



Latitude:36.10804, Longitude:-90.44691

Route:49 Section:02 Log:11.86

Arnold Road ID:28x49x2xA, Arnold Log mile:11.831

District 10, 55 - Greene County

Owner: 1 - State Highway Agency

Inspection Direction: 1 - N to S

### Bridge Posting Information

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

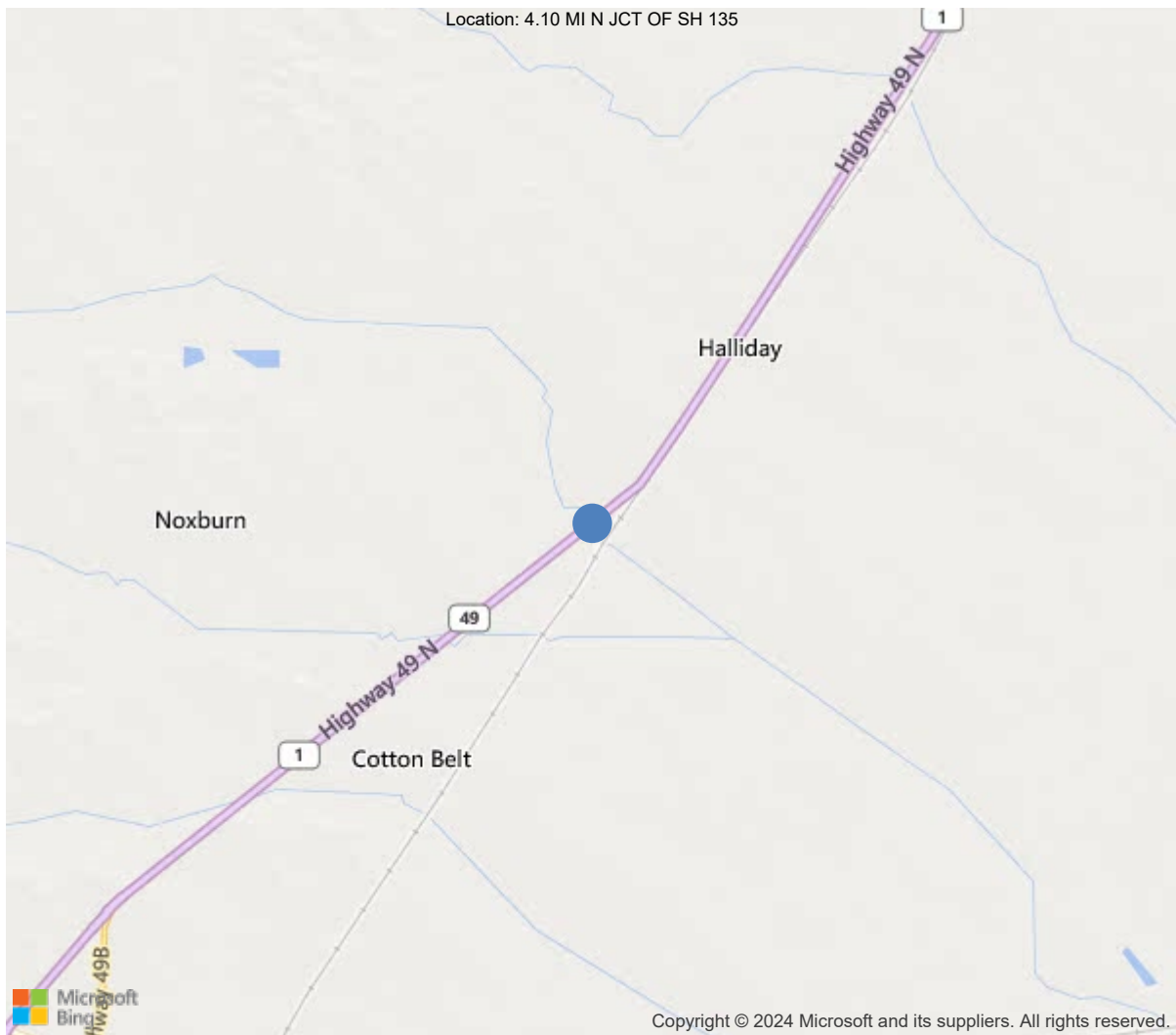
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	35		
Code 9 (31 Tons)	39		
Code 5 (40 Tons)	48		

