

# Bridge Inspection Report

**A5100**  
**I-540, WB LNS**  
**over**  
**Ft Smith Railroad Seb Co**



**Inspection Date:**

**Inspected By:**

**Inspection Type(s):**

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Inspector:

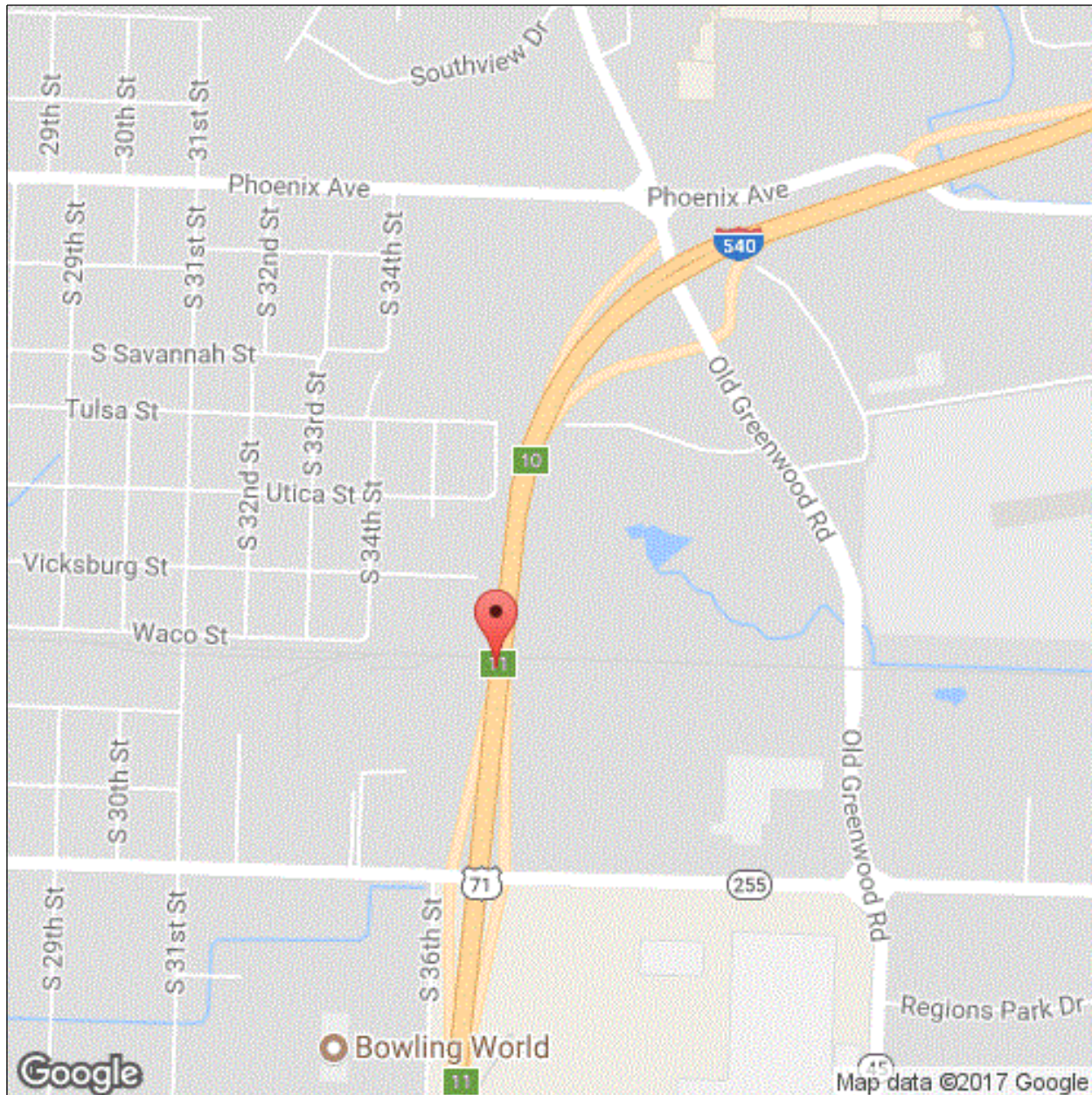
Structure Number: A5100

Inspection Date:

Facility Carried: I-540, WB LNS

## Bridge Inspection Report

### Location Map



Latitude: 35.33076

Longitude: -94.39452



Inspector:

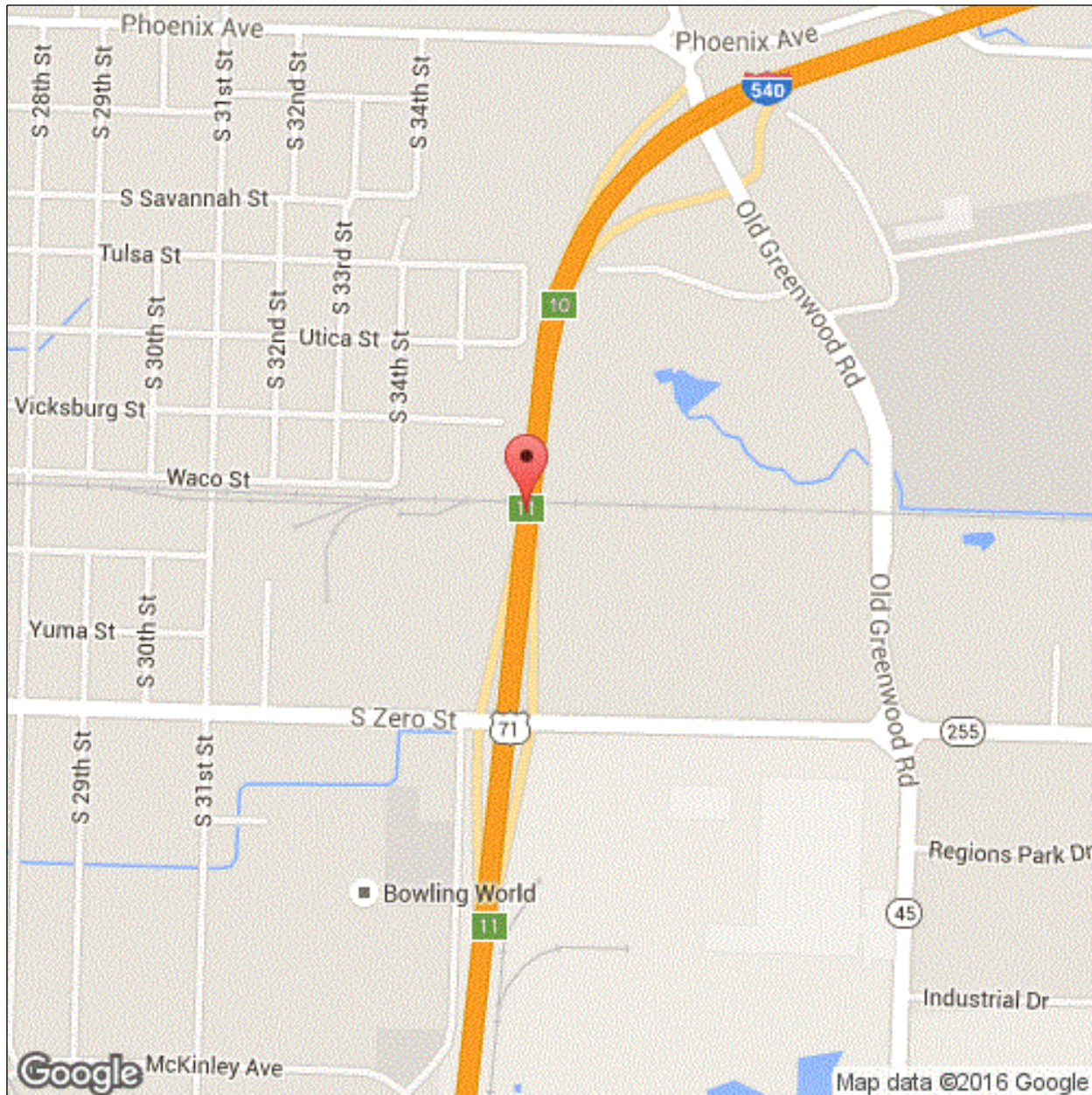
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## Bridge Inspection Report

