

Bridge Inspection Report

B3957
I 540 NB-Crawford
over
State Highway 162



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

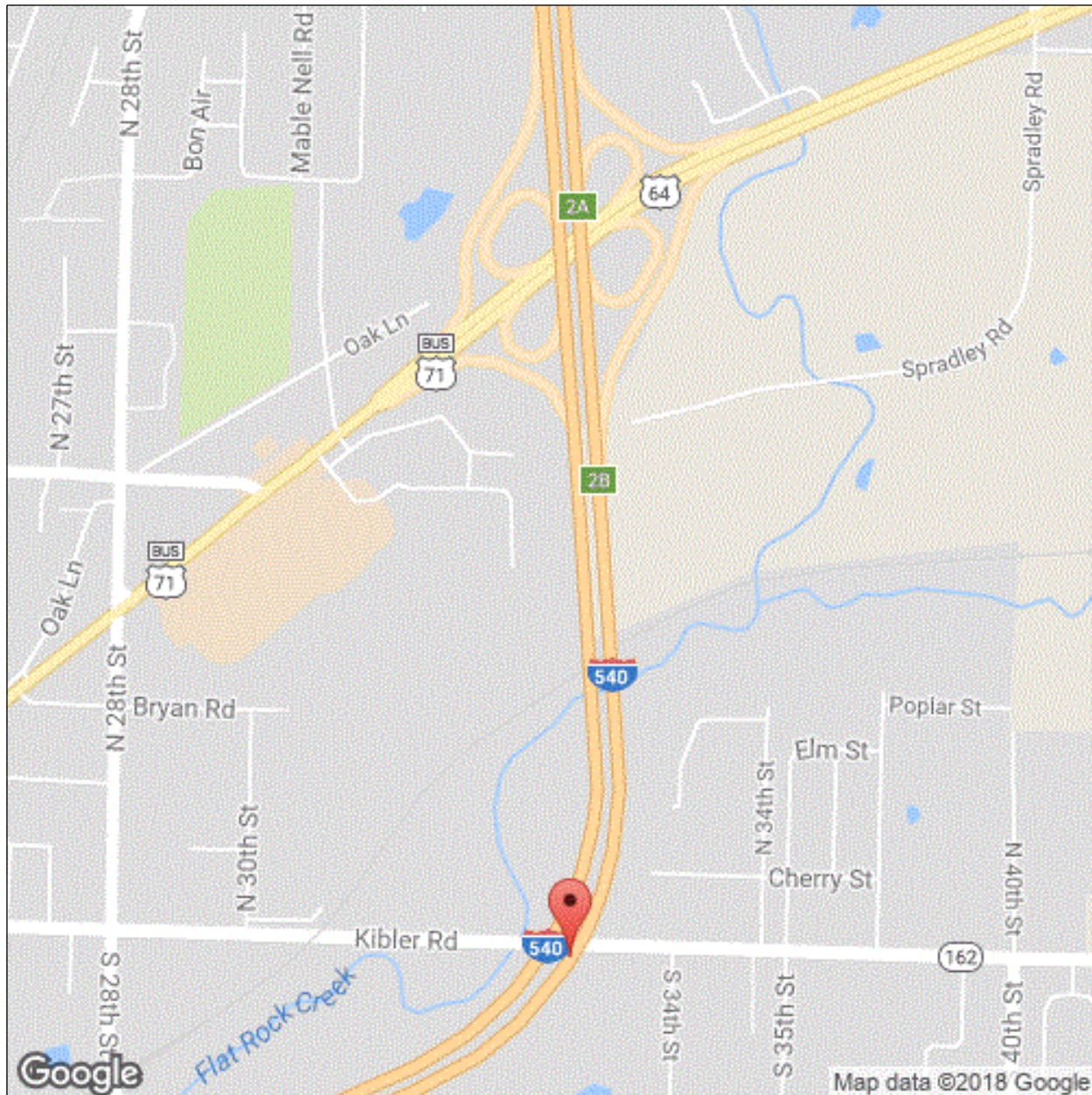
Structure Number: B3957

Inspection Date:

Facility Carried: I 540 NB-Crawford

Bridge Inspection Report

Location Map



Latitude: 35.435986887800304

Longitude: -94.32014827662044

Inspector:

