



Latitude:35.20726, Longitude:-90.45265

Route:12 Section:00 Log:1.24

Arnold Road ID:18xBUCKLAKERDx0xA, Arnold Log mile:9.11

District 01, 35 - Crittenden County

Owner: 2 - County Highway Agency

Inspection Direction: 4 - W to E

Bridge Posting Information

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

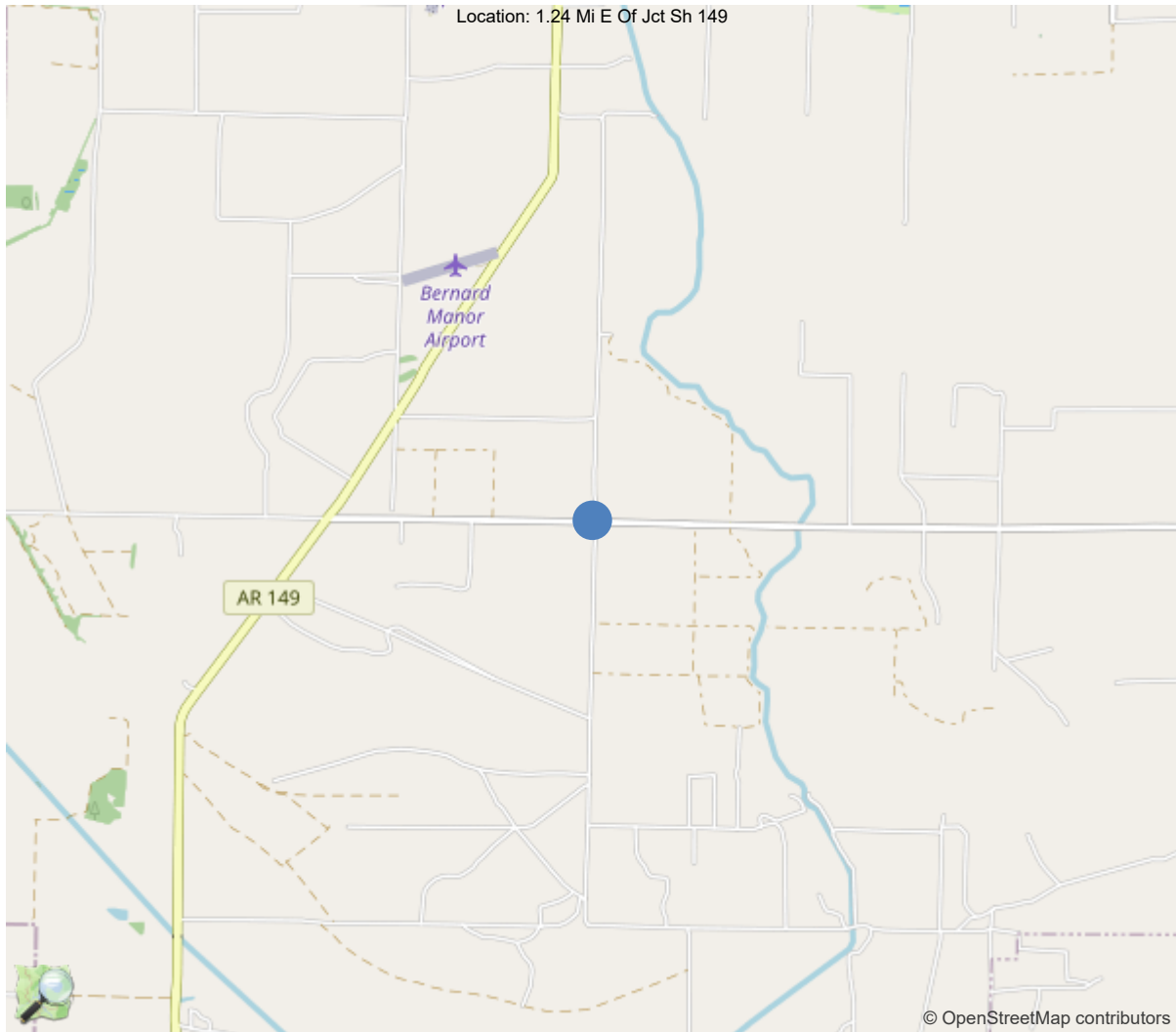
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	40		
Code 9 (31 Tons)	50		
Code 5 (40 Tons)	60		

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



35.20726, -90.45265



Asset #M3957(Routine)

