



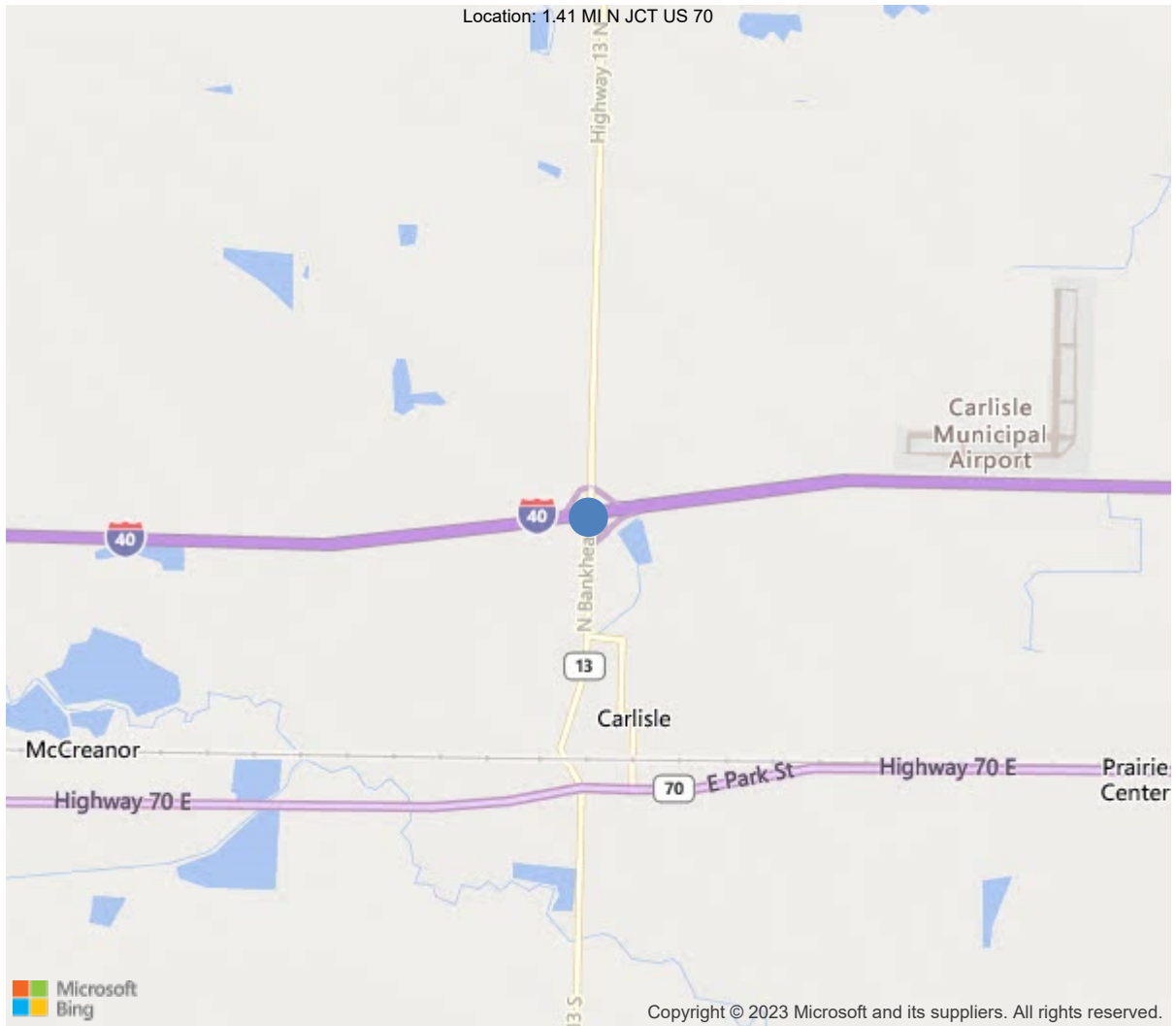
Latitude:34.80004, Longitude:-91.75045

Route:13 Section:10 Log:1.41

Arnold Road ID:43x13x10xA, Arnold Log mile:1.409

District 06, 85 - Lonoke County

Owner: 1 - State Highway Agency



34.80004, -91.75045



Asset #03655(Routine)

