

# Bridge Inspection Report

**A5096**  
**I 540-SEC 1, SB LN**  
**over**  
**Boston Street-Sebastian**



**Inspection Date:**

**Inspected By:**

**Inspection Type(s):**

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Inspector:

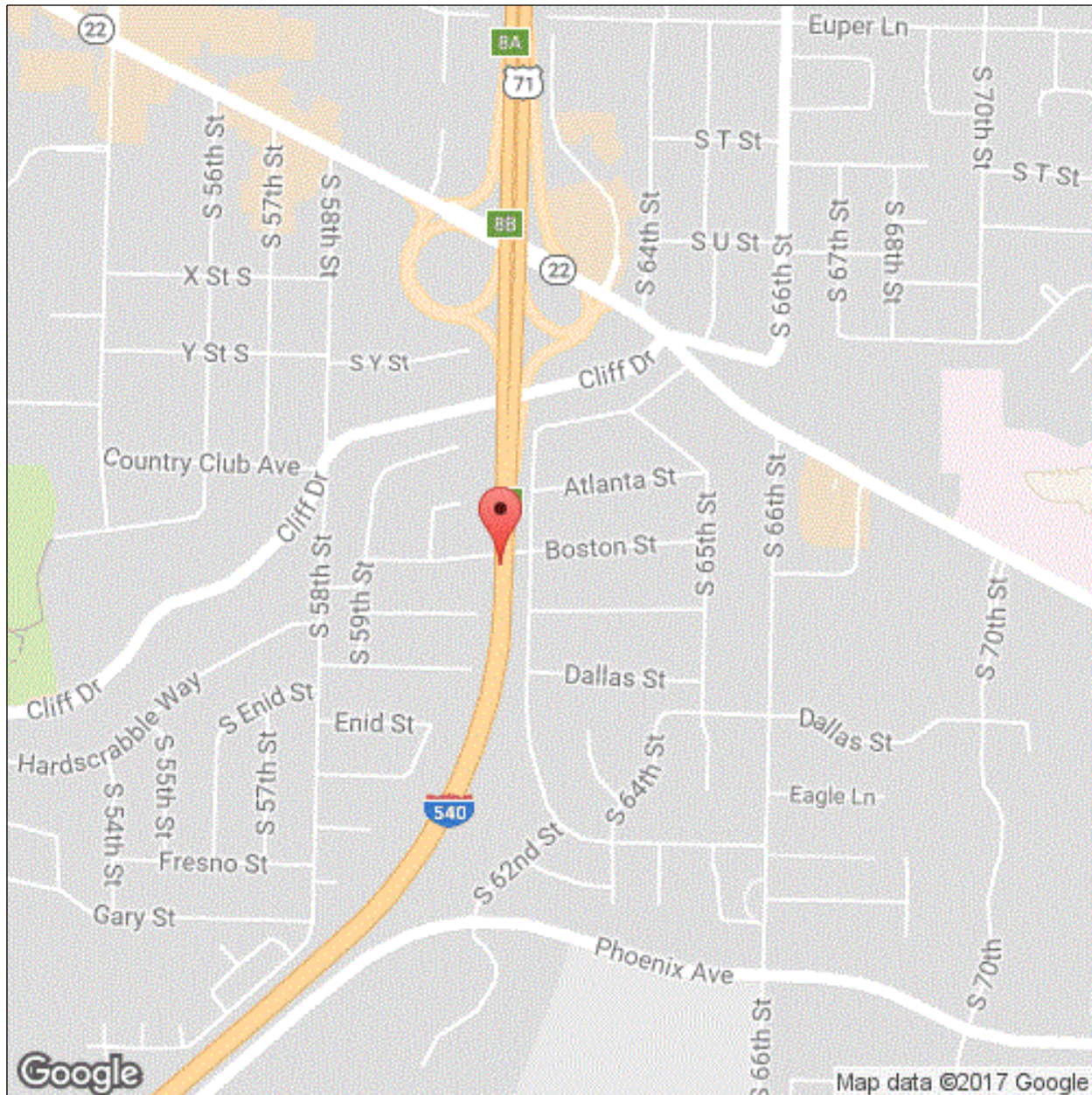
Structure Number: A5096

Inspection Date:

