



Latitude:34.18860, Longitude:-92.08412

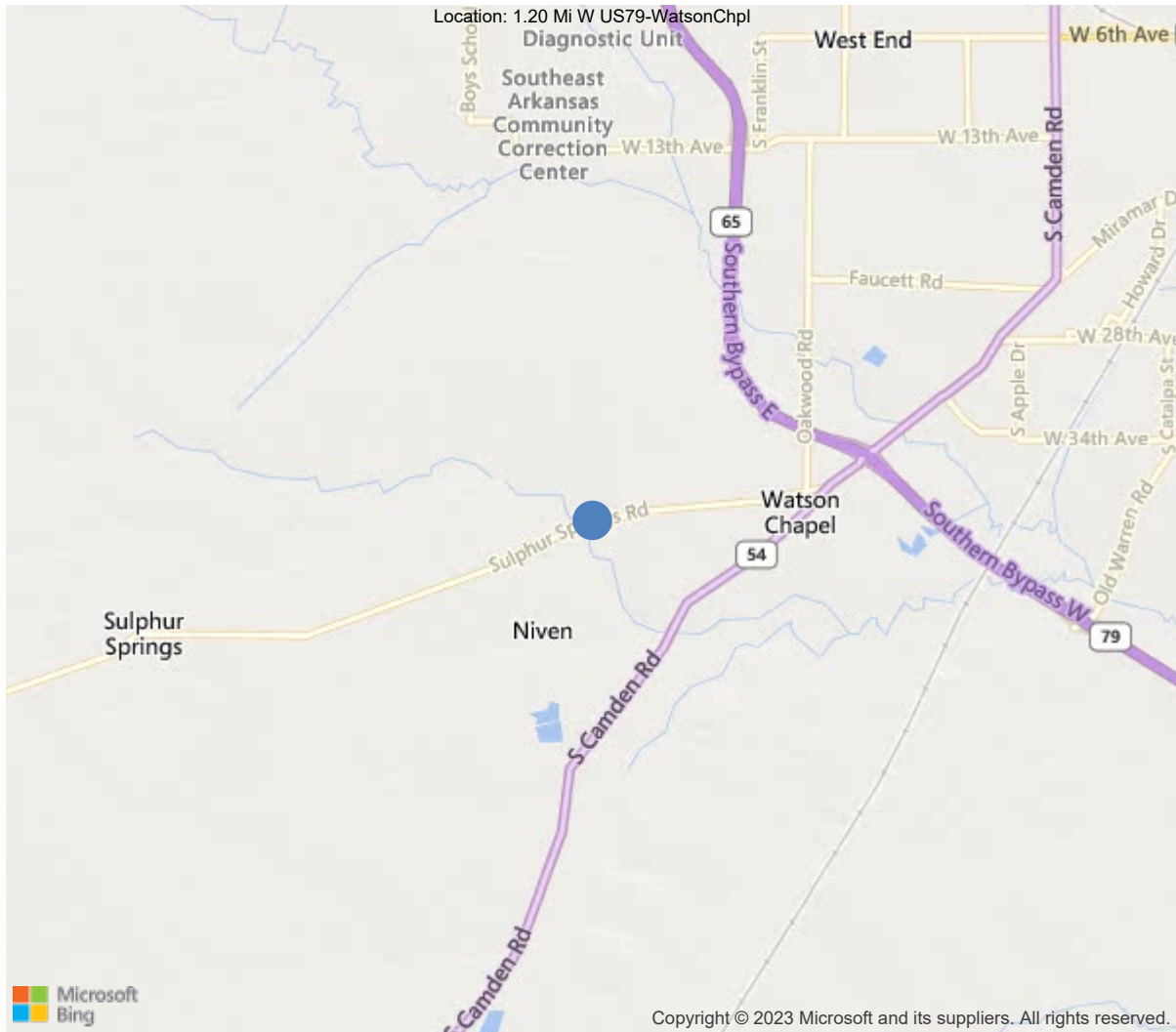
Route:54 Section:10 Log:1.2

Arnold Road ID:35x54x10xA, Arnold Log mile:1.203

District 02, 69 - Jefferson County

Owner: 1 - State Highway Agency





34.18860, -92.08412



Asset #M3278(Routine)

