

Bridge Inspection Report

B5583

I 630 EB Log 5.48

over

MISS AVE, RUSHING CREEK



Inspection Date:

Inspected By:

Inspection Type(s):

Inspector:

Structure Number: B5583

Inspection Date:

Facility Carried: I 630 EB Log 5.48

Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	02/09/2016
(8) STRUCTURE NUMBER	B5583	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 1 1 630 2	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	06 (3) COUNTY CODE 119	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	39020	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	MISS AVE, RUSHING CREEK	C. OTHER SPECIAL	Y 24 02/08/2017
(7) FACILITY CARRIED	I 630 EB Log 5.48		
(9) LOCATION	1.7 E OF I-430		
(11) MILEPOINT 5.479	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000630210 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 34.74566	(17) LONGITUDE -92.35880		
(98A) BORDER BRIDGE CODE			
PERCENT RESPONSIBILITY	(99) BORDER BRIDGE STRUCT		
STRUCTURE TYPE AND MATERIAL		CONDITION	
(43) STRUCTURE TYPE, MAIN		(58) DECK	6
A) KIND OF MATERIAL/DESIGN: 4 - Steel continuous		(59) SUPERSTRUCTURE	4 (60) SUBSTRUCTURE 6
B) TYPE OF DESIGN/CONSTR: 05 - Box Beam or Girders - Multiple		(61) CHANNEL & CHANNEL PROTECTION	6 (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 4	(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 1977	(106) YEAR RECONSTRUCTED 0000	(31) DESIGN LOAD	5
(42) TYPE OF SERVICE ON 1 UNDER 6		(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 03 UNDER 05		(64) OPERATING RATING	39
(29) AVERAGE DAILY TRAFFIC 129884	(19) BYPASS DETOUR LENGTH 1	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2014		(66) INVENTORY RATING	24
(109) AVERAGE DAILY TRUCK TRAFFIC 3		(70) BRIDGE POSTING	5
		(41) STRUCTURE OPEN/POSTED/CLOSED	A
GEOMETRIC DATA		APPRAISAL	
(48) LENGTH OF MAX SPAN (ft.) 134	(49) STRUCTURE LENGTH (ft.) 444	(67) STRUCTURAL EVALUATION	4
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 0 RIGHT 0		(68) DECK GEOMETRY	6
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) 55.8		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	6
(52) DECK WIDTH, OUT-TO-OUT (ft.) 58.5		(71) WATERWAY ADEQUACY	8
(32) APPROACH ROADWAY WIDTH (ft.) 55.1		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 3	(34) SKEW (DEG.) 0	(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.) 56.4		36B) TRANSITIONS:	0
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	0
(54) VERTICAL UNDER CLEARANCE (ft.) H 16.92		36D) APPROACH GUARDRAIL ENDS:	0
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) H 12.5		(113) SCOUR CRITICAL BRIDGES	8
(56) MIN LATERAL UNDER CLEARANCE (ft.) 12.5		SUFFICIENCY RATING	1 STATUS 46.8
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 69000	(115) YEAR OF FUTURE ADT 2034	(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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UNDER RECORD 2

IDENTIFICATION

(1) STATE CODE	056 - Arkansas	(7) FACILITY CARRIED	I 630 EB Log 5.48
(3) COUNTY CODE	119	(8) STRUCTURE NUMBER	B5583
(4) PLACE CODE	39020	(9) LOCATION	1.7 E OF I-430
(5) INV. ROUTE (ON/UNDER)	2 5 1 38940 0	(11) MILEPOINT	0.790 (12) BASE HIGHWAY NETWORK 0
(6) FEATURES INTERSECTED	MISS AVE, RUSHING CREEK	(13A) LRS INVENTORY ROUTE	0000000000 (13B) SUBROUTE NUMBER 00
		(16) LATITUDE	34.7456388888889 (17) LONGITUDE -92.3588333333334

STRUCTURE TYPE AND MATERIAL

(43) STRUCTURE TYPE, MAIN A) KIND OF MATERIAL/DESIGN: 4 - Steel continuous
B) TYPE OF DESIGN/CONSTR: 05 - Box Beam or Girders - Multiple

