

Bridge Inspection Report

05464

**State Highway 16
over
Illinois River-Wash Co.**



Inspection Date:

Inspected By:

Inspection Type(s):



Inspector:

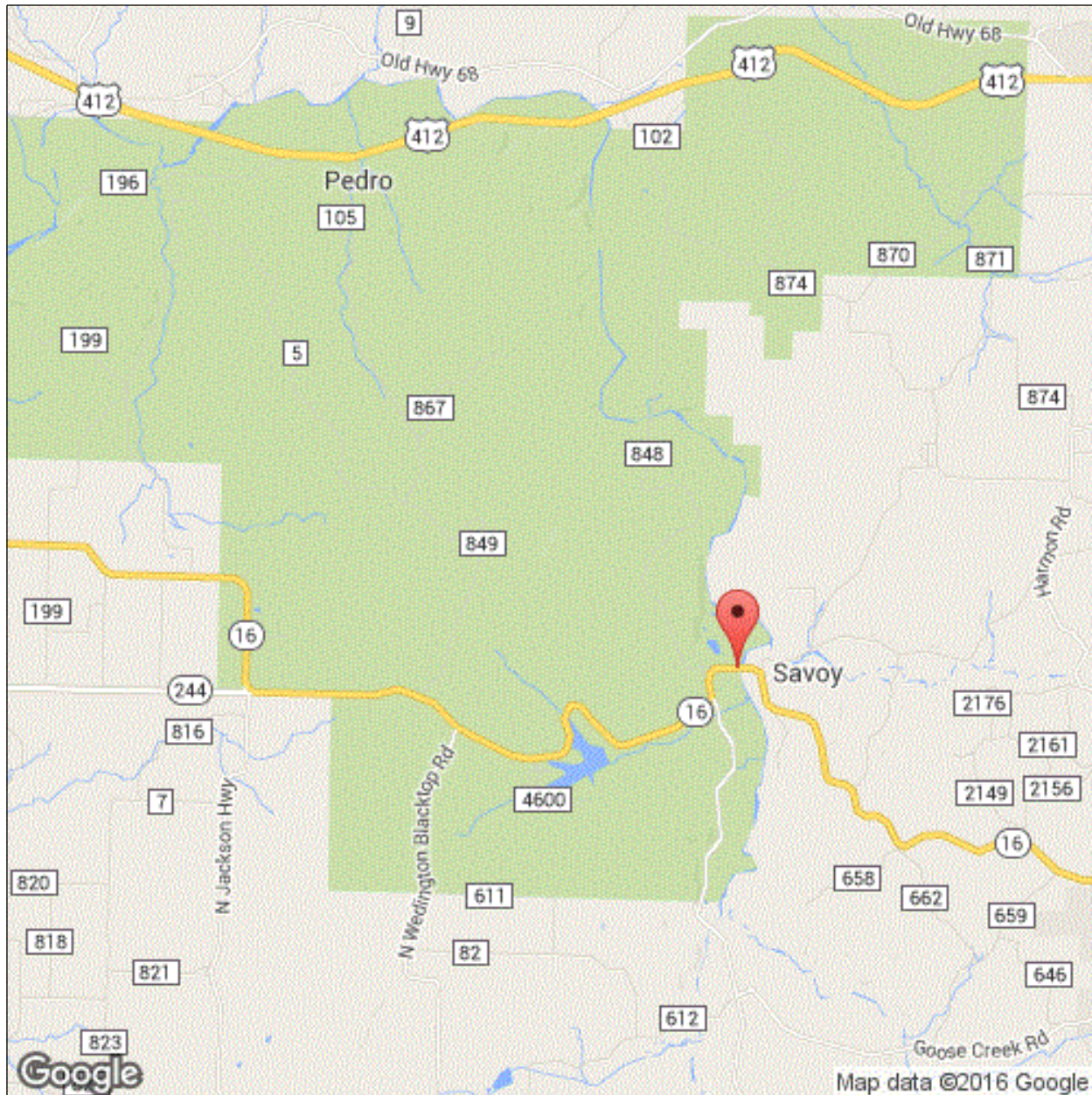
Structure Number: 05464

Inspection Date:

Facility Carried: State Highway 16

Bridge Inspection Report

Location Map



Latitude: 36.10304

Longitude: -94.34466

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Executive Summary

06/29/2016 - EJW & RWF -Underwater Type II inspection conducted this date. Wading and probing indicate the tops of footings are exposed at Bents # 2 and 3. Footings appear to be well keyed into solid rock channel with no apparent scour problems at this inspection.

