



Latitude:34.84441, Longitude:-92.12209

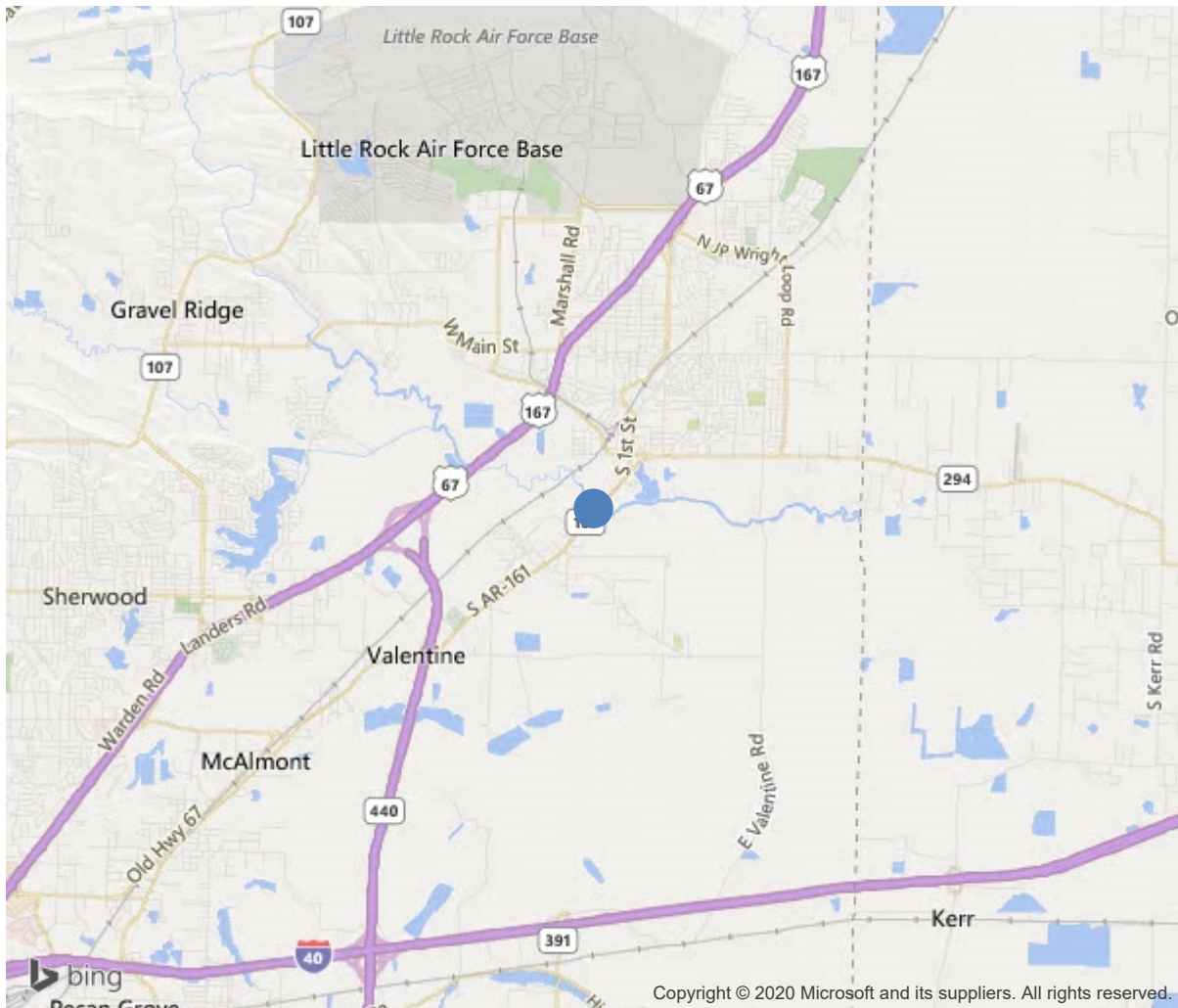
Route:161 Section:03 Log:3.45

Arnold Road ID:60x161x3xA, Arnold Log mile:3.441

District 06, Pulaski County

Owner: 1-State Highway Agency

7.77 MI N OF SH 70(I-I)



34.84441, -92.12209



Bridge #02913(Routine)

