



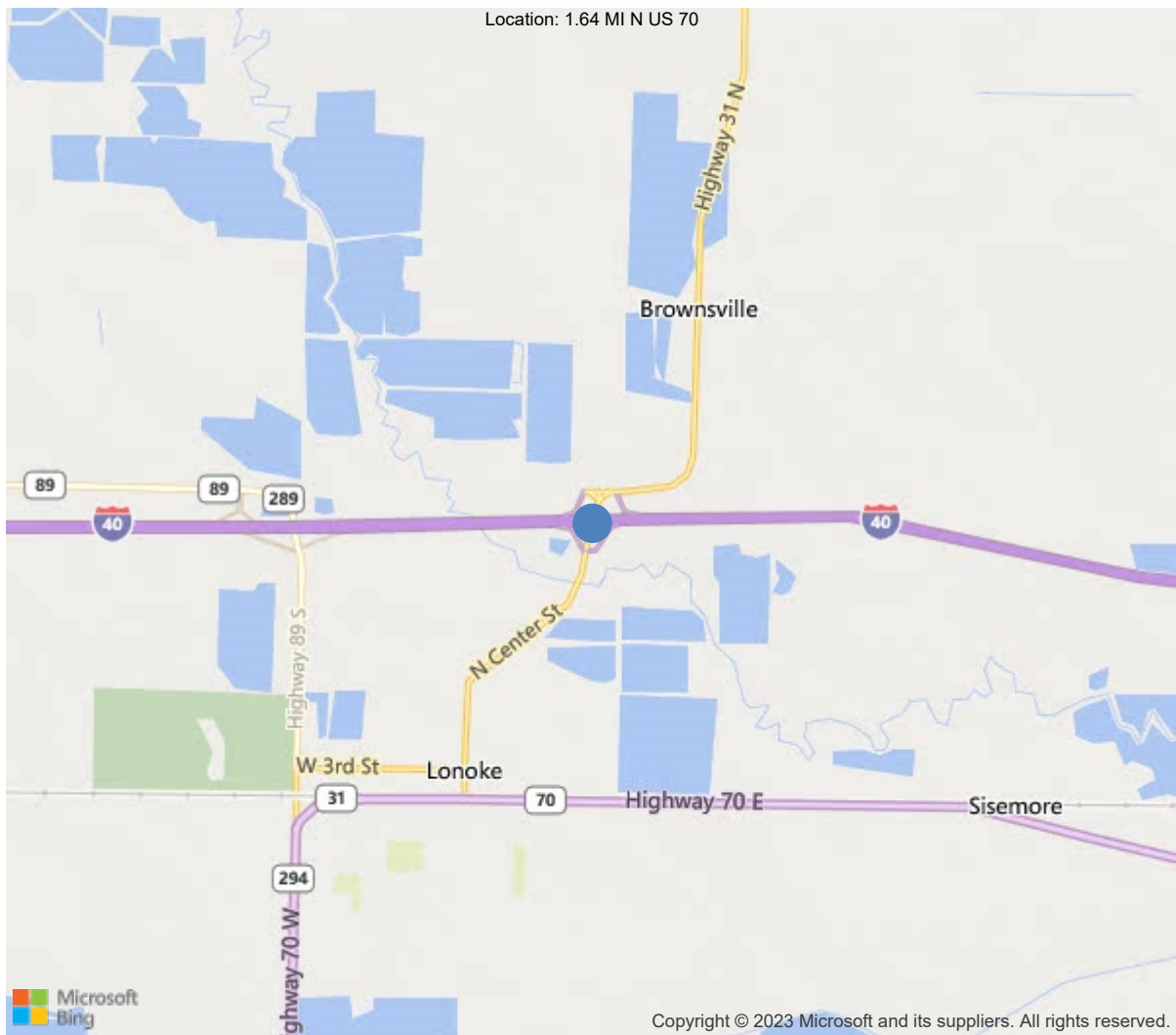
Latitude:34.80379, Longitude:-91.88877

Route:31 Section:03 Log:1.64

Arnold Road ID:43x31x3xA, Arnold Log mile:1.636

District 06, 85 - Lonoke County

Owner: 1 - State Highway Agency



34.80379, -91.88877



Asset #03228(Routine)