Facility Carried: I 540-SEC 1, SB LN

## Bridge Inspection Report

### Location Map



Latitude: 35.35447

Longitude: -94.36521



Inspector:

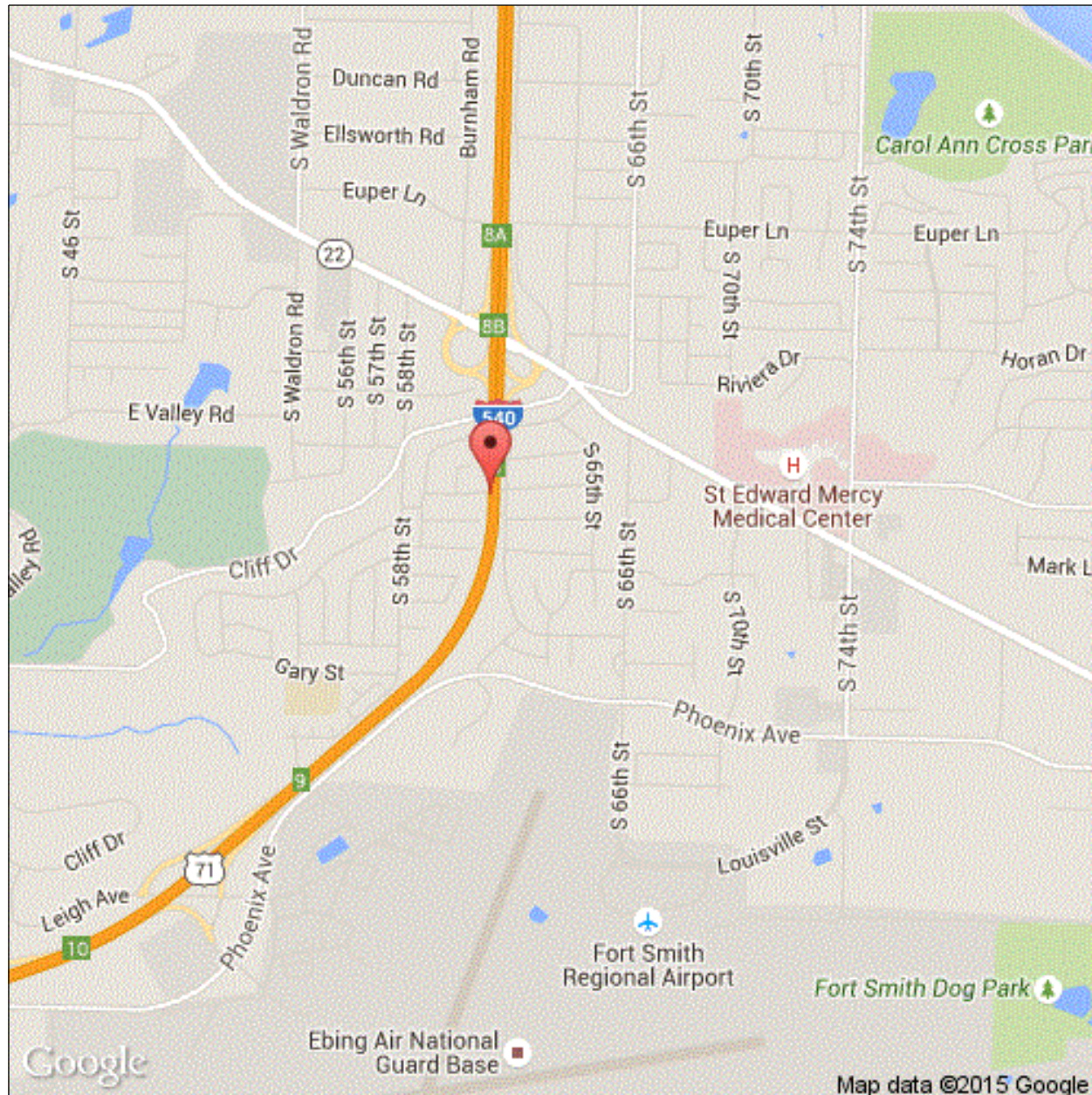
Structure Number: A5096

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## Bridge Inspection Report

### Location Map



Latitude: 35.35447

Longitude: -94.36521



Structure Number: A5096

Facility Carried: I 540-SEC 1, SB LN

Inspector:

