



Latitude:36.29253, Longitude:-93.24109

Route:392 Section:01 Log:0.19

Arnold Road ID:5x392x1xA, Arnold Log mile:0.182

District 09, 9 - Boone County

Owner: 1 - State Highway Agency

Inspection Direction: 1 - N to S

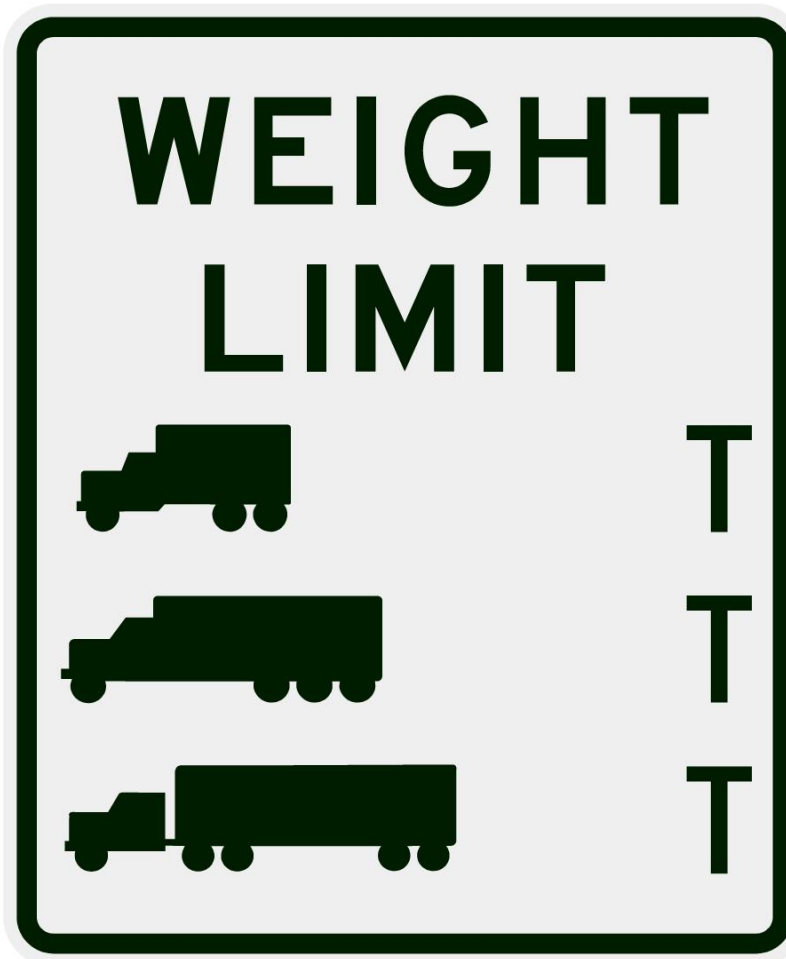
Bridge Posting Information

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

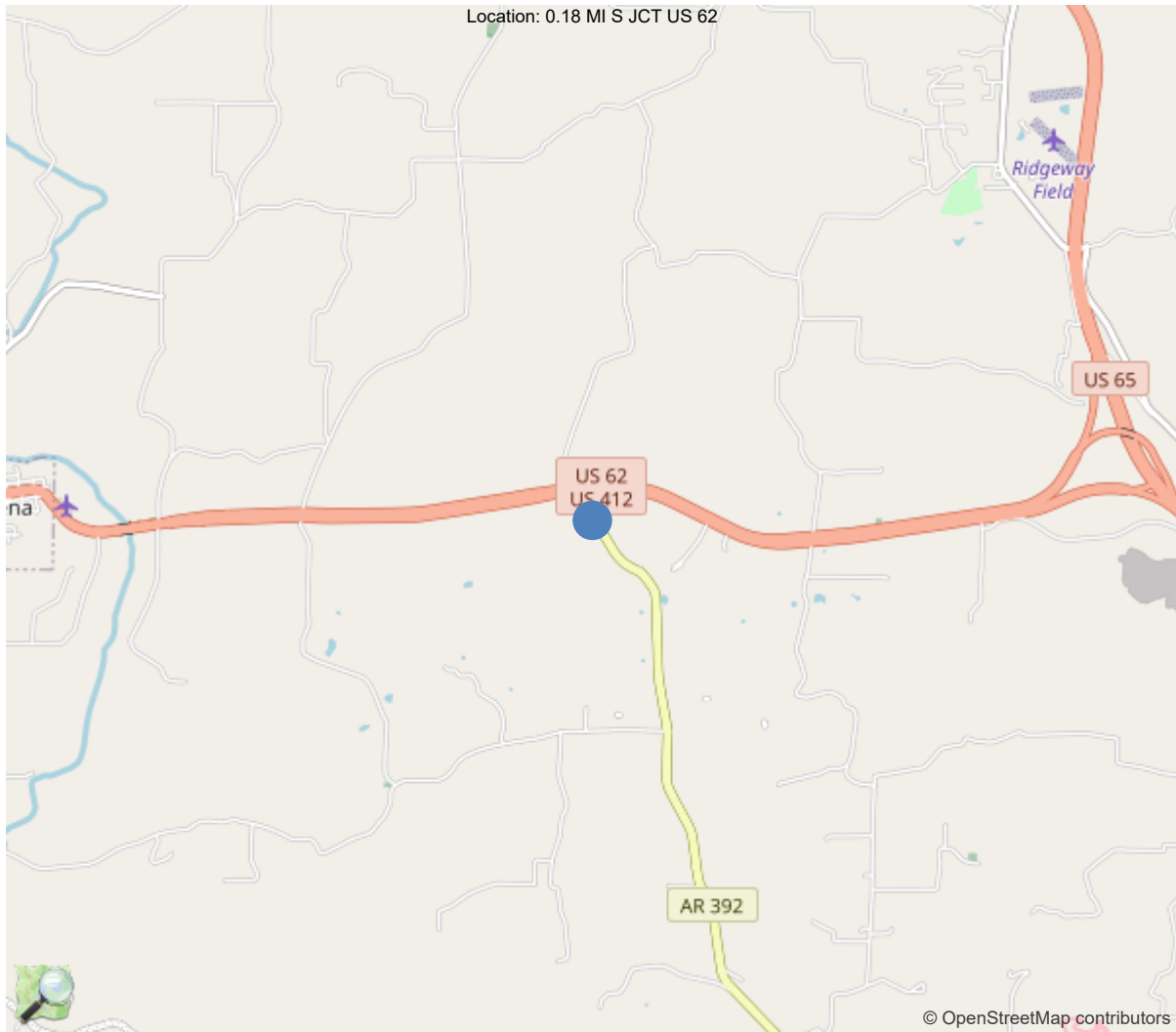
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	28		
Code 9 (31 Tons)	33		
Code 5 (40 Tons)	48		

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



36.29253, -93.24109



Asset #M1108(Routine)
SH 392 Boone over DITCH
Location: 0.18 MI S JCT US 62

Team Lead: Nathan Rowland Inspection Date: 07/31/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	M1108
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	9 - Boone County
(4) Place Code	0
(6) Features Intersected	DITCH
(7) Facility Carried	SH 392 Boone
(9) Location	0.18 MI S JCT US 62
(11) Mile Point	0.19 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000392010
(16) Latitude	36.2925291198291
(17) Longitude	-93.2410873095195
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	119
Material	1 - Concrete
Type	19 - Culvert
(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	N - Not applicable
(108) Wearing Surface/Protective System	
Type of Wearing Surface	N - Not applicable (applies only to stru
Type of Membrane	N - Not applicable (applies only to stru
Type of Deck Protection	N - Not applicable (applies only to stru
AGE AND SERVICE	
(27) Year Built	1931
(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	1700
(30) Year of ADT	2018
(109) Truck ADT	3 %
(19) Bypass, Detour Length	67 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	11 ft
(49) Structure Length	32 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	0 ft
(52) Deck Width Out to Out	0 ft
(32) Approach Roadway Width (W/Shoulders)	30 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	99.9 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 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	7 - Rural Major Collector
(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	N
(59) Superstructure	N
(60) Substructure	N
(61) Channel & Channel Protection	6
(62) Culverts	6
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	39
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	24
(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	N
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	N - Not applicable or a safety feat
(36B) Transitions	N - Not applicable or a safety feat
(36C) Approach Guardrail	N - Not applicable or a safety feat
(36D) Approach Guardrail Ends	N - Not applicable or a safety feat
(113) Scour Critical Bridges	8 - 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	2473
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	07/31/2023		
(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.			

