01 256 |      | Slope Protection                 | 2   | 2 ea.                   | 2                           | 0     | 0     | 0     | 0     |
| 01 304 |      | Open Expansion Joint             | 2   | 46 m.                   | 46                          | 0     | 0     |       |       |
| 01 312 |      | Enclosed/Concealed Bearing       | 2   | 2 ea.                   | 2                           | 0     | 0     | 0     | 0     |
| 01 337 |      | Metal Railing (W6X25 Posts)      | 2   | 154 m.                  | 142                         | 0     | 12    | 0     | 0     |
| 01 358 |      | Deck Cracking                    | 2   | 1 ea.                   | 0                           | 1     | 0     | 0     | 0     |

Bridge No.: 55C0148

Location: 0.1 MI W HARBOR BLVD

Inspection Date: 05-JUN-01

WORK RECOMMENDATIONS - NONE

Inspected By : M. Ogata

*M. Ogata*  
\_\_\_\_\_  
Registered Civil Engineer



CC : TMRut  
Orange County

Bridge No.: 55C0148

Location: 0.1 MI W HARBOR BLVD

Inspection Date: 05-JUN-01

## STRUCTURE INVENTORY AND APPRAISAL REPORT

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

(1) STATE NAME - CALIFORNIA 069  
 (8) STRUCTURE NUMBER 55C0148  
 (5) INVENTORY ROUTE (ON/UNDER) - ON 140 0M019N  
 (2) HIGHWAY AGENCY DISTRICT 12  
 (3) COUNTY CODE 059 (4) PLACE CODE 00000  
 (6) FEATURE INTERSECTED - SANTA ANA RIVER CHANNEL  
 (7) FACILITY CARRIED - WARNER AVE  
 (9) LOCATION - 0.1 MI W 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 50 SEC  
 (17) LONGITUDE 117 DEG 55 MIN 19 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 2 04  
 (44) STRUCTURE TYPE APPR: MATERIAL -  
 TYPE - CODE  
 (45) NUMBER OF SPANS IN MAIN UNIT 6  
 (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 1961  
 (106) YEAR RECONSTRUCTED 1969  
 (42) TYPE OF SERVICE: ON - HIGHWAY 1  
 UNDER - WATERWAY 5  
 (28) LANES: ON STRUCTURE 05 UNDER STRUCTURE  
 (29) AVERAGE DAILY TRAFFIC 30000  
 (30) YEAR OF ADT 1999 (109) TRUCK ADT 1%  
 (19) BYPASS, DETOUR LENGTH 2 KM

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

(48) LENGTH OF MAXIMUM SPAN 14 M  
 (49) STRUCTURE LENGTH 77.4 M  
 (50) CURB OR SIDEWALK: LEFT 0 M RIGHT 0 M  
 (51) BRIDGE ROADWAY WIDTH CURB TO CURB 21.2 M  
 (52) DECK WIDTH OUT TO OUT 23.2 M  
 (32) APPROACH ROADWAY WIDTH (W/SHOULDERS) 23.5 M  
 (33) BRIDGE MEDIAN - CLOSED (NO BARRIER) 2  
 (34) SKEW 9 DEG (35) STRUCTURE FLARED NO  
 (10) INVENTORY ROUTE MIN VERT CLEAR 99.99 M  
 (47) INVENTORY ROUTE TOTAL HORIZ CLEAR 12.5 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 = 88.0 \*\*\*\*\*

STATUS =

HEALTH INDEX = 100

## \*\*\*\*\* 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) 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 6  
 (59) SUPERSTRUCTURE 7  
 (60) SUBSTRUCTURE 7  
 (61) CHANNEL & CHANNEL PROTECTION 8  
 (62) CULVERTS N

## \*\*\*\*\* LOAD RATING AND POSTING \*\*\*\*\* CODE

(31) DESIGN LOAD - MS - 18 OR HS - 20 5  
 (63) OPERATING RATING METHOD - LOAD FACTOR 1  
 (64) OPERATING RATING - 55.3  
 (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 7  
 (36) TRAFFIC SAFETY FEATURES 0000  
 (113) SCOUR CRITICAL BRIDGES 6

