



Latitude:36.21132, Longitude:-94.49567

Route:59 Section:01 Log:23.1

Arnold Road ID:4x59x1xA, Arnold Log mile:23.011

District 09, 7 - Benton County

Owner: 1 - State Highway Agency

Inspection Direction: 1 - N to S

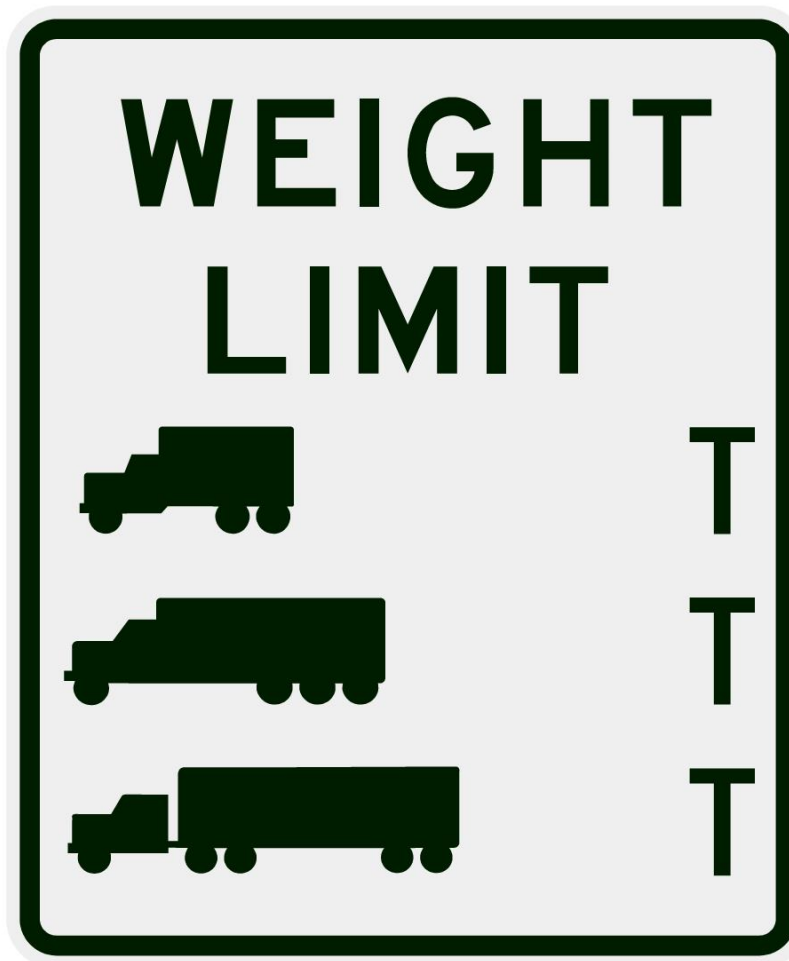
### Bridge Posting Information

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

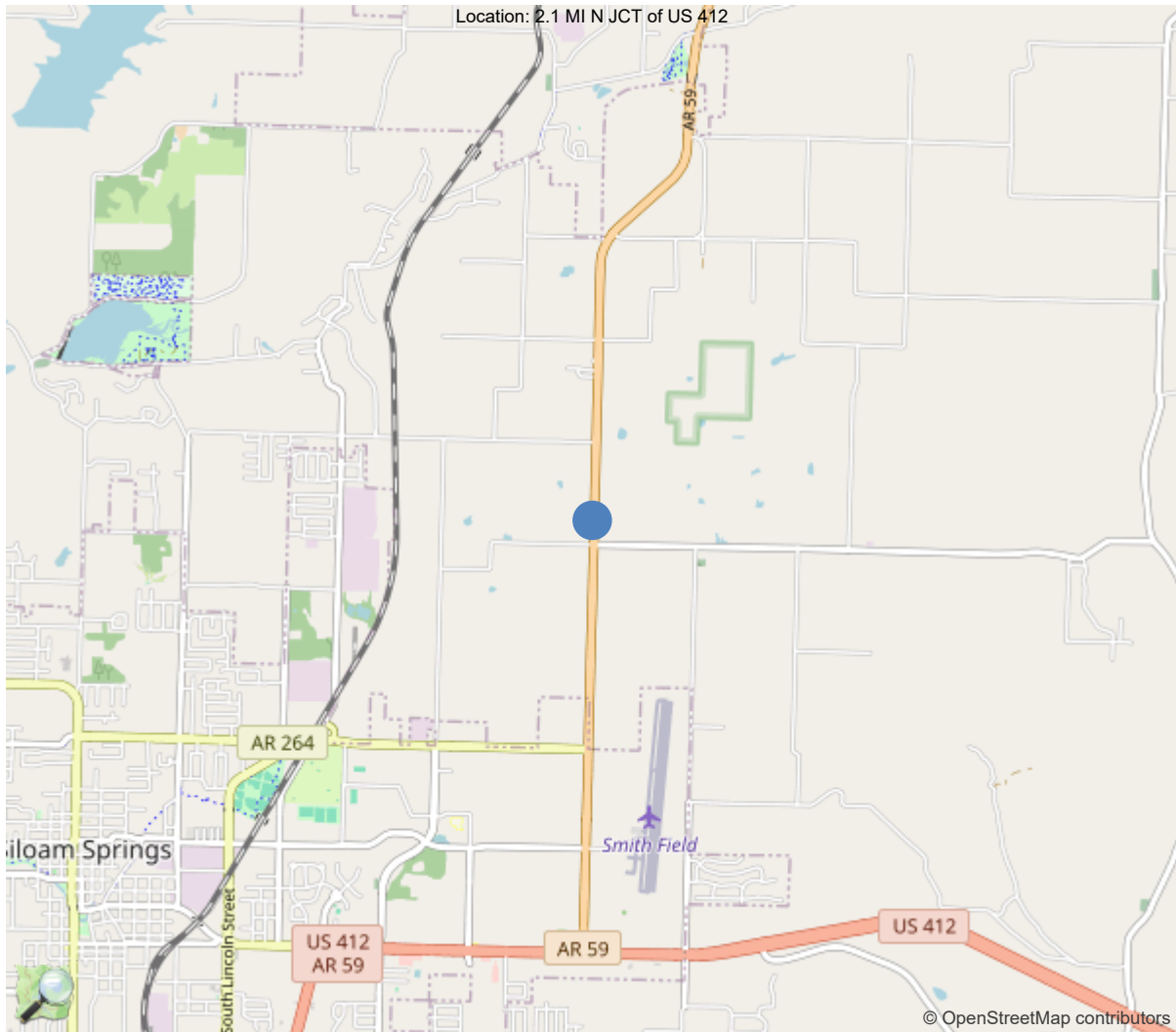
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	38		
Code 9 (31 Tons)	48		
Code 5 (40 Tons)	56		

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



36.21132, -94.49567



**Asset #X1318(Routine)**  
**SH 59 Benton 2 over BRANCH**  
**Location: 2.1 MI N JCT of US 412**

**Team Lead: Nathan Rowland Inspection Date: 07/10/2023**

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	X1318
(5) Inventory Route	1
(2) Highway Agency District	09 - District 09
(3) County Code	7 - Benton County
(4) Place Code	0
(6) Features Intersected	BRANCH
(7) Facility Carried	SH 59 Benton 2
(9) Location	2.1 MI N JCT of US 412
(11) Mile Point	23.1 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000059010
(16) Latitude	36.211323
(17) Longitude	-94.495667
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	119
Material	1 - Concrete
Type	19 - Culvert
(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	N - Not applicable
(108) Wearing Surface/Protective System	
Type of Wearing Surface	N - Not applicable (applies only to stru
Type of Membrane	N - Not applicable (applies only to stru
Type of Deck Protection	N - Not applicable (applies only to stru
AGE AND SERVICE	
(27) Year Built	2008
(106) Year Reconstructed	0
(42) Type of Service	15
On	1 - Highway
Under	5 - Waterway
(28) Lane	
On	5
Under	0
(29) Average Daily Traffic	17000
(30) Year of ADT	2018
(109) Truck ADT	10 %
(19) Bypass, Detour Length	9 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	10 ft
(49) Structure Length	27 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	0 ft
(52) Deck Width Out to Out	0 ft
(32) Approach Roadway Width (W/Shoulders)	76.1 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	99.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.9 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	16 - Urban 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	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	N
(59) Superstructure	N
(60) Substructure	N
(61) Channel & Channel Protection	7
(62) Culverts	7
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	56
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	34
(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	N
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	N - Not applicable or a safety feat
(36B) Transitions	N - Not applicable or a safety feat
(36C) Approach Guardrail	N - Not applicable or a safety feat
(36D) Approach Guardrail Ends	N - Not applicable or a safety feat
(113) Scour Critical Bridges	8 - 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	12975
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	07/10/2023		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	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 #X1318(Routine)**

**SH 59 Benton 2 over BRANCH**

**Location: 2.1 MI N JCT of US 412**

**Team Lead: Nathan Rowland Inspection Date: 07/10/2023**

**General Observation**

7/10/2023 WNR & DBM: Routine inspection conducted this date. See Element notes for documentation.