Team Lead: Nathan Rowland, Inspection Date: 07/31/2023

IDENTIFICATION	
B.ID.01 Bridge Number	M1108
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	9 - Boone County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	09 - District 09
B.L.05 Latitude	36.2925291198291
B.L.06 Longitude	-93.2410873095195
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	
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	
B.CL.02 Maint. Responsibility	
B.CL.03 Federal or Tribal Land Access	
B.CL.04 Historic Significance	
B.CL.05 Toll	
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	
B.G.02 Total Bridge Length	
B.G.03 Max Span Length	
B.G.04 Min Span Length	
B.G.05 Bridge Width Out-to-Out	
B.G.06 Bridge Width Curb-to-Curb	
B.G.07 Left Curb or Sidewalk Width	
B.G.08 Right Curb or Sidewalk Width	
B.G.09 Approach Roadway Width	

B.G.10 Bridge Median	
B.G.11 Skew	
B.G.12 Curved Bridge	
B.G.13 Max Bridge Height	
B.G.14 Sidehill Bridge	
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	

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

INSPECTION REQUIREMENTS	
B.IR.01 NSTM Inspection Required	
B.IR.02 Fatigue Details	
B.IR.03 UW Inspection Required	
B.IR.04 Complex Feature	

COMPONENT CONDITION RATINGS	
B.C.01 Deck Condition Rating	
B.C.02 Superstructure Condition	
B.C.03 Substructure Condition	
B.C.04 Substructure Condition	
B.C.05 Bridge Railing Condition	
B.C.06 Bridge Railing Transitions Condition	
B.C.07 Bridge Bearings Cond.	
B.C.08 Bridge Joints Condition	
B.C.09 Channel Condition Rating	
B.C.10 Channel Protection Condition	
B.C.11 Scour Condition Rating	
B.C.12 Bridge Condition Classification	
B.C.13 Lowest Condition Rating	
B.C.14 NSTM Insp. Condition	
B.C.15 UW Inspection Condition	

APPRAISAL	
B.AP.01 Approach Roadway Alignment	
B.AP.02 Overtopping Likelihood	
B.AP.03 Scour Vulnerability	
B.AP.04 Scour Plan of Action	
B.AP.05 Seismic Vulnerability	



Team Lead: Nathan Rowland, **Inspection Date:** 07/31/2023

POSTING STATUS DATA	
B.PS.01 Load Posting Status	B.PS.02 Posting Status Change Date

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



Asset #M1108(Routine)

SH 392 Boone over DITCH

Location: 0.18 MI S JCT US 62

Team Lead: Nathan Rowland **Inspection Date:** 07/31/2023

General Observation

07-31-2023 WNR & DBM: Routine inspection conducted this date see element notes for documentation.

Structure is logged from NW to SE and is accessible from the barrel floor.

No bat activity was noted.

Team Lead: Nathan Rowland **Inspection Date:** 07/31/2023

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
241	Reinforced Concrete Culvert	LF	157	80	43	34	0
1080	Delamination/Spall/Patched Area	LF	26	0	18	8	0
1090	Exposed Rebar	LF	6	0	0	6	0
1120	Efflorescence/Rust Staining	LF	20	0	0	20	0
1130	Cracking (RC and Other)	LF	15	0	15	0	0
1190	Abrasion/Wear (PSC/RC)	LF	10	0	10	0	0
(241) 07-31-2023 WNR & DBM:							
Driving surface- has asphalt with map cracking.							
Barrel #1- has 2' of exposed rebar and shallow delaminations in the top slab at the inlet end with areas of delamination in the same footage. A 2' area of deep honeycombing exists in the back wall of barrel #1 near the bottom slab, the back wall has 17' total of honeycombing at the bottom of the back wall. The outlet end of the barrel #1 top slab has map cracking with efflorescence for 3' into the barrel. Division wall #1 on the barrel #1 side has a horizontal hairline crack for almost the entire length of the division wall, with 3' of map cracking with efflorescence at the outlet end. The barrel floor has minor build up along the division wall with 4' of cs2 abrasion that is visible.							
Left wing wall- has 7' of cs2 abrasion in the lower portion.							
Right wing wall- has 3' of cs2 abrasion in the lower portion. The last 2' of the wing is not visible due to dirt accumulation.							
Barrel #2 has 4' of map cracking with efflorescence in the top slab at the outlet end.							
Barrel #2- has 18" of stream bed material build up for most of the width for the full length of the barrel. Division wall #2 has 4' of map cracking with efflorescence at the outlet end with 11' of vertical hairline cracks in the remaining portion of the wall.							
Barrel #3- has 6' of map cracking with efflorescence in the outlet end of the back wall with 4' of additional vertical hairline cracking in the remaining portion of the back wall. The top slab of barrel #3 has 2 small areas of spalling with exposed rebar and 6' of map cracking at the outlet end. The top slab also has 2' of spalling with exposed rebar 5' in from the inlet end. Barrel #3 has 18" of stream bed material build up for the full length and width of the barrel.							
Left wing wall- has 5' of cs3 efflorescence map cracking.							
Right wing wall- has 6' of cs3 spalling with no rebar exposed along the top edge with 3' of efflorescence map cracking in the same footage.							
Both headwalls have map cracking with efflorescence and spalling with no rebar exposed.							
The wing walls are integral and are quantified with the structure.							