SH 31 Overpass over I-40 LOG 174.58

Location: 1.64 MI N US 70

Team Lead: Bryan Saunders, Inspection Date: 03/23/2023

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	03228
(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 LOG 174.58
(7) Facility Carried	SH 31 Overpass
(9) Location	1.64 MI N US 70
(11) Mile Point	1.64 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000031030
(16) Latitude	34.80379
(17) Longitude	-91.88877
(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	11
On	1 - Highway
Under	1 - Highway, with or without pedestrian
(28) Lane	
On	2
Under	4
(29) Average Daily Traffic	6485
(30) Year of ADT	2018
(109) Truck ADT	2 %
(19) Bypass, Detour Length	9 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	70 ft
(49) Structure Length	222 ft
(50) Curb or Sidewalk Width	
Left	1.5 ft
Right	1.5 ft
(51) Bridge Roadway Width Curb to Curb	25.9 ft
(52) Deck Width Out to Out	31.7 ft
(32) Approach Roadway Width (W/Shoulders)	28.9 ft
(33) Bridge Median	0 - No median
(34) Skew	15 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	11.1 ft
Ref:	
(56) Min Lat Underclear LT	25.8 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	6 - Rural Minor Arterial
(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	6
(60) Substructure	5
(61) Channel & Channel Protection	N
(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	5
(68) Deck Geometry	3
(69) Clearances, Vertical/Horizontal	5
(71) Waterway Adequacy	N
(72) Approach Roadway Alignment	6
(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	31 - Replacement of bridge or
(76) Length of Structure Improvement	256 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 265
(96) Total Project Cost	\$ 1198
(97) Year of Improvement Cost Estimate	2002
(114) Future ADT	6215
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	03/23/2023		
(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.			



Asset #03228(Routine)

District: 06, County: 85 - Lonoke County

Team Lead: Bryan Saunders, Inspection Date: 03/23/2023

General Observation

Job # 6680 drawing # 9977 for layout

Logged North bound.

A-46 - Asset Files

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SH 31 Overpass over I-40 LOG 174.58

Location: 1.64 MI N US 70

Team Lead: Bryan Saunders, Inspection Date: 03/23/2023

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	6334	865	3275	2194	0
1080	Delamination/Spall/Patched Area	SF	2694	0	2450	244	0
1090	Exposed Rebar	SF	56	0	0	56	0
1120	Efflorescence/Rust Staining	SF	1894	0	0	1894	0
1190	Abrasion/Wear (PSC/RC)	SF	825	0	825	0	0
(12) Exposed rebar in the deck in various locations due to patches failing deck has large patches spalls with asphalt and exposed rebar in all spans The deck surface has numerous patched areas, span 3 is the worst with approx 1580 sf of patched areas. Some of the patched areas have exposed rebar and the overhangs have Spalls with exposed rebar at the deck drains and deck haunches. All spans have cracking with efflorescence and rust stains on the soffit. The deck surface has transverse cracks on approx. three foot centers, 0.030 to 0.040 width and these cracks have been sealed.							
107	Steel Open Girder/Beam	LF	1100	735	150	215	0
1000	Corrosion	LF	365	0	150	215	0
515	Steel Protective Coating	SF	8513	0	4500	1813	2200
3440	Effectiveness (Steel Protective Coatings)	LF	8513	0	4500	1813	2200
(107) Scattered areas of freckled rust on beams 1 and 5. All of the beam ends have some active rust with pitting up to 1/8 inch deep. Span 3 beam 1 thru 5 have active rust with moderate pitting. (515-107) Span 3 coating has failed allowing corrosion Other spans have scattered areas of peeling and bubbling							
205	Reinforced Concrete Column	EA	6	0	4	2	0
1080	Delamination/Spall/Patched Area	EA	4	0	4	0	0
1090	Exposed Rebar	EA	2	0	0	2	0
(205) Bent 2 column 1 and 2 large crack and delams at tops Bent 3 column 1 large vertical crack and spall with rebar Bent 3 column 2 large vertical cracks rebar exposed bottom right delam top left Bent 4 column 1 large delam at the top and exposed rebar Bent 4 column 2 vertical cracks							
215	Reinforced Concrete Abutment	LF	58	50	8	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1130	Cracking (RC and Other)	LF	6	0	6	0	0
(215) Two small delaminations on the face of bent 1 left side small cracks in bent 5							
234	Reinforced Concrete Pier Cap	LF	87	25	45	17	0
1080	Delamination/Spall/Patched Area	LF	10	0	0	10	0
1090	Exposed Rebar	LF	7	0	0	7	0

