



Latitude:35.77883, Longitude:-93.79604

Route:23 Section:08 Log:0.6

Arnold Road ID:44x23x8xA, Arnold Log mile:0.539

District 09, 87 - Madison County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

Bridge Posting Information

41 - Structure Open/Posted/Closed: A - Open, no restriction

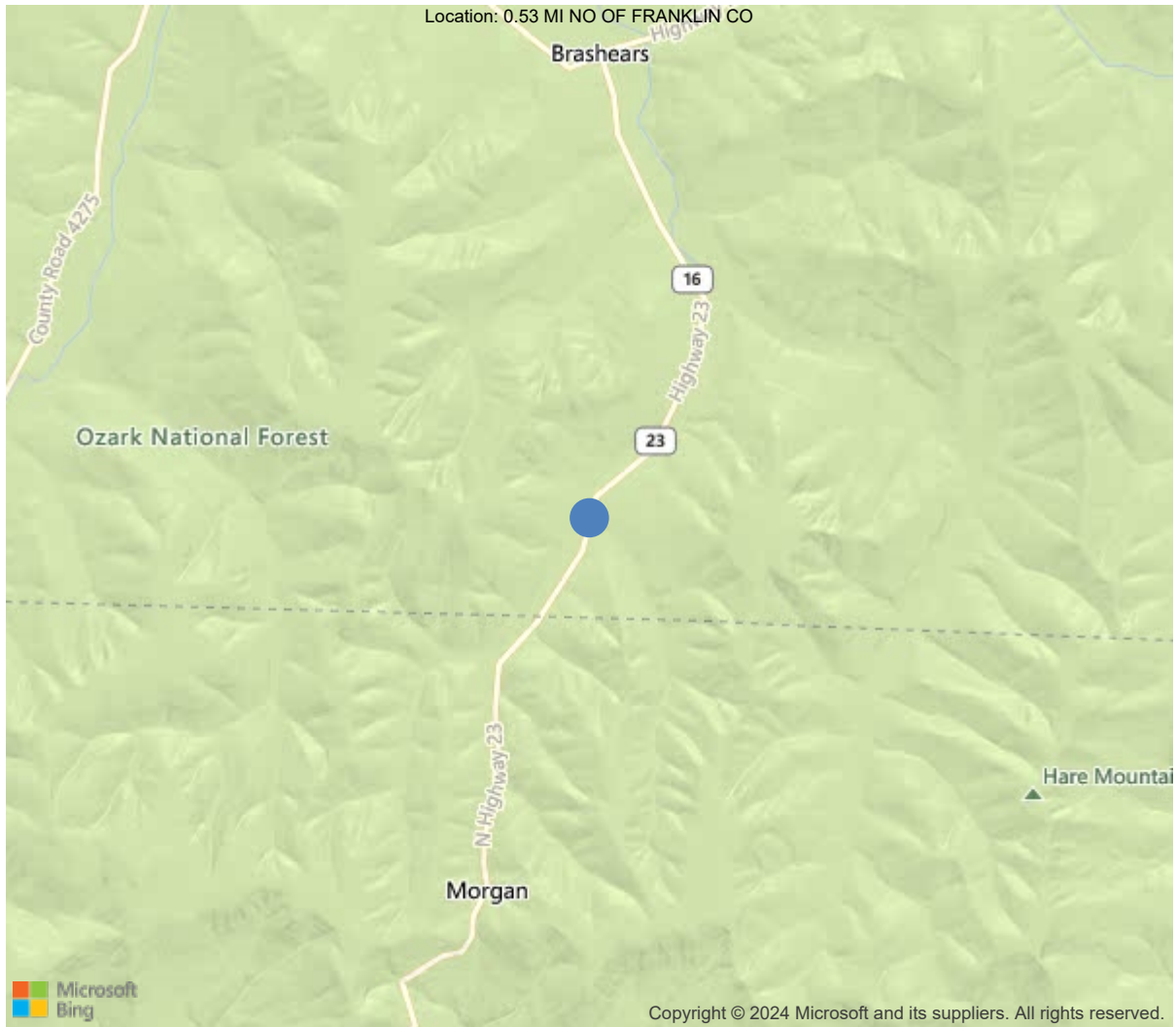
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	29		
Code 9 (31 Tons)	34		
Code 5 (40 Tons)	43		

