



Latitude:36.19939, Longitude:-94.13821

Route:71 Section:17 Log:7.47

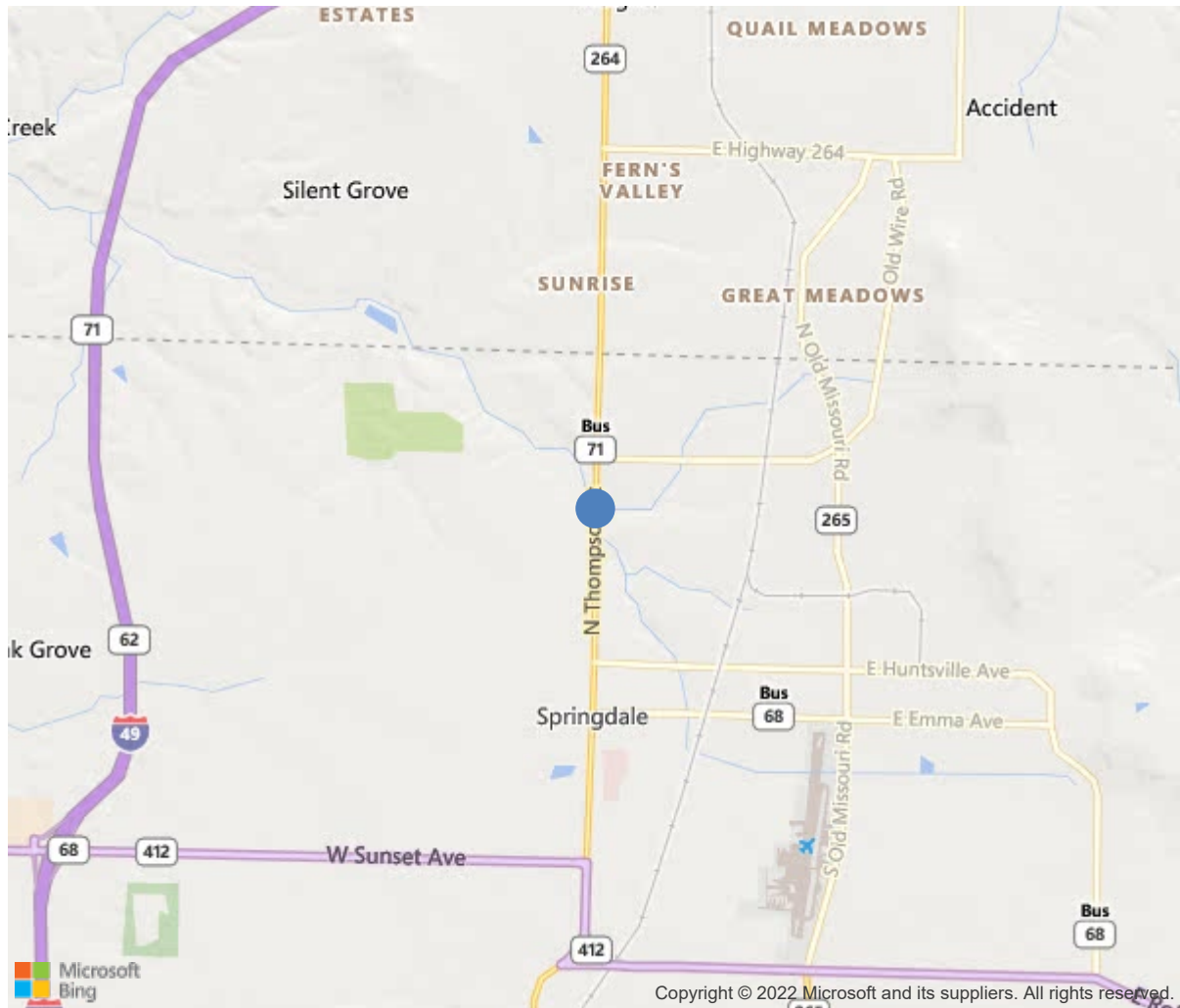
Arnold Road ID:72x71x17BxA, Arnold Log mile:7.336

