

Bridge 04819 Inspection Report



Latitude:35.93342, Longitude:-93.11473

Route:58 Section:00 Log:5.81

Arnold Road ID:51x6450x0xA, Arnold Log mile:5.43

District 09, 101 - Newton County

Owner: 2 - County Highway Agency

Inspection Direction: 2 - S to N

Bridge Posting Information

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

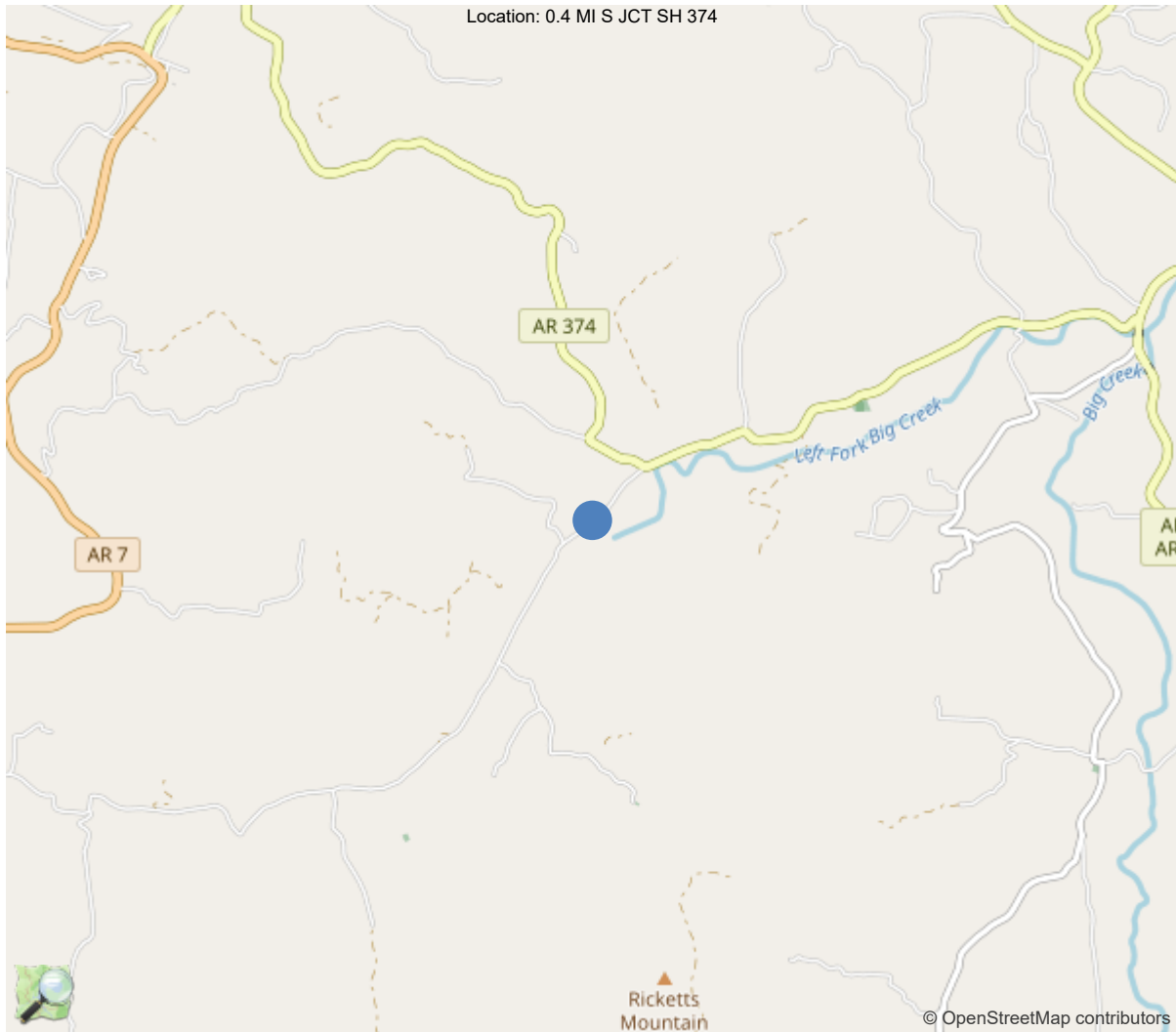
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	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