If calculated Capacity is less than the Legal Load Listed, the Bridge Legally Requires Posting Signs to be installed by the Bridge Owner



30"x36" AR



35.77883, -93.79604



Asset #M0547(Routine, Underwater type 2)

Madison Co. SH 23 over CREEK

Location: 0.53 MI NO OF FRANKLIN CO

Team Lead: Nathan Rowland Inspection Date: 11/02/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	M0547
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	87 - Madison County
(4) Place Code	0
(6) Features Intersected	CREEK
(7) Facility Carried	Madison Co. SH 23
(9) Location	0.53 MI NO OF FRANKLIN CO
(11) Mile Point	0.6 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000023080
(16) Latitude	35.77883
(17) Longitude	-93.79604
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	32
Material	3 - Steel
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	1
(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	1963
(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	770
(30) Year of ADT	2018
(109) Truck ADT	17 %
(19) Bypass, Detour Length	55 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	28 ft
(49) Structure Length	30 ft
(50) Curb or Sidewalk Width	
Left	0.4 ft
Right	0.4 ft
(51) Bridge Roadway Width Curb to Curb	24.3 ft
(52) Deck Width Out to Out	25.7 ft
(32) Approach Roadway Width (W/Shoulders)	21 ft
(33) Bridge Median	0 - No median
(34) Skew	0 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	25.3 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 w
(111) Pier Protection	1 - Navigation protection not
(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
(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
(20) Toll	3 - On free road. The structure
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	5
(59) Superstructure	4
(60) Substructure	5
(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	51
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	31
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(36D) Approach Guardrail Ends	0 - Inspected feature does not meet
(113) Scour Critical Bridges	5 - Bridge foundations determined to
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	1139
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	11/02/2023		
(91) Frequency	24		
(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.			



Asset #M0547(Routine, Underwater type 2)

Madison Co. SH 23 over CREEK

Location: 0.53 MI NO OF FRANKLIN CO

Team Lead: Nathan Rowland **Inspection Date:** 11/02/2023

General Observation

11/02/2023- WNR & DBM: Routine and Underwater type II inspections conducted this date. See element notes for documentation.

Special recurring inspection conducted this date to monitor the condition of the superstructure. See element notes for documentation.

Logged South to North.

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	732	529	38	165	0
1080	Delamination/Spall/Patched Area	SF	64	0	38	26	0
1120	Efflorescence/Rust Staining	SF	139	0	0	139	0
510	Wearing Surfaces	SF	732	654	78	0	0
3220	Crack (Wearing Surface)	SF	78	0	78	0	0
(12) 11/02/2023- WNR & DBM:							
-The deck has an asphalt overlay with longitudinal and transverse cracking in the asphalt. The undersurface of the deck is showing signs of leaching with efflorescence and rust staining in the visible portion of the bays between the beams, with efflorescence map cracking and spalling with no rebar exposed on the left and right deck edges. -Maintenance forces have constructed new cast-in-place concrete curbs since last inspection. -The left and right exterior sides of the deck are deteriorated and spalling the full length of structure.							
107	Steel Open Girder/Beam	LF	990	16	927	45	2
1000	Corrosion	LF	970	0	923	45	2
1900	Distortion	LF	4	0	4	0	0
515	Steel Protective Coating	SF	2640	1940	0	0	700
3440	Effectiveness (Steel Protective Coatings)	LF	700	0	0	0	700
(107) 11/02/2023- WNR & DBM:							
33 painted steel beam system. -Maintenance forces have repaired the deteriorated girders in several locations. Portions of the superstructure have a new paint system. Rust is beginning to bleed through the new paint in many locations. -Girder #1-The bottom 6" of Girder #1 has been replaced in an area 19' long. Girder #1 adjacent abutment #1 splice cover plate has separated from bottom flange on the t-splice side. Welds have deteriorated causing pack rust. -Girders #2 ,#3 ,#4 and #5 have areas of knife edged section loss to bottom flanges in random locations. -Numerous girders have areas of light to moderate pitting that is reflecting through new steel protective coating in random locations. -Girder #25-The bottom 6" of Girder #25 has been replaced in an area 19'-9" long -Girder #28 has section loss that has reduced the width right side of bottom flange from 4 5/8" to 3 5/8" at its deepest point in an area approximately 3.5' long approximately 4' from abutment #2. -Girder #28 has section loss that has reduced the width right side of bottom flange from 4 5/8" to 4" at its deepest point in an area approximately 2.5' long approximately 11.5' from abutment #2. -Girder #33 (right exterior girder)-The bottom 6" of girder has been replaced the entire length of girder. All repairs appear to be holding at this inspection. -Girders #23 - #33 have areas of active corrosion. (these are the worst cases when compared to the rest of the superstructure.)							
215	Reinforced Concrete Abutment	LF	56	13	21	22	0
1120	Efflorescence/Rust Staining	LF	14	0	0	14	0
1130	Cracking (RC and Other)	LF	4	0	4	0	0
1190	Abrasion/Wear (PSC/RC)	LF	25	0	17	8	0
(215) 11/02/2023- WNR & DBM:							
-Abutment #1 has one vertical crack in the breastwall and three vertical cracks in the cap on the left side. The bridge seat portion of							

