

Bridge Inspection Report

B5096
I 540-SEC 1, NB LN
over
Boston St. Seb. Co.



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

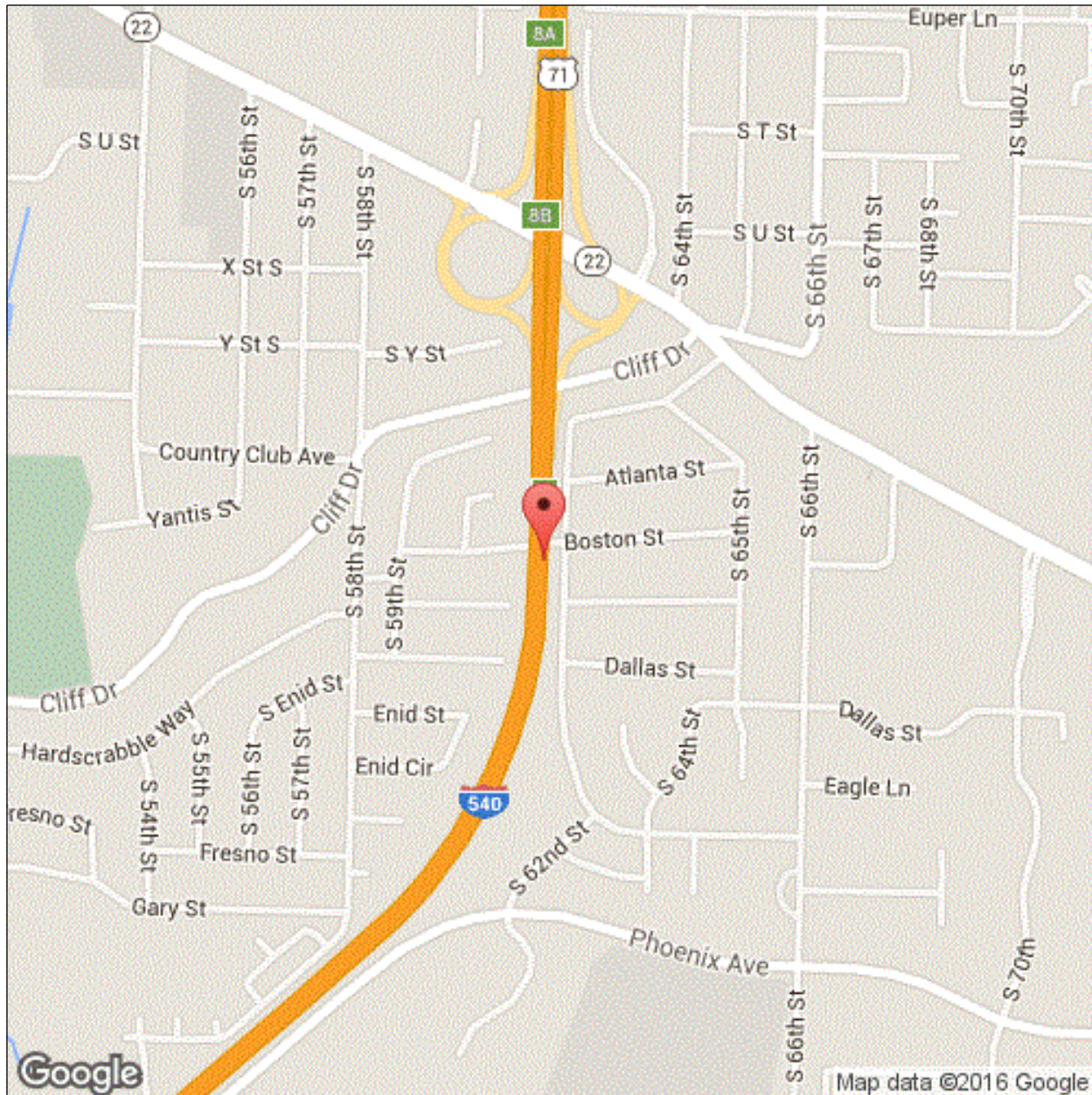
Structure Number: B5096

Inspection Date:

Facility Carried: I 540-SEC 1, NB LN

Bridge Inspection Report

Location Map



Latitude: 35.35448

Longitude: -94.36507

Inspector:

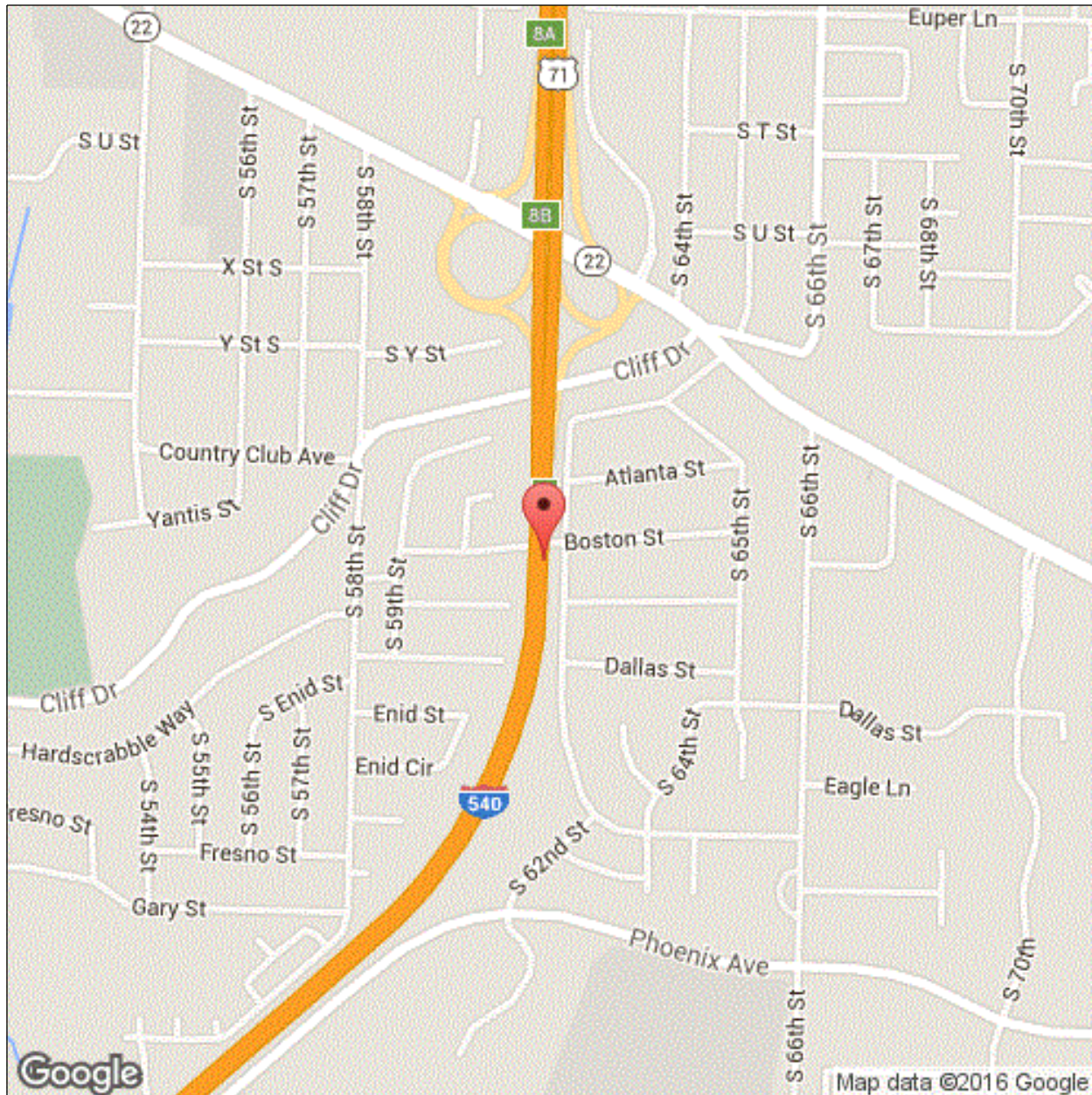
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Bridge Inspection Report