35.93342, -93.11473

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	04819
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	101 - Newton County
(4) Place Code	0
(6) Features Intersected	DRY BRANCH
(7) Facility Carried	CR 58 Newton
(9) Location	0.4 MI S JCT SH 374
(11) Mile Point	5.81 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.933423679643
(17) Longitude	-93.114733924833
(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	1 - Monolithic Concrete (concurrently pl
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1999
(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	190
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	12 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	31 ft
(49) Structure Length	96 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	30.7 ft
(32) Approach Roadway Width (W/Shoulders)	20 ft
(33) Bridge Median	0 - No median
(34) Skew	15 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	28.9 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	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	4 - Historical significance is
CONDITION	
(58) Deck	7
(59) Superstructure	7
(60) Substructure	7
(61) Channel & Channel Protection	6
(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	6
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	9
(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	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	350
(115) Year of Future ADT	2030

INSPECTIONS *			
(90) Inspection Date			01/18/2024
(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: Nathan Rowland, Inspection Date: 01/18/2024

Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	04819
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	15604
B.W.01 Year Built	1999

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	101 - Newton County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	09 - District 09
B.L.05 Latitude	35.933423679643
B.L.06 Longitude	-93.114733924833
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	0.4 MI S JCT SH 374
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	L01 - County highway agency
B.CL.02 Maint. Responsibility	L01 - County highway agency
B.CL.03 Federal or Tribal Land Access	N - Not Applicable
B.CL.04 Historic Significance	7 - Historic significance of the br
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	96.1
B.G.02 Total Bridge Length	96.1
B.G.03 Max Span Length	30.8
B.G.04 Min Span Length	31
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	20

B.G.10 Bridge Median	0 - No median
B.G.11 Skew	15
B.G.12 Curved Bridge	N - Not curved
B.G.13 Max Bridge Height	11
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	2964.6

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	N - NOT APPLICABLE - Bridge do
B.C.09 Channel Condition Rating	6 - SATISFACTORY - Widespread
B.C.10 Channel Protection Condition	7 - GOOD - Some minor defects.
B.C.11 Scour Condition Rating	8 - Insignificant scour.
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	1 - Remote - once every 100 years o
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	A - Seismic evaluation completed. B

Team Lead: Nathan Rowland, Inspection Date: 01/18/2024

SPAN SETS			
M1			
B.SP.02 # of Spans	3	B.SP.08 Deck Interaction	IM - Integral or monolithic
B.SP.03 # of Beam Lines	16	B.SP.09 Deck Material and Type	CP-T - TEMP - concrete precast
B.SP.04 Span Material	C02 - Reinforced concrete - pr	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	G07 - Girder/beam - channel ad	B.SP.12 Deck Reinforcing Protective System	0 - None
B.SP.07 Span Protective System	U - Unknown	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	C02 - Coating - sealer
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	F02 - Footing - on rock
B.SB.04 Substructure Type	BX - Bent - other	B.SB.07 Foundation Protective System	U - Unknown
P1			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	C02 - Coating - sealer
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	F02 - Footing - on rock
B.SB.04 Substructure Type	P03 - Pier - multiple column	B.SB.07 Foundation Protective System	U - Unknown

HIGHWAY FEATURES			
H1			
B.F.02 Feature Location	C - Carried on bridge	B.H.09 Annual ADT	190
B.F.03 Feature Name	CR 58 Newton	B.H.10 Annual ADTT	1
B.H.01 Functional Classification	6 - Minor Collector	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		B.H.16 Highway Max Usable Surface Width	28.8
B.H.07 LRS Mile Point	5.81	B.H.17 Bypass Detour Length	12
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	1	58	2-T - TEMP - Two-way traffic - NS or EW	4 - County route	1 - Mainline



Team Lead: Nathan Rowland, Inspection Date: 01/18/2024

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	DRY BRANCH	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	

OTHER FEATURES

B1

B.F.02 Feature Location	C - Carried on bridge	B.F.01A Feature Type	B - Urban feature
B.F.03 Feature Name	CR 58 Newton		

POSTING STATUS DATA

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



Inspection Notes

General Observation

1/18/2024 - WNR & DBM: Routine and Underwater Type II inspections conducted this date. See notes for documentation.

