

Bridge 02673 Inspection Report



Latitude:35.16079, Longitude:-90.16443

Route:40 Section:52 Log:278.83

Arnold Road ID:18x40x52xB, Arnold Log mile:5.656

District 01, 35 - Crittenden County

Owner: 1 - State Highway Agency

Inspection Direction: 4 - W to E

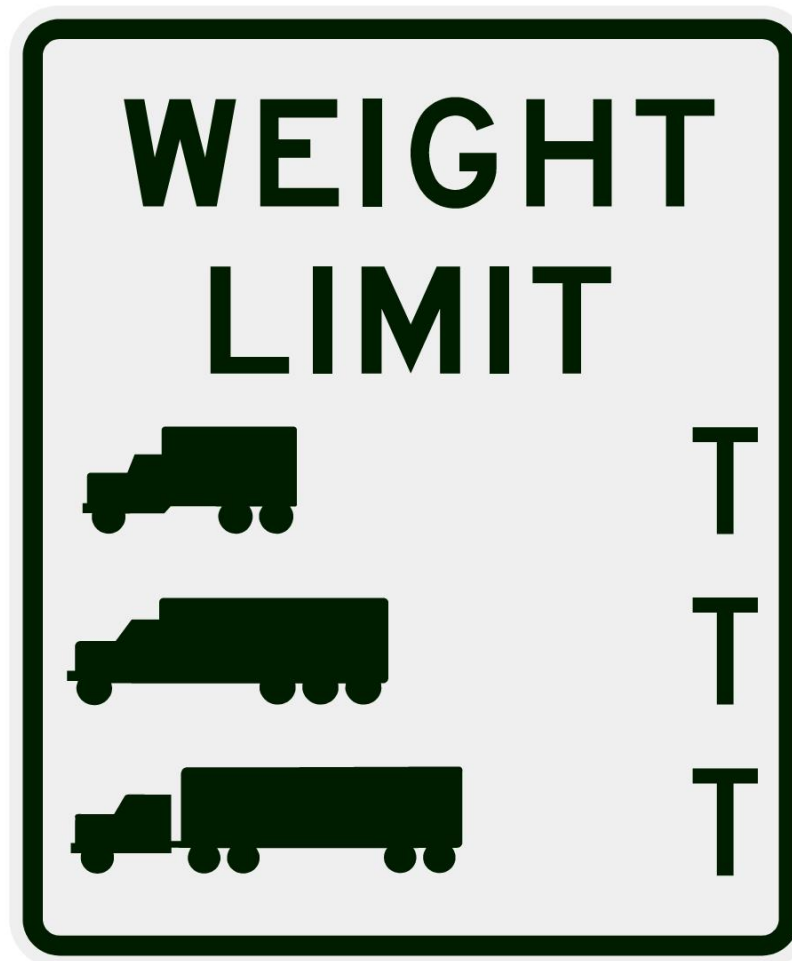
Bridge Posting Information

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

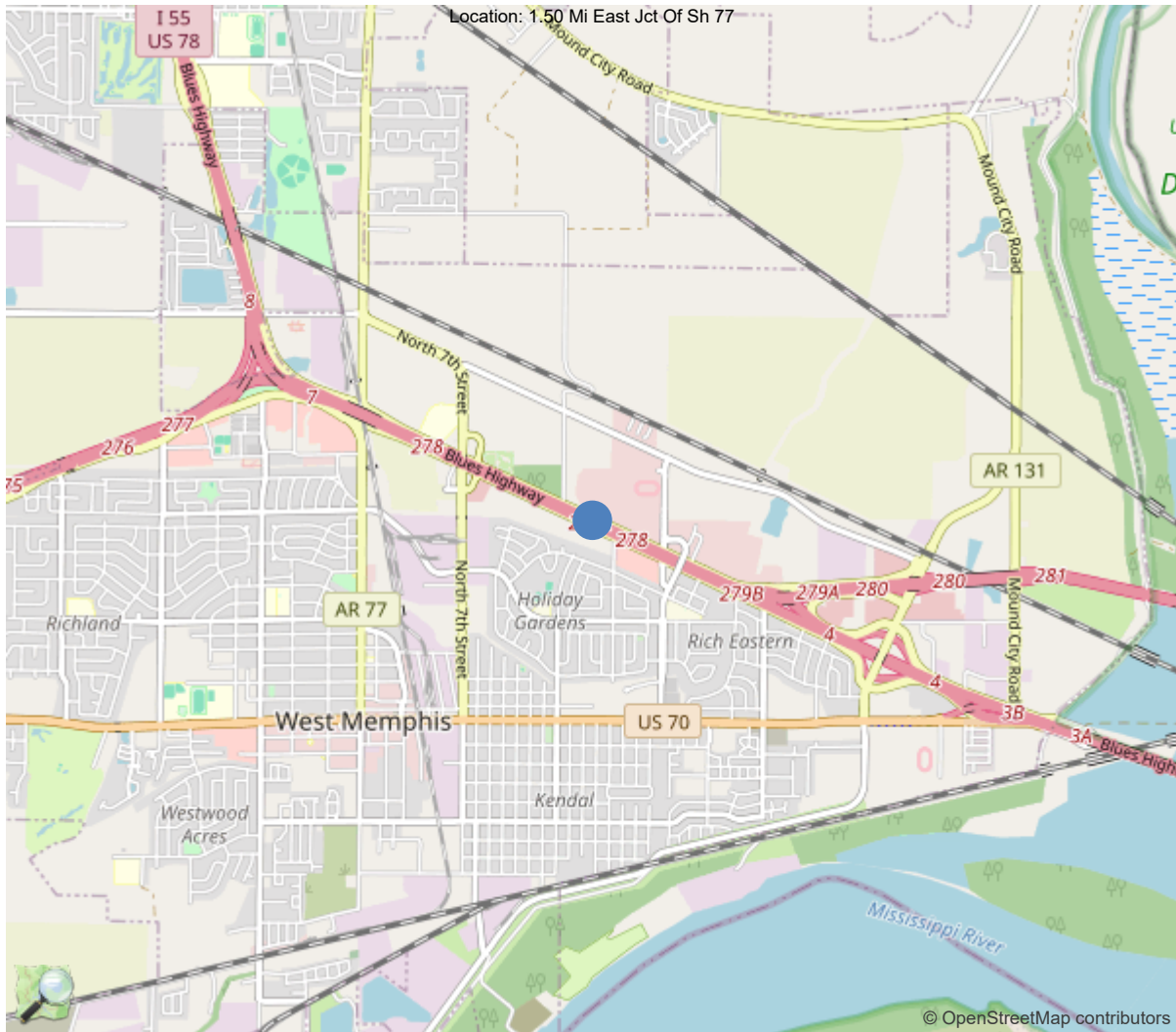
70 - Bridge Posting: 5 - Equal to or above legal loads

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)	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



35.16079, -90.16443

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	02673
(5) Inventory Route	1
(2) Highway Agency District	01 - District 01
(3) County Code	35 - Crittenden County
(4) Place Code	74540
(6) Features Intersected	Ten Mile Bayou
(7) Facility Carried	I-40W/Sec52/278.83
(9) Location	1.50 Mi East Jct Of Sh 77
(11) Mile Point	278.83 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000040520
(16) Latitude	35.16079
(17) Longitude	-90.16443
(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	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	1951
(106) Year Reconstructed	1992
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	3
Under	0
(29) Average Daily Traffic	7869
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	1 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	31 ft
(49) Structure Length	121 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	59.7 ft
(52) Deck Width Out to Out	62.6 ft
(32) Approach Roadway Width (W/Shoulders)	60 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	59.7 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	1
(26) Functional Class	11 - Urban Principal Arterial
(100) Defense Highway	1 - The inventory route is on
(101) Parallel Structure	L - The left structure of para
(102) Direction of Traffic	1 - 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	6 - MS 18+Mod / HS 20+Mod
(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	7
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(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	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	41405
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			04/26/2022
(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		
<p>* 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.</p>			

