



Latitude:34.78094, Longitude:-92.15903

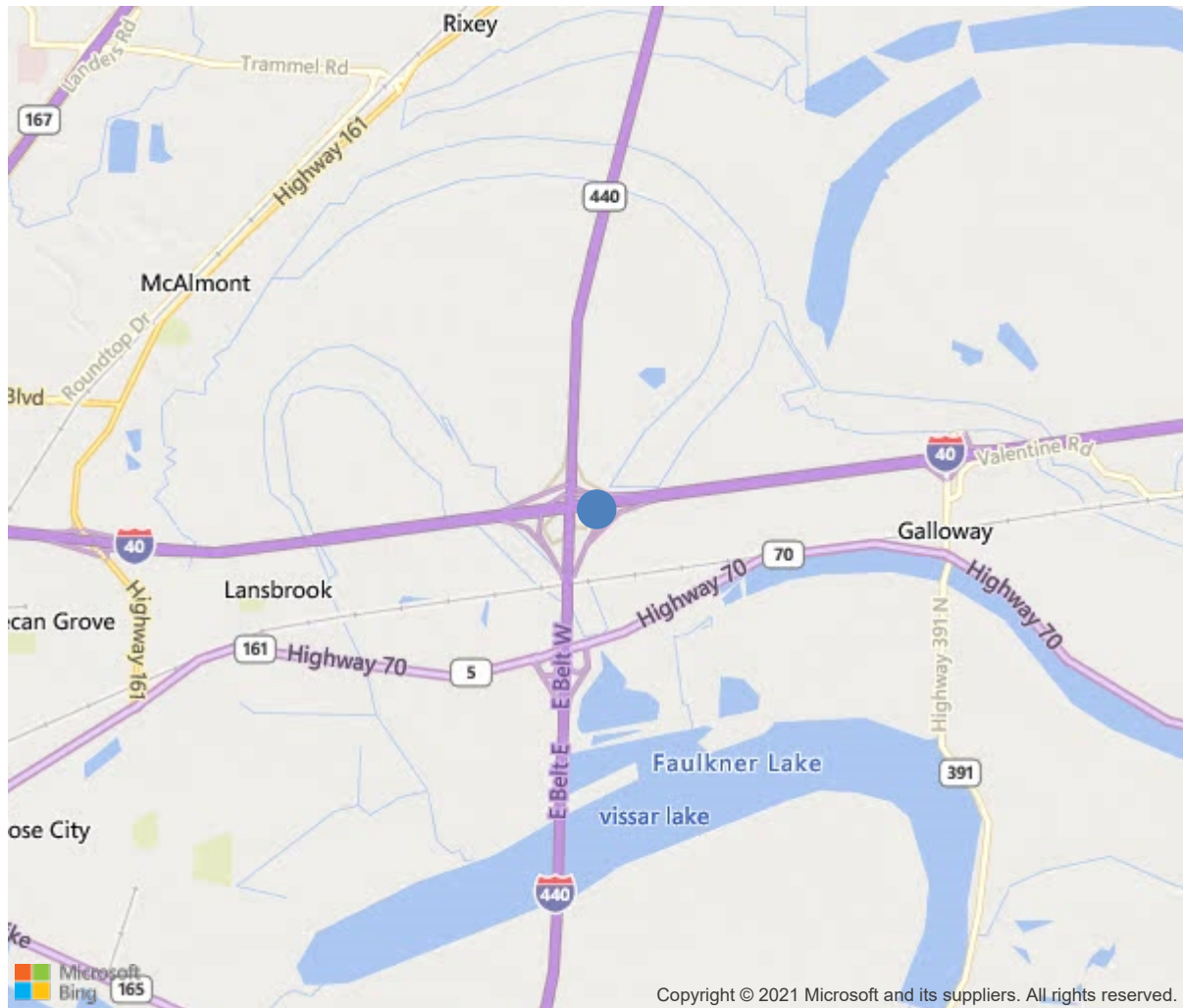
Route:440 Section:02 Log:10.39

Arnold Road ID:60x440x171xA, Arnold Log mile:0.186

District 06, Pulaski County

Owner: 1-State Highway Agency

1.7 W OF GALLOWAY (I-6)



34.78094, -92.15903



Bridge #05712(Routine)

SH 440 SW RAMP over I 40 Log 159.07

Location: 1.7 W OF GALLOWAY (I-6)

