

Bridge 03989 Inspection Report



Latitude:34.91196, Longitude:-91.75848

Route:13 Section:10 Log:10.15

Arnold Road ID:43x13x10xA, Arnold Log mile:10.143

District 06, 85 - Lonoke County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

Bridge Posting Information

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

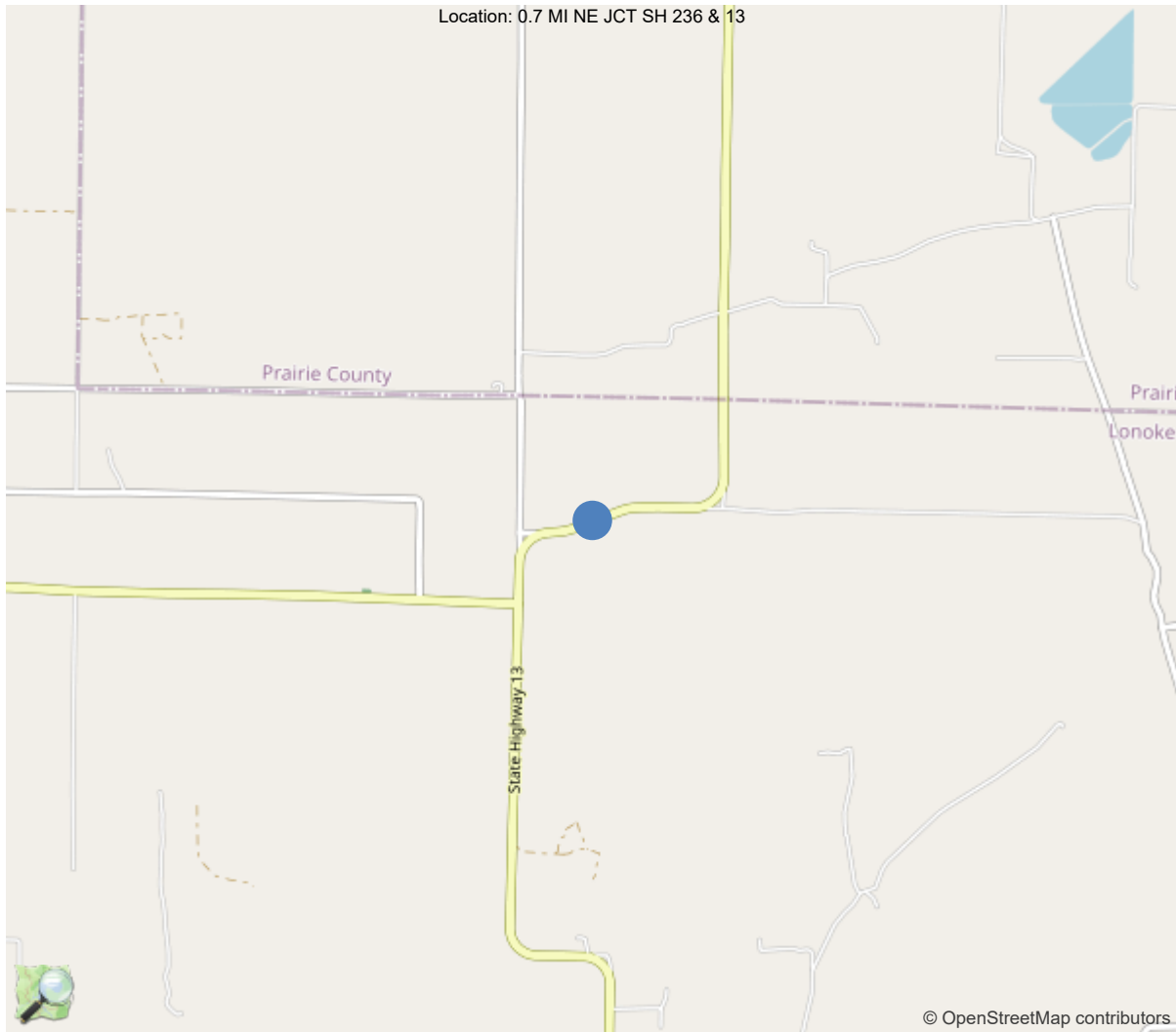
70 - Bridge Posting: 5 - Equal to or above legal loads

