



Latitude:36.15223, Longitude:-93.49859

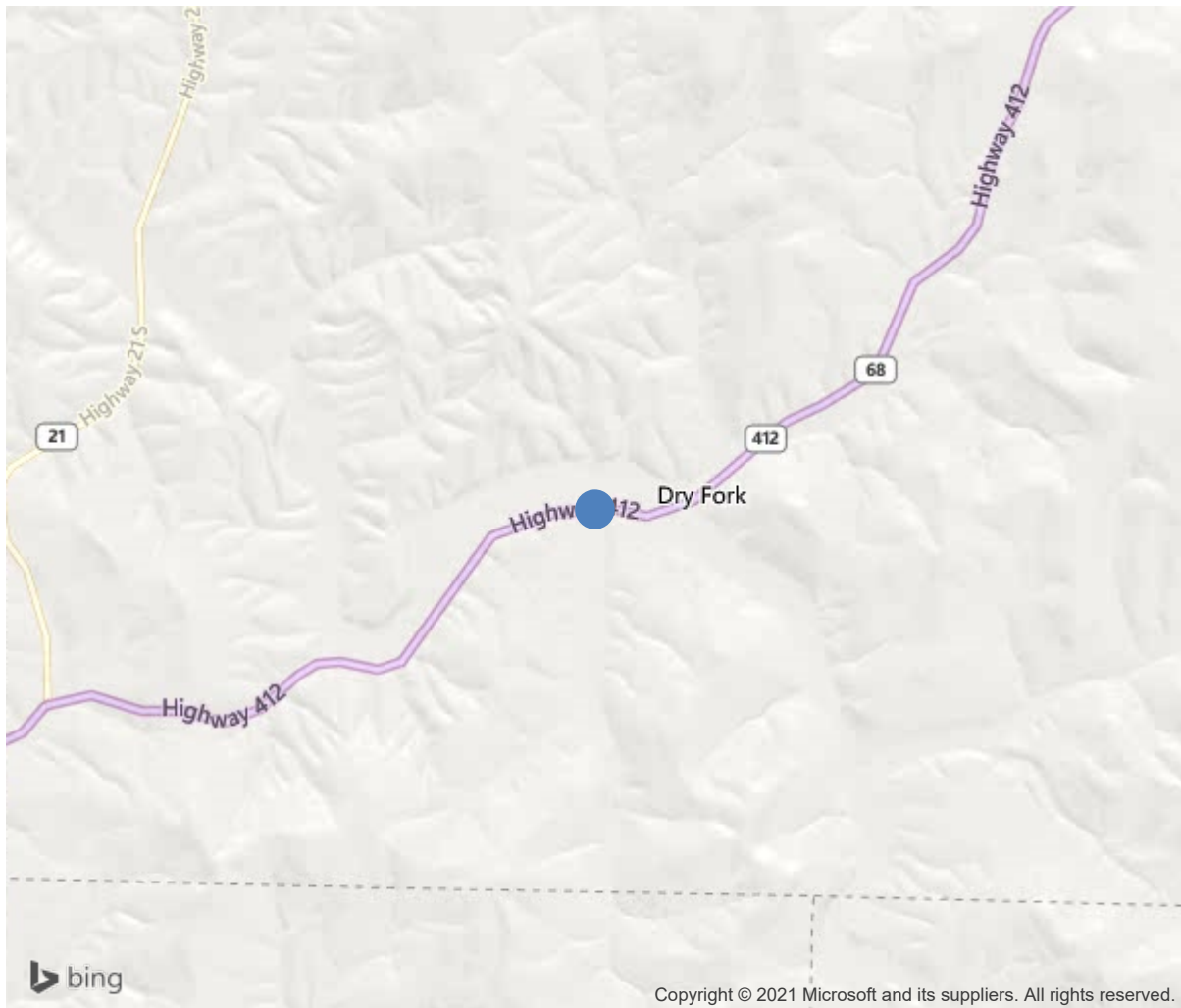
Route:412 Section:05 Log:3.48

Arnold Road ID:8x412x5xA, Arnold Log mile:3.475

District 09, Carroll County

Owner: 1-State Highway Agency

3.51 MI NE MADISON CO LI



36.15223, -93.49859



Bridge #06576(Routine)
US 412 S-5 Carroll over SITES BRANCH
Location: 3.51 MI NE MADISON CO LI

