

*California Department of Transportation
Division of Maintenance*

Structure Maintenance and Investigations

B_{RIDGE}

I_{NSPECTION}

R_{ECORDS}

I_{NFORMATION}

S_{YSTEM}

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STRUCTURE RATING DATA SHEET

BRIDGE NO: 53C1744 LA County Br. No : 2446
Facility Carried : ARTESIA BLVD
Location : 0.3MI W/O SANTA FE AVE
BRIDGE NAME: SP/UP,COMPTON CR.ALAMEDA

Structural Elements Rated :

Multi-span Steel Plate Girder Superstructure, R/C Deck

DESIGN LOADING

| | Rating | Metric | CRITICAL LOCATION | | | |
|----------------|--------|------------|-------------------|-----------------|------------------------|---------------|
| | Factor | Tons | Structure | Control Element | Load Action | Location |
| HS20 Inventory | 0.00 | 0.0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| HS20 Operating | 0.00 | 0.0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |

LEGAL RATING

| | Rating | Posting US Tons | Structure | Control Element | Load Action | Location |
|---------------------|--------|--------------------|----------------|-----------------|------------------------|---------------|
| Type 3 (25T) | 0.00 | 0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| Type 3S2 (36T) | 0.00 | 0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| Type 3-3 (40T) | 0.00 | 0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| NRL (40T) | | | | | | |
| SHV - SU4 (27T) | | | | | | |
| SHV - SU5 (31T) | | | | | | |
| SHV - SU6 (34.75T) | | | | | | |
| SHV - SU7 (38.75T) | | | | | | |
| FAST - EV2 (28.75T) | | | | | | |
| FAST - EV3 (43T) | | | | | | |

PERMIT RATING

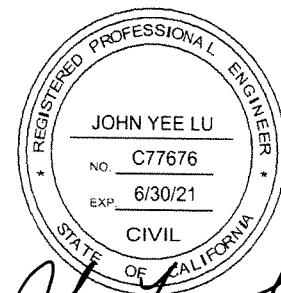
| | Rating | Permit Rating | Structure | Control Element | Load Action | Location |
|-----------|--------|------------------|----------------|-----------------|------------------------|---------------|
| P5 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| P7 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| P9 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| P11 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| P13 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |

RELEVANT LOAD RATING INFORMATION

Notes:

Load rating calculations were completed by John Lu on 06/09/2021. Bridge Inspection Report dated 06/22/2019 and field inspection of the fire damage on 04/19/2021 were used to verify the physical conditions assumed in the above referenced load rating calculations. The rating assumption is that the fire (incident occurred on 12/18/2020) at Span 10 had reached 750 degrees C (1,380 degrees F) from assessment of the conditions of the damaged bridge. The concrete strength loss is estimated at 60%, reinforcing steel yield strength loss is estimated at 10% and plate girder yield strength loss is estimated at 40%. The shear connector and bottom flange of steel girders are assumed to be ineffective due to the excessive damage.

Overlay Used in Rating: None
 Rating Type: Calculated
 Rating Date: 06/09/2021
 Rating Method: I (LF Load Factor) Inventory (65)
 I (LF Load Factor) Operating (63)
 Control Rating By: John Lu
 Rating Checked By: Nhan Nguyen
 Analysis Tool: BrR 6.7.0 AASHTO
 Rating File Location: LA County Department of Public Works, Design Division
 Summary Prepared By: John Lu
 Summary Date: 06/09/2021



Stamped by: John Lu 06/09/2021

Rating Results Summary Report

Name: SP/UP,COMPTON CR,ALAMEDA
 Struct-Def: Bridge Span Ten (Fire Damage 2020)

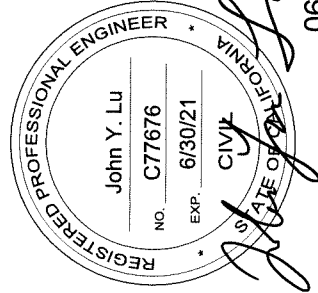
Bridge ID: 53C1744
 Member: G2

NBI: 53C1744
 Member Alt: Girder 56-5 (Interior Girder)

| Live Load | Live Load Type | Rating Method | Rating Level | Load Rating (Ton) | Rating Factor | Location (ft) | Location Span-(%) | Limit State | Impact | Lane |
|-----------|----------------|---------------|--------------|-------------------|---------------|---------------|-------------------|------------------------|--------------|--------------|
| HS 20-44 | Lane | LFD | Inventory | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| HS 20-44 | Lane | LFD | Inventory | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| HS 20-44 | Axle Load | LFD | Inventory | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| HS 20-44 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type 3 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type 3S2 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type 3-3 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P05 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P07 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P09 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P11 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P13 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| NRL | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| SU4 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| SU5 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| SU6 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| SU7 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type EV2 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type EV3 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |

Note:

The rating assumption is that the fire (incident occurred on 12/18/2020) at Span 10 had reached 750 degrees C (1,380 degrees F) from assessment of the conditions of the damaged bridge. The concrete strength loss is estimated at 60%, reinforcing steel yield strength loss is estimated at 10% and plate girder yield strength loss is estimated at 40%. The shear connector and bottom flange of steel girders are assumed to be ineffective due to the excessive damage.



06/09/2021



BRIDGE INSPECTION REPORT

Routine Inspection



BRIDGE NO.: **53C1744 (2446)** STRUCTURE NAME: **SP/UP,COMPTON CR,ALAMEDA**

INSPECTION DATE:
June 8, 2021

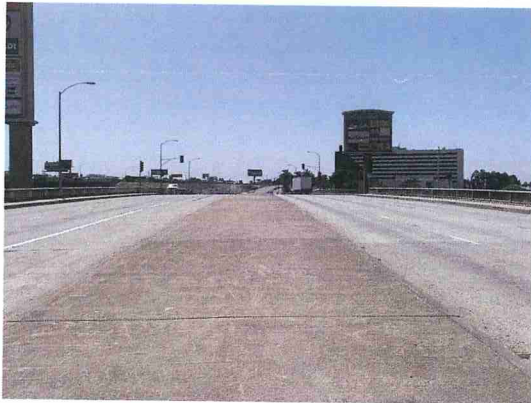
BRIDGE LOCATION INFORMATION

| | | | |
|----------------|------------------------|----------------------------------|-------------------------|
| (9) LOCATION | 0.3MI W/O SANTA FE AVE | (7) FACILITY CARRIED | ARTESIA BLVD |
| (11) POSTMILE | 0 | (6) FEATURE INTERSECTED | UPRR,COMPTON CR,ALAMEDA |
| (16) LATITUDE | 33°52'26.61" | (5) INVENTORY RTE(ON/UNDER) | ON 15000000 |
| (17) LONGITUDE | 118°13'07.19" | (104) ON NATIONAL HIGHWAY SYSTEM | NOT ON NHS |

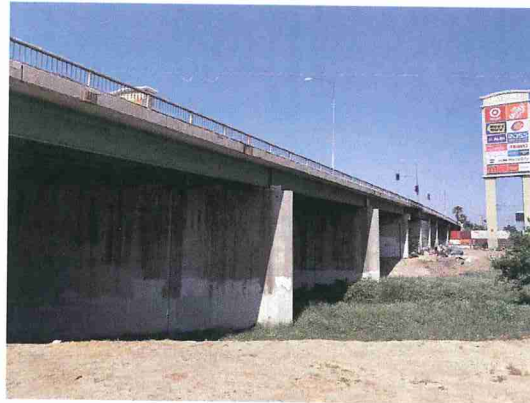
STRUCTURAL HEALTH CONDITION SUMMARY INFORMATION

| | | | |
|---------------------------|-------------------------|------------------------------------|-----------------------|
| (58) DECK | 4 POOR | DECK AREA (M) ² | 7,429 |
| (59) SUPERSTRUCTURE | 5 FAIR | SUFFICIENCY RATING | 16.0 |
| (60) SUBSTRUCTURE | 7 GOOD | PAINT CONDITION SUPER | N/A SUBSTR N/A |
| (62) CULVERT | N N/A (NBI) | STRUCTURALLY DEFICIENT (SD) STATUS | SD |
| (67) STRUCTURE EVALUATION | 2 INTOLERABLE - REPLACE | (113) SCOUR | 5 STABLE W/IN FOOTING |

PHOTOGRAPH IDENTIFICATION



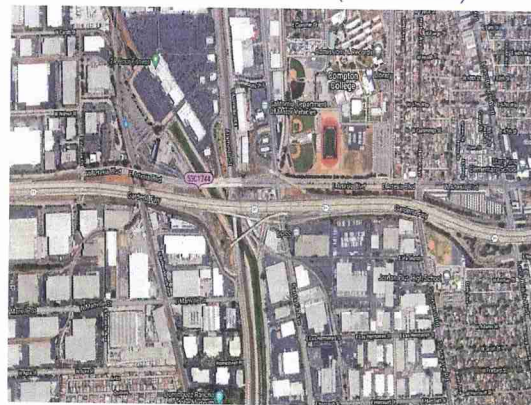
Routine-Roadway View (05/18/2021)



Routine-Elevation View (05/18/2021)



Routine-Underside View (05/18/2021)



Routine-Map View (07/01/2021)

TEAM LEADER Wein N. Chu
 REPORT AUTHOR Wein N. Chu
 INSPECTED BY WN.Chu/MY.Chow

Wein N. Chu

Wein N. Chu (Registered Civil Engineer)

11/16/2021
Date



STRUCTURE OVERVIEW

AGENCY INFORMATION

(1) STATE NAME CALIFORNIA 069
 (2) HIGHWAY DISTRICT 07
 (3) COUNTY CODE (53)LOS ANGELES
 (4) PLACE CODE (15044) COMPTON
 (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

INSPECTION INFORMATION

(90) INSPECTION DATE 06/21 (91) FREQUENCY 24 MO
 (92) CRITICAL FEATURE INSPECTION (93) CFI DATE
 A) FRACTURE CRITICAL 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
 % Ownership Owner/Agency
 100% City of Compton

CONSTRUCTION INFORMATION

(27) YEAR BUILT 1956 (45) MAIN SPANS 10 (43a) STRUCTURE TYPE MAIN 3: STEEL
 (106) YEAR MODIFIED N/A (46) APPR SPANS 0 (43b) DESIGN TYPE MAIN 02: STRINGER/MULTI-BEAM
 (34) SKEW 99 (48) MAX SPAN (M) 27.4 (44a) STRUCTURE TYPE APPR 0: OTHER/ NOT APPLICABLE
 (49) LENGTH (M) 219.8 (35) STR FLARE 0-NO (44b) DESIGN TYPE APPR 00: OTHER/NOT APPLICABLE
 (112) NBIS BR LENGTH Y JOINTS 11 NO. OF HINGES 0

STRUCTURE DESCRIPTION

Composite RC deck and steel girders on (3) five column RC bents, (2) six column bents, (2) two column bents, 2 RC piers and RC seat abutments on steel H-piles.

SPAN CONFIGURATION

(W) 64 ft, 3 @ 84 ft, 80 ft, 55 ft, 48 ft, 90 ft, 80 ft, 50 ft (E)

OPERATIONAL INFORMATION

LOAD CAPACITY

(31) DESIGN LOAD 5 MS 18 (HS 20) (65) CALC METHOD 1 LF LOAD FACTOR
 (66) INVENTORY RATING RF=0.00 =>0.0 metric tons (63) CALC METHOD 1 LF LOAD FACTOR
 (64) OPERATING RATING RF=0.00 =>0.0 metric tons (70) BRIDGE POSTING 5 AT/ABOVE LEGAL LOADS
 (41) STRUCTURE STATUS A-OPEN, NO RESTRICTION PERMIT RATING XXXXX
 OVERLAY THICKNESS 0 inches

POSTING LOADS

| | Safe Loads | Existing Ordinance/Order | Posting Signs | |
|----------|------------|--------------------------|---------------|-----------|
| Type 3 | 0 | 0 | 0 | U.S. Tons |
| Type 3S2 | 0 | 0 | 0 | U.S. Tons |
| Type 3-3 | 0 | 0 | 0 | U.S. Tons |
| Speed | 45 | | | MPH |

Additional Ordinance/Order Requirements

NONE

Additional Signs

NONE

Posting Order Date
 Load Rating Summary Date 06/09/21
 Load Rating Type Calculated
 Load Rating Tool - Date BrR 6.7.0 AASHTO - 06/09/21

MINIMUM VERTICAL CLEARANCE

(53) MIN VERT CLEAR OVER BRIDGE RDWY Unimpaired
 (54) MIN VERT UNDERCLEAR REF H-HIGHWAY 6.68 M

MINIMUM LATERAL UNDERCLEARANCE

(55) MIN LAT UNDERCLEAR RT REF H-HIGHWAY 2.0 M
 (56) MIN LAT UNDERCLEAR LT 0.0 M

CONDITION INFORMATION

INSPECTION COMMENTARY

SCOPE AND ACCESS

The roadway portion of the bridge was inspected on foot. There was a moderate amount of water in the waterway on the date of inspection. Transient encampments have hindered the inspection of spans 5-7, and 10.

CONDITION INFORMATION

INSPECTION COMMENTARY

REVISIONS

Item #115, Year of Future ADT, has been updated from 2039 to 2041.

SAFE LOAD CAPACITY

A Load Rating Summary Sheet dated 08/25/15 is on file for this structure. While this report does not include a check of that analysis, it does verify that the structural conditions observed during this inspection are consistent with those assumed in that analysis.

RECOMMENDATIONS

- Shot blast the concrete deck surface and apply methacrylate sealant.
- Repair spalls and delaminations.
- Repair the bridge rails.
- Clean the expansion joints and replace the sealant.
- Replace south half of bridge deck in span 10, between pier 10 and east abutment.
- Replace fire damaged steel girder.
- Repair slope protecting east abutment.
- Clear the deck drains.
- Repair approach sidewalks.

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

- (S) 1.3 ft br, 5.3 ft sw, 35 ft (2 lanes), 10 ft med, 35 ft (2 lanes), 5 ft sw, 1.3 ft br (N) Alameda
- (S) 1.3 ft br, 5.3 ft sw, 42.8 ft (2 lanes), 18.5 ft med, 42.8ft (2 lanes), 5.ft sw, 1.3ft br (N) Artesia

DECK GEOMETRY

| | |
|--------------------------|--------------------------|
| (49) LENGTH | 219.8 M |
| (51) NET WIDTH | 24.4 M |
| (52) TOTAL WIDTH | 33.8 M |
| (50) CURB OR SIDEWALK | LEFT 1.6 M RIGHT 1.6 M |
| (32) APPROACH RDWY WIDTH | 31.7 M |
| (33) BRIDGE MEDIAN | 2 CLOSED MED W/O BARRIER |

DECK ROADWAY/OPERATIONAL INFORMATION

| | |
|--|-------------------------|
| (42a) TYPE OF SERVICE | 5-HIGHWAY-PEDESTRIAN |
| (12) BASE HIGHWAY NETWORK | 0-NOT ON NET |
| (13) LRS INVENTORY RTE & SUBRTE | |
| (104) NATIONAL HIGHWAY SYSTEM | 0-NOT ON NHS |
| (26) FUNCTIONAL CLASS | 16-MINOR ARTERIAL URBAN |
| (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 | 30.47 M |
| (47) INVENTORY ROUTE TOTAL HORIZ CLEAR | 12.2 M |
| (68) DECK GEOMETRY | 9 ABOVE DESIRABLE CRIT |
| (72) APPR ROADWAY ALIGN | 8 EQUAL DESIRABLE CRIT |
| (105) FEDERAL LANDS HWY | 0-NOT APPLICABLE |
| (110) DESIGNATED NATIONAL NETWORK | 0-NOT ON NET |
| (20) TOLL | 3-ON FREE ROAD |
| (28a) LANES | 4 |
| SPEED | 45 |
| (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 | 0-NONE |
| B) TYPE OF MEMBRANE | 0-NONE |
| C) TYPE OF DECK PROTECTION | 0-NONE |
| OVERLAY THICKNESS (inches) | 0 inches |
| (29) AVERAGE DAILY TRAFFIC | 25440 |
| (30) YEAR OF ADT | 2012 |
| (109) TRUCK ADT % | 7 % |
| (19) BYPASS, DETOUR LENGTH | 8 KM |
| (114) FUTURE ADT | 30528 |
| (115) YEAR OF FUTURE ADT | 2041 |
| (37) HISTORICAL SIGNIFICANCE | 5: NOT ELIGIBLE FOR NRHP |

DECK ELEMENT INSPECTION RATINGS AND NOTES

(58) DECK RATING = 4

| Elem No. | Defect/Prot Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State | | | |
|----------|--------------------|---------------------------------|-----|-----------|-------|-----------------------------|------|------|------|
| | | | | | | CS 1 | CS 2 | CS 3 | CS 4 |
| 12 | | Deck-RC | 2 | 7429 | sq.m | 0 | 441 | 6988 | 0 |
| 1080 | | Delamination/Spall/Patched Area | 2 | 5 | | 0 | 0 | 5 | 0 |
| 1120 | | Efflorescence/Rust Staining | 2 | 1 | | 0 | 1 | 0 | 0 |

DECK ELEMENT INSPECTION RATINGS AND NOTES

(58) DECK RATING = 4

| Elem No. | Defect/Prot Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State | | | |
|---|--------------------|--------------------------------|-----|-----------|-------|-----------------------------|------|------|------|
| | | | | | | CS 1 | CS 2 | CS 3 | CS 4 |
| 1130 | | Cracking (RC and Other) | 2 | 7423 | | 0 | 440 | 6983 | 0 |
| (12) Deck-RC | | | | | | | | | |
| <p>Many scupper drains along the deck surface are plugged with debris. (06/10/2003). (Verified 06/08/2021)</p> <p>Fire damaged the steel girders in span 10, between pier 10 and east abutment and caused the south half of bride deck bulkled up to 2.5 inches. (04/19/2020)(Verified 06/08/2021)</p> | | | | | | | | | |
| (12-1080) Delamination/Spall/Patched Area | | | | | | | | | |
| <p>Spalls up to 8 inches in diameter were found in the deck surface near abutment 1 along westbound lanes. (03/21/2001) (Verified 06/08/2021)</p> <p>Several areas of delamination and spalling up to 6 inches in diameter were found along the exterior edge of the north and south sidewalks. The spalls are over traffic lanes of Alameda Street. (04/07/1999) (Verified 06/08/2021)</p> <p>Spalls up to 4 inches in diameter with exposed rebar were found along the curbs. The spalls appear to be caused by insufficient cover of the rebar. (01/29/1990) (Verified 06/08/2021)</p> | | | | | | | | | |
| (12-1120) Efflorescence/Rust Staining | | | | | | | | | |
| <p>Hairline cracks with efflorescence exist in random locations along the deck soffit. (05/04/2011) (Verified 06/08/2021)</p> | | | | | | | | | |
| (12-1130) Cracking (RC and Other) | | | | | | | | | |
| <p>Transverse cracks up to 0.07 inches wide were found along the deck surface. (05/04/2011) (Verified 06/08/2021)</p> | | | | | | | | | |