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



34.91196, -91.75848

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	03989
(5) Inventory Route	1
(2) Highway Agency District	06 - District 06
(3) County Code	85 - Lonoke County
(4) Place Code	0
(6) Features Intersected	COLLINS CREEK
(7) Facility Carried	SH 13 Log 10.15
(9) Location	0.7 MI NE JCT SH 236 & 13
(11) Mile Point	10.15 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	34.91196
(17) Longitude	-91.75848
(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	1966
(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	442
(30) Year of ADT	2018
(109) Truck ADT	1 %
(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	1.5 ft
Right	1.5 ft
(51) Bridge Roadway Width Curb to Curb	24 ft
(52) Deck Width Out to Out	27 ft
(32) Approach Roadway Width (W/Shoulders)	26.9 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	29.2 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	5
(59) Superstructure	6
(60) Substructure	5
(61) Channel & Channel Protection	7
(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	46
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	28
(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 t
PROPOSED IMPROVEMENTS	
(75) Type of Work	35 - Bridge rehabilitation bec
(76) Length of Structure Improvement	75 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 101
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	608
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			07/31/2024
(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: Shane Byrd, Inspection Date: 07/31/2024

Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	03989
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	1966

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	85 - Lonoke County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	06 - District 06
B.L.05 Latitude	34.91196
B.L.06 Longitude	-91.75848
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	0.7 MI NE JCT SH 236 & 13
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	26.9
B.G.06 Bridge Width Curb-to-Curb	24
B.G.07 Left Curb or Sidewalk Width	1.6
B.G.08 Right Curb or Sidewalk Width	1.6
B.G.09 Approach Roadway Width	26.9

B.G.10 Bridge Median	0 - No median
B.G.11 Skew	0
B.G.12 Curved Bridge	N - Not curved
B.G.13 Max Bridge Height	15
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	2021.2

LOADS AND LOAD RATING	
B.LR.01 Design Load	H15 - H-15
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	0.78
B.LR.06 Operating Load Rating Factor	1.28
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	5 - FAIR - Some moderate defec
B.C.02 Superstructure Condition	6 - SATISFACTORY - Widespread
B.C.03 Substructure Condition	5 - FAIR - Some moderate defec
B.C.04 Culvert Condition	N - NOT APPLICABLE - Component
B.C.05 Bridge Railing Condition	5 - FAIR - Some moderate defec
B.C.06 Bridge Railing Transitions Condition	6 - SATISFACTORY - Widespread
B.C.07 Bridge Bearings Cond.	N - NOT APPLICABLE - Component
B.C.08 Bridge Joints Condition	5 - FAIR - Some moderate defec
B.C.09 Channel Condition Rating	7 - GOOD - Some minor defects.
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	F - Fair
B.C.13 Lowest Condition Rating	5 - FAIR - Some moderate defec
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	0 - Seismic evaluation not complete

Team Lead: Shane Byrd, Inspection Date: 07/31/2024

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	0 - None
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	P01 - Pile - steel H-shape
B.SB.04 Substructure Type	A02 - Abutment - stub	B.SB.07 Foundation Protective System	0 - None
P2			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C02 - Reinforced concrete - pr	B.SB.06 Foundation Type	PX - Pile - other
B.SB.04 Substructure Type	B01 - Bent - column or open	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	442
B.F.03 Feature Name	SH 13 Log 10.15	B.H.10 Annual ADTT	4
B.H.01 Functional Classification	5 - Major 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	29.1
B.H.07 LRS Mile Point	10.15	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	13	2-T - TEMP - Two-way traffic - NS or EW	3 - State route	1 - Mainline



Team Lead: Shane Byrd, Inspection Date: 07/31/2024

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	COLLINS 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 #03989(Routine)

SH 13 Log 10.15 over COLLINS CREEK

Location: 0.7 MI NE JCT SH 236 & 13

Team Lead: Shane Byrd Inspection Date: 07/31/2024

Inspection Notes

General Observation

Job #6795, Drawing #13246 for layout.

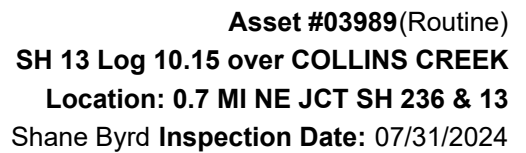
Approach looking north.