### Location Map



Latitude: 35.33076

Longitude: -94.39452



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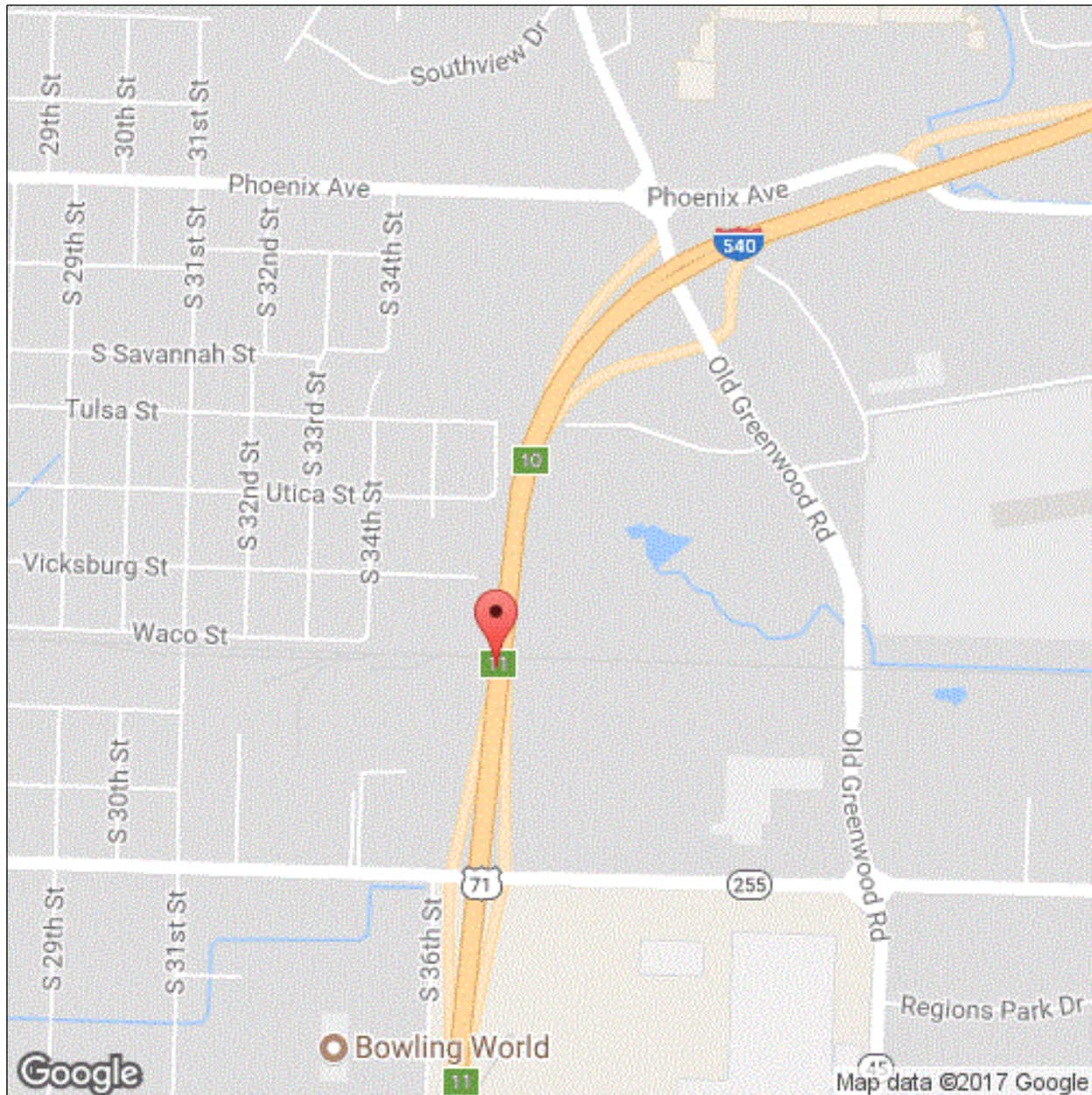
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## Bridge Inspection Report

### Location Map



Latitude: 35.33076

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## Bridge Inspection Report

### Executive Summary

06/13/2016 - JCJ & JML - Vertical underclearances were actual field measured this inspection.

