

Bridge 05438 Inspection Report



Latitude:33.84265, Longitude:-92.46944

Route:8 Section:07 Log:14.54

Arnold Road ID:20x8x7xA, Arnold Log mile:14.551

District 07, 39 - Dallas County

Owner: 1 - State Highway Agency

Inspection Direction: 4 - W to E

Bridge Posting Information

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

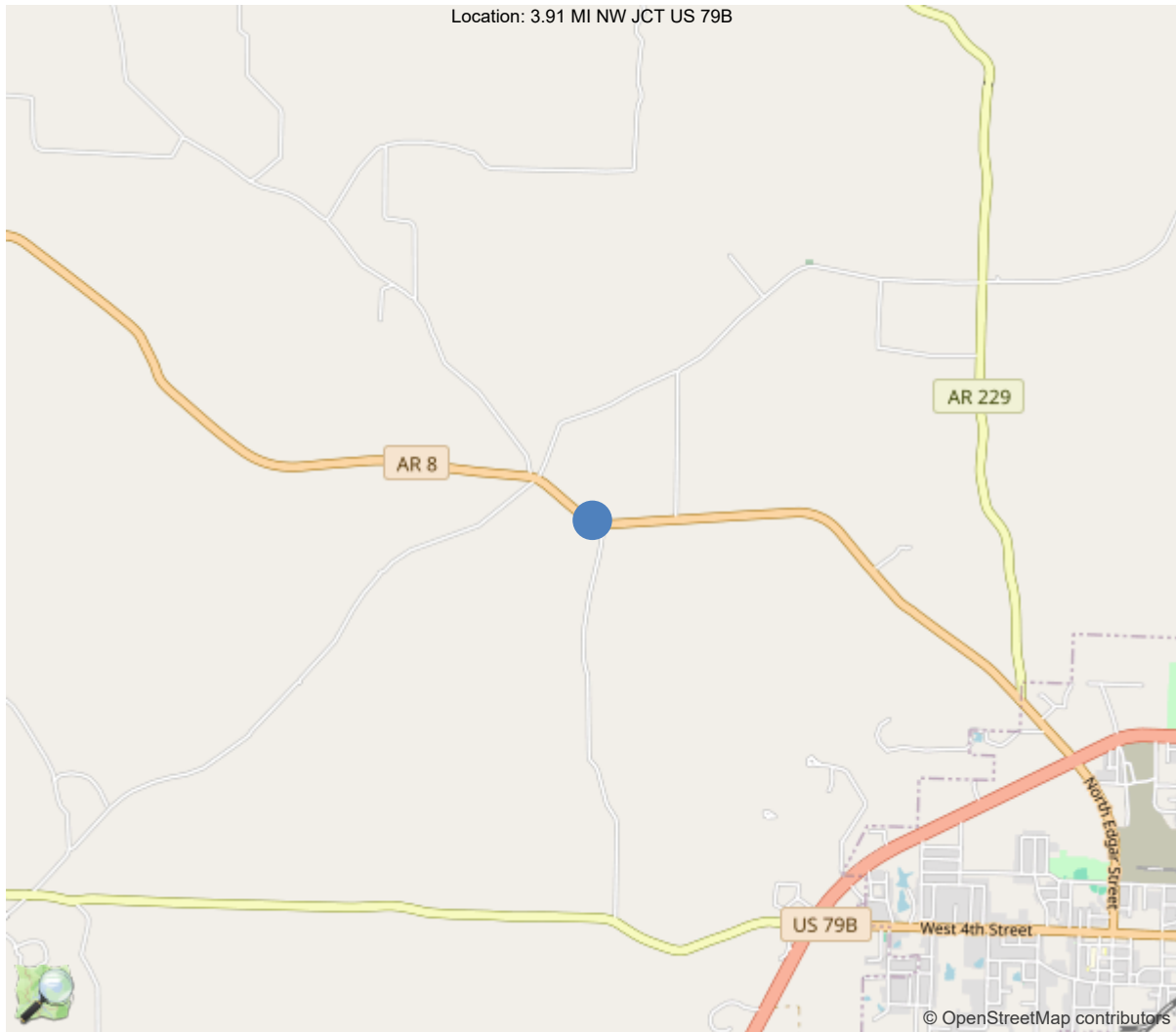
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	37		
Code 9 (31 Tons)	43		
Code 5 (40 Tons)	57		

