



Latitude:35.70649, Longitude:-94.48276

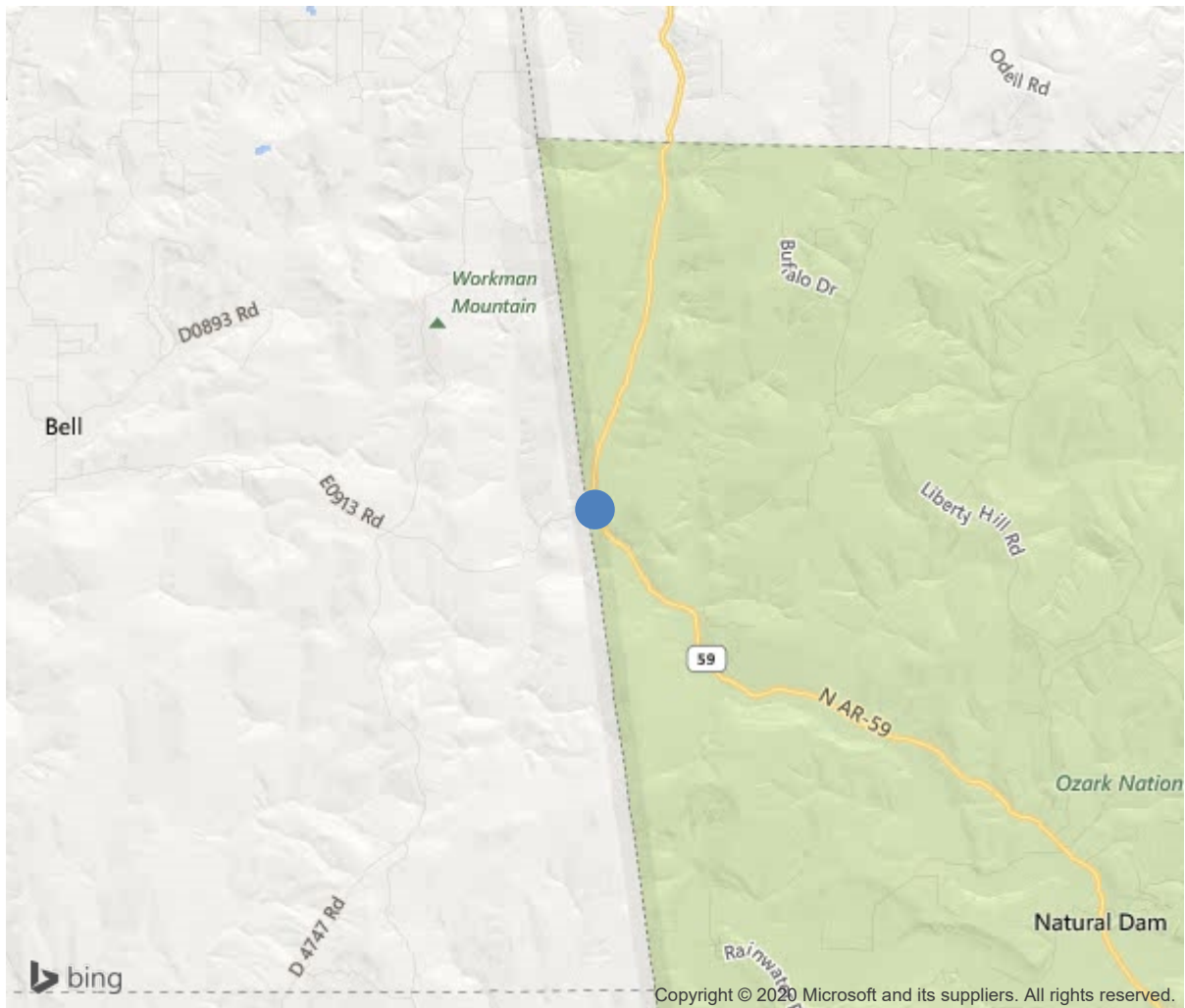
Route:59 Section:05 Log:3.729

Arnold Road ID:17x59x5xA, Arnold Log mile:3.762

District 04, Crawford County

Owner: 1-State Highway Agency

21.6 MI N I 40



35.70649, -94.48276



Bridge #02814(Routine)

