



Latitude:36.46439, Longitude:-93.61345

Route:143 Section:01 Log:5.76

Arnold Road ID:8x143x1xA, Arnold Log mile:5.742

District 09, 15 - Carroll County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

Bridge Posting Information

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

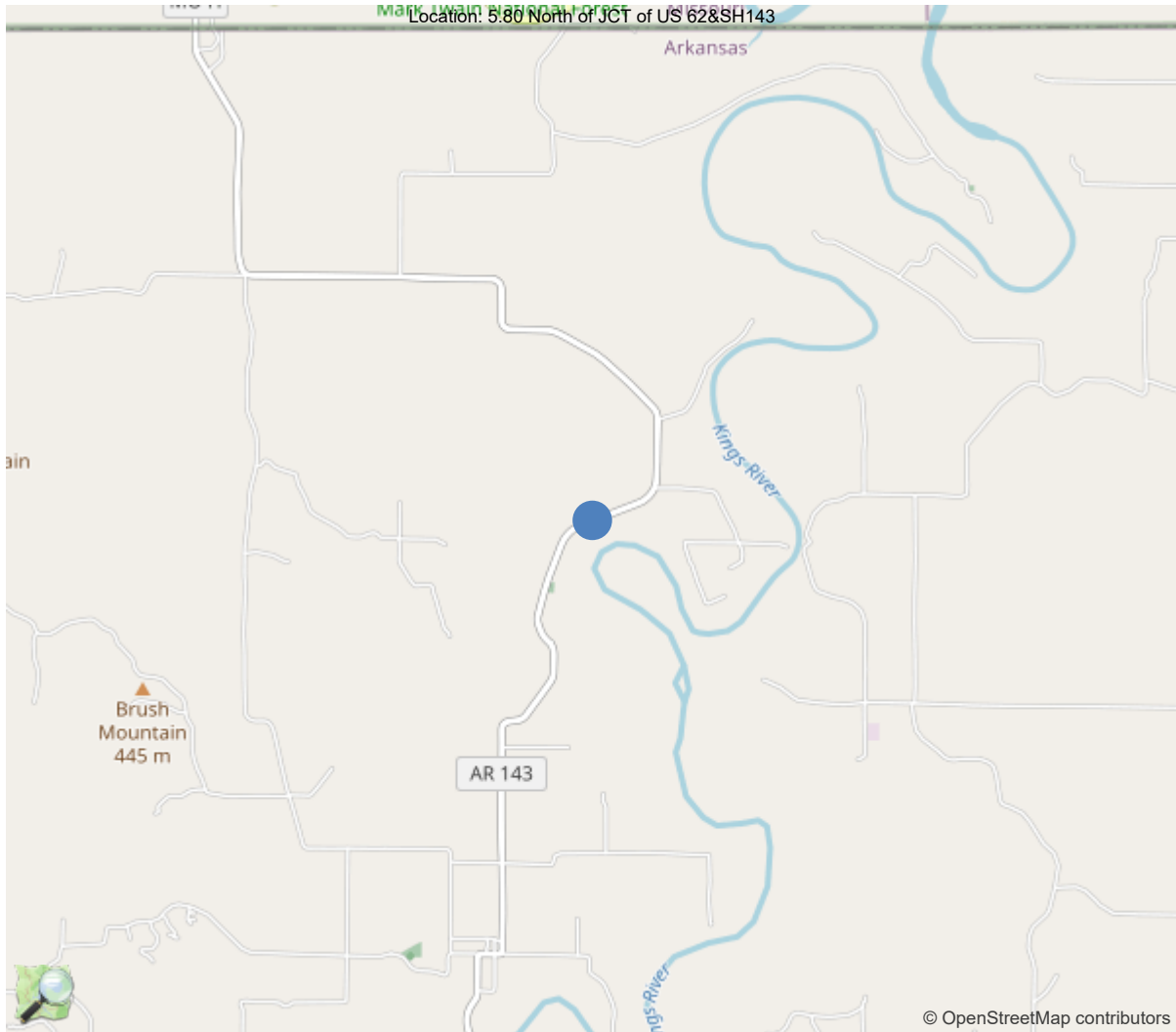
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	40		
Code 9 (31 Tons)	50		
Code 5 (40 Tons)	56		

