



# BRIDGE INSPECTION REPORT

## Routine Inspection



BRIDGE NO.:  
**37C0220**

STRUCTURE NAME:  
**STEVENS CREEK**

INSPECTION DATE:  
**May 15, 2024**

### BRIDGE LOCATION INFORMATION

|                |                            |                                  |                      |
|----------------|----------------------------|----------------------------------|----------------------|
| (9) LOCATION   | <b>E STEVENS CANYON RD</b> | (7) FACILITY CARRIED             | <b>MCCLELLAN RD</b>  |
| (11) POSTMILE  | <b>0</b>                   | (6) FEATURE INTERSECTED          | <b>STEVENS CREEK</b> |
| (16) LATITUDE  | <b>37°18'46.53"</b>        | (5) INVENTORY RTE(ON/UNDER)      | <b>ON 150000000</b>  |
| (17) LONGITUDE | <b>122°03'50.55"</b>       | (104) ON NATIONAL HIGHWAY SYSTEM | <b>NOT ON NHS</b>    |

### STRUCTURAL HEALTH CONDITION SUMMARY INFORMATION

|                           |                            |                                    |                               |
|---------------------------|----------------------------|------------------------------------|-------------------------------|
| (58) DECK                 | <b>7 GOOD</b>              | DECK AREA (M) <sup>2</sup>         | <b>109</b>                    |
| (59) SUPERSTRUCTURE       | <b>5 FAIR</b>              | SUFFICIENCY RATING                 | <b>47.5</b>                   |
| (60) SUBSTRUCTURE         | <b>7 GOOD</b>              | PAINT CONDITION                    | <b>N/A</b>                    |
| (62) CULVERT              | <b>N N/A (NBI)</b>         | STRUCTURALLY DEFICIENT (SD) STATUS | <b>NOT SD</b>                 |
| (67) STRUCTURE EVALUATION | <b>4 MINIMUM TOLERABLE</b> | (113) SCOUR                        | <b>8 STABLE ABOVE FOOTING</b> |

### PHOTOGRAPH IDENTIFICATION



Routine-Roadway View (05/04/2022)



Routine-Elevation View (05/04/2022)



Routine-Underside View (05/04/2022)



Routine-Map View (05/31/2022)

TEAM LEADER Morgan Delgado

REPORT AUTHOR Morgan Delgado

INSPECTED BY M.Delgado/SW.Kung

*Louis D. Nash*

Louis D. Nash (Registered Civil Engineer)

10/16/2024

Date



STRUCTURE OVERVIEW

AGENCY INFORMATION

INSPECTION INFORMATION

(1) STATE NAME

CALIFORNIA

069

(2) HIGHWAY DISTRICT

04

(3) COUNTY CODE

(37) SANTA CLARA

(4) PLACE CODE

(17610) CUPERTINO

(21) MAINTAIN

04 CITY OR MUNICIPAL HI

(22) OWNER

04 CITY OR MUNICIPAL HI

(98) BORDER BRIDGE STATE CODE

N/A

% SHARE

N/A

(99) BORDER BRIDGE STRUCTURE NUMBER

N/A

(90) INSPECTION DATE

05/24

(91) FREQUENCY

24

MO

(92) CRITICAL FEATURE INSPECTION

(93) CFI DATE

A) NSTM INSP

N-NO

MO

A)

N/A

B) UNDERWATER INSP

N-NO

MO

B)

N/A

C) OTHER SPECIAL INSP

N-NO

MO

C)

N/A

CONSTRUCTION INFORMATION

(27) YEAR BUILT

1920

(45) MAIN SPANS

1

(43a) STRUCTURE TYPE MAIN

1: CONCRETE

(106) YEAR MODIFIED

1976

(46) APPR SPANS

0

(43b) DESIGN TYPE MAIN

04: TEE BEAM

(34) SKEW

15

(48) MAX SPAN (M)

10.1

(44a) STRUCTURE TYPE APPR

0: OTHER/ NOT APPLICABLE

(49) LENGTH (M)

10.7

(35) STR FLARE

0-NO

(44b) DESIGN TYPE APPR

00: OTHER/NOT APPLICABLE

(112) NBIS BR LENGTH

Y

JOINTS

0

NO. OF HINGES

0

STRUCTURE DESCRIPTION

Original (1920): Single span RC T-girders (4) with an RC deck on RC diaphragm abutments with monolithic wingwalls. All founded on spread footings.

1976 Left Widening: Single span RC T-girders (2, total 6) with an RC deck on RC diaphragm abutments with monolithic wingwalls. All founded on spread footings.