[illegible]



Elevation looking west



Inventory looking north



General View of Superstructure



View of abutment #1



General view of abutment #2



Flaking rust and section loss to girders on east side of bridge



Upstream view



General view of deck



Downstream view



Elevation looking east



General view of superstructure



Inventory looking north



Upstream view



Downstream view



Elevation view. Log mile from left to right.



Upstream channel view.



Downstream channel view



Upstream view



Downstream view



Inventory looking north



Approach view in direction of log mile.



View of abutment #2



View of active corrosion to girders typical for right side of structure



Left side of deck in overhang area spalling that exposes the top flange of girder.



06/09/2020

IMG_5318



06/09/2020

View of superstructure



06/09/2020

View of abutment #1



06/09/2020

Inventory Looking North



Elevation looking West



General view of deck



Cracking in the north bound lanes wearing surface



Elevation looking west.



General view of deck



General view of the driving surface.



View of superstructure.



Railing left adjacent abutment #2 minor collision damage.



Railing left adjacent abutment #2 minor collision damage.

Maintenance Needs

Date Reported: 11/18/2021

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component:

Deficiency Description

Pack rust is separating the bottom flange splice plate welds on beam #1 near abutment #1.

Remarks

Bridge Crew



Pack rust is separating the bottom flange splice plate welds on beam #1 near abutment #1.



Girder #1 adjacent abutment #1 splice cover plate has separated from bottom flange on the t-splice side. Welds have deteriorated causing packrust.

Maintenance Needs

Date Reported: 11/16/2011

Priority: D- Routine

Type of Work: (Inactive) (Inactive) 9 - None

Status: Monitor

Component:

Deficiency Description

Bridge railing - The bridge railing on the left side at end has loose anchorage.

Remarks



Bent 2 left - bridge rail anchorage is loose.

Maintenance Needs

Date Reported: 11/07/2013

Priority: D- Routine

Type of Work: (Inactive) (Inactive) 9 - None

Status: Monitor

Component:

Deficiency Description

Superstructure - Girder #28 has significant section loss to the bottom flange in several locations. The most notable is an area of section loss that has reduced the width of the bottom flange up to 1" in an area approximately 2' long located approximately 6' from abutment #2. Beams #2,3,4,5 and 26,27 also have section loss down to knife edge on the bottom flange in some locations. The superstructure has a failing paint system with moderate pitting to the bottom flanges in several locations.

Remarks



Girder #28 has section loss that has reduced the width of bottom flange up to 1" in an area approximately 2' long and in a few other random locations.



Girder #28 has section loss that has reduced the width of bottom flange up to 1" in an area approximately 2' long and in a few other random locations.



Girder #28-Section loss to bottom flange.



Girder #28 has significant section loss to the bottom flange



View of girders with flaking rust



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Location: 0.53 MI NO OF FRANKLIN CO

Team Lead: Nathan Rowland Inspection Date: 11/02/2023

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	
A-55 - Deck Washing Needed	
A-56 - Joint Cleaning/Flushing Needed	
A-57 - Beam End and Bearing Paint Needed	
A-58 - Cap Cleaning/Flushing Needed	
A-59 - Joint Repair Needed	
A-60 - Full Beam Painting Needed	
A-61 - Polymer Overlay Advised	
A-62 - Hydro and LMC Advised	
A-63 - Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	

A-54 - Sealable Deck Cracks

A-55 - Deck Washing Needed

A-56 - Joint Cleaning/Flushing Needed



Asset #M0547(Routine, Underwater type 2)