AGE OF SERVICE

(19) BYPASS DETOUR LENGTH	1	(30) YEAR OF AVERAGE DAILY TRAFFIC	1983
(27) YEAR BUILT	1977	(42) TYPE OF SERVICE	ON 1 UNDER 6
(28) LANES	ON 05 UNDER 03	(109) AVERAGE DAILY TRUCK TRAFFIC	1
(29) AVERAGE DAILY TRAFFIC	9736		

GEOMETRIC DATA

(10) INV RTE, MIN VERT CLEARANCE	16.92	(48) LENGTH OF MAXIMUM SPAN	134	(49) STRUCTURE LENGTH	444
(47) TOTAL HORIZONTAL CLEARANCE	80.0				

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.	25974	sq. ft.	14665	6602	4707	0
	Spans 1,3 & 4 have spalls filled with asphalt. See photo. All spans have large unsealed cracks up to 1/8" wide.						
1080 - Delamination/Spall/Patched Area		32				32	
1130 - Cracking (RC and Other)		11277			6602	4675	
102 - Steel Closed Web/Box Girder	1- Ben.	1768	ft.	1524	204	40	0
	<p>All of the exterior paint is chalky with some peeling and scattered freckling rust on the sides and on the bottom of all box girders. All girders ends at both abutments have active rust on the bottom of box girders at bearings due to leaking joints. Minor scrapes to the bottom of girders 3 and 4 in span 1.</p> <p>The interior paint of all boxes has scattered freckled rust and some moderate peeling. Some rust is present at the ends of the girders on the inside due to water entering the girders from the open joints. This then drains out of the inspection hatches at the West end of the bridge. The interior of Girder 4, span 3 near bent 3 has a section (Approx. 30') that has no finish coat of paint, only the primer coat. The top flanges of the box girders have scattered active rust due to deck cracks and leaks in the deck control joints. Fatigue cracks are present in the sides of the box girders and at the welded connections of the cross brace diaphragm on Girder 1 left side diaphragms 1, 2, 3, 4, 10, 14, 15, 21, 22 and bulkhead 3, Girder 1 right side diaphragms 1, 2, 14, 15, 22 and bulkhead 3, Girder 2 left side diaphragms 2, 3, 4, 10, 14, 15, 21 and 22, Girder 2 right side diaphragms 3, 4, 10, 14, 15, 21 and 22, Girder 3 left side diaphragms 1, 2, 3, 4, 11, 15, 21 and 22, Girder 3 right side diaphragms 3, 14, 21 and 22, Girder 4 left side diaphragm 10, Girder 4 right side diaphragms 1, 2, 3, 4, 10, 14, 21 and 22, Girder 4 right side 4th stiffener between diaphragms 7 and 8. Crack location sheet linked. HBM has drilled some of the fatigue cracks that had propagated to the outside of box at these locations where they drilled ahead and back of diaphragm the cracks have ringed out to the drilled holes. See photos and crack sketch.</p>						
1000 - Corrosion		210			194	16	
1010 - Cracking		32			8	24	
7000 - Damage		2			2		
515 - Steel Protective Coating		35943	sq. ft.	0	16631	16632	2680
3440 - Effectiveness (Steel Protective Coatings)		35943			16631	16632	2680
205 - Reinforced Concrete Column	1- Ben.	9	each	9			
	Bent 4 column 3 small cracks around base.						
215 - Reinforced Concrete Abutment	1- Ben.	118	ft.	20	98	0	0
	Both abutments have small horizontal and vertical cracks.						
1130 - Cracking (RC and Other)		98			98		
234 - Reinforced Concrete Pier Cap	1- Ben.	176	ft.	176			