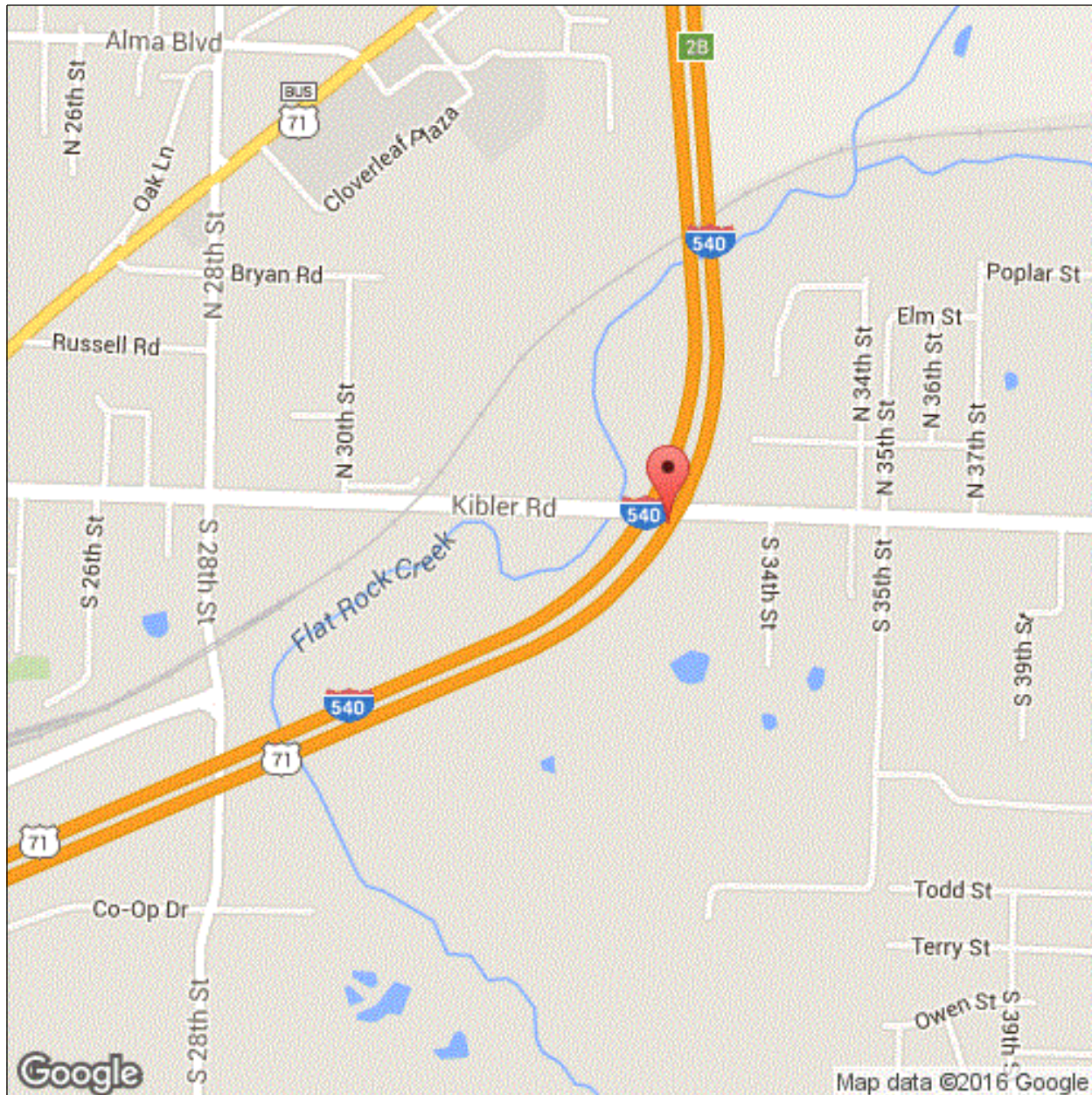
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