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



33.84265, -92.46944

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	05438
(5) Inventory Route	1
(2) Highway Agency District	07 - District 07
(3) County Code	39 - Dallas County
(4) Place Code	0
(6) Features Intersected	COOKS CREEK
(7) Facility Carried	SH 8
(9) Location	3.91 MI NW JCT US 79B
(11) Mile Point	14.54 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000008070
(16) Latitude	33.84265
(17) Longitude	-92.46944
(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	3
(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 pl
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1976
(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	800
(30) Year of ADT	2018
(109) Truck ADT	19 %
(19) Bypass, Detour Length	10 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	25 ft
(49) Structure Length	75 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	28.2 ft
(52) Deck Width Out to Out	31 ft
(32) Approach Roadway Width (W/Shoulders)	34.1 ft
(33) Bridge Median	0 - No median
(34) Skew	45 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	29.5 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	7
(59) Superstructure	7
(60) Substructure	6
(61) Channel & Channel Protection	5
(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	
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	
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	7
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	1 - Inspected feature meets current
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	5 - Bridge foundations determined t
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	880
(115) Year of Future ADT	2038

INSPECTIONS *			
(90) Inspection Date			02/12/2024
(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.			

Team Lead: Rickie Bratton, Inspection Date: 02/12/2024

Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	05438
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	M0236
B.W.01 Year Built	1976

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	39 - Dallas County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	07 - District 07
B.L.05 Latitude	33.84265
B.L.06 Longitude	-92.46944
B.L.07 Border Bridge Number	
B.L.08 Border Bridge State or Country Code	
B.L.09 Border Bridge Insp. Resp.	
B.L.10 Border Bridge Designated Lead State	
B.L.11 Bridge Location	3.91 MI NW JCT US 79B
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	S01 - State transportation departme
B.CL.02 Maint. Responsibility	S01 - State transportation departme
B.CL.03 Federal or Tribal Land Access	N - Not Applicable
B.CL.04 Historic Significance	N - Bridge is not eligible for the
B.CL.05 Toll	N - Bridge does not carry a toll ro
B.CL.06 Emergency Evacuation Designation	

ROADSIDE HARDWARE	
B.RH.01A Bridge Railing Type	
B.RH.01B Bridge Railing Year (YY)	
B.RH.01C Bridge Railing Test Level	
B.RH.02A Transition Type	
B.RH.02B Transition Year (YY)	
B.RH.02C Transition Test Level	

BRIDGE GEOMETRY	
B.G.01 NBIS Bridge Length	75.1
B.G.02 Total Bridge Length	75.1
B.G.03 Max Span Length	24.9
B.G.04 Min Span Length	25
B.G.05 Bridge Width Out-to-Out	30.8
B.G.06 Bridge Width Curb-to-Curb	28.2
B.G.07 Left Curb or Sidewalk Width	0
B.G.08 Right Curb or Sidewalk Width	0
B.G.09 Approach Roadway Width	34.1

B.G.10 Bridge Median	0 - No median
B.G.11 Skew	45
B.G.12 Curved Bridge	N - Not curved
B.G.13 Max Bridge Height	14
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	2317

LOADS AND LOAD RATING	
B.LR.01 Design Load	HS20 - HS-20
B.LR.02 Design Method	
B.LR.03 Load Rating Date	
B.LR.04 Load Rating Method	LFR - Load Factor Rating
B.LR.05 Inventory Load Rating Factor	1
B.LR.06 Operating Load Rating Factor	1.67
B.LR.07 Controlling Legal Load Rating Factor	
B.LR.08 Routine Permit Loads	

INSPECTION REQUIREMENTS	
B.IR.01 NSTM Inspection Required	N - NSTM inspection not required.
B.IR.02 Fatigue Details	N - No E/E' details
B.IR.03 UW Inspection Required	N - Underwater inspection not requi
B.IR.04 Complex Feature	N - Bridge does not have complex fe