DECK ELEMENT INSPECTION RATINGS AND NOTES

(58) DECK RATING = 4

DECK PHOTOGRAPHS



Photo 3
Deck Cracking



Photo 5
Deck Spalls and Cracking



Photo 9
Displacement at SE Approach Sidewalk



Photo 16
Buckling of Roadway

JOINT - APPROACH - RAIL

RAIL INFORMATION

(36a) Rail Code 0 (36b) Transition 0 (36c) Appr Guardrail 0 (36d) Appr Guardrail End 0 Roadway Speed 45 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 |
| 301 | | Joint-Pourable Seal | 2 | 271 | m | 0 | 0 | 0 | 271 |
| 2310 | | Leakage (Joints) | 2 | 271 | | 0 | 0 | 0 | 271 |
| (301-2310) Leakage (Joints) The pourable joint seal has failed and large sections of the seal are missing. (05/04/2011) (Verified 06/08/2021) | | | | | | | | | |
| 302 | | Joint-Compression Seal | 2 | 157 | m | 57 | 9 | 56 | 35 |
| 2320 | | Seal Adhesion (Joints) | 2 | 91 | | 0 | 0 | 56 | 35 |
| 2340 | | Seal Cracking (Joints) | 2 | 9 | | 0 | 9 | 0 | 0 |
| 7000 | | Damage | 2 | 35 | | 0 | 0 | 0 | 35 |
| (302-2320) Seal Adhesion (Joints) There is adhesion failure in random locations along the compression joint seal. (04/12/2013) (Verified 06/08/2021) Fire caused adhesion failure along all of the compression joint seal of east abutment. (04/19/2021)(Verified 06/08/2021) | | | | | | | | | |

JOINT - APPROACH - RAIL

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 |
| (302-2340) Seal Cracking (Joints) | | | | | | | | | |
| Cracking along the compression joint seal was observed. The affected area is approximately 9 lineal meters. (05/23/2017)(Verified 06/08/2021) | | | | | | | | | |
| (302-7000) Damage | | | | | | | | | |
| Compression joint seal in east abutment were damaged by fire. (04/19/2021)(Verified 06/08/2021) | | | | | | | | | |
| 330 | | Railing-Metal | 2 | 455 | m | 0 | 415 | 34 | 6 |
| 1000 | | Corrosion | 2 | 439 | | 0 | 415 | 24 | 0 |
| 1900 | | Distortion | 2 | 16 | | 0 | 0 | 10 | 6 |
| 7000 | | Damage | 2 | 16 | | 0 | 0 | 10 | 6 |
| (330-1000) Corrosion | | | | | | | | | |
| Freckled rust was observed along the metal bridge rail. (05/23/2017)(Verified 06/08/2021) | | | | | | | | | |
| (330-1900) Distortion | | | | | | | | | |
| Five balusters are missing from the south metal rail near abutment 1; approximately 15 are bent. Temporary repairs have been made. (05/04/2011) (Verified 06/08/2021) | | | | | | | | | |
| There are two 1 inch balusters missing form the rial at the northwest corner of the Alameda ramp. (06/10/2003) (Verified 06/08/2021) | | | | | | | | | |
| Fourteen consecutive square balusters are missing from the north handrail. Two balusters are badly bent. A temporary repair was made but should be repaired correctly. (06/10/2003) (Verified 06/08/2021) | | | | | | | | | |
| There is a baluster missing from the north rial approximately 196 feet west of abutment 11. (06/10/2003) (Verified 06/08/2021) | | | | | | | | | |
| Two sections of the metal handrail at the northeast corner of the intersection with the Alameda Street ramp have been damaged. (01/29/1990) (Verified 06/08/2021) | | | | | | | | | |
| (330-7000) Damage | | | | | | | | | |
| Refer to notes for defect 1900. | | | | | | | | | |

JOINT - APPROACH - RAIL

JOINT/RAIL PHOTOGRAPHS



Photo 4
Joint Spalls



Photo 6
Missing Joint Seal



Photo 7
Damage Section of Bridge Rail



Photo 8
Missing Balusters



Photo 17
Burned Expansion Joint

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 |

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 |
| 107 | | Girder/Beam-Steel | 2 | 2418 | m | 2332 | 0 | 0 | 86 |
| 1900 | | Distortion | 2 | 86 | | 0 | 0 | 0 | 86 |
| 515 | | Steel Coating-Paint | 2 | 7933 | sq.m | 0 | 7812 | 0 | 121 |
| | | 3440 Effectiveness (Steel PC) | 2 | 7933 | | 0 | 7812 | 0 | 121 |
| (107-1900) Distortion | | | | | | | | | |
| <p>In late October of 2018 there was a fire in span 6. There is approximately 11 lineal meters of distortion along the fifth steel girder from the south. The distortion occurred along the east end of the girder near pier 7; there was no visual distortion at girders four and six. The distortion includes lateral curving of the lower flange and bulging, in a southward direction, of the girder web between stiffeners. The web stiffeners appear to have maintained the vertical dimension of the girder. (1/9/2019)</p> <p>12-18-2020 fire damaged covered whole area under span 10, between pier 10 and east abutment. The fire distorted the all the girders except girder 11 (South end). The distortion includes lateral curving of the lower flange and bulging of the girder web between stiffeners. The web stiffeners appear to have maintained the vertical dimension of most of the girder. Up to 10% of girder web were bulging in girder 1, 2, 3, 4, 5, 7, 8, 9, and 10 were observed. 7% to more than 20% of distortion in lower flange of girder 3, 4, 5, 6, 7, 8, 9, and 10 were observed. (04/19/2021)(Verified 06/08/2021)</p> | | | | | | | | | |
| (107-515-3440) Effectiveness (Steel PC) | | | | | | | | | |
| The paint system has faded with the area affected by the recent fire burned down to bare metal. (01/09/2019)(Verified 06/08/2021) | | | | | | | | | |
| 182 | | EQ Restrainer Cable-Other | 2 | 20 | ea. | 20 | 0 | 0 | 0 |
| (182) EQ Restrainer Cable-Other | | | | | | | | | |
| No significant issues were observed. | | | | | | | | | |
| 311 | | Bearing-Moveable | 2 | 110 | each | 110 | 0 | 0 | 0 |
| (311) Bearing-Moveable | | | | | | | | | |
| No significant issues were observed. | | | | | | | | | |
| 313 | | Bearing-Fixed | 2 | 110 | each | 110 | 0 | 0 | 0 |
| (313) Bearing-Fixed | | | | | | | | | |
| No significant issues were observed. | | | | | | | | | |

SUBSTRUCTURE

DESCRIPTION UNDER STRUCTURE

| | | | |
|-----------------------------|---------------------------|---|---------------|
| (42b) TYPE OF SERVICE UNDER | 3-HIGHWAY-WATERWAY-RAILRO | (38) NAVIGATION CONTROL | 0: NO CONTROL |
| (69) UNDERCLEARANCES V - H | 4 TOLERABLE | (111) PIER PROTECTION | N/A |
| (71) WATER ADEQUACY | 8 EQUAL DESIRABLE | (39) NAVIGATION VERTICAL CLEARANCE | 0.0 M |
| (61) CHANNEL PROTECTION | 8 PROTECTED | (116) VERT-LIFT BRIDGE NAV MIN VERTICAL CLEAR | M |
| (113) SCOUR | 5 STABLE W/IN FOOTING | (40) NAVIGATION HORIZONTAL CLEARANCE | 0.0 M |
| SCOUR POA DATE | N/A | | |

CHANNEL DESCRIPTION

Trapezoidal channel with RC sides and natural bottom.

ROADWAY DESCRIPTION UNDER STRUCTURE

SUBSTRUCTURE

ROADWAY DESCRIPTION UNDER STRUCTURE

| | | | |
|---------------------------|---------------------|-------------------------------|--------------------------|
| (5a) POSITION: | 2 ONE ROUTE UNDER | NBI UNDER RECORD | |
| ROADWAY NAME: | COMPTON CR | | |
| (5d) ROUTE | 00000 | (104) NATIONAL HIGHWAY SYSTEM | 1-NHS |
| (11) POST MILE | 0 | (26) FUNCTIONAL CLASS | 14 URBAN OTHER PRINC |
| (5b) KIND HIGHWAY | 5 CITY STREET | (100) DEFENSE HWY | 0 NOT DEF HWY |
| (5c) LEVEL SERVICE | 0 NONE OF THE BELOW | (110) NATIONAL TRUCK NETWORK | 0 NOT PART OF NATL NETWO |
| (10) VERTICAL CLEAR (m) | 6.68 | (20) TOLL FACILITY | 3 ON FREE ROAD |
| (47) HORIZONTAL CLEAR (m) | 26.50 | (28b) LANES | 4 |
| (19) DETOUR LENGTH | 7.99 | (29) RECENT ADT | 10300 (30) ADT YEAR |
| (102) DIRECTION TRAFFIC | 2 2-WAY TRAFFIC | (109) TRUCK % ADT | 7 |

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 |
| 210 | | Pier Wall-RC | 2 | 245 | m | 245 | 0 | 0 | 0 |
| (210) Pier Wall-RC No significant issues were observed. There were fire burned marks on east face of Pier 10 wall. No other defect were observed. (04/19/2021) | | | | | | | | | |
| 215 | | Abutment-RC | 2 | 70 | m | 70 | 0 | 0 | 0 |
| (215) Abutment-RC No significant issues were observed. There were fire burned marks on east abutment. No other defect were observed. (04/19/2021) | | | | | | | | | |
| 225 | | Pile-Steel | 2 | 1 | ea. | 1 | 0 | 0 | 0 |
| (225) Pile-Steel 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. | | | | | | | | | |
| 234 | | Pier Cap-RC | 2 | 245 | m | 212 | 24 | 9 | 0 |
| 1080 | | Delamination/Spall/Patched Area | 2 | 33 | | 0 | 24 | 9 | 0 |
| (234) Pier Cap-RC No significant issues were observed. (234-1080) Delamination/Spall/Patched Area More than 50 percent of east face pier cap was covered with facial spalls. Also, there were two large spalls on lower edge of pier cap. One spall had 1ft in diameter with 10ft L and another had 1ft in diameter with 19ft. (Verified 06/08/2021) | | | | | | | | | |

SUBSTRUCTURE PHOTOGRAPHS



Photo 15
Distorted Lower Flanges and Girder Bracings

OTHER PHOTOGRAPHS



Photo 2
Roadway Photo



Photo 10
Elevation View from North

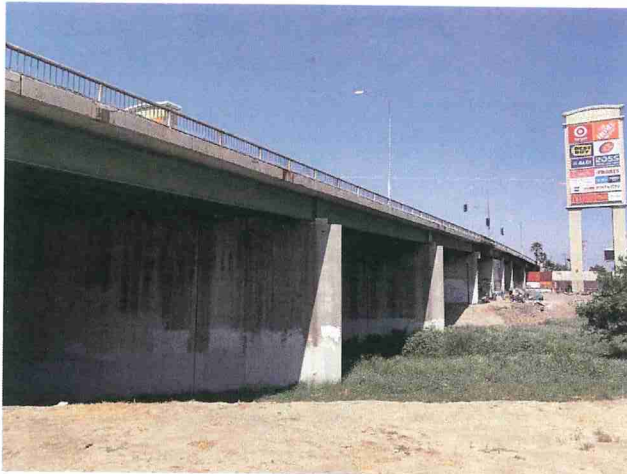


Photo 11
Elevation From South



Photo 12
Underside Photo



Photo 13
East Abutment Fire Site



Photo 14
Remains of Burned Trashes

WORK RECOMMENDATIONS**DECK WORK RECOMMENDATIONS**

| | | | | | | |
|--|------------|---------|-------------------|------------|----------|-------------|
| Rec Date | 06/08/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Deck-Patch spalls | Str Target | 2 YEARS | EA |
| Repair spalls and delaminations. | | | | | | |
| Rec Date | 06/08/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Deck-Misc. | Str Target | 6 MONTHS | EA |
| Repair approach sidewalks. | | | | | | |
| Rec Date | 06/08/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Deck-Methacrylate | Str Target | 2 YEARS | EA |
| Shot blast the concrete deck surface and apply methacrylate sealant. | | | | | | |
| Rec Date | 04/19/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Deck-Replace | Str Target | 2 YEARS | EA |
| Replace south half of bridge deck in span 10, between pier 10 and east abutment. | | | | | | |

JOINT/APPR/RAIL WORK RECOMMENDATIONS

| | | | | | | |
|---|------------|---------|----------------|------------|---------|-------------|
| Rec Date | 06/08/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Railing-Repair | Str Target | 2 YEARS | EA |
| Repair the bridge rails. | | | | | | |
| Rec Date | 06/08/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Joints-Replace | Str Target | 2 YEARS | EA |
| Clean the expansion joints and replace the sealant. | | | | | | |

SUPERSTRUCTURE WORK RECOMMENDATIONS

| | | | | | | |
|--|------------|---------|---------------|------------|---------|-------------|
| Rec Date | 04/19/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Super-Replace | Str Target | 2 YEARS | EA |
| Replace damaged girders (girder #1, 2, 3, 4, 5, 6, 7, 8, 9, 10) in span 10, between pier 10 and east abutment, | | | | | | |

SUBSTRUCTURE WORK RECOMMENDATIONS

| | | | | | | |
|--|------------|---------|--------------|------------|---------|-------------|
| Rec Date | 04/19/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Sub-Misc. | Str Target | 2 YEARS | EA |
| Repair slope protecting east abutment. | | | | | | |

OTHER WORK RECOMMENDATIONS

| | | | | | | |
|------------------------|------------|---------|----------------|------------|---------|-------------|
| Rec Date | 06/08/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Drainage Issue | Str Target | 2 YEARS | EA |
| Clean the deck drains. | | | | | | |

53C1744 SP, COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
100 - Routine-Roadway View

May 10, 2021 [AAAD]



Photo #2
Roadway Photo

53C1744 SF . . . COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
102 - Deck-Damage/Deterioration

May 10, 2021 [AAAD]

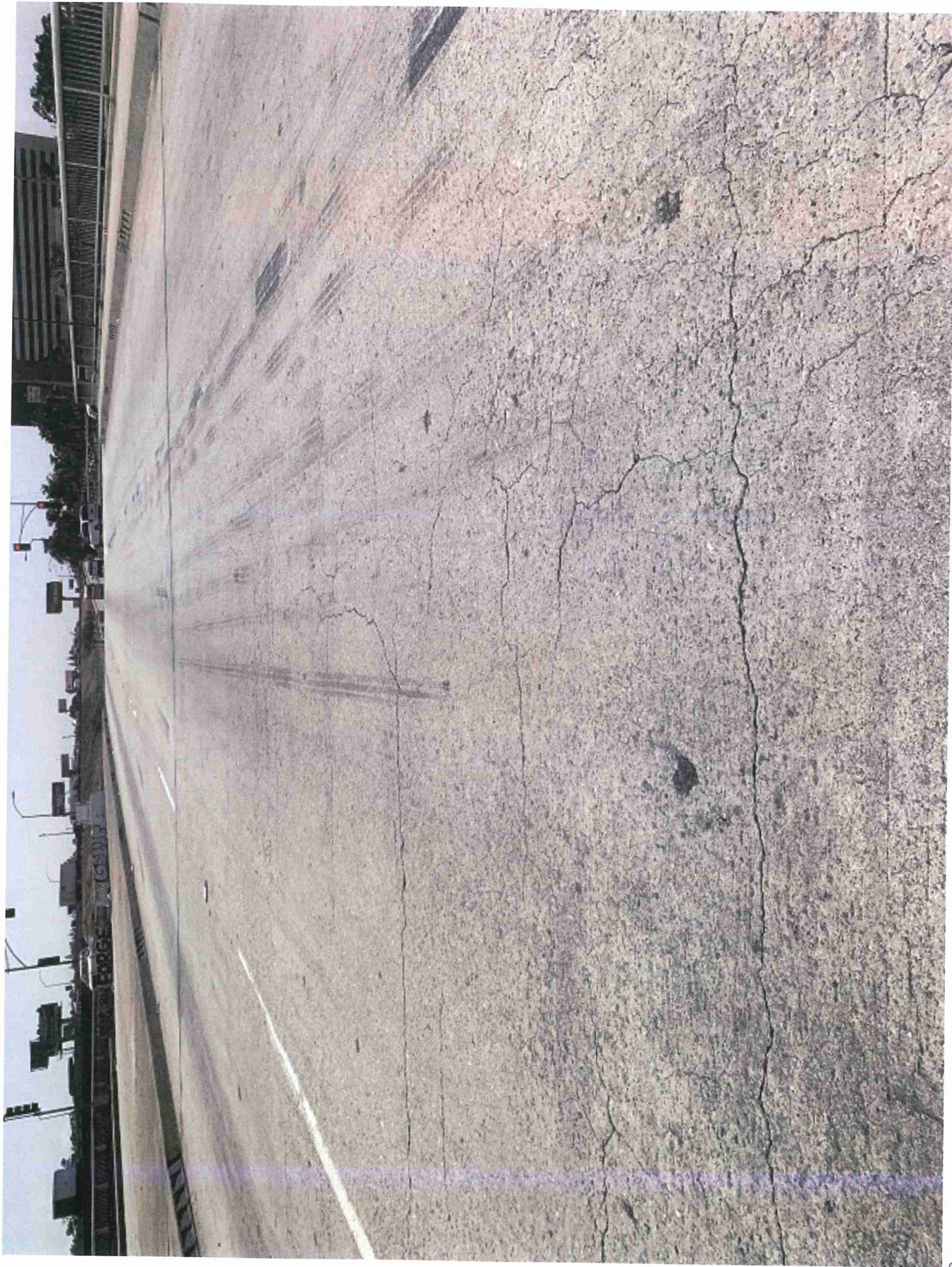


Photo #3
Deck Cracking

53C1744 SP. . . COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
124 - Joint-Damage/Deterioration