## \*\*\*\*\* 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 60000  
 (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 - YES -1 MO A)  
 B) UNDERWATER INSP - NO -1 MO B)  
 C) OTHER SPECIAL INSP - NO -1 MO C)

Bridge Number 55C-148

**TYPE OF INVESTIGATION/REPORT**

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

Location 12 - Ora - FAU M019-CR  
Dist.-Co.-Rte.-City

Date of Investigation July 14, 1995

Name SANTA ANA RIVER CHANNEL (Warner Avenue, 0.1 mile west of Harbor Boulevard)

**CONDITION RATINGS:**

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

Channel & Channel Protection

8

SCOUR CRITICAL:

A scour rating of A-1 is appropriate.

CONDITION OF STRUCTURE:

- A. Portion of the pourable seal for the south half of the bridge has failed and dirt has started to accumulate in joint.
- B. There is light transverse cracking in soffit that show leach marks.

Condition of structure is good.

REVISION:

DESCRIPTION - HYDRAULICS.

Channel: RC bottom trapezoidal with RC side slope.

WORK RECOMMENDED:

Remove portion of failed pourable seal, clean joint and install appropriate seal.

ENCROACHMENT:

Two 0.10 m PVC ducts in south exterior bay.

By M. Hadi Behrooj <sup>MHB</sup>  
G. P. Balinghasay



GPB:cd  
cc: CDHarris  
Orange County  
WLindsey

INFORMATION ONLY - NOT FOR UPDATE

|                           |    |
|---------------------------|----|
| 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]

07/18/95

BY: [Signature]

Bridge No. 55C-148

**Name** SANTA ANA RIVER CHANNEL (Warner Avenue, 0.1 mile west of Harbor Boulevard)

**Location** 12-Ora-FAS M019-CR  
Dist.-Co.-Rte.-City

## SUMMARY OF ENCROACHMENTS

| Permit No.<br>and Permittee | Date                | Description & Location on Bridge               |
|-----------------------------|---------------------|------------------------------------------------|
|                             | Prior to<br>7-14-95 | 2 - 0.10 m PVC ducts in south exterior<br>bay. |

HBD M 30

**SUPPLEMENTARY BRIDGE REPORT**  
DS-M19 (REV. 8/92)

Bridge Number 55C-148

Location 12 - Ora - FAU M019-CR  
Dist.-Co.-Rte.-City

Date of Investigation April 12, 1993

**TYPE OF INVESTIGATION/REPORT**

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

Name SANTA ANA RIVER CHANNEL (Warner Avenue, 0.1 mile west of Harbor Boulevard)

**CONDITION RATINGS:**

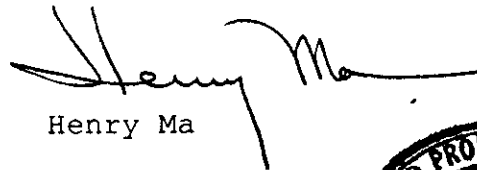
Condition ratings of all bridge elements are shown on the PONTIS DATA FORM (Attachment A).

Channel & Channel Protection

8

CONDITION OF STRUCTURE:

Condition of the structure remains unchanged and is good.

  
Henry Ma

HM:cd  
cc: INagai (2)  
County of Orange





INFORMATION ONLY - NOT FOR UPDATE

| BRIDGE NUMBER | FRAME | INSPECTION DATE |
|---------------|-------|-----------------|
| 55C0148       | 01    | 041293          |
| 1             | 8     | 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:**

BRIDGE REPORT

DS-M58 (REV. 1/91)

14W11

Bridge No. 55C - 148

Location 12 - Ora - FAU M019-CR  
Dist Co Rte City

REVISED ORIGINAL REPORT

Date of Investigation April 11, 1991

Name SANTA ANA RIVER CHANNEL (Warner Avenue, 0.1 mile west of Harbor Boulevard)

Lat. 33° - 42.9'N Long. 117° - 55.2'W

Custodian County of Orange Owner County of Orange

STRUCTURAL DATA AND HISTORY

Year Built 1961 By County of Orange Contract No. Unknown  
See Page 2

Designed by: County Plans Avail. @ County

Description: 6 span continuous CIP RC "T" beam (9 each) supported by RC pier walls and open end RC diaphragm abutments, all on concrete piles.