Location Map



Latitude: 35.35448

Longitude: -94.36507

Inspector:

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Bridge Inspection Report

Executive Summary

07/19/2016 - JCJ & RSM - Underclearance for this structure was actual field measured this date

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National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	07/19/2016
(8) STRUCTURE NUMBER	B5096	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 1 1 540 2	(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 St. Seb. Co.	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	I 540-SEC 1, NB LN		
(9) LOCATION	2.01 MI NO OF SH 45		
(11) MILEPOINT 6.410	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000540010 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 35.35448	(17) LONGITUDE -94.36507		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	7
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	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 46000	(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	6
(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.) 99.99	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 25.16		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.) 9.2		SUFFICIENCY RATING	0 STATUS 83.0
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	R
(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	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

Inspector:

Structure Number: B5096

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Facility Carried: I 540-SEC 1, NB LN

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National Bridge Inventory

UNDER RECORD 2

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 540-SEC 1, NB LN
(3) COUNTY CODE	131	(8) STRUCTURE NUMBER	B5096
(4) PLACE CODE	24060	(9) LOCATION	2.01 MI NO OF SH 45
(5) INV. ROUTE (ON/UNDER)	2 5 1 6160 0	(11) MILEPOINT	3.379 (12) BASE HIGHWAY NETWORK 0
(6) FEATURES INTERSECTED	BOSTON ST.	(13A) LRS INVENTORY ROUTE	0000000000 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	35.3545277777778 (17) LONGITUDE -94.365

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	25.3	(48) LENGTH OF MAXIMUM SPAN	55 (49) STRUCTURE LENGTH	153
(47) TOTAL HORIZONTAL CLEARANCE	38.7			

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	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.	6689	sq. ft.	5945	744	0	0
	07/19/2016 - JCJ & RSM - The driving surface of the deck has sealable transverse and longitudinal cracking in all spans. The deck overhangs have transverse cracking with efflorescence.						
1120 - Efflorescence/Rust Staining		24			24		
1130 - Cracking (RC and Other)		720			720		
107 - Steel Open Girder/Beam	1- Ben.	1057	ft.	1025	30	2	0
	07/19/2016 - JCJ & RSM - Superstructure has a few isolated areas with peeling / flaking paint that exposes the bare metal. Superficial rust coating is visible in areas.						
1000 - Corrosion		32			30	2	
515 - Steel Protective Coating		7134	sq. ft.	7066	30	25	13
3440 - Effectiveness (Steel Protective Coatings)		68			30	25	13
205 - Reinforced Concrete Column	1- Ben.	7	each	0	1	6	0
	07/19/2016 - JCJ & RSM - Columns of Bents 2 and 3 have spalls with exposed reinforcing steel with Delaminated areas and vertical cracking. Bent 3 column 2 has a large delaminated area at the cap juncture.						
1080 - Delamination/Spall/Patched Area		3				3	
1090 - Exposed Rebar		2				2	
1130 - Cracking (RC and Other)		2			1	1	
215 - Reinforced Concrete Abutment	1- Ben.	95	ft.	89	6	0	0
	07/19/2016 - JCJ & RSM - Bent 1 backwall has hairline cracking with efflorescence in bay 5. The vertical face of the North abutment bridge seat has a delaminated area under beam 3. The Right side of North abutment bridge seat has an area of horizontal cracking between beams 6 and 7.						
1080 - Delamination/Spall/Patched Area		1			1		
1120 - Efflorescence/Rust Staining		1			1		
1130 - Cracking (RC and Other)		4			4		
234 - Reinforced Concrete Pier Cap	1- Ben.	80	ft.	51	26	3	0
	07/19/2016 - JCJ & RSM - Bent 2 center cap under beam 1 has an area of spalling with exposed reinforcing steel. Bent 2 cap has light / medium scaling due to apparent expansion joint leakage. Bent 2 cap has hairline map cracking visible in the cap undersurface. Bent 3 center cap has a spall with exposed reinforcing steel.						
1080 - Delamination/Spall/Patched Area		3			1	2	
1090 - Exposed Rebar		1				1	
1130 - Cracking (RC and Other)		25			25		

