



Latitude:35.78936, Longitude:-90.17813

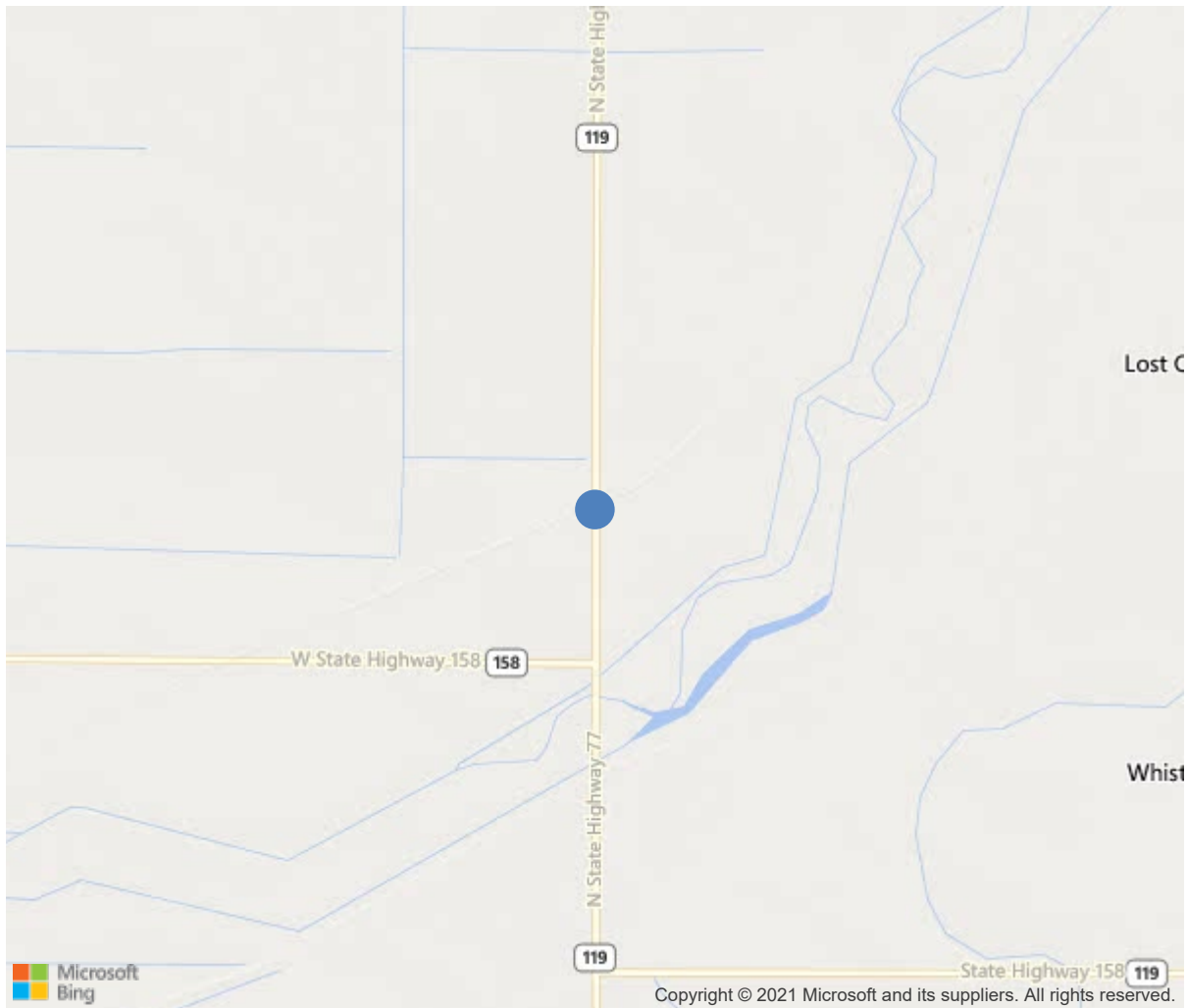
Route:77 Section:02 Log:5.97

Arnold Road ID:47x77x2xA, Arnold Log mile:5.418

District 10, Mississippi County

Owner: 1-State Highway Agency

.75 MI N JCT OF SH 158



35.78936, -90.17813



Bridge #02873(Routine)