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



36.10804, -90.44691





Asset #02460(Routine, Underwater type 2)

US 49-02- LM 11.86 over LOCUST CREEK

Location: 4.10 MI N JCT OF SH 135

Team Lead: Richard Jones Inspection Date: 05/13/2024

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	02460
(5) Inventory Route	1
(2) Highway Agency District	10 - District 10
(3) County Code	55 - Greene County
(4) Place Code	0
(6) Features Intersected	LOCUST CREEK
(7) Facility Carried	US 49-02- LM 11.86
(9) Location	4.10 MI N JCT OF SH 135
(11) Mile Point	11.86 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000049020
(16) Latitude	36.108038
(17) Longitude	-90.44691
(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	5
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(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	1947
(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	6400
(30) Year of ADT	2018
(109) Truck ADT	6 %
(19) Bypass, Detour Length	7 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	30 ft
(49) Structure Length	152.3 ft
(50) Curb or Sidewalk Width	
Left	1.8 ft
Right	1.8 ft
(51) Bridge Roadway Width Curb to Curb	26 ft
(52) Deck Width Out to Out	31.5 ft
(32) Approach Roadway Width (W/Shoulders)	34.1 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	26 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	6 - Rural Minor 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 struct
(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	5
(60) Substructure	5
(61) Channel & Channel Protection	5
(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	53
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	32
(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	2
(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	3 - Bridge is scour critical; brid
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	183 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 265
(96) Total Project Cost	\$ 954
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	14000
(115) Year of Future ADT	2033

INSPECTIONS *			
(90) Inspection Date	05/13/2024		
(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 #02460**(Routine, Underwater type 2)

**US 49-02- LM 11.86 over LOCUST CREEK**

**Location: 4.10 MI N JCT OF SH 135**

**Team Lead: Richard Jones Inspection Date: 05/13/2024**

---

**58 - Deck** (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Deck has areas of deterioration near joints.

---

**59 - Superstructure** (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

A few girder ends were repaired in 2015, but most girder ends have active corrosion. Several areas have moderate to advanced section loss.

---

**60 - Substructure** (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

Substructure elements are in good to fair condition.

Channel scour has widened the original channel since construction in 1947 and caused loss of pile penetration at interior bents.

---

**61 - Channel/Channel Protection** (5 - Bank protection is being eroded. River control devices and/or embankment have major damage. Trees and brush restrict the channel.)

Channel scour has widened the original channel since construction in 1947 and caused loss of pile penetration at interior bents.

Rip rap was placed along slope in front of end bents in 2022.

Embankment under span 2 has a steep cut/erosion.

Large drift is built up at bents 3 - 5.

Toe of slope under span 5 has steep cut bank/embankment erosion.