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National Bridge Inventory

IDENTIFICATION		INSPECTIONS	
(1) STATE CODE	056 - Arkansas	(90) INSPECTION DATE	06/29/2016
(8) STRUCTURE NUMBER	05464	(91) DESIGNATED INSPECTION FREQUENCY	24
(5) INV. ROUTE (ON/UNDER)	1 3 1 16 0	(92) CRITICAL FEATURE INSPECTION	(93) CFI DATE
(2) HIGHWAY AGENCY	04 (3) COUNTY CODE 143	A. FRACTURE CRITICAL DETAIL	N
(4) PLACE CODE	00000	B. UNDERWATER INSPECTION	N
(6) FEATURES INTERSECTED	Illinois River-Wash Co.	C. OTHER SPECIAL	N
(7) FACILITY CARRIED	State Highway 16		
(9) LOCATION	3.93 MI E BENTON CO LN		
(11) MILEPOINT 3.929	(12) BASE HIGHWAY NETWORK 1		
(13A) LRS INVENTORY ROUTE	0000016020 (13B) SUBROUTE NUMBER 00		
(16) LATITUDE 36.10304	(17) LONGITUDE -94.34466		
(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: 3 - Steel		(59) SUPERSTRUCTURE 7	(60) SUBSTRUCTURE 6
B) TYPE OF DESIGN/CONSTR: 02 - Stringer/Multi-beam or Girder		(61) CHANNEL & CHANNEL PROTECTION 8	(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 5	(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 1972	(106) YEAR RECONSTRUCTED 0000	(31) DESIGN LOAD	5
(42) TYPE OF SERVICE ON 1 UNDER 5		(63) METHOD USED TO DETERMINE OPERATING RATING	1
(28) LANES ON 02 UNDER 00		(64) OPERATING RATING	60
(29) AVERAGE DAILY TRAFFIC 2800	(19) BYPASS DETOUR LENGTH 20	(65) METHOD USED TO DETERMINE INVENTORY RATING	1
(30) YEAR OF AVERAGE DAILY TRAFFIC 2014		(66) INVENTORY RATING	36
(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.) 60	(49) STRUCTURE LENGTH (ft.) 302	(67) STRUCTURAL EVALUATION	6
(50) CURB/SIDEWALK WIDTHS (ft.) LEFT 0 RIGHT 0		(68) DECK GEOMETRY	4
(51) BRDG RDWY WIDTH CURB-TO-CURB (ft.) 27.9		(69) UNDERCLEARANCES, VERTICAL & HORIZONTAL	N
(52) DECK WIDTH, OUT-TO-OUT (ft.) 30.7		(71) WATERWAY ADEQUACY	8
(32) APPROACH ROADWAY WIDTH (ft.) 34.1		(72) APPROACH ROADWAY ALIGNMENT	8
(33) BRIDGE MEDIAN 0	(34) SKEW (DEG.) 0	(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.) 29.2		36B) TRANSITIONS:	1
(53) VERTICAL CLEARANCE OVER BRIDGE ROADWAY (ft.) 99.99		36C) APPROACH GUARDRAIL:	1
(54) VERTICAL UNDER CLEARANCE (ft.) N 0		36D) APPROACH GUARDRAIL ENDS:	1
(55) LATERAL UNDER CLEARANCE RIGHT (ft.) N 99.9		(113) SCOUR CRITICAL BRIDGES	8
(56) MIN LATERAL UNDER CLEARANCE (ft.) 0		SUFFICIENCY RATING	0 STATUS 77.7
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	0
(94) BRIDGE IMPROVEMENT COST (\$)	0	(26) FUNCTIONAL CLASSIFICATION OF INVENTORY ROUTE	06
(95) ROADWAY IMPROVEMENT COST (\$)	0	(100) STRAHNET HIGHWAY DESIGNATION	0
(96) TOTAL PROJECT COST	0	(101) PARALLEL STRUCTURE DESIGNATION	N
(97) YEAR OF IMPROVEMENT COST ESTIMATE		(102) DIRECTION OF TRAFFIC	2
(114) FUTURE ADT 3797	(115) YEAR OF FUTURE ADT 2028	(103) TEMP STRUCTURE	
		(105) FEDERAL LANDS HIGHWAYS	0
		(110) DESIGNATED NATIONAL NETWORK	0
		(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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Element Inspection