Logged North to South. Chest waders are needed.

No bat activity was noted.

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**A-15 - Late Reason**

Heavy Work load

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ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
241	Reinforced Concrete Culvert	LF	372	0	371	1	0
1080	Delamination/Spall/Patched Area	LF	3	0	3	0	0
1090	Exposed Rebar	LF	1	0	0	1	0
1120	Efflorescence/Rust Staining	LF	5	0	5	0	0
1130	Cracking (RC and Other)	LF	9	0	9	0	0
1190	Abrasion/Wear (PSC/RC)	LF	354	0	354	0	0
<p>(241) 7/10/2023 WNR &amp; DBM:</p> <p>A few lifting lug holes have visible reinforcing wire/steel.</p> <p>Channel and culvert has approximately 3' of standing water at this inspection.</p> <p>Barrel #1- has 2' of cs2 abrasion on the lower portion of the walls of all precast units for the length of the barrel. The floor has up to 6" of stream bed material build up for the entire length. All precast units have a hairline horizontal crack along the top haunch area.</p> <p>Barrel #2 - has 2' of cs2 abrasion on the lower portion of the walls of the precast units for the length of the barrel. Barrel #2 has 4' of hairline cracking in the top slab and walls. The barrel floor has up to 1' of stream bed material build up for the length of the barrel. The barrel as 3' of scour at the outlet end with no undermining.</p> <p>Barrel #3- has 2' of cs2 abrasion on the lower portion of the walls of the precast units for the length of the barrel. It has 5' of hairline cracking with efflorescence in the top slab and walls and 4' of hairline cracking. Unit #10 has 1' of exposed rebar in the top slab at a lifting lug area. The barrel has 3' of scour at the outlet end with no undermining.</p> <p>The right headwall has minor shallow spalling with no rebar exposed over barrels #1,2,3. The left headwall has areas of map cracking over barrels #1,2,3.</p>							



Elevation looking east



Inventory looking South



Barrel #1



Barrel #2





Barrel #3



Upstream view



Downstream view



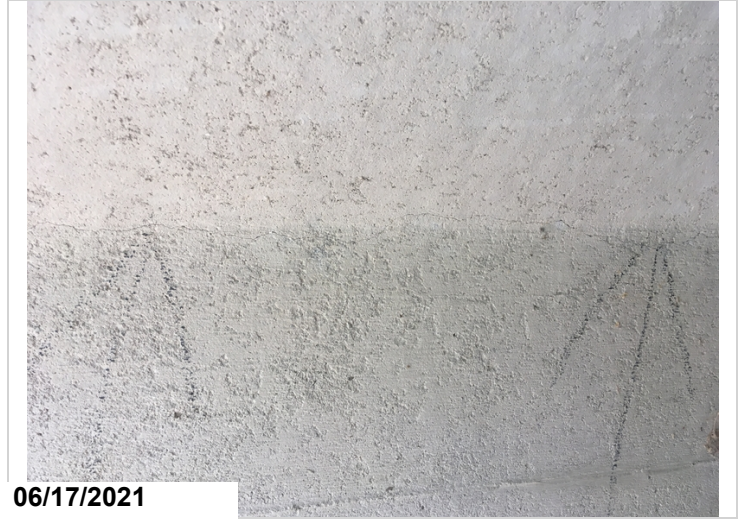
Elevation view. Log mile from left to right.





06/17/2021

Approach view in direction of log mile.



06/17/2021

Hairline horizontal cracking at the upper haunch area in precast units.



06/17/2021

Downstream channel view.



06/17/2021

Unit #10 has a spall with rebar exposed in the top slab at a lifting lug area.





Abrasion on the lower 2' of all precast units in barrel #1.



Upstream channel view.



Typical view of driving surface.



Typical view of driving surface.





Elevation view. Log mile from left to right.



Approach view in direction of log mile.



Upstream channel view.



Typical view of interior of barrels.



The inlet end of barrel #3 has a 2' deep scour hole.



