



Latitude:36.49618, Longitude:-94.47757

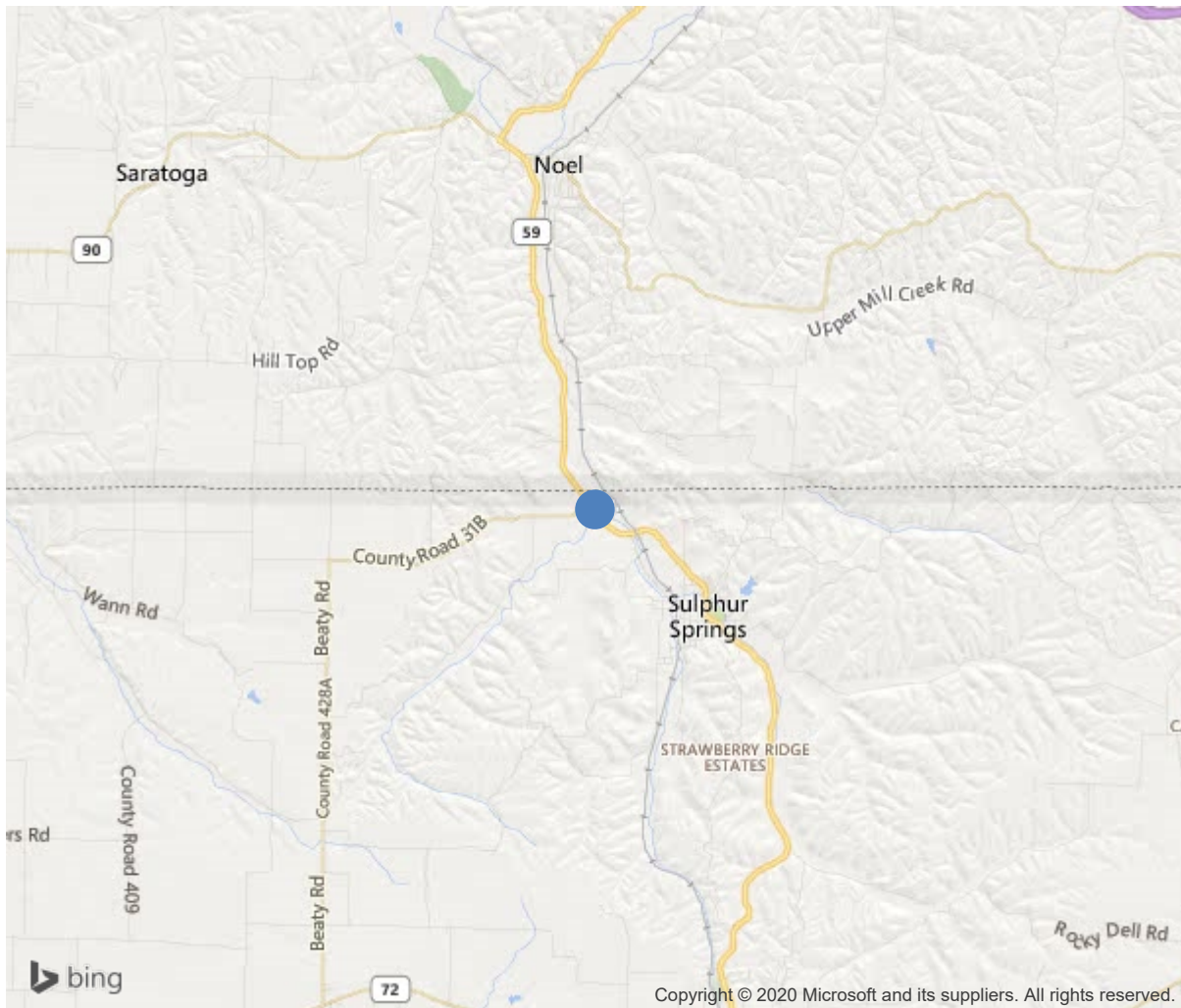
Route:59 Section:01 Log:0.21

Arnold Road ID:4x59x1xA, Arnold Log mile:0.252

District 09, Benton County

Owner: 1-State Highway Agency

6.4 MI N JCT SH 72 & 59



36.49618, -94.47757



Bridge #06995(Routine)

