

## Bridge 03554 Inspection Report



Latitude:33.36847, Longitude:-91.85118

Route:425 Section:02 Log:10.3

Arnold Road ID:2x425x2xA, Arnold Log mile:10.283

District 02, 3 - Ashley County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

### Bridge Posting Information

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

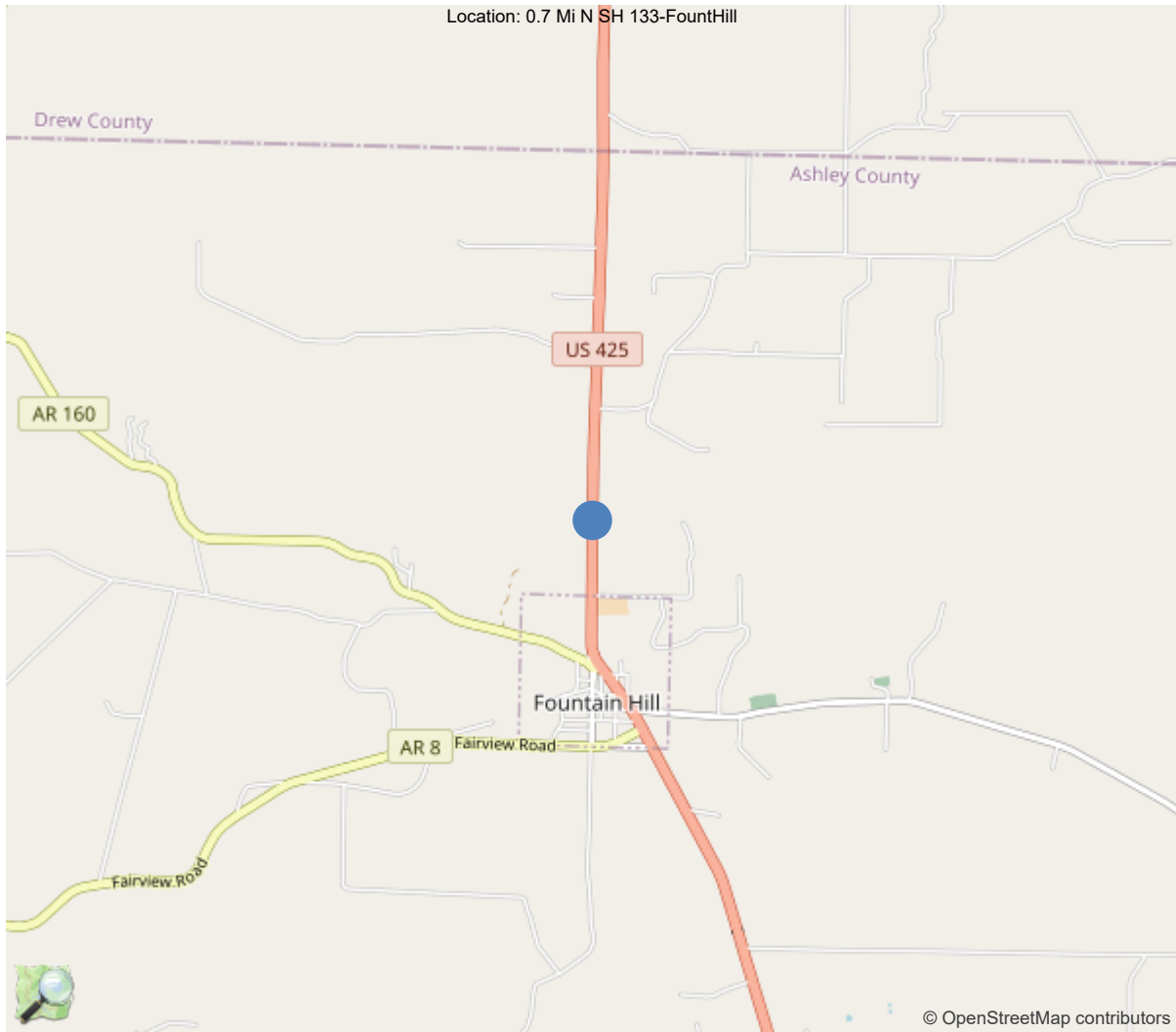
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	39		
Code 9 (31 Tons)	47		
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