---



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	4125	3970	1	154	0
1080	Delamination/Spall/Patched Area	SF	1	0	1	0	0
1120	Efflorescence/Rust Staining	SF	134	0	0	134	0
1130	Cracking (RC and Other)	SF	20	0	0	20	0
510	Wearing Surfaces	SF	3900	2863	0	1037	0
3210	Delam/Spall/Patched Area/Pothole	SF	55	0	0	55	0
3220	Crack (Wearing Surface)	SF	982	0	0	982	0
<p>(12) Undersurface has a few efflorescent cracks, especially near joints and overhangs. CS3</p> <p>Rt overhang has a spall at bent 5 joint. CS2</p> <p>(510-12) Asphalt wearing surface has widespread areas of map cracks. CS3</p> <p>Asphalt is cracked, delaminated, and raveling out over joints. CS3</p>							
107	Steel Open Girder/Beam	LF	600	534	48	16	2
1000	Corrosion	LF	66	0	48	16	2
515	Steel Protective Coating	SF	4970	1623	2485	545	317
3440	Effectiveness (Steel Protective Coatings)	LF	3347	0	2485	545	317
<p>(107) Ends of several girders were t-spliced or had plates welded over holes at haunch in 2015.</p> <p>Several diaphragms over bents have heavy section loss with holes rusted through.</p> <p>Span 1 bent 1 girder 4 has 2' of rust with areas of up to 1/8" section loss at web below haunch, around diaphragm connection, and along bottom of web. CS3</p> <p>Span 1 bent 2 girder 1 has 12" x 2" of heavy section loss along bottom of web. Web has section loss at web below haunch, around diaphragm connection, and on bottom flange near bearing. CS3</p> <p>Span 1 bent 2 girder 4 has a 2" x 1" hole at web below haunch. CS3</p> <p>Span 2 bent 2 girder 1 has welded web plates at web below haunch. Web has a 2" x 4" hole below plates, a 5" x 1" hole under diaphragm connection, and a 12" x up to 3" area of heavy loss with two 1" diameter holes rusted through web starting 21" from end. Rt bottom flange has section loss and is knife edged. CS4</p> <p>Span 2 bent 2 girder 2 has welded plates at web below haunch.</p> <p>Span 2 bent 2 girder 3 has a 2" x 1" hole in web below haunch. CS3</p> <p>Span 2 bent 2 girder 4 has a welded web splice at haunch.</p> <p>Span 3 bent 3 girders 1 and 4 were t spliced in the past.</p> <p>Span 3 bent 4 girder 1 has a t splice and welded plates at haunch.</p> <p>Span 4 bent 4 girders 1, 2, and 4 were t spliced in the past. Girders 1, 2, and 3 have welded plates at haunch.</p> <p>Span 4 bent 5 girders 1 and 4 were t spliced in the past.</p> <p>Span 4 bent 5 girder 3 has moderate section loss for 4" at end of web. CS3</p> <p>Span 5 bent 5 girder 1 was t spliced in the past.</p> <p>Span 5 bent 6 girder 1 has 3' of moderate to advanced section loss around concrete haunch, diaphragm connection and along</p>							



ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
bottom flange. Bottom of web has a 2" x 1" hole below diaphragm. Rt bottom flange is knife edged for 1' near bearing. CS3							
Span 5 bent 6 girder 4 has 2' of moderate section loss (up to 3/16") at web below haunch, diaphragm connection and along bottom of web. CS3							
215	Reinforced Concrete Abutment	LF	72	50	22	0	0
1090	Exposed Rebar	LF	5	0	5	0	0
6000	Scour	LF	17	0	17	0	0
(215) Rip rap was placed along slope in front of bents 1 and 6 abutments in 2022.							
227	Reinforced Concrete Pile	EA	16	0	12	4	0
1190	Abrasion/Wear (PSC/RC)	EA	8	0	8	0	0
6000	Scour	EA	8	0	4	4	0
(227) Piles at bents 3 and 4 have minor abrasion. CS2 Piles at bents 2 and 5 have had scour since original construction. CS2 and 3							
234	Reinforced Concrete Pier Cap	LF	101	97	1	3	0
1080	Delamination/Spall/Patched Area	LF	3	0	0	3	0
1130	Cracking (RC and Other)	LF	1	0	1	0	0
(234) Bent 5 cap has a 4' horizontal crack and delaminated area between girders 1 and 2 on back side near top. Ahead side has a 3' spall up to 2" deep between girders 1 and 2.							
311	Movable Bearing	EA	20	0	0	20	0
1000	Corrosion	EA	20	0	0	20	0
515	Steel Protective Coating	SF	80	0	80	0	0
3440	Effectiveness (Steel Protective Coatings)	EA	80	0	80	0	0
(311) Bearings have pack rust and section loss.							
313	Fixed Bearing	EA	20	0	0	20	0
1000	Corrosion	EA	20	0	0	20	0
515	Steel Protective Coating	SF	80	0	80	0	0
3440	Effectiveness (Steel Protective Coatings)	EA	80	0	80	0	0
(313) Bearings have pack rust and section loss.							
331	Reinforced Concrete Bridge Railing	LF	300	270	28	2	0
1080	Delamination/Spall/Patched Area	LF	2	0	0	2	0
1090	Exposed Rebar	LF	2	0	2	0	0
1120	Efflorescence/Rust Staining	LF	8	0	8	0	0
1130	Cracking (RC and Other)	LF	18	0	18	0	0
(331) Concrete rails have a few minor cracks, some with light efflorescence. Span 1 Rt overhang has a 2' spall near mid span. Lt bridge rail over bent 2 is leaning towards channel.							