Spans (W) 35', 4 @ 46', 35' (E)

Length 254' NBIS Bridge Length Yes Skew 9° Left

Number Of Intermediate Joints: @Hinges 2 @Bents None

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

Design Live Load H20-S16-44 Design Method Unknown

DESCRIPTION - ON STRUCTURE

Bridge Width (S) 0.3'br, 41', 5.3'm, 28.6', 0.3'br (N)

Total Width 76' Net Width 69.6' Lanes 5 Tracks None

Median Raised island Rail Type Metal beam

Vert. Clearance over deck Unimpaired Appr. Rdwy. Width 77'

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

Alignment Tangent and R = 10,000'

DESCRIPTION - UNDER STRUCTURE

Roadway Section None

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

Lanes Tracks

Facilities Crossed Santa Ana River Channel (E 01)

0000

April 11, 1991

## DESCRIPTION - HYDRAULICS

Channel Sandy trapezoidal with PCC side slopes

Navigable: Yes ☐ No ☒ Clearances: Vert. Horiz.Pier/Abutment Protection (For Navigation) ☐

| TRAFFIC INFORMATION                 | DECK             | YEAR               | UNDER       | YEAR |
|-------------------------------------|------------------|--------------------|-------------|------|
| Average Daily Traffic & Year :      | 32,000           | 1989               | N           |      |
| Average Daily Traffic (Future) :    | 34,000 Est       | 2010               | N           |      |
| Average Daily Trucks ( % OF ADT ) : | 1% Est           |                    | N           |      |
| Bypass Detour Length                | 1 mile           |                    | N           |      |
| Shell Route:                        | No               |                    | No          |      |
| Functional Classification :         | 14               |                    | N           |      |
| LOAD RATINGS:                       | Inventory HS 20  | Operating          | HS 34       |      |
|                                     | Permit P P P P P | Computation Method | Load Factor |      |

## CONDITION RATINGS:

Deck  Superstructure  Substructure   
 Channel & Channel Protection  Culvert  Widenable Yes

## APPRAISAL RATINGS:

Waterway Adequacy  Approach Roadway Alignment

Date of Revisions

## STRUCTURAL DATA AND HISTORY (Con't.)

Date of Revision: 1969, widened south side

CONDITION OF STRUCTURE:

South metal beam bridge rail is bent at several locations from traffic damage.

There is light to moderate transverse cracking in the concrete bridge deck.

Channel invert remains stable with exposure of top and sides of pier footing of Pier 3, 4, and 5 (from west), same as previously noted.

Condition of the structure is satisfactory.

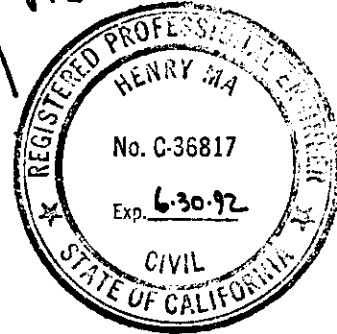
April 11, 1991

ENCROACHMENT:

2 - 4" PVC ducts in south exterior bay.

  
Henry Ma

HM:ms  
cc: INagai (2)  
County of Orange



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**SUPPLEMENTARY BRIDGE REPORT**  
DS-M19 (REV. 1/89)

Bridge No. 55C-148  
Location 12-Ora - FAU M019 - CR  
Dist. Co. Rte. City  
Date of Investigation 4-10-89

Name SANTA ANA RIVER (Warner Avenue, 0.1 mile NW of Harbor Boulevard)

**CONDITION RATING:**

Deck 7 Superstructure 8 Substr.&Pipes 8  
Channel & Channel Protection 8 Culvert N Widenable? Yes

**TYPE OF INVESTIGATION/REPORT**

BIENNIAL X DAMAGE         
CATEGORY A        OTHER         
UNDERWATER        OFFICE       

**CONDITION OF STRUCTURE:**

There is exposure of top and sides of footing at pier 3,4 and 5 (from west) in the river channel.

