**Bridge #07039**(Routine, Underwater type 2)
**US 412 -09-LM 5.52 over LOCUS CREEK RELIEF**
**Location: 2.73 MI W MO STATE LINE**
**Team Lead:** James Adams **Inspection Date:** June 24, 2020

Latitude:36.05243, Longitude:-90.39030

Route:412  Section:09  Log:5.52

Arnold Road ID:28x412x9xA, Arnold Log mile:5.509

District 10, Greene County

Owner: 1-State Highway Agency

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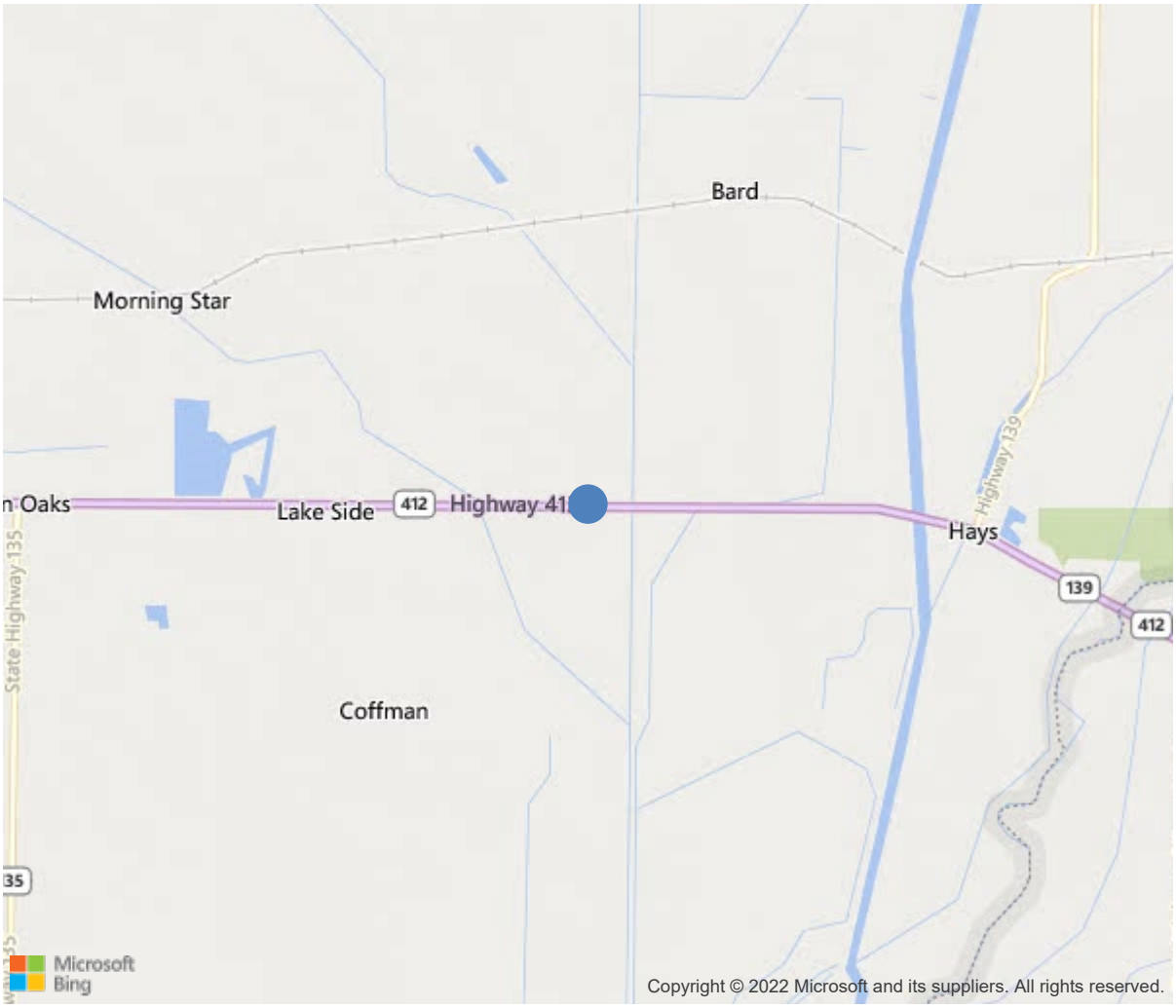
2.73 MI W MO STATE LINE




36.05243, -90.39030

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| IDENTIFICATION | |
|---|---|
| (1) State Names | Arkansas |
| (8) Structure Number | 07039 |
| (5) Inventory Route | 412 |
| (2) Highway Agency District | 10 |
| (3) County Code | 55-Greene County, Arkansas |
| (4) Place Code | 0 |
| (6) Features Intersected | LOCUS CREEK RELIEF |
| (7) Facility Carried | US 412 -09-LM 5.52 |
| (9) Location | 2.73 MI W MO STATE LINE |
| (11) Mile Point | 5.52 mi |
| (12) Base Highway Network | Yes |
| (13) LRS Inventory Rte & Subrte | 0000412090 |
| (16) Latitude | 36.0524304834207 |
| (17) Longitude | -90.3903047910054 |
| (98) Border Bridge State Code | |
| (99) Border Bridge Structure No. | |