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Element Inspection

302 - Compression Joint Seal	1- Ben.	118	ft.	0	0	0	118
	Both joint seals have failed.						
2310 - Leakage		118					118
311 - Movable Bearing	1- Ben.	32	each	16	16	0	0
	Active rust at both abutments due to leaking joints.						
1000 - Corrosion		16			16		
313 - Fixed Bearing	1- Ben.	8	each	8			
321 - Reinforced Concrete Approach Slab	1- Ben.	3648	sq. ft.	0	3430	218	0
	Both approach slabs have settled and have diagonal cracks and patched areas.						
1080 - Delamination/Spall/Patched Area		8				8	
1130 - Cracking (RC and Other)		210				210	
4000 - Settlement		3430			3430		
331 - Reinforced Concrete Bridge Railing	1- Ben.	444	ft.	381	63	0	0
1130 - Cracking (RC and Other)		63			63		
333 - Other Bridge Railing	1- Ben.	444	ft.	385	59	0	0
1080 - Delamination/Spall/Patched Area		1			1		
1130 - Cracking (RC and Other)		58			58		

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Maintenance Needs

Date Reported: 2/25/2011 12:00:00 AM

Priority: C - Important

Work Code:

Deficiency Description:

Deck surface

Large transverse and longitudinal unsealed cracks are present in all spans.
Some are 1/8" and larger allowing moisture in steel box girders.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Date Reported: 2/25/2011 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Both abutments have vertical and horizontal cracks.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Date Reported: 2/25/2011 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Girders at both abutments have active rust on bottom of box girders at bearings.

.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Inspector:

Inspection Date:

Structure Number: B5583

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Bridge Inspection Report

Maintenance Needs

Date Reported: 2/15/2013 12:00:00 AM

Priority: C - Important

Work Code:

Deficiency Description:

Left concrete approach rail with traffic at abutment 2 has a large crack.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Inspector:

Structure Number: B5583

Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 2/25/2011 12:00:00 AM

Priority: C - Important

Work Code:

Deficiency Description:

Top of abutment 1 has large cracks and abutment joint armor is popping under traffic. Joint seals are missing at both abutments causing debris to build-up around bearings.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description West abutment girder 4. Debris has accumulated on girder end and bearing due to joint seals laying on abutment.

Stage: Monitor



PHOTO 2 Description Bent 5 joint seal missing. Common bent .

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Maintenance Needs

Date Reported: 2/10/2012 12:00:00 AM

Priority: B - Pressing; 6 month completion goal

Work Code:

Deficiency Description:

Fatigue cracks are present in the sides of the box girders and at the welded connections of the cross brace diaphragm on Girder 1 left side diaphragms 1, 2, 3, 4, 10, 14, 15, 21, 22 and bulkhead 3, Girder 1 right side diaphragms 1, 2, 14, 15, 22 and bulkhead 3, Girder 2 left side diaphragms 2, 3, 4, 10, 14, 15, 21 and 22, Girder 2 right side diaphragms 3, 4, 10, 14, 15, 21 and 22, Girder 3 left side diaphragms 1, 2, 3, 4, 11, 15, 21 and 22, Girder 3 right side diaphragms 3, 14, 21 and 22, Girder 4 left side diaphragm 10, Girder 4 right side diaphragms 1, 2, 3, 4, 10, 14, 21 and 22, Girder 4 right side 4th stiffener between diaphragms 7 and 8. Photos attached.

Added 2/08/2017 CDDC497

A New fatigue crack was located at the welded connection of the diaphragm on Girder 2 right side diaphragm 11. New fatigue cracks were located at Girder 2 bulk head 1 in the top left and right weld connection. Multiple cracks throughout the bridge have grown in length.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Girder 4 diaphragm 21 ahead crack in the web. No change.

Stage: Assigned



PHOTO 2 Description Girder 2 diaphragm 3 back crack in the weld. No change.

Inspector:

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Maintenance Needs

Stage: Assigned



PHOTO 3 Description Girder 3 diaphragm 3 back crack in the top weld. New crack.

Stage: Assigned



PHOTO 4 Description Girder 3 diaphragm 1 left bottom crack has propagated 1/4".

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Maintenance Needs

Date Reported: 2/15/2013 12:00:00 AM

Priority: C - Important

Work Code:

Deficiency Description:

Deck has spalls and spalls filled with asphalt and a deep spall at joint of abutment 1.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 4 spall filled with asphalt