

Bridge Inspection Report

B3956
I-540 SEC 2 NB LN
over
FLAT ROCK CR. Crawford



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

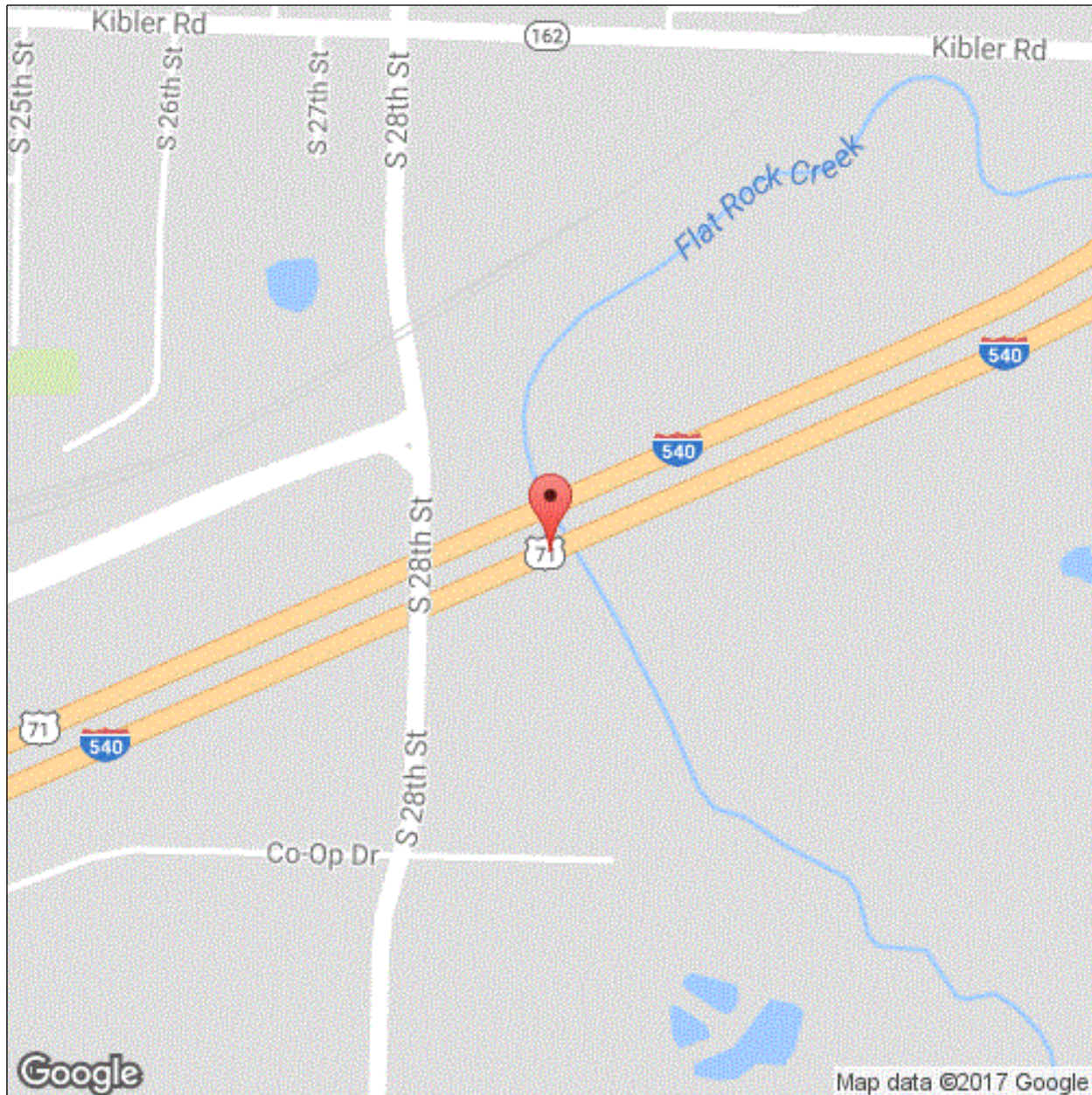
Structure Number: B3956

Inspection Date:

Facility Carried: I-540 SEC 2 NB LN

Bridge Inspection Report

Location Map



Latitude: 35.432251

Longitude: -94.327721

Inspector:

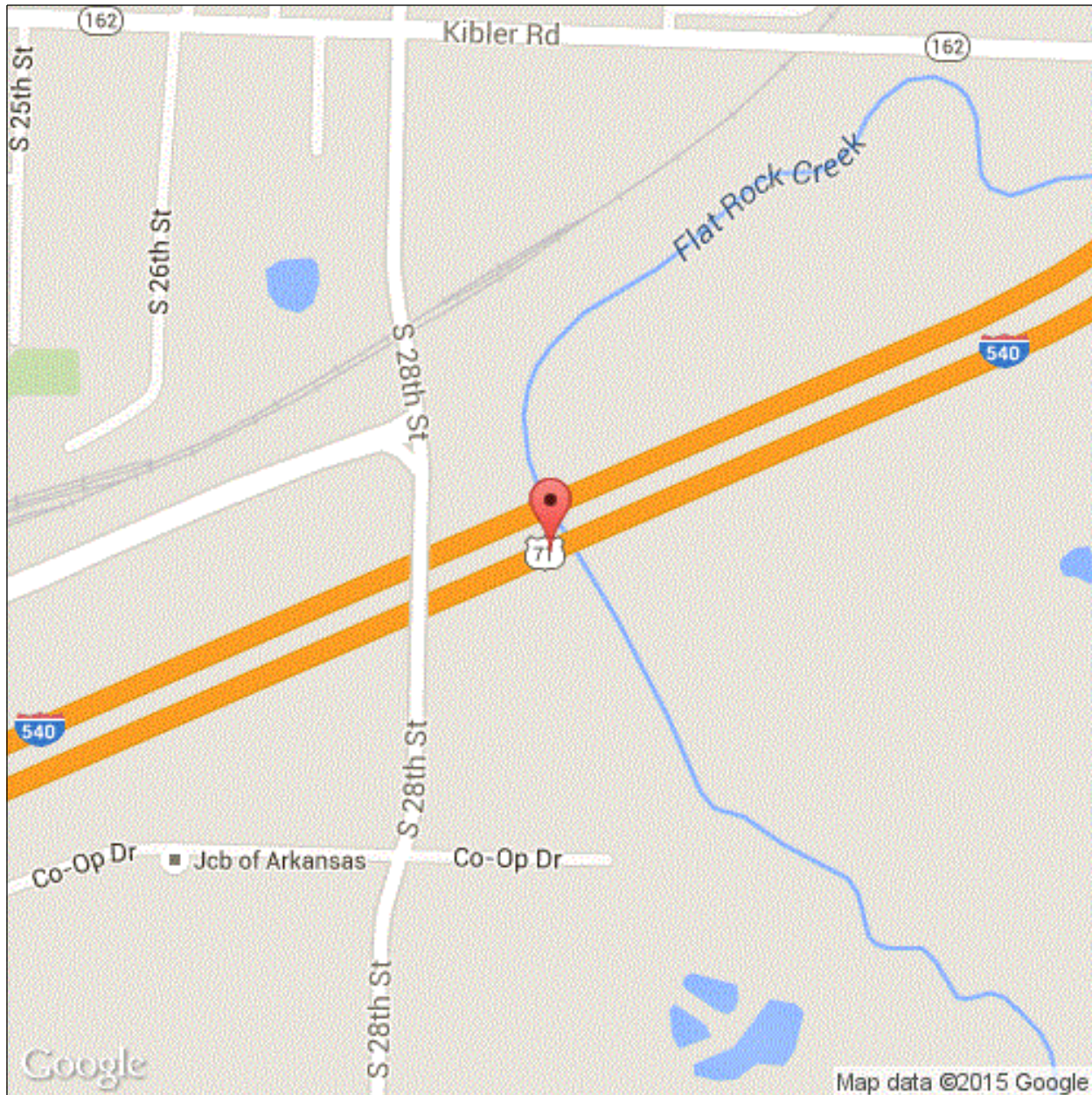
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Location Map



Latitude: 35.432251

Longitude: -94.327721

Inspector:

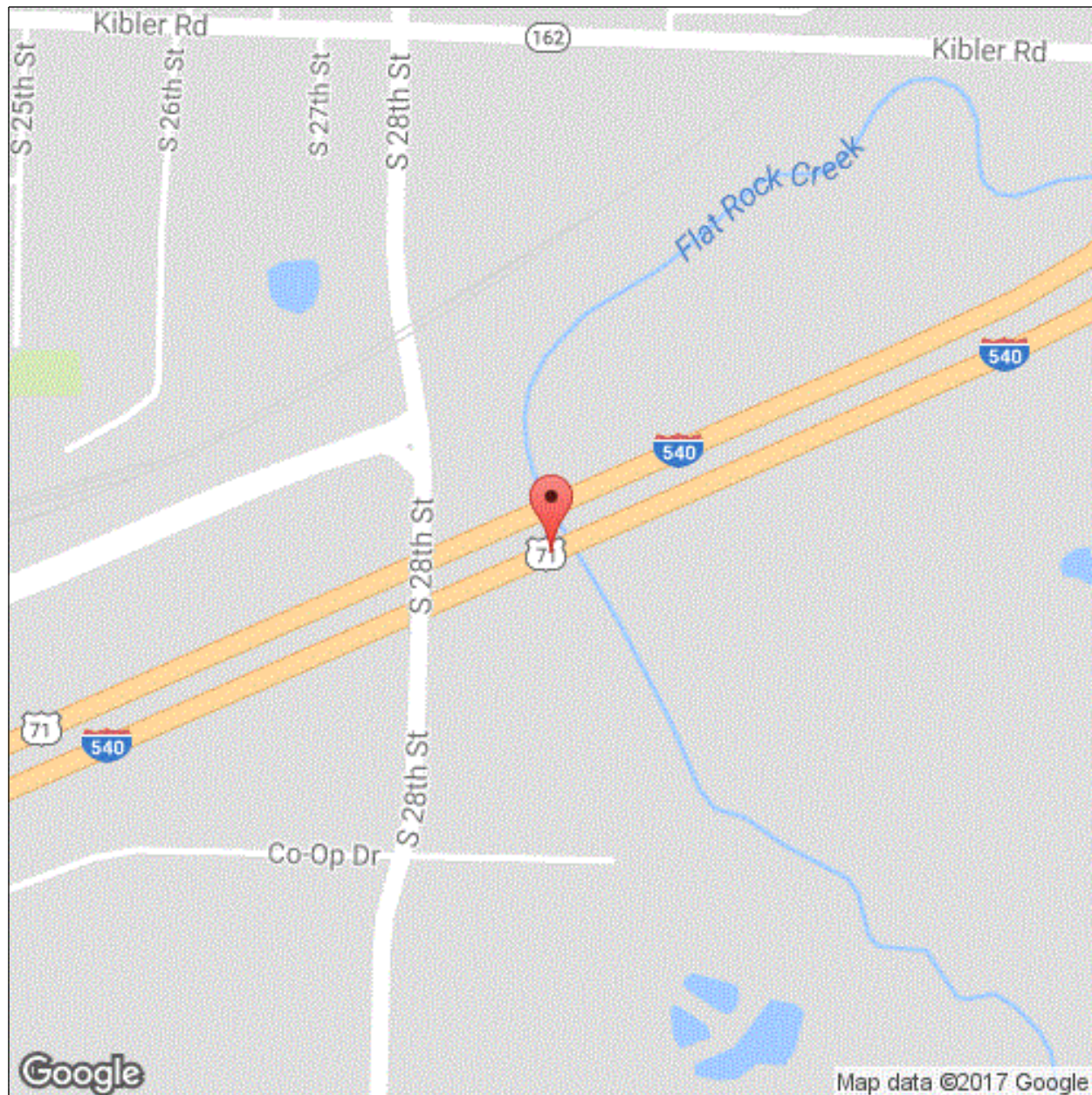
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Location Map



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Bridge Inspection Report

Executive Summary

09/07/2017 JPB & SPC-Routine and Underwater Type 2 Inspections conducted on this date.