May . ., 2021 [AAAD]

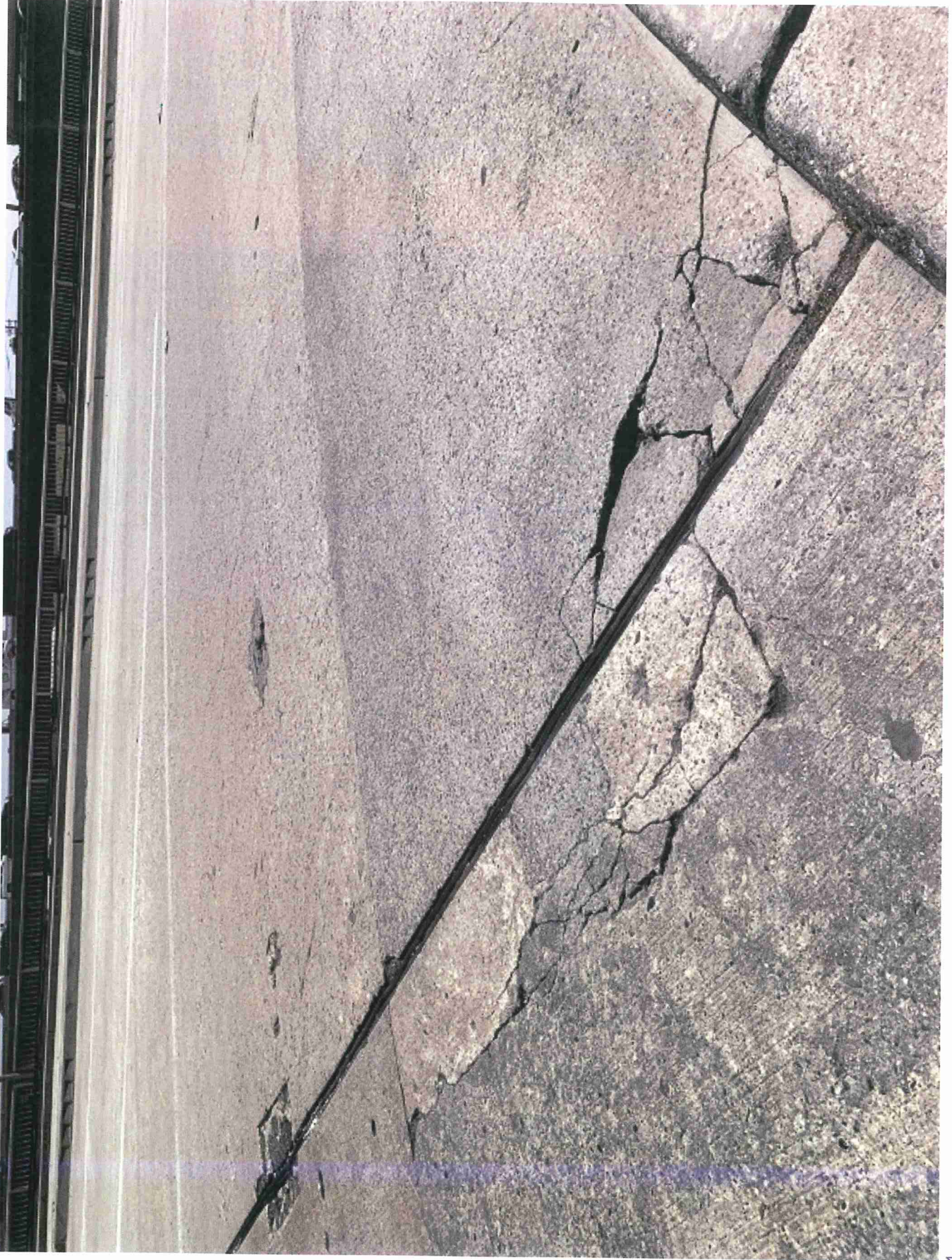


Photo #4
Joint Spalls

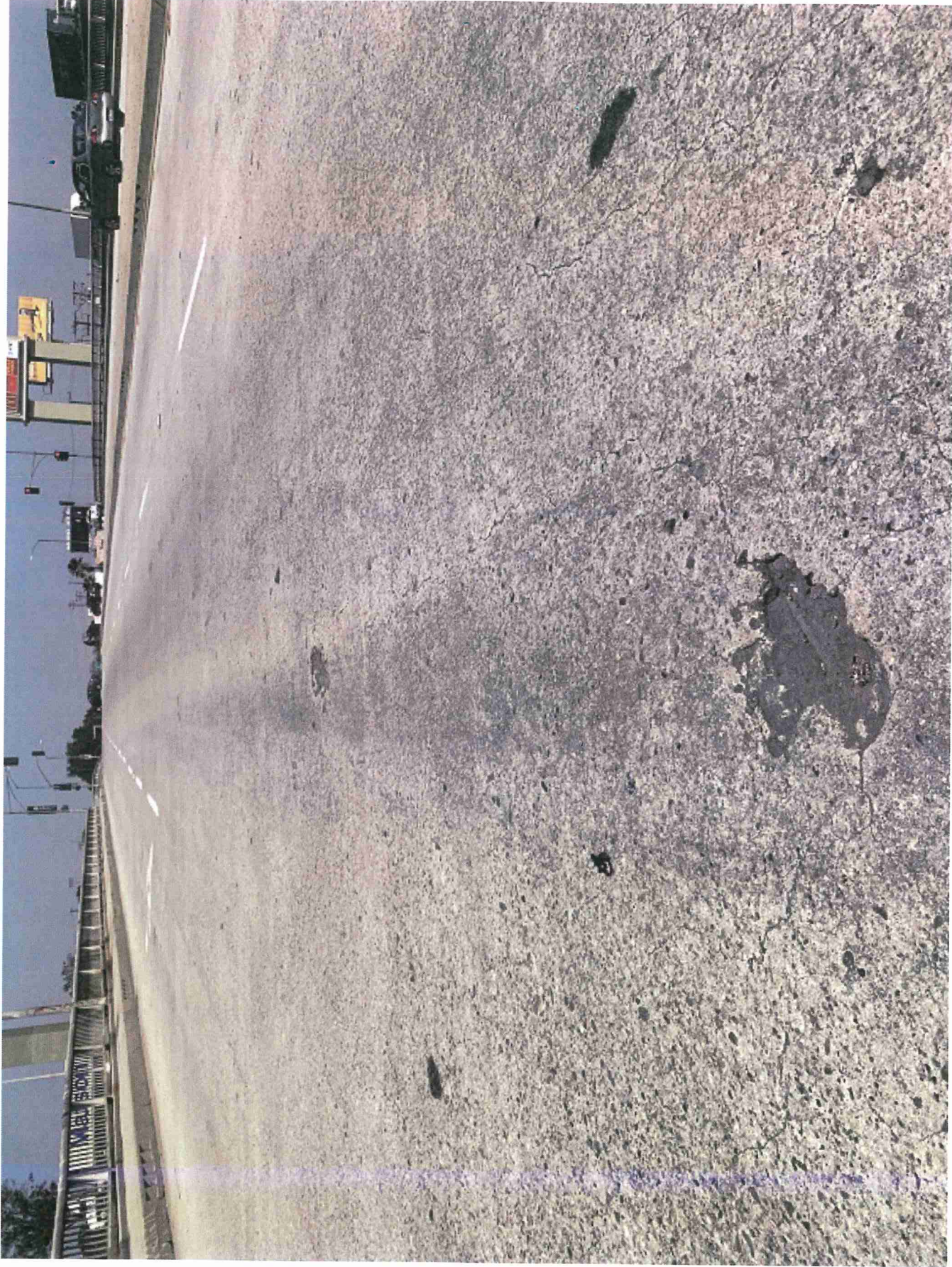


Photo #5
Deck Spalls and Cracking

53C1744 SP, COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
124 - Joint-Damage/Deterioration

May 11, 2021 [AAAD]

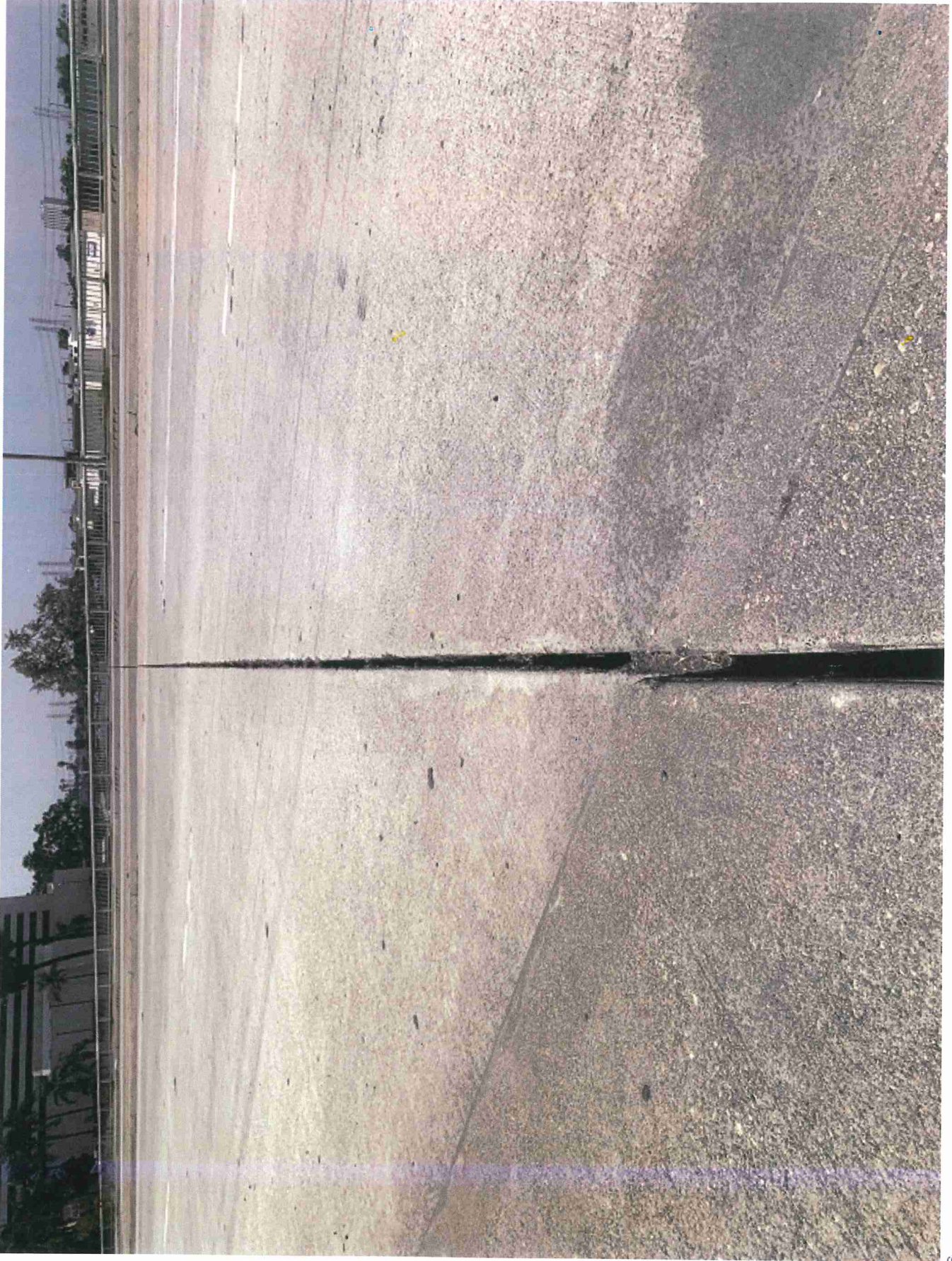


Photo #6
Missing Joint Seal



Photo #7
Damage Section of Bridge Rail



Photo #8
Missing Balusters



Photo #9
Displacement at SE Approach Sidewalk



Photo #10
Elevation View from North



Photo #11
Elevation From South



Photo #12
Underside Photo



Photo #13
East Abutment Fire Site

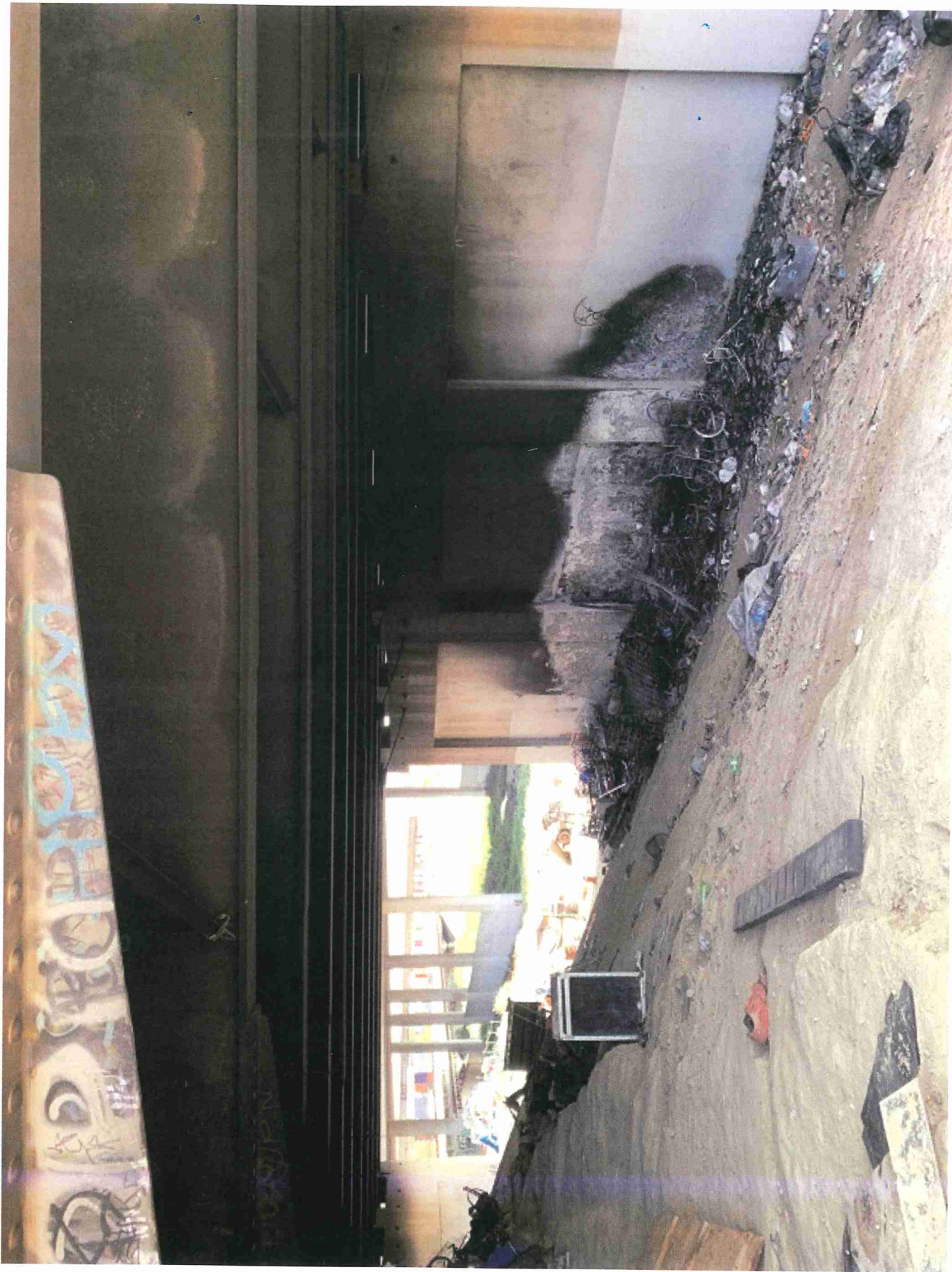


Photo #14
Remains of Burned Trashes



Photo #15

Distorted Lower Flanges and Girder Bracings

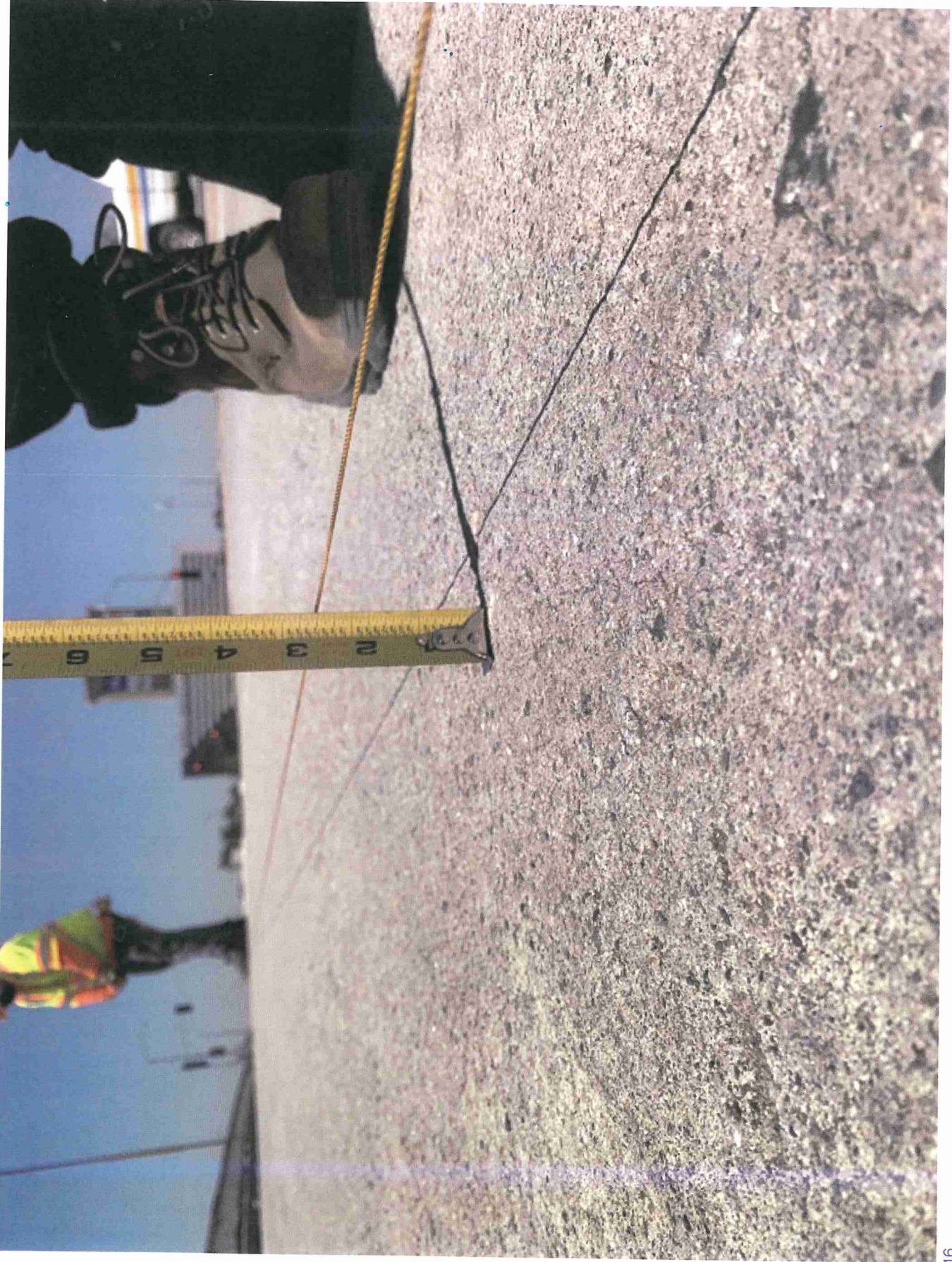


Photo #16
Buckling of Roadway

53C1744 SF. . . COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
124 - Joint-Damage/Deterioration