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## Bridge Inspection Report

### Executive Summary

07/31/2017 - JCJ & JML - Minimum vertical underclearances are actual field measured this Inspection.

Inspector:

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## Bridge Inspection Report

## National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	07/31/2017
(8) STRUCTURE NUMBER	A5096	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 1 1 540 4	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	04 (3) COUNTY CODE 131	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	24060	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	Boston Street-Sebastian	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	I 540-SEC 1, SB LN		
(9) LOCATION	0.22 MI S JCT SH 22		
(11) MILEPOINT 6.410	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000540010 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.35447	(17) LONGITUDE -94.36521		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	6
A) KIND OF MATERIAL/DESIGN: 3 - Steel		(59) SUPERSTRUCTURE 7	(60) SUBSTRUCTURE 5
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder		(61) CHANNEL & CHANNEL PROTECTION	N (62) CULVERT N
(44) STRUCTURE TYPE, APPROACH SPANS			
A) KIND OF MATERIAL/DESIGN: 0 - Other			
B) TYPE OF DESIGN/CONSTR: 00 - Other			
(45) NUMBER OF SPANS IN MAIN 3	(46) NUMBER OF APPROACH 0		
(107) DECK STRUCTURE TYPE 1	(108A) WEARING SURFACE 1		
(108B) DECK MEMBRANE 0	(108C) DECK PROTECTION 0		
AGE OF SERVICE		LOAD RATING AND POSTING	
(27) YEAR BUILT 1968	(106) YEAR RECONSTRUCTED 1988	(31) DESIGN LOAD	5
(42) TYPE OF SERVICE ON 1 UNDER 1		(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 02 UNDER 02		(64) OPERATING RATING	60.0
(29) AVERAGE DAILY TRAFFIC 64134	(19) BYPASS DETOUR LENGTH 6	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2013		(66) INVENTORY RATING	36.0
(109) AVERAGE DAILY TRUCK TRAFFIC 1		(70) BRIDGE POSTING	5
		(41) STRUCTURE OPEN/POSTED/CLOSED	A
GEOMETRIC DATA		APPRAISAL	
(48) LENGTH OF MAX SPAN (ft.) 55	(49) STRUCTURE LENGTH (ft.) 153	(67) STRUCTURAL EVALUATION	5
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 0 RIGHT 0		(68) DECK GEOMETRY	7
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) 41.3		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	4
(52) DECK WIDTH, OUT-TO-OUT (ft.) 44.3		(71) WATERWAY ADEQUACY	N
(32) APPROACH ROADWAY WIDTH (ft.) 42.0		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 7	(36) TRAFFIC SAFETY FEATURE	
(35) STRUCTURE FLARED 0	(10) INV RTE, MIN VERT CLEAR (ft.) 24.91	36A) BRIDGE RAILINGS:	1
(47) TOTAL HORIZONTAL CLEARANCE (ft.) 42.7		36B) TRANSITIONS:	1
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	1
(54) VERTICAL UNDER CLEARANCE (ft.) H 24.91		36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) H 7.5		(113) SCOUR CRITICAL BRIDGES	N
(56) MIN LATERAL UNDER CLEARANCE (ft.) 9.5		SUFFICIENCY RATING	0 STATUS 72.0
PROPOSED IMPROVEMENTS		CLASSIFICATION	
(75A) TYPE OF WORK PROPOSED	(75B) WORK DONE BY	(112) NBIS BRIDGE LENGTH	Y
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.) 0		(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1
(94) BRIDGE IMPROVEMENT COST (\$)	0	(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	11
(95) ROADWAY IMPROVEMENT COST (\$)	0	(100) STRAHNET HIGHWAY DESIGNATION	1
(96) TOTAL PROJECT COST	0	(101) PARALLEL STRUCTURE DESIGNATION	L
(97) YEAR OF IMPROVEMENT COST ESTIMATE		(102) DIRECTION OF TRAFFIC	1
(114) FUTURE ADT 36242	(115) YEAR OF FUTURE ADT 2028	(103) TEMP STRUCTURE	
		(105) FEDERAL LANDS HIGHWAYS	0
		(110) DESIGNATED NATIONAL NETWORK	1
		(20) TOLL	3
		(21) MAINTENANCE RESPONSIBILITY	01
		(22) OWNER	01
		(37) HISTORICAL	5
		NAVIGATION DATA	
		(38) NAVIGATION CONTROL	N
		(111) PIER OR ABUTMENT PROTECTION	1
		(39) NAV VERT CLEARANCE (ft.)	0
		(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0
		(40) NAV HORIZONTAL CLEARANCE (ft.)	0