A-54 - Sealable Deck Cracks (Y)

Span 2 longitudinal crack at centerline.

A-59 - Joint Repair Needed (Y)

All joints are full of debris and missing.



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	1950	5	1450	495	0
1080	Delamination/Spall/Patched Area	SF	174	0	159	15	0
1090	Exposed Rebar	SF	3	0	0	3	0
1130	Cracking (RC and Other)	SF	651	0	651	0	0
1190	Abrasion/Wear (PSC/RC)	SF	1117	0	640	477	0
(38) All spans have heavy abrasion, patches and cracks. See photo. Small spall in span 3 all other spalls have been patched with asphalt. Span 1&3 have spalls with exposed rebar on side of slab Deck span 1 80' of patches. CS2 80'. Deck span 2 69' of patches. CS2 69'. Deck span 3 10' of patches. CS2 10'. Deck span 3 has a 3'x5' spall filled with asphalt. CS3 15'. Deck Span 2 has longitudinal crack at centerline.							
215	Reinforced Concrete Abutment	LF	86	86	0	0	0
(215) Rip rap countermeasures still in place.							
227	Reinforced Concrete Pile	EA	6	0	4	2	0
1190	Abrasion/Wear (PSC/RC)	EA	6	0	4	2	0
(227) All pile have minor abrasion.							
234	Reinforced Concrete Pier Cap	LF	53	40	6	7	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1090	Exposed Rebar	LF	7	0	0	7	0
1130	Cracking (RC and Other)	LF	4	0	4	0	0
(234) Spalls with exposed rebar and delamination on the back face of cap at bent 2. CS3 7'.							
301	Pourable Joint Seal	LF	48	0	0	48	0
2310	Leakage	LF	48	0	0	48	0
(301) All joint seals are missing and full of debris.							
330	Metal Bridge Railing	LF	150	129	15	6	0
7000	Damage	LF	21	0	15	6	0
(330) Bent 3 left bridge rail has damage due to traffic impact.							

Inspection Photos and Notes



Elevation.



Span 2 undersurface.



Deck overview.



Downstream channel view.



Upstream channel view.



Approach Northbound.



Span 2 longitudinal crack at centerline.



Bent 3 joint seal full of debris.



Span 3 right side spall with exposed rebar in side of deck.
CS3 2'.



Span 1 left side spall with exposed rebar in side of deck.
CS3 1'.



Span 2 longitudinal crack at centerline.



Span 3 spall filled with asphalt. 15'CS3



Span 1 abrasion in concrete deck.



Bent 2 pile 2 minor abrasion at waterline. Common all piles this bent.



Bent 2 cap back spalls with exposed rebar. CS3 7'.



Bent 3 joint seal full of debris.



Span 3 left bridge rail damaged due to traffic impact.

Maintenance Needs

Date Reported: 08/27/2013

Priority: C - Important

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

Status: Monitor

Component:

Deficiency Description

Deck has small spalls and heavy scaling.

Remarks



Span 3 spall filled with asphalt. 15'CS3



Deck has small spalls and heavy scaling.



Overview of deck with heavy abrasion, cracks and patches.



Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is Recommended?
A-54 - Sealable Deck Cracks	Yes
A-55 - Deck Washing Needed	No
A-56 - Joint Cleaning/Flushing Needed	No
A-57 - Beam End and Bearing Paint Needed	No
A-58 - Cap Cleaning/Flushing Needed	No
A-59 - Joint Repair Needed	Yes
A-60 - Full Beam Painting Needed	No
A-61 - Polymer Overlay Advised	No
A-62 - Hydro and LMC Advised	No
A-63 - Missing/Incorrect Log Mile Signage	No
A-64 - Vegetation Removal Requested	No
A-65 - Clogged deck drains?	
A-66 - Approach minor pothole/leveling needed	

A-54 - Sealable Deck Cracks (Yes)

Span 2 longitudinal crack at centerline.



Span 2 longitudinal crack at centerline.

A-55 - Deck Washing Needed (No)

A-56 - Joint Cleaning/Flushing Needed (No)

A-57 - Girder End and Bearing Painting Needed (No)

A-58 - Cap Cleaning/Flushing Needed (No)

A-59 - Joint Repair Needed (Yes)

All joints are full of debris and missing.