**Team Lead:** Richard Jones **Inspection Date:** 05/13/2024

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
	Bridge rail end posts at bent 6 have spalls from past collision damage. Rt wing has rebar exposed.						



Elevation



Roadway



Wearing surface



Span 5 Under Surface





Overhang at several joints



Span 2 bent 2 girder 4 has a welded web splice at haunch.



Bent 1



Bent 6 Lt scour repair





Embankment under span 5 has scour at toe of slope with rip rap displacement



2023 - Embankment under span 2



Span 1 Rt overhang has 2' spall near mid span cs3



Bent 6, Right side: collision damage at bridge rail end post with exposed rebar cs2



Bent 2 Lt



## Maintenance Needs

**Date Reported:** 06/13/2024

**Priority:** B - Pressing

**Type of Work:** T-Splice

**Status:** Open

**Component:** Superstructure

---

## Deficiency Description

Span 2 bent 2 girder 1 has welded web plates at web below haunch. Web has a 2" x 4" hole below plates, a 5" x 1" hole under diaphragm connection, and a 12" x up to 3" area of heavy loss with two 1" diameter holes rusted through web starting 21" from end. Rt bottom flange has section loss and is knife edged.

Span 5 bent 6 girder 1 has 3' of moderate to advanced section loss around concrete haunch, diaphragm connection and along bottom flange. Bottom of web has a 2" x 1" hole below diaphragm. Rt bottom flange is knife edged for 1' near bearing.

## Remarks

Pulled these 2 locations from older maintenance need to increase priority due to continued deterioration.6/13/24 RRJ

---



Span 5 bent 6 girder 1 has 3' of moderate to advanced section loss around concrete haunch, diaphragm connection and along bottom flange. Bottom of web has a 2" x 1" hole below diaphragm. Rt bottom flange is knife edged for 1' near bearing.



Span 2 bent 2 girder 1 has welded web plates at web below haunch. Web has a 2" x 4" hole below plates, a 5" x 1" hole under diaphragm connection, and a 12" x up to 3" area of heavy loss with two 1" diameter holes rusted through web starting 21" from end. Rt bottom flange has section loss and is knife edged.





2023 - Span 2 bent 2 girder 1



2023 - Span 5 bent 6 girder 1

### Maintenance Needs

**Date Reported:** 05/18/2017

**Priority:** C - Important

**Type of Work:** Repair (General)

**Status:** Monitor

**Component:** Superstructure

---

### Deficiency Description

Span 1 bent 1 girder 4 has 2' of rust with areas of up to 1/8" section loss at web below haunch, around diaphragm connection, and along bottom of web.

Span 1 bent 2 girder 1 has heavy section loss at web below haunch, around diaphragm connection, and on bottom flange near bearing.

Span 1 bent 2 girder 4 has a 2" x 1" hole at web below haunch.

Span 2 bent 2 girder 3 has a 2" x 1/2" hole in web below haunch.

Span 4 bent 5 girder 3 has moderate section loss for 4" at end of web.

Span 5 bent 6 girder 4 has 2' of moderate section loss (up to 3/16") at web below haunch, diaphragm connection and along bottom of web.

### Remarks

---



2023 - Span 1 bent 1 girder 4



Span 1 bent 1 girder 4 2020





2023 - Span 1 bent 2 girder 1



Span 1 bent 2 girder 4 has a 2" x 1" hole at web below haunch.



2023 - Span 2 bent 2



Span 5 bent 6 girder 4 has 2' of moderate section loss (up to 3/16") at web below haunch, diaphragm connection and along bottom of web.



### Maintenance Needs

**Date Reported:** 02/26/2013

**Priority:** C - Important

**Type of Work:** Channel Work/Drift Removal

**Status:** Open

**Component:** Channel

### Deficiency Description

Large drift is built up at bents 3 - 5.

### Remarks



2024 - Large drift at 4 and 5



Drift at 3 - 5



2023 - Drift at bents 3 - 5



2022



### Maintenance Needs

**Date Reported:** 05/08/2023

**Priority:** D- Routine

**Type of Work:** Approach Leveling/Maintenance

**Status:** Monitor

**Component:** Approach

### Deficiency Description

Approach roadways have settlement at each end of bridge. Asphalt is cracked, rutted, and has several potholes. Asphalt wearing surface has widespread areas of map cracks. Asphalt is cracked, delaminated, and raveling out over joints.