33.36847, -91.85118

## National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	03554
(5) Inventory Route	1
(2) Highway Agency District	02 - District 02
(3) County Code	3 - Ashley County
(4) Place Code	0
(6) Features Intersected	Flat Creek
(7) Facility Carried	US 425-02 LM 10.30
(9) Location	0.7 Mi N SH 133-FountHill
(11) Mile Point	10.3 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000425020
(16) Latitude	33.3684713447744
(17) Longitude	-91.8511759214276
(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	7
(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	1962
(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	3800
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	45 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	25 ft
(49) Structure Length	175 ft
(50) Curb or Sidewalk Width	
Left	1.2 ft
Right	1.2 ft
(51) Bridge Roadway Width Curb to Curb	27.9 ft
(52) Deck Width Out to Out	33.6 ft
(32) Approach Roadway Width (W/Shoulders)	36.1 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	27.9 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	5 - None present but re-evalua
(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	1
(26) Functional Class	2 - Rural Principal Arterial -
(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	1 - The inventory route is par
(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	6
(59) Superstructure	6
(60) Substructure	6
(61) Channel & Channel Protection	6
(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	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	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	1 - Inspected feature meets current
(113) Scour Critical Bridges	5 - 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	4211
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			05/17/2023
(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: Sharon Hooks, Inspection Date: 05/17/2023

### Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	03554
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	3 - Ashley County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	02 - District 02
B.L.05 Latitude	33.3684713447744
B.L.06 Longitude	-91.8511759214276
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: Sharon Hooks, Inspection Date: 05/17/2023

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

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 #03554**(Routine)

**US 425-02 LM 10.30 over Flat Creek**

**Location: 0.7 Mi N SH 133-FountHill**

**Team Lead: Sharon Hooks Inspection Date: 05/17/2023**

## Inspection Notes

### General Observation

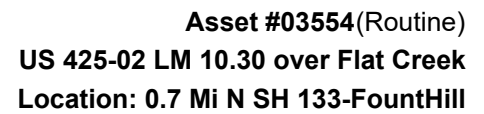
Beginning of structure toward SH 133, Fountain Hill, South End.05-15-2007, Dropping UW inspection due to sub-str. elements are not continuously submerged. Normal water depth appears less than 2 foot deep. Durations of high water events occur. No signs of channel scour up or down stream. NBI Items #60 and #61 will represent all elements that occasionally stand in water. RLW.

### A-59 - Joint Repair Needed (Y)

Joints - Bents 2-8: Pourable joint material has deteriorated and joint is mostly filled with dirt and debris.