SH 77-02- LM 5.97 over LITTLE RIVER

Location: .75 MI N JCT OF SH 158

Team Lead: Tim Myrick Inspection Date: October 23, 2019

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	02873
(5) Inventory Route	77
(2) Highway Agency District	10
(3) County Code	93-Mississippi County, Arkansa
(4) Place Code	0
(6) Features Intersected	LITTLE RIVER
(7) Facility Carried	SH 77-02- LM 5.97
(9) Location	.75 MI N JCT OF SH 158
(11) Mile Point	5.97 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.78936
(17) Longitude	-90.17813
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	32
Material	3-Steel
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	6-Bituminous
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1954
(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	1500
(30) Year of ADT	2014
(109) Truck ADT	1 %
(19) Bypass, Detour Length	13 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	40 ft
(49) Structure Length	122 ft
(50) Curb or Sidewalk Width	
Left	1 ft
Right	1 ft
(51) Bridge Roadway Width Curb to Curb	24 ft
(52) Deck Width Out to Out	28.8 ft
(32) Approach Roadway Width (W/Shoulders)	27.9 ft
(33) Bridge Median	0-No median
(34) Skew	20 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	25.3 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	5-None present but re-evaluation
(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	7-Rural Major Collector
(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	4
(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	10
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	3
Rating	6
(70) Bridge Posting	0-> 39.9% below
(41) Structure Open/Posted/Closed	P-Posted for load (may include o
APPRAISAL	
(67) Structural Evaluation	3
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	9
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0-Inspected feature does not meet cur
(36B) Transitions	0-Inspected feature does not meet cur
(36C) Approach Guardrail	0-Inspected feature does not meet cur
(36D) Approach Guardrail Ends	0-Inspected feature does not meet cur
(113) Scour Critical Bridges	5-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	1586
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			10/2019
(91) Frequency			24 Months
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection	Yes		11/2020
* 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.			



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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	3041	1622	751	668	0
1080	Delamination/Spall/Patched Area	SF	94	0	94	0	0
1090	Exposed Rebar	SF	252	0	0	252	0
1120	Efflorescence/Rust Staining	SF	416	0	0	416	0
1130	Cracking (RC and Other)	SF	507	0	507	0	0
1190	Abrasion/Wear (PSC/RC)	SF	150	0	150	0	0
510	Wearing Surfaces	SF	2880	2880	0	0	0
3220	Crack (Wearing Surface)	SF	0	0	0	0	0
107	Steel Open Girder/Beam	LF	600	199	150	251	0
1000	Corrosion	LF	401	0	150	251	0
515	Steel Protective Coating	SF	4523	0	3168	1266	89
3440	Effectiveness (Steel Protective Coatings)	SF	4523	0	3168	1266	89
215	Reinforced Concrete Abutment	LF	82	0	42	40	0
1130	Cracking (RC and Other)	LF	2	0	2	0	0
6000	Scour	LF	80	0	40	40	0
227	Reinforced Concrete Pile	EA	10	0	10	0	0
1190	Abrasion/Wear (PSC/RC)	EA	10	0	10	0	0
234	Reinforced Concrete Pier Cap	LF	53	32	17	4	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1090	Exposed Rebar	LF	4	0	0	4	0
1130	Cracking (RC and Other)	LF	15	0	15	0	0
304	Open Expansion Joint	LF	110	110	0	0	0
311	Movable Bearing	EA	15	0	0	15	0
1000	Corrosion	EA	14	0	0	14	0
1020	Connection	EA	1	0	0	1	0
313	Fixed Bearing	EA	15	0	0	15	0
1000	Corrosion	EA	12	0	0	12	0
1020	Connection	EA	3	0	0	3	0
330	Metal Bridge Railing	LF	245	245	0	0	0
515	Steel Protective Coating	SF	784	784	0	0	0





s3 b4 g5



Inspection Comments

Deck Notes

Wearing surface has been roto milled off and replaced under job # 100838

Notes pertaining to deck deficiencies not visible due to new wearing surface have been left from previous inspection.

Concrete deck with asphalt overlay has 3' x 10' area of heavy cracking and impending spall in left lane of span 1.

Span 1 left
gutter line has a 2' x 1' spall without rebar exposed and a 2.5' x 28' x 2" deep spall with exposed rebar with section loss.

Span 1 right
gutter line has a 1' x 12' x 1" deep spall without rebar exposed and has a 2.5' x 19' x 2" deep and a 2.5' x 8' x 2" deep and a 2' diameter x 2" deep spall with exposed rebar.

Span 3 left
gutter line has a 20' x 1' x 2" deep spall with exposed rebar.

Span 3 right
gutter line has a 2' diameter and a 1.5" diameter spall 2" deep with exposed rebar.