SPAN CONFIGURATION

1 @ 33 ft

OPERATIONAL INFORMATION

LOAD CAPACITY

(31) DESIGN LOAD

0 UNKNOWN

(65) CALC METHOD

0 FIELD EVAL/ENG JUDG.

(66) INVENTORY RATING

RF=0.48 =>15.6 metric tons

(63) CALC METHOD

0 FIELD EVAL/ENG JUDG.

(64) OPERATING RATING

RF=0.80 =>25.9 metric tons

(70) BRIDGE POSTING

5 AT/ABOVE LEGAL LOADS

(41) STRUCTURE STATUS

A-OPEN, NO RESTRICTION

PERMIT RATING

OOOOO

OVERLAY THICKNESS

1 inches

POSTING LOADS

Safe Loads

Existing Ordinance/Order

Posting Signs

Type 3

Legal

N/A

N/A

U.S. Tons

Type 3S2

Legal

N/A

N/A

U.S. Tons

Type 3-3

Legal

N/A

N/A

U.S. Tons

Speed

25

N/A

N/A

MPH

Additional Ordinance/Order Requirements

NONE

Additional Signs

NONE

Posting Date

N/A

Load Rating Summary Date

06/23/10

Load Rating Type

Assigned no plans

Load Rating Tool - Date

None - 06/23/10

MINIMUM VERTICAL CLEARANCE

MINIMUM LATERAL UNDERCLEARANCE

(53) MIN VERT CLEAR OVER BRIDGE RDWY

Unimpaired

(55) MIN LAT UNDERCLEAR RT REF

N-NOT H/RR

0.0 M

(54) MIN VERT UNDERCLEAR REF

N-NOT H/RR

0.00 M

(56) MIN LAT UNDERCLEAR LT

0.0 M

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## CONDITION INFORMATION

### INSPECTION COMMENTARY

#### SCOPE AND ACCESS

There was approximately 18 inches of clear, flowing water across Abutment 2 at the time of this routine inspection. All other bridge elements were dry. Abutment 2 was sighted through clear water.

No other access limitations were encountered and a complete routine inspection was performed.

#### SAFE LOAD CAPACITY

The load rating for this structure is being reviewed by SMI Ratings Branch under Work Request Number 13462. An updated Load Rating Summary will be archived when this review is complete. The current rating has been temporarily assigned to this structure in accordance with SMI procedures dated 06/23/2010.

#### WATERWAY

A new channel cross section was taken during this inspection and is included with this report. When compared to the previous cross section taken on 04/15/2014, there were no significant changes in the channel elevations.

## SPECIAL INSPECTION INFORMATION

**STEEL INVESTIGATION DETAILS** - NOT APPLICABLE FOR THIS BRIDGE.

**UNDERWATER INVESTIGATION DETAILS** - NOT APPLICABLE FOR THIS BRIDGE.

## DECK AND ROADWAY

### DECK CROSS SECTION

1.5 ft br, 29.75 ft, 1.25 ft cu, 1 ft br

### DECK GEOMETRY

|                          |                        |
|--------------------------|------------------------|
| (49) LENGTH              | 10.7 M                 |
| (51) NET WIDTH           | 9.1 M                  |
| (52) TOTAL WIDTH         | 10.2 M                 |
| (50) CURB OR SIDEWALK    | LEFT 0.0 M RIGHT 0.4 M |
| (32) APPROACH RDWY WIDTH | 9.1 M                  |
| (33) BRIDGE MEDIAN       | 0 NO MEDIAN            |

### DECK ROADWAY/OPERATIONAL INFORMATION

|                                        |                          |
|----------------------------------------|--------------------------|
| (42a) TYPE OF SERVICE                  | 1-HIGHWAY                |
| (12) BASE HIGHWAY NETWORK              | 0-NOT ON NET             |
| (13) LRS INVENTORY RTE & SUBRTE        |                          |
| (104) NATIONAL HIGHWAY SYSTEM          | 0-NOT ON NHS             |
| (26) FUNCTIONAL CLASS                  | 08-MINOR COLLECTOR RURAL |
| (100) DEFENSE HIGHWAY                  | 0-NOT STRAHNET           |
| (101) PARALLEL STRUCTURE               | N-NONE EXISTS            |
| (102) DIRECTION OF TRAFFIC             | 2-2 WAY                  |
| (10) INVENTORY ROUTE MIN VERT CLEAR    | 99.99 M                  |
| (47) INVENTORY ROUTE TOTAL HORIZ CLEAR | 9.1 M                    |
| (68) DECK GEOMETRY                     | 4 TOLERABLE              |
| (72) APPR ROADWAY ALIGN                | 6 EQUAL MIN CRITERIA     |
| (105) FEDERAL LANDS HWY                | 0-NOT APPLICABLE         |
| (110) DESIGNATED NATIONAL NETWORK      | 0-NOT ON NET             |
| (20) TOLL                              | 3-ON FREE ROAD           |
| (28a) LANES                            | 2                        |
| SPEED                                  | 25                       |
| (103) TEMPORARY STRUCTURE              | N/A                      |