### Remarks



Approach roadway at beginning



Bent 2 joint



Approach roadway at end



Bent 1 approach roadway



Bent 6 approach





**Asset #02460**(Routine, Underwater type 2)

**US 49-02- LM 11.86 over LOCUST CREEK**

**Location: 4.10 MI N JCT OF SH 135**

**Team Lead: Richard Jones Inspection Date: 05/13/2024**

## **Routine Maintenance**

Check Box Maintenance Items

<b>Type of Maintenance</b>	<b>Is recommended?</b>
A-54 - Sealable Deck Cracks	No
A-55 - Deck Washing Needed	Yes
A-56 - Joint Cleaning/Flushing Needed	No
A-57 - Beam End and Bearing Paint Needed	Yes
A-58 - Cap Cleaning/Flushing Needed	Yes
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 (Yes)**

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





**Asset #02460**(Routine, Underwater type 2)

**US 49-02- LM 11.86 over LOCUST CREEK**

**Location: 4.10 MI N JCT OF SH 135**

**Team Lead: Richard Jones Inspection Date: 05/13/2024**

**A-57 - Girder End and Bearing Painting Needed (Yes)**

**A-58 - Cap Cleaning/Flushing Needed (Yes)**

**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)**



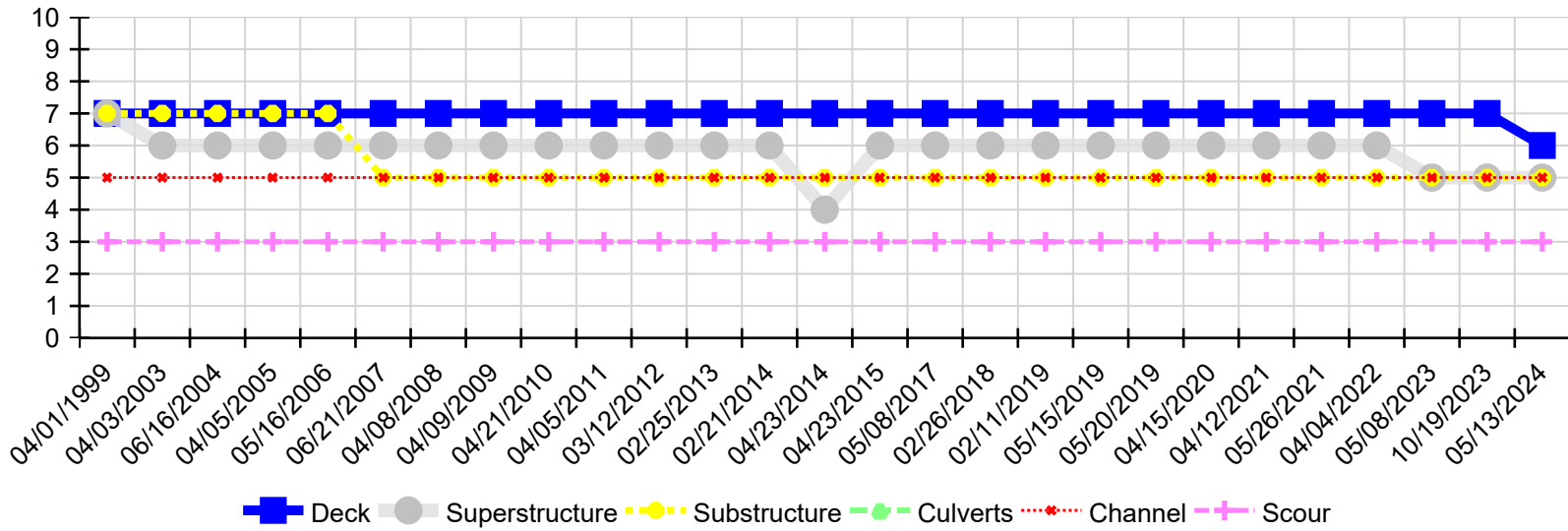
Asset #02460(Routine, Underwater type 2)