Team Lead: Myron Futrell, Inspection Date: 04/26/2022

Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	02673
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	35 - Crittenden County
B.L.03 Place Code	74540 - West Memphis
B.L.04 Highway Agency District	01 - District 01
B.L.05 Latitude	35.16079
B.L.06 Longitude	-90.16443
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: Myron Futrell, Inspection Date: 04/26/2022

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
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POSTING STATUS DATA

B.PS.01 Load Posting Status	B.PS.02 Posting Status Change Date
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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
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Asset #02673(Routine, Underwater type 2)

I-40W/Sec52/278.83 over Ten Mile Bayou

Location: 1.50 Mi East Jct Of Sh 77

Team Lead: Myron Futrell Inspection Date: 04/26/2022

Inspection Notes

General Observation

Drawing numbers: 29967, Job R10008 Widened.

Abutment #1 left, right side slope is eroded with depths up to 3' extending down slope to bent #2.

Scouring of slope at bent #4 exposing (+/-)3' of piles from original slope line.

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

04/27/2020 lowered deck from 7 to 6 due to being integral.

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

04/27/2020 lowered substructure from 7 to 6 due to erosion.

61 - Channel/Channel Protection (6 - Bank is beginning to slump. River control devices and embankment protection have widespread minor damage. There is minor stream bed movement evident. Debris is restricting the channel slightly.)
04/27/2020 lowered channel from 7 to 6 due to erosion.

National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	7521	2379	5046	96	0
1080	Delamination/Spall/Patched Area	SF	3	0	0	3	0
1120	Efflorescence/Rust Staining	SF	819	0	726	93	0
1190	Abrasion/Wear (PSC/RC)	SF	4320	0	4320	0	0
(38) Soffit all spans typically have open longitudinal cracks with light efflorescence. Spans #3 and 4 have areas of longitudinal cracks with areas of rust stain. Span #3 center and right lanes have one foot shallow spall each. Span #4 deck has one foot long narrow spall at centerline All spans have light abrasion with no loose aggregate in travel lanes.							
215	Reinforced Concrete Abutment	LF	139	115	24	0	0
6000	Scour	LF	24	0	24	0	0
(215) Abutment #1 cap left end is undermined 6" for a length of 6' exposing pile #1. Abutment 2 right end is undermined up to 1' for 15'.							
227	Reinforced Concrete Pile	EA	37	37	0	0	0
(227) Abutment #1 pile #1 exposed.							
234	Reinforced Concrete Pier Cap	LF	199	185	8	6	0
1080	Delamination/Spall/Patched Area	LF	9	0	3	6	0
1090	Exposed Rebar	LF	5	0	5	0	0
(234) Bent #2 cap ahead, bottom face has two one foot spalls with exposed rebar by pile #5. Bent #2,3 cap left side at construction joint has 1' spall with no exposed rebar. Caps at bent #2,3,4 at left const. joint cracked and delamination. Bents 3&4 small spalls on bottom of cap at bent #3 piles (8 & 11) and bent #4 (3,4 & 11).							
301	Pourable Joint Seal	LF	382	10	0	32	340
2330	Seal Damage	LF	340	0	0	0	340
2360	Adjacent Deck or Header	LF	32	0	0	32	0
(301) All deck joints are missing material. Abutment #1 joint adjacent header has six feet of spalling and six feet of cracking. Abutment #2 joint adjacent header has twenty feet of cracking.							
321	Reinforced Concrete Approach Slab	SF	3000	3000	0	0	0
(321) Approach slabs have hairline transverse cracks.							
331	Reinforced Concrete Bridge Railing	LF	242	142	100	0	0
1130	Cracking (RC and Other)	LF	100	0	100	0	0
(331) Bridge rails have vertical cracks. Right rail has several spalls with no exposed rebar.							