Underwater Type 2 Inspection: Footings have cover with no apparent scour problems at this inspection.

09/15/2015 - JCJ & JML - There are no apparent significant changes since the last inspection.

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Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	09/07/2017
(8) STRUCTURE NUMBER	B3956	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 1 1 540 1	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	04 (3) COUNTY CODE 033	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	69380	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	FLAT ROCK CR. Crawford	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	I-540 SEC 2 NB LN		
(9) LOCATION	1.37 MI N SEBASTIAN CO LN		
(11) MILEPOINT 12.900	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000540020 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.432251	(17) LONGITUDE -94.327721		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	5
A) KIND OF MATERIAL/DESIGN: 3 - Steel		(59) SUPERSTRUCTURE 7	(60) SUBSTRUCTURE 6
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder		(61) CHANNEL & CHANNEL PROTECTION 8	(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 0000	(31) DESIGN LOAD	6
(42) TYPE OF SERVICE ON 1 UNDER 5		(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 02 UNDER 00		(64) OPERATING RATING	60.0
(29) AVERAGE DAILY TRAFFIC 45000	(19) BYPASS DETOUR LENGTH 1	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2014		(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.) 40	(49) STRUCTURE LENGTH (ft.) 122	(67) STRUCTURAL EVALUATION	6
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 0.5 RIGHT 0.5		(68) DECK GEOMETRY	6
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) 39.0		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(52) DECK WIDTH, OUT-TO-OUT (ft.) 42.4		(71) WATERWAY ADEQUACY	8
(32) APPROACH ROADWAY WIDTH (ft.) 38.1		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 0	(36) TRAFFIC SAFETY FEATURE	
(35) STRUCTURE FLARED 0	(10) INV RTE, MIN VERT CLEAR (ft.) 99.99	36A) BRIDGE RAILINGS:	1
(47) TOTAL HORIZONTAL CLEARANCE (ft.) 40.0		36B) TRANSITIONS:	0
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	1
(54) VERTICAL UNDER CLEARANCE (ft.) N 0		36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) N 99.9		(113) SCOUR CRITICAL BRIDGES	5
(56) MIN LATERAL UNDER CLEARANCE (ft.) 0		SUFFICIENCY RATING	0 STATUS 92.7
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 28453	(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	0
		(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

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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.	4758	sq. ft.	1532	3226	0	0
	-Maintenance forces have placed epoxy over the shoulders. -Shoulders sound hollow when sounded in areas. -Map cracking in areas. -All 3 Spans have isolated areas of medium scale / abrasion on the driving surface. -Previous repairs made by maintenance forces are showing signs of deterioration. -There are a few isolated spalls with exposed reinforcing steel visible from the undersurface of the overhangs in the deck. -Undersurface of Span 3, Bays 5 & 6 have scaling / leaching along both sides of Beam 6.						
1080 - Delamination/Spall/Patched Area		1020			1020		
1090 - Exposed Rebar		6			6		
1130 - Cracking (RC and Other)		1200			1200		
1190 - Abrasion/Wear (PSC/RC)		1000			1000		
107 - Steel Open Girder/Beam	1- Ben.	854	ft.	851	3	0	0
	-There are a couple of areas with minor superficial rust on the bottom flanges adjacent to the expansion joints.						
1000 - Corrosion		3			3		
515 - Steel Protective Coating		4875	sq. ft.	4872	0	0	3
3440 - Effectiveness (Steel Protective Coatings)		3					3
205 - Reinforced Concrete Column	1- Ben.	4	each	0	4	0	0
	-There is light scale at the base of the columns near the water elevation.						
1080 - Delamination/Spall/Patched Area		1			1		
1190 - Abrasion/Wear (PSC/RC)		3			3		
215 - Reinforced Concrete Abutment	1- Ben.	90	ft.	80	10	0	0
	-One area with exposed reinforcing steel is visible in the Rt side of Bent 1 where reinforcing steel was placed adjacent to the concrete forms during the construction process.						
1080 - Delamination/Spall/Patched Area		2			2		
1090 - Exposed Rebar		3			3		
1130 - Cracking (RC and Other)		5			5		
234 - Reinforced Concrete Pier Cap	1- Ben.	78	ft.	60	17	1	0
	-Bent 2 has a 3' long horizontal crack located approximately 6" below the top of cap under Beam 7. -Bent 2 has a 16" delaminated area in the Rt end of cap. -Bent 3 has 2 baseball size delaminated areas and one baseball size spall with exposed reinforcing steel visible from the undersurface of the cap between the columns. Exposed reinforcing steel has no apparent section loss at this inspection.						
1080 - Delamination/Spall/Patched Area		1				1	