Team Lead: Nathan Rowland Inspection Date: August 21, 2019

| IDENTIFICATION | |
|---|--|
| (1) State Names | Arkansas |
| (8) Structure Number | 06576 |
| (5) Inventory Route | 412 |
| (2) Highway Agency District | 09 |
| (3) County Code | 15-Carroll County, Arkansas |
| (4) Place Code | 0 |
| (6) Features Intersected | SITES BRANCH |
| (7) Facility Carried | US 412 S-5 Carroll |
| (9) Location | 3.51 MI NE MADISON CO LI |
| (11) Mile Point | 3.48 mi |
| (12) Base Highway Network | Yes |
| (13) LRS Inventory Rte & Subrte | 0000412050 |
| (16) Latitude | 36.15223 |
| (17) Longitude | -93.49859 |
| (98) Border Bridge State Code | |
| (99) Border Bridge Structure No. | |
| STRUCTURE TYPE AND MATERIAL | |
| (43) Main Structure Type | 14 |
| Material | 1-Concrete |
| Type | 4-Tee beam |
| (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 | 1995 |
| (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 | 4200 |
| (30) Year of ADT | 2014 |
| (109) Truck ADT | 1 % |
| (19) Bypass, Detour Length | 14 mi |
| GEOMETRIC DATA | |
| (48) Length of Maximum Span | 35 ft |
| (49) Structure Length | 105 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 | 43.1 ft |
| (32) Approach Roadway Width (W/Shoulders) | 24 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 | 41.3 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 | 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 | 1 |
| (26) Functional Class | 2-Rural Principal Arterial - Oth |
| (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 | 8 |
| (60) Substructure | 7 |
| (61) Channel & Channel Protection | 7 |
| (62) Culverts | N |
| LOAD RATING AND POSTING | |
| (31) Design Load | 5-MS 18 / HS 20 |
| (63) Operating Rating Method | 1 |
| (64) Operating Rating | |
| Type | 1-Load Factor(LF) |
| Rating | 60 |
| (65) Inventory Rating Method | 1-Load Factor(LF) |
| (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 | 8 |
| (72) Approach Roadway Alignment | 8 |
| (36A) Bridge Railings | 1-Inspected feature meets currently a |
| (36B) Transitions | 1-Inspected feature meets currently a |
| (36C) Approach Guardrail | 1-Inspected feature meets currently a |
| (36D) Approach Guardrail Ends | 1-Inspected feature meets currently a |
| (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 | 4453 |
| (115) Year of Future ADT | 2028 |
| INSPECTIONS | |
| (90) Inspection Date | 08/2019 |
| (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 | No |