Apr 13, 2021 [AAAD]

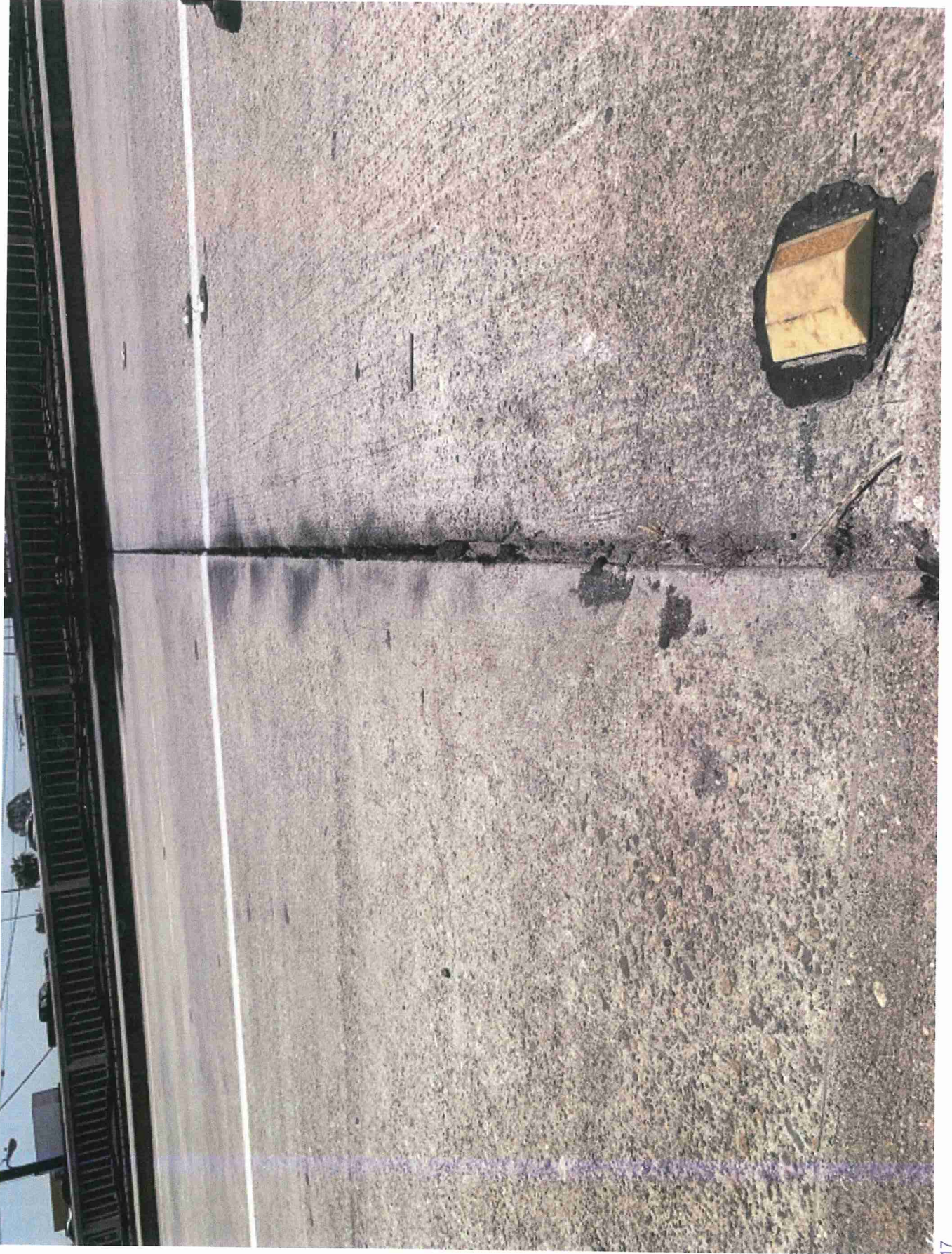


Photo #17
Burned Expansion Joint



BRIDGE INSPECTION REPORT

Fire Damage Inspection



BRIDGE NO.: **53C1744 (2446)** STRUCTURE NAME: **SP/UP,COMPTON CR,ALAMEDA**

INSPECTION DATE: **April 19, 2021**

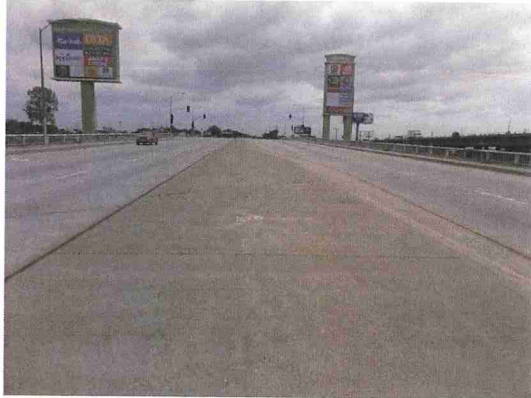
BRIDGE LOCATION INFORMATION

| | | | |
|----------------|------------------------|----------------------------------|-------------------------|
| (9) LOCATION | 0.3MI W/O SANTA FE AVE | (7) FACILITY CARRIED | ARTESIA BLVD |
| (11) POSTMILE | 0 | (6) FEATURE INTERSECTED | UPRR,COMPTON CR,ALAMEDA |
| (16) LATITUDE | 33°52'26.61" | (5) INVENTORY RTE(ON/UNDER) | ON 15000000 |
| (17) LONGITUDE | 118°13'07.19" | (104) ON NATIONAL HIGHWAY SYSTEM | NOT ON NHS |

STRUCTURAL HEALTH CONDITION SUMMARY INFORMATION

| | | | |
|---------------------------|-------------------------|------------------------------------|-----------------------|
| (58) DECK | 4 POOR | DECK AREA (SF) | 7,429 |
| (59) SUPERSTRUCTURE | 5 FAIR | SUFFICIENCY RATING | 37.8 |
| (60) SUBSTRUCTURE | 7 GOOD | PAINT CONDITION SUPER | N/A SUBSTR N/A |
| (62) CULVERT | N N/A (NBI) | STRUCTURALLY DEFICIENT (SD) STATUS | SD |
| (67) STRUCTURE EVALUATION | 2 INTOLERABLE - REPLACE | (113) SCOUR | 5 STABLE W/IN FOOTING |

PHOTOGRAPH IDENTIFICATION



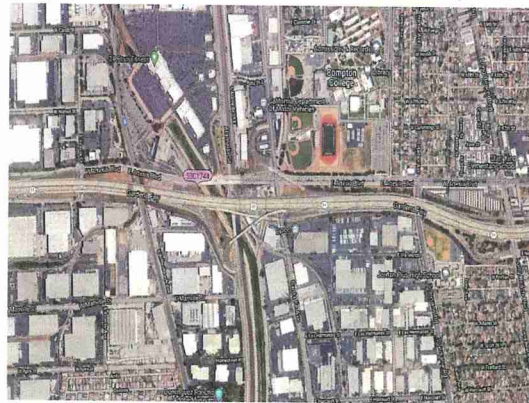
Routine-Roadway View (12/15/2016)



Routine-Elevation View (06/26/2019)



Routine-Underside View (04/19/2021)



Routine-Map View (07/01/2021)

TEAM LEADER Wein N. Chu
 REPORT AUTHOR Wein N. Chu
 INSPECTED BY WN.Chu/MY.Chow

Wein N. Chu
 Wein N. Chu (Registered Civil Engineer)

7/1/2021
 Date



STRUCTURE OVERVIEW

AGENCY INFORMATION

(1) STATE NAME CALIFORNIA 069
 (2) HIGHWAY DISTRICT 07
 (3) COUNTY CODE (53) LOS ANGELES
 (4) PLACE CODE (15044) COMPTON
 (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

INSPECTION INFORMATION

(90) INSPECTION DATE 06/19 (91) FREQUENCY 24 MO
 (92) CRITICAL FEATURE INSPECTION (93) CFI DATE
 A) FRACTURE CRITICAL 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
 % Ownership Owner/Agency
 100% City of Compton

CONSTRUCTION INFORMATION

(27) YEAR BUILT 1956 (45) MAIN SPANS 10 (43a) STRUCTURE TYPE MAIN 3: STEEL
 (106) YEAR MODIFIED N/A (46) APPR SPANS 0 (43b) DESIGN TYPE MAIN 02: STRINGER/MULTI-BEAM
 (34) SKEW 99 (48) MAX SPAN (M) 27.4 (44a) STRUCTURE TYPE APPR 0: OTHER/ NOT APPLICABLE
 (49) LENGTH (M) 219.8 (35) STR FLARE 0-NO (44b) DESIGN TYPE APPR 00: OTHER/NOT APPLICABLE
 (112) NBIS BR LENGTH Y JOINTS 11 NO. OF HINGES 0

STRUCTURE DESCRIPTION

SPAN CONFIGURATION

OPERATIONAL INFORMATION

LOAD CAPACITY

(31) DESIGN LOAD 5 MS 18 (HS 20) (65) CALC METHOD 1 LF LOAD FACTOR
 (66) INVENTORY RATING RF=0.00 =>0.0 metric tons (63) CALC METHOD 1 LF LOAD FACTOR
 (64) OPERATING RATING RF=0.00 =>0.0 metric tons (70) BRIDGE POSTING 5 AT/ABOVE LEGAL LOADS
 (41) STRUCTURE STATUS A-OPEN, NO RESTRICTION PERMIT RATING XXXXX
 OVERLAY THICKNESS 0 inches

POSTING LOADS

| | Safe Loads | Existing Ordinance/Order | Posting Signs | |
|----------|------------|--------------------------|---------------|-----------|
| Type 3 | 0 | N/A | N/A | U.S. Tons |
| Type 3S2 | 0 | N/A | N/A | U.S. Tons |
| Type 3-3 | 0 | N/A | N/A | U.S. Tons |
| Speed | 45 | N/A | N/A | MPH |

Additional Ordinance/Order Requirements

NONE

Additional Signs

NONE

Posting Date N/A
 Load Rating Summary Date 06/09/21
 Load Rating Type Calculated
 Load Rating Tool - Date BrR 6.7.0 AASHTO - 06/09/21

MINIMUM VERTICAL CLEARANCE

(53) MIN VERT CLEAR OVER BRIDGE RDWY Unimpaired
 (54) MIN VERT UNDERCLEAR REF H-HIGHWAY 6.68 M

MINIMUM LATERAL UNDERCLEARANCE

(55) MIN LAT UNDERCLEAR RT REF H-HIGHWAY 2.0 M
 (56) MIN LAT UNDERCLEAR LT 0.0 M

CONDITION INFORMATION

INSPECTION COMMENTARY

FIRE DAMAGE REPORT (4/19/2021)

A fire occurred on 12-18-2020 at a Transient camp under east abutment of Artesia Boulevard bridge. Shaoli Xu of Design Division showed up at the site and requested to the City of Compton that the area be cleared of all debris and made safe for inspection.

CONDITION INFORMATION

INSPECTION COMMENTARY

On morning of 4-19-2021 Design Division (DES) was notified that the area had been cleaned. Around 11 am same day, the inspection of the burn area was conducted by Wein Chu (DES) with the assistance of Mi Chow. Also present were John Lu (DES) for Structural Analysis, Stuart Lillich and Damian Padilla of Road Maintenance Division (RMD) to assess the damages and to prepare the plans for repair. Shaoli Xu (DES) and Richard Dergazarian (DES) were assisting all three groups in collecting data, taking measurements and pictures of the fire damages.

The fire damaged covered whole area under span 10, between pier 10 and abutment 11. Discoloration of all of steel members and concrete deck soffit, distortions of the diaphragm and girder were clearly visible with heavy spalling of the east face of pier cap and minimal spalling in deck soffit. Spalling of the haunch along the top flange of the girders were also observed.

The fire distorted the all the girders except girder 11 (South end). The distortion includes lateral curving of the lower flange and bulging of the girder web between stiffeners. The web stiffeners appear to have failed to maintained the vertical dimension of the girders in south side of the span. Spalling of the haunch along the top flange of the girder was observed.

Northside/Westbound roadway portion of the deck above the burn area appeared in tact with no distress observed.

However, southside of the roadway of deck above the burn area appeared in distressed and distorted. There was ½-inches gap at the east abutment joint with ½-inches displacement upward of the deck. There was also ½-inches gap at the pier 10 joint with ½-inches displacement upward of the deck. After careful observation and measurement, the roadway portion of southside was found to be concaved down 2.5 inches. (4/19/2021)

Girder were label from North end (G1) to South end (G11)

Summary of defects from fire (12/18/2020) (Inspected date 4/19/2021)

Up to 10 feet of girder web were bulging in girder 1, 2, 3, 4, 5, 7, 8, 9, and 10

7 feet to more than 20 foot of distortion in lower flange of girder 3, 4, 5, 6, 7, 8, 9, and 10

More than 50 percent of east face pier cap was covered with facial spalls. Also, there were two large spalls on lower edge of pier cap.

One spall had 1 foot in diameter with 10-foot L and another had 1 foot in diameter with 19 feet.

Soil loss were found in bay 1, 6, 7, 8, 9 and 10. Bay 1 (between girder 1 and girder 2) had 5 feet D x 2.25 feet H x 10 feet L of soil losses and bay 6 to bay 10 (between girder 6 and girder 11) had 6 inches to up 5 feet D x 4 inches to up to 2.25 feet H x 50 feet L of soil removed under abutment wall.

Whole area (48 feet x 108 feet) under span 10 slope needs repair.

See Sketch for the location of the defects.

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

DECK GEOMETRY

| | |
|--------------------------|--------------------------|
| (49) LENGTH | 219.8 M |
| (51) NET WIDTH | 24.4 M |
| (52) TOTAL WIDTH | 33.8 M |
| (50) CURB OR SIDEWALK | LEFT 1.6 M RIGHT 1.6 M |
| (32) APPROACH RDWY WIDTH | 31.7 M |
| (33) BRIDGE MEDIAN | 2 CLOSED MED W/O BARRIER |

DECK ROADWAY/OPERATIONAL INFORMATION

| | |
|--|-------------------------|
| (42a) TYPE OF SERVICE | 5-HIGHWAY-PEDESTRIAN |
| (12) BASE HIGHWAY NETWORK | 0-NOT ON NET |
| (13) LRS INVENTORY RTE & SUBRTE | |
| (104) NATIONAL HIGHWAY SYSTEM | 0-NOT ON NHS |
| (26) FUNCTIONAL CLASS | 16-MINOR ARTERIAL URBAN |
| (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 | 30.47 M |
| (47) INVENTORY ROUTE TOTAL HORIZ CLEAR | 12.2 M |
| (68) DECK GEOMETRY | 9 ABOVE DESIRABLE CRIT |
| (72) APPR ROADWAY ALIGN | 8 EQUAL DESIRABLE CRIT |
| (105) FEDERAL LANDS HWY | 0-NOT APPLICABLE |
| (110) DESIGNATED NATIONAL NETWORK | 0-NOT ON NET |
| (20) TOLL | 3-ON FREE ROAD |
| (28a) LANES | 4 |
| SPEED | 45 |
| (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 | 0-NONE |
| B) TYPE OF MEMBRANE | 0-NONE |
| C) TYPE OF DECK PROTECTION | 0-NONE |
| OVERLAY THICKNESS (inches) | 0 inches |
| (29) AVERAGE DAILY TRAFFIC | 25440 |
| (30) YEAR OF ADT | 2012 |
| (109) TRUCK ADT % | 7 % |
| (19) BYPASS, DETOUR LENGTH | 8 KM |
| (114) FUTURE ADT | 30528 |
| (115) YEAR OF FUTURE ADT | 2041 |
| (37) HISTORICAL SIGNIFICANCE | 5: NOT ELIGIBLE FOR NRHP |