COMPONENT CONDITION RATINGS	
B.C.01 Deck Condition Rating	7 - GOOD - Some minor defects.
B.C.02 Superstructure Condition	7 - GOOD - Some minor defects.
B.C.03 Substructure Condition	7 - GOOD - Some minor defects.
B.C.04 Culvert Condition	N - NOT APPLICABLE - Component
B.C.05 Bridge Railing Condition	8 - VERY GOOD - Some inherent
B.C.06 Bridge Railing Transitions Condition	8 - VERY GOOD - Some inherent
B.C.07 Bridge Bearings Cond.	N - NOT APPLICABLE - Component
B.C.08 Bridge Joints Condition	7 - GOOD - Some minor defects.
B.C.09 Channel Condition Rating	5 - FAIR - Moderate defects; b
B.C.10 Channel Protection Condition	
B.C.11 Scour Condition Rating	5 - Moderate scour; strength a
B.C.12 Bridge Condition Classification	G - Good
B.C.13 Lowest Condition Rating	7 - GOOD - Some minor defects.
B.C.14 NSTM Insp. Condition	
B.C.15 UW Inspection Condition	

APPRAISAL	
B.AP.01 Approach Roadway Alignment	G - Good
B.AP.02 Overtopping Likelihood	VLM-T - TEMP - Very low to moderate
B.AP.03 Scour Vulnerability	AB-T - TEMP - Stable for scour, pos
B.AP.04 Scour Plan of Action	0 - A scour POA is not required.
B.AP.05 Seismic Vulnerability	0 - Seismic evaluation not complete

Team Lead: Rickie Bratton, Inspection Date: 02/12/2024

SPAN SETS			
M1			
B.SP.02 # of Spans	3	B.SP.08 Deck Interaction	IM - Integral or monolithic
B.SP.03 # of Beam Lines	1	B.SP.09 Deck Material and Type	C01 - Reinforced concrete - ca
B.SP.04 Span Material	C01 - Reinforced concrete - ca	B.SP.10 Wearing Surface	C01 - Concrete - monolithic
B.SP.05 Span Continuity	1 - Simple or single span	B.SP.11 Deck Protective System	0 - None
B.SP.06 Span Type	S01 - Slab - solid	B.SP.12 Deck Reinforcing Protective System	0 - None
B.SP.07 Span Protective System	0 - None	B.SP.13 Deck Stay-In-Place Forms	0 - None

SUBSTRUCTURE SETS			
A1			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	PX - Pile - other
B.SB.04 Substructure Type	A02 - Abutment - stub	B.SB.07 Foundation Protective System	0 - None
P1			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	PX - Pile - other
B.SB.04 Substructure Type	B03 - Bent - pile	B.SB.07 Foundation Protective System	0 - None

HIGHWAY FEATURES			
H1			
B.F.02 Feature Location	C - Carried on bridge	B.H.09 Annual ADT	800
B.F.03 Feature Name	SH 8	B.H.10 Annual ADTT	152
B.H.01 Functional Classification	4 - Minor Arterial	B.H.11 Year of Annual ADT	2018
B.H.02 Urban Code	99999	B.H.12 Highway Max Usable Vertical Clearance	99.9
B.H.03 NHS Designation	N - Non-NHS	B.H.13 Highway Min Vertical Clearance	99.9
B.H.04 National Highway Freight Network	N - Not on the NHFN	B.H.14 Highway Min Horizontal Clearance, Left	
B.H.05 STRAHNET Designation	N - Not a STRAHNET route	B.H.15 Highway Min Horizontal Clearance, Right	
B.H.06 LRS Route ID	8070	B.H.16 Highway Max Usable Surface Width	29.1
B.H.07 LRS Mile Point	14.54	B.H.17 Bypass Detour Length	10
B.H.08 Lanes On Highway	2	B.H.18 Crossing Bridge Number	

HIGHWAY ROUTES					
Highway Parent	B.RT.01 Route Designation	B.RT.02 Route Number	B.RT.03 Route Direction	B.RT.04 Route Type	B.RT.05 Service Type
H1	R01	8	2-T - TEMP - Two-way traffic - NS or EW	3 - State route	1 - Mainline



Team Lead: Rickie Bratton, Inspection Date: 02/12/2024

WATERWAY FEATURES

W1

B.F.02 Feature Location	B - Below bridge	B.N.03 Movable Bridge Max Navigation Vertical Clearance	
B.F.03 Feature Name	COOKS CREEK	B.N.04 Navigation Channel Width	
B.N.01 Navigable Waterway	N - Not navigable waters	B.N.05 Navigation Channel Min Horizontal Clearance	
B.N.02 Navigation Min Vertical Clearance		B.N.06 Substructure Navigation Protection	