### DECK STRUCTURE INFORMATION

|                                           |                          |
|-------------------------------------------|--------------------------|
| (107) DECK STRUCTURE TYPE                 | 1-CIP CONCRETE           |
| (108) WEARING SURFACE / PROTECTIVE SYSTEM |                          |
| A) TYPE OF WEARING SURFACE                | 6-BITUMINOUS             |
| B) TYPE OF MEMBRANE                       | 0-NONE                   |
| C) TYPE OF DECK PROTECTION                | 0-NONE                   |
| OVERLAY THICKNESS (inches)                | 1 inches                 |
| (29) AVERAGE DAILY TRAFFIC                | 4509                     |
| (30) YEAR OF ADT                          | 2020                     |
| (109) TRUCK ADT %                         | 1 %                      |
| (19) BYPASS, DETOUR LENGTH                | 2 KM                     |
| (114) FUTURE ADT                          | 7309                     |
| (115) YEAR OF FUTURE ADT                  | 2045                     |
| (37) HISTORICAL SIGNIFICANCE              | 5: NOT ELIGIBLE FOR NRHP |

### DECK ELEMENT INSPECTION RATINGS AND NOTES

(58) DECK RATING = 7

| Elem No. | Defect/Prot Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State |      |      |      |
|----------|--------------------|---------------------|-----|-----------|-------|-----------------------------|------|------|------|
|          |                    |                     |     |           |       | CS 1                        | CS 2 | CS 3 | CS 4 |
| 16       |                    | Top Flange-RC       | 2   | 109       | sq.m  | 94                          | 15   | 0    | 0    |

**DECK ELEMENT INSPECTION RATINGS AND NOTES**

(58) DECK RATING = 7

| Elem No.                                                                                                                                                                                                               | Defect/Prot Defect | Element Description             | Env | Total Qty | Units | Qty in each Condition State |      |      |      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------|-----|-----------|-------|-----------------------------|------|------|------|
|                                                                                                                                                                                                                        |                    |                                 |     |           |       | CS 1                        | CS 2 | CS 3 | CS 4 |
| 1080                                                                                                                                                                                                                   |                    | Delamination/Spall/Patched Area | 2   | 11        |       | 0                           | 11   | 0    | 0    |
| 1120                                                                                                                                                                                                                   |                    | Efflorescence/Rust Staining     | 2   | 4         |       | 0                           | 4    | 0    | 0    |
| 510                                                                                                                                                                                                                    |                    | Deck Wearing Surface-Asphalt    | 2   | 98        | sq.m  | 98                          | 0    | 0    | 0    |
| (16-1080) Delamination/Spall/Patched Area                                                                                                                                                                              |                    |                                 |     |           |       |                             |      |      |      |
| There are random soffit patches throughout the original portion of the structure that are up to 3 feet in diameter. These patches appear to be functioning as intended. See Photo 8 of the 05/2022 routine inspection. |                    |                                 |     |           |       |                             |      |      |      |
| (16-1120) Efflorescence/Rust Staining                                                                                                                                                                                  |                    |                                 |     |           |       |                             |      |      |      |
| There are a few random areas of light efflorescence in the soffit in the original portion of the structure. See Photo 5 of the 05/2022 routine inspection.                                                             |                    |                                 |     |           |       |                             |      |      |      |
| (16-510) Deck Wearing Surface-Asphalt                                                                                                                                                                                  |                    |                                 |     |           |       |                             |      |      |      |
| There were no significant defects noted.                                                                                                                                                                               |                    |                                 |     |           |       |                             |      |      |      |

**JOINT - APPROACH - RAIL****RAIL INFORMATION**

(36a) Rail Code 0 (36b) Transition 0 (36c) Appr Guardrail 0 (36d) Appr Guardrail End 0 Roadway Speed 25 MPH