Inspection Photos and Notes



Side view / elevation

Maintenance Needs

Date Reported: 04/25/2016

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Element

Deficiency Description

All deck joints are missing material.

Remarks



All deck joints are missing material.

Maintenance Needs

Date Reported: 04/25/2016

Priority: C - Important

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

Status: Monitor

Component:

Deficiency Description

CHANNEL SMALL DRIFT AT BENT #3 LEFT SIDE.

4/26/2022-Large drift gone small drift remains.

Remarks



Small drift in channel, bent #3 left side



Large drift left side of bridge.

Maintenance Needs

Date Reported: 04/24/2014

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component: Channel

Deficiency Description

Abutment #1 left, right side slope is eroded with depths up to 3' extending down slope to bent #2.
Scouring of slope at bent #4 exposing (+/-)3' of piles from original slope line.

Remarks



Erosion abutment #1 left side



Erosion at bent #4



Abutment 1 left side slope.



Abutment 1 right side slope.



Abutment #1 slope erosion.

Maintenance Needs

Date Reported: 04/24/2014

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component: Channel

Deficiency Description

Abutment #1 cap left end is undermined 6" for a length of 6' exposing pile #1.

Remarks



Abutment 1 cap undermined left end.

Maintenance Needs

Date Reported: 04/25/2016

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component: Channel

Deficiency Description

Abutment cap 2 right end is undermined up to 1' for 15'.

4-26-2022 added more erosion.

Remarks



Abutment 2 right end is undermined up to 1' for 15'.



Abutment 2 right end is undermined 1' for 3'.

Maintenance Needs

Date Reported: 04/26/2018

Priority: D- Routine

Type of Work: (Inactive) (Inactive) 1 - Clean

Status: Monitor

Component: Channel

Deficiency Description

Vegetation growing beside and under bridge

Remarks



Vegetation growing beside and under bridge

Maintenance Needs

Date Reported: 04/29/2022

Priority: D- Routine

Type of Work: Repair (General)

Status: Open

Component: Element

Deficiency Description

Bent #2 cap ahead, bottom face has two one foot spalls with exposed rebar by pile #5.

Bent #2,3 cap left side at construction joint has 1' spall with no exposed rebar.

Caps at bent #2,3,4 at left const. joint cracked and delamination.

Bents 3&4 small spalls on bottom of cap at bent #3 piles (8 & 11) and bent #4 (3,4 & 11).

Remarks



04/26/2022

Bent #2 ahead face



04/26/2022

Bent #2 cap ahead, bottom face has two one foot spalls with exposed rebar by pile #5.



04/26/2022

Bent #2 cap back face, left side spalled at construction joint



04/26/2022

Exposed rebar, bent #4 cap bottom face left side by piles #3 and 4.

Maintenance Needs

Date Reported: 04/29/2022

Priority: D- Routine

Type of Work: Repair (General)

Status: Open

Component: Element

Deficiency Description

Abutment #1 joint left side adjacent header spalled for six feet

Abutment #2 joint left side adjacent header has twenty feet of cracking and spalling

Remarks



Abutment #1 joint left side adjacent header spalled for six feet



Abutment #2 joint left side adjacent header has twenty feet of cracking and spalling

Maintenance Needs

Date Reported: 04/29/2022

Priority: D- Routine

Type of Work: Repair (General)

Status: Open

Component: Element

Deficiency Description

Span #3 center and right lanes have one foot shallow spall each.
Span #4 deck has one foot long narrow spall at centerline

Remarks



04/26/2022

Span #3 center and right lanes have one foot shallow spall each.