US 49-02- LM 11.86 over LOCUST CREEK

Location: 4.10 MI N JCT OF SH 135

Team Lead: Richard Jones Inspection Date: 05/13/2024

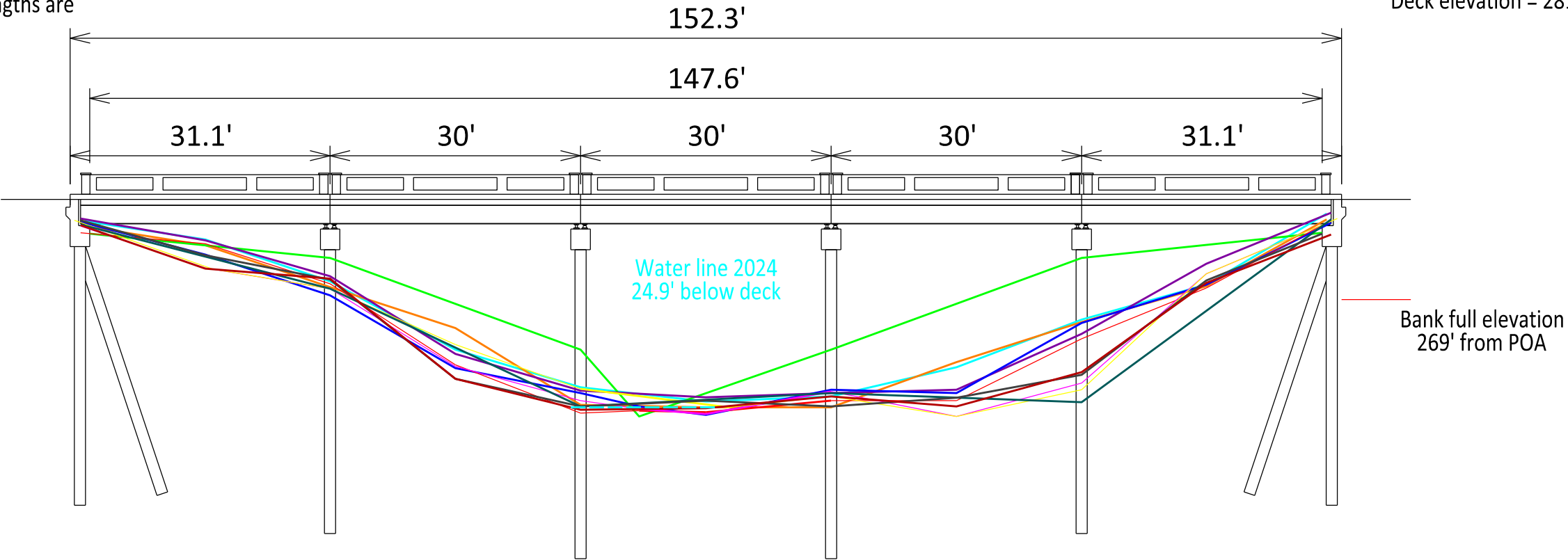
Condition History



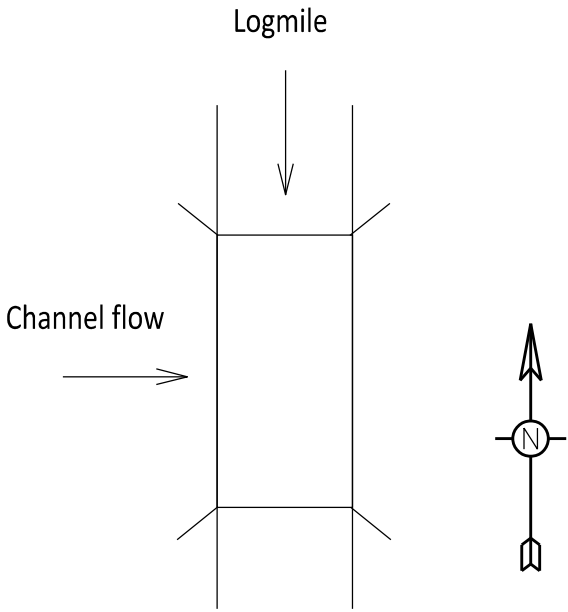
Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
05/13/2024	6	5	5	N	5	3
10/19/2023	7	5	5	N	5	3
05/08/2023	7	5	5	N	5	3
04/04/2022	7	6	5	N	5	3
05/26/2021	7	6	5	N	5	3
04/12/2021	7	6	5	N	5	3
04/15/2020	7	6	5	N	5	3
05/20/2019	7	6	5	N	5	3
05/15/2019	7	6	5	N	5	3
02/11/2019	7	6	5	N	5	3
02/26/2018	7	6	5	N	5	3
05/08/2017	7	6	5	N	5	3
04/23/2015	7	6	5	N	5	3
04/23/2014	7	4	5	N	5	3
02/21/2014	7	6	5	N	5	3
02/25/2013	7	6	5	N	5	3
03/12/2012	7	6	5	N	5	3
04/05/2011	7	6	5	N	5	3
04/21/2010	7	6	5	N	5	3
04/09/2009	7	6	5	N	5	3
04/08/2008	7	6	5	N	5	3
06/21/2007	7	6	5	N	5	3
05/16/2006	7	6	7	N	5	3
04/05/2005	7	6	7	N	5	3
06/16/2004	7	6	7	N	5	3
04/03/2003	7	6	7	N	5	3
04/01/1999	7	7	7	N	5	3