District 04, Washington County

Owner: 1-State Highway Agency

Place Code: 63900 - SPRINGDALE

0.76 MI S OF BENTON CO LN



36.19939, -94.13821

Inspection Direction : S to N



**Bridge #01408**(Routine, Underwater type 2)

**US 71B-Washington over Dry Branch**

**Location: 0.76 MI S OF BENTON CO LN**

**Team Lead: Jacob Turner Inspection Date: September 30, 2021**

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	01408
(5) Inventory Route	71
(2) Highway Agency District	04
(3) County Code	143-Washington County, Arkansas
(4) Place Code	63900
(6) Features Intersected	Dry Branch
(7) Facility Carried	US 71B-Washington
(9) Location	0.76 MI S OF BENTON CO LN
(11) Mile Point	7.47 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	000007117B
(16) Latitude	36.199387
(17) Longitude	-94.138214
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	11
Material	1-Concrete
Type	1-Slab
(44) Approach Structure Type	00
Material	0-Other
Type	0-Other
(45) No. of Spans in Main Unit	1
(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	1929
(106) Year Reconstructed	1984
(42) Type of Service	15
On	1-Highway
Under	5-Waterway
(28) Lane	
On	5
Under	0
(29) Average Daily Traffic	29000
(30) Year of ADT	2014
(109) Truck ADT	1 %
GEOMETRIC DATA	
(48) Length of Maximum Span	28 ft
(49) Structure Length	30 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	80.1 ft
(52) Deck Width Out to Out	82.9 ft
(32) Approach Roadway Width (W/Shoulders)	80.1 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	81 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	14-Urban Other Principal 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	6
(60) Substructure	6
(61) Channel & Channel Protection	6
(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	50
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	1
Rating	30
(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	9
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	6
(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	8-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	36568
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	09/2021		
(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:** Jacob Turner, **Inspection Date:** September 30, 2021

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	1543	1388	133	22	0
1080	Delamination/Spall/Patched Area	SF	1	0	1	0	0
1120	Efflorescence/Rust Staining	SF	72	0	50	22	0
1130	Cracking (RC and Other)	SF	82	0	82	0	0
510	Wearing Surfaces	SF	645	375	180	90	0
3220	Crack (Wearing Surface)	SF	270	0	180	90	0
(16)							
11/01/2021 JRT & AMJ							
- Cracking with efflorescence is visible throughout the under surface of the structure - Abrasion typical in the wheel paths on the deck  -There is a concrete wearing surface over the original portion of the deck. -The driving surface of the deck has light abrasion, map cracking, and sealable longitudinal cracks at approximately 14" centers on the right side of deck. -Cracking with efflorescence visible from the undersurface of deck. -The construction joints have minor efflorescence visible from the undersurface of the deck. -Both exterior edges of the deck have no wearing surface.							
38	RC Slab	SF	1398	1047	331	20	0
1080	Delamination/Spall/Patched Area	SF	32	0	31	1	0
1090	Exposed Rebar	SF	1	0	0	1	0
1120	Efflorescence/Rust Staining	SF	37	0	19	18	0
1130	Cracking (RC and Other)	SF	41	0	41	0	0
1190	Abrasion/Wear (PSC/RC)	SF	240	0	240	0	0
510	Wearing Surfaces	SF	783	513	210	60	0
3220	Crack (Wearing Surface)	SF	270	0	210	60	0
(38)							
11/01/2021 - JRT & AMJ							
- Slab span construction joint cracking with efflorescence and spalling with exposed reinforcing steel - Abrasion in all wheel paths - Longitudinal cracking throughout the under surface  -There is a concrete wearing surface over the voided slab span portion of the deck. -There are random cracks with light abrasion on the driving surface of the deck. -The undersurface of the slab span portions of the deck have short duration longitudinal cracks with light efflorescence. -Delaminated areas in the slab soffit adjacent to girder # 2. -Efflorescence in the voided slab / slab span construction joint along with one spall with 8" of exposed reinforcing steel.							