Condition of the structure remains unchanged and is good.

**REVISION:**

Location: 12-Ora-FAU M019-CR

**WORK RECOMMENDED:**

None.

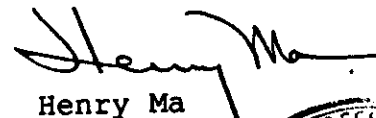
**RECOMMENDED POSTING:**

None.

**SUBSTRUCTURE CODING UPDATE:**

2 RC open end diaphragm abutments on concrete piles.

5 RC pier walls on concrete piles.

  
Henry Ma

HM:ms

cc: INagai (2)  
County of Orange (2)



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY BRIDGE REPORT  
DM-OS M19 (REV. 1/74)

Bridge No. 55C-148

Location 7-Ora-FAU-M019-CR  
Dist - Co - Rte - PM - City

Date of investigation April 15, 1987

SANTA ANA RIVER (Warner Ave., 0.1 mile NW of Harbor Blvd.)

Name

CONDITION RATING:

APPRAISAL RATING:

Deck 7 Superstructure 8 Substr. & Pipes 8 Overall 7  
Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required By County Yes ☐ No ☒

PRIORITY

A - Immediate Action  
B - Early Scheduling  
C - Routine Maint.  
O - For Record Only

REVISION:

Facilities Crossed - Santa Ana River  
Average Daily Traffic - 24,000 (1985)

CONDITION OF STRUCTURE:

Overall condition of the structure is good.

RECOMMENDED POSTING:

None

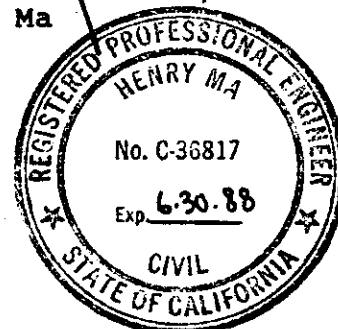
WORK RECOMMENDED:

None

HM:pht

cc: INagai (2)  
Orange County (2)

Henry Ma



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY BRIDGE REPORT  
DH-05 MIB (REV. 1/74)

Bridge No. 55C-148  
Location 7-Ora-FAU M019-CR  
Sta. 6+00 - 7+00 - 8+00 (On Deck)  
Date of Investigation December 4, 1985

Name SANTA ANA RIVER (Warner Ave., 0.1 mile northwest of Harbor Blvd.)

CONDITION RATING:

APPRAISAL RATING:

Deck (7) Superstructure 8 Substr. & Pipes 8 Overall (7)  
Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required by County Yes ☒ No ☐

PRIORITY

A - Immediate Action  
B - Early Scheduling  
C - Routine Maint.  
O - For Record Only

REVISION:

Condition Rating - Deck 7  
Appraisal Rating - Overall 7  
Custodian - County of Orange, Owner - County of Orange

ENCROACHMENT:

2 - 4" PVC ducts in south exterior bay.

CONDITION OF STRUCTURE:

The southwest end post and rail have been hit. In addition, the south rail has been hit near center of channel and at east hinge.

Otherwise, the overall condition of the structure is good.

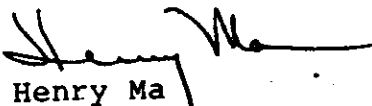
RECOMMENDED POSTING:

None

WORK RECOMMENDED:

Repair south rail at three locations - west end, near center of channel, and at east hinge.

HM:pdh  
cc: INagai (2)  
Orange County (2)

  
Henry Ma  
C-36817

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY BRIDGE REPORT  
DH.QS M19 (REV. 1/74)

14W11

Bridge No. 55C-148  
Location 7-Oran-FAU M019-CR  
Dist - Co - Rte - PM - City (On deck)  
Date of Investigation June 8, 1983

Name SANTA ANA RIVER (Warner Ave., 0.1 mile northwest of Harbor Blvd.)