Structure is logged from SW to NE and is accessible from the channel / small ladder.
No bat activity was noted.

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

Driving surface- The driving surface of the deck has a tined finish that is showing minor wear. Span #1 and Span #3 have minor debris accumulation in the left and right gutter lines. The top of the keyway grout is partially spalled between some of the channel beam units, especially at the end and the beginning of the spans. No cracking was noted in the driving surface.

Bridge railing- No deficiencies were noted in the concrete parapet walls.

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

The 8 channel beam unit system is transversely bolted, grouted, and longitudinally bolted at the ends over the bents.

Span #1- Hairline vertical flexure cracking was noted at approximately 12" spacing in the left and right stems of all units. Unit #7 has a small superficial spall on the right stem 5' in front of the abutment face. Cs2 efflorescence leaching was noted between units #2-8. The under surface of the channel beams (deck) showed no deficiencies.

Span #2- Hairline vertical flexure cracking was noted at approximately 12" spacing in the left and right stems of all units. CS2 efflorescence leaching was noted between units #2-8. The under surface of the channel beams (deck) showed no deficiencies.

Span #3- Hairline vertical flexure cracking was noted at approximately 12" spacing in the left and right stems of all units. Unit #5 has a delamination on the right and left stem 6' in front of the bent #2 cap. Cs2 efflorescence leaching was noted between units #2-8. The bottoms of the stems have shallow insignificant spalls at random locations due to the construction process. The undersurface of the channel beams (deck) showed no deficiencies.

60 - Substructure (7 - GOOD CONDITION - some minor problems.)

Abutment #1- has 3 vertical hairline cracks. The top edge of the bridge seat has shallow, superficial spalls on the top edge from construction when setting channel beam units onto the bridge seats, no rebar is exposed at these locations. Abutment #1 slope rip rap is in place and functioning as intended.

Bent #1- no deficiencies noted on the caps or columns of bent #1. The top of the footing is exposed at the right column of bent #1, but is keyed into solid rock. The channel bottom is solid rock for the full width of the channel.

Bent #2- has a small shallow superficial spall under the left curb unit on the span #3 side. No other deficiencies noted. The top of the left and right column footings are exposed, but are keyed entirely in solid rock. No deficiencies noted on the columns.

Abutment #2- has 1 vertical hairline crack with shallow superficial spalls on the top edge from the construction process. Embankment erosion has occurred at the abutment #2 slope where it is not armored with rip rap. The edge of the erosion measures 15' 3" from under unit #5 at the abutment #2 face, this condition has not worsened since the last inspection.

Inspection Photos and Notes



Elevation looking east



Inventory looking north



General view of span #2



View of abutment #1



View of abutment #2



Upstream view



Downstream view



General view of deck



Asset #04819(Routine, Underwater type 2)

CR 58 Newton over DRY BRANCH

Location: 0.4 MI S JCT SH 374

Team Lead: Nathan Rowland Inspection Date: 01/18/2024

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-65 - Clogged deck drains?	
A-66 - Approach minor pothole/leveling needed	

A-54 - Sealable Deck Cracks

A-55 - Deck Washing Needed

A-56 - Joint Cleaning/Flushing Needed



Asset #04819(Routine, Underwater type 2)

CR 58 Newton over DRY BRANCH

Location: 0.4 MI S JCT SH 374

Team Lead: Nathan Rowland Inspection Date: 01/18/2024

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 #04819(Routine, Underwater type 2)