**Team Lead:** Jacob Turner, **Inspection Date:** September 30, 2021

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
110	Reinforced Concrete Open Girder/Beam	LF	210	157	51	2	0
1080	Delamination/Spall/Patched Area	LF	5	0	5	0	0
1090	Exposed Rebar	LF	2	0	0	2	0
1120	Efflorescence/Rust Staining	LF	38	0	38	0	0
1130	Cracking (RC and Other)	LF	8	0	8	0	0
(110)							
11/01/2021 - JRT & AMJ							
- Girder 1 on the west side has spalling - Girder 6 has cracking with efflorescence							
-Concrete tee beam # 6 has longitudinal hairline cracks and map cracking with heavy efflorescence. -Exterior beams have spalls that range from softball size to approximately 18" long (appears to be collision damage from maintenance forces) with no exposed reinforcing steel. -There are 4 small shallow spalls with exposed reinforcing steel on beam # 3 adjacent to bent # 2.							
215	Reinforced Concrete Abutment	LF	182	134	43	5	0
1080	Delamination/Spall/Patched Area	LF	10	0	8	2	0
1090	Exposed Rebar	LF	3	0	0	3	0
1120	Efflorescence/Rust Staining	LF	21	0	21	0	0
1130	Cracking (RC and Other)	LF	14	0	14	0	0
(215)							
11/01/2021 - JRT & AMJ							
- Bent 1 spalling with exposed reinforcing steel adjacent to girder 2 and slab unit - Bent 1 vertical cracking - Bent 2 vertical cracking at construction joint - Sud build up on slab unit and bent 2 - Bent 2 shallow spalling							
-Bent # 1 at the left side of bridge has a basket ball sized spall with exposed reinforcing steel adjacent to concrete tee beam # 2. Initial section loss to the exposed reinforcing steel. -There is one 10" shallow spall with exposed reinforcing steel located under the construction joint where the hollow core deck was widened with the slab span near the center of the structure. -The right side of bent # 1 has map cracking with light efflorescence in the bearing area and adjacent to the concrete deck girders. -Bent # 2 has map cracking with light efflorescence in the bearing area and adjacent to some of the concrete deck girders.							
331	Reinforced Concrete Bridge Railing	LF	60	54	6	0	0
1130	Cracking (RC and Other)	LF	6	0	6	0	0
(331)							
-The concrete portions of the bridge rails have a few isolated short duration vertical cracks.							



Elevation



Abrasion in all wheel paths





Abrasion in all wheel paths



Inventory





Typical map cracking



Bent 2 shallow spalling





Sud build up on slab unit and bent 2



Sud build up on slab unit and bent 2



Bent 2 vertical cracking at construction joint



Bent 1 vertical cracking





Typical under surface



Bay 5 cracking with efflorescence





Bay 5 cracking with efflorescence



Slab span construction joint cracking with efflorescence and spalling with exposed reinforcing steel





Slab unit adjacent to girder 2 delam



Outside girder 1 spalling



Bent 1 spalling with exposed reinforcing steel adjacent to girder 2 and slab unit



## Maintenance Needs

**Date Reported:** 11/13/2019

**Priority:** D- Routine

**Type of Work:** None

**Status:** Monitor

**Component:**

---

## Deficiency Description

11/01/2021 - JRT & AMJ

- Maintenance item still exist.

There is a spall with exposed reinforcing steel in the undersurface of the slab at the construction joint near centerline of structure.

## Remarks

---



Slab soffit construction joint with exposed reinforcing steel.



Slab span construction joint cracking with efflorescence and spalling with exposed reinforcing steel



Bridge #01408(Routine, Underwater type 2)

US 71B-Washington over Dry Branch

Location: 0.76 MI S OF BENTON CO LN

Team Lead: Jacob Turner Inspection Date: September 30, 2021

Date Reported: 10/29/2013

Priority: D- Routine

Type of Work: Repair

Status: Monitor

Component:

---

### Deficiency Description

Deck

11/01/2021 - JRT & AMJ

- Maintenance item still exist at this inspection.

The driving surface of the deck has sealable cracking.

### Remarks

---



Driving surface of the slab span. Inside Northbound lane.



Typical map cracking



**Date Reported:** 10/29/2013

**Priority:** D- Routine

**Type of Work:** Repair

**Status:** Monitor

**Component:**

---

**Deficiency Description**

Substructure

11/01/2021 - JRT & AMJ

- Bent 1 adjacent to girder 2 has spalling with exposed reinforcing steel

Bent # 1 has a 24" spall with exposed reinforcing steel in the Left side of the bent.

**Remarks**

---



Left end of Bent # 1.



Bent 1 spalling with exposed reinforcing steel adjacent to girder 2 and slab unit



**Bridge #01408**(Routine, Underwater type 2)

**US 71B-Washington over Dry Branch**

**Location: 0.76 MI S OF BENTON CO LN**

**Team Lead:** Jacob Turner **Inspection Date:** September 30, 2021

### **Inspection Comments**

RSM & SPC: Routine and Underwater Type II inspections conducted this date. See element notes for documentation. Channel sounded / profiled this inspection. See MicroStation sketch linked in "Files" tab for sounding measurements.

11/14/2019 - TJL - Elements were plan verified on this date.10/09/2017