Downstream channel view.



**Maintenance Needs**

**Date Reported:** 06/17/2021

**Priority:** D- Routine

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

**Status:** Monitor

**Component:**

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**Deficiency Description**

The outlet end of barrels #2,3 have a 3' deep scour pocket with no undermining of the precast units.

**Remarks**

Benton II -

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Barrels #2,3 have 3' of scour at the outlet end.



Asset #X1318(Routine)

SH 59 Benton 2 over BRANCH

Location: 2.1 MI N JCT of US 412

Team Lead: Nathan Rowland Inspection Date: 07/10/2023

## 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-54 - Sealable Deck Cracks**

**A-55 - Deck Washing Needed**

**A-56 - Joint Cleaning/Flushing Needed**



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**SH 59 Benton 2 over BRANCH**

**Location: 2.1 MI N JCT of US 412**

**Team Lead: Nathan Rowland Inspection Date: 07/10/2023**

**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**



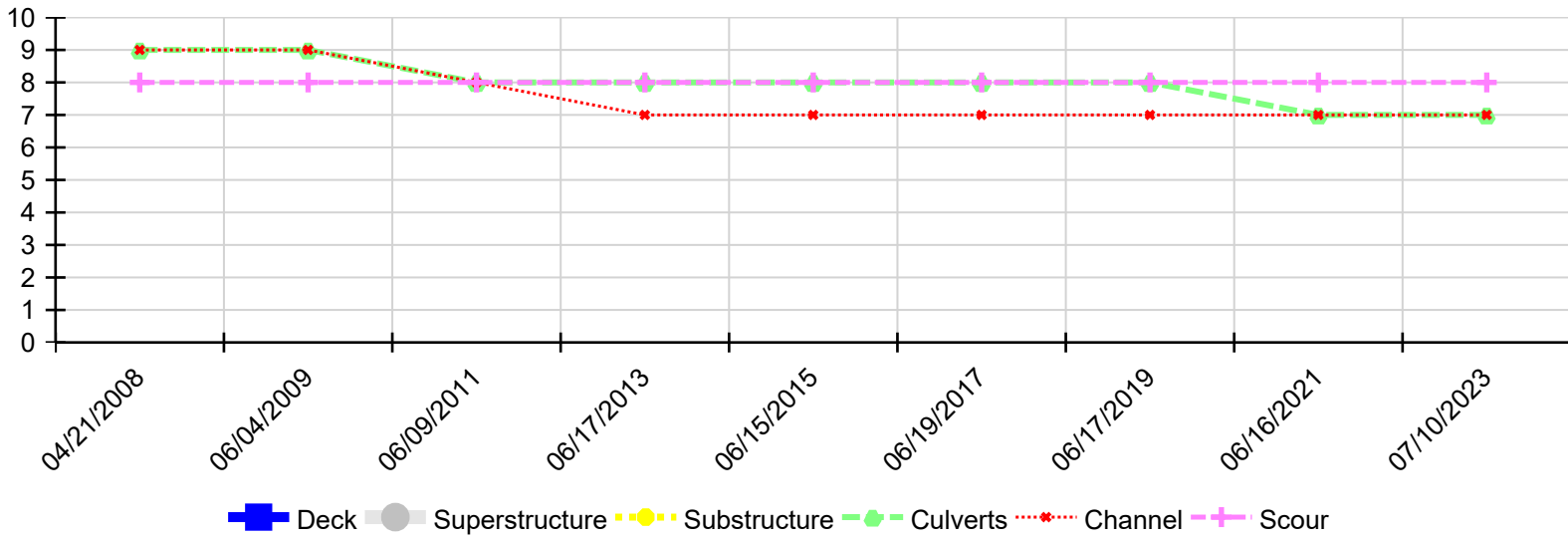
Asset #X1318(Routine)

SH 59 Benton 2 over BRANCH

Location: 2.1 MI N JCT of US 412

Team Lead: Nathan Rowland Inspection Date: 07/10/2023

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
07/10/2023	N	N	N	7	7	8
06/16/2021	N	N	N	7	7	8
06/17/2019	N	N	N	8	7	8
06/19/2017	N	N	N	8	7	8
06/15/2015	N	N	N	8	7	8
06/17/2013	N	N	N	8	7	8
06/09/2011	N	N	N	8	8	8
06/04/2009	N	N	N	9	9	8
04/21/2008	N	N	N	9	9	8