SH 161 Log 3.45 over BAYOU METO

Location: 7.77 MI N OF SH 70(I-I)

Team Lead: Shane Byrd Inspection Date: July 24, 2019

| IDENTIFICATION | |
|---|--|
| (1) State Names | Arkansas |
| (8) Structure Number | 02913 |
| (5) Inventory Route | 161 |
| (2) Highway Agency District | 06 |
| (3) County Code | 119-Pulaski County, Arkansas |
| (4) Place Code | 0 |
| (6) Features Intersected | BAYOU METO |
| (7) Facility Carried | SH 161 Log 3.45 |
| (9) Location | 7.77 MI N OF SH 70(I-I) |
| (11) Mile Point | 3.45 mi |
| (12) Base Highway Network | Yes |
| (13) LRS Inventory Rte & Subrte | 0000161030 |
| (16) Latitude | 34.84441 |
| (17) Longitude | -92.12209 |
| (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 | 32 |
| Material | 3-Steel |
| Type | 2-Stringer/Multi-beam or girder |
| (45) No. of Spans in Main Unit | 1 |
| (46) No. of Approach Spans | 4 |
| (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 | 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 | 12000 |
| (30) Year of ADT | 2018 |
| (109) Truck ADT | 2 % |
| (19) Bypass, Detour Length | 2 mi |
| GEOMETRIC DATA | |
| (48) Length of Maximum Span | 38 ft |
| (49) Structure Length | 165 ft |
| (50) Curb or Sidewalk Width | |
| Left | 1.6 ft |
| Right | 1.6 ft |
| (51) Bridge Roadway Width Curb to Curb | 25.9 ft |
| (52) Deck Width Out to Out | 31.8 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 | 29.9 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 | | 16-Urban 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 | | | 6 |
| (59) Superstructure | | | 5 |
| (60) Substructure | | | 5 |
| (61) Channel & Channel Protection | | | 7 |
| (62) Culverts | | | N |
| 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 | | | 48 |
| (65) Inventory Rating Method | | 1-Load Factor(LF) | |
| (66) Inventory Rating | | | |
| Type | | | 1 |
| Rating | | | 29 |
| (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 | | | 2 |
| (69) Clearances, Vertical/Horizontal | | | N |
| (71) Waterway Adequacy | | | 7 |
| (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 | | Replacement of bridge or other | |
| (76) Length of Structure Improvement | | | 195 ft |
| (94) Bridge Improvement Cost | | | \$ 0 |
| (95) Roadway Improvement Cost | | | \$ 341 |
| (96) Total Project Cost | | | \$ 1000 |
| (97) Year of Improvement Cost Estimate | | | 2002 |
| (114) Future ADT | | | 15554 |
| (115) Year of Future ADT | | | 2028 |
| INSPECTIONS | | | |
| (90) Inspection Date | | | 201907 |
| (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 | 60.8 |
| STATUS (SD/FO/None) | Functionally Obsolete |



Bridge #02913(Routine)

SH 161 Log 3.45 over BAYOU METO

Location: 7.77 MI N OF SH 70(I-I)