SH 59-Crawford Co. over Mountain Fork Creek

Location: 21.6 MI N I 40

Team Lead: James Barte Inspection Date: March 13, 2017

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	02814
(5) Inventory Route	59
(2) Highway Agency District	04
(3) County Code	33-Crawford County, Arkansas
(4) Place Code	0
(6) Features Intersected	Mountain Fork Creek
(7) Facility Carried	SH 59-Crawford Co.
(9) Location	21.6 MI N I 40
(11) Mile Point	3.729 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000059050
(16) Latitude	35.70649
(17) Longitude	-94.48276
(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	6
(46) No. of Approach Spans	0
(107) Deck Structure Type	1-Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6-Bituminous
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1951
(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	1000
(30) Year of ADT	2018
(109) Truck ADT	17 %
(19) Bypass, Detour Length	40 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	18 ft
(49) Structure Length	108 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	22 ft
(52) Deck Width Out to Out	24 ft
(32) Approach Roadway Width (W/Shoulders)	27.9 ft
(33) Bridge Median	0-No median
(34) Skew	0 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	23.6 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 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			0-The inventory route is not part of
(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			5
(59) Superstructure			5
(60) Substructure			5
(61) Channel & Channel Protection			5
(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			41
(65) Inventory Rating Method			1-Load Factor(LF)
(66) Inventory Rating			
Type			6
Rating			25
(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			N
(71) Waterway Adequacy			7
(72) Approach Roadway Alignment			7
(36) Traffic Safety Features			0011
A) Bridge Railings			0-Inspected feature does not meet cur
B) Transitions			0-Inspected feature does not meet cur
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			Replacement of bridge or other
(76) Length of Structure Improvement			135 ft
(94) Bridge Improvement Cost			\$ 0
(95) Roadway Improvement Cost			\$ 156
(96) Total Project Cost			\$ 472
(97) Year of Improvement Cost Estimate			2004
(114) Future ADT			1423
(115) Year of Future ADT			2028
INSPECTIONS			
(90) Inspection Date			201904
(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	51.7
STATUS (SD/FO/None)	Functionally Obsolete



**Bridge #02814(Routine)**  
**SH 59-Crawford Co. over Mountain Fork Creek**

**Location: 21.6 MI N I 40**

**Team Lead: James Barte, Inspection Date: March 13, 2017**

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
38	RC Slab	SF	2376	1641	401	334	0
1080	Delamination/Spall/Patched Area	SF	226	0	0	226	0
1090	Exposed Rebar	SF	1	0	1	0	0
1120	Efflorescence/Rust Staining	SF	108	0	0	108	0
1130	Cracking (RC and Other)	SF	400	0	400	0	0
510	Wearing Surfaces	SF	2376	2376	0	0	0
3220	Crack (Wearing Surface)	SF	0	0	0	0	0
(38)							
-Edges of deck and tops of curbs have soft and deteriorated concrete with heavy map cracking with exposed reinforcing steel. Exposed reinforcing steel in the curb has active corrosion with up to approximately 1/8" section loss. -Undersurface of deck has short duration longitudinal cracks with efflorescence. -Isolated spalls with exposed reinforcing steel along the drip groove. -Leaching is visible in isolated areas. -ACHM along both gutter lines sounds hollow when sounded with a range pole.							
205	Reinforced Concrete Column	EA	10	0	10	0	0
1080	Delamination/Spall/Patched Area	EA	6	0	6	0	0
1190	Abrasion/Wear (PSC/RC)	EA	4	0	4	0	0
(205)							
-Light abrasion at the base of columns with isolated shallow softball size spalls with no exposed reinforcing steel.							
215	Reinforced Concrete Abutment	LF	54	44	10	0	0
1120	Efflorescence/Rust Staining	LF	6	0	6	0	0
1130	Cracking (RC and Other)	LF	4	0	4	0	0
(215)							
-Bent 7 has map cracking with efflorescence in the exterior edges of the bent.							
234	Reinforced Concrete Pier Cap	LF	120	73	15	32	0
1080	Delamination/Spall/Patched Area	LF	8	0	0	8	0
1090	Exposed Rebar	LF	2	0	2	0	0
1120	Efflorescence/Rust Staining	LF	24	0	0	24	0
1130	Cracking (RC and Other)	LF	13	0	13	0	0
(234)							
-Intermediate bent caps have soft deteriorated concrete with heavy map cracking and efflorescence in the ends of the caps. -The Rt side of bent caps appear to have notably more deterioration than the Lt end of caps.							
333	Other Bridge Railing	LF	216	120	70	13	13
1080	Delamination/Spall/Patched Area	LF	13	0	0	0	13
1120	Efflorescence/Rust Staining	LF	50	0	50	0	0



**Team Lead:** James Barte, **Inspection Date:** March 13, 2017

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1130	Cracking (RC and Other)	LF	20	0	20	0	0
1220	Deterioration (Other)	LF	13	0	0	13	0
515	Steel Protective Coating	SF	432	0	432	0	0
3440	Effectiveness (Steel Protective Coatings)	SF	432	0	432	0	0
(333)							
-The base of most bridge rail posts have deteriorated concrete with heavy map cracking and efflorescence.							
-Spalled areas on bottom with exposed reinforcing steel with up to approximately 50% section loss.							



