



Latitude:35.92825, Longitude:-93.68330

Route:23 Section:08 Log:15.4

Arnold Road ID:44x23x8xA, Arnold Log mile:15.305

District 09, Madison County

Owner: 1-State Highway Agency



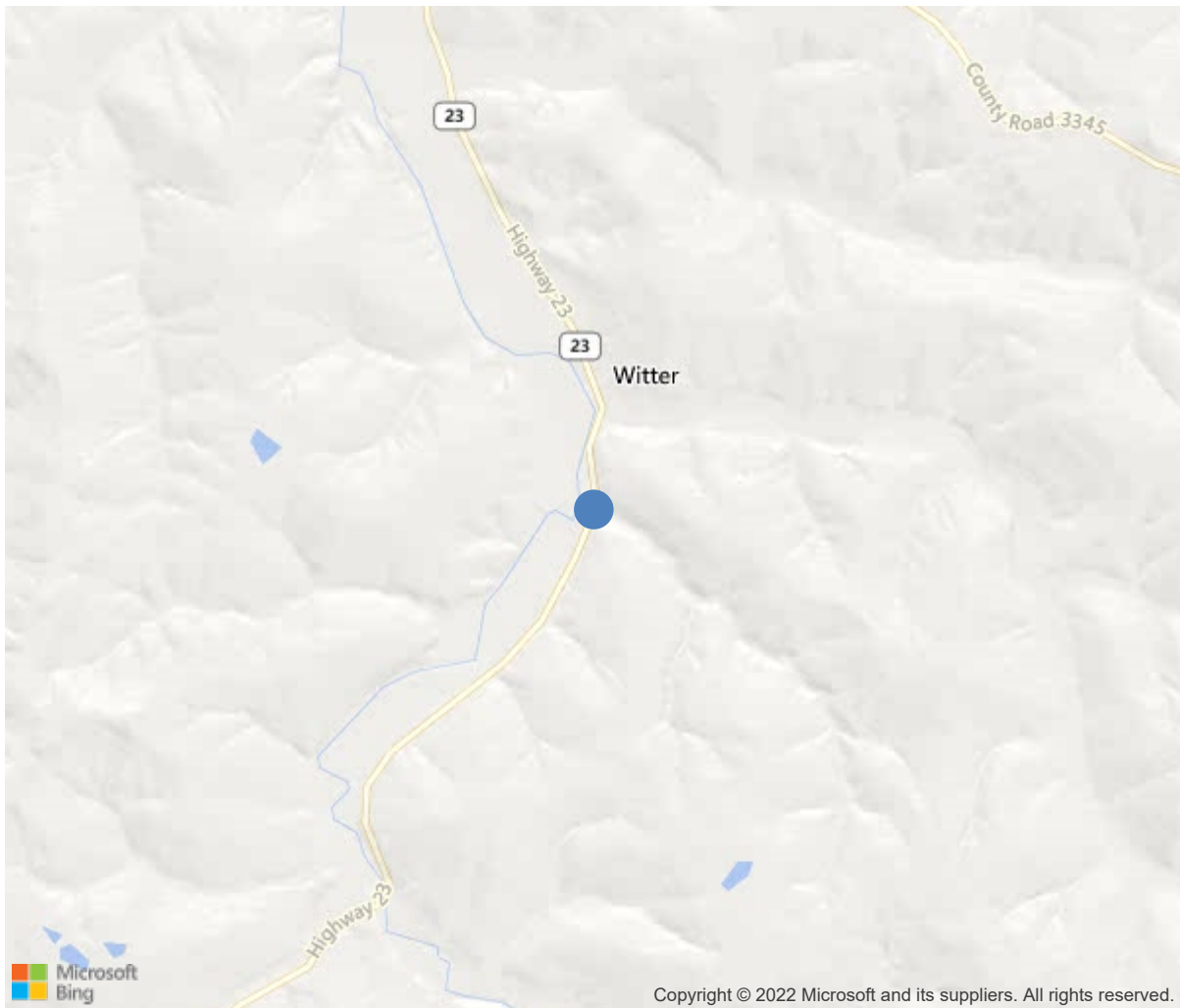
Bridge #02947(Routine, Underwater type 2)