SH 59 Benton 2 over CHALYBEATE CREEK

Location: 6.4 MI N JCT SH 72 & 59

Team Lead: Benjamin Smith Inspection Date: January 27, 2020

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	06995
(5) Inventory Route	59
(2) Highway Agency District	09
(3) County Code	7-Benton County, Arkansas
(4) Place Code	0
(6) Features Intersected	CHALYBEATE CREEK
(7) Facility Carried	SH 59 Benton 2
(9) Location	6.4 MI N JCT SH 72 & 59
(11) Mile Point	0.21 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000059010
(16) Latitude	36.49618
(17) Longitude	-94.47757
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	42
Material	4-Steel continuous
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	3
(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 placed
Type of Membrane	0-None
Type of Deck Protection	1-Epoxy Coated Reinforcing
AGE AND SERVICE	
(27) Year Built	2006
(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	3500
(30) Year of ADT	2018
(109) Truck ADT	15 %
(19) Bypass, Detour Length	30 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	82 ft
(49) Structure Length	219 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	40 ft
(52) Deck Width Out to Out	43.2 ft
(32) Approach Roadway Width (W/Shoulders)	40 ft
(33) Bridge Median	0-No median
(34) Skew	30 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	41.3 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 water
(111) Pier Protection	1-Navigation protection not requ
(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 a S
(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			1-The inventory route is part of the
(20) Toll			3-On free road. The structure is toll-
(21) Maintain			1-State Highway Agency
(22) Owner			1-State Highway Agency
(37) Historical Significance			5-Bridge is not eligible for the NRHP
CONDITION			
(58) Deck			7
(59) Superstructure			7
(60) Substructure			7
(61) Channel & Channel Protection			8
(62) Culverts			N
LOAD RATING AND POSTING			
(31) Design Load			A-HL93
(63) Operating Rating Method			3
(64) Operating Rating			
Type			3-Load and Resistance Factor(LRFR)
Rating			56
(65) Inventory Rating Method			3-Load and Resistance Factor(LRF
(66) Inventory Rating			
Type			3
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			7
(68) Deck Geometry			6
(69) Clearances, Vertical/Horizontal			N
(71) Waterway Adequacy			9
(72) Approach Roadway Alignment			8
(36) Traffic Safety Features			1111
A) Bridge Railings			1-Inspected feature meets currently a
B) Transitions			1-Inspected feature meets currently a
C) Approach Guardrail			1-Inspected feature meets currently a
D) Approach Guardrail Ends			1-Inspected feature meets currently a
(113) Scour Critical Bridges			8-Bridge foundations determined to be
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			3385
(115) Year of Future ADT			2028
INSPECTIONS			
(90) Inspection Date			202001
(91) Frequency			24 Months
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No	24	
B: Underwater Inspection	No	0	
C: Other Special Inspection	No	0	

SUFFICIENCY RATING	92.5
STATUS (SD/FO/None)	Not Deficient

Location: 6.4 MI N JCT SH 72 & 59

Team Lead: Benjamin Smith, **Inspection Date:** January 27, 2020

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	9374	7357	1441	576	0
1120	Efflorescence/Rust Staining	SF	42	0	42	0	0
1130	Cracking (RC and Other)	SF	1975	0	1399	576	0
(12)							
01/27/2020:							
-The driving surface of the deck has numerous sealable cracks in all spans. The deck has full length longitudinal cracks in several locations with areas of heavy mapcracking. The cracks have been sealed in a few locations.							
-The gutters in span #1 have moderate dirt and debris accumulation near abutment #1.							
Undersurface - has sip forms.							
Span 1- has 9 total feet of cs2 efflorescence in the overhangs.							
Span 2- has 23 total feet of cs2 efflorescence in the overhangs.							
Span 3- has 10 total feet of cs2 efflorescence in the overhangs.							
107	Steel Open Girder/Beam	LF	1080	639	432	9	0
1000	Corrosion	LF	441	0	432	9	0
515	Steel Protective Coating	SF	11178	10710	432	18	18
3430	Oxide Film Degradation Color/Texture Adherence (Steel Protective Coatings)	SF	468	0	432	18	18
(107)							
01/27/2020 - The ends of some of the girders over the abutments have corrosion in locations with flaking rust to the weathering steel protective coating where the expansion joint seals leak onto the Substructure and Superstructure.							
Span #1- Beams #1,4,5 have 5 total feet of cs 3 corrosion at the beam ends over abutment 1. The lower portion of the external web on beams #1,5 have cs 2 corrosion.							
Span #2- The lower portion of the external web on beams #1,5 have cs 2 corrosion.							
Span #3- Beams #1,4 have 4 total feet cs 3 corrosion at the beam ends over abutment 2. The lower portion of the external web on beams #1,5 have cs 2 corrosion.							
205	Reinforced Concrete Column	EA	6	5	1	0	0
1080	Delamination/Spall/Patched Area	EA	1	0	1	0	0
(205)							
-Bent 1- no deficiencies noted.							
-Bent #2, column #1 has a shallow softball sized shallow spall with no exposed reinforcing steel near base of column on the span 2 side.							
-All footings have cover at this inspection.							
215	Reinforced Concrete Abutment	LF	96	51	45	0	0
1120	Efflorescence/Rust Staining	LF	7	0	7	0	0
1130	Cracking (RC and Other)	LF	38	0	38	0	0
(215)							