Undersurface of deck has short duration longitudinal cracks with efflorescence.



Intermediate bent caps have soft deteriorated concrete with heavy map cracking and efflorescence in the ends of the caps.





Edges of deck and tops of curbs have soft and deteriorated concrete with heavy map cracking with exposed reinforcing steel. Exposed reinforcing steel in the curb has active corrosion with up to 100% section loss.



- The base of most bridge rail posts have deteriorated concrete with heavy map cracking and efflorescence.
- Spalled areas on bottom with exposed reinforcing steel with up to approximately 50% section loss.





The asphalt surface of the deck has map cracking that is allowing water to seep through and cause deck deterioration that is visible on the undersurface.



Metal portions of the bridge railing has a rust coating.





Edges of deck and tops of curbs have soft and deteriorated concrete with heavy map cracking with exposed reinforcing steel.



Edges of deck and tops of curbs have soft and deteriorated concrete with heavy map cracking with exposed reinforcing steel.





Isolated spalls with exposed reinforcing steel along the drip groove.



The South approach roadway has an asphalt repair at the bridge end at appears to be holding at this inspection.





Edges of deck and tops of curbs have soft and deteriorated concrete with heavy map cracking with exposed reinforcing steel. Exposed reinforcing steel in the curb has active corrosion with up to 100% section loss.



North abutment embankment repair appears to be holding at this inspection.





Light abrasion at the base of columns with isolated shallow softball size spalls with no exposed reinforcing steel.



The base of most bridge rail posts have deteriorated concrete with heavy map cracking and efflorescence.





Bent 7 has map cracking with efflorescence in the exterior edges of the bent.



The left undersurface of Span 6 has a large spall with the exterior edge delaminated.





South abutment embankment repair appears to be holding at this inspection.



Edges of deck and tops of curbs have soft and deteriorated concrete with heavy map cracking with exposed reinforcing steel.





Spalled areas on bottom with exposed reinforcing steel with up to approximately 50% section loss.



The Rt side of bent caps appear to have notably more deterioration than the Lt end of caps.



Inventory 1 looking South.





**Bridge #02814**(Routine)

**SH 59-Crawford Co. over Mountain Fork Creek**

**Location: 21.6 MI N I 40**

**Team Lead:** James Barte **Inspection Date:** March 13, 2017

## **Maintenance Needs**



**Bridge #02814(Routine)**  
**SH 59-Crawford Co. over Mountain Fork Creek**

**Location: 21.6 MI N I 40**

**Team Lead: James Barte Inspection Date: March 13, 2017**

### **Inspection Comments**

03/13/2017JPB & SPC-Routine Inspection conducted on this date.

The Substructure rating (Item 60) has been raised to a "5" at this inspection due to repair work at both abutments and for channel realignment that has abated the erosion problems described in previous reports. This structure has a history of channel realignment and erosion of the embankments that are likely to reoccur during high water events.

06/21/2016 - EJW & RWF - Special Inspection conducted on this date at the request of Jason Hughey, District Construction Engineer.

- The structure had a large drift pile restricting the channel, currently the drift has been removed by state maintenance forces on 06/20/2016.
  - The embankment at Bent # 1 (North Abutment) is eroded to the back of the columns and abutment cap with the concrete columns partially exposed, no footings are exposed at this inspection.
  - Bent # 7 (South Abutment) has a large void under the abutment cap that extends approximately 3' under the approach roadway in the northbound lane. The void is approximately 6' long at this inspection. The concrete covered rip rap at Bent # 7 is fractured in several locations and displaced from apparent scouring at Bent # 7.
  - Bent # 3 Column # 1 has approximately 6" of the top edge on the Left side of the footing exposed but not undermined.
  - Bent # 4 Column # 1 top of footing is partially exposed in areas, no undermining.
  - Bent # 4 Column # 2 has up to 10" of the edge of the footing exposed, no apparent undermining.
  - Bents # 2, 5 & 6 column footings have cover.
  - A solid rock channel is exposed in numerous areas throughout the channel.
  - Maintenance forces have placed a asphalt wedge on the approach roadway at the south abutment in the past to control settlement adjacent to the bridge deck.
  - Substructure "NBI" condition rating has been lowered to a "4" at this inspection to reflect the erosion at the abutments. Inspectors may review and update the condition rating once the repairs are made.
  - Special Recurring Inspection for substructure rating less than 5 added this date on a 24 month frequency but scheduled for 12 months.
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