Inspector:

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Facility Carried: I 540-SEC 1, SB LN

Bridge Inspection Report

National Bridge Inventory

UNDER RECORD 2

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-SEC 1, SB LN
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	A5096
(4) PLACE CODE	24060	(9) LOCATION	0.22 MI S JCT SH 22
(5) INV. ROUTE (ON/UNDER)	2 5 1 6160 0	(11) MILEPOINT	3.369 (12) BASE HIGHWAY NETWORK 0
(6) FEATURES INTERSECTED	Boston Street	(13A) LRS INVENTORY ROUTE	0000000000 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	35.3545277777778 (17) LONGITUDE -94.3652222222222

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE, MAIN A) KIND OF MATERIAL/DESIGN: 3 - Steel  
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder

AGE OF SERVICE

(19) BYPASS DETOUR LENGTH	2	(30) YEAR OF AVERAGE DAILY TRAFFIC	1983
(27) YEAR BUILT	1968	(42) TYPE OF SERVICE	ON 1 UNDER 1
(28) LANES	ON 02 UNDER 02	(109) AVERAGE DAILY TRUCK TRAFFIC	1
(29) AVERAGE DAILY TRAFFIC	1879		

GEOMETRIC DATA

(10) INV RTE, MIN VERT CLEARANCE	24.91	(48) LENGTH OF MAXIMUM SPAN	55 (49) STRUCTURE LENGTH 153
(47) TOTAL HORIZONTAL CLEARANCE	39.0		

CLASSIFICATION

(20) TOLL	3	(102) DIRECTION OF TRAFFIC	2
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	19	(103) TEMP STRUCTURE	
(100) STRAHNET HIGHWAY DESIGNATION	0	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	0
(101) PARALLEL STRUCTURE DESIGNATION	L	(110) DESIGNATED NATIONAL NETWORK	0