06/21/2017 - JCJ & JML - Special Recurring Inspection. - Item 58 has been assessed with a NBIS Rating of 4. Maintenance forces have made some repairs since the last inspection. Numerous deficiencies still exist. No change in the NBIS Rating of 4 for Item 58.

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## Bridge Inspection Report

## National Bridge Inventory

IDENTIFICATION				INSPECTIONS			
(1) STATE CODE	056 - Arkansas			(90) INSPECTION DATE	06/13/2016		
(8) STRUCTURE NUMBER	A5100			(91) DESIGNATED INSPECTION FREQUENCY	24		
(5) INV. ROUTE (ON/UNDER)	1	1	1	(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	Ft Smith Railroad Seb Co			C. OTHER SPECIAL	Y	24	06/21/2017
(7) FACILITY CARRIED	I-540, WB LNS			CONDITION			
(9) LOCATION	.50 MI S SH 45			(58) DECK	4		
(11) MILEPOINT	3.890	(12) BASE HIGHWAY NETWORK	1	(59) SUPERSTRUCTURE	7	(60) SUBSTRUCTURE	6
(13A) LRS INVENTORY ROUTE	0000540010	(13B) SUBROUTE NUMBER	00	(61) CHANNEL & CHANNEL PROTECTION	N	(62) CULVERT	N
(16) LATITUDE	35.33076	(17) LONGITUDE	-94.39452	LOAD RATING AND POSTING			
(98A) BORDER BRIDGE CODE				(31) DESIGN LOAD	6		
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT			(63) METHOD USED TO DETERMINE OPERATING RATING	1		
STRUCTURE TYPE AND MATERIAL				(64) OPERATING RATING	60.0		
(43) STRUCTURE TYPE, MAIN				(65) METHOD USED TO DETERMINE INVENTORY RATING	1		
A) KIND OF MATERIAL/DESIGN:	3 - Steel			(66) INVENTORY RATING	36.0		
B) TYPE OF DESIGN/CONSTR:	02 - Stringer/Multi-beam or Girder			(70) BRIDGE POSTING	5		
(44) STRUCTURE TYPE, APPROACH SPANS				(41) STRUCTURE OPEN/POSTED/CLOSED	A		
A) KIND OF MATERIAL/DESIGN:	0 - Other			APPRAISAL			
B) TYPE OF DESIGN/CONSTR:	00 - Other			(67) STRUCTURAL EVALUATION	6		
(45) NUMBER OF SPANS IN MAIN	3	(46) NUMBER OF APPROACH	0	(68) DECK GEOMETRY	8		
(107) DECK STRUCTURE TYPE	1	(108A) WEARING SURFACE	1	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	6		
(108B) DECK MEMBRANE	0	(108C) DECK PROTECTION	0	(71) WATERWAY ADEQUACY	N		
AGE OF SERVICE				(72) APPROACH ROADWAY ALIGNMENT	8		
(27) YEAR BUILT	1969	(106) YEAR RECONSTRUCTED	0000	(36) TRAFFIC SAFETY FEATURE			
(42) TYPE OF SERVICE	ON 1	UNDER 2		36A) BRIDGE RAILINGS:	1		
(28) LANES	ON 02	UNDER 00		36B) TRANSITIONS:	1		
(29) AVERAGE DAILY TRAFFIC	57312	(19) BYPASS DETOUR LENGTH	1	36C) APPROACH GUARDRAIL:	1		
(30) YEAR OF AVERAGE DAILY TRAFFIC	2013			36D) APPROACH GUARDRAIL ENDS:	1		
(109) AVERAGE DAILY TRUCK TRAFFIC	1			(113) SCOUR CRITICAL BRIDGES	N		
GEOMETRIC DATA				SUFFICIENCY RATING	1	STATUS	89.4
(48) LENGTH OF MAX SPAN (ft.)	53	(49) STRUCTURE LENGTH (ft.)	155	CLASSIFICATION			
(50) CURB/SIDEWALK WIDTHS (ft.)	LEFT 0	RIGHT 0		(112) NBIS BRIDGE LENGTH	Y		
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	42.0			(104) HIGHWAY SYSTEM OF THE INVENTORY ROUTE	1		
(52) DECK WIDTH, OUT-TO-OUT (ft.)	45.2			(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	11		
(32) APPROACH ROADWAY WIDTH (ft.)	42.0			(100) STRAHNET HIGHWAY DESIGNATION	1		
(33) BRIDGE MEDIAN	0	(34) SKEW (DEG.)	4	(101) PARALLEL STRUCTURE DESIGNATION	L		
(35) STRUCTURE FLARED	0	(10) INV RTE, MIN VERT CLEAR (ft.)	99.99	(102) DIRECTION OF TRAFFIC	1		
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	43.0			(103) TEMP STRUCTURE			
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	99.99			(105) FEDERAL LANDS HIGHWAYS	0		