DECK ELEMENT INSPECTION RATINGS AND NOTES

(58) DECK RATING = 4

| Elem No. | Defect/Prot Defect | Element Description | Env | Total Qty | Units | Qty in each Condition State | | | |
|--|--------------------|--|-----|-----------|-------|-----------------------------|------|------|------|
| | | | | | | CS 1 | CS 2 | CS 3 | CS 4 |
| 12 | | Deck-RC | 2 | 7429 | sq.m | 0 | 441 | 6988 | 0 |
| | 1080 | Delamination/Spall/Patched Area | 2 | 5 | | 0 | 0 | 5 | 0 |
| | 1120 | Efflorescence/Rust Staining | 2 | 1 | | 0 | 1 | 0 | 0 |
| | 1130 | Cracking (RC and Other) | 2 | 7423 | | 0 | 440 | 6983 | 0 |
| (12) Deck-RC | | | | | | | | | |
| Many scupper drains along the deck surface are plugged with debris. (06/10/2003) (Verified 05/23/2017) | | | | | | | | | |
| Fire damaged the steel girders in span 10, between pier 10 and east abutment and caused the south half of bride deck bulked up to 2.5 inches. (04/19/2020) | | | | | | | | | |
| (12-1080) Delamination/Spall/Patched Area | | | | | | | | | |
| Spalls up to 8 inches in diameter were found in the deck surface near abutment 1 along westbound lanes. (03/21/2001) (Verified 05/23/2017) | | | | | | | | | |
| Several areas of delamination and spalling up to 6 inches in diameter were found along the exterior edge of the north and south sidewalks. The spalls are over traffic lanes of Alameda Street. (04/07/1999) (Verified 05/23/2017) | | | | | | | | | |
| Spalls up to 4 inches in diameter with exposed rebar were found along the curbs. The spalls appear to be caused by insufficient cover of the rebar. (01/29/1990) (Verified 05/23/2017) | | | | | | | | | |
| (12-1120) Efflorescence/Rust Staining | | | | | | | | | |
| Hairline cracks with efflorescence exist in random locations along the deck soffit. (05/04/2011) (Verified 05/23/2017) | | | | | | | | | |
| (12-1130) Cracking (RC and Other) | | | | | | | | | |
| Transverse cracks up to 0.07 inches wide were found along the deck surface. (05/04/2011) (Verified 05/23/2017) | | | | | | | | | |

DECK ELEMENT INSPECTION RATINGS AND NOTES

(58) DECK RATING = 4

DECK PHOTOGRAPHS



Photo 1



Photo 1



Photo 1



Photo 1



Photo 1

JOINT - APPROACH - RAIL

RAIL INFORMATION

(36a) Rail Code 0 (36b) Transition 0 (36c) Appr Guardrail 0 (36d) Appr Guardrail End 0 Roadway Speed 45 MPH

JOINT/APPROACH/RAIL ELEMENT INSPECTION RATINGS AND NOTES

| Elem | Defect/ | Element Description | Env | Total | Units | Qty in each Condition State |
|------|---------|---------------------|-----|-------|-------|-----------------------------|
|------|---------|---------------------|-----|-------|-------|-----------------------------|

JOINT - APPROACH - RAIL

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 |
| 301 | | Joint-Pourable Seal | 2 | 271 | m | 0 | 0 | 0 | 271 |
| 2310 | | Leakage (Joints) | 2 | 271 | | 0 | 0 | 0 | 271 |
| (301-2310) Leakage (Joints) The pourable joint seal has failed and large sections of the seal are missing. (05/04/2011) (Verified 05/23/2017) | | | | | | | | | |
| 302 | | Joint-Compression Seal | 2 | 157 | m | 57 | 9 | 56 | 35 |
| 2320 | | Seal Adhesion (Joints) | 2 | 91 | | 0 | 0 | 56 | 35 |
| 2340 | | Seal Cracking (Joints) | 2 | 9 | | 0 | 9 | 0 | 0 |
| 7000 | | Damage | 2 | 35 | | 0 | 0 | 0 | 35 |
| (302-2320) Seal Adhesion (Joints) There is adhesion failure in random locations along the compression joint seal. (04/12/2013) (Verified 05/23/2017) | | | | | | | | | |
| (302-2340) Seal Cracking (Joints) Fire caused adhesion failure along all of the compression joint seal of east abutment. (04/19/2021) | | | | | | | | | |
| (302-2340) Seal Cracking (Joints) Cracking along the compression joint seal was observed. The affected area is approximately 9 lineal meters. (Verified 05/23/2017) | | | | | | | | | |
| (302-7000) Damage Compression joint seal in east abutment were damaged by fire. (04/19/2021) | | | | | | | | | |
| 330 | | Railing-Metal | 2 | 455 | m | 0 | 415 | 34 | 6 |
| 1000 | | Corrosion | 2 | 439 | | 0 | 415 | 24 | 0 |
| 1900 | | Distortion | 2 | 16 | | 0 | 0 | 10 | 6 |
| 7000 | | Damage | 2 | 16 | | 0 | 0 | 10 | 6 |
| (330-1000) Corrosion Freckled rust was observed along the metal bridge rail. (Verified 05/23/2017) | | | | | | | | | |
| (330-1900) Distortion Five balusters are missing from the south metal rail near abutment 1; approximately 15 are bent. Temporary repairs have been made. (05/04/2011) (Verified 05/23/2017) | | | | | | | | | |
| There are two 1 inch balusters missing from the rail at the northwest corner of the Alameda ramp. (06/10/2003) (Verified 05/23/2017) | | | | | | | | | |
| Fourteen consecutive square balusters are missing from the north handrail. Two balusters are badly bent. A temporary repair was made but should be repaired correctly. (06/10/2003) (Verified 05/23/2017) | | | | | | | | | |
| There is a baluster missing from the north rail approximately 196 feet west of abutment 11. (06/10/2003) (Verified 05/23/2017) | | | | | | | | | |
| Two sections of the metal handrail at the northeast corner of the intersection with the Alameda Street ramp have been damaged. (01/29/1990) (Verified 05/23/2017) | | | | | | | | | |
| (330-7000) Damage Refer to notes for defect 1900. | | | | | | | | | |

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 |
| 107 | | Girder/Beam-Steel | 2 | 2418 | m | 2332 | 0 | 0 | 86 |
| 1900 | | Distortion | 2 | 86 | | 0 | 0 | 0 | 86 |
| 515 | | Steel Coating-Paint | 2 | 7933 | sq.m | 0 | 7812 | 0 | 121 |
| 3440 | | Effectiveness (Steel PC) | 2 | 7933 | | 0 | 7812 | 0 | 121 |

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 | |
| (107-1900) Distortion | | | | | | | | | | |
| <p>In late October of 2018 there was a fire in span 6. There is approximately 11 lineal meters of distortion along the fifth steel girder from the south. The distortion occurred along the east end of the girder near pier 7; there was no visual distortion at girders four and six. The distortion includes lateral curving of the lower flange and bulging, in a southward direction, of the girder web between stiffeners. The web stiffeners appear to have maintained the vertical dimension of the girder. (1/9/2019)</p> <p>12-18-2020 fire damaged covered whole area under span 10, between pier 10 and east abutment. The fire distorted the all the girders except girder 11 (South end). The distortion includes lateral curving of the lower flange and bulging of the girder web between stiffeners. The web stiffeners appear to have maintained the vertical dimension of most of the girder.</p> <p>∫ Up to 10∫ of girder web were bulging in girder 1, 2, 3, 4, 5, 7, 8, 9, and 10 were observed.</p> <p>∫ 7∫ to more than 20∫ of distortion in lower flange of girder 3, 4, 5, 6, 7, 8, 9, and 10 were observed.</p> <p>(04/19/2021)</p> | | | | | | | | | | |
| (107-515-3440) Effectiveness (Steel PC) | | | | | | | | | | |
| The paint system has faded with the area affected by the recent fire burned down to bare metal. (01/09/2019) | | | | | | | | | | |
| 182 | | EQ Restrainer Cable-Other | | 2 | 20 | ea. | 20 | 0 | 0 | 0 |
| (182) EQ Restrainer Cable-Other | | | | | | | | | | |
| No significant issues were observed. | | | | | | | | | | |
| 311 | | Bearing-Moveable | | 2 | 110 | each | 110 | 0 | 0 | 0 |
| (311) Bearing-Moveable | | | | | | | | | | |
| No significant issues were observed. | | | | | | | | | | |
| 313 | | Bearing-Fixed | | 2 | 110 | each | 110 | 0 | 0 | 0 |
| (313) Bearing-Fixed | | | | | | | | | | |
| No significant issues were observed. | | | | | | | | | | |

SUPERSTRUCTURE PHOTOGRAPHS



Photo 1



Photo 1



Photo 1

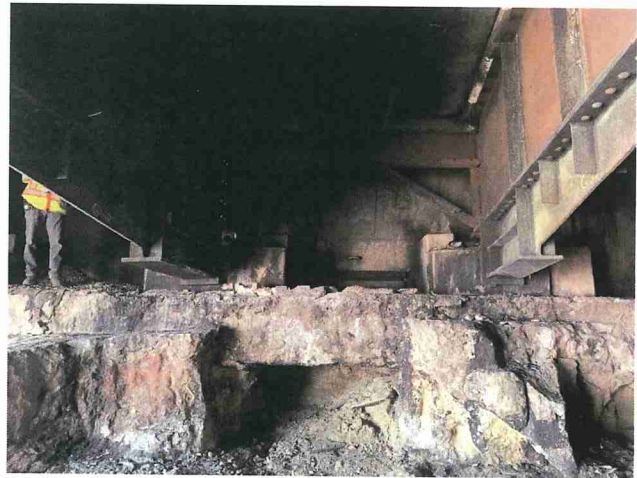


Photo 1



Photo 1



Photo 1

SUPERSTRUCTURE PHOTOGRAPHS



Photo 1

SUBSTRUCTURE

DESCRIPTION UNDER STRUCTURE

| | | | |
|-----------------------------|---------------------------|---|---------------|
| (42b) TYPE OF SERVICE UNDER | 3-HIGHWAY-WATERWAY-RAILRO | (38) NAVIGATION CONTROL | 0: NO CONTROL |
| (69) UNDERCLEARANCES V - H | 4 TOLERABLE | (111) PIER PROTECTION | N/A |
| (71) WATER ADEQUACY | 8 EQUAL DESIRABLE | (39) NAVIGATION VERTICAL CLEARANCE | 0.0 M |
| (61) CHANNEL PROTECTION | 8 PROTECTED | (116) VERT-LIFT BRIDGE NAV MIN VERTICAL CLEAR | M |
| (113) SCOUR | 5 STABLE W/IN FOOTING | (40) NAVIGATION HORIZONTAL CLEARANCE | 0.0 M |
| SCOUR POA DATE | N/A | | |

CHANNEL DESCRIPTION

Trapezoidal channel with RC sides and natural bottom.

ROADWAY DESCRIPTION UNDER STRUCTURE

| | | | |
|---------------------------|---------------------|-------------------------------|--------------------------|
| (5a) POSITION: | 2 ONE ROUTE UNDER | | |
| ROADWAY NAME: | COMPTON CR | NBI UNDER RECORD | |
| (5d) ROUTE | 00000 | (104) NATIONAL HIGHWAY SYSTEM | 1-NHS |
| (11) POST MILE | 0 | (26) FUNCTIONAL CLASS | 14 URBAN OTHER PRINC |
| (5b) KIND HIGHWAY | 5 CITY STREET | (100) DEFENSE HWY | 0 NOT DEF HWY |
| (5c) LEVEL SERVICE | 0 NONE OF THE BELOW | (110) NATIONAL TRUCK NETWORK | 0 NOT PART OF NATL NETWO |
| (10) VERTICAL CLEAR (m) | 6.68 | (20) TOLL FACILITY | 3 ON FREE ROAD |
| (47) HORIZONTAL CLEAR (m) | 26.50 | (28b) LANES | 4 |
| (19) DETOUR LENGTH | 7.99 | (29) RECENT ADT | 10300 (30) ADT YEAR |
| (102) DIRECTION TRAFFIC | 2 2-WAY TRAFFIC | (109) TRUCK % ADT | 2012 |

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 |
| 210 | | Pier Wall-RC | 2 | 245 | m | 245 | 0 | 0 | 0 |
| (210) | | Pier Wall-RC | | | | | | | |
| | | No significant issues were observed. There were fire burned marks on east face of Pier 10 wall. No other defect were observed. (04/19/2021) | | | | | | | |
| 215 | | Abutment-RC | 2 | 70 | m | 70 | 0 | 0 | 0 |
| (215) | | Abutment-RC | | | | | | | |

SUBSTRUCTURE

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 No significant issues were observed. There were fire burned marks on east abutment. No other defect were observed. (04/19/2021) | | | | | | | | | |
| 225 | | Pile-Steel | 2 | 1 | ea. | 1 | 0 | 0 | 0 |
| (225) Pile-Steel The piles are not visible for inspection and are therefore listed for record only. | | | | | | | | | |
| 234 | | Pier Cap-RC | 2 | 245 | m | 212 | 24 | 9 | 0 |
| | 1080 | Delamination/Spall/Patched Area | 2 | 33 | | 0 | 24 | 9 | 0 |
| (234) Pier Cap-RC No significant issues were observed. | | | | | | | | | |
| (234-1080) Delamination/Spall/Patched Area More than 50 percent of east face pier cap was covered with facial spalls. Also, there were two large spalls on lower edge of pier cap. One spall had 1 $\frac{1}{2}$ in diameter with 10 $\frac{1}{2}$ L and another had 1 $\frac{1}{2}$ in diameter with 19 $\frac{1}{2}$. | | | | | | | | | |

SUBSTRUCTURE PHOTOGRAPHS



Photo 1



Photo 1



Photo 1

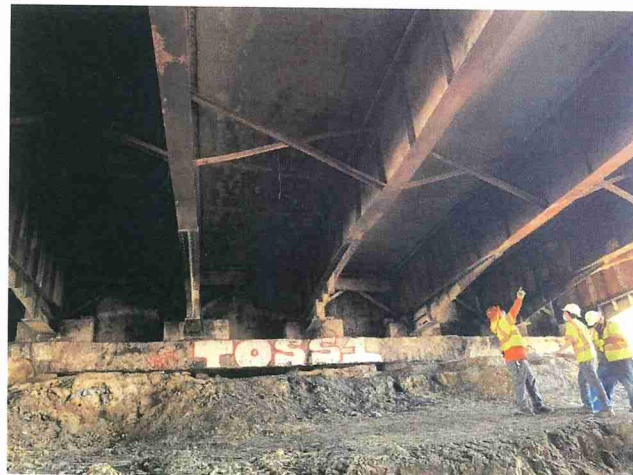


Photo 1

CHANNEL X-SECTION

Side Upstream
Measured From Top of metal rail - Upstream

X-Section Date 04/19/2021

CHANNEL X-SECTION

Side Upstream
 Measured From Top of metal rail - Upstream
 X-Section Date 04/19/2021

| Location | Horiz(m) | Vert(m) | Comments |
|----------|----------|---------|--------------|
| Abut 1 | 12.19 | 7.78 | top of slope |
| | 32.00 | 12.36 | toe of slope |
| | 40.84 | 12.71 | |
| | 50.29 | 13.92 | Thalweg |
| | 62.17 | 13.92 | |
| | 80.16 | 12.87 | toe of slope |
| | 92.35 | 10.00 | top of slope |

OTHER PHOTOGRAPHS



Photo 1

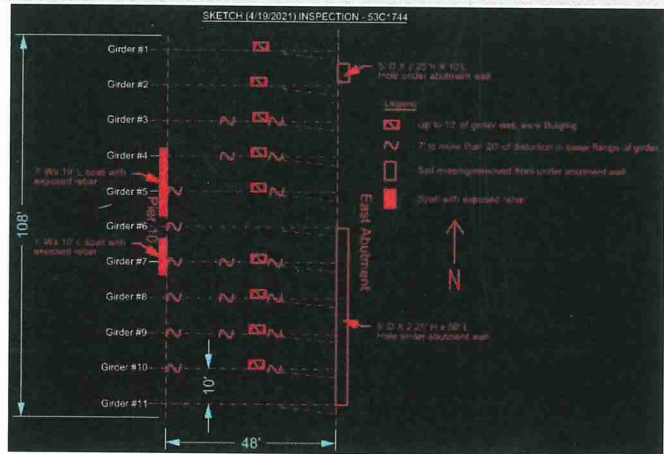


Photo 1



Photo 1



Photo 1

WORK RECOMMENDATIONS

DECK WORK RECOMMENDATIONS

| | | | | | | |
|--|------------|---------|--------------|------------|---------|-------------|
| Rec Date | 04/19/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Deck-Replace | Str Target | 2 YEARS | EA |
| Replace south half of bridge deck in span 10, between pier 10 and east abutment. | | | | | | |

OINT/APPR/RAIL WORK RECOMMENDATIONS - NONE

SUPERSTRUCTURE WORK RECOMMENDATIONS

SUBSTRUCTURE WORK RECOMMENDATIONS

WORK RECOMMENDATIONS**SUPERSTRUCTURE WORK RECOMMENDATIONS**

| | | | | | | |
|----------|------------|---------|---------------|------------|---------|-------------|
| Rec Date | 04/19/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Super-Replace | Str Target | 2 YEARS | EA |

Replace damaged girders (girder #1, 2, 3, 4, 5, 6, 7, 8, 9, 10) in span 10, between pier 10 and east abutment,

SUBSTRUCTURE WORK RECOMMENDATIONS

| | | | | | | |
|----------|------------|---------|--------------|------------|---------|-------------|
| Rec Date | 04/19/2021 | Work By | LOCAL AGENCY | Est Cost | | Dist Target |
| Status | PROPOSED | Action | Sub-Misc. | Str Target | 2 YEARS | EA |

Repair slope protecting east abutment.