| STRUCTURE TYPE AND MATERIAL | |
|---|---|
| (43) Main Structure Type | 42 |
| Material | 4-Steel continuous |
| 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 | 1-Monolithic Concrete (concurrently placed |
| Type of Membrane | 0-None |
| Type of Deck Protection | 1-Epoxy Coated Reinforcing |

| AGE AND SERVICE | |
|---|---|
| (27) Year Built | 2008 |
| (106) Year Reconstructed | 0 |
| (42) Type of Service | 19 |
| On | 1-Highway |
| Under | 9-Relief for waterway |
| (28) Lane | |
| On | 4 |
| Under | 0 |
| (29) Average Daily Traffic | 8600 |
| (30) Year of ADT | 2014 |
| (109) Truck ADT | 14 % |
| (19) Bypass, Detour Length | 4 mi |

| GEOMETRIC DATA | |
|---|---|
| (48) Length of Maximum Span | 34 ft |
| (49) Structure Length | 90 ft |
| (50) Curb or Sidewalk Width | |
| Left | 0 ft |
| Right | 0 ft |
| (51) Bridge Roadway Width Curb to Curb | 75.1 ft |
| (52) Deck Width Out to Out | 78.2 ft |
| (32) Approach Roadway Width (W/Shoulders) | 75.1 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 | 76.1 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 | N-Not applicable, no waterway. |
| (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 | 4-Historical significance is not dete |

| CONDITION | |
|---|---|
| (58) Deck | 7 |
| (59) Superstructure | 8 |
| (60) Substructure | 8 |
| (61) Channel & Channel Protection | 8 |
| (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 | 8 |
| (68) Deck Geometry | 9 |
| (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 | 10307 |
| (115) Year of Future ADT | 2025 |

**INSPECTIONS ***

| (90) Inspection Date | | | 06/2020 |
|---|---|---|---|
| (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 | | |

* 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 | 7113 | 6367 | 252 | 494 | 0 |
| 1120 | Efflorescence/Rust Staining | SF | 111 | 0 | 12 | 99 | 0 |
| 1130 | Cracking (RC and Other) | SF | 635 | 0 | 240 | 395 | 0 |
| 107 | Steel Open Girder/Beam | LF | 810 | 810 | 0 | 0 | 0 |
| 515 | Steel Protective Coating | SF | 6749 | 6749 | 0 | 0 | 0 |
| 215 | Reinforced Concrete Abutment | LF | 156 | 149 | 0 | 7 | 0 |
| 1120 | Efflorescence/Rust Staining | LF | 7 | 0 | 0 | 7 | 0 |
| 225 | Steel Pile | EA | 18 | 18 | 0 | 0 | 0 |
| 515 | Steel Protective Coating | SF | 980 | 980 | 0 | 0 | 0 |
| 234 | Reinforced Concrete Pier Cap | LF | 154 | 148 | 6 | 0 | 0 |
| 1120 | Efflorescence/Rust Staining | LF | 3 | 0 | 3 | 0 | 0 |
| 1130 | Cracking (RC and Other) | LF | 3 | 0 | 3 | 0 | 0 |
| 310 | Elastomeric Bearing | EA | 18 | 18 | 0 | 0 | 0 |
| 321 | Reinforced Concrete Approach Slab | SF | 4307 | 3883 | 228 | 196 | 0 |
| 1080 | Delamination/Spall/Patched Area | SF | 2 | 0 | 0 | 2 | 0 |
| 1130 | Cracking (RC and Other) | SF | 422 | 0 | 228 | 194 | 0 |
| 331 | Reinforced Concrete Bridge Railing | LF | 182 | 163 | 19 | 0 | 0 |
| 1080 | Delamination/Spall/Patched Area | LF | 2 | 0 | 2 | 0 | 0 |
| 1120 | Efflorescence/Rust Staining | LF | 3 | 0 | 3 | 0 | 0 |
| 1130 | Cracking (RC and Other) | LF | 14 | 0 | 14 | 0 | 0 |

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## Maintenance Needs

**Date Reported:** 07/02/2018
**Priority:** C - Important
**Type of Work:** None
**Status:** Monitor
**Component:**

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### Deficiency Description

Deck has several unsealed transverse and longitudinal cracks & diagonal cracks at both corners of span 1 over bent 1 & left corner of span 3 at bent 4.

### Remarks

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**Location: 2.73 MI W MO STATE LINE**
**Team Lead:** James Adams **Inspection Date:** June 24, 2020

**Date Reported:** 06/24/2020
**Priority:** C - Important
**Type of Work:** Repair
**Status:** Open
**Component:** Deck

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**Deficiency Description**

Approach slabs have several unsealed cracks.

**Remarks**

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**Inspection Comments**

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**Deck Notes**

Approach slabs have several unsealed cracks.
Bridge rails have several vertical cracks, some with efflorescence.
Deck has several unsealed transverse and longitudinal cracks & diagonal cracks at both corners of span 1 over bent 1 & left corner of span 3 at bent 4.
Soffit at Bay 4 does not have any SIP forms. Exposed soffit has several transverse cracks with efflorescence.

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**Superstructure Notes**

Weathering steel superstructure is light brown in color with a light granular texture.

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**Substructure Notes**

Caps have a few minor cracks.
Backwall portion of concrete caps have a few vertical cracks with efflorescence.
Underwater type 2 inspection performed this report.