SH 13-SEC 10 over I 40-SEC 41 LOG 182.51

Location: 1.41 MI N JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 07/31/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	03655
(5) Inventory Route	1
(2) Highway Agency District	06 - District 06
(3) County Code	85 - Lonoke County
(4) Place Code	0
(6) Features Intersected	I 40-SEC 41 LOG 182.51
(7) Facility Carried	SH 13-SEC 10
(9) Location	1.41 MI N JCT US 70
(11) Mile Point	1.41 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	34.80004
(17) Longitude	-91.75045
(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	4
(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	1964
(106) Year Reconstructed	0
(42) Type of Service	61
On	6 - Overpass structure at an interchange or s
Under	1 - Highway, with or without pedestrian
(28) Lane	
On	2
Under	5
(29) Average Daily Traffic	6600
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	0 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	71 ft
(49) Structure Length	224 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	27.9 ft
(52) Deck Width Out to Out	33.7 ft
(32) Approach Roadway Width (W/Shoulders)	30.8 ft
(33) Bridge Median	0 - No median
(34) Skew	9 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	29.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	16 ft
Ref:	
(55) Min Lat Underclear RT	5.5 ft
Ref:	
(56) Min Lat Underclear LT	22.9 ft
NAVIGATION DATA	
(38) Navigation Control	N - Not applicable, no waterwa
(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	4
(59) Superstructure	4
(60) Substructure	6
(61) Channel & Channel Protection	N
(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	5
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	3
(71) Waterway Adequacy	N
(72) Approach Roadway Alignment	7
(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	N - Bridge not over waterway.
PROPOSED IMPROVEMENTS	
(75) Type of Work	35 - Bridge rehabilitation bec
(76) Length of Structure Improvement	224 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 371
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	1326
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	07/31/2023		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
* 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.			



General Observation

AHTD job 6686, 11994 for layout.

approach looking north

58 - Deck (4 - POOR CONDITION - advanced section loss, deterioration, spalling or scour)

deck and soffit has multiple cracks and large patched areas in all spans

59 - Superstructure (4 - POOR CONDITION - advanced section loss, deterioration, spalling or scour.)

paint system has failed allowing corrosion to initiate on the beam end and the haunch areas

All beams ends have active rust to upper web. Beams have freckling rust to flanges and webs all spans.

Span 1 beam 5 has pitting to 3/16 inch deep on the web and bottom flange at bent 2.

Span 1 beam 2 at bent 2 has a 5" by 1" hole in web under haunch

Span 1 beam 3 at bent 2 has a 6" by 1-1/2" hole in web under haunch

Span 2 beam 3 at bent 3 has a 1" by 1/2" hole in web under haunch

Span 4 beam 3 at bent 4 has a 3" by 1" hole in web under haunch

Span 4 beam 4 at bent 4 has a 1" by 1/2" hole in web under haunch

60 - Substructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

caps

Bent 2, left end on the bottom of the cap, Spalls with exposed rebar.

Bent 3, back side, Spalls with exposed rebar, see photo and a delamination on the top at beam 1.

Bent 3 ahead side has cracks with rust stains.

Bent 4 has small Spalls with exposed rebar on the bottom of the cap..

columns

Bent 3, column 1 has a delam at the top.

abutments cracks at beam seats

A-46 - Asset Files

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Asset #03655(Routine)

SH 13-SEC 10 over I 40-SEC 41 LOG 182.51

Location: 1.41 MI N JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 07/31/2023