CONDITION RATING:

APPRAISAL RATING:

Deck 8 Superstructure 8 Substr. & Pipes 8 Overall 8  
Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐  
County  
Action Required by County: Yes ☐ No ☒

PRIORITY

A - Immediate Action  
B - Early Scheduling  
C - Routine Maint.  
O - For Record Only

CONDITION OF STRUCTURE:

Several feet of water flowing in river.

The overall condition of the structure is good.

RECOMMENDED POSTING:

None.

RECOMMENDATION:

None.

*E. L. Neff*

E. L. Neff  
C 28703

ELN:cd  
cc: DRHiggins (2)  
Orange County (2)



STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY BRIDGE REPORT  
DH-OS M19 (REV. 1/74)

Bridge No. 55C-148  
Location 07-Ora-FAU M019-CR (On deck)  
Dist - Co - Rte - PM - City

Date of Investigation August 20, 1981

Name SANTA ANA RIVER (Warner Ave., 0.1 mile northwesterly of Harbor Blvd.)  
CONDITION RATING: APPRAISAL RATING:

Deck 8 Superstructure 8 Substr. & Pipes 8 Overall 8  
Channel & Channel Protection 8 Retaining Walls N

Widenable? Yes ☒ No ☐ Conditional ☐

County: DIXON  
Action Required by DIXON Yes ☐ No ☒

WORK DONE:

The previously recommended work has been done.

CONDITION OF STRUCTURE:

The overall condition of the structure is good.

RECOMMENDED POSTING:

None.

*E. L. Neff*

E. L. Neff  
C 28703

ELN:cd  
cc: DRHiggins (2)  
Orange County (2)

No. 1 - RATING

No. 2 - CODER

No. 3 - BRIDGE BOOK

BRIDGE NO. 55C-148 (ORIG)

LOCATION \_\_\_\_\_

NAME SANTA ANA RIVER  
(WARNER AVE)

RATING

|           | FACTOR      | VEHICLE        | CRIT. LOC. |
|-----------|-------------|----------------|------------|
| INVENTORY | _____       | <u>HS 20.6</u> | _____      |
| OPERATING | _____       | <u>HS 34.4</u> | _____      |
| PERMIT    |             |                |            |
| 5 AXLE    | _____       | <u>PURPLE</u>  | _____      |
| 7 AXLE    | _____       | <u>do</u>      | _____      |
| 9 AXLE    | _____       | <u>do</u>      | _____      |
| 11 AXLE   | _____       | <u>do</u>      | _____      |
| 13 AXLE   | <u>1.06</u> | <u>PURPLE</u>  | _____      |
| LEGAL     |             |                |            |
| TYPE 3    | _____       | _____          | _____      |
| TYPE 3S2  | _____       | _____          | _____      |
| TYPE 3-3  | _____       | _____          | _____      |
| AC=       | _____       |                |            |

RATED FOR ORANGE CO. 10/76, By FRAME RATE

RATED BY: HMMOCK

DATE: 7/22/80

No. 1 - RATING  
No. 2 - CODER  
No. 3 - BRIDGE BOOK

BRIDGE NO. 55C-148 (WIDENING)

LOCATION \_\_\_\_\_

NAME SANTA ANA RIVER  
(WARNER AVE)

RATING

|           | FACTOR      | VEHICLE        | CRIT.LOC. |
|-----------|-------------|----------------|-----------|
| INVENTORY | _____       | <u>HS 22.2</u> | _____     |
| OPERATING | _____       | <u>HS 36.8</u> | _____     |
| PERMIT    |             |                |           |
| 5 AXLE    | _____       | <u>PURPLE</u>  | _____     |
| 7 AXLE    | _____       | <u>do</u>      | _____     |
| 9 AXLE    | _____       | <u>do</u>      | _____     |
| 11 AXLE   | _____       | <u>do</u>      | _____     |
| 13 AXLE   | <u>1.19</u> | <u>PURPLE</u>  | _____     |
| LEGAL     |             |                |           |
| TYPE 3    | _____       | _____          | _____     |
| TYPE 3S2  | _____       | _____          | _____     |
| TYPE 3-3  | _____       | _____          | _____     |
| AC=       | _____       |                |           |