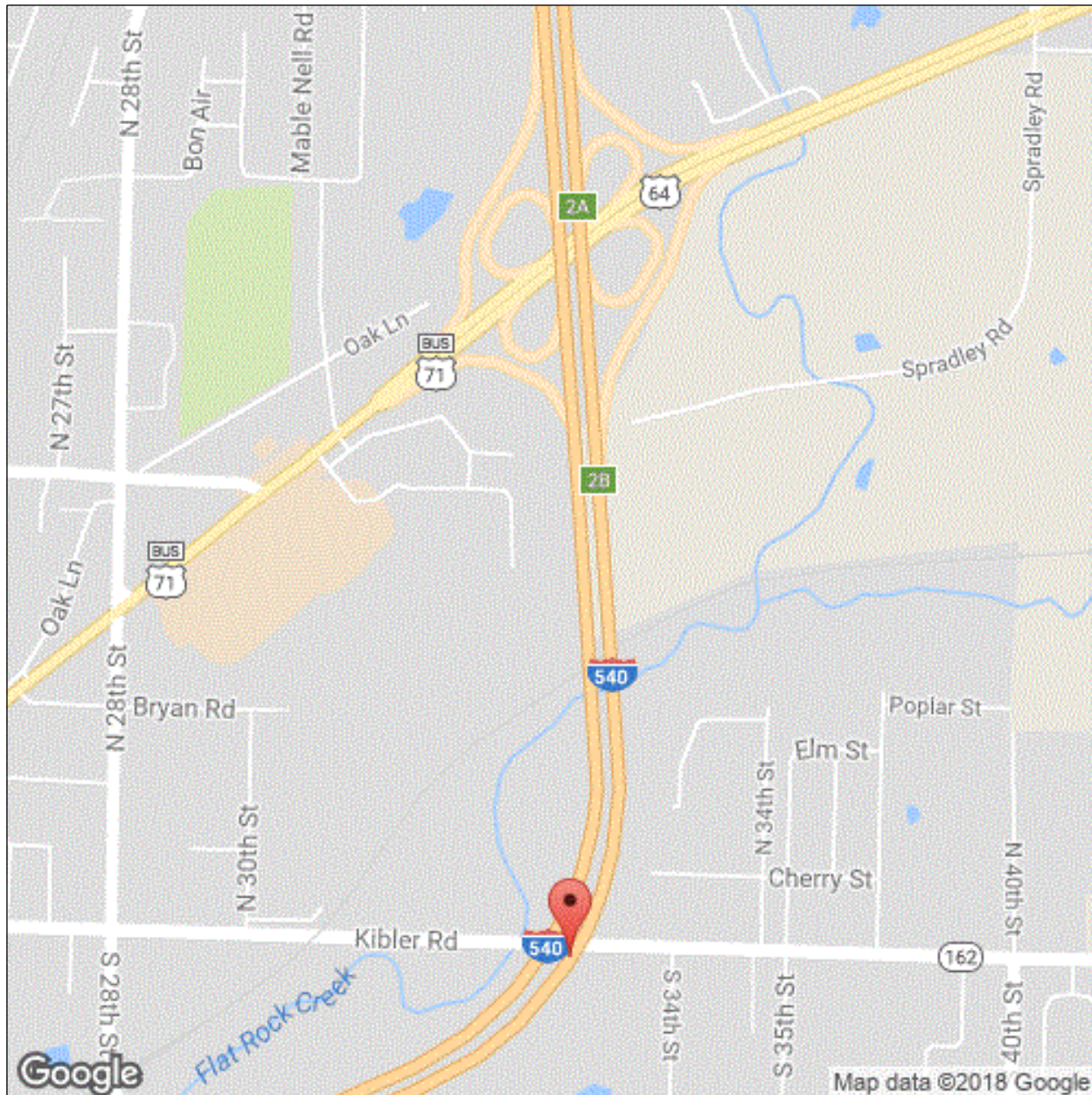
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Executive Summary