Team Lead: Shane Byrd, Inspection Date: July 24, 2019

| ELEM | DESCRIPTION | UNITS | TOTAL | CS1 | CS2 | CS3 | CS4 |
|--|---|-------|-------|-----|------|-----|-----|
| 12 | Reinforced Concrete Deck | SF | 5192 | 0 | 5192 | 0 | 0 |
| 1080 | Delamination/Spall/Patched Area | SF | 30 | 0 | 30 | 0 | 0 |
| 1130 | Cracking (RC and Other) | SF | 3182 | 0 | 3182 | 0 | 0 |
| 1190 | Abrasion/Wear (PSC/RC) | SF | 1980 | 0 | 1980 | 0 | 0 |
| (12) | | | | | | | |
| Spans 2&4 have areas of scaling with some small delaminations. All spans have transverse cracks with heavy map cracking. All spans have traffic abrasion. Spans 3 and 4 have small spalls. Span 5, 2 ft delam soffit. Spans 3 and 4, exposed rebar on overhangs | | | | | | | |
| 107 | Steel Open Girder/Beam | LF | 813 | 685 | 78 | 50 | 0 |
| 1000 | Corrosion | LF | 126 | 0 | 76 | 50 | 0 |
| 7000 | Damage | LF | 2 | 0 | 2 | 0 | 0 |
| 515 | Steel Protective Coating | SF | 4112 | 0 | 3112 | 748 | 252 |
| 3410 | Chalking (Steel Protective Coatings) | SF | 2912 | 0 | 2912 | 0 | 0 |
| 3420 | Peeling/Bubbling/Cracking | SF | 200 | 0 | 200 | 0 | 0 |
| 3440 | Effectiveness (Steel Protective Coatings) | SF | 1000 | 0 | 0 | 748 | 252 |
| (107) | | | | | | | |
| All of the beams are/ were re-used from another bridge. All of the beams have bolt holes in the bottom flange ahead of the bearings. All of the beams have active rust with pitting to 3/16 to 3/8" inch deep on the bottom flanges at bearing area. Beams 2&3 of spans 2&4 have had some section loss repairs to the bottom flange in the past, these repair have flaking rust on the bottom flange repairs. See photo. Span 1, beams 1&4 have dents in the bottom flange. | | | | | | | |
| 205 | Reinforced Concrete Column | EA | 2 | 0 | 0 | 2 | 0 |
| 1090 | Exposed Rebar | EA | 1 | 0 | 0 | 1 | 0 |
| 1190 | Abrasion/Wear (PSC/RC) | EA | 1 | 0 | 0 | 1 | 0 |
| (205) | | | | | | | |
| Bent 3 column 1 spall with exposed rebar. Bent 3 column 2 has severe abrasion at bottom of column. | | | | | | | |
| 210 | Reinforced Concrete Pier Wall | LF | 17 | 0 | 17 | 0 | 0 |
| 1190 | Abrasion/Wear (PSC/RC) | LF | 17 | 0 | 17 | 0 | 0 |
| 215 | Reinforced Concrete Abutment | LF | 80 | 70 | 7 | 3 | 0 |
| 1130 | Cracking (RC and Other) | LF | 10 | 0 | 7 | 3 | 0 |
| (215) | | | | | | | |
| Vertical cracks in bents 1 and 6 up to 0.060" | | | | | | | |
| 227 | Reinforced Concrete Pile | EA | 12 | 0 | 12 | 0 | 0 |

Team Lead: Shane Byrd, **Inspection Date:** July 24, 2019

| ELEM | DESCRIPTION | UNITS | TOTAL | CS1 | CS2 | CS3 | CS4 |
|--|---------------------------------|-------|-------|-----|-----|-----|-----|
| 1190 (227) | Abrasion/Wear (PSC/RC) | EA | 12 | 0 | 12 | 0 | 0 |
| The pile at bents 2,4&5 have abrasion up from the channel bottom 4 to 6 feet tall. | | | | | | | |
| 234 | Reinforced Concrete Pier Cap | LF | 106 | 87 | 4 | 15 | 0 |
| 1080 | Delamination/Spall/Patched Area | LF | 3 | 0 | 0 | 3 | 0 |
| 1090 (234) | Exposed Rebar | LF | 16 | 0 | 4 | 12 | 0 |
| Bent 2 has Spalls with exposed rebar. Photo linked. Bent 4 cap back spalls with exposed rebar. Bent 5 has Spalls with exposed rebar on left end. Bent 5 spall with exposed rebar bottom of cap between columns 2 & 3. | | | | | | | |
| 304 | Open Expansion Joint | LF | 189 | 189 | 0 | 0 | 0 |
| 311 | Movable Bearing | EA | 25 | 0 | 0 | 25 | 0 |
| 1000 (311) | Corrosion | EA | 25 | 0 | 0 | 25 | 0 |
| All bearings have active rust with pitting and layered rust due to open joints. | | | | | | | |
| 313 | Fixed Bearing | EA | 25 | 0 | 0 | 25 | 0 |
| 1000 (313) | Corrosion | EA | 25 | 0 | 0 | 25 | 0 |
| All bearings have active rust with pitting and layered rust due to open joints. | | | | | | | |
| 330 | Metal Bridge Railing | LF | 330 | 0 | 0 | 330 | 0 |
| 1000 (330) | Corrosion | LF | 330 | 0 | 0 | 330 | 0 |
| All of the rail has active rust with pitting on all surfaces. | | | | | | | |