**JOINT/APPROACH/RAIL ELEMENT INSPECTION RATINGS AND NOTES**

| Elem No.                                                                                                                                                                                                                                                                                                                                                 | Defect/Prot Defect | Element Description             | Env | Total Qty | Units | Qty in each Condition State |      |      |      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------|-----|-----------|-------|-----------------------------|------|------|------|
|                                                                                                                                                                                                                                                                                                                                                          |                    |                                 |     |           |       | CS 1                        | CS 2 | CS 3 | CS 4 |
| 331                                                                                                                                                                                                                                                                                                                                                      |                    | Railing-RC                      | 2   | 22        | m     | 21                          | 0    | 1    | 0    |
| 1080                                                                                                                                                                                                                                                                                                                                                     |                    | Delamination/Spall/Patched Area | 2   | 1         |       | 0                           | 0    | 1    | 0    |
| 7000                                                                                                                                                                                                                                                                                                                                                     |                    | Damage                          | 2   | 1         |       | 0                           | 0    | 1    | 0    |
| (331-1080) Delamination/Spall/Patched Area                                                                                                                                                                                                                                                                                                               |                    |                                 |     |           |       |                             |      |      |      |
| There is a spall with exposed reinforcing, approximately 18 inches high by 18 inches long by 6 inches deep, in the concrete end post of the right bridge rail at Abutment 2. Due to the location of the spall and the bending of the rebar, it is assumed that this condition is due to vehicular impact. See Photo 1 of the 05/2020 routine inspection. |                    |                                 |     |           |       |                             |      |      |      |
| (331-7000) Damage                                                                                                                                                                                                                                                                                                                                        |                    |                                 |     |           |       |                             |      |      |      |
| See element 1080 - Delamination/Spall - above for more information.                                                                                                                                                                                                                                                                                      |                    |                                 |     |           |       |                             |      |      |      |

**SUPERSTRUCTURE****SUPERSTRUCTURE ELEMENT INSPECTION RATINGS AND NOTES**

(59) SUPERSTRUCTURE RATING = 5

| Elem No.                                                                                                                                                                                                | Defect/Prot Defect | Element Description             | Env | Total Qty | Units | Qty in each Condition State |      |      |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------|-----|-----------|-------|-----------------------------|------|------|------|
|                                                                                                                                                                                                         |                    |                                 |     |           |       | CS 1                        | CS 2 | CS 3 | CS 4 |
| 110                                                                                                                                                                                                     |                    | Girder/Beam-RC                  | 2   | 61        | m     | 17                          | 43   | 1    | 0    |
| 1080                                                                                                                                                                                                    |                    | Delamination/Spall/Patched Area | 2   | 40        |       | 0                           | 39   | 1    | 0    |
| 1090                                                                                                                                                                                                    |                    | Exposed Rebar (PS Conc./RC)     | 2   | 4         |       | 0                           | 4    | 0    | 0    |
| (110) Girder/Beam-RC                                                                                                                                                                                    |                    |                                 |     |           |       |                             |      |      |      |
| Girders 3 through 6 have hairline vertical cracks that are spaced as close as 4 feet on center. No defect is warranted at this time.                                                                    |                    |                                 |     |           |       |                             |      |      |      |
| (110-1080) Delamination/Spall/Patched Area                                                                                                                                                              |                    |                                 |     |           |       |                             |      |      |      |
| There are patched areas of various sizes throughout Girders 3 through 6. See Photo 1.                                                                                                                   |                    |                                 |     |           |       |                             |      |      |      |
| The bottom of Girder 6 has a spalled area near the quarter span point. This spall is approximately 2 feet long by 12 inches wide by 2.5 inches deep with exposed, lightly corroded rebars. See Photo 2. |                    |                                 |     |           |       |                             |      |      |      |
| (110-1090) Exposed Rebar (PS Conc./RC)                                                                                                                                                                  |                    |                                 |     |           |       |                             |      |      |      |



## SUPERSTRUCTURE

### SUPERSTRUCTURE ELEMENT INSPECTION RATINGS AND NOTES

(59) SUPERSTRUCTURE RATING = 5

| Elem No. | Defect/Prot | Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State |      |      |      |
|----------|-------------|--------|---------------------|-----|-----------|-------|-----------------------------|------|------|------|
|          |             |        |                     |     |           |       | CS 1                        | CS 2 | CS 3 | CS 4 |

#### (110-1090) Exposed Rebar (PS Conc./RC)

Girder 6 has 3 exposed, lightly corroded rebars due to insufficient cover near Abutment 2. Additionally, the area around these exposed rebars is unsound. See Photo 7 of the 05/2022 routine inspection.