03/06/2018 - EJW - Routine Inspection conducted on this date. Underclearance measurements verified.

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National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	03/06/2018
(8) STRUCTURE NUMBER	B3957	(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	State Highway 162	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	I 540 NB-Crawford		
(9) LOCATION	1.98 MI N SEBASTIAN CO LN		
(11) MILEPOINT 13.410	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000540020 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.435986887800304	(17) LONGITUDE -94.32014827662044		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	8
A) KIND OF MATERIAL/DESIGN: 3 - Steel		(59) SUPERSTRUCTURE	7
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder		(60) SUBSTRUCTURE	7
(44) STRUCTURE TYPE, APPROACH SPANS		(61) CHANNEL & CHANNEL PROTECTION	N
A) KIND OF MATERIAL/DESIGN: 0 - Other		(62) CULVERT	N
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 1		
AGE OF SERVICE		LOAD RATING AND POSTING	
(27) YEAR BUILT 1968	(106) YEAR RECONSTRUCTED 2013	(31) DESIGN LOAD	6
(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 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 12		(70) BRIDGE POSTING	5
		(41) STRUCTURE OPEN/POSTED/CLOSED	A
GEOMETRIC DATA		APPRAISAL	
(48) LENGTH OF MAX SPAN (ft.) 54	(49) STRUCTURE LENGTH (ft.) 164.2	(67) STRUCTURAL EVALUATION	7
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 0 RIGHT 0		(68) DECK GEOMETRY	7
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) 40.0		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	5
(52) DECK WIDTH, OUT-TO-OUT (ft.) 43.0		(71) WATERWAY ADEQUACY	N
(32) APPROACH ROADWAY WIDTH (ft.) 38.1		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 27	(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.) 39.7		36B) TRANSITIONS:	1
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	1
(54) VERTICAL UNDER CLEARANCE (ft.) H 16.17		36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) H 10.5		(113) SCOUR CRITICAL BRIDGES	N
(56) MIN LATERAL UNDER CLEARANCE (ft.) 000		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	R
(97) YEAR OF IMPROVEMENT COST ESTIMATE		(102) DIRECTION OF TRAFFIC	1
		(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	5
		(39) NAV VERT CLEARANCE (ft.)	000
		(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0

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(114) FUTURE ADT 28000 (115) YEAR OF FUTURE ADT 2032 (40) NAV HORIZONTAL CLEARANCE (ft.) 0000

UNDER RECORD 2

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-Sec 2 NB Lns
(3) COUNTY CODE	033	(8) STRUCTURE NUMBER	B3957
(4) PLACE CODE	69380	(9) LOCATION	1.98 MI N SEBASTIAN CO LN
(5) INV. ROUTE (ON/UNDER)	2 3 1 162 0	(11) MILEPOINT	1.020 (12) BASE HIGHWAY NETWORK 0
(6) FEATURES INTERSECTED	S.H. 162 - Sec. 2	(13A) LRS INVENTORY ROUTE	0000000000 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	35.436 (17) LONGITUDE -94.320138888889

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	4	(30) YEAR OF AVERAGE DAILY TRAFFIC	2014
(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	9200		

GEOMETRIC DATA

(10) INV RTE, MIN VERT CLEARANCE	16.16	(48) LENGTH OF MAXIMUM SPAN	54 (49) STRUCTURE LENGTH 164.2
(47) TOTAL HORIZONTAL CLEARANCE	44.7		

CLASSIFICATION

(20) TOLL	3	(102) DIRECTION OF TRAFFIC	2
(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	16	(103) TEMP STRUCTURE	
(100) STRAHNET HIGHWAY DESIGNATION	0	(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	0
(101) PARALLEL STRUCTURE DESIGNATION	R	(110) DESIGNATED NATIONAL NETWORK	0

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Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	6924	sq. ft.	6922	0	2	0
	-No apparent cracking in the driving surface or the undersurface of the deck at this inspection -There is a shallow spall on Span 3 at the centerline of the driving surface.						
1080 - Delamination/Spall/Patched Area		2				2	
107 - Steel Open Girder/Beam	1- Ben.	1148	ft.	1146	2	0	0
	-Span 3, Beams 5 & 6 has peeling paint on the bottom flange on the cover plate. -Bent 3, Beams 4 & 5 have old section loss scars that range from up to 0.250" in the top of the web at the existing deck haunch. -No active corrosion or rust in the beams. -No visible cracks at this inspection. -Existing traffic impact scars still exist in Span 2. No apparent out of plane bending in the diaphragms at this inspection.						
1900 - Distortion		2			2		
515 - Steel Protective Coating		9058	sq. ft.	9056	0	2	0
3420 - Peeling/Bubbling/Cracking (Steel Protective Coatings)		2				2	
205 - Reinforced Concrete Column	1- Ben.	6	each	3	1	2	0
	-Bent 2, Column 1 has a 6" long spall with exposed reinforcing steel. -Bent 2, Column 3 has vertical cracking at the base of the column. -Bent 3, Column 2 has a 12" tall spall at the base of the column that does not expose reinforcing steel.						
1080 - Delamination/Spall/Patched Area		1				1	
1090 - Exposed Rebar		1				1	
1130 - Cracking (RC and Other)		1			1		
215 - Reinforced Concrete Abutment	1- Ben.	99	ft.	58	40	1	0
	-The top of the back walls have transverse cracks. -The abutments have random vertical cracks and areas of light scale from apparent previous leakage of the expansion joint seals. -Concrete pedestals were constructed on top of the existing abutments to raise the superstructure. -Bent # 1 has spalling with exposed reinforcing steel on the left side of the abutment. -Bent # 4 has a few shallow spalls on the bridge seats that don't expose reinforcing steel. -No cracking in the pedestals.						
1090 - Exposed Rebar		1				1	
1120 - Efflorescence/Rust Staining		1			1		
1130 - Cracking (RC and Other)		39			39		