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	7008	90	5467	1451	0
1080	Delamination/Spall/Patched Area	SF	3365	0	2170	1195	0
1090	Exposed Rebar	SF	55	0	0	55	0
1120	Efflorescence/Rust Staining	SF	226	0	25	201	0
1130	Cracking (RC and Other)	SF	355	0	355	0	0
1190	Abrasion/Wear (PSC/RC)	SF	2917	0	2917	0	0
<p>(12) All spans have large areas that have been patched. All spans have spalls and spalls filled with asphalt. All of the deck area has minor abrasion. Most of the deck cracking has been sealed.</p> <p>Soffit</p> <p>Span 2 delams over eastbound traffic between girders 1 & 2 right lane and off ramp.</p> <p>Span 3 delams between girders 3&4 over westbound fast lane traffic.</p> <p>All spans have exposed rebar on soffit</p>							
107	Steel Open Girder/Beam	LF	1100	0	997	98	5
1000	Corrosion	LF	1100	0	997	98	5
515	Steel Protective Coating	SF	9039	0	2939	3100	3000
3440	Effectiveness (Steel Protective Coatings)	LF	9039	0	2939	3100	3000
<p>(107) All beams ends have active rust to upper web. Beams have freckling rust to flanges and webs all spans.</p> <p>Span 1 beam 5 has pitting to 3/16 inch deep on the web and bottom flange at bent 2.</p> <p>Span 1 beam 2 at bent 2 has a 5" by 1" hole in web under haunch</p> <p>Span 1 beam 3 at bent 2 has a 6" by 1-1/2" hole in web under haunch</p> <p>Span 2 beam 3 at bent 3 has a 1" by 1/2" hole in web under haunch</p> <p>Span 4 beam 3 at bent 4 has a 3" by 1" hole in web under haunch</p> <p>Span 4 beam 4 at bent 4 has a 1" by 1/2" hole in web under haunch</p> <p>(515-107) paint system has failed</p>							
205	Reinforced Concrete Column	EA	6	3	2	1	0
1080	Delamination/Spall/Patched Area	EA	3	0	2	1	0
(205) Bent 3, column 1 has a delam at the top.							
215	Reinforced Concrete Abutment	LF	73	67	6	0	0
1130	Cracking (RC and Other)	LF	6	0	6	0	0
(215) Bent 1 has horizontal cracks in the beam seat							
234	Reinforced Concrete Pier Cap	LF	87	51	22	14	0
1080	Delamination/Spall/Patched Area	LF	11	0	5	6	0
1090	Exposed Rebar	LF	21	0	13	8	0
1130	Cracking (RC and Other)	LF	4	0	4	0	0



Asset #03655(Routine)

SH 13-SEC 10 over I 40-SEC 41 LOG 182.51

Location: 1.41 MI N JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 07/31/2023

Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	7008	90	5467	1451	0
1080	Delamination/Spall/Patched Area	SF	3365	0	2170	1195	0
1090	Exposed Rebar	SF	55	0	0	55	0
1120	Efflorescence/Rust Staining	SF	226	0	25	201	0
1130	Cracking (RC and Other)	SF	355	0	355	0	0
1190	Abrasion/Wear (PSC/RC)	SF	2917	0	2917	0	0
(12) All spans have large areas that have been patched. All spans have spalls and spalls filled with asphalt. All of the deck area has minor abrasion. Most of the deck cracking has been sealed. Soffit Span 2 delams over eastbound traffic between girders 1 & 2 right lane and off ramp. Span 3 delams between girders 3&4 over westbound fast lane traffic. All spans have exposed rebar on soffit							

58 - Deck (4 - POOR CONDITION - advanced section loss, deterioration, spalling or scour)

Comment: deck and soffit has multiple cracks and large patched areas in all spans

**Superstructure**

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	1100	0	997	98	5
1000	Corrosion	LF	1100	0	997	98	5
515	Steel Protective Coating	SF	9039	0	2939	3100	3000
3440	Effectiveness (Steel Protective Coatings)	LF	9039	0	2939	3100	3000
(107) All beams ends have active rust to upper web. Beams have freckling rust to flanges and webs all spans. Span 1 beam 5 has pitting to 3/16 inch deep on the web and bottom flange at bent 2. Span 1 beam 2 at bent 2 has a 5" by 1" hole in web under haunch Span 1 beam 3 at bent 2 has a 6" by 1-1/2" hole in web under haunch Span 2 beam 3 at bent 3 has a 1" by 1/2" hole in web under haunch Span 4 beam 3 at bent 4 has a 3" by 1" hole in web under haunch Span 4 beam 4 at bent 4 has a 1" by 1/2" hole in web under haunch (515-107) paint system has failed							

59 - Superstructure (4 - POOR CONDITION - advanced section loss, deterioration, spalling or scour.)

