



Latitude:36.13173, Longitude:-93.94810

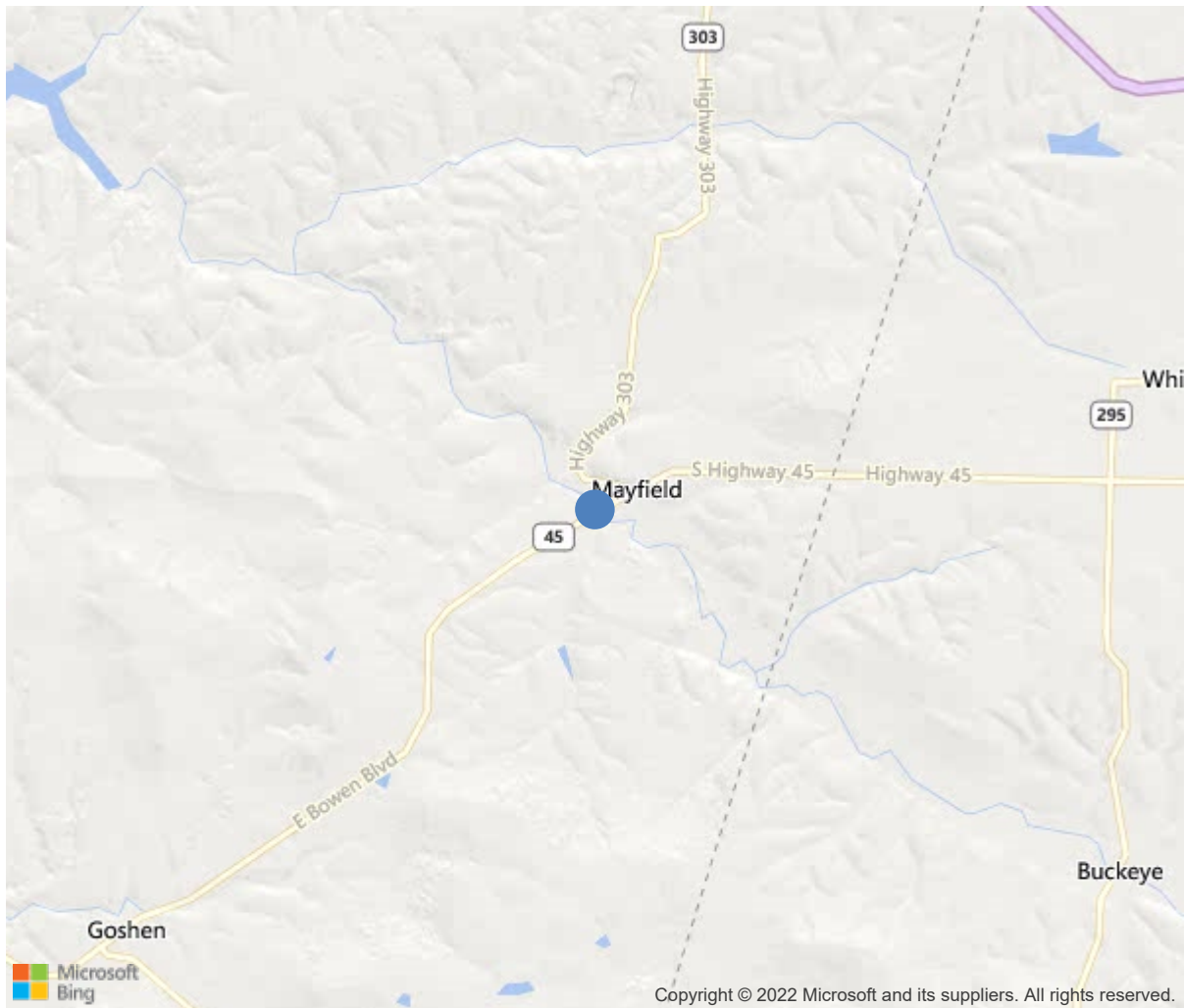
Route:45 Section:05 Log:14.257

Arnold Road ID:72x45x5xA, Arnold Log mile:14.246

District 04, Washington County

Owner: 1-State Highway Agency

1.23 MI W OF MADISON CO



36.13173, -93.94810

Inspection Direction : W to E



Bridge #02712(Routine, Underwater type 2)