Plan Drawing #6784 Proposed Pile Lengths are  
Bents 1 & 6 = 32'  
Bents 2 & 5 = 35'  
Bents 3 & 4 = 38'

Deck elevation = 281.0' from layout sheet



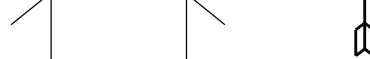
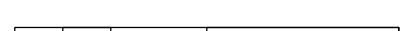
Bent 1	Mid	Bent 2	Mid	Bent 3	+7	Mid	Bent 4	Mid	Bent 5	Mid	Bent 6
4.1'	--	7.0'	--	18.0'	26.0'	--	18.0'	--	7.0'	--	4.0'
3.3'	5.5'	10.5'	15.4'	24.6'		24.9'	24.9'	19.5'	14.7'	10.4'	2.4'
2.6'	4.8'	9.8'	18.0'	22.5'		24.2'	23.6'	20.1'	14.4'	10.2'	1.7'
2.3'	4.9'	9.2'	18.5'	22.9'		23.7'	23.2'	22.8'	16.1'	7.7'	1.6'
2.7'	6.6'	11.5'	20.2'	23.2'	24.8'	25.8'	22.8'	23.2'	14.8'	10.2'	2.8'
4.0'	5.3'	10.1'	19.8'	25.6'	25.3'	25.5'	24.1'	24.1'	16.7'	10.6'	2.5'
3.2'	8.2'	10.7'	20.0'	24.1'	25.1'	25.7'	23.0'	26.0'	22.0'	8.9'	2.6'
2.5'	8.5'	11.0'	18.0'	22.7'		24.9'	23.6'	26.0'	22.8'	9.0'	2.3'
3.0'		10.7'		24.8'			23.2'		24.3'		2.4'
2.5'	6.7'	9.6'	21.3'	24.8'		24.1'	24.8'	23.9'	21.0'	9.7'	4.1'
3.1'	8.3'	9.5'	21.5'	25.2'		25.0'	23.6'	24.8'	20.7'	10.0'	4.2'



Bridge was constructed from South to North.  
Bridge is logged from North to South.

Channel sounded from top of deck on Lt side (down stream side)

Green soundings taken from 1945 layout sheet  
Orange soundings taken on 2/21/2014  
Aqua Blue soundings taken on 5/8/2017  
Purple Soundings taken on 2/26/2018  
Blue Soundings taken on 2/12/2019  
Red Soundings taken on 5-15-2019  
Pink (Dashed-line) Soundings taken on 4-15-2020  
Soundings of 04-14-2021  
Dark teal soundings taken 4-22-2022  
Black soundings taken on 5/8/2023  
Maroon soundings taken on 5/13/2024

			BRIDGE NO.		District: 10
			02460		County: Greene - 28
ARKANSAS STATE HIGHWAY COMMISSION Little Rock, ARK.	Scale:1"=16'		Logmile: 11.86	Route: 49	Sect/Zone: 02
	Inspection Dir: South	Channel Flow: East	Date Drawn: 5/13/2024	Insp. / Assist.: RRJ / NSR	