CR 58 Newton over DRY BRANCH

Location: 0.4 MI S JCT SH 374

Team Lead: Nathan Rowland Inspection Date: 01/18/2024

A-66 - Approach minor pothole/leveling needed



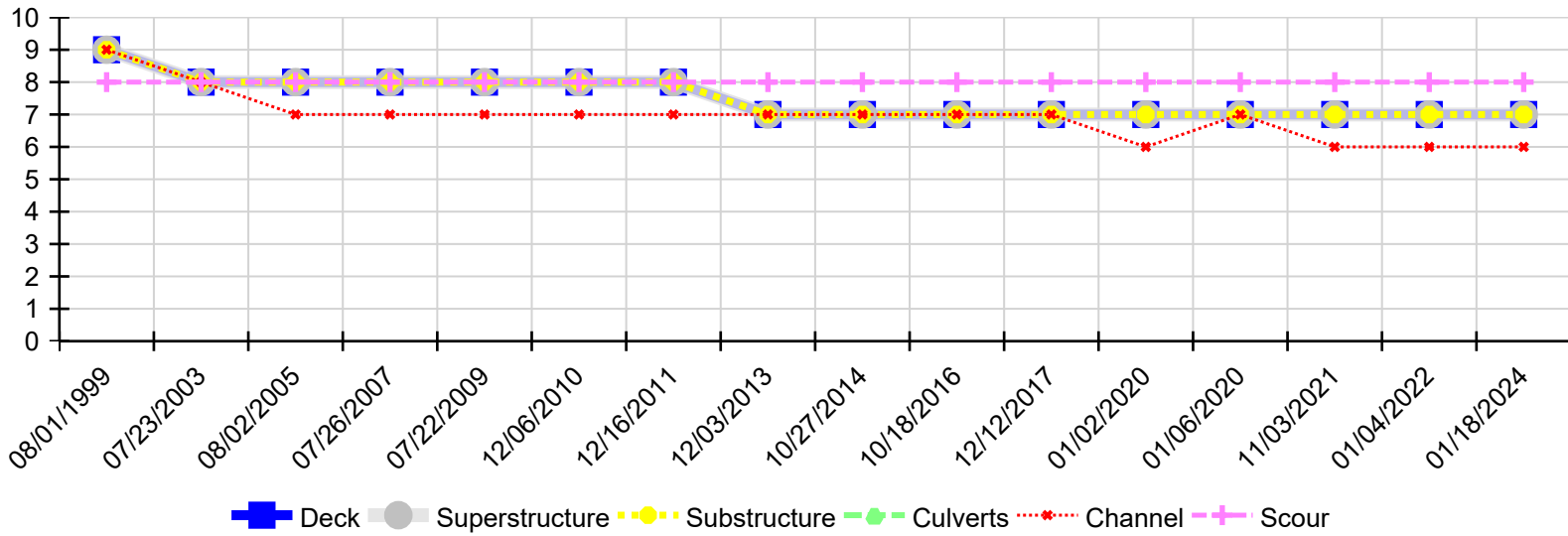
Asset #04819(Routine, Underwater type 2)

CR 58 Newton over DRY BRANCH

Location: 0.4 MI S JCT SH 374

Team Lead: Nathan Rowland Inspection Date: 01/18/2024

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
01/18/2024	7	7	7	N	6	8
01/04/2022	7	7	7	N	6	8
11/03/2021	7	7	7	N	6	8
01/06/2020	7	7	7	N	7	8
01/02/2020	7	7	7	N	6	8
12/12/2017	7	7	7	N	7	8
10/18/2016	7	7	7	N	7	8
10/27/2014	7	7	7	N	7	8
12/03/2013	7	7	7	N	7	8
12/16/2011	8	8	8	N	7	8
12/06/2010	8	8	8	N	7	8
07/22/2009	8	8	8	N	7	8
07/26/2007	8	8	8	N	7	8
08/02/2005	8	8	8	N	7	8
07/23/2003	8	8	8	N	8	8
08/01/1999	9	9	9	N	9	8