



Latitude:36.01972, Longitude:-91.33614

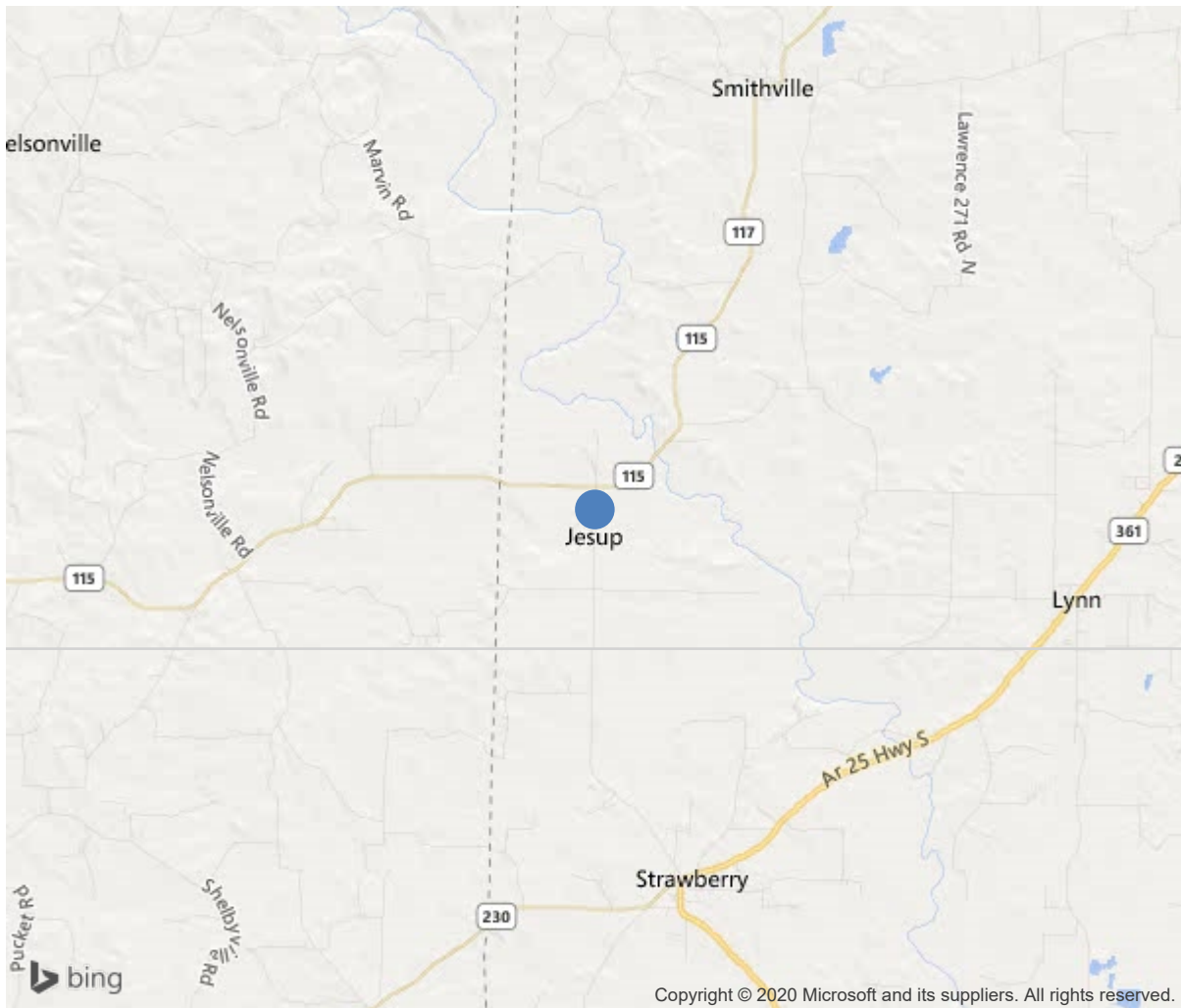
Route:117 Section:01 Log:3.99

Arnold Road ID:38x117x1xA, Arnold Log mile:3.932

District 10, Lawrence County

Owner: 1-State Highway Agency

.22 MI S JCT SH 115 & 117



36.01972, -91.33614



Bridge #03468(Routine)