SH 54-10 LM 1.20 over Nevins Creek

Location: 1.20 Mi W US79-WatsonChpl

Team Lead: Greg Loomis, Inspection Date: 12/02/2021

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	M3278
(5) Inventory Route	1
(2) Highway Agency District	02 - District 02
(3) County Code	69 - Jefferson County
(4) Place Code	0
(6) Features Intersected	Nevins Creek
(7) Facility Carried	SH 54-10 LM 1.20
(9) Location	1.20 Mi W US79-WatsonChpl
(11) Mile Point	1.2 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	34.1885955801915
(17) Longitude	-92.0841237513225
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	122
Material	1 - Concrete
Type	22 - Channel beam
(44) Approach Structure Type	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	2 - Concrete Precast Panels
(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	1970
(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	6500
(30) Year of ADT	2018
(109) Truck ADT	2 %
(19) Bypass, Detour Length	10 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	31 ft
(49) Structure Length	69 ft
(50) Curb or Sidewalk Width	
Left	0.5 ft
Right	0.5 ft
(51) Bridge Roadway Width Curb to Curb	26.1 ft
(52) Deck Width Out to Out	28 ft
(32) Approach Roadway Width (W/Shoulders)	22 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	27.2 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	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	17 - Urban Collector
(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	0 - The inventory route is not
(20) Toll	3 - On free road. The structure
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	7
(59) Superstructure	7
(60) Substructure	6
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	2 - M 13.5 / H 15
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	46
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	27
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	6
(68) Deck Geometry	2
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(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	5 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	95 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 324
(96) Total Project Cost	\$ 664
(97) Year of Improvement Cost Estimate	2002
(114) Future ADT	7400
(115) Year of Future ADT	2038

INSPECTIONS *			
(90) Inspection Date	12/02/2021		
(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 #M3278(Routine)

District: 02, County: 69 - Jefferson County

Team Lead: Greg Loomis, Inspection Date: 12/02/2021

#### A-46 - Asset Files

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#### General Observation (False)

Bridge is logged from east to west.

Updated LM from 1.27 to 1.20 per Str. Line from Tech Serv. dated 4/2010. DRB, 5/7/10

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Asset #M3278(Routine)

SH 54-10 LM 1.20 over Nevins Creek

Location: 1.20 Mi W US79-WatsonChpl

Team Lead: Greg Loomis, Inspection Date: 12/02/2021

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	1943	1875	68	0	0
1130	Cracking (RC and Other)	SF	68	0	68	0	0
(16) Deck: 28'-2" wide x 69' long = 1943 sqft. Joints are grouted and grout is in good condition - grout has come out of a few key-ways along bents. Some scattered minor- to moderate-sized cracks on decks of a few units.							
110	Reinforced Concrete Open Girder/Beam	LF	552	515	27	10	0
1080	Delamination/Spall/Patched Area	LF	27	0	27	0	0
1090	Exposed Rebar	LF	10	0	0	10	0
(110) Girders: 8 precast units per span / Spans 1-3 (19' - 31' - 19' = 69' total span). Units are bolted transversely and longitudinally - no noted missing or loose bolts. NOTE: State forces have removed delaminated concrete, cleaned steel, and applied concrete patches to legs of units in various locations. (Repaired areas = 25' in State 2.)  Spalling along bottom of legs (some rebar exposed) at locations indicated: Span 1 Girders 3,4 & 5: Spalling with exposed rebar - 5' total.							
216	Timber Abutment	LF	66	51	12	3	0
1140	Decay/Section Loss	LF	15	0	12	3	0
(216) Backwalls: 33' each / Bents 1 & 4. Both back walls have some decay.							
228	Timber Pile	EA	20	15	2	3	0
1020	Connection	EA	2	0	2	0	0
1150	Check/Shake	EA	3	0	0	3	0
(228) Piling: 5 per bent / Bents 1-4. NOTE: Only 1-2' of Bent 1 pile visible / only 4" of Bent 4 pile visible.  Bent 2 Pile 5, Bent 3 Pile 2, and Bent 4 Pile 1: Moderate checking - CS3 checking x 3.  Bent 3 Piles 1, 3, & 4: Repaired/replaced by state forces - CS2 connection x 2 (Pile 1 has angles at cap = CS1).							
234	Reinforced Concrete Pier Cap	LF	112	98	10	4	0
1080	Delamination/Spall/Patched Area	LF	5	0	4	1	0
1090	Exposed Rebar	LF	5	0	5	0	0
1130	Cracking (RC and Other)	LF	4	0	1	3	0
(234) Caps: 28' each / Bents 1-4. Bent 1: Two vertical cracks Bent 2: Spall with exposed rebar - 4'. Bent 3: Spall to right corner and small contact spalls under channel legs. Bent 4: Small spalls, delaminations, and large cracks with efflorescence.							
330	Metal Bridge Railing	LF	140	139	1	0	0
7000	Damage	LF	1	0	1	0	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
515	Steel Protective Coating	SF	322	322	0	0	0
(330) Railing: 70' each side. Coating: 2.3 square feet per linear feet of railing. Metal railing on concrete posts. End post on north east corner has some damage due to traffic impact.							