Madison Co. SH 23 over CREEK

Location: 0.53 MI NO OF FRANKLIN CO

Team Lead: Nathan Rowland Inspection Date: 11/02/2023

A-57 - Girder End and Bearing Painting Needed

A-58 - Cap Cleaning/Flushing Needed

A-59 - Joint Repair Needed

A-60 - Full Girder Painting Needed

A-61 - Polymer Overlay Advised

A-62 - Hydro and LMC Advised

A-63 - Missing/Incorrect Log Mile Signage

A-64 - Vegetation Removal Requested



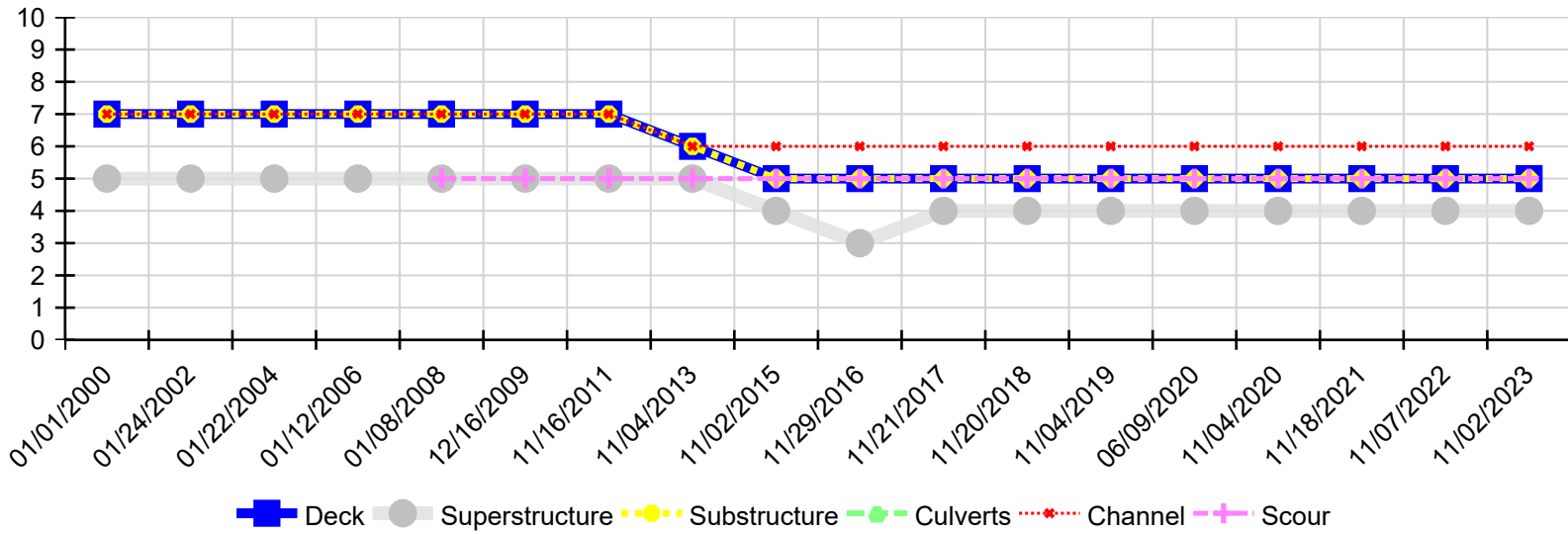
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Madison Co. SH 23 over CREEK

Location: 0.53 MI NO OF FRANKLIN CO

Team Lead: Nathan Rowland Inspection Date: 11/02/2023

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
11/02/2023	5	4	5	N	6	5
11/07/2022	5	4	5	N	6	5
11/18/2021	5	4	5	N	6	5
11/04/2020	5	4	5	N	6	5
06/09/2020	5	4	5	N	6	5
11/04/2019	5	4	5	N	6	5
11/20/2018	5	4	5	N	6	5
11/21/2017	5	4	5	N	6	5
11/29/2016	5	3	5	N	6	5
11/02/2015	5	4	5	N	6	5
11/04/2013	6	5	6	N	6	5
11/16/2011	7	5	7	N	7	5
12/16/2009	7	5	7	N	7	5
01/08/2008	7	5	7	N	7	5
01/12/2006	7	5	7	N	7	N
01/22/2004	7	5	7	N	7	N
01/24/2002	7	5	7	N	7	N
01/01/2000	7	5	7	N	7	N