### National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	5285	724	2652	1709	200
1080	Delamination/Spall/Patched Area	SF	11	0	5	6	0
1120	Efflorescence/Rust Staining	SF	30	0	0	30	0
1130	Cracking (RC and Other)	SF	1000	0	300	500	200
1190	Abrasion/Wear (PSC/RC)	SF	3520	0	2347	1173	0
(38) Deck (void-tube construction): 30.2' wide x 175' long = 5285 sqft.							
<p>Deck: All spans: Several moderate-sized longitudinal full-depth cracks with large delams in soffit/ a few scattered minor-sized transverse cracks / minor to significant abrasive wear with some scattered loss of aggregate.</p> <p>Sides of slabs: Vertical cracks at bents – especially Span 1 right @ Bent 2.</p> <p>Soffit: Cracking with efflorescence at various locations with some large delams.</p>							
215	Reinforced Concrete Abutment	LF	76	76	0	0	0
(215) Abutment: 34' each (with 2' wingwalls each corner) / Bents 1 & 8. Both abutments are stained due to joint seals leaking.							
227	Reinforced Concrete Pile	EA	30	5	25	0	0
1080	Delamination/Spall/Patched Area	EA	1	0	1	0	0
1190	Abrasion/Wear (PSC/RC)	EA	24	0	24	0	0
<p>(227) Piling: 5 per bent / Bents 2-7. Bents 2-7: Light abrasive wear at water/groundline. Bent 4 Pile 3: Small spall - repaired/patched by state forces.</p>							
234	Reinforced Concrete Pier Cap	LF	186	116	50	20	0
1080	Delamination/Spall/Patched Area	LF	45	0	45	0	0
1090	Exposed Rebar	LF	25	0	5	20	0
<p>(234) Caps: 31' each / Bents 2-7. Bents 2-6: Small spalls with exposed rebar on faces and bottom (some repaired/patched by state forces).</p>							
301	Pourable Joint Seal	LF	224	0	112	0	112
2330	Seal Damage	LF	112	0	0	0	112
2350	Debris Impaction	LF	112	0	112	0	0
<p>(301) Joints: 28' each / Bents 1-8. Bent 1: Joint at bridge end is considerably wider than normal (approximately 6"), making a bump for traffic coming onto and off of bridge. Bents 2-8: Pourable joint material has deteriorated and joint is mostly filled with dirt and debris.</p>							
330	Metal Bridge Railing	LF	350	350	0	0	0



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
515	Steel Protective Coating	SF	875	0	875	0	0
3410	Chalking (Steel Protective Coatings)	SF	875	0	875	0	0
(330) Railing: 175' each side. Coating: 2.5 square feet per linear feet of railing. Railing is dull and has no luster. Left rail posts in Spans 1 & 3 have minor collision damage.							

## Inspection Photos and Notes



Elevation.



Bent 4 pile have abrasion.



Bent 7 cap back has spalls and delams.



Span 7 large soffit delam.



Span 6 deck cracking.



Bent 4 joint seal has lost bond.



Span 1 deck cracking.



Bent 3 Pile have abrasion.



Bent 3 bottom of cap has spalls with exposed rebar.



Span 2 soffit has large cracks with staining.



Deck overview.



Approach.

### Maintenance Needs

**Date Reported:** 05/01/2017

**Priority:** C - Important

**Status:** Monitor

**Type of Work:** (Inactive) (Inactive) 0 - N/A

**Component:**

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### Deficiency Description

**Deck:**

All spans: Several moderate-sized longitudinal full-depth cracks with delams to soffit/ a few scattered minor-sized transverse cracks / minor to significant abrasive wear with some scattered loss of aggregate.

**Sides of slabs:**

Vertical cracks at bents – especially Span 1 right @ Bent 2.

**Soffit:**

Cracking with efflorescence at various locations.

Changed from "D" to "C" 2021 SDH.

### Remarks



Deck - Spans 1-7: Typical



Large crack on span 4 near centerline but common on spans 1,3,4,5 & 6



Span 2 large unsealed crack that reflect to soffit.



Span 2 cracking reflecting from top side of deck



Span 8 soffit on left lane has large delam with cracking and staining.

### Maintenance Needs

Date Reported: 05/28/2019

Priority: D- Routine

Status: Monitor

Type of Work: (Inactive) (Inactive) 0 - N/A

Component:

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### Deficiency Description

Joint - Bent 1: Joint at bridge end is considerably wider than normal (approximately 6"), making a bump for traffic coming onto and off of bridge.

### Remarks

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Bent 1 - Left : Hole



Bent 1 and roadway approach, Joint filled with debris.



