

Bridge Inspection Report

B5984
I-49 NB L Benton
over
CO RD 831-G



Inspection Date:

Inspected By:

Inspection Type(s):

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Inspector:

Structure Number: B5984

Inspection Date:

Facility Carried: I-49 NB L Benton

Bridge Inspection Report

Location Map



Latitude: 36.40445

Longitude: -94.19792

Inspector:

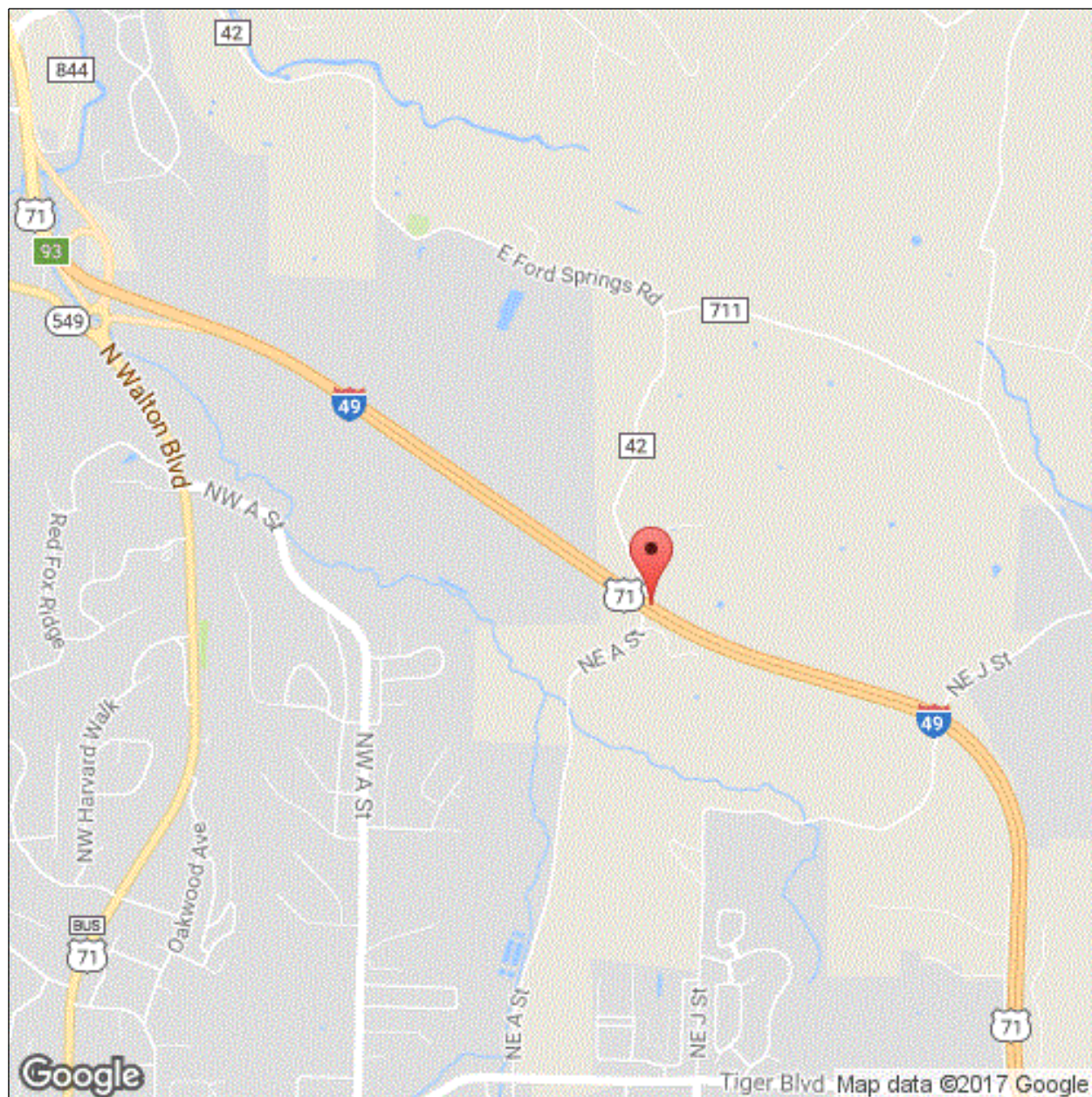
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Location Map



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Location Map



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Bridge Inspection Report

Executive Summary

Logged South to North.