Team Lead: Chris Doggett Inspection Date: July 31, 2019

| IDENTIFICATION                            |   |
|---|---|
| (1) State Names                           | Arkansas  |
| (8) Structure Number                      | 05712   |
| (5) Inventory Route                       | 440   |
| (2) Highway Agency District               | 06  |
| (3) County Code                           | 119-Pulaski County, Arkansas                    |
| (4) Place Code                            | 0   |
| (6) Features Intersected                  | I 40 Log 159.07                                 |
| (7) Facility Carried                      | SH 440 SW RAMP                                  |
| (9) Location                              | 1.7 W OF GALLOWAY (I-6)                         |
| (11) Mile Point                           | 10.39 mi  |
| (12) Base Highway Network                 | Yes   |
| (13) LRS Inventory Rte & Subrte           | 0000440020                                      |
| (16) Latitude                             | 34.78094  |
| (17) Longitude                            | -92.15903                                       |
| (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              | 32  |
| Material                                  | 3-Steel   |
| Type                                      | 2-Stringer/Multi-beam or girder                 |
| (45) No. of Spans in Main Unit            | 4   |
| (46) No. of Approach Spans                | 3   |
| (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                           | 1980  |
| (106) Year Reconstructed                  | 0   |
| (42) Type of Service                      | 61  |
| On  | 6-Overpass structure at an interchange or secon |
| Under                                     | 1-Highway, with or without pedestrian           |
| (28) Lane                                 |   |
| On  | 1   |
| Under                                     | 6   |
| (29) Average Daily Traffic                | 36088   |
| (30) Year of ADT                          | 2013  |
| (109) Truck ADT                           | 1 %   |
| (19) Bypass, Detour Length                | 1 mi  |
| GEOMETRIC DATA                            |   |
| (48) Length of Maximum Span               | 108 ft  |
| (49) Structure Length                     | 619 ft  |
| (50) Curb or Sidewalk Width               |   |
| Left                                      | 0 ft  |
| Right                                     | 0 ft  |
| (51) Bridge Roadway Width Curb to Curb    | 24.9 ft   |
| (52) Deck Width Out to Out                | 27.8 ft   |
| (32) Approach Roadway Width (W/Shoulders) | 24.9 ft   |
| (33) Bridge Median                        | 0-No median                                     |
| (34) Skew                                 | 22 Deg  |
| (35) Structure Flared                     | No flare  |
| (10) Inventory Route Min Vert Clear       | 99.99 ft  |
| (47) Inventory Route Total Horiz Clear    | 26.2 ft   |
| (53) Min Vert Clear Over Bridge Rdwy      | 99.99 ft  |
| (54) Min Vert Underclear                  | 16.92 ft  |
| Ref:                                      |   |
| (55) Min Lat Underclear RT                | 31.3 ft   |
| Ref:                                      |   |
| (56) Min Lat Underclear LT                | 30.2 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                  | 12-Urban 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             | 1 - 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                    | 7                                      |
| (60) Substructure                      | 6                                      |
| (61) Channel & Channel Protection      | N                                      |
| (62) Culverts                          | N                                      |
| LOAD RATING AND POSTING                |  |
| (31) Design Load                       | 6-MS 18+Mod / HS 20+Mod                |
| (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                                   | 4                                      |
| 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             | 6                                      |
| (68) Deck Geometry                     | 7                                      |
| (69) Clearances, Vertical/Horizontal   | 7                                      |
| (71) Waterway Adequacy                 | N                                      |
| (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           | N-Bridge not over waterway.            |
| 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                       | 12500                                  |
| (115) Year of Future ADT               | 2028                                   |

| INSPECTIONS *  |      |             |           |
|--|------|-------------|-----------|
| (90) Inspection Date   |      |             | 07/2019   |
| (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   |             |           |
| * 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. |      |             |           |