(54) VERTICAL UNDER CLEARANCE (ft.)	R		23.42	(110) DESIGNATED NATIONAL NETWORK	1		
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)	R		16.8	(20) TOLL	3		
(56) MIN LATERAL UNDER CLEARANCE (ft.)	33.3			(21) MAINTENANCE RESPONSIBILITY	01		
PROPOSED IMPROVEMENTS				(22) OWNER	01		
(75A) TYPE OF WORK PROPOSED	(75B) WORK DONE BY			(37) HISTORICAL	5		
(76) LENGTH OF STRUCTURE IMPROVEMENT (ft.)	0			NAVIGATION DATA			
(94) BRIDGE IMPROVEMENT COST (\$)	0			(38) NAVIGATION CONTROL	N		
(95) ROADWAY IMPROVEMENT COST (\$)	0			(111) PIER OR ABUTMENT PROTECTION	1		
(96) TOTAL PROJECT COST	0			(39) NAV VERT CLEARANCE (ft.)	0		
(97) YEAR OF IMPROVEMENT COST ESTIMATE				(116) MIN NAVIGATION VERT CLEARANCE, VERT LIFT BRIDGE (ft.)	0		
(114) FUTURE ADT	34924	(115) YEAR OF FUTURE ADT	2028	(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.	6510	sq. ft.	133	3612	2675	90
	06/13/2016 - JCJ & JML - Span # 1 has numerous areas that have been patched by maintenance forces in the past. Several patches have failed since the last inspection. The driving surface has numerous spalls with temporary asphalt patches, delaminated areas, and areas of heavy scale in the gutters. The undersurface of the deck has areas of leaching, light scale, and map cracking that correspond with the distressed areas on the driving surface of the deck. Spans # 2 & 3 have medium scale and a few areas of up to heavy scale in the gutters and a few spalls. The driving surface of the deck has had the cracks sealed in the past by maintenance forces, numerous unsealed cracks exist at this inspection..						
1080 - Delamination/Spall/Patched Area		1943			1302	551	90
1120 - Efflorescence/Rust Staining		120			120		
1130 - Cracking (RC and Other)		1914			990	924	
1190 - Abrasion/Wear (PSC/RC)		2400			1200	1200	
107 - Steel Open Girder/Beam	1- Ben.	1085	ft.	985	100	0	0
	06/13/2016 - JCJ & JML - There is freckled rust showing through the paint system. Minor corrosion adjacent to the joints.						
1000 - Corrosion		100			100		
515 - Steel Protective Coating		7775	sq. ft.	775	3500	3500	0
3440 - Effectiveness (Steel Protective Coatings)		7000			3500	3500	
205 - Reinforced Concrete Column	1- Ben.	6	each	6			
	06/13/2016 - JCJ & JML - The columns have no apparent noteworthy deficiencies at this inspection.						
215 - Reinforced Concrete Abutment	1- Ben.	95	ft.	55	16	24	0
	06/13/2016 - JCJ & JML - Both abutments have vertical hairline cracks at variable spacing typical. The driving surface of abutment backwalls are spalled with no exposed reinforcing steel.						
1080 - Delamination/Spall/Patched Area		24				24	
1130 - Cracking (RC and Other)		16			16		
234 - Reinforced Concrete Pier Cap	1- Ben.	84	ft.	67	2	15	0
	06/13/2016 - JCJ & JML - The left end of the Bent 2 cap has a horizontal crack located approximately 6" below the top of cap. The Bent 3 cap has concrete deterioration at the top edge of cap. Substructure caps have staining where the deck joint seals leak.						
1080 - Delamination/Spall/Patched Area		15				15	
1130 - Cracking (RC and Other)		2			2		
302 - Compression Joint Seal	1- Ben.	180	ft.	0	0	140	40
	06/13/2016 - JCJ & JML - Bent 1 anchorage is damaged in the Left side of the structure with visible movement and is noisy when impacted by traffic. Deck joint seals are deteriorated and leak.						
2310 - Leakage		90				90	