04/26/2022

Span #4 deck has one foot long narrow spall at centerline



Asset #02673(Routine, Underwater type 2)

I-40W/Sec52/278.83 over Ten Mile Bayou

Location: 1.50 Mi East Jct Of Sh 77

Team Lead: Myron Futrell Inspection Date: 04/26/2022

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	
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



Asset #02673(Routine, Underwater type 2)

I-40W/Sec52/278.83 over Ten Mile Bayou

Location: 1.50 Mi East Jct Of Sh 77

Team Lead: Myron Futrell Inspection Date: 04/26/2022

A-57 - Girder End and Bearing Painting Needed

A-58 - Cap Cleaning/Flushing Needed

A-59 - Joint Repair Needed

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?



Asset #02673(Routine, Underwater type 2)

I-40W/Sec52/278.83 over Ten Mile Bayou

Location: 1.50 Mi East Jct Of Sh 77

Team Lead: Myron Futrell Inspection Date: 04/26/2022

A-66 - Approach minor pothole/leveling needed



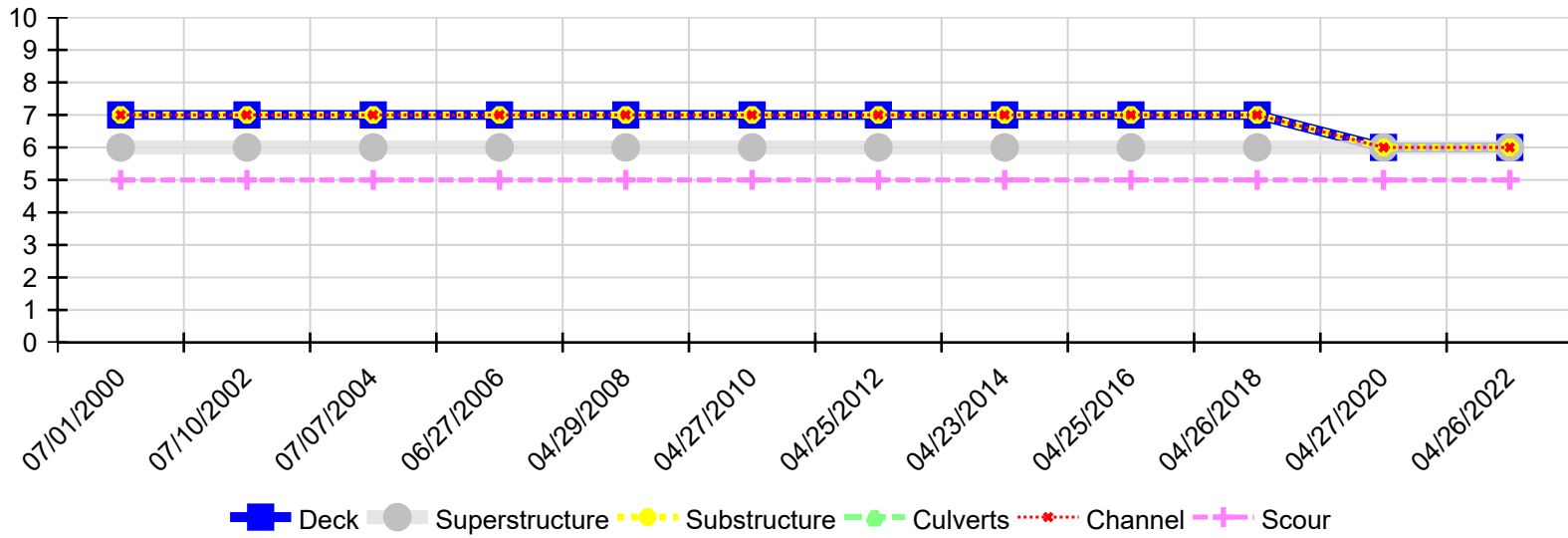
Asset #02673(Routine, Underwater type 2)