Team Lead: Bryan Saunders, **Inspection Date:** 03/23/2023

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1120	Efflorescence/Rust Staining	LF	27	0	27	0	0
1130	Cracking (RC and Other)	LF	18	0	18	0	0
(234) All of the caps have Spalls with exposed rebar, cracking and efflorescence. Bent 4: top of cap is spalled and delaminated at the top. Approximately 15'. Across the length							
303	Assembly Joint with Seal	LF	146	0	0	146	0
2310	Leakage	LF	146	0	0	146	0
(303) All joints are leaking causing corrosion to beam ends and bearings							
311	Movable Bearing	EA	20	0	0	20	0
1000	Corrosion	EA	20	0	0	20	0
(311) All of the bearings have laminated rust.							
313	Fixed Bearing	EA	20	0	14	6	0
1000	Corrosion	EA	20	0	14	6	0
(313) All of the bearings have laminated rust.							
330	Metal Bridge Railing	LF	444	444	0	0	0
(330) Bridge rail is aluminum and has oxidized							
331	Reinforced Concrete Bridge Railing	LF	444	370	48	26	0
1080	Delamination/Spall/Patched Area	LF	30	0	30	0	0
1090	Exposed Rebar	LF	26	0	0	26	0
1130	Cracking (RC and Other)	LF	18	0	18	0	0
(331) Scattered Spalls with exposed rebar along both rails.							

Asset #03228(Routine)

Substructure

[illegible]



Asset #03228(Routine)

SH 31 Overpass over I-40 LOG 174.58

Location: 1.64 MI N US 70

Team Lead: Bryan Saunders, Inspection Date: 03/23/2023

Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4



Elevation



Approach looking north



Deck view span 3



Span 1



Typical deck



Soffit view



Span 3 beam 1 corrosion



Bent 4 backside spall exposing hoop bars



Column 1 at bent 4 has large spall delams and exposed rebar



Column 1 at bent 4



Bent 4 cap has large horizontal cracks spalls and rebar exposed



Span 3 paint has failed and corrosion has begun



Span 3 soffit has large patches spalls and spalls with rebar



Bent 3 column 1



Delam bent 2 column 2



Bent 2 beam 1 corrosion with deep pitting up to 1/8"



Delamination bent 1



Beam 4 bent 1 bearings typical all bearings



Beam 1 bent 1 corrosion at the bearing and haunches



Exposed rebar in the concrete bridge rail left side span 1



Exposed rebar in the deck span 2. deck has large patches
spalls with asphalt and exposed rebar in all spans

Maintenance Needs

Date Reported: 03/17/2022

Priority: B - Pressing

Type of Work: Repair (General)

Status: Forward State

Component:

Deficiency Description

Top of deck on all spans have numerous patches, spalls, spalls filled with asphalt, rebar exposed and cracks that reflect through to bottom of the deck.

Bottom of deck has numerous spalls and patches.

Span 3: large open spall with exposed rebar over west bound lane

Remarks



Spalls in the approach roadway bent 1



Asphalt patches span 2



Exposed rebar left side span 3



Exposed rebar left side span 4



potholes in the Approach wearing surface at north end



Span 2



Span 3 soffit view



Span 4 right side spall with exposed rebar



Span 3 overview



Span 3



Span 3 large spalls with exposed rebar.

Maintenance Needs

Date Reported: 03/28/2012

Priority: C - Important

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

Status: Monitor

Component:

Deficiency Description

Caps of bents 3 and 4 have spalls with exposed rebar and delamination.
Bent 4: right end of cap with a large spall that is adjacent to girder 5 bearing.

Remarks



The right end of the cap of bent 4 has a large spall.



Bent 4, backside of cap is spalled and delaminated at the top.



Bent 4: right end of cap with a large spall that is adjacent to girder 5 bearing.



Bent 4: right end of cap with a large spall that is adjacent to girder 5 bearing.