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



36.46439, -93.61345



Asset #05883(Routine)

SH 143 Carroll over FLAT ROCK CREEK

Location: 5.80 North of JCT of US 62&SH143

Team Lead: Benjamin Smith Inspection Date: 04/23/2024

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	05883
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	15 - Carroll County
(4) Place Code	0
(6) Features Intersected	FLAT ROCK CREEK
(7) Facility Carried	SH 143 Carroll
(9) Location	5.80 North of JCT of US 62&SH143
(11) Mile Point	5.76 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	36.46439
(17) Longitude	-93.61345
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	32
Material	3 - Steel
Type	2 - Stringer/Multi-beam or girder
(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	0 - None (no additional concrete thickne
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1982
(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	1300
(30) Year of ADT	2018
(109) Truck ADT	1 %
GEOMETRIC DATA	
(48) Length of Maximum Span	75 ft
(49) Structure Length	227.2 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	27.9 ft
(52) Deck Width Out to Out	30.9 ft
(32) Approach Roadway Width (W/Shoulders)	27 ft
(33) Bridge Median	0 - No median
(34) Skew	30 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	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	7 - Rural Major Collector
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exis
(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 structu
(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	7
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	4 - M 18 / H 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	58
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	35
(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	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	2357
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	04/23/2024		
(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.			



Asset #05883(Routine)

SH 143 Carroll over FLAT ROCK CREEK

Location: 5.80 North of JCT of US 62&SH143

Team Lead: Benjamin Smith Inspection Date: 04/23/2024

General Observation

Structure is logged from SW to NE, and is accessible with a snooper.
No bat activity was noted.

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

The deck has a polymer overlay with no deficiencies.

The undersurface has a few cs2 efflorescence cracks and exposed rebar in the overhangs.

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

The superstructure was repainted under contract in 2016. Cs2 corrosion is bleeding through at the bearings.

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

The substructure has shrinkage cracking with a few areas of delamination and cs3 efflorescence leaching.

61 - Channel/Channel Protection (7 - Bank protection is in need of minor repairs. River control devices and embankment protection have a little minor damage. Banks and/or channel have minor amounts of drift.)

The upstream channel is vegetated. The banks have minor erosion.

The channel beneath the structure has minor erosion on the banks. No significant scour was noted.

The downstream channel is vegetated. The banks have minor erosion.



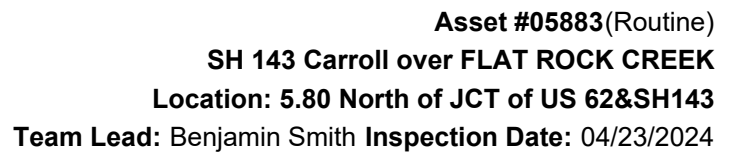
Asset #05883(Routine)

SH 143 Carroll over FLAT ROCK CREEK

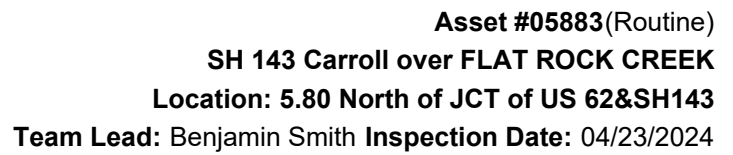
Location: 5.80 North of JCT of US 62&SH143