POSTING STATUS DATA

B.PS.01 Load Posting Status	B.PS.02 Posting Status Change Date
PO - Permanent - Open	

LOAD EVALUATION AND POSTING

B.EP.01 Legal Load Configuration	B.EP.02 Legal Load Rating Factor	B.EP.03 Posting Type	B.EP.04 Posting Value
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Asset #05438(Routine)

SH 8 over COOKS CREEK

Location: 3.91 MI NW JCT US 79B

Team Lead: Rickie Bratton Inspection Date: 02/12/2024

Inspection Notes

General Observation

-Structure logged West to East.
Rubber boots used for inspection.

58 - Deck (7 - GOOD CONDITION - some minor problems.)

Good Condition - Deck has areas of map cracking and exposed rebar on soffit.

59 - Superstructure (7 - GOOD CONDITION - some minor problems.)

Good Condition - Span 2 soffit has small exposed rebar with minimal section loss.

60 - Substructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Satisfactory Condition - Caps have exposed rebar with minimal section loss, abutments have scour full length, piles have light abrasion.



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SH 8 over COOKS CREEK

Location: 3.91 MI NW JCT US 79B

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National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	2325	571	1704	50	0
1090	Exposed Rebar	SF	4	0	4	0	0
1130	Cracking (RC and Other)	SF	1750	0	1700	50	0
(38) Minor cracks, slab edges @ bt 2 left have spalled @ joint.							
215	Reinforced Concrete Abutment	LF	62	15	47	0	0
6000	Scour	LF	47	0	47	0	0
(215) Minor scour/erosion along abutments 20'. Roadway settlement abutment 1.							
227	Reinforced Concrete Pile	EA	8	4	4	0	0
1190	Abrasion/Wear (PSC/RC)	EA	4	0	4	0	0
234	Reinforced Concrete Pier Cap	LF	62	51	11	0	0
1090	Exposed Rebar	LF	11	0	11	0	0
(234) Bent 3 cap bottom has spalls with exposed rebar, no measurable section loss.							
301	Pourable Joint Seal	LF	62	0	62	0	0
2320	Seal Adhesion	LF	62	0	62	0	0
(301) Worn and tattered, losing bond.							
331	Reinforced Concrete Bridge Railing	LF	150	150	0	0	0

Inspection Photos and Notes



Elevation



Profile



Elevation



Span 2 soffit exposed rebar ahead of bent 2.



02/13/2024

Span 2 soffit overview



02/13/2024

Deck overview



02/23/2022

Deck



02/25/2020

Span 3, map cracks



Span 2, map cracks



Deck overview



Underside span 2



Span 3 soffit



Bank erosion encroaching left side abutment 1.



Profile



Deck Soffit.



Abutment 1, scour back under abutment cap, and scour encroaching the abutment cap from C/L left.



Scour abutment 2



Rail damage right side



Roadway



Deck



Approach roadway Eastbound



Roadway



Approach roadway



Scattered areas of map cracking.



Unsealed cracks span 3 common all spans.



Bent 3 cap bottom exposed rebar, common bent 2.



Span 2 soffit exposed rebar ahead of bent 2.

Maintenance Needs

Date Reported: 02/27/2014

Priority: D- Routine

Status: Monitor

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

Component:

Deficiency Description

Abutment Scour, both abutments have scour below and back under abutment caps, with abutment 2 being the worst with scour about 1 ft below bottom of cap and goes back to back of cap. There is about 3 ft hole between pile 1 & 2 @ abut. 2 that goes back under the cap. Both Abut. slopes have scour that is encroaching upon the abutments, & there is no slope protection on either abutment slope. There is little or no roadway settlement @ either abutment, but there appears to be approach slabs @ both ends of the bridge.

Remarks



Scour abutment 2 all pile exposed



Scour abutment 1



Abutment 1, scour back under abutment cap, and scour encroaching the abutment cap from C/L left.



Abutment 1 slope erosion.

Maintenance Needs

Date Reported: 02/09/2016

Priority: D- Routine

Status: Monitor

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

Component:

Deficiency Description

Wooden guard rail posts are beginning to rot and delaminate.

Remarks



05438 wooden guard rail posts are beginning to rot.