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Team Lead: Benjamin Smith, **Inspection Date:** January 27, 2020

[illegible]



General view of span 2 driving surface.



General view of span 3 driving surface.



Cracking span 1 right side near mid span.



Cracking in deck span 2 near bent 1.



Girder #1-Abnormal weathering to exterior side.



Map cracking in span 3 Left side center of north bound lane.



Bent 2 joint seal missing.



Substructure footings have cover.



Collision damage at guardrail approximately 40 feet from bridge end. Southeast railing.



Abutment #2, bearing #4-Abnormal weathering.



Abutment #1-Debris impact in compression joint.



Cracking in span 1 Left side near abutment 1.



Corrosion with flaking rust



Inventory 1 looking South.



Transverse cracking in the backwall.



Bent 2 column 1 softball sized shallow spall



Abutment 2 Left side has minor earth settlement.



Collision damage at guardrail approximately 20 feet from bridge end. Southwest railing.



The gutters in span #1 have dirt and debris accumulation near abutment #1.



Channel view looking West.



Corrosion with flaking rust.



Vertical cracking in backwall.



General view of span 1 driving surface.



General view of undersurface in span 1.



General view of abutment 2



Cracking span 1 Left side near bent1



Collision damage at guardrail approximately 20 feet from bridge end. Southwest railing.



General view of span 3 undersurface.



General view of splice plates.



General view of abutment 1



General view of bent 1.



Cracking span 1 right side near mid span.



General view of bent 2.



General view of span 2 undersurface.



Collision damage at guardrail approximately 60 feet from bridge end. Southeast railing.



Approach rail damage at the right end of the structure.

Maintenance Needs

Date Reported: 01/30/2018

Priority: D- Routine

Type of Work: None

Status: Monitor

Component:

Deficiency Description

Deck - The driving surface of the deck has numerous sealable cracks in all spans. The deck has full length longitudinal cracks in several locations with areas of heavy mapcracking.

Remarks



Mapcracking.



Deck cracking.



Longitudinal deck cracking.

Date Reported: 01/30/2018

Priority: D- Routine

Type of Work: None

Status: Monitor

Component:

Deficiency Description

Expansion joints - The compression joint seals have heavy debris impactation in the gutters. The seals leak water in locations allowing water to leak onto the Superstructure causing corrosion and abnormal weathering to the steel protective coating of the girder ends and bearing devices over abutments.

Remarks



Abutment #1-Debris impactation in compression joint.



abnormal weathering to girder end and bearing device.



abnormal weathering to girder end and bearing device.

Date Reported: 01/30/2018
Priority: C - Important
Type of Work: None
Status: Monitor
Component:

Deficiency Description

South approach railing - The Southwest railing has collision damage that has broken the railing loose from one post and caused out-of-plane bending in a section of the railing that has created a "pocket" in the railing.

Remarks



Southwest approach railing-Collision damage that has created a pocket in the railing.

Date Reported: 01/30/2018
Priority: G - General/ Preventive maintenance
Type of Work: None
Status: Monitor
Component:

Deficiency Description

Deck - The gutters on the right and left sides of span #1 have moderate dirt and debris accumulation near North bridge end.

Remarks



The gutters in span #1 have dirt and debris accumulation near North bridge end.



Bridge #06995(Routine)

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Inspection Comments

Structure is logged North to South and is accessible with a large extension ladder.