Comment: paint system has failed allowing corrosion to initiate on the beam end and the haunch areas

All beams ends have active rust to upper web. Beams have freckling rust to flanges and webs all spans.
Span 1 beam 5 has pitting to 3/16 inch deep on the web and bottom flange at bent 2.
Span 1 beam 2 at bent 2 has a 5" by 1" hole in web under haunch
Span 1 beam 3 at bent 2 has a 6" by 1-1/2" hole in web under haunch
Span 2 beam 3 at bent 3 has a 1" by 1/2" hole in web under haunch
Span 4 beam 3 at bent 4 has a 3" by 1" hole in web under haunch
Span 4 beam 4 at bent 4 has a 1" by 1/2" hole in web under haunch

**Substructure**

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
205	Reinforced Concrete Column	EA	6	3	2	1	0
1080	Delamination/Spall/Patched Area	EA	3	0	2	1	0
(205) Bent 3, column 1 has a delam at the top.							
215	Reinforced Concrete Abutment	LF	73	67	6	0	0
1130	Cracking (RC and Other)	LF	6	0	6	0	0
(215) Bent 1 has horizontal cracks in the beam seat							
234	Reinforced Concrete Pier Cap	LF	87	51	22	14	0
1080	Delamination/Spall/Patched Area	LF	11	0	5	6	0
1090	Exposed Rebar	LF	21	0	13	8	0
1130	Cracking (RC and Other)	LF	4	0	4	0	0
(234) Bent 2, left end on the bottom of the cap, Spalls with exposed rebar. Bent 3, back side, Spalls with exposed rebar, see photo and a delamination on the top at beam 1. Bent 3 ahead side has cracks with rust stains. Bent 4 has small Spalls with exposed rebar on the bottom of the cap..							

60 - Substructure (6 - SATISFACTORY CONDITION - structural elements show some minor deterioration.)

Comment: caps

Bent 2, left end on the bottom of the cap, Spalls with exposed rebar.

Bent 3, back side, Spalls with exposed rebar, see photo and a delamination on the top at beam 1.

Bent 3 ahead side has cracks with rust stains.

Bent 4 has small Spalls with exposed rebar on the bottom of the cap..

columns

Bent 3, column 1 has a delam at the top.

abutments cracks at beam seats



Asset #03655(Routine)

SH 13-SEC 10 over I 40-SEC 41 LOG 182.51

Location: 1.41 MI N JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 07/31/2023

Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4



Elevation



Approach looking north



Deck view



Soffit span 2 has cracking with efflorescence



Typical deck



Cracks and spalls with rebar bent 3



Horizontal cracks in the abutment at bent 1



span 2 soffit delams removed



Typical paint condition



Bent 1 typical bearing condition



Bent 1 beam 5. Has 1/2 remaining section at bearing area.
Flanges 7/8" thick



Span 4 repair forms still in place



Span 1 right side of beam 5 spall with rebar



Guardrail damage span 2 east side



Spillage from erosion at bent 5 accumulation around bent 4 columns



Bent 4 joint



Bent 5 joint



Spall with rebar bent 4 at beam 5



Bent 1 beam 1 corrosion at beam end and bearing



Bent 3 joint



Spall at bent 3 joint



Spalls with exposed rebar in the deck span 2,3 and 4



Joint at bent 1



Bent 2 joint

Maintenance Needs

Date Reported: 07/21/2020

Priority: A - Safety deficiency; requires prompt action

Status: Repair Documented

Type of Work: Repair (General)

Component: Deck

Deficiency Description

Span 2 small delam between beams 1&2 over eastbound traffic right lane and off ramp.
Added 7/2021: delams over traffic in westbound fast lane between beams 3&4

Remarks

delams have been removed



span 2 soffit



Span 4 repair forms still in place



Span 2 delam between beams 1&2 over eastbound traffic right lane.



Span 2 delam between beams 1&2 over eastbound traffic off ramp.



Span 2 small delam between beams 1&2 over eastbound traffic right lane and off ramp.



Delams over traffic in westbound fast lane between beams 3&4.