OTHER WORK RECOMMENDATIONS - NONE

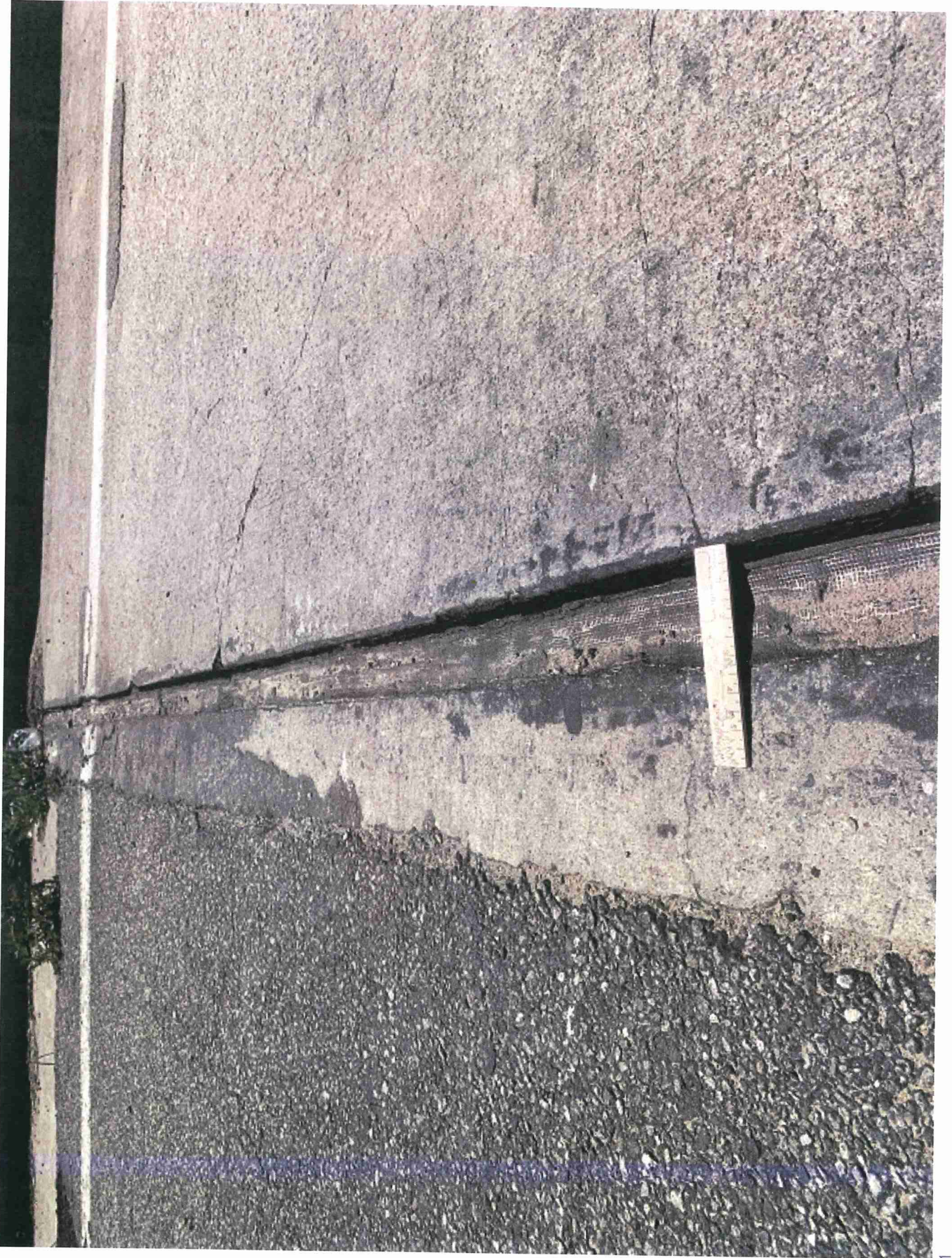
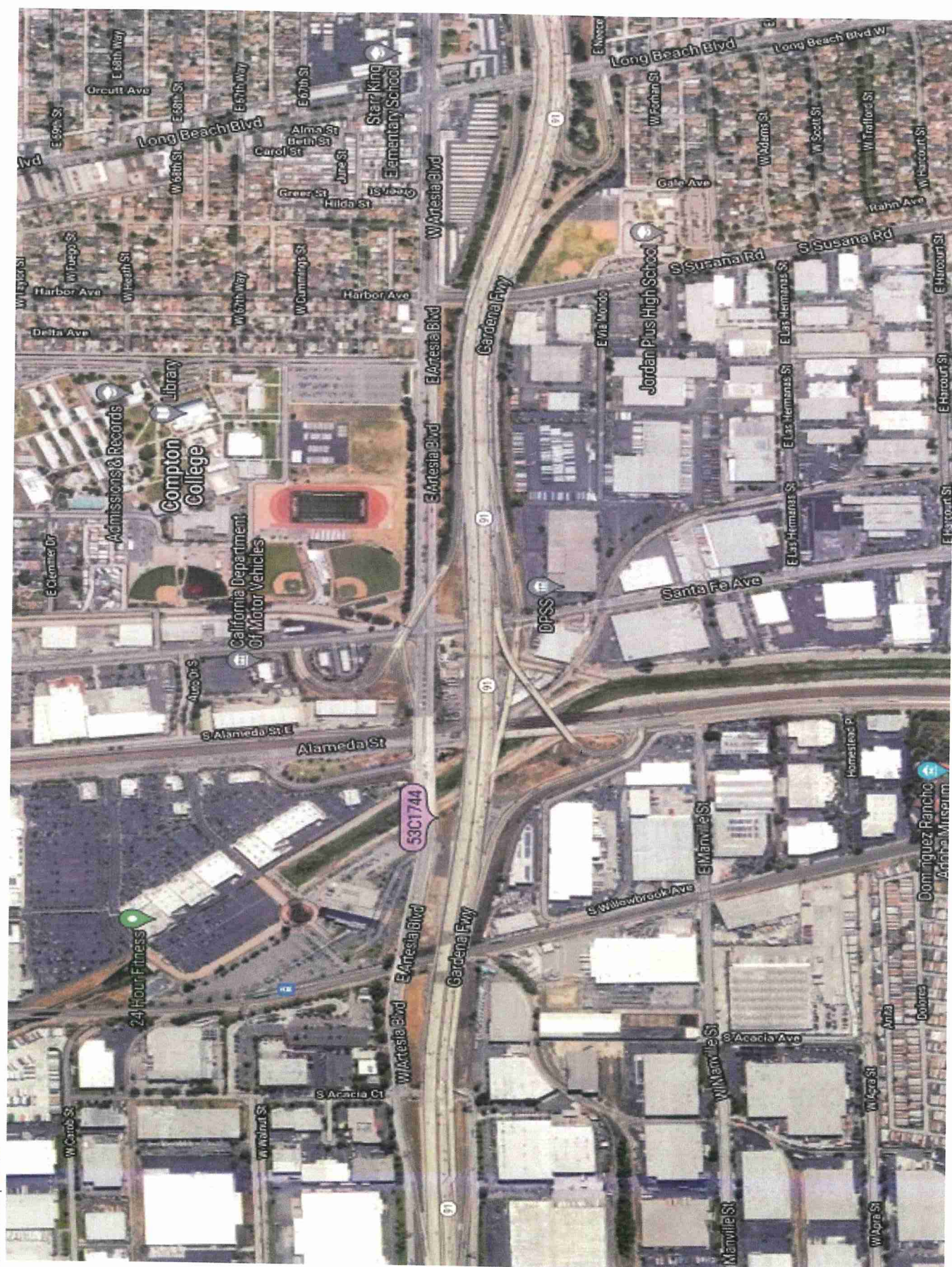


Photo #1



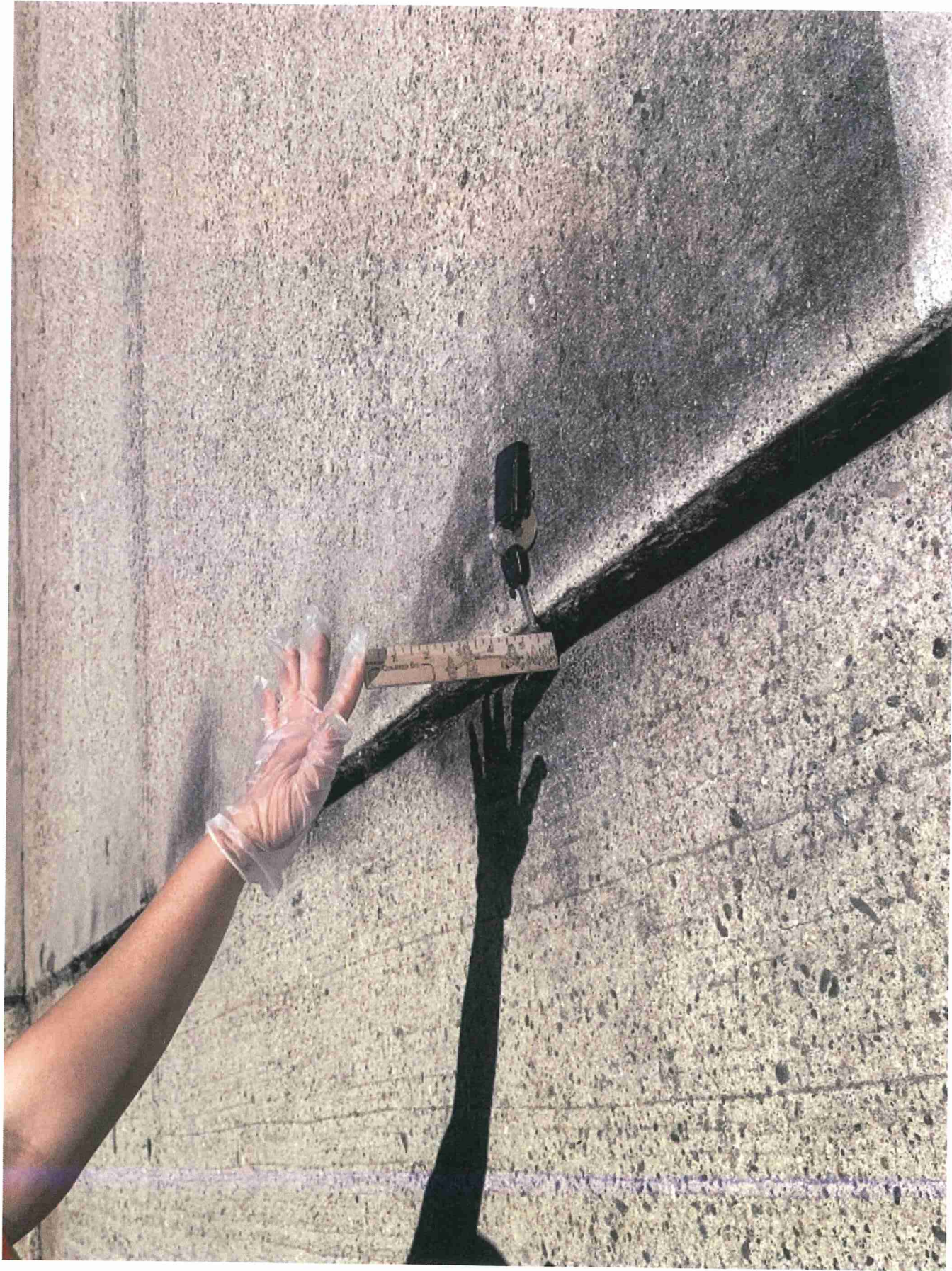


Photo #1

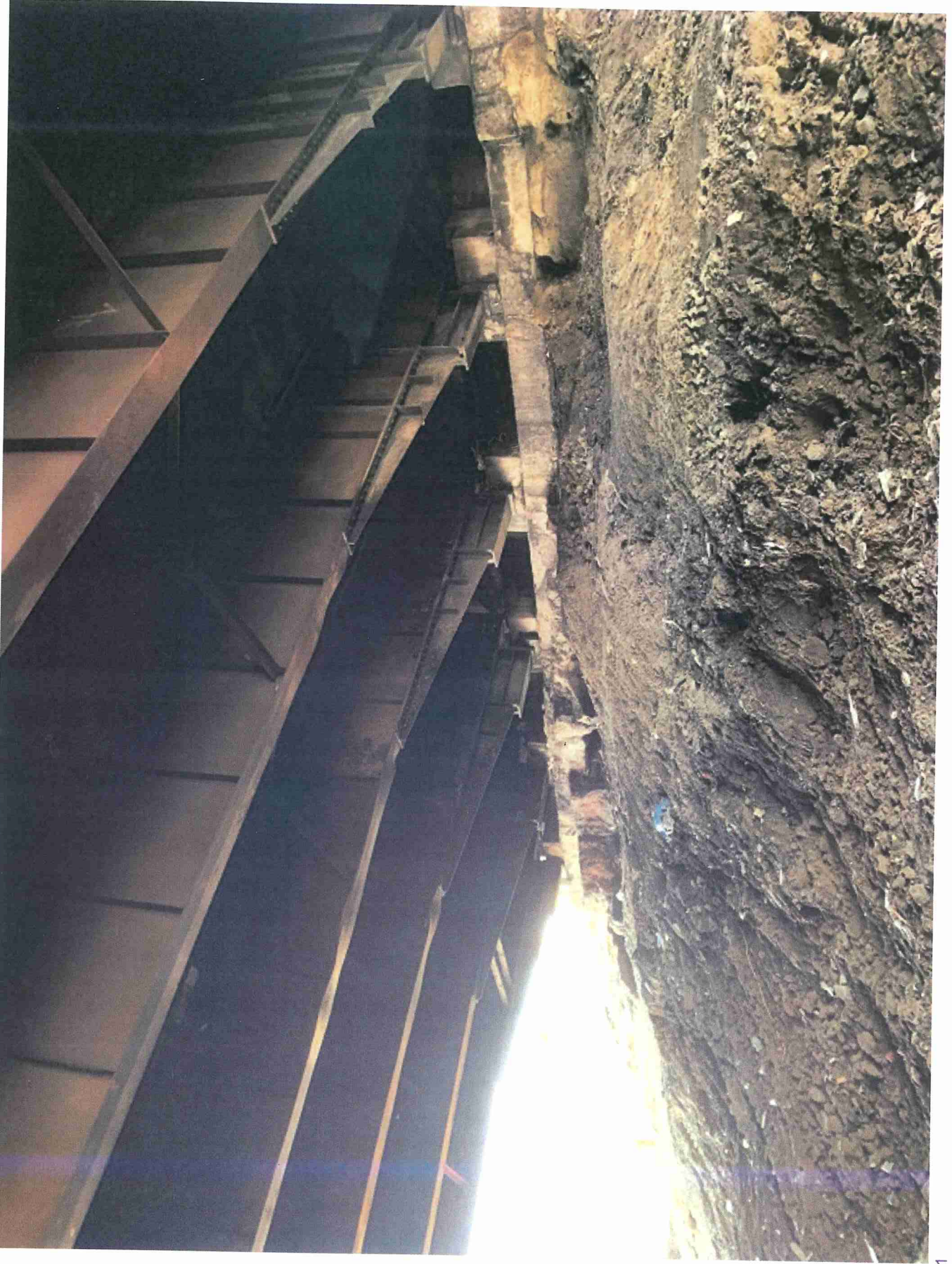


Photo #1



Photo #1



Photo #1

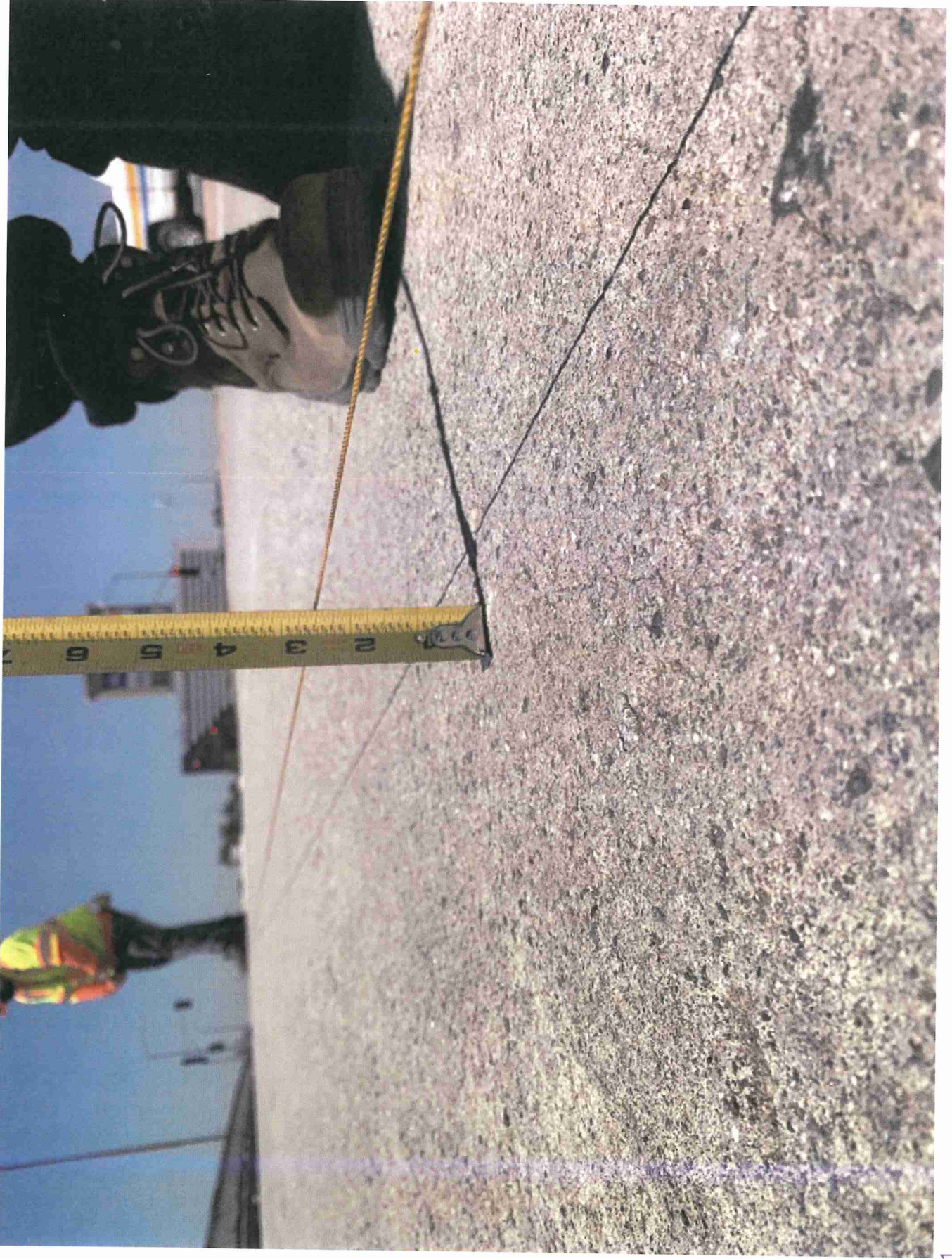


Photo #1

53C1744 SP, COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
102 - Deck-Damage/Deterioration

Apr 21, 2021 [AAAC]

