

Bridge Inspection Report

A3604
I 540, SB LNS
over
Free Ferry St. Seb. Co.



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

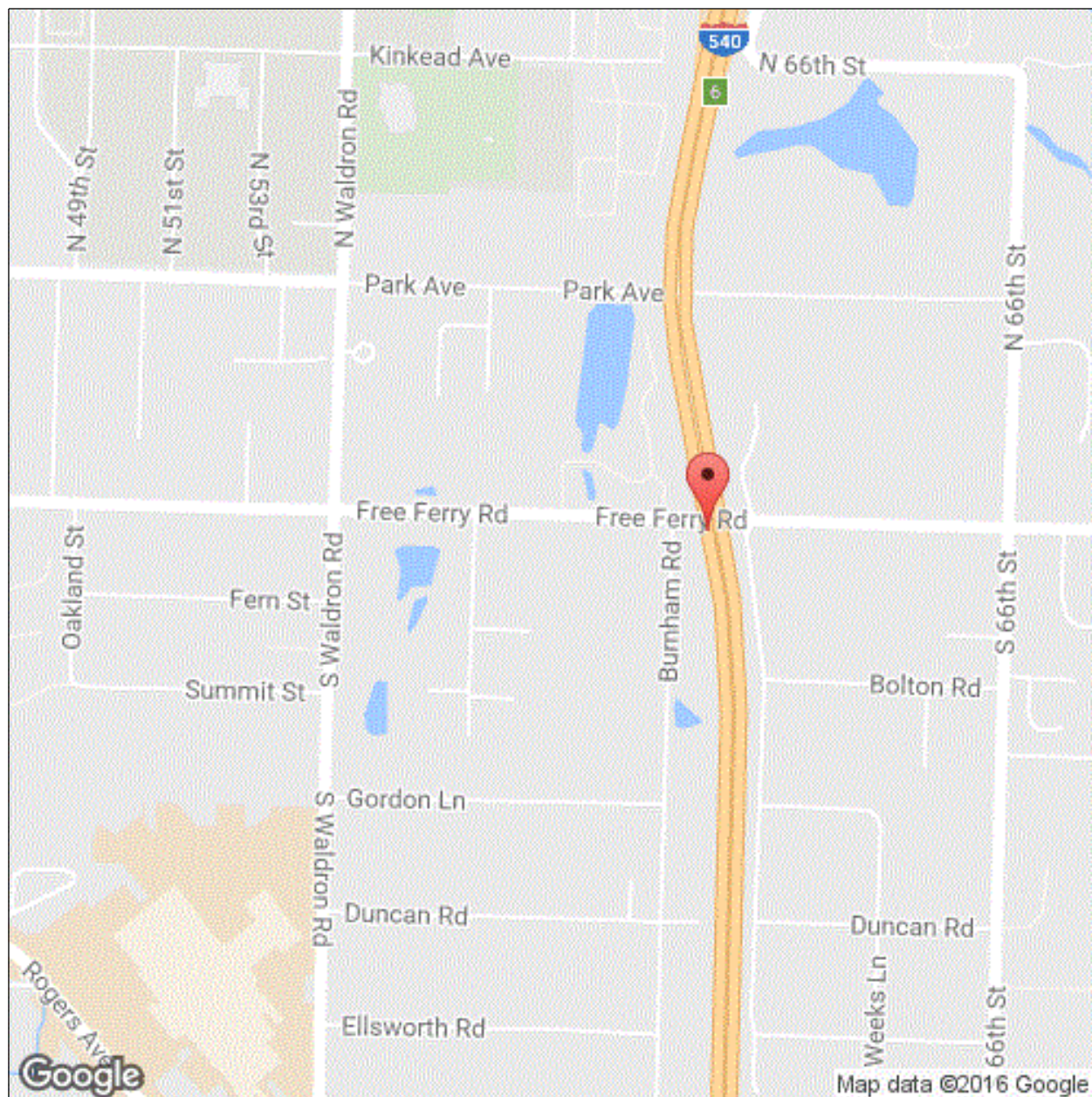
Structure Number: A3604

Inspection Date:

Facility Carried: I 540, SB LNS

Bridge Inspection Report

Location Map



Latitude: 35.37403

Longitude: -94.36514

Inspector:

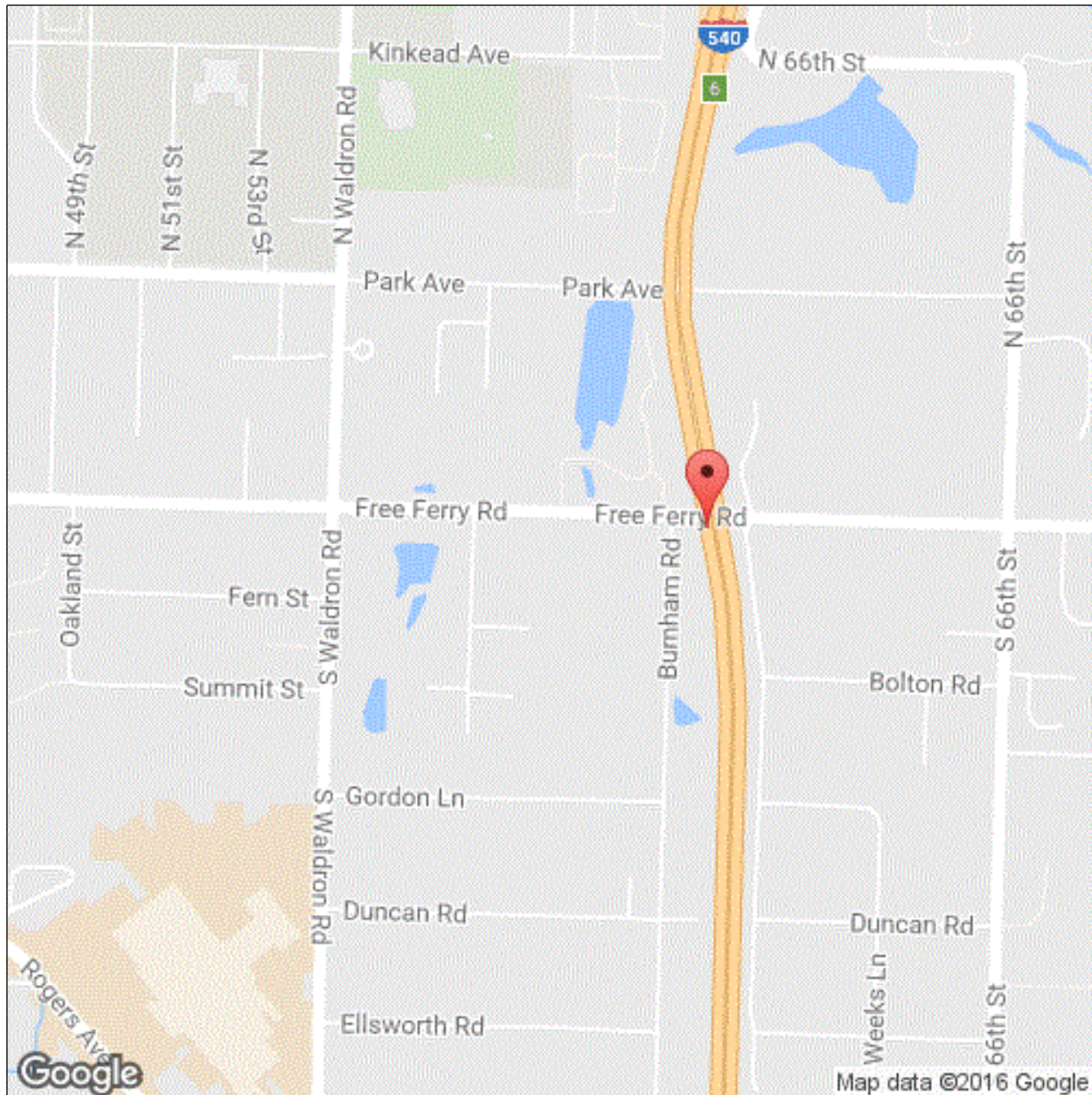
Structure Number: A3604

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Facility Carried: I 540, SB LNS

Bridge Inspection Report

Location Map



Latitude: 35.37403

Longitude: -94.36514

Inspector:

Structure Number: A3604

Inspection Date:

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Bridge Inspection Report

Executive Summary

09/26/2016 - JCJ & JML - Minimum vertical underclearances were actual field measured this inspection. See MicroStation drawing for additional information.

Inspector:

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National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	09/26/2016
(8) STRUCTURE NUMBER	A3604	(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	Free Ferry St. Seb. Co.	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	I 540, SB LNS		
(9) LOCATION	1 MI N JCT SH 22		
(11) MILEPOINT 7.750	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000540010 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.37403	(17) LONGITUDE -94.36514		
(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 6	(60) SUBSTRUCTURE 6
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 1965	(106) YEAR RECONSTRUCTED 0000	(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 133124	(19) BYPASS DETOUR LENGTH 5	(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.) 62	(49) STRUCTURE LENGTH (ft.) 134	(67) STRUCTURAL EVALUATION	6
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 1.5 RIGHT 1.5		(68) DECK GEOMETRY	7
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.)	40.0	(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	6
(52) DECK WIDTH, OUT-TO-OUT (ft.)	45.6	(71) WATERWAY ADEQUACY	N
(32) APPROACH ROADWAY WIDTH (ft.)	38.1	(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 12	(36) TRAFFIC SAFETY FEATURE	
(35) STRUCTURE FLARED 0	(10) INV RTE, MIN VERT CLEAR (ft.) 99.99	36A) BRIDGE RAILINGS:	0
(47) TOTAL HORIZONTAL CLEARANCE (ft.)	43.0	36B) TRANSITIONS:	1
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.)	99.99	36C) APPROACH GUARDRAIL:	1
(54) VERTICAL UNDER CLEARANCE (ft.)	H 15.5	36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.)	H 18.6	(113) SCOUR CRITICAL BRIDGES	N
(56) MIN LATERAL UNDER CLEARANCE (ft.)	16	SUFFICIENCY RATING	0 STATUS 84.0
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 52057	(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, SB LNS

Bridge Inspection Report

National Bridge Inventory

UNDER RECORD 2

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540, SB LNS
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	A3604
(4) PLACE CODE	24060	(9) LOCATION	1 MI N JCT SH 22
(5) INV. ROUTE (ON/UNDER)	2 5 1 21120 0	(11) MILEPOINT	2.239 (12) BASE HIGHWAY NETWORK 0
(6) FEATURES INTERSECTED	Free Ferry St.	(13A) LRS INVENTORY ROUTE	0000000000 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	35. (17) LONGITUDE -94.365111111111
			373972222222

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	1965	(42) TYPE OF SERVICE	ON 1 UNDER 1
(28) LANES	ON 02 UNDER 02	(109) AVERAGE DAILY TRUCK TRAFFIC	1
(29) AVERAGE DAILY TRAFFIC	2973		

GEOMETRIC DATA

(10) INV RTE, MIN VERT CLEARANCE	15.5	(48) LENGTH OF MAXIMUM SPAN	62 (49) STRUCTURE LENGTH	134
(47) TOTAL HORIZONTAL CLEARANCE	58.0			

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	L	(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.	5280	sq. ft.	1256	986	3038	0
	09/26/2016 - JCJ & JML - Maintenance forces have sealed numerous cracks and made numerous patches on the driving surface of the deck in the past. Span # 1 has shallow spalling that exposes reinforcing steel in the Right gutter. No apparent section loss to the exposed reinforcing steel at this inspection. Light scale / leaching is beginning to form adjacent to Beam # 1 in Span # 2 that is visible from the undersurface of the deck. Shallow spalling adjacent to the sliding plate over Bent # 3. No exposed reinforcing steel in the shallow spalls at this inspection. Light to medium scale in the gutters. Sealable transverse and map cracking in driving lanes.						
1080 - Delamination/Spall/Patched Area		176			138	38	
1090 - Exposed Rebar		3			3		
1120 - Efflorescence/Rust Staining		45			45		
1130 - Cracking (RC and Other)		2600				2600	
1190 - Abrasion/Wear (PSC/RC)		1200			800	400	
107 - Steel Open Girder/Beam	1- Ben.	924	ft.	618	250	56	0
	09/26/2016 - JCJ & JML - General paint system deterioration throughout superstructure. The Beam ends on Span 2 at Bents 2 & 3 have failed with areas of active corrosion on the bottom flanges and webs of the beams. The dent on bottom flange of Span 2, Beam 1 has no apparent changes since the last inspection. There are insignificant scrape marks visible in the bottom flange of Beam 1 in Span 2.						
1000 - Corrosion		306			250	56	
515 - Steel Protective Coating		5966	sq. ft.	66	3500	1500	900
3440 - Effectiveness (Steel Protective Coatings)		5900			3500	1500	900
205 - Reinforced Concrete Column	1- Ben.	4	each	3	1	0	0
	09/26/2016 - JCJ & JML - Bent # 2, Left column has 2 areas of shallow spalling with exposed # 9 wire. Some of the spalls have been covered with caulking by maintenance forces in the past as a type of repair.						
1080 - Delamination/Spall/Patched Area		1			1		
215 - Reinforced Concrete Abutment	1- Ben.	100	ft.	87	13	0	0
	09/26/2016 - JCJ & JML - The abutments have vertical hairline cracks at variable spacing. There is settlement of the concrete rip rap adjacent to the Left side of Bent # 1, with the Left retaining wall leaning in approximately 1 foot at the top. There is also settlement of concrete rip rap adjacent to the Left side of Bent # 4.						
1130 - Cracking (RC and Other)		13			13		