Deck overview.



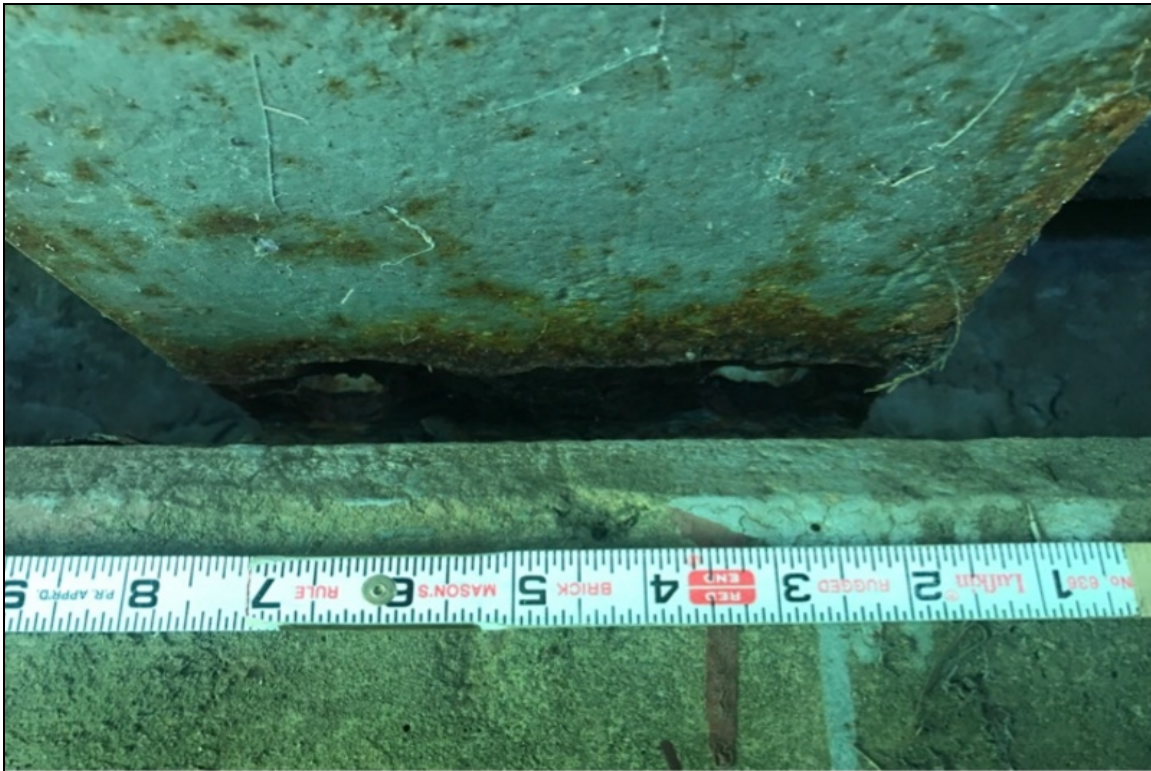
Bent 2 left end of cap spall with 100% section loss to hoop bars.



Span 5 looking back soffit overview.



Abutment 1 vertical cracks up to 0.060"



Bent 6 beam 4 deep pitting up to 3/8" on bottom flange at bearing area.