Asset #03554(Routine)

US 425-02 LM 10.30 over Flat Creek

Location: 0.7 Mi N SH 133-FountHill

Team Lead: Sharon Hooks Inspection Date: 05/17/2023

## 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	Yes
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**



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**US 425-02 LM 10.30 over Flat Creek**

**Location: 0.7 Mi N SH 133-FountHill**

**Team Lead: Sharon Hooks Inspection Date: 05/17/2023**

**A-57 - Girder End and Bearing Painting Needed**

**A-58 - Cap Cleaning/Flushing Needed**

**A-59 - Joint Repair Needed (Yes)**

Joints - Bents 2-8: Pourable joint material has deteriorated and joint is mostly filled with dirt and debris.

**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?**



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**A-66 - Approach minor pothole/leveling needed**



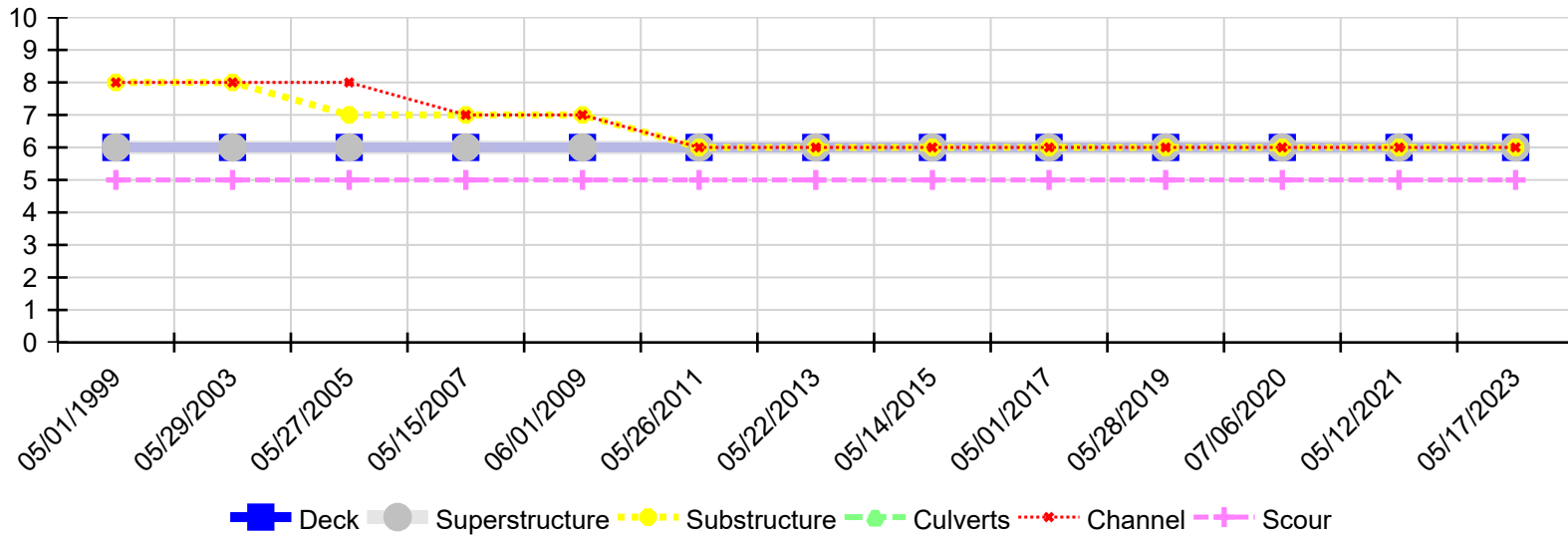
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### Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
05/17/2023	6	6	6	N	6	5
05/12/2021	6	6	6	N	6	5
07/06/2020	6	6	6	N	6	5
05/28/2019	6	6	6	N	6	5
05/01/2017	6	6	6	N	6	5
05/14/2015	6	6	6	N	6	5
05/22/2013	6	6	6	N	6	5
05/26/2011	6	6	6	N	6	5
06/01/2009	6	6	7	N	7	5
05/15/2007	6	6	7	N	7	5
05/27/2005	6	6	7	N	8	5
05/29/2003	6	6	8	N	8	5
05/01/1999	6	6	8	N	8	5