SH 54-10 LM 1.20 over Nevins Creek

**Location: 1.20 Mi W US79-WatsonChpl**

**Team Lead:** Greg Loomis, **Inspection Date:** 12/02/2021

## Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	1943	1875	68	0	0
1130	Cracking (RC and Other)	SF	68	0	68	0	0
<p>(16) Deck: 28'-2" wide x 69' long = 1943 sqft.</p> <p>Joints are grouted and grout is in good condition - grout has come out of a few key-ways along bents.</p> <p>Some scattered minor- to moderate-sized cracks on decks of a few units.</p>							

## Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
110	Reinforced Concrete Open Girder/Beam	LF	552	515	27	10	0
1080	Delamination/Spall/Patched Area	LF	27	0	27	0	0
1090	Exposed Rebar	LF	10	0	0	10	0
<p>(110) Girders: 8 precast units per span / Spans 1-3 (19' - 31' - 19' = 69' total span).            Units are bolted transversely and longitudinally - no noted missing or loose bolts.            NOTE: State forces have removed delaminated concrete, cleaned steel, and applied concrete patches to legs of units in various locations. (Repaired areas = 25' in State 2.)</p> <p>Spalling along bottom of legs (some rebar exposed) at locations indicated:            Span 1 Girders 3,4 &amp; 5: Spalling with exposed rebar - 5' total.</p>							



## Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
216	Timber Abutment	LF	66	51	12	3	0
1140	Decay/Section Loss	LF	15	0	12	3	0
(216) Backwalls: 33' each / Bents 1 & 4. Both back walls have some decay.							
228	Timber Pile	EA	20	15	2	3	0
1020	Connection	EA	2	0	2	0	0
1150	Check/Shake	EA	3	0	0	3	0
(228) Piling: 5 per bent / Bents 1-4. NOTE: Only 1-2' of Bent 1 pile visible / only 4" of Bent 4 pile visible.  Bent 2 Pile 5, Bent 3 Pile 2, and Bent 4 Pile 1: Moderate checking - CS3 checking x 3.  Bent 3 Piles 1, 3, & 4: Repaired/replaced by state forces - CS2 connection x 2 (Pile 1 has angles at cap = CS1).							
234	Reinforced Concrete Pier Cap	LF	112	98	10	4	0
1080	Delamination/Spall/Patched Area	LF	5	0	4	1	0
1090	Exposed Rebar	LF	5	0	5	0	0
1130	Cracking (RC and Other)	LF	4	0	1	3	0
(234) Caps: 28' each / Bents 1-4. Bent 1: Two vertical cracks Bent 2: Spall with exposed rebar - 4'. Bent 3: Spall to right corner and small contact spalls under channel legs. Bent 4: Small spalls, delaminations, and large cracks with efflorescence.							



Asset #M3278(Routine)

SH 54-10 LM 1.20 over Nevins Creek

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Team Lead: Greg Loomis, Inspection Date: 12/02/2021

## Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4



Left side view



Roadway view



Deck - Spans 1-3: Typical



Soffit - Span 2: Typical



**Maintenance Needs**

**Date Reported:** 11/07/2017  
**Priority:** D- Routine  
**Type of Work:** Repair (General)  
**Status:** Monitor  
**Component:** Element

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**Deficiency Description**

Caps -  
Bent 2: Spall with exposed rebar.  
Bent 3: Spall to right corner and small contact spalls under channel legs.  
Bent 4: Small spalls, delaminations, and large cracks with efflorescence.

**Remarks**

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Bent 4 abutment right has cracking with efflorescence and delambs



Bent 2 cap near pile 3 has spall with exposed rebar .