Bucklake/Z-E/1.24 over Ditch

Location: 1.24 Mi E Of Jct Sh 149

Team Lead: Drew Melton Inspection Date: 04/04/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	M3957
(5) Inventory Route	1
(2) Highway Agency District	01 - District 01
(3) County Code	35 - Crittenden County
(4) Place Code	0
(6) Features Intersected	Ditch
(7) Facility Carried	Bucklake/Z-E/1.24
(9) Location	1.24 Mi E Of Jct Sh 149
(11) Mile Point	1.24 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.207264
(17) Longitude	-90.452652
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	122
Material	1 - Concrete
Type	22 - Channel beam
(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	2 - Concrete Precast Panels
(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	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	360
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	4 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	19 ft
(49) Structure Length	57 ft
(50) Curb or Sidewalk Width	
Left	0.6 ft
Right	0.6 ft
(51) Bridge Roadway Width Curb to Curb	26.2 ft
(52) Deck Width Out to Out	29.9 ft
(32) Approach Roadway Width (W/Shoulders)	23 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	26.2 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	0 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	8 - Rural Minor 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	2 - County Highway Agency
(22) Owner	2 - County Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	7
(59) Superstructure	6
(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	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	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	211
(115) Year of Future ADT	2007

INSPECTIONS *			
(90) Inspection Date	04/04/2023		
(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: Drew Melton, Inspection Date: 04/04/2023

IDENTIFICATION	
B.ID.01 Bridge Number	M3957
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	35 - Crittenden County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	01 - District 01
B.L.05 Latitude	35.207264
B.L.06 Longitude	-90.452652
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 Culvert 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: Drew Melton, Inspection Date: 04/04/2023

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
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POSTING STATUS DATA

B.PS.01 Load Posting Status	B.PS.02 Posting Status Change Date
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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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General Observation

Abutment #1 approach shoulders eroded at bridge end.
Abutment #1 approach roadway, right side settled up to 2" for last 4' on right side.
Approach rails are leaning outward.

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

Deck is integral and is in good condition. Deck has an asphalt overlay and soffit-undersurface has a few cracks with light efflorescence.

Wearing surface cracked transversely at joints and longitudinally at center line full length with one to two longitudinal cracks each span.

Span #3 unit #8 soffit-under surface has one longitudinal crack in soffit-under surface with light efflorescence.

Bridge rails have some Graffiti.

Abutment #1 monument posts are spalled on corners no rebar exposed.

Abutment #2 left monument post is leaning back.

Abutment #2 right monument post corner is spalled off no rebar exposed.

59 - Superstructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Superstructure is integral and is in satisfactory condition. Superstructure has some spalls, cracks and delaminated areas.

All girders have longitudinal cracks at stem connection.

All girders have vertical hairline flexure cracks spaced six to eight inches apart.

All connection bolts are corroded.

All units have pop offs on legs at various locations.

All units at drains have light to moderate abrasion for 1'.

Span #1 unit #1 right leg has 2' delamination on side of girder at 1/4 span and a 1' spall/delamination on side of girder at 3/4 span.

Span #1 unit #3 right leg near bent #2 has a 1' spall no rebar exposed.

Span #1 unit #4 left leg cs2 crack with rust stains for 2' on bottom at 1/4 span.

Span #1 unit #5 left leg has 1' delaminated area on side and bottom at 1/4 span with efflorescence.

Span #1 unit #5 left leg has two 1' spalls at midpoint no rebar exposed.

Span #2 unit #1 has a 2' cs2 crack in right leg on bottom at 1/4 with light efflorescence.

Span #2 unit #2 right leg has 1' delaminated area at quarter span.

Span #2 unit #2 right leg full length of span has cs2 crack where leg meet soffit-under surface.

Span #2 unit #6 left leg has a 3' cs2 cracks bottom and side near bent #3.

Span #2 unit #6 left leg has a crack with delamination for 1' at 1/4 span with rust stains.

Span #2 unit #7 left leg has a cs2 crack/pop off spall 8" area near bent #2.

Span #2 unit #8 left leg has a crack with delaminating near bent #2 with rust stains for 1'.

Span #3 unit #2 right leg has 3' delaminated area bottom and side 3' from abutment #2.

Span #3 unit #4 right leg at quarter span has a 1' delamination on side with rust stains.

Span #3 unit #4 right leg has 2' delaminated area on side and bottom 3' from abutment #2.

Span #3 unit #5 left leg has a 1' cs2 crack with delamination with efflorescence at quarter span on side and bottom.

Span #3 unit #5 left leg has a 2' long cs2 crack/ delaminated area on side 3' from abutment #2.

Span #3 unit #5 right leg has a 1' long cs2 crack 2' from bent #3 and at bent #4 cap on bottom and side.

Span #3 unit #7 left leg has two 1' spalls with rebar exposed no section loss one at 1/4 span the other at 3/4.