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## Bridge Inspection Report

## Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	6350	sq. ft.	2732	3618	0	0
	07/31/2017 - JCJ & JML - The deck has sealable longitudinal, transverse, and map cracking on the driving surface of the deck. Transverse cracks with light efflorescence are visible from the undersurface of the overhang. Transverse cracks appear to correspond with the joints in the parapet walls. There are isolated areas of light abrasion on the driving surface of the deck.						
1130 - Cracking (RC and Other)		378			378		
1190 - Abrasion/Wear (PSC/RC)		3240			3240		
107 - Steel Open Girder/Beam	1- Ben.	1071	ft.	1071			
	07/31/2017 - JCJ & JML - The paint system has minor rust beginning to show through in isolated areas and at the ends of the beams where water leaks through the deck joints.						
515 - Steel Protective Coating		8777	sq. ft.	8717	60	0	0
3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		60			60		
205 - Reinforced Concrete Column	1- Ben.	8	each	0	0	8	0
	07/31/2017 - JCJ & JML - Bent # 2 columns have numerous grouted and epoxy repairs. Bent # 2, Column # 1 has medium scale visible on the exterior face of column. Bent # 2, Column # 2 has a 2' X 3' spall with exposed reinforcing steel on the Span # 2 side of column located approximately 10' above the ground. Exposed reinforcing steel appears to have active corrosion with up to approximately 1/8" section loss at this inspection.  -Bent # 3 columns have numerous grouted and epoxy repairs. Bent # 3, Column # 1 has heavy scale on the exterior face of column. Bent # 3, Column # 1 has two vertical cracks approximately 3' long located below the cap in the Span # 3 side of column and one full height crack in the Span # 2 side of column.						
1090 - Exposed Rebar		2				2	
1130 - Cracking (RC and Other)		6				6	
215 - Reinforced Concrete Abutment	1- Ben.	520	ft.	459	61	0	0
	07/31/2017 - JCJ & JML - Abutments have stains where the deck joint seals leak water on the abutment caps. There are vertical hairline cracks at variable spacing in the stems of the abutments. Bent # 1 abutment has small shallow spalls with exposed reinforcing steel at the base of the back wall juncture with the cap. There are transverse cracks in the top of the backwalls visible from the driving surface of the deck.						
1080 - Delamination/Spall/Patched Area		5			5		
1090 - Exposed Rebar		3			3		
1130 - Cracking (RC and Other)		53			53		

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## Bridge Inspection Report

## Element Inspection

234 - Reinforced Concrete Pier Cap	1- Ben.	80	ft.	30	0	50	0
<p>07/31/2017 - JCJ &amp; JML - Bent caps have up to medium scale with areas of concrete deterioration where water leaks through the deck joint seals onto the bent caps.</p> <p>-Bent # 2 cap, Span # 1 side has a 15' long horizontal crack located approximately 4" below the top of cap. Bent # 2 cap, Span # 2 side has a 25' long crack located approximately 6" below the top of cap. There is a 16" spall with exposed reinforcing steel in the top of cap located above column1.</p> <p>-Bent # 3 cap, Span # 2 side of cap has a 3' long horizontal crack under Bay # 2 located approximately 4" below the top of cap. Bent # 3 cap, Span # 3 side has a 4' horizontal crack under Bay # 2 located approximately 4" below the top of cap.</p> <p>-Bent # 3 center cap located over Column # 4 has one 6" spall with exposed reinforcing steel and one 12" spall with exposed reinforcing steel. Exposed reinforcing steel has active corrosion with initial section loss at this inspection.</p>							
1080 - Delamination/Spall/Patched Area		6				6	
1090 - Exposed Rebar		5				5	
1130 - Cracking (RC and Other)		39				39	
302 - Compression Joint Seal	1- Ben.	170	ft.	0	35	87	48
<p>07/31/2017 - JCJ &amp; JML - Deck joint seals are deteriorated and partially missing over the intermediate bent caps. Deck joint seals over the abutments are torn and deteriorated. No apparent repairs to the deck joint seals since the last inspection.</p>							
2310 - Leakage		24			24		
2330 - Seal Damage		146			11	87	48
311 - Movable Bearing	1- Ben.	14	each	0	14	0	0
<p>07/27/2015 - EJW &amp; RWF - Minor corrosion with light pack rust at the masonry plates at Bents # 1 and 4, Beam # 1. The paint system on the bearings is beginning to fail with rust showing through the paint in numerous locations.</p> <p>07/31/2017 - JCJ &amp; JML - There are no apparent changes since the last inspection.</p>							
1000 - Corrosion		14			14		
313 - Fixed Bearing	1- Ben.	28	each	0	28	0	0
<p>07/27/2015 - EJW &amp; RWF - The paint system is beginning to deteriorate in areas with rust showing through the paint in several locations.</p> <p>07/31/2017 - JCJ &amp; JML - There are no apparent changes since the last inspection.</p>							
1000 - Corrosion		28			28		
321 - Reinforced Concrete Approach Slab	1- Ben.	1104	sq. ft.	1079	25	0	0
<p>07/27/2015 - EJW &amp; RWF - The approach slabs have a few minor cracks but no apparent settlement issues at this inspection.</p> <p>07/31/2017 - JCJ &amp; JML - There are no apparent changes since the last inspection.</p>							