Maintenance Needs

Date Reported: 03/28/2012

Priority: C - Important

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

Status: Monitor

Component:

Deficiency Description

Columns of bents 2, 3 and 4 have spalls with exposed rebar and delamination.

Remarks



Bent 3, column 1: large spall with exposed rebar.



Bent 4 column 1 large spalls with exposed rebar

Maintenance Needs

Date Reported: 03/28/2012

Priority: C - Important

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

Status: Monitor

Component:

Deficiency Description

Left approach rail at bent 1 has a large spall.

Remarks



Left end post at bent 1.



Left approach rail at bent 1 has a large spall.



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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	



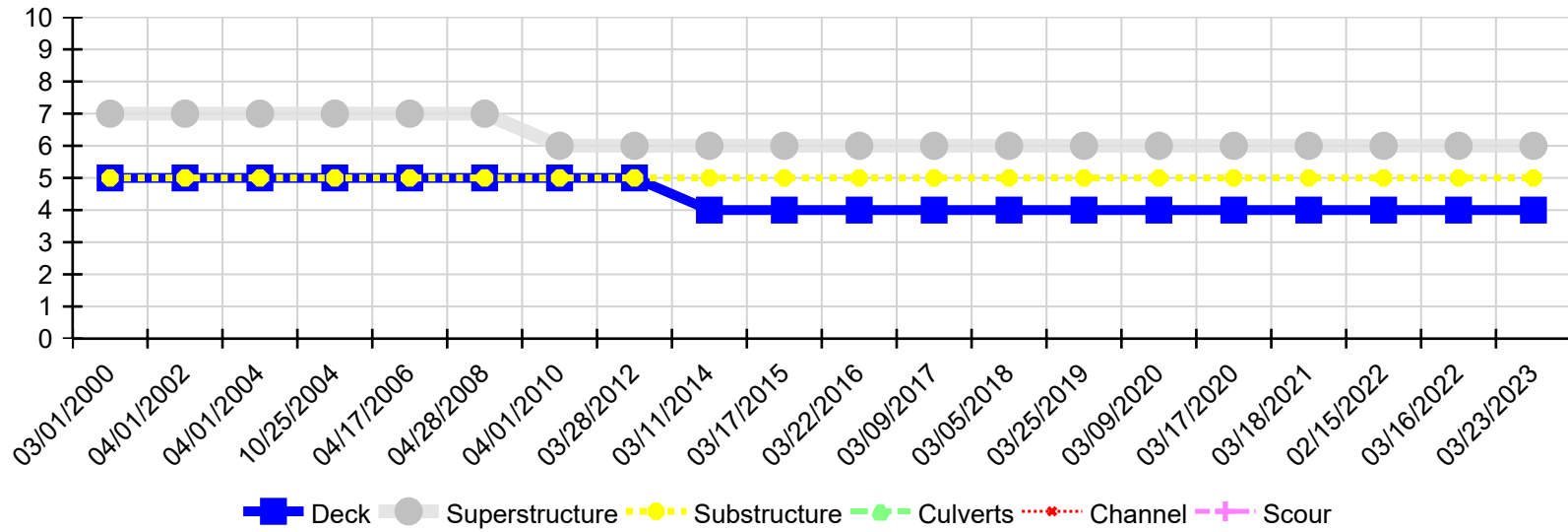
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Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
03/23/2023	4	6	5	N	N	N
03/16/2022	4	6	5	N	N	N
03/16/2022	4	6	5	N	N	N
02/15/2022	4	6	5	N	N	N
03/18/2021	4	6	5	N	N	N
03/17/2020	4	6	5	N	N	N
03/09/2020	4	6	5	N	N	N
03/25/2019	4	6	5	N	N	N
03/05/2018	4	6	5	N	N	N
03/09/2017	4	6	5	N	N	N
03/22/2016	4	6	5	N	N	N
03/17/2015	4	6	5	N	N	N
03/11/2014	4	6	5	N	N	N
03/28/2012	5	6	5	N	N	N
04/01/2010	5	6	5	N	N	N
04/28/2008	5	7	5	N	N	N
04/17/2006	5	7	5	N	N	N
10/25/2004	5	7	5	N	N	N
04/01/2004	5	7	5	N	N	N
04/01/2002	5	7	5	N	N	N
03/01/2000	5	7	5	N	N	N