Asset #M3957 (Routine)

Bucklake/Z-E/1.24 over Ditch

Location: 1.24 Mi E Of Jct Sh 149

Team Lead: Drew Melton Inspection Date: 04/04/2023

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

4/26/2021-lowered substructure from 7 to 6 due to erosion at abutments.

Substructure is in satisfactory condition with a few minor defect with abutment caps undermined full length.

All piles are weathered and have minor vertical cracks.

Piles have unknown depth or length

Bent #1 pile #3 is split.

Bent #2 piles #1,3 are split by drift pin, and pile #3 is also sounds moderately hollow.

Bent #2 pile #4 has light shake left side 2' above ground line.

Bent #2 cap back face has a 2' delamination under unit #1 right leg.

Abutment #1,2 caps are undermined full length up to 1' deep exposing all piles.

61 - Channel/Channel Protection (6 - Bank is beginning to slump. River control devices and embankment protection have widespread minor damage. There is minor stream bed movement evident. Debris is restricting the channel slightly.)

4/26/2021-Lowered channel from 7 to 6 due to caps being undermined up to one foot.

Channel has good alignment with bridge. Channel banks are well vegetated and step with some areas of erosion and slumping. Channel has minor amounts of debris restricting water flow.



04/04/2023

Side view-elevation



04/04/2023

Top view-inventory



04/04/2023

Channel under bridge



04/04/2023

Channel left side



Channel right side



Abutment #1 slope



Abutment #2 slope



Abutment #1 approach rails



Abutment #2 approach rails



Abutment #1 left approach



Abutment #1 right approach



Left bridge rail



Right bridge rail



Abutment #2 left monument post



Abutment #2 right monument post



Typical deck



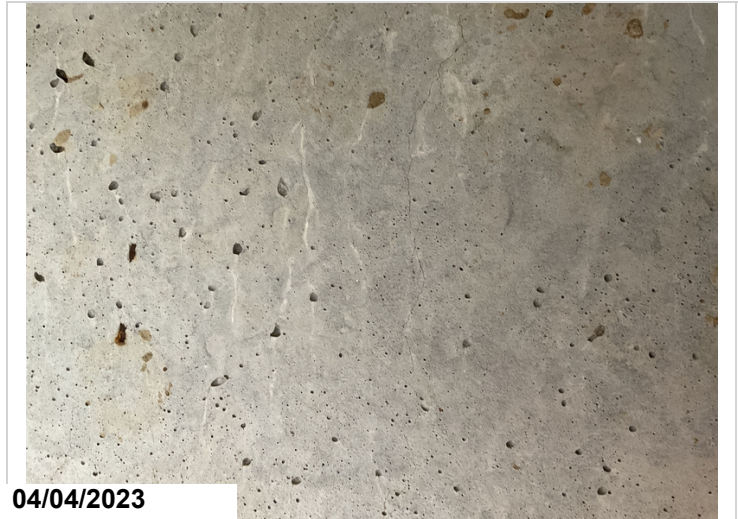
Typical soffit-under surface



Typical debris in gutters



All units at drains have light to moderate abrasion for 1'.



Typical vertical flex crack in side of girder



04/04/2023

Typical corroded connection bolt



04/04/2023

Soffit-under surface and girders span #1



04/04/2023

Span #2 soffit-under surface and girders



04/04/2023

Span #3 soffit-under surface and girders



Bent #2 cap back face has a 2' delamination under unit #1 right leg.



All piles are weathered and have minor vertical cracks.



Bent #2 piles #1,3 are split by drift pin, and pile #3 is also sounds moderately hollow.



Abutment #1



Abutment #2

Maintenance Needs

Date Reported: 04/03/2019

Priority: B - Pressing

Type of Work: Approach Leveling/Maintenance

Status: Monitor

Component: Approach

Deficiency Description

Abutment #1 left side approach shoulder is eroded three feet deep and into roadway.

Remarks

Letter dated 4-29-2021 mailed to Judge Wheelless on 5-3-2021.



Abutment #1 left approach shoulder eroded.

Maintenance Needs

Date Reported: 04/03/2019

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Substructure

Deficiency Description

Abutment #1,2 caps are undermined full length up to one foot deep exposing all piles.

Remarks

Letter dated 4-29-2021 mailed to Judge Wheelless on 5-3-2021.



Abutment #2.



Abutment #1.

Maintenance Needs

Date Reported: 04/27/2021

Priority: C - Important

Type of Work: Approach Leveling/Maintenance

Status: Monitor

Component: Approach

Deficiency Description

Abutment #1 right approach shoulder has settled up to two inches at bridge end for four feet wide.