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Bridge Inspection Report

National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	10/23/2019
(8) STRUCTURE NUMBER	B5984	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 1 1 49 1	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	09 (3) COUNTY CODE 007	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	00000	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	CO RD 831-G	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	I-49 NB L Benton		
(9) LOCATION	2.26 MI N SH 72		
(11) MILEPOINT 90.110	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000049090 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 36.40445	(17) LONGITUDE -94.19792		
(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: 4 - Steel continuous		(59) SUPERSTRUCTURE 6	(60) SUBSTRUCTURE 7
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 1		
AGE OF SERVICE		LOAD RATING AND POSTING	
(27) YEAR BUILT 1989	(106) YEAR RECONSTRUCTED 0000	(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 37000	(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 1		(70) BRIDGE POSTING	5
		(41) STRUCTURE OPEN/POSTED/CLOSED	A
GEOMETRIC DATA		APPRAISAL	
(48) LENGTH OF MAX SPAN (ft.) 64	(49) STRUCTURE LENGTH (ft.) 154	(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.) 40.0		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	5
(52) DECK WIDTH, OUT-TO-OUT (ft.) 42.8		(71) WATERWAY ADEQUACY	N
(32) APPROACH ROADWAY WIDTH (ft.) 40.0		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 31	(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.) 41.0		36B) TRANSITIONS:	0
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	0
(54) VERTICAL UNDER CLEARANCE (ft.) H 16.58		36D) APPROACH GUARDRAIL ENDS:	0
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) H 8.2		(113) SCOUR CRITICAL BRIDGES	N
(56) MIN LATERAL UNDER CLEARANCE (ft.) 0		SUFFICIENCY RATING	91.5 STATUS 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 21860	(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

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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.	6505	sq. ft.	5175	1330	0	0
	10/23/2019 - WNR & DBM: -The driving surface of the deck has longitudinal cracking in all spans and transverse cracking in the gutters that correspond with the joints in the bridge railing. -The wheel paths have light abrasion. -The North approach slab has significant settlement.						
1120 - Efflorescence/Rust Staining		45		0	45	0	0
1130 - Cracking (RC and Other)		117		0	117	0	0
1190 - Abrasion/Wear (PSC/RC)		1168		0	1168	0	0
107 - Steel Open Girder/Beam	1- Ben.	906	ft.	905	1	0	0
	10/23/2019 - WNR & DBM: -The ends of girders over abutments have corrosion due to compression joint seals leaking allowing water to leak onto the superstructure. The webs of girders over abutments have corrosion with section loss in at the deck haunch juncture in locations. -Span #3 girder #2 has a loose bolt in the bottom flange splice plate connection. -The majority of the paint system is oxidized.						
1020 - Connection		1		0	1	0	0
515 - Steel Protective Coating		6711	sq. ft.	1351	5355	0	5
3410 - Chalking (Steel Protective Coatings)		5355		0	5355	0	0
3440 - Effectiveness (Steel Protective Coatings)		5		0	0	0	5
205 - Reinforced Concrete Column	1- Ben.	4	each	4	0	0	0
	10/23/2019 - WNR & DBM: No noteworthy deficiencies at this inspection.						
215 - Reinforced Concrete Abutment	1- Ben.	94	ft.	85	7	2	0
	10/23/2019 - WNR & DBM: -The lower right side of abutment #2 breastwall has a 2" wide horizontal fracture due to embankment settlement. The embankment settlement has caused the adjacent wing wall and the right side of the concrete revetment to settle approximately 2".						
1080 - Delamination/Spall/Patched Area		2		0	0	2	0
1130 - Cracking (RC and Other)		7		0	7	0	0
234 - Reinforced Concrete Pier Cap	1- Ben.	92	ft.	92	0	0	0
	10/23/2019 - WNR & DBM: No noteworthy deficiencies at this inspection.						
302 - Compression Joint Seal	1- Ben.	98	ft.	0	0	56	42
	10/23/2019 - WNR & DBM: -The compression joint seals has deterioration with dirt and debris that has caused the seals to separate from the assemblies allowing water to leak onto the superstructure promoting corrosion.						
2310 - Leakage		56		0	0	56	0