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Bridge Inspection Report

Element Inspection

1130 - Cracking (RC and Other)		25			25		
331 - Reinforced Concrete Bridge Railing	1- Ben.	306	ft.	302	4	0	0
	07/31/2017 - JCJ & JML - There are a few isolated vertical hairline cracks in the face of the parapet walls.						
1130 - Cracking (RC and Other)		4			4		



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## Bridge Inspection Report

Pictures

Inspector:

Inspection Date:

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## Bridge Inspection Report

Sketches

Inspector:

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Inspection Date:

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 7/17/2013 12:00:00 AM

Priority: D - Routine

Work Code: Repair

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#### Deficiency Description:

The deck has sealable longitudinal, transverse, and map cracking on the driving surface of the deck. Transverse cracks with light efflorescence are visible from the undersurface of the deck. Transverse cracks appear to correspond with the joints in the parapet walls. There are isolated areas of light abrasion on the driving surface of the deck.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

---

Stage: Assigned



PHOTO 1      Description      Longitudinal crack in Span 3.



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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 7/17/2013 12:00:00 AM

Priority: D - Routine

Work Code: Repair

---

#### Deficiency Description:

Bent # 2 columns have numerous grouted and epoxy repairs. Bent # 2, Column # 1 has medium scale visible on the exterior face of column. Bent # 2, Column # 2 has a 2' X 3" spall with exposed reinforcing steel on the Span # 2 side of column located approximately 10' above the ground. Exposed reinforcing steel appears to have active corrosion with up to approximately 1/8" section loss at this inspection. Bent # 3 columns have numerous grouted and epoxy repairs. Bent # 3, Column # 1 has heavy scale on the exterior face of column. Bent # 3, Column # 1 has two vertical cracks approximately 3' long located below the cap in the Span # 3 side of column and one full height crack in the Span # 2 side of column.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

---

Stage: Assigned



PHOTO 1      Description      Bent 3, Column1 patched area

Stage: Assigned



PHOTO 2      Description      Bent 2, Column 2.

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 7/17/2013 12:00:00 AM

Priority: D - Routine

Work Code: Repair

---

#### Deficiency Description:

Deck joint seals are deteriorated and partially missing over the intermediate bent caps. Deck joint seals over the abutments are torn and deteriorated.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

---

Stage: Assigned



PHOTO 1      Description      Expansion joint seal over Bent 2.

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 7/17/2013 12:00:00 AM

Priority: D - Routine

Work Code: Repair

#### Deficiency Description:

Bent caps have up to medium scale with areas of concrete deterioration where water leaks through the deck joint seals onto the bent caps. Bent # 2 cap, Span # 1 side has a 15' long horizontal crack located approximately 4" below the top of cap. Bent # 2 cap, Span # 2 side has a 25' long crack located approximately 6" below the top of cap. Bent # 3 cap, Span # 2 side of cap has a 3' long horizontal crack under Bay # 2 located approximately 4" below the top of cap. Bent # 3 cap, Span # 3 side has a 4' horizontal crack under Bay # 2 located approximately 4" below the top of cap. Bent # 3 cap has two 6" spalls with exposed reinforcing steel located 3' from the Left end of cap. Bent # 3 center cap located over Column # 4 has one 6" spall with exposed reinforcing steel and one 12" spall with exposed reinforcing steel. Exposed reinforcing steel has active corrosion with initial section loss at this inspection.

#### Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 3, center cap under centerline median of highway.

Stage: Assigned



PHOTO 2 Description Bent 3. Typical



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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 7/17/2013 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code: Repair

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#### Deficiency Description:

Concrete riprap has settlement under Spans # 1 & 3.

#### Work Description:

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Date Repairs Completed:

Maintenance Comments:

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Stage: Monitor



PHOTO 1      Description      Concrete riprap under Span 3.

Stage: Monitor



PHOTO 2      Description      Concrete riprap adjacent to Bent 1.