Concrete soffit has some minor abrasion. Concrete soffit span 1 between girders 4 & 5 has 4' wide x 20' long x 2" deep shelled out bottom of deck with exposed rebar.

Span 1 left
overhang has an area 1.5' wide x 4' long x 2" deep shelled out area with exposed rebar, 30% section loss to rebar.

Span 3 left
overhang has a 1' x 1.5' x 2" deep shelled out area with exposed rebar.

Bottom of deck has numerous cracks with efflorescence.

Steel open joints are rusted with some section loss, not visible due to overlay.

Superstructure Notes

Ends of majority of girders spans 1, 2, & 3 over bents 2 & 3 are rusted with up to 1/4" section loss to web and bottom flange 2.5' on ends.

Exterior girders have heavy rust especially under drain opening.

Majority of span 1 girders have up to 5/8" section loss to girders.

Span 1 bent 1 girders 2, 3, & 4 bearings have anchor bolts & nuts rusted off.



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Span 1 bent 1 girder 1 has a 3" hole in web at haunch.

Span 1 bent 1 girder 2 has a 4 x 1/2" hole in web at haunch.

Span 1 bent 1 girder 3 has 6" x 1" hole in web near haunch.

Span 1 bent 1 girder 4 has 1" diameter hole in web near haunch.

Span 1 bent 1 girder 5 has 5" diameter hole in web near haunch.

Span 1 girder 5 at the mid span of girder has section loss to web and flanges.

Span 1 bent 2 girder 1 has been repaired. Some section loss up to 1/4" bottom flange of repair.

Span 1 bent 2 girder 2 has been repaired.

Span 1 bent 2 girder 3 has 6" x 1" hole rusted thru web at haunch.

Span 1 bent 2 girders 3 & 4 section loss at bearing bottom flange.

Spans 1 & 2 bent 2 girder 5 has 1/8" section loss to bottom flange & 1' of web on end of girder.

Span 2 bent 2 girder 1 rusted with 5" x 5" hole rusted thru web at haunch.

Span 2 bent 2 girder 3 rusted with 4" x 1" hole rusted thru web at haunch and a 2" x 2" hole in left bottom flange.

Span 2 bent 2 girder 4 has an 8" x 1" hole in web at haunch.

Span 2 bent 3 girder 1 has 10" x 8" hole rusted thru web at haunch.

Span 2 bent 3 girder 2 has 2" x 2" hole rusted thru web at haunch.

Span 2 bent 3 girder 3 has 6" x 2" hole rusted thru web at haunch and 1/4" section loss to bottom flange 6' long from bearing.

Span 2 bent 3 girder 4 has a 1" x 3" hole in end of web at haunch and section loss to bottom flange at bearing area.

Span 2 bent 3 girder 5 has 12" x 3" hole rusted thru web at haunch and 1/8" section loss to web at bottom flange.

Span 3 bent 3 girder 1 bearing has 1 anchor bolt and nut missing.

Span 3 bent 3 girder 2 has 6" x 1" hole rusted thru web at haunch.

Span 3 bent 3 girder 3 has 6" x 1" hole rusted thru web at haunch.



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Span 3 bent 3 girder 4 has 6" x 1" hole rusted thru web at haunch.

Span 3 bent 3 girder 5 has a 10" x 7" hole rusted thru web at haunch.

Span 3 girder 5 at the mid span of girder has section loss to web and flanges with heavy section loss to bottom flanges.

Span 3 bent 4 girder 1 has 10" x 3" hole in web at haunch, with distortion to web.

Span 3 bent 4 girder 3 has 5" x 1" hole in web at haunch, moving under traffic, and the bearing has heavy rust with areas of 50% section loss.

Span 3 bent 4 girder 4 has a 1" diameter hole in web at haunch.

Span 3 bent 4 girder 5 has an 11" x 1" hole in web at haunch.

Majority of span 3 girders have up to 1/8" section loss to girders.

Majority of bearings are rusted with some section loss.

Substructure Notes

Concrete piling have minor abrasion.

Heavy erosion to bent 1, up to 3' deep x 2.5' back under abutments due to roadway runoff.

Bent 1 abutment cap has 3' cracks.

Bent 2 cap has some abrasion wear & cracking.

Bent 3 cap Left end has a 2' x 6" spall with no rebar exposed and a 4' x 1.5' x 4" deep spall face of cap under girder 4 with rebar exposed and some cracking with impending spalls. (3' cracks, 10' abrasion wear).

Heavy erosion to bent 4, up to 2' deep x 2' back under abutments due to roadway runoff.

Brush on channel banks.