SH 117-01- LM 3.99 over BIG CREEK

Location: .22 MI S JCT SH 115 & 117

Team Lead: James Adams Inspection Date: October 16, 2019

| IDENTIFICATION                            |  |
|---|--|
| (1) State Names                           | Arkansas                                   |
| (8) Structure Number                      | 03468                                      |
| (5) Inventory Route                       | 117  |
| (2) Highway Agency District               | 10   |
| (3) County Code                           | 75-Lawrence County, Arkansas               |
| (4) Place Code                            | 0  |
| (6) Features Intersected                  | BIG CREEK                                  |
| (7) Facility Carried                      | SH 117-01- LM 3.99                         |
| (9) Location                              | .22 MI S JCT SH 115 & 117                  |
| (11) Mile Point                           | 3.99 mi                                    |
| (12) Base Highway Network                 | No   |
| (13) LRS Inventory Rte & Subrte           | 0000000000                                 |
| (16) Latitude                             | 36.01972                                   |
| (17) Longitude                            | -91.33614                                  |
| (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            | 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                   | 1-Monolithic Concrete (concurrently placed |
| Type of Membrane                          | 0-None                                     |
| Type of Deck Protection                   | 0-None                                     |
| AGE AND SERVICE                           |  |
| (27) Year Built                           | 1962                                       |
| (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                | 1100                                       |
| (30) Year of ADT                          | 2018                                       |
| (109) Truck ADT                           | 1 %  |
| (19) Bypass, Detour Length                | 22 mi                                      |
| GEOMETRIC DATA                            |  |
| (48) Length of Maximum Span               | 45 ft                                      |
| (49) Structure Length                     | 272 ft                                     |
| (50) Curb or Sidewalk Width               |  |
| Left                                      | 1.5 ft                                     |
| Right                                     | 1.5 ft                                     |
| (51) Bridge Roadway Width Curb to Curb    | 24 ft                                      |
| (52) Deck Width Out to Out                | 28.5 ft                                    |
| (32) Approach Roadway Width (W/Shoulders) | 29.9 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    | 24 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                    | 5                                      |
| (60) Substructure                      | 5                                      |
| (61) Channel & Channel Protection      | 6                                      |
| (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                                 | 49                                     |
| (65) Inventory Rating Method           | 1-Load Factor(LF)                      |
| (66) Inventory Rating                  |  |
| Type                                   | 6                                      |
| Rating                                 | 26                                     |
| (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                     | 4                                      |
| (69) Clearances, Vertical/Horizontal   | N                                      |
| (71) Waterway Adequacy                 | 9                                      |
| (72) Approach Roadway Alignment        | 8                                      |
| (36) Traffic Safety Features           | 0000                                   |
| A) Bridge Railings                     | 0-Inspected feature does not meet cur  |
| B) Transitions                         | 0-Inspected feature does not meet cur  |
| C) Approach Guardrail                  | 0-Inspected feature does not meet cur  |
| D) 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                       | 737                                    |
| (115) Year of Future ADT               | 2028                                   |
| INSPECTIONS                            |  |
| (90) Inspection Date                   | 201910                                 |
| (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  | 57.3          |
| STATUS (SD/FO/None) | Not Deficient |



Bridge #03468(Routine)