Delams over traffic in westbound fast lane between
beams 3&4

Maintenance Needs

Date Reported: 07/22/2021

Priority: B - Pressing

Type of Work: Repair (General)

Status: Forward State

Component: Element

Deficiency Description

Span 1 beam 2 at bent 2 has a 5" by 1" hole in web under haunch
Span 1 beam 3 at bent 2 has a 6" by 1-1/2" hole in web under haunch
Span 2 beam 3 at bent 3 has a 1" by 1/2" hole in web under haunch
Span 4 beam 3 at bent 4 has a 3" by 1" hole in web under haunch
Span 4 beam 4 at bent 4 has a 1" by 1/2" hole in web under haunch

Remarks



Span 1 beam 2 at bent 2 has a 5" by 1" hole in web under haunch



Span 1 beam 3 at bent 2 has a 6" by 1-1/2" hole in web under haunch

Maintenance Needs

Date Reported: 07/22/2015

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component:

Deficiency Description

Beam ends all spans have active rust moderate pitting.

Span1 at bent 2, beams 1,4&5 have deep pitting to upper web and lower web.

Remarks



Span 1, beam 5, pitting to 3/16 inch deep on the web and bottom flange.



Span1 at bent 2, beam 5 has deep pitting to upper web and lower flange.



Span 1, beam 5, pitting to 3/16 inch deep on upper web.



Span 1 at bent 1 beam 1

Maintenance Needs

Date Reported: 07/22/2015

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component:

Deficiency Description

At bents 1 and 5 the bearings have heavy laminating rust to bearings and masonry plates.

Remarks



Bent 5 beam 2 bearing



Bearings at bent 5



Bent 5, girder 4: typical condition of bearings throughout the bridge



Bent 1 bearing condition overview



Bent 1 bearing 5 laminating rust on bearing and masonry plate.

Maintenance Needs

Date Reported: 07/22/2015

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component:

Deficiency Description

Slope paving at both abutments have voids under slope paving and have settled.

Remarks



Erosion at bent 1 right side



Bent 5 abutment has erosion hole under slope paving
6' deep at point of measurement



Bent 1 left side erosion hole



Slope paving undermined on the south end



South end slope paving



South slope paving



Southeast corner of bridge.
Slope paving has a 10' wide by 2' deep void w

Maintenance Needs

Date Reported: 07/17/2018

Priority: C - Important

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

Status: Monitor

Component:

Deficiency Description

Deck all span have spalls and spalls filled with asphalt.
Span 3 right curb with a large spall near bent 4 joint

Remarks



Spall at the curb bent 4





Span 3, right curb with a large spall near bent 4 joint



Span 1, right shoulder: previous patch is deteriorating



Span 4, right lane: open spall



Span 2 spalls and spalls filled with asphalt



Span 2 spalls in deck



Span 4, left curb with a large spall near bent 4 joint



Span 4 spalls and spalls filled with asphalt



Span 3 overview



Span 2 large spalls filled with asphalt

Maintenance Needs

Date Reported: 07/10/2019

Priority: C - Important

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

Status: Monitor

Component:

Deficiency Description

South approach has settled over 4". The north approach has also settled approx. 2.5".

Remarks



North approach has settled over 4"



North approach settlement



North approach settlement

Maintenance Needs

Date Reported: 07/21/2020

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component:

Deficiency Description

Northwest end of bridge has 5' hole at approach slab drain.
Southwest end of bridge has 3' hole at approach slab drain.

Remarks



Northwest end of bridge has 5' hole at approach slab drain.



Northwest end of bridge has 5' hole at approach slab drain.



Southwest end of bridge has 3' hole at approach slab drain.



Southwest end of bridge has 3' hole at approach slab drain.



Northwest end of bridge has 5' hole at approach slab drain.

Maintenance Needs

Date Reported: 08/10/2023

Priority: C - Important

Type of Work: Repair (General)