Bent 3 joint seal full of debris.

A-60 - Full Girder Painting Needed (No)

A-61 - Polymer Overlay Advised (No)



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SH 13 Log 10.15 over COLLINS CREEK

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A-62 - Hydro and LMC Advised (No)

A-63 - Missing/Incorrect Log Mile Signage (No)

A-64 - Vegetation Removal Requested (No)

A-65 - Clogged deck drains?

A-66 - Approach minor pothole/leveling needed



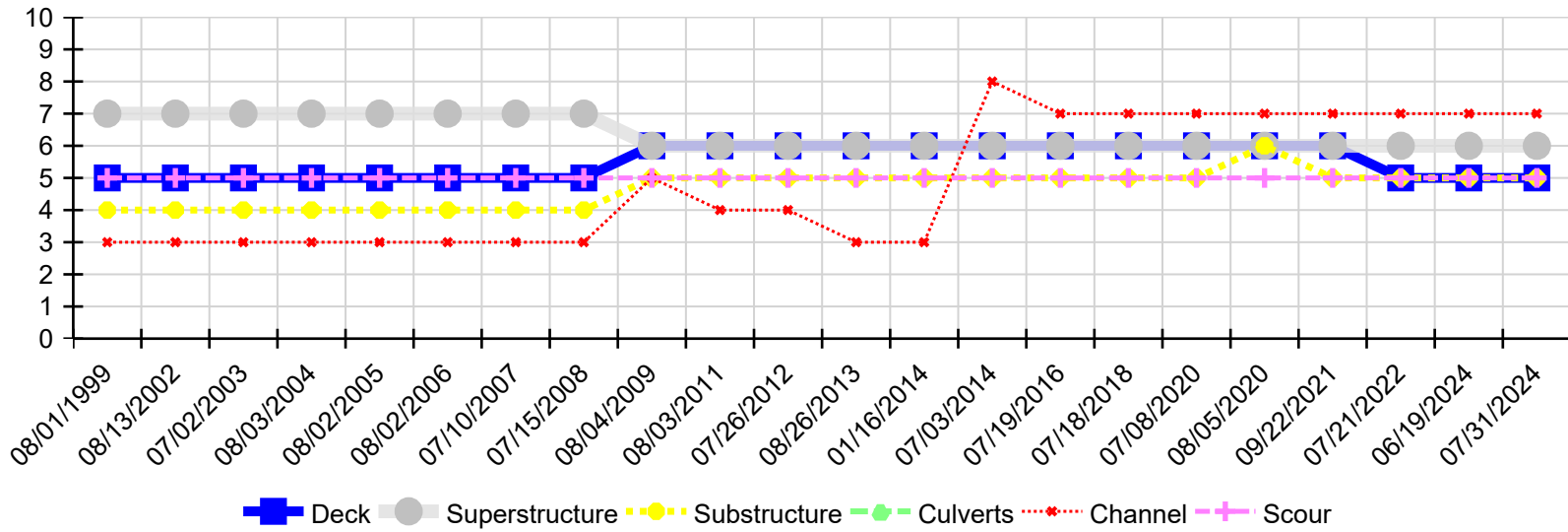
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Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
07/31/2024	5	6	5	N	7	5
06/19/2024	5	6	5	N	7	5
07/21/2022	5	6	5	N	7	5
09/22/2021	6	6	5	N	7	5
08/05/2020	6	6	6	N	7	5
07/08/2020	6	6	5	N	7	5
07/18/2018	6	6	5	N	7	5
07/19/2016	6	6	5	N	7	5
07/03/2014	6	6	5	N	8	5
01/16/2014	6	6	5	N	3	5
08/26/2013	6	6	5	N	3	5
07/26/2012	6	6	5	N	4	5
08/03/2011	6	6	5	N	4	5
08/04/2009	6	6	5	N	5	5
07/15/2008	5	7	4	N	3	5
07/10/2007	5	7	4	N	3	5
08/02/2006	5	7	4	N	3	5
08/02/2005	5	7	4	N	3	5
08/03/2004	5	7	4	N	3	5
07/02/2003	5	7	4	N	3	5
08/13/2002	5	7	4	N	3	5
08/01/1999	5	7	4	N	3	5