SH 117-01- LM 3.99 over BIG CREEK

Location: .22 MI S JCT SH 115 & 117

Team Lead: Cory Shaw, Inspection Date: October 16, 2019

| ELEM | DESCRIPTION                               | UNITS | TOTAL | CS1  | CS2  | CS3  | CS4  |
|------|---|-------|-------|------|------|------|------|
| 12   | Reinforced Concrete Deck                  | SF    | 6840  | 2822 | 0    | 4018 | 0    |
| 1080 | Delamination/Spall/Patched Area           | SF    | 1875  | 0    | 0    | 1875 | 0    |
| 1090 | Exposed Rebar                             | SF    | 5     | 0    | 0    | 5    | 0    |
| 1120 | Efflorescence/Rust Staining               | SF    | 252   | 0    | 0    | 252  | 0    |
| 1130 | Cracking (RC and Other)                   | SF    | 1886  | 0    | 0    | 1886 | 0    |
| 107  | Steel Open Girder/Beam                    | LF    | 1350  | 358  | 810  | 182  | 0    |
| 1000 | Corrosion                                 | LF    | 992   | 0    | 810  | 182  | 0    |
| 515  | Steel Protective Coating                  | SF    | 8644  | 0    | 5607 | 853  | 2184 |
| 3440 | Effectiveness (Steel Protective Coatings) | SF    | 8644  | 0    | 5607 | 853  | 2184 |
| 205  | Reinforced Concrete Column                | EA    | 6     | 2    | 0    | 4    | 0    |
| 1080 | Delamination/Spall/Patched Area           | EA    | 2     | 0    | 0    | 2    | 0    |
| 1090 | Exposed Rebar                             | EA    | 2     | 0    | 0    | 2    | 0    |
| 215  | Reinforced Concrete Abutment              | LF    | 67    | 67   | 0    | 0    | 0    |
| 225  | Steel Pile                                | EA    | 8     | 0    | 0    | 2    | 6    |
| 1000 | Corrosion                                 | EA    | 8     | 0    | 0    | 2    | 6    |
| 515  | Steel Protective Coating                  | SF    | 373   | 0    | 0    | 0    | 373  |
| 3440 | Effectiveness (Steel Protective Coatings) | SF    | 373   | 0    | 0    | 0    | 373  |
| 234  | Reinforced Concrete Pier Cap              | LF    | 128   | 99   | 16   | 13   | 0    |
| 1080 | Delamination/Spall/Patched Area           | LF    | 3     | 0    | 0    | 3    | 0    |
| 1090 | Exposed Rebar                             | LF    | 6     | 0    | 0    | 6    | 0    |
| 1120 | Efflorescence/Rust Staining               | LF    | 3     | 0    | 0    | 3    | 0    |
| 1130 | Cracking (RC and Other)                   | LF    | 17    | 0    | 16   | 1    | 0    |
| 305  | Assembly Joint without Seal               | LF    | 168   | 78   | 24   | 66   | 0    |
| 2360 | Adjacent Deck or Header                   | LF    | 90    | 0    | 24   | 66   | 0    |
| 311  | Movable Bearing                           | EA    | 30    | 0    | 0    | 30   | 0    |
| 1000 | Corrosion                                 | EA    | 30    | 0    | 0    | 30   | 0    |
| 313  | Fixed Bearing                             | EA    | 30    | 0    | 0    | 30   | 0    |
| 1000 | Corrosion                                 | EA    | 30    | 0    | 0    | 30   | 0    |
| 330  | Metal Bridge Railing                      | LF    | 544   | 0    | 544  | 0    | 0    |
| 1000 | Corrosion                                 | LF    | 544   | 0    | 544  | 0    | 0    |
| 515  | Steel Protective Coating                  | SF    | 1850  | 1294 | 0    | 556  | 0    |
| 3440 | Effectiveness (Steel Protective Coatings) | SF    | 556   | 0    | 0    | 556  | 0    |





Span 5 bent 5 pile 1 2019



Span 2 soffit





Span 5 bent 6 pile 4 2019



Deck





Span 6 bent 6 pile 2 2019



Span 6 bent 6 girder 2 2019





Span 6 bent 6 pile 3 2019



Roadway





Bent 5 pile 3 2019



Bent 5 pile 4 2019



**Bridge #03468**(Routine)  
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**Team Lead:** James Adams **Inspection Date:** October 16, 2019

## **Maintenance Needs**





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### Deck Notes

Deck has several unsealed transverse cracks, delaminated areas, and spalls with some exposed rebar. Deck has several cracked and delaminated areas along edge of joint slide plates.

Gutters have several areas of abrasion and delamination.

Soffit has several cracks with efflorescence.

Span 5 bay 3 near bent 6 has a 4 ft. x 6 ft. area of map cracking with efflorescence in soffit.