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Element Inspection

234 - Reinforced Concrete Pier Cap	1- Ben.	88	ft.	73	15	0	0
09/26/2016 - JCJ & JML - Bent 2 cap has a few vertical hairline cracks. -Bent 3, undersurface of the cap has one 2" and one 6" shallow spall with exposed reinforcing steel on the Left side of cap. Bent 3 Cap has a vertical hairline crack near the center of the cap and areas with hairline horizontal cracking located approximately 8" below the top of cap.							
1080 - Delamination/Spall/Patched Area							
1090 - Exposed Rebar		2			2		
1130 - Cracking (RC and Other)		13			13		
305 - Assembly Joint without Seal	1- Ben.	164	ft.	164			
09/26/2016 - JCJ & JML - Sliding plate Joints leak water on the bearings and the substructure. No significant changes since the last inspection. The joint anchorage appears to be sound at this inspection.							
311 - Movable Bearing	1- Ben.	21	each	0	21	0	0
09/26/2016 - JCJ & JML - Moveable bearings have isolated areas with active corrosion. Rocker pins appear to have a red rust / fretting due to pin wear.							
1000 - Corrosion		11			11		
2210 - Movement		10			10		
313 - Fixed Bearing	1- Ben.	21	each	0	11	10	0
09/26/2016 - JCJ & JML - Fixed bearings have active corrosion, pack rust, and section loss between the masonry plates and the sole plates. Bent # 4, Beam # 5 has one anchor bolt missing from the bearing.							
1000 - Corrosion		20			10	10	
1020 - Connection		1			1		
321 - Reinforced Concrete Approach Slab	1- Ben.	2800	sq. ft.	2656	48	96	0
The approach slab, gutters and wing walls have been replaced since last inspection and appear new at both bridge ends.							
1130 - Cracking (RC and Other)		96				96	
1190 - Abrasion/Wear (PSC/RC)		48			48		
330 - Metal Bridge Railing	1- Ben.	268	ft.	248	20	0	0
Maintenance forces have tightened the bridge rails since the last inspection. No noteworthy deficiencies at this inspection. Bridge railing is noisy when structure is impacted by traffic.							
1020 - Connection		20			20		

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Pictures

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Bridge Inspection Report

Sketches

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 9/18/2014 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

North and south approach roadways -

The recently constructed south approach slab has two sealable transverse cracks.

Several of The bolts that secure the top of the grated drop inlet on the left side of the north approach roadway are not fully engaged.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Inspector:

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 09/26/2016

Priority: C - Important

Work Code:

Deficiency Description:

The metal portions of the bridge railing have loose connections.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Open



PHOTO 1 Description Loose bridge rail. Connection bolt laying on the base of the post.

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Bridge Inspection Report

Maintenance Needs

Date Reported: 9/17/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Superstructure -

The paint system is deteriorating and flaking off in locations with rust forming. The ends of beams over the intermediate bents are the most extreme case. The top flanges have isolated areas of active corrosion.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Bent 3. Typical

Stage: Monitor



PHOTO 2 Description Span 3. Right side

Inspector:

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Maintenance Needs

Stage: Monitor



PHOTO 3 Description Bent 3 Beams 1&2 corrosion

Inspector:

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Maintenance Needs

Date Reported: 9/17/2012 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

Left wing walls -

The left earth retaining walls adjacent to Bents # 1 & 4 have settled and are leaning.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Bent 1 Left retaining wall

Stage: Monitor



PHOTO 2 Description Bent 4. Left side

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Maintenance Needs

Date Reported: 9/18/2014 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

North abutment, bearing # 5 -

The bearing for beam # 5 at the north abutment has one anchor bolt sheared off.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Bent 4, Beam 5

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Maintenance Needs

Date Reported: 9/18/2014 12:00:00 AM

Priority: C - Important

Work Code:

Deficiency Description:

Deck -

The driving surface of the deck has a spall in the Right lane of Span # 1 near the yellow line and adjacent to Bent # 2. The area surrounding the spall is delaminated.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Right side of span 1. Spall with exposed reinforcing steel

Stage: Monitor



PHOTO 2 Description Span 1. Right gutter

Inspector:

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Maintenance Needs

Date Reported: 9/18/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Deck -

The driving surface of the deck has medium / heavy scaling in the gutters.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 1, Left gutter

Stage: Monitor



PHOTO 2 Description Span 2. Typical

Inspector:

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Maintenance Needs

Stage: Monitor



PHOTO 3 Description Span 2 left gutter

Inspector:

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Maintenance Needs

Date Reported: 9/18/2014 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Substructure -

Bent # 3 has shallow spalling in the undersurface of the cap on the left side.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Bent 3, Undersurface of the Left side of cap.