Elevation looking west



Inventory looking South



Barrel #3



Barrel #2



07/31/2023

Barrel #1



07/31/2023

Downstream view



07/31/2023

Upstream view



07/13/2021

Elevation view. Log mile from left to right.



Ending approach view.



Spalling with no rebar exposed in the top edge of the barrel #3 right wing.



Downstream channel view.



Upstream channel view.



General view of the driving surface.



Concrete deterioration with map cracking and efflorescence at the outlet end of all 3 barrels.



Downstream channel view.



Top slab condition at the outlet end of barrel #3. Showing efflorescence map cracking. Typical of all 3 barrels.



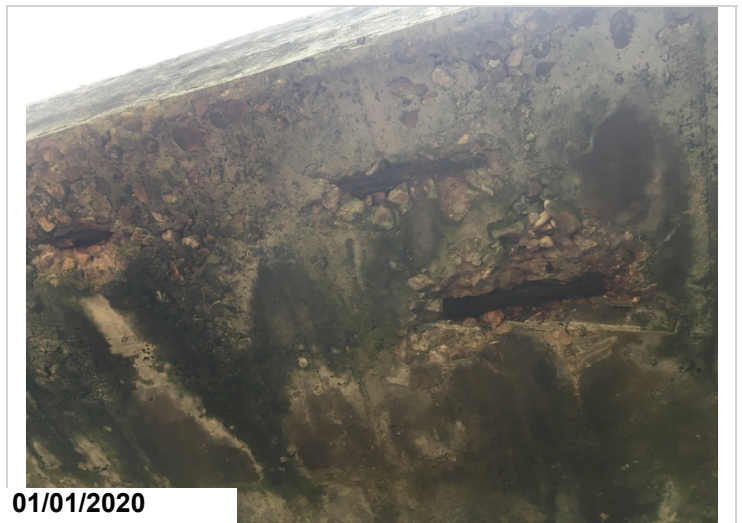
Approach view in the direction of log mile.



Concrete deterioration with map cracking and efflorescence on the right head wall.



Elevation view. Log mile from left to right.



Spalling with rebar exposed at the inlet end of barrel #1 top slab.



Barrel #1 interior condition.



Upstream channel view.



Minor amount of stream bed material build up in barrel #2.



Stream bed material build up in barrel #3.



Typical view of the driving surface.

Maintenance Needs

Date Reported: 07/20/2015

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

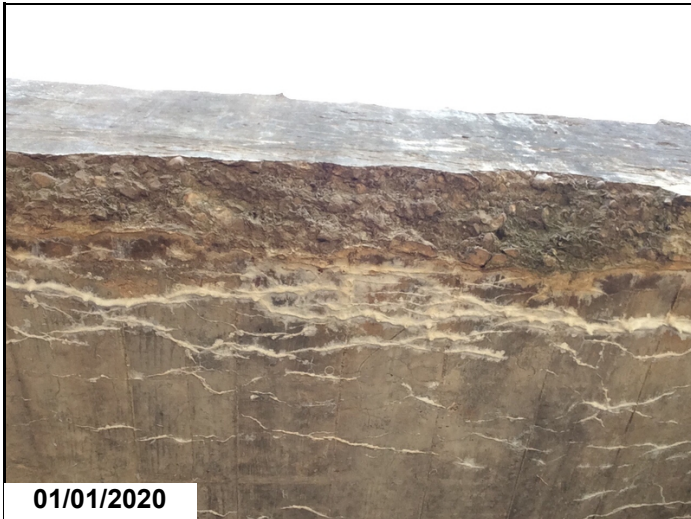
Component:

Deficiency Description

Barrels #2 and #3 have map cracking with efflorescence and spalling located in both head walls, the division wall and the top slab of the barrels at the outlet and inlet ends.