Remarks

Letter dated 4-29-2021 mailed to Judge Wheelless on 5-3-2021.



Abutment #1 roadway settlement, right side.

Maintenance Needs

Date Reported: 04/03/2019

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component: Approach

Deficiency Description

Approach rails are leaning outward.
Abutment #2 left approach rail has minor collision damage.

Remarks

Letter dated 4-29-2021 mailed to Judge Wheelless on 5-3-2021.



04/03/2019

Approach rails are leaning outward.



04/26/2021

Abutment #2 left approach rail damage.



Asset #M3957(Routine)

Bucklake/Z-E/1.24 over Ditch

Location: 1.24 Mi E Of Jct Sh 149

Team Lead: Drew Melton Inspection Date: 04/04/2023

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 #M3957(Routine)

Bucklake/Z-E/1.24 over Ditch

Location: 1.24 Mi E Of Jct Sh 149

Team Lead: Drew Melton Inspection Date: 04/04/2023

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

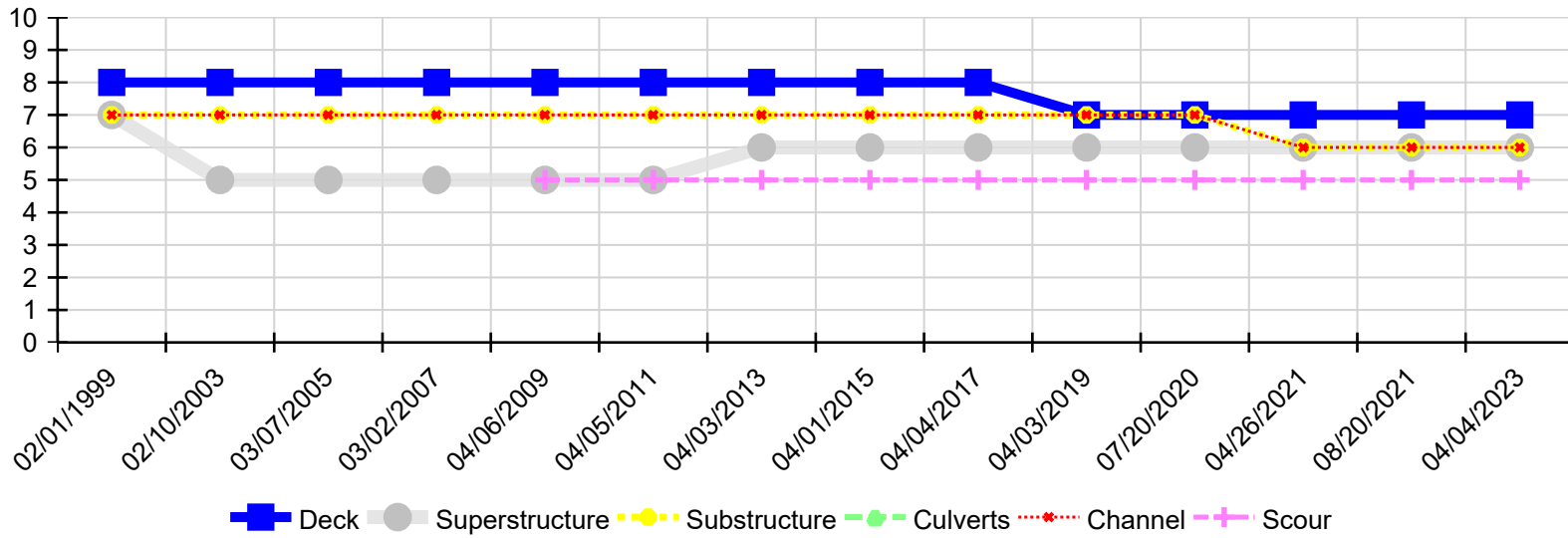
A-61 - Polymer Overlay Advised

A-62 - Hydro and LMC Advised

A-63 - Missing/Incorrect Log Mile Signage

A-64 - Vegetation Removal Requested

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
04/04/2023	7	6	6	N	6	5
08/20/2021	7	6	6	N	6	5
04/26/2021	7	6	6	N	6	5
07/20/2020	7	6	7	N	7	5
04/03/2019	7	6	7	N	7	5
04/04/2017	8	6	7	N	7	5
04/01/2015	8	6	7	N	7	5
04/03/2013	8	6	7	N	7	5
04/05/2011	8	5	7	N	7	5
04/06/2009	8	5	7	N	7	5
03/02/2007	8	5	7	N	7	N
03/07/2005	8	5	7	N	7	N
02/10/2003	8	5	7	N	7	N
02/01/1999	8	7	7	N	7	N