SH 23 Madison over SLOW TOM CR

Location: .75 MI S OF WITTER

Team Lead: Nathan Rowland **Inspection Date:** September 08, 2022

.75 MI S OF WITTER



35.92825, -93.68330

Inspection Direction : S to N



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Location: .75 MI S OF WITTER

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IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	02947
(5) Inventory Route	23
(2) Highway Agency District	09
(3) County Code	87-Madison County, Arkansas
(4) Place Code	0
(6) Features Intersected	SLOW TOM CR
(7) Facility Carried	SH 23 Madison
(9) Location	.75 MI S OF WITTER
(11) Mile Point	15.4 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000023080
(16) Latitude	35.92825
(17) Longitude	-93.6833
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	11
Material	1-Concrete
Type	1-Slab
(44) Approach Structure Type	00
Material	0-Other
Type	0-Other
(45) No. of Spans in Main Unit	2
(46) No. of Approach Spans	0
(107) Deck Structure Type	1-Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6-Bituminous
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1955
(106) Year Reconstructed	0
(42) Type of Service	15
On	1-Highway
Under	5-Waterway
(28) Lane	
On	2
Under	0
(29) Average Daily Traffic	1100
(30) Year of ADT	2018
(109) Truck ADT	13 %
(19) Bypass, Detour Length	18 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	28 ft
(49) Structure Length	56 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	24 ft
(52) Deck Width Out to Out	28.5 ft
(32) Approach Roadway Width (W/Shoulders)	22 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	25.9 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	6-Rural Minor Arterial
(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	5
(59) Superstructure	5
(60) Substructure	6
(61) Channel & Channel Protection	6
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	2-M 13.5 / H 15
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1-Load Factor(LF)
Rating	45
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	2
Rating	27
(70) Bridge Posting	5-Equal to or above legal loads
(41) Structure Open/Posted/Closed	A-Open, no restriction
APPRAISAL	
(67) Structural Evaluation	5
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	7
(36A) Bridge Railings	0-Inspected feature does not meet cur
(36B) Transitions	0-Inspected feature does not meet cur
(36C) Approach Guardrail	0-Inspected feature does not meet cur
(36D) Approach Guardrail Ends	0-Inspected feature does not meet cur
(113) Scour Critical Bridges	5-Bridge foundations determined to be
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	0 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 0
(97) Year of Improvement Cost Estimate	
(114) Future ADT	1152
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			09/2022
(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	Yes		09/2020
* 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.			



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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	1344	497	24	823	0
1080	Delamination/Spall/Patched Area	SF	24	0	24	0	0
1120	Efflorescence/Rust Staining	SF	823	0	0	823	0
510	Wearing Surfaces	SF	1344	1033	134	167	10
3220	Crack (Wearing Surface)	SF	311	0	134	167	10
(12)							
09/08/2022 WNR & DBM:							
-Driving surface has an asphalt overlay with areas of longitudinal and transverse cracking throughout with significant transverse cracking at all three joints.							
-The undersurface of the deck/superstructure has numerous areas of mapcracking with efflorescence. The most extreme areas are along the exterior edges and in the vertical faces which has heavy mapcracking with efflorescence and delaminated areas.							
-Maintenance forces have repaired the left and right concrete curb.							
(12-510)							
09/08/2022 WNR & DBM:							
-The ACHM wearings surface of the deck has multiple longitudinal and horizontal cracking in random locations throughout the surface of the deck.							
215	Reinforced Concrete Abutment	LF	56	56	0	0	0
(215)							
09/08/2022 WNR & DBM:							
-No apparent noteworthy deficiencies at this inspection.							
225	Steel Pile	EA	4	0	4	0	0
1000	Corrosion	EA	4	0	4	0	0
515	Steel Protective Coating	SF	136	0	0	62	74
3440	Effectiveness (Steel Protective Coatings)	SF	136	0	0	62	74
(225)							
09/08/2022 WNR & DBM:							
-All piling at the intermediate bent have a failing paint system with active corrosion on the majority of the piling that is exposed.							
-The previously documented section loss has been repaired by state maintenance forces. The repair is a complete replacement of the portion of steel piling that had the section loss.							
(225-515)							
09/08/2022 WNR & DBM:							
234	Reinforced Concrete Pier Cap	LF	28	0	9	19	0
1080	Delamination/Spall/Patched Area	LF	9	0	9	0	0