The top slab has areas of spalling with exposed rebar.

Remarks



Efflorescence in the top slab



Barrel 2 and 3 soft deteriorated concrete located in head wall an interior wall of boxes outlet end



Spalling with rebar exposed in the top slab of barrel #3.

Maintenance Needs

Date Reported: 07/31/2023

Priority: D- Routine

Type of Work: Replace (General)

Status: Open

Component: Culverts

Deficiency Description

The Southwest Flareboard has been displaced.

Remarks



Inventory looking South



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 #M1108(Routine)
SH 392 Boone over DITCH
Location: 0.18 MI S JCT US 62

Team Lead: Nathan Rowland Inspection Date: 07/31/2023

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

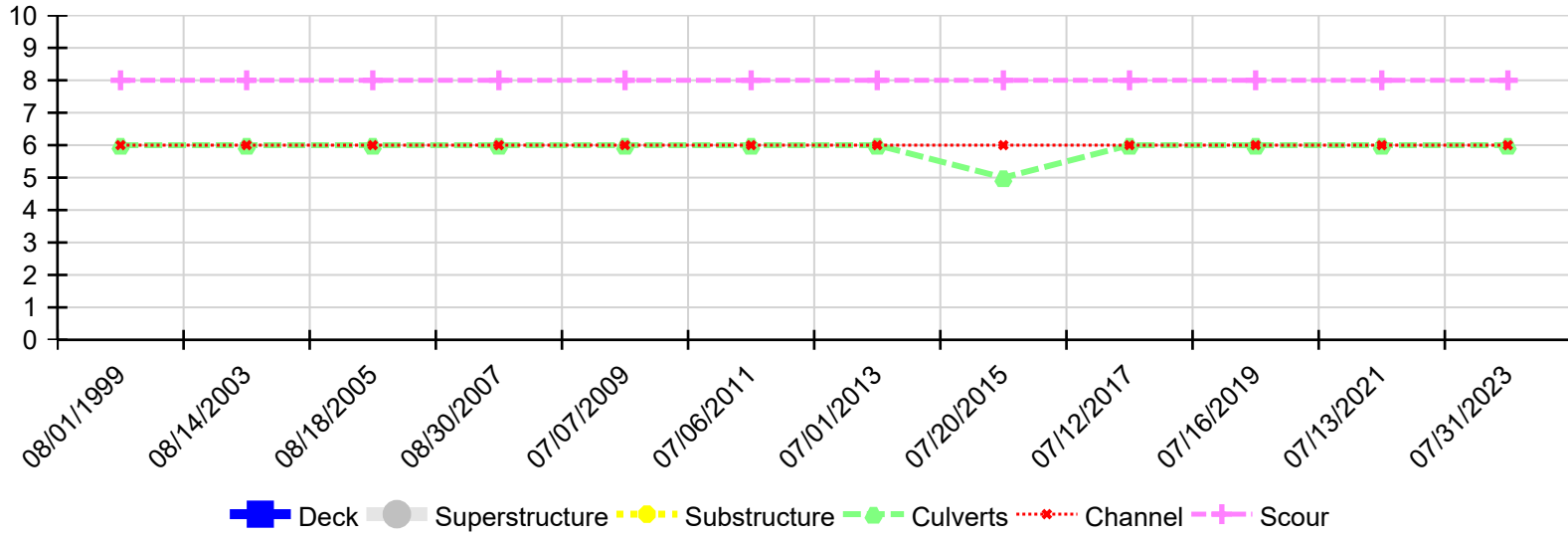
A-64 - Vegetation Removal Requested



Asset #M1108(Routine)
SH 392 Boone over DITCH
Location: 0.18 MI S JCT US 62

Team Lead: Nathan Rowland Inspection Date: 07/31/2023

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
07/31/2023	N	N	N	6	6	8
07/13/2021	N	N	N	6	6	8
07/16/2019	N	N	N	6	6	8
07/12/2017	N	N	N	6	6	8
07/20/2015	N	N	N	5	6	8
07/01/2013	N	N	N	6	6	8
07/06/2011	N	N	N	6	6	8
07/07/2009	N	N	N	6	6	8
08/30/2007	N	N	N	6	6	8
08/18/2005	N	N	N	6	6	8
08/14/2003	N	N	N	6	6	8
08/01/1999	N	N	N	6	6	8