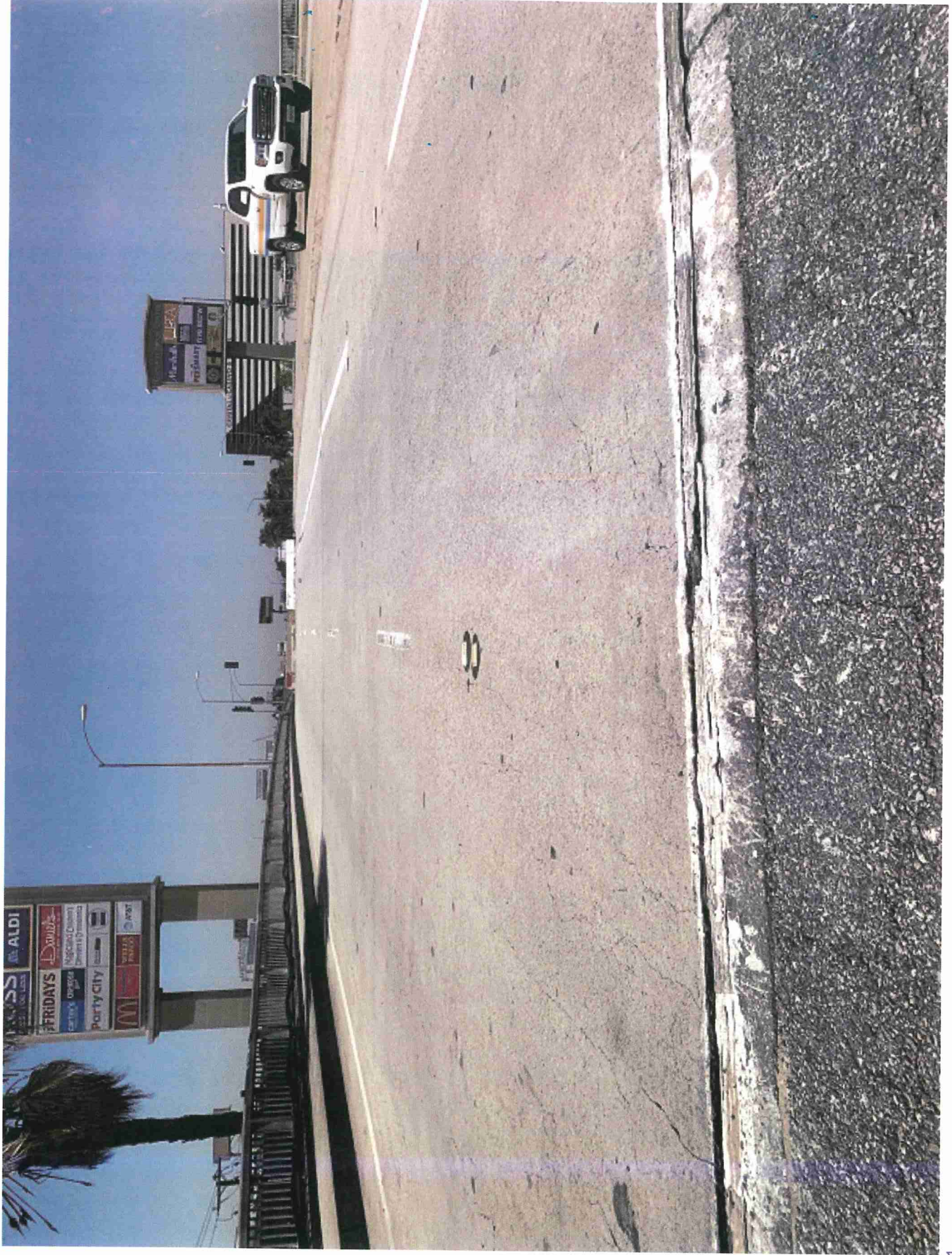


Photo #1

53C1744 SF ... COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
107 - Super-Damage/Deterioration

Apr 10, 2021 [AAAC]

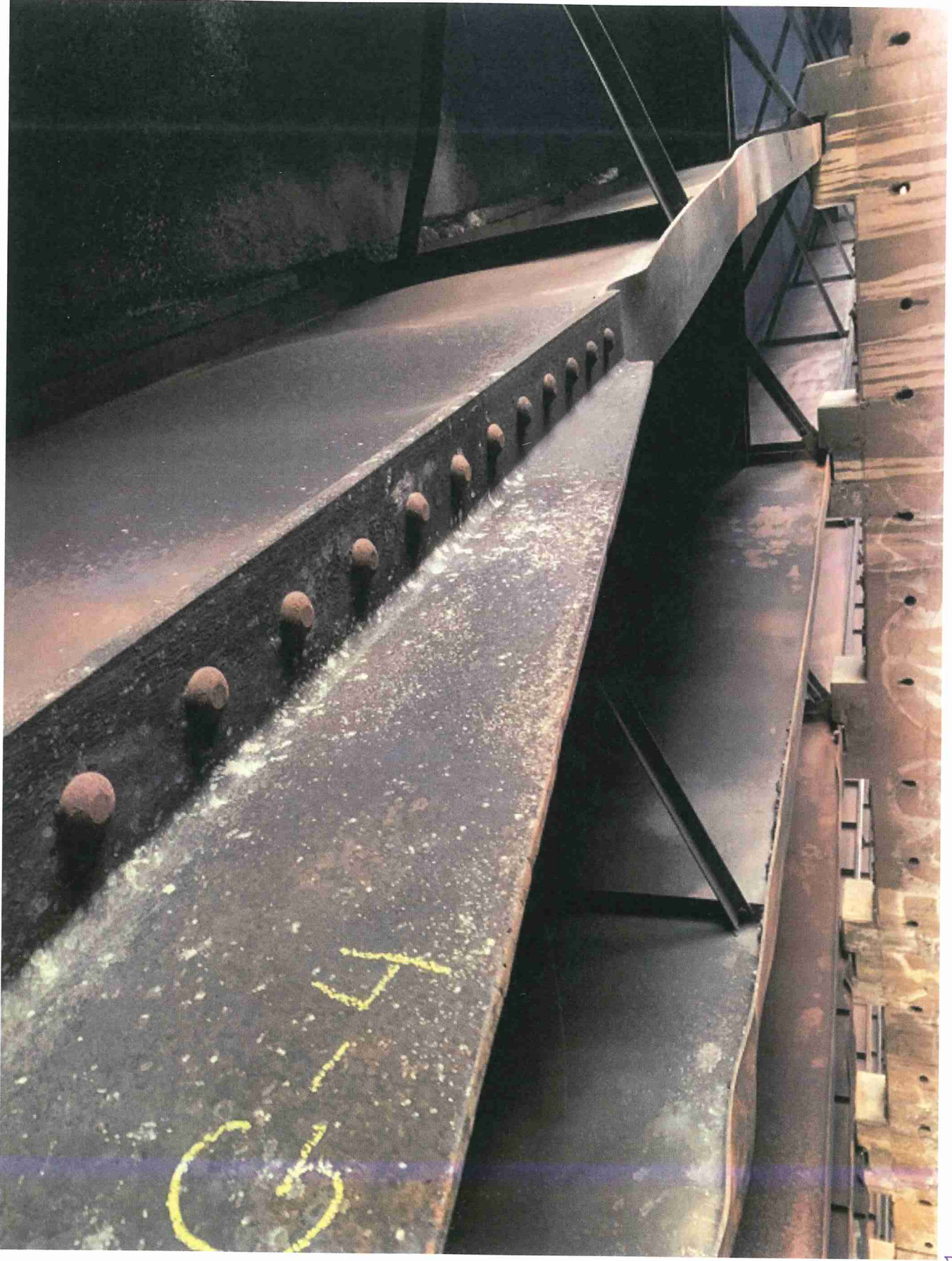


Photo #1

53C1744 SF. . . . COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
107 - Super-Damage/Deterioration

Apr 10, 2021 [AAAC]



Photo #1



Photo #1



Photo #1



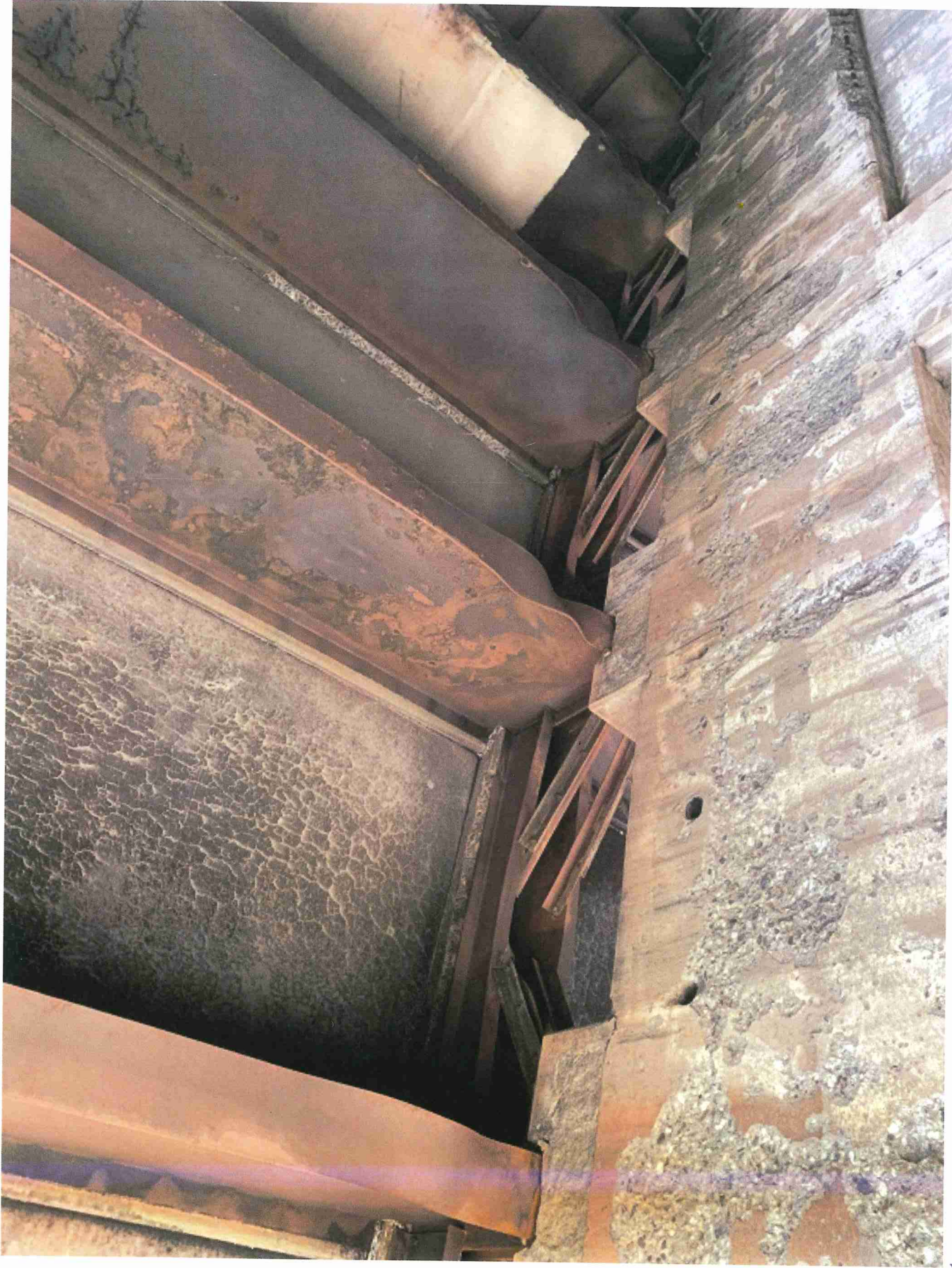


Photo #1

53C1744 SF. . . COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
113 - Sub-Damage/Deterioration

Apr 12, 2021 [AAAC]



Photo #1

SKETCH (4/19/2021) INSPECTION - 53C1744

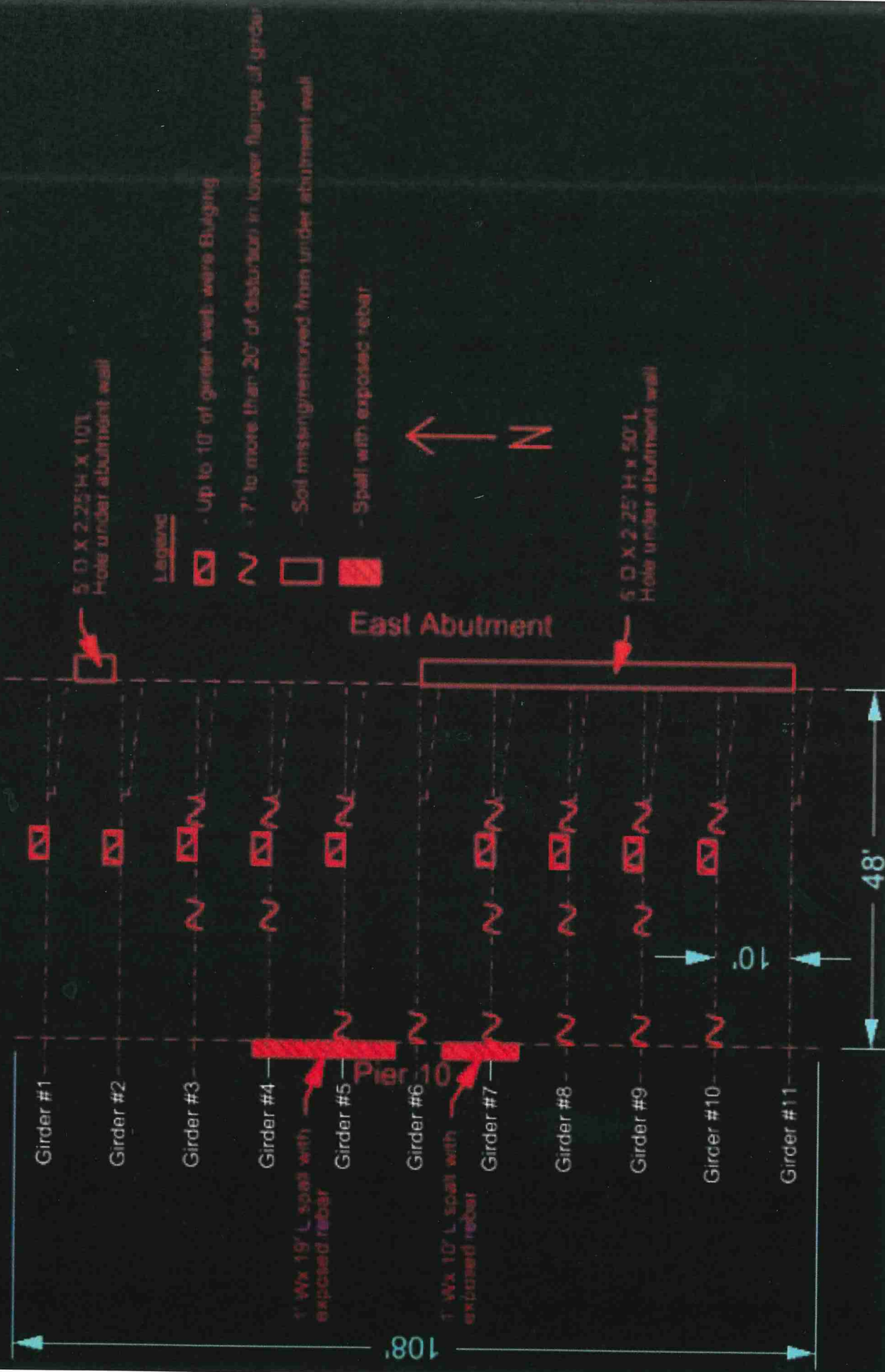


Photo #1

53C1744 SP. COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
113 - Sub-Damage/Deterioration

Apr 19, 2021 [AAAC]



Photo #1

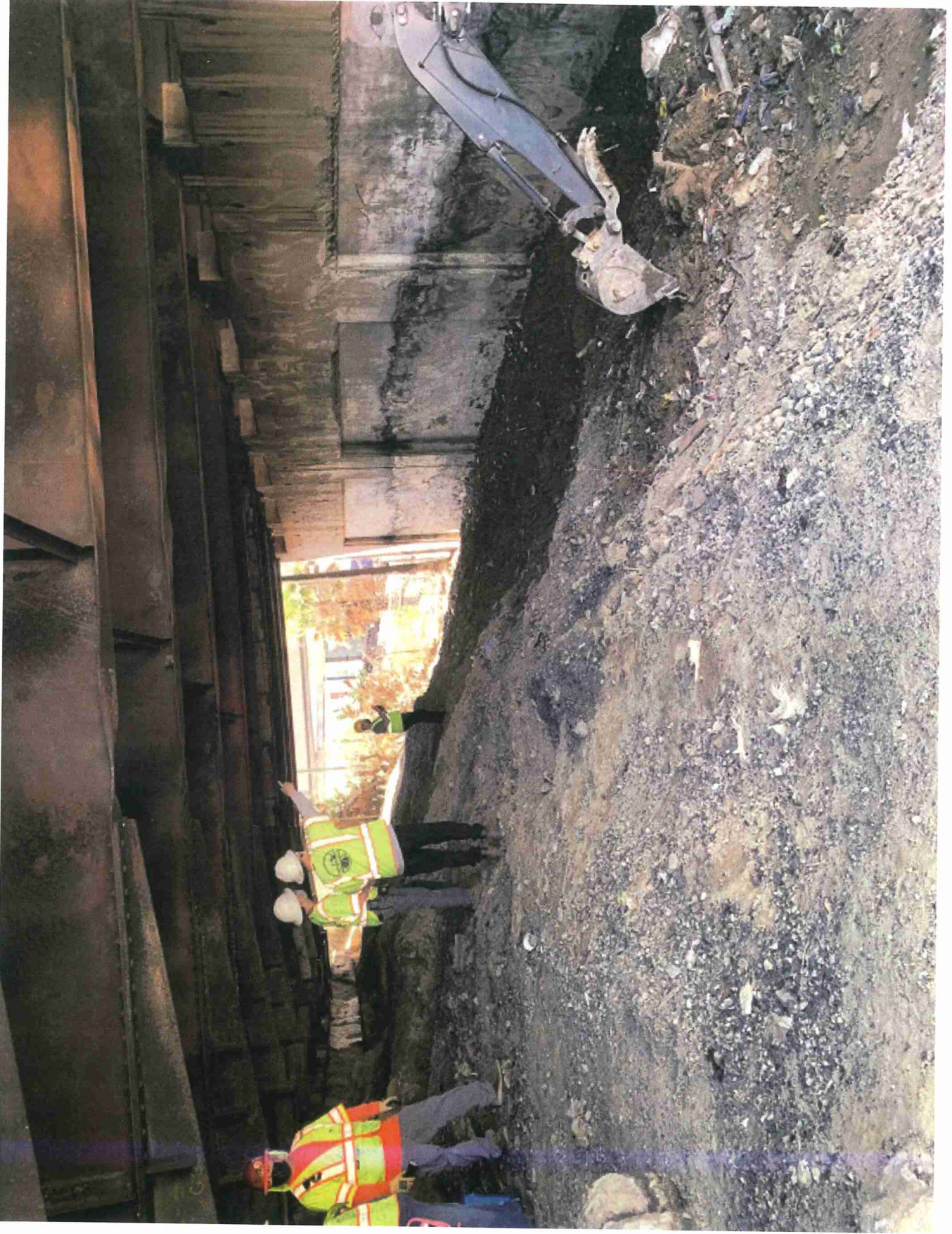


Photo #1

53C1744 SF, COMPTON CR, ALAMEDA 0.3MI W/O SANTA FE AVE
101 - Routine-Elevation View