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Element Inspection

1090 - Exposed Rebar		3			3		
1130 - Cracking (RC and Other)		14			14		
302 - Compression Joint Seal	1- Ben.	160	ft.	72	88	0	0
-Compression seals are deteriorated and torn. -Water stains on the substructure indicate joint seals leak.							
2310 - Leakage		20			20		
2320 - Seal Adhesion		20			20		
2330 - Seal Damage		24			24		
2340 - Seal Cracking		24			24		
311 - Movable Bearing	1- Ben.	21	each	15	6	0	0
-Bearings have areas with fretting and isolated areas with minor corrosion.							
1000 - Corrosion		6			6		
313 - Fixed Bearing	1- Ben.	21	each	16	5	0	0
-Bearings have areas with fretting and isolated areas with minor corrosion.							
1000 - Corrosion		5			5		
321 - Reinforced Concrete Approach Slab	1- Ben.	2736	sq. ft.	2736			
-There are no apparent noteworthy deficiencies at this inspection.							
330 - Metal Bridge Railing	1- Ben.	244	ft.	244			
-There are no apparent noteworthy deficiencies at this inspection.							

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Pictures

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Facility Carried: I-540 SEC 2 NB LN

Bridge Inspection Report

Sketches

Inspector:

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Maintenance Needs

Date Reported: 09/07/2017

Priority: D - Routine

Work Code:

Deficiency Description:

Vegetation beginning to grow into the edge of the shoulders on the bridge railing.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Vegetation beginning to grow into the edge of the shoulders on the bridge railing.

Inspector:

Structure Number: B3956

Inspection Date:

Facility Carried: I-540 SEC 2 NB LN

Bridge Inspection Report

Maintenance Needs

Date Reported: 11/4/2011 12:00:00 AM

Priority: D - Routine

Work Code: Replace

Deficiency Description:

Deck Joint Seals -
Compression seals are deteriorated and torn.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Compression seals are deteriorated and torn.

Stage: Assigned



PHOTO 2 Description Compression seals are deteriorated and torn.

Inspector:

Structure Number: B3956

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 11/4/2011 12:00:00 AM

Priority: D - Routine

Work Code: Repair

Deficiency Description:

Bearings -

Some Bearings have fine metal powder between the masonry plates and the sole plates indicating excessive movement during traffic impacts. Visible movement in the bearing at Bent 1, Beam 3 during traffic impact at this inspection. Bent 4, Beam 7 bearing has approximately 1/8" of pack rust.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1	Description	Some Bearings have fine metal powder between the masonry plates and the sole plates indicating excessive movement during traffic impacts. Visible movement in the bearing at Bent 1, Beam 3 during traffic impact at this inspection.
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Maintenance Needs

Date Reported: 9/26/2013 12:00:00 AM

Priority: D - Routine

Work Code: Repair

Deficiency Description:

Bent 2 cap -

The Rt side of Bent 2 cap has horizontal cracking approximately 6" below the top of the cap on the Span 1 and Span 2 sides. The Span 2 side has a diagonal crack that propagates from the horizontal crack.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description The Rt side of Bent 2 cap has horizontal cracking approximately 6" below the top of the cap on the Span 1 and Span 2 sides.

Stage: Assigned



PHOTO 2 Description Bent 2 has a 16" delaminated area in the Rt end of cap.

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Maintenance Needs

Date Reported: 9/26/2013 12:00:00 AM

Priority: D - Routine

Work Code: Repair

Deficiency Description:

Deck -

The driving surface of the deck has spalling with delaminated areas in the right lane and gutter.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description The driving surface of the deck has spalling with delaminated areas in the right lane and gutter.