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### Superstructure Notes

Girders have areas of rust with initial to measurable section loss along bottom flange and bottom of web. Ends of most girders have section loss at concrete haunches, diaphragm connections and some along bottom of web and bottom flange. Span 1 bent 1 girder 2 has some section loss at bottom of web and bottom flange near bearing. Span 1 bent 2 girder 2 has section on bottom flange. Right bottom flange near bearing has heavy section loss. Span 2 bent 2 girder 2 has a 2 in. x 1 in. hole in web below haunch. Span 2 bent 2 girder 4 has a 1 in. diameter hole in web below haunch. Span 2 bent 2 girder 5 bottom flange has 2 ft. of heavy section loss at bearing & utility connection. Span 3 girders have section loss along bottom of web up to 2 in. high throughout span. Span 3 bent 3 girder 2 has a 3 in. x 1 in. hole in web below haunch. Span 3 bent 3 girder 3 has a 3 in. x 1 in. hole in web below haunch. Span 3 girder 5 has section loss to bottom flange approx. 10 ft. ahead of bent 3 at utility connection. Span 4 bent 4 girder 2 has a 5 in. x 2 in. hole in web below haunch & a 1 in. diameter hole in web at diaphragm connection. Span 4 bent 4 girder 3 has a 3.5 in. x 1 in. hole in web below haunch. Span 4 bent 4 girder 4 has a 4 in. x 1 in. hole in web below haunch, and a 1 in. hole in web at diaphragm connection. Span 4 girder 5 at bent 5 has heavy section loss to bottom flange at anchor bolt. Span 5 bent 5 girder 2 has section loss for 8 ft. on bottom flange. Span 5 bent 5 girder 3 has a 4 in. x 2 in. hole in web below haunch. Span 5 bent 5 girder 4 has a 3 1/2 in. x 1 in. hole in web below haunch. Span 6 bent 6 girder 2 has a 4 in. x 1.5 in. hole in web below haunch, and a 3 in. x 1 in. hole at diaphragm connection. See 2019 photo. Span 6 bent 6 girder 3 has a 2 in. x 1 in. hole in web below haunch. Span 6 bent 6 bearing 4 is floating (up to 1/8 in. gap.) Span 6 bent 7 girder 3 has 2 ft. of section loss along bottom of web and bottom flange. Bottom flange has heavy section loss on left side. Bearings have pack rust and section loss. Anchor bolts and nuts have rust with section loss, some have complete section loss. Span 2 bent 2 bearing 5 is missing 1 anchor bolt nut. Span 2 bent 3 bearings 1 - 4 are missing 2 anchor bolt nuts. Span 3 bent 4 bearings 2 - 4 are missing 2 anchor bolt nuts. Span 3 bent 4 bearing 5 is missing 1 anchor bolt. Span 6 bent 6 bearing 1



is missing 1 anchor bolt nut.

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Span 6 bent 7 bearing 1  
is missing 1 anchor bolt nut.

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### **Substructure Notes**



**Bridge #03468**(Routine)

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**Team Lead:** James Adams **Inspection Date:** October 16, 2019

Bent 2 cap span 1 side  
has 3 ft. of horizontal cracks. Bent 2 column 1 has 4  
small spalls with exposed rebar.

Bent 3 cap has a small  
spall with exposed rebar on right end.

Bent 3 columns 1 and 2  
have a few small cracked & delaminated areas.

Bent 4 cap has 3 ft. of cracks  
and minor abrasion. Right end has 1 ft. of cracking with rust stains.

Bent 4 column 1 has a 1  
ft. spall with exposed rebar.

Bent 5 cap has a 1/8 in.  
vertical crack with efflorescence over pile 3. Cap has 5 ft. of exposed rebar.  
Left end has 1 ft. of cracking & delamination.

Bent 6 cap has 8ft. of  
cracks and 10 ft. of abrasion.

Steel H pile at bents 5  
and 6 are rust covered. Piles have heavy section loss at bottom of cap. Several  
have holes rusted through flange.

Bent 5 pile 1 has a 5.5  
in. x 1 in. hole rusted through flange. See 2019 photo.

Bent 5 pile 3 has a 5.5  
in. x 1 in. hole rusted through flange on span 4 side, 1 in. on span 5 side. See 2019 photo.

Bent 5 pile 4 has a 3  
in. x 1.5 in. hole in flange on span 4 side, and a 5 in. x 2 in. hole in flange  
on span 5 side. See  
2019 photo.

Bent 6 pile 2 has a 3.5  
in. x 1 in. hole in left flange on span 6 side, and a 2 in. diameter hole at  
edge of right flange on span 6 side. See 2019 photo.

Bent 6 pile 3 has a 1  
in. diameter hole at each edge of flange on span 6 side. See 2019 photo.

Bent 6  
pile 4 has a 5 in. x 1 in. hole in flange on span 5 side & a 1/2 in. diameter  
hole in left flange on span 6 side. See 2019 photo.