RATED BY FRAME RATE FOR ORANGE Co, 10/76

RATED BY: H Mock

DATE: 7/22/80

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY BRIDGE REPORT  
DH-OS M19 (REV. 1/74)

Bridge No. 55C-148  
Location 07-Oran-PAU-M019  
Dist - Co - Rte - PM - City  
Date of Investigation July 17, 1980

Name SANTA ANA RIVER (Warner Avenue - .1 mi. NW'ly of Harbor Blvd.)

| CONDITION RATING:                     |                          |                          | APPRAISAL RATING: |
|---------------------------------------|--------------------------|--------------------------|-------------------|
| Deck <u>8</u>                         | Superstructure <u>8</u>  | Substr. & Pipes <u>8</u> | Overall <u>8</u>  |
| Channel & Channel Protection <u>8</u> | Retaining Walls <u>N</u> |                          |                   |

Widenable? Yes ☒ No ☐ Conditional ☐  
County

Action Required by ~~SEWER~~ Yes ☒ No ☐

AVERAGE DAILY TRAFFIC: 12,000 (Estimated 1980)

BYPASS DETOUR LENGTH: 1 mile

ENCROACHMENTS: Two 4"  $\phi$  conduits in the SW'ly exterior bay.

REVISIONS: \*

|                    |          |
|--------------------|----------|
| Inventory          | HS20/LF  |
| Operating          | HS3A/LF  |
| Permit             | PPPPP/LF |
| Safe Load Capacity | 9        |

HISTORY: Due to the unusually heavy storm activity during the winter of 1979-1980 the Santa Ana River had degraded for several miles of its length in Orange County. This is the first time that this has occurred during the period for which records have been kept. At 5th Street bridge over the Santa Ana River (Br. No. 55C-372), the river was considered the most stable, and this point on the river gradient was used as the hinge point for the river's hydraulic design. The river degraded 30'+ (Max.) at this bridge.

At this time, the U.S. Army Corps of Engineers is designing a series of drop structures for this degraded stretch of the river in order to bring the gradient of the river back close to its original gradient. Any additional work necessary to stabilize the structures along the portion of the river, will be done by the owner of each structure.

SEISMIC RETROFIT: Since there are hinges in this structure, the structure should be considered for retrofitting with earthquake restrainers.

**CONDITION OF STRUCTURE:** The river bed has degraded 3'+ (Max.) at the structure. At the southerly corner of the structure, adjacent to the southeasterly paving notch, there is a hole in the AC pavement (7"x10"+x2'+ deep). The AC pavement in the east bound lanes at the southeasterly approach to the bridge is cracking and spalling.

**LOAD CAPACITY:** The inventory, operating and permit ratings shown were obtained through the "Frame Rate" program using the load factor (LF) method of analysis.

**RECOMMENDATIONS:**

1. After the U. S. Army Corps of Engineers has completed its design for the repair work in the Santa Ana River, a study should be made to determine if any additional work will be required to stabilize and/or protect the structure.
2. Initiate a project for any additional work necessary to stabilize and/or protect the structure.
3. Backfill the hole in the AC pavement at the southerly corner of the structure.
4. Repair the AC pavement in the east bound lanes at the southeasterly approach.

Original signed by

FRANK J. WALLISER  
C 019767

FJW:ym  
cc: DRHiggins  
Orange County (2)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
SUPPLEMENTARY BRIDGE REPORT  
DH-OS M19 (REV. 1/74)

Bridge No. 550-148

Location 07-02A, RAIL, RD 19, 2, SA

Date of Investigation July 12, 1976

Name SANTA ANA RIVER (WASHER)

CONDITION RATING:

APPRAISAL RATING:

Deck 8 Superstructure 8 Substr. & Pipes 8 Overall 8  
Channel & Channel Protection 8 Retaining Walls 8

Widenable? Yes ☒ No ☐ Conditional ☐

Action Required by District: Yes ☐ No ☒

The channel is being improved under a going contract with POC paved slopes.