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2330 - Seal Damage		42		0	0	0	42
310 - Elastomeric Bearing	1- Ben.	12	each	12	0	0	0
10/23/2019 - WNR & DBM: -No noteworthy deficiencies at this inspection.							
311 - Movable Bearing	1- Ben.	12	each	1	6	5	0
10/23/2019 - WNR & DBM: -Bearings have active corrosion with flaking rust typical. -Abutment #1 bearing #4 rocker portion of bearings does not make contact with sole plate girder is floating over rocker bearing. -The rocker devices for bearings #2, #4 and #5 do not make contact with the masonry plates and have significant movement under live load. The rockers for bearings #4 and #5 can be moved by hand. Bearing #4 has red rust staining indicating wear from fretting.							
1000 - Corrosion		11		0	6	5	0
515 - Steel Protective Coating		36	sq. ft.	21	0	0	15
3440 - Effectiveness (Steel Protective Coatings)		15		0	0	0	15
321 - Reinforced Concrete Approach Slab	1- Ben.	2016	sq. ft.	1866	73	77	0
10/23/2019 - WNR & DBM: -The North and South approach slabs have wide longitudinal, transverse and random cracking. -The North approach slab has significant settlement.							
1130 - Cracking (RC and Other)		150		0	73	77	0
331 - Reinforced Concrete Bridge Railing	1- Ben.	308	ft.	287	21	0	0
10/23/2019 - WNR & DBM: -The concrete bridge railing has vertical cracks in random locations with light scaling to the bases of parapets in numerous locations.							
1130 - Cracking (RC and Other)		21		0	21	0	0

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Pictures

PHOTO 1

Description

PHOTO 2

Description

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Bridge Inspection Report

Pictures

PHOTO 2

Description

PHOTO 3

Description

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Bridge Inspection Report

Sketches

Inspector:

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Inspection Date:

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Bridge Inspection Report

Maintenance Needs

Date Reported: 10/11/2011 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

Superstructure - Span #3, girder #2 has a loose bolt in the bottom flange splice plate connection.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Span 3 Girder 2 splice plate - loose bolt.

Stage: Monitor



PHOTO 2 Description Span #3, girder #2 has a loose bolt in the bottom flange splice plate connection.

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Bridge Inspection Report

Maintenance Needs

Date Reported: 10/11/2011 12:00:00 AM

Priority: D - Routine

Work Code:

Deficiency Description:

Deck - The compression joint seal at abutment #1 is deteriorated with tears along the top of seal that appear to be from traffic impact. The seal at abutment #2 has dirt and debris that has caused the seal to pull away from the assembly allowing water to leak onto the superstructure promoting corrosion. The road iron next to backwall anchorage is loose.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Abutment #1 compression joint seal typical cracking and tearing from vehicle impaction.

Stage: Assigned



PHOTO 2 Description Abutment #2 compression joint material.

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Maintenance Needs

Date Reported: 10/23/2019

Priority: C - Important

Work Code:

Deficiency Description:

North approach slab - The North approach slab has settlement.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description North approach slab-Settlement.

Stage: Monitor



PHOTO 2 Description North approach slab and roadway are showing signs of settlement.

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Maintenance Needs

Stage: Monitor



PHOTO 3 Description North approach slab and roadway are showing signs of settlement.

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Bridge Inspection Report

Maintenance Needs

Date Reported: 10/11/2011 12:00:00 AM

Priority: G - General/ Preventive maintenance

Work Code:

Deficiency Description:

Abutment #1 and #2 bearings - Rust and corrosion.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Abutment #1 bearing #6 pack rust in rocker area worst case at abutment #1

Stage: Monitor



PHOTO 2 Description Abutment #2 bearing #5 flaking rust.

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Maintenance Needs

Date Reported: 10/10/2013 12:00:00 AM

Priority: C - Important

Work Code:

Deficiency Description:

Abutment #1 - The rocker devices for bearings #2, #4 and #5 over abutment #1 do not make contact with the masonry plates and have significant movement under live load. The rockers for bearings #4 and #5 can be moved by hand. Bearing #4 has red rust staining indicating wear from fretting.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Monitor



PHOTO 1 Description Abutment #1 bearing #4 rocker portion of bearings does not make contact with sole plate girder is floating over rocker bearing.

Stage: Assigned



PHOTO 2 Description Abutment #1-Bearing #4-Rust staining indicating wear from fretting.