Jun '26, 2019 [AAAC]



Photo #1

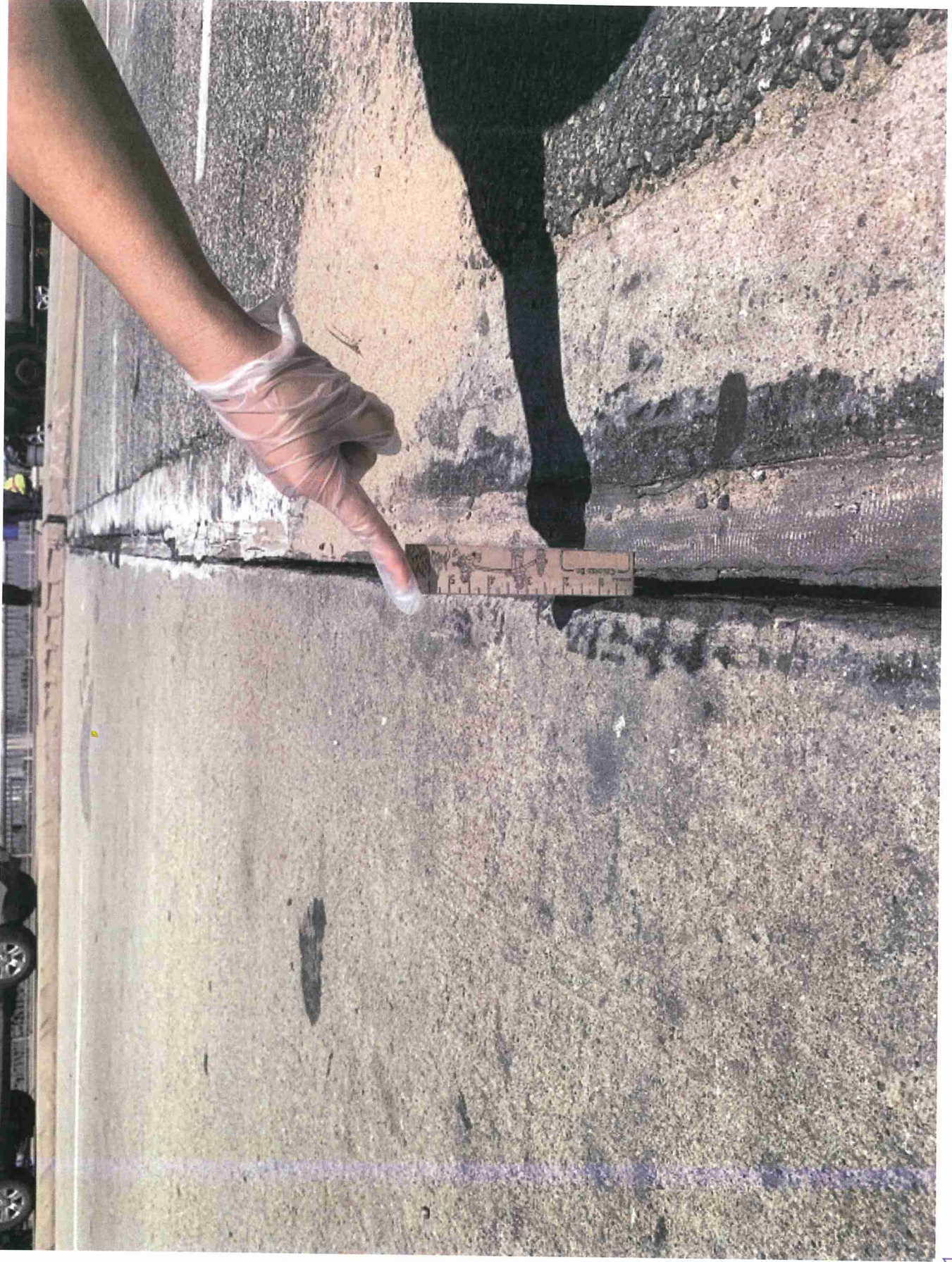


Photo #1

STRUCTURE MAINTENANCE & INVESTIGATIONS RECORD OF CRITICAL FINDINGS

(REV 11/2014)

| | | |
|--|--|---|
| Bridge Name: ARTESIA BLVD OVER OVER COMPTON CR, ALAMEI | | Owner (State/County/City/Other): CITY OF COMPTON |
| Bridge Number: 53C1744 | Location (Dist-County-Rte-PM): LOS ANGELES COUNTY | |
| Contact Made With (Name): Damion Timmons / Wein Chu | | <input type="checkbox"/> DISTRICT |
| Business Phone: (310) 605-5691 /626-458-7880 | | <input checked="" type="checkbox"/> CITY |
| Email Address: dtimmons@comptoncity.org / WCHU@DPW.LACOUNTY.GOV | | <input checked="" type="checkbox"/> COUNTY |
| Date of Contact: 12-19-2020 | | <input type="checkbox"/> OTHER _____ |

PROBLEM (Be Brief) :
In 12-18-2020 fire damage covered whole area under span 10. Fire damaged and distorted all the girders except girder 11 (South end) in span 10, between pier 10 and east abutment. And it caused the south half of bridge deck bulked up to 2.5 inches.

ACTION RECOMMENDED (By SM&I) :
CLOSE EAST HALF OF THE BRIDGE, FROM SPAN 6 TO SPAN 10.
CITY TO REPAIR FIRE DAMAGED GIRDERS OR REPLACE THE FIRE DAMAGED SPAN.

ACTION TAKEN (By Bridge Owner) :
EAST HALF OF THE BRIDGE IS CLOSED TO VEHICULAR TRAFFIC.

Permanent Resolution, No Follow-Up Required Temporary Resolution, Follow-Up Required: every month(s)

OPERATIONAL RESTRICTIONS: NO YES (Describe)
NO VEHICULAR TRAFFIC ALLOW ON EAST HALF OF THE BRIDGE.

| | | |
|----------------|----------------------------|------------------|
| NAME: WEIN CHU | SIGNATURE: <i>Wein Chu</i> | DATE: 06/27/2022 |
|----------------|----------------------------|------------------|

| | | |
|---|-----------------------------|------------------|
| SENIOR ASSIGNED TO FOLLOW UP, if different than above | SIGNATURE: <i>Shaoli Xu</i> | DATE: 07/13/2022 |
|---|-----------------------------|------------------|

FOLLOW-UP ACTION / INSPECTION:

Permanent Resolution, Close Action Document

| | | |
|----------------|----------------------------|------------------|
| NAME: WEIN CHU | SIGNATURE: <i>Wein Chu</i> | DATE: 06/27/2022 |
|----------------|----------------------------|------------------|

| ROUTING: | SIGNATURE: | FOLLOW-UP SIGNATURE (if required) : |
|---------------------------|------------------------------|-------------------------------------|
| 1. SUPERVISING SENIOR | <i>Gedem Wewrade</i> | |
| 2. OFFICE CHIEF | <i>[Signature]</i> 9/21/2022 | |
| 3. DEPUTY DIVISION CHIEF | <i>[Signature]</i> | |
| 4. ADMINISTRATIVE SUPPORT | <i>[Signature]</i> | |

CC: FHWA (CA Division Structures Engineer)
DLAE (for local agency bridges only)
Local Agency (for local agency bridges only)
SM&I Information Officer

Br. No. 53C1744 Artesia Blvd in City of Compton Fire Damage



Girder 4- Lower flange and Bay 2 top bracing were distorted



2.5" buckled downward in eastbound roadway portion of span 10



Abutment north half



Abutment south half



Bay 3



Bay 4



Bay 5 – deck soffit



Girder 9

STRUCTURE RATING DATA SHEET

| | | |
|---------------------------|--------------------------|-------------------------|
| BRIDGE NO: | 53C1744 | LA County Br. No : 2446 |
| Facility Carried : | ARTESIA BLVD | |
| Location : | 0.3MI W/O SANTA FE AVE | |
| BRIDGE NAME: | SP/UP,COMPTON CR,ALAMEDA | |

Structural Elements Rated :

Multi-span Steel Plate Girder Superstructure, R/C Deck

DESIGN LOADING

| | Rating Factor | Metric Tons | CRITICAL LOCATION | | | |
|----------------|---------------|-------------|-------------------|-----------------|------------------------|---------------|
| | | | Structure | Control Element | Load Action | Location |
| HS20 Inventory | 0.00 | 0.0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| HS20 Operating | 0.00 | 0.0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |

LEGAL RATING

| | Rating Factor | Posting US Tons | Structure | Control Element | Load Action | Location |
|---------------------|---------------|-----------------|----------------|-----------------|------------------------|---------------|
| Type 3 (25T) | 0.00 | 0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| Type 3S2 (36T) | 0.00 | 0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| Type 3-3 (40T) | 0.00 | 0 | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| NRL (40T) | | | | | | |
| SHV - SU4 (27T) | | | | | | |
| SHV - SU5 (31T) | | | | | | |
| SHV - SU6 (34.75T) | | | | | | |
| SHV - SU7 (38.75T) | | | | | | |
| FAST - EV2 (28.75T) | | | | | | |
| FAST - EV3 (43T) | | | | | | |

PERMIT RATING

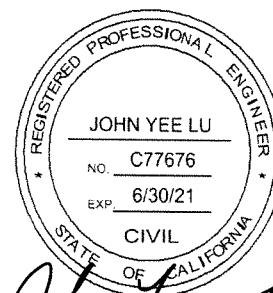
| | Rating Factor | Permit Rating | Structure | Control Element | Load Action | Location |
|-----------|---------------|---------------|----------------|-----------------|------------------------|---------------|
| P5 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| P7 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| P9 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| P11 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |
| P13 Split | 0.00 | X | Superstructure | Girder | Design Flexure - Steel | Span 10 - 40% |

RELEVANT LOAD RATING INFORMATION

Notes:

Load rating calculations were completed by John Lu on 06/09/2021. Bridge Inspection Report dated 06/22/2019 and field inspection of the fire damage on 04/19/2021 were used to verify the physical conditions assumed in the above referenced load rating calculations. The rating assumption is that the fire (incident occurred on 12/18/2020) at Span 10 had reached 750 degrees C (1,380 degrees F) from assessment of the conditions of the damaged bridge. The concrete strength loss is estimated at 60%, reinforcing steel yield strength loss is estimated at 10% and plate girder yield strength loss is estimated at 40%. The shear connector and bottom flange of steel girders are assumed to be ineffective due to the excessive damage.

| | | |
|-------------------------|---|----------------|
| Overlay Used in Rating: | None | |
| Rating Type: | Calculated | |
| Rating Date: | 06/09/2021 | |
| Rating Method: | 1 (LF Load Factor) | Inventory (65) |
| | 1 (LF Load Factor) | Operating (63) |
| Control Rating By: | John Lu | |
| Rating Checked By: | Nhan Nguyen | |
| Analysis Tool: | BrR 6.7.0 AASHTO | |
| Rating File Location: | LA County Department of Public Works, Design Division | |
| Summary Prepared By: | John Lu | |
| Summary Date: | 06/09/2021 | |



Stamped by: John Lu 06/09/2021

Rating Results Summary Report

Name: SP/UP, COMPTON CR, ALAMEDA
 Struct-Def: Bridge Span Ten (Fire Damage 2020)

Bridge ID: 53C1744
 Member: G2

NBI: 53C1744
 Member Alt: Girder 56-5 (Interior Girder)

| Live Load | Live Load Type | Rating Method | Rating Level | Load Rating (Ton) | Rating Factor | Location (ft) | Location Span-(%) | Limit State | Impact | Lane |
|-----------|----------------|---------------|--------------|-------------------|---------------|---------------|-------------------|------------------------|--------------|--------------|
| HS 20-44 | Lane | LFD | Inventory | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| HS 20-44 | Lane | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| HS 20-44 | Axle Load | LFD | Inventory | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| HS 20-44 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type 3 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type 3S2 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type 3-3 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P05 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P07 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P09 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P11 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| P13 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| NRL | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| SU4 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| SU5 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| SU6 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| SU7 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type EV2 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |
| Type EV3 | Axle Load | LFD | Operating | 0.00 | 0.000 | 18.92 | - (40.0) | Design Flexure - Steel | As Requested | As Requested |

Note:

The rating assumption is that the fire (incident occurred on 12/18/2020) at Span 10 had reached 750 degrees C (1,380 degrees F) from assessment of the conditions of the damaged bridge. The concrete strength loss is estimated at 60%, reinforcing steel yield strength loss is estimated at 10% and plate girder yield strength loss is estimated at 40%. The shear connector and bottom flange of steel girders are assumed to be ineffective due to the excessive damage.



06/09/2021

STRUCTURE MAINTENANCE & INVESTIGATIONS RECORD OF CRITICAL FINDINGS

(REV 11/2014)

| | | |
|---|---|---|
| Bridge Name: ARTESIA BLVD OVER OVER COMPTON CR, ALAMEDA | | Owner (State/County/City/Other): CITY OF COMPTON |
| Bridge Number: 53C1744 | Location (Dist-County-Rte-PM): LOS ANGELES COUNTY | |
| Contact Made With (Name): Damion Timmons | | <input type="checkbox"/> DISTRICT <input checked="" type="checkbox"/> CITY <input checked="" type="checkbox"/> COUNTY <input type="checkbox"/> OTHER _____ |
| Business Phone: (310) 605-5691 | | |
| Email Address: dtimmons@comptoncity.org | | |
| Date of Contact: 08-04-2022 | | |

PROBLEM (Be Brief) :
 Utility box cover in sidewalk located above span 7, near traffic light pole was missing. Sidewalk settlement at the N/E & S/E bridge approaches. Those are tripping hazards. Utility box cover on the traffic light pole was missing. Missing vertical rails at the bridge sidewalk railing panel located at N/W approach. There is a large gap after utility post was removed between north handrail panels. See attached photos for reference.

ACTION RECOMMENDED (By SM&I) :
 Add addition k-rails to channelize existing east bound traffic to Alameda St Ramp together with additional warning signs. Fix the gap between north handrail panels. Repair approach sidewalk settlements. Replace the missing utility box cover on sidewalk and traffic light post. Install/replace missing balusters in north sidewalk pedestrian handrail.

ACTION TAKEN (By Bridge Owner) :
 K-Rail was moved back to original position. New panel installed on damaged utility (S/E).

Permanent Resolution, No Follow-Up Required
 Temporary Resolution, Follow-Up Required: every month(s)

OPERATIONAL RESTRICTIONS:
 NO
 YES (Describe)
NO VEHICULAR TRAFFIC ALLOW ON EAST HALF OF THE BRIDGE.

| | | |
|-----------------------|---------------------------------|-------------------------|
| NAME: WEIN CHU | SIGNATURE: <i>Wein Chun Chu</i> | DATE: 10/01/2022 |
|-----------------------|---------------------------------|-------------------------|

| | | |
|---|-----------------------------|-------------------------|
| SENIOR ASSIGNED TO FOLLOW UP, if different than above | | |
| NAME: Shaoli Xu | SIGNATURE: <i>Shaoli Xu</i> | DATE: 10/01/2022 |

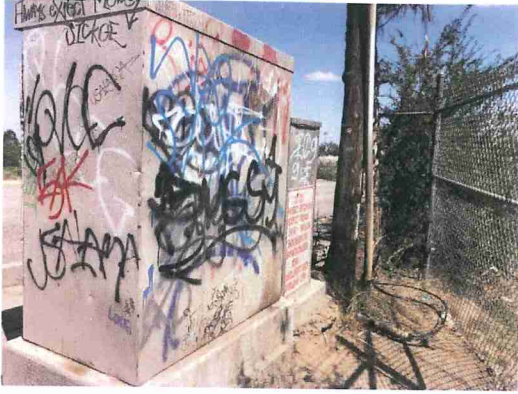
FOLLOW-UP ACTION / INSPECTION:

Permanent Resolution, Close Action Document

| | | |
|-------|------------|-------|
| NAME: | SIGNATURE: | DATE: |
|-------|------------|-------|

| ROUTING: | SIGNATURE: | FOLLOW-UP SIGNATURE (if required) : |
|---------------------------|---------------------|-------------------------------------|
| 1. SUPERVISING SENIOR | <i>Edem Werrade</i> | |
| 2. OFFICE CHIEF | | |
| 3. DEPUTY DIVISION CHIEF | | |
| 4. ADMINISTRATIVE SUPPORT | | |

CC: FHWA (CA Division Structures Engineer)
 DLAE (for local agency bridges only)
 Local Agency (for local agency bridges only)
 SM&I Information Officer



P1_ New panel was installed on damaged utility (Right- on smaller utility box) _ Done



P2_K-Rail was moved back to original position _ Done



P3_Missing baluster in handrail _ Need repair



P4a_Missing utility box cover in sidewalk _ Need repair



P4b_Missing utility boxes covers in light post and sidewalk (pic from August)



P5_Approach sidewalk settlement at N/E of bridge



Gap between handrail after utility post was removed _ Need repair (Newfound)