**Date Reported:** 11/07/2017  
**Priority:** (Inactive) (Inactive) G - General/ Preventive maintenance  
**Type of Work:** Repair (General)  
**Status:** Monitor  
**Component:** Element

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**Deficiency Description**

Girders - Span 1 Units 1, 4, 5, 6, & 7: Scattered spalling with exposed rebar (minor corrosion/section loss) on bottom of legs of units

**Remarks**

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Spall with exposed rebar at span 1 girder 4 left leg  
but common on right leg also.





**Asset #M3278(Routine)**

**SH 54-10 LM 1.20 over Nevins Creek**

**Location: 1.20 Mi W US79-WatsonChpl**

**Team Lead: Greg Loomis, Inspection Date: 12/02/2021**

## **Routine Maintenance**

Check Box Maintenance Items

<b>Data Field</b>	<b>Value</b>
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 - Hydo and LMC Advised	



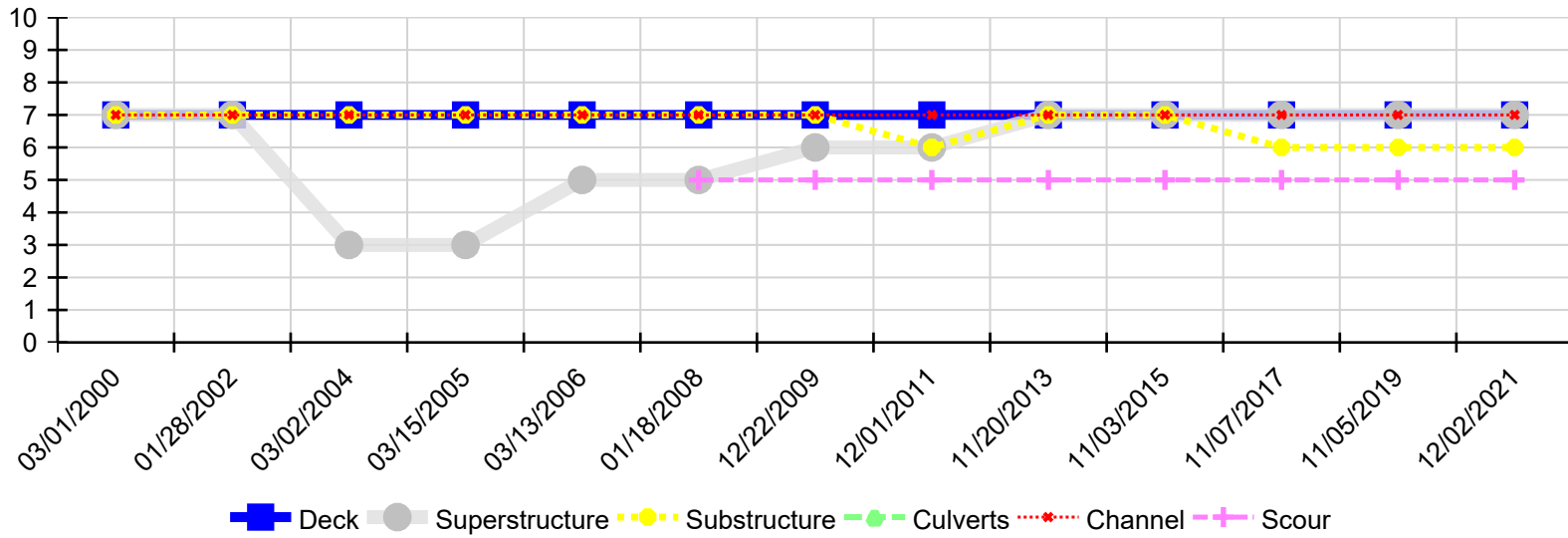
Asset #M3278(Routine)

SH 54-10 LM 1.20 over Nevins Creek

Location: 1.20 Mi W US79-WatsonChpl

Team Lead: Greg Loomis, Inspection Date: 12/02/2021

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
12/02/2021	7	7	6	N	7	5
11/05/2019	7	7	6	N	7	5
11/07/2017	7	7	6	N	7	5
11/03/2015	7	7	7	N	7	5
11/20/2013	7	7	7	N	7	5
12/01/2011	7	6	6	N	7	5
12/22/2009	7	6	7	N	7	5
01/18/2008	7	5	7	N	7	5
03/13/2006	7	5	7	N	7	N
03/15/2005	7	3	7	N	7	N
03/02/2004	7	3	7	N	7	N
01/28/2002	7	7	7	N	7	N
03/01/2000	7	7	7	N	7	N