**Team Lead:** Chris Doggett, **Inspection Date:** July 31, 2019

| ELEM   | DESCRIPTION                               | UNITS | TOTAL | CS1   | CS2   | CS3  | CS4  |
|--|---|-------|-------|-------|-------|------|------|
| 12   | Reinforced Concrete Deck                  | SF    | 17273 | 11702 | 5571  | 0    | 0    |
| 1130   | Cracking (RC and Other)                   | SF    | 5571  | 0     | 5571  | 0    | 0    |
| (12)   |   |       |       |       |       |      |      |
| Transverse cracks are present in all spans on 6 to 8 foot spacing. 0.035 inch avg. Span 4 is the worst span. All spans have areas of map cracking.   |   |       |       |       |       |      |      |
| 107  | Steel Open Girder/Beam                    | LF    | 1851  | 1388  | 463   | 0    | 0    |
| 1000   | Corrosion                                 | LF    | 463   | 0     | 463   | 0    | 0    |
| 515  | Steel Protective Coating                  | SF    | 23729 | 0     | 15573 | 6674 | 1482 |
| 3440   | Effectiveness (Steel Protective Coatings) | SF    | 23729 | 0     | 15573 | 6674 | 1482 |
| (107)  |   |       |       |       |       |      |      |
| All beams have areas of freckling rust on the web and flanges with minor pitting.  |   |       |       |       |       |      |      |
| 205  | Reinforced Concrete Column                | EA    | 12    | 5     | 3     | 4    | 0    |
| 1130   | Cracking (RC and Other)                   | EA    | 7     | 0     | 3     | 4    | 0    |
| (205)  |   |       |       |       |       |      |      |
| Bent 2 both column have cracks.<br>Bent 4, left column is cracked. 0.015 inch avg.<br>Bent 5, both columns have vertical cracks. 0.030 avg.<br>Bent 6, both columns have vertical cracks. 0.030 avg. |   |       |       |       |       |      |      |
| 215  | Reinforced Concrete Abutment              | LF    | 81    | 22    | 18    | 41   | 0    |
| 1080   | Delamination/Spall/Patched Area           | LF    | 41    | 0     | 0     | 41   | 0    |
| 1130   | Cracking (RC and Other)                   | LF    | 18    | 0     | 18    | 0    | 0    |
| (215)  |   |       |       |       |       |      |      |
| Spalls in the top of both back walls at road irons.  |   |       |       |       |       |      |      |
| 234  | Reinforced Concrete Pier Cap              | LF    | 156   | 78    | 26    | 52   | 0    |
| 1130   | Cracking (RC and Other)                   | LF    | 78    | 0     | 26    | 52   | 0    |
| (234)  |   |       |       |       |       |      |      |
| Bents 2 & 7 have map cracking the entire length of cap. Bent four has cracks on the bottom of cap.   |   |       |       |       |       |      |      |
| 302  | Compression Joint Seal                    | LF    | 184   | 121   | 57    | 0    | 6    |
| 2310   | Leakage                                   | LF    | 63    | 0     | 57    | 0    | 6    |
| (302)  |   |       |       |       |       |      |      |
| Approximately six feet of the seal has failed at bent 7. All joint seals are weathered and cracked.  |   |       |       |       |       |      |      |
| (302-2310)   |   |       |       |       |       |      |      |



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SH 440 SW RAMP over I 40 Log 159.07  
Location: 1.7 W OF GALLOWAY (I-6)

Team Lead: Chris Doggett, Inspection Date: July 31, 2019

| ELEM | DESCRIPTION                        | UNITS | TOTAL | CS1  | CS2 | CS3 | CS4 |
|------|------------------------------------|-------|-------|------|-----|-----|-----|
|      |                                    |       |       |      |     |     |     |
| 310  | Elastomeric Bearing                | EA    | 36    | 36   | 0   | 0   | 0   |
| 321  | Reinforced Concrete Approach Slab  | SF    | 1584  | 1167 | 389 | 28  | 0   |
| 1080 | Delamination/Spall/Patched Area    | SF    | 3     | 0    | 0   | 3   | 0   |
| 1130 | Cracking (RC and Other)            | SF    | 414   | 0    | 389 | 25  | 0   |
| 331  | Reinforced Concrete Bridge Railing | LF    | 1239  | 805  | 434 | 0   | 0   |
| 1130 | Cracking (RC and Other)            | LF    | 434   | 0    | 434 | 0   | 0   |





Deck view



Bent 8: back wall spalled





Bent 5, column 1: numerous full height vertical cracks on 6" centers. All columns on this structure are in similar condition



Span 4: transverse cracks common at this span. (3' spacing)





Span 1: common paint condition of girders on this structure



Bent 2 ahead: entire length of cap is map cracked





Bent 7, left end of cap is map cracked.



**Bridge #05712(Routine)**

**SH 440 SW RAMP over I 40 Log 159.07**

**Location: 1.7 W OF GALLOWAY (I-6)**

**Team Lead: Chris Doggett Inspection Date: July 31, 2019**

**Inspection Comments**

AHTD Job 60184, 21510 for layout.

Logged East bound