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is Recommended?
A-54 - Sealable Deck Cracks	Yes
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-65 - Clogged deck drains?	
A-66 - Approach minor pothole/leveling needed	

A-54 - Sealable Deck Cracks (Yes)

A-55 - Deck Washing Needed

A-56 - Joint Cleaning/Flushing Needed



Asset #05438(Routine)

SH 8 over COOKS CREEK

Location: 3.91 MI NW JCT US 79B

Team Lead: Rickie Bratton Inspection Date: 02/12/2024

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

A-65 - Clogged deck drains?



Asset #05438(Routine)

SH 8 over COOKS CREEK

Location: 3.91 MI NW JCT US 79B

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A-66 - Approach minor pothole/leveling needed



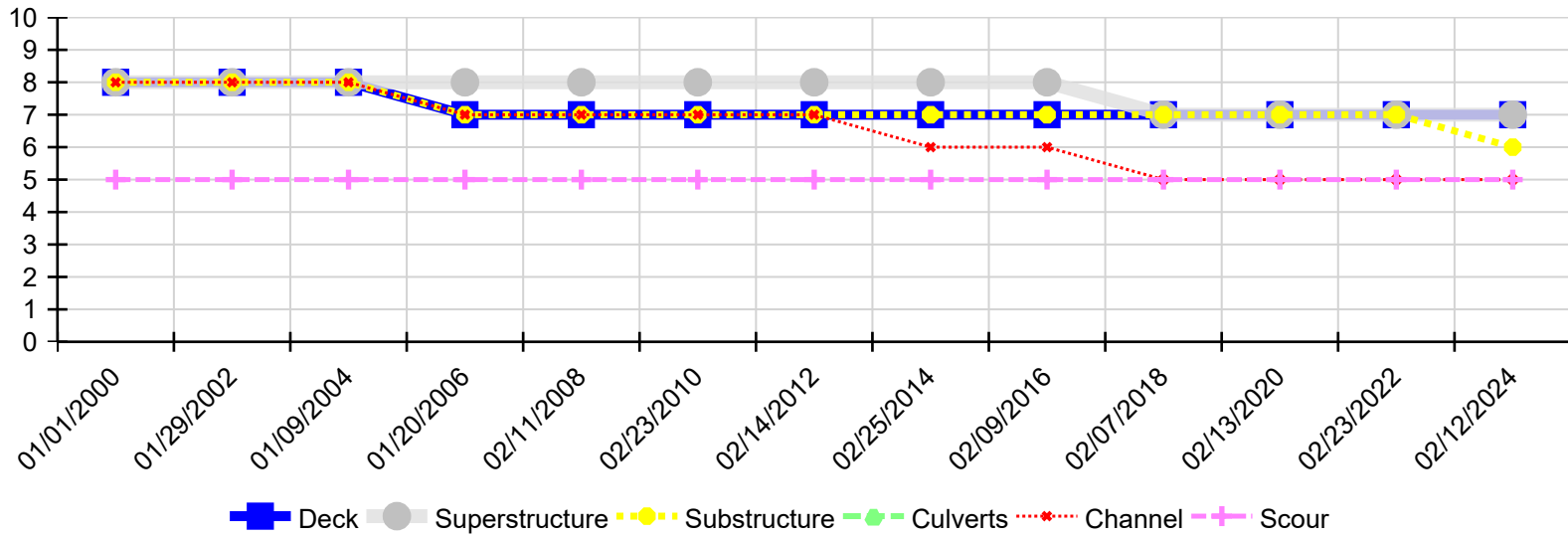
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SH 8 over COOKS CREEK

Location: 3.91 MI NW JCT US 79B

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Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
02/12/2024	7	7	6	N	5	5
02/23/2022	7	7	7	N	5	5
02/13/2020	7	7	7	N	5	5
02/07/2018	7	7	7	N	5	5
02/09/2016	7	8	7	N	6	5
02/25/2014	7	8	7	N	6	5
02/14/2012	7	8	7	N	7	5
02/23/2010	7	8	7	N	7	5
02/11/2008	7	8	7	N	7	5
01/20/2006	7	8	7	N	7	5
01/09/2004	8	8	8	N	8	5
01/29/2002	8	8	8	N	8	5
01/01/2000	8	8	8	N	8	5