I-40W/Sec52/278.83 over Ten Mile Bayou

Location: 1.50 Mi East Jct Of Sh 77

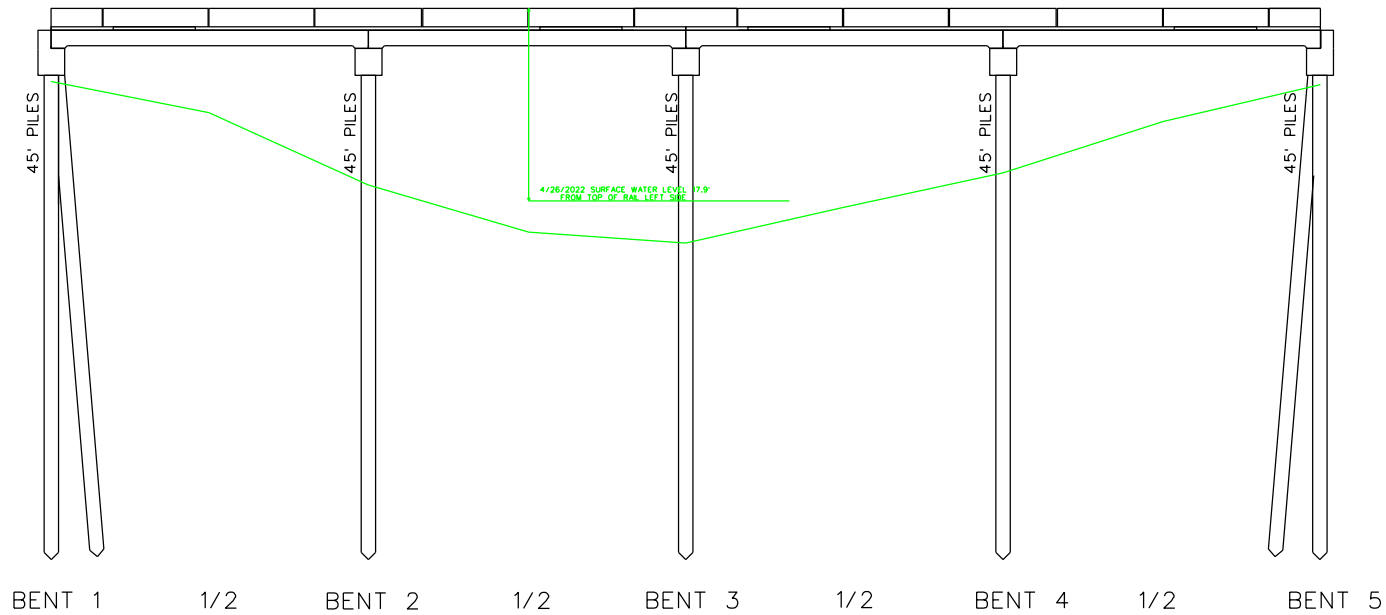
Team Lead: Myron Futrell Inspection Date: 04/26/2022

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
04/26/2022	6	6	6	N	6	5
04/27/2020	6	6	6	N	6	5
04/26/2018	7	6	7	N	7	5
04/25/2016	7	6	7	N	7	5
04/23/2014	7	6	7	N	7	5
04/25/2012	7	6	7	N	7	5
04/27/2010	7	6	7	N	7	5
04/29/2008	7	6	7	N	7	5
06/27/2006	7	6	7	N	7	5
07/07/2004	7	6	7	N	7	5
07/10/2002	7	6	7	N	7	5
07/01/2000	7	6	7	N	7	5

BRIDGE #02673
CHANNEL PROFILE
LEFT SIDE



04/26/2022 6.8' 9.8' 16.4' 20.8' 21.8' 18.5' 15.3' 10.5' 7.1'

*Not to Scale

READINGS TAKEN FROM TOP OF PARAPET WALL, LEFT SIDE OF BRIDGE, UNLESS OTHERWISE NOTED.

Bridge No. 02673	Dist. 1	Co. Crittenden - 18
Logmile 278.94	Rt. 40	Sect/Zone - 52/0
Date Drawn 04/23/2014	Date Redrawn 04/26/2022 By DMF	