Status: Open

Component: Element

Deficiency Description

Metal bridge railing has damage in span 2 east side due to vehicle impact

Remarks



Guardrail damage span 2 east side



Routine Maintenance

Check Box Maintenance Items

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



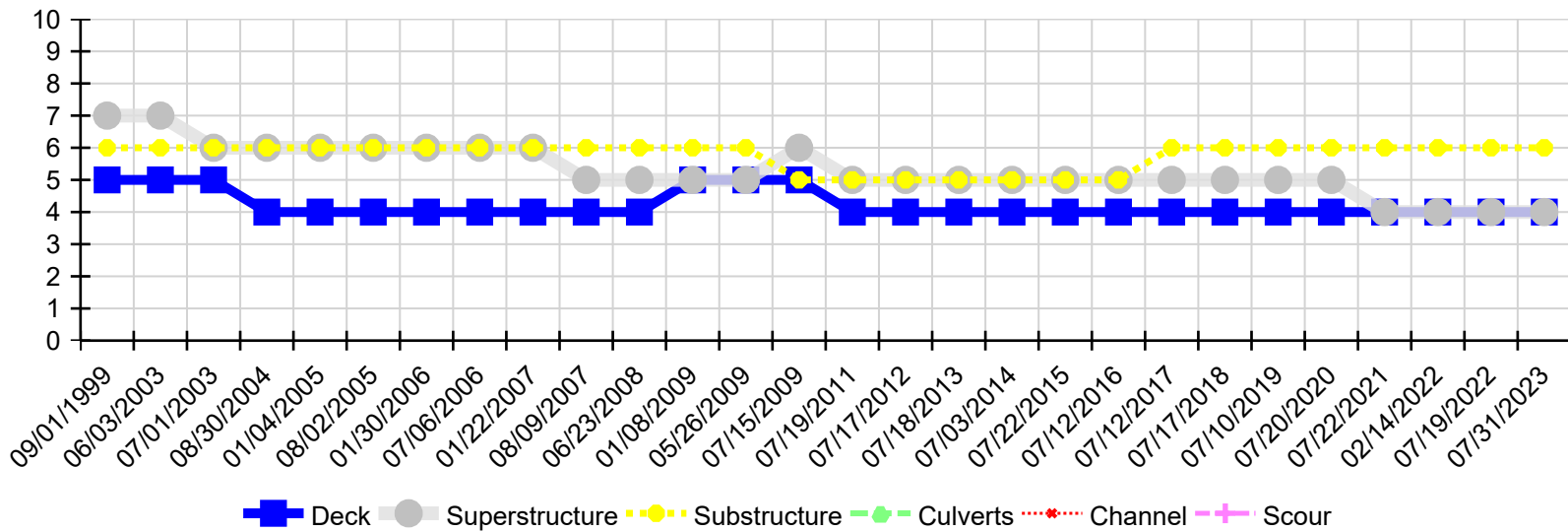
Asset #03655(Routine)

SH 13-SEC 10 over I 40-SEC 41 LOG 182.51

Location: 1.41 MI N JCT US 70

Team Lead: Bryan Saunders, Inspection Date: 07/31/2023

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
07/31/2023	4	4	6	N	N	N
07/19/2022	4	4	6	N	N	N
02/14/2022	4	4	6	N	N	N
07/22/2021	4	4	6	N	N	N
07/20/2020	4	5	6	N	N	N
07/10/2019	4	5	6	N	N	N
07/17/2018	4	5	6	N	N	N
07/12/2017	4	5	6	N	N	N
07/12/2016	4	5	5	N	N	N
07/22/2015	4	5	5	N	N	N
07/03/2014	4	5	5	N	N	N
07/18/2013	4	5	5	N	N	N
07/17/2012	4	5	5	N	N	N
07/19/2011	4	5	5	N	N	N
07/15/2009	5	6	5	N	N	N
05/26/2009	5	5	6	N	N	N
01/08/2009	5	5	6	N	N	N
06/23/2008	4	5	6	N	N	N
08/09/2007	4	5	6	N	N	N
01/22/2007	4	6	6	N	N	N
07/06/2006	4	6	6	N	N	N
01/30/2006	4	6	6	N	N	N
08/02/2005	4	6	6	N	N	N
01/04/2005	4	6	6	N	N	N
08/30/2004	4	6	6	N	N	N
07/01/2003	5	6	6	N	N	N
06/03/2003	5	7	6	N	N	N



Asset #03655(Routine)

SH 13-SEC 10 over I 40-SEC 41 LOG 182.51

Location: 1.41 MI N JCT US 70

Team Lead: Bryan Saunders, **Inspection Date:** 07/31/2023

Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
09/01/1999	5	7	6	N	N	N