Team Lead: Benjamin Smith Inspection Date: 04/23/2024

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	7014	6703	301	10	0
1080	Delamination/Spall/Patched Area	SF	3	0	0	3	0
1090	Exposed Rebar	SF	2	0	0	2	0
1120	Efflorescence/Rust Staining	SF	64	0	59	5	0
1130	Cracking (RC and Other)	SF	242	0	242	0	0
(12) Driving surface- The deck has a new polymer overlay at the 2024 inspection. No deficiencies noted.							
Under surface-							
The bays do not have sip forms.							
The under surface of the deck in all bays is showing hairline cracking.							
Span 1-							
No efflorescence was noted in the bays.							
The left overhang has 8' of cs2 efflorescence. The right overhang has 12' of cs2 efflorescence and 1' cs3 delamination. The right overhang has 1' of cs3 exposed rebar at the beginning of the span.							
Span 2-							
No efflorescence was noted in the bays.							
The right overhang has 11' of cs2 efflorescence, 1' of cs3 delamination and 1' of cs3 spalling with exposed cs3 rebar. The left overhang has 15' of cs2 efflorescence and 1' of cs3 delamination.							
Span 3-							
A 1' x 5' area of efflorescence map cracking was noted in the bay #1 haunch area at the beginning of span #3.							
The left overhang has 7' of cs2 efflorescence cracking.							
The right overhang has 6' of cs2 efflorescence and 1' of spalling with exposed cs3 rebar.							
107	Steel Open Girder/Beam	LF	900	899	0	1	0
1000	Corrosion	LF	1	0	0	1	0
515	Steel Protective Coating	SF	8584	8579	0	0	5
3440	Effectiveness (Steel Protective Coatings)	LF	5	0	0	0	5
(107) 4 steel beam system. The protective coating includes the diaphragms. The bridge was sand blasted and repainted in 2016. The bottom flange cover plates are cut square and welded at the ends. The cover plates are an E detail.							
Span #1- Beams #2,3 have rust stains on the bottom flange from the leaking joint seal. The sole plates over abutment #1 have areas of cs3 corrosion.							
Span #2- The bottom of the bottom flanges at the ends of beams #1-3 over pier #2 have up to 3/16" pitting and section loss for 3" in front of the bearings. The corrosion has been arrested on beams #1 and #3. Beam #2 has active corrosion at this location.							
Span #3- Beam #1 has 1' of cs3 corrosion at the extreme end of the web next to the back wall.							
205	Reinforced Concrete Column	EA	2	0	2	0	0
1130	Cracking (RC and Other)	EA	2	0	2	0	0
(205) Pier #1 column- has hairline horizontal and vertical hairline cracking on 3 of the 4 sides. The footing has cover.							
Pier #2 column- has hairline horizontal and vertical hairline cracking on 3 of the 4 sides. The bottom left side of the column has a small cs3 spall with no rebar exposed. The footing has cover.							
215	Reinforced Concrete Abutment	LF	84	65	19	0	0



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1130	Cracking (RC and Other)	LF	19	0	19	0	0
<p>(215) Abutment #1- has 8 vertical hairline cracks in the back wall. No cracking was noted in the bridge seat. 6-8" of embankment settlement was noted beneath the bridge seat. Piles #1,3,4 are exposed due to the settlement. The rip rap is in place and and functioning as intended.</p> <p>Abutment #2- The back wall has 9' of vertical cracking and 2' of vertical cracking in the vertical face of the bridge seat. The rip rap is in place and functioning as intended.</p>							
225	Steel Pile	EA	3	0	3	0	0
1000	Corrosion	EA	3	0	3	0	0
<p>(225) Steel piling at abutment #1- the top 1' of steel piles #1,3,4 are exposed due to 6-8" of embankment settlement beneath the bridge seat. The visible portion of the piles have cs2 corrosion.</p>							
234	Reinforced Concrete Pier Cap	LF	62	9	49	4	0
1080	Delamination/Spall/Patched Area	LF	1	0	0	1	0
1120	Efflorescence/Rust Staining	LF	3	0	0	3	0
1130	Cracking (RC and Other)	LF	49	0	49	0	0
<p>(234) Pier cap #1- has 26' of horizontal and vertical cracking and 3' of cs3 efflorescence. The right cap end has 1' of cs3 delamination. The cap has rust stains from the previously leaking joint seal.</p> <p>Pier cap #2- has 23' of horizontal and vertical hairline cracking. The cap has rust stains from the previously leaking joint seal.</p>							
301	Pourable Joint Seal	LF	144	142	0	2	0
2310	Leakage	LF	2	0	0	2	0
<p>(301) Pourable joint seals were added replacing the compression joint seals in 2024 under contract.</p> <p>Abutment #1 seal- no deficiencies noted.</p> <p>Pier #1 seal- no deficiencies noted.</p> <p>Pier #2 seal- has 2' of cs3 leakage.</p> <p>Abutment #2- no deficiencies noted.</p>							
310	Elastomeric Bearing	EA	24	0	16	8	0
1000	Corrosion	EA	24	0	16	8	0
<p>(310) All bearings are elastomeric. 24 total bearings.</p> <p>Abutment #1 bearings- bearings #1,2,4 have areas of cs3 corrosion on the sole plates. Bearing #3 has cs2 corrosion.</p> <p>Pier #1 bearings- no deficiencies noted in the elastomeric pads. Bearing #3 has cs3 corrosion with flaking rust on the bottom of the sole plate. Bearings #2,3,4 have arrested cs3 corrosion with pitting on the sole plate that has been sand blasted and repainted. The remaining 4 bearings have cs2 corrosion on the sole plates.</p> <p>Pier #2 bearings- No deficiencies noted in the elastomeric pads. Bearing #4 in span #2 has cs3 corrosion with flaking rust on the bottom of the sole plate. The left anchor bolt is in contact with the diaphragm in bay #1 over pier #2 at the beginning of span #3. The remaining 7 bearings have cs2 corrosion on the sole plates.</p> <p>Abutment #2 bearings- all 4 elastomeric pads have no deficiencies. The 4 sole plates have cs2 corrosion.</p>							