This structure is now on Route PAV 6019 (Formerly PAV 6069).

CONDITION OF STRUCTURE:

The structure is in good condition.

RAIL RATING:

(0000)

RECOMMENDATIONS:

None

*A. L. Clemence*

A. L. Clemence

cc: MJurkovich

City of Santa Ana (2)

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
**BRIDGE REPORT**  
DH-OS M58 (REV. 3/74)

Bridge No. 55C-148  
Other No. 8A-30 / 8A-30A (OCD)  
P.U.C. No. \_\_\_\_\_  
Location 07-Ora-PAU 6269-8.3-  
Dist - Co - Rte - PM - City  
Date of Investigation May 23, 1974

**NOT FORWARDED**  
**CONFIDENTIAL REPORT**  
Name SANTA ANA RIVER (Warner Ave)  
Lat. N33°-42.9' Long. W117°-55.2'

**STRUCTURAL DATA AND HISTORY**

Year Built 1961 By OCD Contract No. \_\_\_\_\_

Date of Revisions Widened 1969-

Designed by: B.D. ☐ OCD Plans Avail. @ Bridge Dept.

Description: Continuous R.C. (9) T-Girder on R.C. wall piers and diaphragm  
abutments all on concrete piles.

Spans 1035-1046-1035

Length 254' Skew 9° Lt. Design LL H20-S16-44

Ratings: Inventory -- Operating -- Permit Legal

**DESCRIPTION - ON STRUCTURE**

Bridge Width 6.0 sh-2012.0 -5.0 m-3012.0 -4.0 sh

Total Width 76' Lanes 5 Tracks None

Median Concrete curbed Rail Type Metal Beam

Vert. Clearance over deck Unimpaired Appr. Rdwy. Width 75'

Wearing Surface None Deck Seal None

Alignment Curved R = 10,000'

**DESCRIPTION - UNDER STRUCTURE**

Roadway Section None

Clearances: Vert. \_\_\_\_\_ Horiz.; \_\_\_\_\_ Lt. \_\_\_\_\_ Rt. \_\_\_\_\_

Lanes \_\_\_\_\_ Tracks \_\_\_\_\_ Pumpplant: None ☐ See Br. No. \_\_\_\_\_

Facilities Crossed \_\_\_\_\_

cc: OCD (2)

(1) CON'T.

Bridge No. 55C-148  
Date May 23, 1974

DESCRIPTION - HYDRAULICS

Channel Natural sandy channel

Navigable: Yes ☐ No ☒ Clearances: Vert. \_\_\_\_\_ Horiz. \_\_\_\_\_

MAINTENANCE

Custodian OCRD Owner OCRD

ORIGINAL  
CONDITION RATING

|                              |             |
|------------------------------|-------------|
| Deck                         | <u>8-F8</u> |
| Superstructure               | <u>8-F8</u> |
| Substructure & Pipes         | <u>8-F8</u> |
| Channel & Channel Protection | <u>8-F8</u> |
| Retaining Walls              | <u>NA</u>   |
| Approach Rdwy. Alignment     | <u>7-F7</u> |
| Estimated Remaining Life     | <u>50</u>   |

ORIGINAL  
APPRAISAL

|                          |                  |
|--------------------------|------------------|
| Overall                  | <u>8-F8</u>      |
| Deck Geometry            | <u>7</u>         |
| Underclearances          | Vert. <u>--</u>  |
|                          | Horiz. <u>--</u> |
| Safe Load Capacity       | <u>5-F5</u>      |
| Waterway Adequacy        | <u>8</u>         |
| Approach Rdwy. Alignment | <u>7</u>         |

Widenable? Yes ☒ No ☐ Conditional ☐

County Alameda  
Action Required by Alameda: Yes ☐ No ☒

CONDITION OF STRUCTURE:

Good condition. No defects were noted.

CAPACITY RATING:

Good for legal loads by design and inspection.

RECOMMENDATIONS:

None.

Original signed by

W. R. Baker

WRB:ah