Span 4 has spall in the deck.



Bent 3 span 2 beam 3 section loss repair has laminated rust at bottom flange. Common beam 2 this location.



Bent 1 joint seal missing.



Span 2 has spall in the deck.



Bent 3 column 1 has spall with exposed rebar.



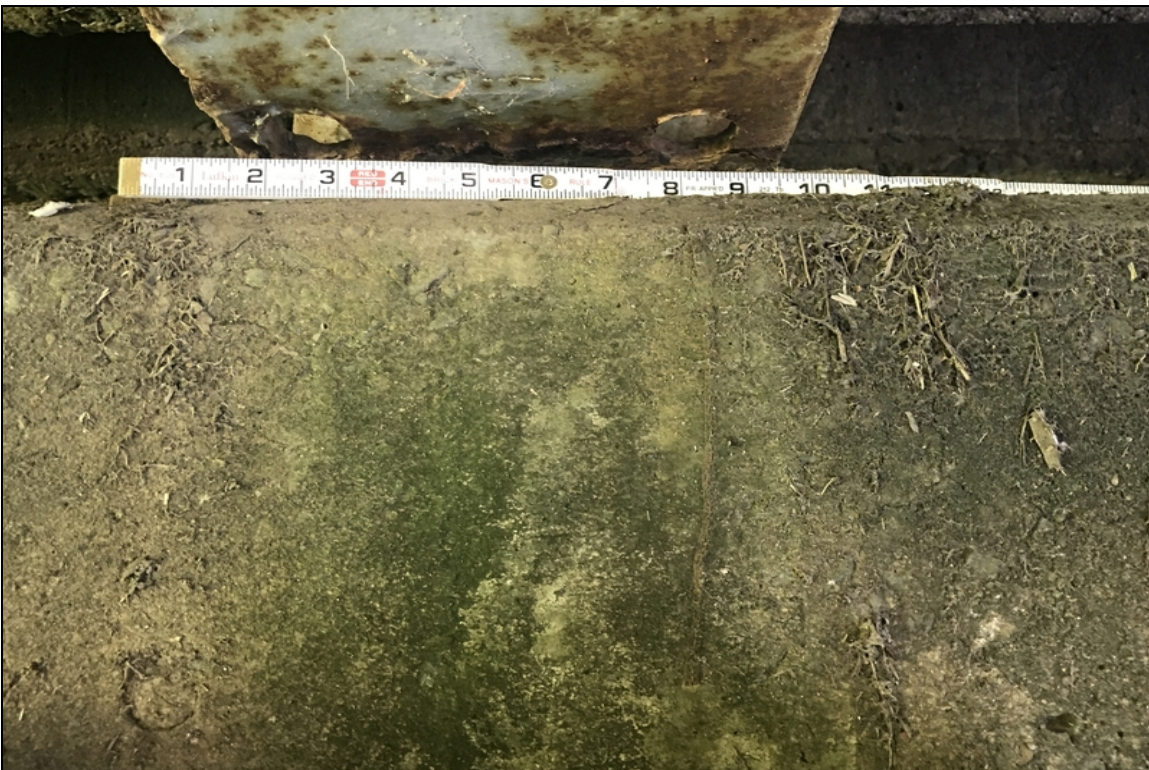
Bent 1 beam 3 deep pitting up to 3/8" on bottom flange at bearing area.



Bent 2 cap right end above pile 4 has spall with exposed rebar.



Bent 3 column 2 severe abrasion at bottom.



Bent 2 span 2 beam 3 deep pitting up to 3/16" to bottom flange at bearing.



Approach Southbound.



Span 2 has large unsealed transverse cracks in deck.



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Maintenance Needs



Bridge #02913(Routine)

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Location: 7.77 MI N OF SH 70(I-I)

Team Lead: Shane Byrd **Inspection Date:** July 24, 2019

Inspection Comments

AHTD Job 6460, 8393 for layout.

Logged north to south.

24' ladder needed , during dry periods you can drive under bridge on the northeast corner.