State Highway 45 over Brush Creek-Washington

Location: 1.23 MI W OF MADISON CO

Team Lead: Eric West Inspection Date: August 22, 2022

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	02712
(5) Inventory Route	45
(2) Highway Agency District	04
(3) County Code	143-Washington County, Arkansas
(4) Place Code	0
(6) Features Intersected	Brush Creek-Washington
(7) Facility Carried	State Highway 45
(9) Location	1.23 MI W OF MADISON CO
(11) Mile Point	14.257 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	36.13173
(17) Longitude	-93.9481
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4-Steel continuous
Type	2-Stringer/Multi-beam or girder
(44) Approach Structure Type	00
Material	0-Other
Type	0-Other
(45) No. of Spans in Main Unit	4
(46) No. of Approach Spans	0
(107) Deck Structure Type	1-Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	1-Monolithic Concrete (concurrently placed
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1950
(106) Year Reconstructed	2003
(42) Type of Service	15
On	1-Highway
Under	5-Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	3900
(30) Year of ADT	2018
(109) Truck ADT	6 %
GEOMETRIC DATA	
(48) Length of Maximum Span	50 ft
(49) Structure Length	202 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	39.4 ft
(52) Deck Width Out to Out	42.4 ft
(32) Approach Roadway Width (W/Shoulders)	40 ft
(33) Bridge Median	0-No median
(34) Skew	0 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	40.7 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	99.9 ft
Ref:	
(56) Min Lat Underclear LT	0 ft
NAVIGATION DATA	
(38) Navigation Control	0-No navigation control on water
(111) Pier Protection	1-Navigation protection not requ
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	0 ft
(40) Navigation Horizontal Clearance	0 ft

CLASSIFICATION	
(112) NBIS Bridge Length	Y
(104) Highway System	0
(26) Functional Class	7-Rural Major Collector
(100) Defense Highway	0-The inventory route is not a S
(101) Parallel Structure	N-No parallel structure exists.
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0-N/A
(110) Designated National Network	0-The inventory route is not part of
(20) Toll	3-On free road. The structure is toll-
(21) Maintain	1-State Highway Agency
(22) Owner	1-State Highway Agency
(37) Historical Significance	5-Bridge is not eligible for the NRHP
CONDITION	
(58) Deck	7
(59) Superstructure	7
(60) Substructure	6
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5-MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1-Load Factor(LF)
Rating	60
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	4
Rating	36
(70) Bridge Posting	5-Equal to or above legal loads
(41) Structure Open/Posted/Closed	A-Open, no restriction
APPRAISAL	
(67) Structural Evaluation	7
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	1-Inspected feature meets currently a
(36B) Transitions	1-Inspected feature meets currently a
(36C) Approach Guardrail	1-Inspected feature meets currently a
(36D) Approach Guardrail Ends	1-Inspected feature meets currently a
(113) Scour Critical Bridges	8-Bridge foundations determined to be
PROPOSED IMPROVEMENTS	
(75) Type of Work	Replacement of bridge or other
(76) Length of Structure Improvement	235 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 125
(96) Total Project Cost	\$ 541
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	4641
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	08/2022		
(91) Frequency	24 Months		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	No		
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			



Bridge #02712(Routine, Underwater type 2)

State Highway 45 over Brush Creek-Washington

Location: 1.23 MI W OF MADISON CO

Team Lead: Eric West, Inspection Date: August 22, 2022

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	8500	6650	1850	0	0
1120	Efflorescence/Rust Staining	SF	56	0	56	0	0
1130	Cracking (RC and Other)	SF	1794	0	1794	0	0
(12)	-There are transverse hairline cracks with light efflorescence at variable spacing visible from the undersurface of the overhang. -The gutters have areas with hairline map cracking that are visible from the driving surface of the deck. -The driving surface of the deck has sealable longitudinal and transverse cracks at variable spacing.						
107	Steel Open Girder/Beam	LF	1200	1198	0	2	0
1000	Corrosion	LF	2	0	0	2	0
515	Steel Protective Coating	SF	10326	0	10324	2	0
3430	Oxide Film Degradation Color/Texture Adherence(Steel Protective Coatings)	SF	10326	0	10324	2	0
(107)	-Abutment # 1 Beam # 5 & Abutment # 2 Beam #6 has active corrosion with pack rust forming at the expansion dam. -No visible cracks in the steel beams.						
205	Reinforced Concrete Column	EA	6	6	0	0	0
(205)	-Substructure columns have no apparent noteworthy deficiencies at this inspection.						
215	Reinforced Concrete Abutment	LF	122	48	74	0	0
1120	Efflorescence/Rust Staining	LF	9	0	9	0	0
1130	Cracking (RC and Other)	LF	65	0	65	0	0
(215)	-There are vertical hairline shrinkage cracks with light efflorescence in the backwalls of both abutments. -There are transverse hairline cracks in the top of the back walls that are visible from the driving surface of the deck. -Stains on the abutments indicate that the deck joint seals leak in areas. Abutment # 1 - -Abutment #1 backwall has map cracking and water staining with a few random cracks with efflorescence buildup. Abutment # 2 - Bent # 5 has cracking in the face of the back wall.						
234	Reinforced Concrete Pier Cap	LF	123	101	22	0	0
1130	Cracking (RC and Other)	LF	22	0	22	0	0
(234)	-The intermediate bent caps have vertical hairline cracks.						
302	Compression Joint Seal	LF	85	0	0	85	0