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Element Inspection

234 - Reinforced Concrete Pier Cap	1- Ben.	90	ft.	63	15	12	0
-Bents # 2 & 3 have numerous shallow spalls with exposed reinforcing steel and numerous delaminated areas and horizontal cracks. -The top of Bent # 3 cap has an apparent cold joint with numerous shallow delaminated areas and horizontal cracking that appears to have been caused from previous joint leakage. -Bent # 2 has a horizontal crack that appears to be a cold joint. -The caps have areas of light scale that appears to have been caused from previous joint leakage.							
1080 - Delamination/Spall/Patched Area		9			2	7	
1090 - Exposed Rebar		8			3	5	
1130 - Cracking (RC and Other)		10			10		
302 - Compression Joint Seal	1- Ben.	180	ft.	138	42	0	0
-The compression joint seals are in place and appear to be functioning as designed. The joint seal at Bent # 3 has dropped approximately 1" lower than its original location inside the travel lanes but is still in the joint. -The compression joint seal on the Lt side over Bent 2 is approx. 1" smaller than the joint between the bridge rails which may allow dirt and water to leak on the end of the cap, beams and bearings. -The joint anchorages appear sound at this inspection.							
2320 - Seal Adhesion		26			26		
2350 - Debris Impaction		16			16		
311 - Movable Bearing	1- Ben.	21	each	16	0	5	0
-A few of the bearings over the intermediate bents where not vertical at the time of the inspection. -Span 1, Bent 2, Beams 4 & 5 and Span 3, Bent 3, Beams 5, 6 & 7 appear to have been set up to 75% expanded. -All pins and keepers are in place at this inspection.							
2220 - Alignment		5				5	
313 - Fixed Bearing	1- Ben.	21	each	21			
-Some of the bearings have old section loss scars. -Most of the bearings over the intermediate bents have loose bolts that pass through the bottom flange, sole plate and attach the beam to the pedestal.							
321 - Reinforced Concrete Approach Slab	1- Ben.	1680	sq. ft.	1635	33	12	0
-No apparent problems or cracking at this inspection. -Transverse cracking in the South approach.							
1130 - Cracking (RC and Other)		45			33	12	
331 - Reinforced Concrete Bridge Railing	1- Ben.	324	ft.	320	4	0	0
-New Jersey type bridge rail. -The expansion joints in the bridge rail over the intermediate bents where not properly formed during the construction process and they are not vertical. -Bridge rails have a few random vertical cracks. -No apparent noteworthy problems at this inspection.							
1130 - Cracking (RC and Other)		4			4		

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Pictures

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Sketches

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Maintenance Needs

Date Reported: 3/14/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Substructure

The substructure has shallow spalling with exposed reinforcing steel, shallow concrete delamination's, vertical and horizontal cracking, and light surface scale that appears to have been caused from previous deck joint seal leakage.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent # 1 left end of the cap spalling with exposed reinforcing steel.

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Maintenance Needs

Date Reported: 03/03/2016

Priority: D - Routine

Work Code:

Deficiency Description:

Deck

The driving surface of the deck has a spall approximately 12" long and 2" deep located near centerline of span # 3.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Spall in the driving surface of span # 3
at centerline.