Team Lead: Nathan Rowland, **Inspection Date:** September 08, 2022

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1120 (234)	Efflorescence/Rust Staining	LF	19	0	0	19	0
09/08/2022 WNR & DBM: -Bent #1 cap left and right sides - maintenance forces have repaired the ends of the caps with cast-in-place concrete. -The cap has chloride contamination with heavy mapcracking and efflorescence throughout with delaminated areas in locations.							
330	Metal Bridge Railing	LF	112	79	26	7	0
1010	Cracking	LF	33	0	26	7	0
515	Steel Protective Coating	SF	354	0	0	354	0
3440 (330)	Effectiveness (Steel Protective Coatings)	SF	354	0	0	354	0
09/08/2022 WNR & DBM: -The concrete posts of the bridge railing have cracking with deteriorating concrete throughout. -The metal bridge railing has a failing paint system with a rust coating over the majority of the railing. -The previously documented damage to approach railing and end post on the right side of abutment #1 has been repaired since last inspection.							



Inventory looking north



View of bent #1 cap ahead side



View of span #1 undersurface



View of span #2 undersurface



Downstream view



Upstream view



General view of deck



General view of deck



General view of span #2



General view of span #1



Typical view of steel piling and cap at bent #1.



Upstream view



Downstream view.



Inventory looking North



Inventory 1 looking north.



Bent 1 ahead side.



General view of piling.



General view of deck.



Span 1 typical cracking with efflorescence.



Bottom of railing posts left side.



Bent 1 behind side.



Span 1 typical cracking with efflorescence.



Bridge railing left.



Typical repair to steel piling.



Elevation looking west.



Bridge railing right.



Bottom of railing posts right side.



Elevation looking East

Maintenance Needs

Date Reported: 09/12/2017

Priority: D- Routine

Type of Work: None

Status: Monitor

Inspection Direction S to N

Component:

Deficiency Description

Superstructure - The undersurface of the deck / superstructure has numerous areas of mapcracking with efflorescence. The most extreme areas are along the exterior edges and in the vertical faces which has heavy mapcracking with efflorescence and delaminated areas.

Remarks



Deck undersurface Span #1 typical view of cracking with efflorescence.



Right side of deck at abutment #2 - shear type crack.



General view of side of bridge showing cracking and efflorescence.

Date Reported: 09/12/2017
Priority: C - Important
Type of Work: None
Status: Monitor
Inspection Direction S to N
Component:

Deficiency Description

Substructure - The intermediate bent cap has chloride contamination with heavy map cracking and efflorescence with delaminated areas in the lower portion of the cap.

Remarks



General view of bent #1 looking South.

Date Reported: 09/12/2017

Priority: D- Routine

Type of Work: None

Status: Monitor

Inspection Direction S to N

Component:

Deficiency Description

The concrete portion of the bridge railing has concrete deterioration mapcracking with efflorescence.

Remarks



Bottom of railing posts right side.



General view of side of bridge showing cracking and efflorescence.



Bottom of railing posts left side.



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Inspection Comments

09/08/2022 WNR & DBM:

Routine and Underwater type II inspections conducted this date. See Element notes for documentation.

Logged South to North.

Deck Notes

Superstructure Notes

Substructure Notes