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## Element Inspection

2330 - Seal Damage		50				50	
2360 - Adjacent Deck or Header		40					40
311 - Movable Bearing	1- Ben.	24	each	0	2	22	0
06/13/2016 - JCJ & JML - The bearings have corrosion showing through the paint system. Bent 4 beam 3 bearing has fretting with minor misalignment Bent 4. Beam 4. Anchor bolt is working out of the cap.							
1000 - Corrosion		22				22	
1020 - Connection		1			1		
2210 - Movement		1			1		
313 - Fixed Bearing	1- Ben.	24	each	0	0	24	0
06/13/2016 - JCJ & JML - Bearings have active corrosion showing through the paint system.							
1000 - Corrosion		24				24	
321 - Reinforced Concrete Approach Slab	1- Ben.	880	sq. ft.	672	208	0	0
06/13/2016 - JCJ & JML - Approach slab is at the North bridge end. Transverse cracks							
1130 - Cracking (RC and Other)		12			12		
1190 - Abrasion/Wear (PSC/RC)		196			196		
330 - Metal Bridge Railing	1- Ben.	155	ft.	135	0	0	20
06/13/2016 - JCJ & JML - The Left bridge railing has a section with missing posts and out of plane bending from an apparent traffic impact. The ends of the railing are not attached and are misaligned.							
7000 - Damage		20					20
331 - Reinforced Concrete Bridge Railing	1- Ben.	155	ft.	149	6	0	0
06/13/2016 - JCJ & JML - The Right (median) parapet wall has hairline vertical and horizontal cracking. The parapet paint system is peeling in areas.							
1130 - Cracking (RC and Other)		6			6		

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## Bridge Inspection Report

Pictures

Inspector:

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Facility Carried: I-540, WB LNS

## Bridge Inspection Report

Sketches



Inspector:

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 06/21/2017

Priority: C - Important

Work Code:

#### Deficiency Description:

There are spalls and delaminated areas on the driving surface of the deck.

#### Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Span 1. Left gutter

Stage: Open



PHOTO 2 Description Span 1. Typical

Inspector:

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## Bridge Inspection Report

### Maintenance Needs

Stage: Open



PHOTO 3    Description    Span 2.

Stage: Open



PHOTO 4    Description    Span 3.

Stage: Open



PHOTO 5    Description    Span 3. Left gutter



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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 7/24/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

The driving surface has sealable transverse and map cracking.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Span 3 deck soffit

Stage: Assigned



PHOTO 2 Description Span 2. Typical



Inspector:

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## Bridge Inspection Report

### Maintenance Needs

Stage: Assigned



PHOTO 3 Description Span 2.

Stage: Assigned



PHOTO 4 Description Span 3.

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## Bridge Inspection Report

### Maintenance Needs

Date Reported: 7/24/2012 12:00:00 AM

Priority: D - Routine

Work Code:

---

#### Deficiency Description:

The compression joint seals leak water and debris on the substructure.

Work Description:

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Date Repairs Completed:

Maintenance Comments:

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Stage: Assigned



PHOTO 1      Description      Bent 4. Beam 3 bearing is fretting.

Stage: Assigned



PHOTO 2      Description      Bent 1. Beam 5. Bearing corrosion.



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### Maintenance Needs

Stage: Assigned



PHOTO 3    Description    Bent 1 debris on cap.

Stage: Assigned



PHOTO 4    Description    Span 3 at Bent 4.



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### Maintenance Needs

Date Reported: 7/24/2012 12:00:00 AM

Priority: D - Routine

Work Code:

---

#### Deficiency Description:

The undersurface of the deck has leaching, light scale, and map cracking in areas that correspond with the areas of distress on the driving surface.

Work Description:

---

Date Repairs Completed:

Maintenance Comments:

---

Stage: Assigned



PHOTO 1      Description      Deck soffit. Span 3, Bay 6.