Team Lead: Nathan Rowland, **Inspection Date:** August 21, 2019

| ELEM | DESCRIPTION | UNITS | TOTAL | CS1 | CS2 | CS3 | CS4 |
|-------|---|-------|-------|------|------|-----|-----|
| 16 | Reinforced Concrete Top Flange | SF | 4525 | 1656 | 2869 | 0 | 0 |
| 1130 | Cracking (RC and Other) | SF | 349 | 0 | 349 | 0 | 0 |
| 1190 | Abrasion/Wear (PSC/RC) | SF | 2520 | 0 | 2520 | 0 | 0 |
| (16) | The deck has a tined finish with wear in the driving lanes for the width of both driving lanes, the tined finish is still visible, but very thin. Both driving lanes have numerous unsealed longitudinal hairline cracks in all spans. No corrosion was noted in the SIP forms. | | | | | | |
| 110 | Reinforced Concrete Open Girder/Beam | LF | 525 | 525 | 0 | 0 | 0 |
| (110) | Span #1-very minor hairline flexure cracking was noted near mid span of the tee beams. Span #2- very minor hairline flexure cracking was noted near mid span. Tee beam #3 has a minor insignificant spall on the bottom edge due to a dozer cleaning out the creek channel. Span #3-very minor hairline flexure cracking was noted near mid span of the tee beams. | | | | | | |
| 210 | Reinforced Concrete Pier Wall | LF | 26 | 26 | 0 | 0 | 0 |
| (210) | The 2 concrete pier columns are 12' 10" wide. Pier wall #1- no deficiencies noted. Footing has cover. Pier wall #2- no deficiencies noted. Footing has cover. | | | | | | |
| 215 | Reinforced Concrete Abutment | LF | 86 | 86 | 0 | 0 | 0 |
| (215) | Abutment #1-No deficiencies noted. Abutment #2- No deficiencies noted. Embankment rip rap is in place and no footings are exposed. | | | | | | |
| 234 | Reinforced Concrete Pier Cap | LF | 86 | 57 | 8 | 21 | 0 |
| 1080 | Delamination/Spall/Patched Area | LF | 14 | 0 | 0 | 14 | 0 |
| 1090 | Exposed Rebar | LF | 7 | 0 | 0 | 7 | 0 |
| 1120 | Efflorescence/Rust Staining | LF | 4 | 0 | 4 | 0 | 0 |
| 1130 | Cracking (RC and Other) | LF | 4 | 0 | 4 | 0 | 0 |
| (234) | Pier cap #1-The left and right ends of the caps have spalls with exposed rebar. The underside of the right cantilever has a 14' long delamination. The cap has vertical hairline cracking with efflorescence at the corners of the beams under tee beams #2-4. Both ahead and behind side of pier cap has efflorescence accumulation at or adjacent to keyways. Pier cap #2- The left undersurface of the left cantilever has 3' of exposed rebar, the right cantilever has 1' of exposed rebar. The cap has 4' of vertical hairline cracking with efflorescence at the corners of the tee beams under beams # 2-4. Both ahead and behind side of pier cap has efflorescence accumulation at or adjacent to keyways. | | | | | | |
| 301 | Pourable Joint Seal | LF | 86 | 0 | 86 | 0 | 0 |
| 2310 | Leakage | LF | 86 | 0 | 86 | 0 | 0 |
| (301) | | | | | | | |

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|---|------------------------------------|-------|-------|-----|-----|-----|-----|
| The pourable joint seal is leaking over both piers allowing efflorescence build up at the keyways and water staining on the underside of the cantilevers. | | | | | | | |
| 331 | Reinforced Concrete Bridge Railing | LF | 230 | 219 | 11 | 0 | 0 |
| 1130 | Cracking (RC and Other) | LF | 11 | 0 | 11 | 0 | 0 |
| (331) | | | | | | | |
| Right parapet wall- vertical hairline cracks exist in the top corners of the drain areas. Left parapet wall- vertical hairline cracks exist in the top corners of the drain areas. Southeast approach railing post adjacent to end treatment is broken. | | | | | | | |



Bent #2 drift accumulation causing large scour hole.



Upstream view



14' of delamination at the under side of the right cantilever of pier #1.



General view of abutment #2.



Inventory looking East



General view of deck



General view of superstructure.



West approach roadway



Southeast approach railing post adjacent to end treatment is broken.



Condition of poured construction joints.



Typical sealable deck cracking.



Typical efflorescence accumulation at pier cap keyway.



Down stream



Bent #1 left end cantilever cap spalling with steel exposed.



Southeast approach railing post adjacent to end treatment is broken.



Bridge #06576(Routine)

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Inspection Comments

Structure is logged from West to East, and is accessible from the ground.