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
331	Reinforced Concrete Bridge Railing	LF	454	368	86	0	0
1130	Cracking (RC and Other)	LF	86	0	86	0	0
(331) Left parapet wall- has hairline vertical cracks off the top corners of the drains and at random locations throughout. Right parapet wall- has hairline vertical cracks off the top corners of the drains and at random locations throughout.							
Approach railing- The left ending approach railing has vehicle impact damage. No deficiencies noted on the remaining locations.							
Transitions- no deficiencies noted.							



Elevation view.



Transition area.



Driving surface view.



New polymer overlay condition.



General view of the paint condition



Upstream channel view.



Downstream channel view.



Channel beneath the structure.



Approach view in direction of log mile.



E detail. Bottom flange cover plates.



Abutment #2 seal condition. no deficiencies noted.



Pier #2 seal condition. no deficiencies noted.



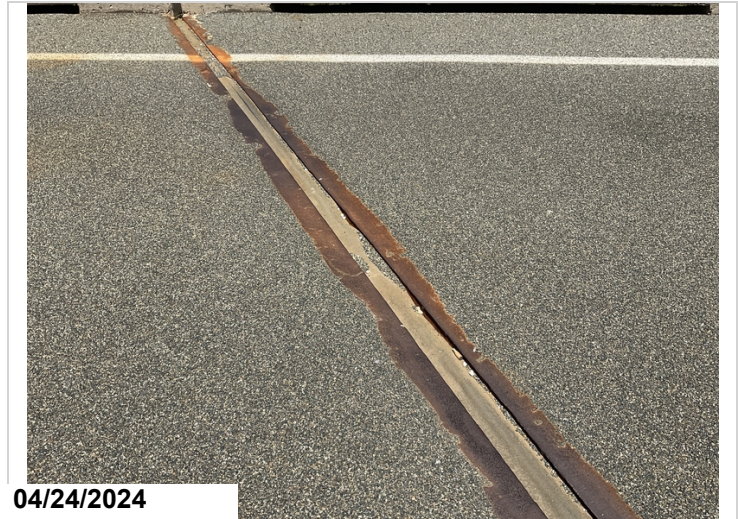
Abutment #1 pourable seal condition. no deficiencies noted.



Cs3 corrosion on bearing #4 at abutment #1.



Sole plate corrosion at abutment #1.



Pier #1 seal showing 2' of cs3 leakage.



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Team Lead: Benjamin Smith Inspection Date: 04/23/2024

Maintenance Needs

Date Reported: 04/11/2012

Priority: D- Routine

Type of Work: Deck Repair

Status: Repair Documented

Component:

Deficiency Description

All deck expansion joints have sections that have cracking or have lost adhesion due to pack rust on the armoring plates. The deck has delamination in the driving surface at the joint seal armoring plates with sealable cracks throughout the driving surface.