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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
2310	Leakage	LF	85	0	0	85	0
(302)							
-Joints have debris impaction in the gutter lines. -Deck joint seals are in place with a few areas that are raised above the driving surface of the deck. -The deck joints appear to leak water.							
310	Elastomeric Bearing	EA	30	20	0	10	0
1000	Corrosion	EA	10	0	0	10	0
(310)							
-Abutment #1 & 2 masonry plates have active corrosion with pack rust. -The elastomeric bearing pads at the intermediate bents have no apparent noteworthy deficiencies at this inspection.							
331	Reinforced Concrete Bridge Railing	LF	400	0	362	38	0
1130	Cracking (RC and Other)	LF	400	0	362	38	0
(331)							
-There are longitudinal cracks in the top of the parapet walls. -There are superficial hairline map cracks in the face of parapets typical.							



Roadway



Typical driving surface of the deck.



Typical undersurface of the deck.



Sealable deck cracking.



Abutment #2 typical.



Abutment #1 typical.



Abutment #2 compression joint seal.



Abutment #1 compression joint seal.



Abutment #1 typical elastomeric bearings.

Maintenance Needs

Date Reported: 08/23/2012
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Inspection Direction W to E
Component: 12 - Reinforced Concrete Deck

Deficiency Description

Deck-
There are sealable transverse and longitudinal cracks in the driving surface of the deck.

Remarks



Deck. Sealable longitudinal crack.



Sealable longitudinal crack.



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Team Lead: Eric West Inspection Date: August 22, 2022

Date Reported: 07/17/2018
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Inspection Direction W to E
Component: 302 - Compression Joint Seal

Deficiency Description

Compression Joint Seals-
The compression joint seals leak water on the bearings and substructure.

Remarks



Right side of Bent # 5. Leaking expansion joint seal.



Bent # 5 expansion joint.



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Expansion joint seal. Right side of Bent # 5.

Date Reported: 07/17/2018
Priority: D- Routine
Type of Work: Repair
Status: Monitor
Inspection Direction W to E
Component: 310 - Elastomeric Bearing

Deficiency Description

Elastomeric Bearing Pads at the Abutments -

The masonry plates have active corrosion with flaking rust at the abutments where the expansion joint seals leak.

Remarks



Bent # 1. Beam # 5. Active corrosion in the masonry plate.



Bent 1 Girder 3 & 4 Flaking rust

Date Reported: 08/22/2022
Priority: C - Important
Type of Work: Repair
Status: Open
Inspection Direction W to E
Component: Approach

Deficiency Description

Approach Roadway-

- The northeast and northwest approach guardrail end terminals have loose anchorage attaching the end terminal to the wood posts.
- The northeast approach guardrail has fractured wood blocks between the guardrail and the rail posts.

Remarks



Northeast approach guardrail end terminal.



Northeast approach guardrail with fractured wood spacer blocks.



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Northwest approach guardrail collision with a damaged post.



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Team Lead: Eric West **Inspection Date:** August 22, 2022

Date Reported: 08/22/2022
Priority: C - Important
Type of Work: Clean
Status: Open
Inspection Direction W to E
Component: Channel

Deficiency Description

Channel-
Drift accumulation at bent # 3.

Remarks



Bent #3 drift accumulation.



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Team Lead: Eric West **Inspection Date:** August 22, 2022

Inspection Comments

08/22/2022 - EJW & JPW - Routine and Underwater Type II Inspection conducted on this date.

07/17/2018 - JCJ & TJL - Type 2 Underwater Inspection - Wading and probing along with visual observation during low and clear water conditions indicate that the footings have cover with no apparent scour problems at this inspection.