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Bridge Inspection Report

Element Inspection

302 - Compression Joint Seal	1- Ben.	170	ft.	2	0	42	126
07/19/2016 - JCJ & RSM - The compression joint seals are deteriorated and partially missing in locations and allow water dirt and debris to leak on the substructure.							
2330 - Seal Damage		126					126
2340 - Seal Cracking		42				42	
311 - Movable Bearing	1- Ben.	21	each	1	19	1	0
07/19/2016 - JCJ & RSM - Bearings have isolated areas of active corrosion with flaking rust between masonry and sole plates.							
1000 - Corrosion		20			19	1	
515 - Steel Protective Coating		42	sq. ft.	23		5	14
313 - Fixed Bearing	1- Ben.	21	each	14	3	4	0
07/19/2016 - JCJ & RSM - Bearings have isolated areas of active corrosion with flaking rust between masonry and sole plates.							
1000 - Corrosion		7			3	4	
515 - Steel Protective Coating		21	sq. ft.	0			21
321 - Reinforced Concrete Approach Slab	1- Ben.	2800	sq. ft.	2728	0	72	0
07/19/2016 - JCJ & RSM - Both approach slabs have sealable transverse cracks.							
1130 - Cracking (RC and Other)		72				72	
331 - Reinforced Concrete Bridge Railing	1- Ben.	306	ft.	297	9	0	0
07/19/2016 - JCJ & RSM - The concrete bridge railing has insignificant scrape marks from apparent traffic impacts with isolated areas of hairline cracking and golfball size spalls.							
1080 - Delamination/Spall/Patched Area		6			6		
1130 - Cracking (RC and Other)		3			3		

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Pictures

Inspector:

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Bridge Inspection Report

Sketches

Inspector:

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Inspection Date:

Facility Carried: I 540-SEC 1, NB LN

Bridge Inspection Report

Maintenance Needs

Date Reported: 7/25/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Utility junction boxes on the right side of structure at the north and south bridge ends -

The covers to the utility junction boxes on the right side of structure at the north and south bridge ends are not in place exposing the electrical wire.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 1 Right, utility box cover missing.

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 7/25/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Bearings -

The bearings have a failing paint system with areas of active corrosion.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 1 beam 6Active corrosion with flaking rust in bearing device.

Inspector:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 7/25/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Substructure -

The caps and columns have delaminated areas and areas of shallow spalling that expose reinforcing steel.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 2 column 3, spalling with exposed reinforcing steel and delaminated areas.

Stage: Assigned



PHOTO 2 Description Bent 2 center column, spalling with exposed reinforcing steel.

Inspector:

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Bridge Inspection Report

Maintenance Needs

Stage: Assigned



PHOTO 3	Description	Bent 2 center cap under beam 1 has an area of spalling with exposed reinforcing steel.
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Bridge Inspection Report

Maintenance Needs

Date Reported: 7/25/2012 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Deck expansion joint compression seals -

The expansion joint compression seals have deteriorated at all expansion joints and are beginning to come apart in locations. The failing expansion joint seals are allowing water, dirt and debris to leak onto the substructure. The most extreme case is at bent #2 where the majority of the compression seal is no longer in place.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent 2 compression seal deteriorated.

Stage: Assigned



PHOTO 2 Description Bent 3 compression seal deteriorated.

Inspector:

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Maintenance Needs

Date Reported: 7/25/2012 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

Deck / Approach slabs -

The driving surfaces of the deck and the approach slabs have sealable cracks.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Full length longitudinal cracking in Right lane of span 3.

Inspector:

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Maintenance Needs

Date Reported: 7/8/2014 12:00:00 AM

Priority: C - Important

Work Code:

Deficiency Description:

North approach roadway -

Repairs made to the asphalt driving surface of the north approach roadway have failed allowing large potholes to form at the juncture of the north approach slab and the approach roadway.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description North approach roadway.