### SUPERSTRUCTURE PHOTOGRAPHS



Photo 1

Typical patched girder areas, as seen on Girder 3



Photo 2

Spall with exposed rebar in the bottom of Girder 6

## SUBSTRUCTURE

### DESCRIPTION UNDER STRUCTURE

|                             |                        |                                               |               |
|-----------------------------|------------------------|-----------------------------------------------|---------------|
| (42b) TYPE OF SERVICE UNDER | 5-WATERWAY             | (38) NAVIGATION CONTROL                       | 0: NO CONTROL |
| (69) UNDERCLEARANCES V - H  | N NOT APPLICABLE (NBI) | (111) PIER PROTECTION                         | N/A           |
| (71) WATER ADEQUACY         | 6 EQUAL MINIMUM        | (39) NAVIGATION VERTICAL CLEARANCE            | 0.0 M         |
| (61) CHANNEL PROTECTION     | 6 BANK SLUMPING        | (116) VERT-LIFT BRIDGE NAV MIN VERTICAL CLEAR | M             |
| (113) SCOUR                 | 8 STABLE ABOVE FOOTING | (40) NAVIGATION HORIZONTAL CLEARANCE          | 0.0 M         |
| SCOUR POA DATE              | N/A                    |                                               |               |

### CHANNEL DESCRIPTION

Gravel and cobbles with moderate vegetation along channel banks upstream and downstream of the structure.

### SUBSTRUCTURE ELEMENT INSPECTION RATINGS AND NOTES

(60) SUBSTRUCTURE RATING = 7

| Elem No. | Defect/Prot | Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State |      |      |      |
|----------|-------------|--------|---------------------|-----|-----------|-------|-----------------------------|------|------|------|
|          |             |        |                     |     |           |       | CS 1                        | CS 2 | CS 3 | CS 4 |

|      |  |  |                                 |   |    |   |    |   |   |   |
|------|--|--|---------------------------------|---|----|---|----|---|---|---|
| 215  |  |  | Abutment-RC                     | 2 | 36 | m | 32 | 4 | 0 | 0 |
| 1080 |  |  | Delamination/Spall/Patched Area | 2 | 4  |   | 0  | 4 | 0 | 0 |

#### (215) Abutment-RC

This quantity includes monolithic wingwalls.

#### (215-1080) Delamination/Spall/Patched Area

The original portion of the abutments has numerous patched areas of various sizes. See Photo 3.

### SUBSTRUCTURE PHOTOGRAPHS

# SUBSTRUCTURE

## SUBSTRUCTURE PHOTOGRAPHS



Photo 3  
Patched areas on Abutment 2

### CHANNEL X-SECTION

| Side          | Upstream         | X-Section Date |                  | 05/15/2024 |
|---------------|------------------|----------------|------------------|------------|
| Measured From | Top of rail (RT) |                |                  |            |
| Location      | Horiz(m)         | Vert(m)        | Comments         |            |
| Abutment 1    | 0.00             | 3.50           | Face of abutment |            |
|               | 1.00             | 4.10           | EOW              |            |
|               | 8.00             | 4.40           | Thalweg          |            |
| Abutment 2    | 9.50             | 4.20           | Face of abutment |            |

## WORK RECOMMENDATIONS

DECK WORK RECOMMENDATIONS - NONE

### JOINT/APPR/RAIL WORK RECOMMENDATIONS

|                                                                              |            |         |              |            |         |             |
|------------------------------------------------------------------------------|------------|---------|--------------|------------|---------|-------------|
| Rec Date                                                                     | 05/21/2016 | Work By | LOCAL AGENCY | Est Cost   |         | Dist Target |
| Status                                                                       | PROPOSED   | Action  | Rail-Repair  | Str Target | ROUTINE | EA          |
| Patch the spalled area in the right bridge rail post adjacent to Abutment 2. |            |         |              |            |         |             |

### SUPERSTRUCTURE WORK RECOMMENDATIONS

|                                                                                                                 |            |         |                    |            |         |             |
|-----------------------------------------------------------------------------------------------------------------|------------|---------|--------------------|------------|---------|-------------|
| Rec Date                                                                                                        | 04/11/2006 | Work By | LOCAL AGENCY       | Est Cost   |         | Dist Target |
| Status                                                                                                          | PROPOSED   | Action  | Super-Patch spalls | Str Target | ROUTINE | EA          |
| Chip out any unsound concrete in Girder 6. Clean and patch with a suitable material. (Revised 05/31/22 L. Nash) |            |         |                    |            |         |             |

SUBSTRUCTURE WORK RECOMMENDATIONS - NONE

OTHER WORK RECOMMENDATIONS - NONE





Photo #1

Typical patched girder areas, as seen on Girder 3





Photo #2  
Spall with exposed rebar in the bottom of Girder 6





Photo #3

Patched areas on Abutment 2