Remarks

It was noted during the routine inspection that the deck has a new polymer overlay and pourable joint seals under contract in 2024. BDS 2024

Maintenance Needs

Date Reported: 04/20/2022

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component:

Deficiency Description

Abutment #1 has 6-8" of embankment settlement at the bridge seat that has exposed the tops of three of the steel piles.

Remarks

Carroll Co.



Exposed piling at abutment #1.



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SH 143 Carroll over FLAT ROCK CREEK

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Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is recommended?
A-54 - Sealable Deck Cracks	No
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	No
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-54 - Sealable Deck Cracks (No)

A-55 - Deck Washing Needed (No)

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



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

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

A-59 - Joint Repair Needed (No)

A-60 - Full Girder 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)



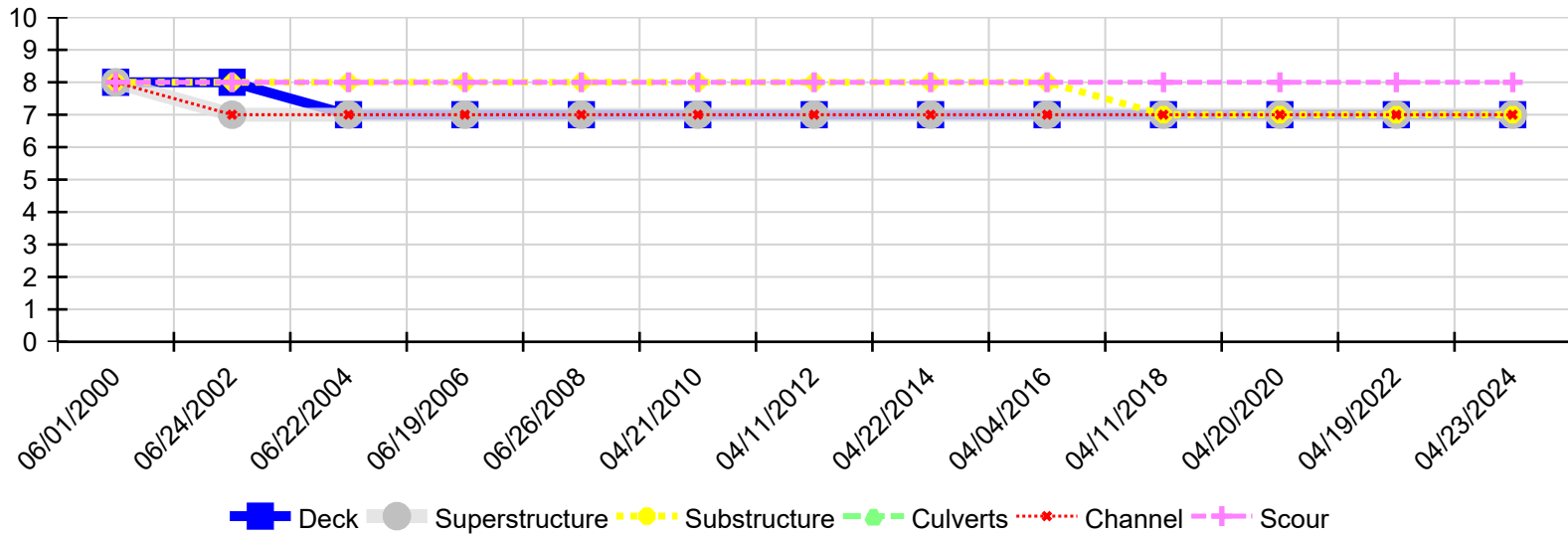
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Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
04/23/2024	7	7	7	N	7	8
04/19/2022	7	7	7	N	7	8
04/20/2020	7	7	7	N	7	8
04/11/2018	7	7	7	N	7	8
04/04/2016	7	7	8	N	7	8
04/22/2014	7	7	8	N	7	8
04/11/2012	7	7	8	N	7	8
04/21/2010	7	7	8	N	7	8
06/26/2008	7	7	8	N	7	8
06/19/2006	7	7	8	N	7	8
06/22/2004	7	7	8	N	7	8
06/24/2002	8	7	8	N	7	8
06/01/2000	8	8	8	N	8	8