	Environment	Total Quantity	Units	Condition State 1	Condition State 2	Condition State 3	Condition State 4
12 - Reinforced Concrete Deck	1- Ben.	9271	sq. ft.	5308	2387	1576	0
	06/29/2016 - EJW & RWF - Span # 1 has medium scale with sand and epoxy repairs. Epoxy repairs are beginning to delaminate from the deck with several areas that sound hollow when sounded. Several repairs are beginning to deteriorate with numerous asphalt patches in Span # 1. Concrete spalls with exposed reinforcing steel is visible from the undersurface of the deck adjacent to the deck drain openings.						
1080 - Delamination/Spall/Patched Area		48			48		
1190 - Abrasion/Wear (PSC/RC)		3915			2339	1576	
107 - Steel Open Girder/Beam	1- Ben.	1200	ft.	933	267	0	0
	06/29/2016 - EJW & RWF - Superstructure has areas of active corrosion at the ends of beams adjacent to the expansion joints. No apparent section loss to the structural steel.						
1000 - Corrosion		267			267		
515 - Steel Protective Coating		10380	sq. ft.	9846	0	0	534
3440 - Effectiveness (Steel Protective Coatings)		534					534
205 - Reinforced Concrete Column	1- Ben.	8	each	4	4	0	0
	06/29/2016 - EJW & RWF - The tops of footings are exposed at Bents # 2 and 3. Footings appear to be well keyed into solid rock channel. Light abrasion at the bases. No apparent noteworthy changes at this inspection.						
1080 - Delamination/Spall/Patched Area		1			1		
1190 - Abrasion/Wear (PSC/RC)		3			3		
215 - Reinforced Concrete Abutment	1- Ben.	60	ft.	42	17	1	0
	06/29/2016 - EJW & RWF - The East abutment has a 6' horizontal crack in the Bearing area of Beam # 4. A few hairline vertical cracks at random spacing.						
1090 - Exposed Rebar		1				1	
1130 - Cracking (RC and Other)		17			17		
234 - Reinforced Concrete Pier Cap	1- Ben.	180	ft.	96	0	84	0
	06/29/2016 - EJW & RWF - The intermediate bent caps have horizontal cracking located approximately 4 to 6 inches below the top of the exterior steps. Bent # 2, Right side of cap has map cracking and shallow spalls in the end of cap and one 24 inch spall that is visible from the undersurface of the cap. Bents # 3 & 5, have several areas that are delaminated along with shallow spalls with exposed reinforcing steel in both faces of the cap. Exposed reinforcing steel has initial section loss. There are no apparent repairs or changes since last inspection.						
1080 - Delamination/Spall/Patched Area		3				3	
1090 - Exposed Rebar		10				10	
1130 - Cracking (RC and Other)		71				71	

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302 - Compression Joint Seal	1- Ben.	180	ft.	0	0	180	0
06/29/2016 - EJW & RWF - Deck Joint seals are in place with large areas that have adhesion failure and leak water on the substructure caps and the ends of the superstructure.							
2310 - Leakage		102				102	
2320 - Seal Adhesion		78				78	
311 - Movable Bearing	1- Ben.	20	each	0	20	0	0
06/29/2016 - EJW & RWF - Bent #5 bearings have been painted with bridge mate. Repairs appear to be holding at this time. No changes to other bearings with active corrosion and debris accumulation tops of caps around bearings.							
1000 - Corrosion		20			20		
313 - Fixed Bearing	1- Ben.	20	each	0	20	0	0
06/29/2016 - EJW & RWF - Intermediate bents bearings have active corrosion with with debris accumulation in areas.							
1000 - Corrosion		20			20		
331 - Reinforced Concrete Bridge Railing	1- Ben.	604	ft.	544	60	0	0
06/29/2016 - EJW & RWF - Numerous areas of shallow spalling with exposed reinforcing steel where steel has very little concrete cover from the construction process. Majority of parapet has light scale at the base of wall.							
1090 - Exposed Rebar		60			60		

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Maintenance Needs

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

Priority: C - Important

Work Code:

Deficiency Description:

Deck

The driving surface of span # 1 has medium abrasion with areas of spalling that has created potholes in the driving surface of the left and right lanes. Exposed reinforcing steel with section loss is visible in one of the spalls. Previous repairs made with asphaltic mix have failed. The gutter on the right side of span # 1 has an area of concrete deterioration and scaling.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Span # 1 Right gutter pothole.

Stage: Assigned



PHOTO 2 Description Span # 1 temporary asphalt repairs.

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Maintenance Needs

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

Priority: C - Important

Work Code:

Deficiency Description:

Substructure Caps

The intermediate bent caps have horizontal cracking approximately 4 inches below the bearing areas and numerous areas of shallow spalling with exposed reinforcing steel. The most extreme case appears to be the exterior vertical face on the Right side of Bent # 2 cap. This area has concrete deterioration with map cracking. The undersurface has spalling with exposed reinforcing steel.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1	Description	Span # 1 Bent # 2 horizontal cracking in cap.
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Maintenance Needs

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

Priority: D - Routine

Work Code:

Deficiency Description:

Deck joint seals

The compression joint seals are deteriorating and have lost their bond to the joint assemblies in locations allowing water to leak onto the bent caps.

Work Description:

Date Repairs Completed:

Maintenance Comments:

Stage: Assigned



PHOTO 1 Description Bent # 2 failing joint seal.