



Latitude:35.41433, Longitude:-93.22041

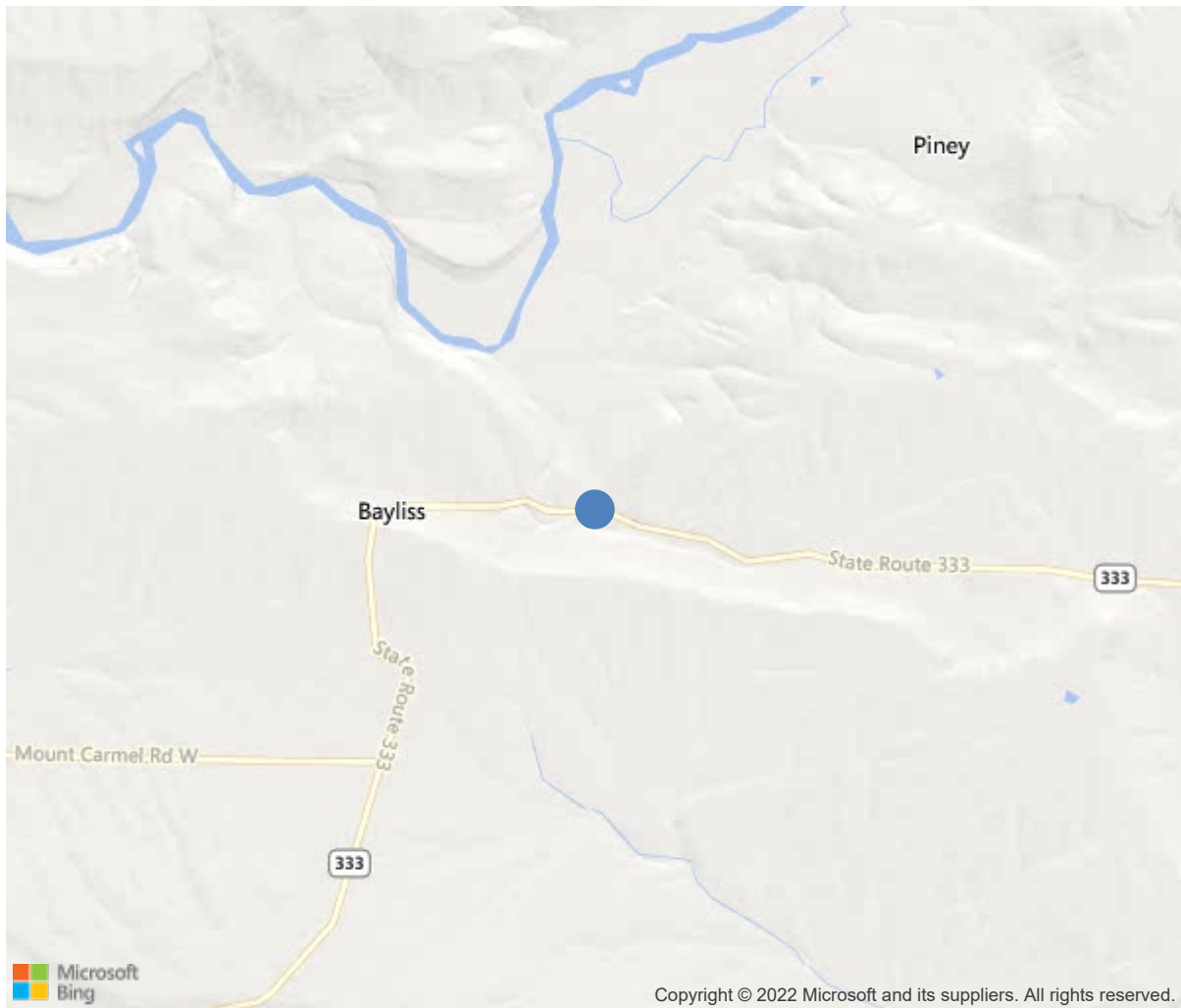
Route:333 Section:01 Log:8.09

Arnold Road ID:58x333x1xA, Arnold Log mile:8.081

District 08, Pope County

Owner: 1-State Highway Agency

5.5 I W Jct SH 7 & 333



35.41433, -93.22041

Inspection Direction : W to E



Bridge #M4000(Routine, Underwater type 2)

SH 333 over Branch

Location: 5.5 I W Jct SH 7 & 333

Team Lead: William Wood Inspection Date: November 04, 2021

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	M4000
(5) Inventory Route	333
(2) Highway Agency District	08
(3) County Code	115-Pope County, Arkansas
(4) Place Code	0
(6) Features Intersected	Branch
(7) Facility Carried	SH 333
(9) Location	5.5 I W Jct SH 7 & 333
(11) Mile Point	8.09 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.41433
(17) Longitude	-93.22041
(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	00
Material	0-Other
Type	0-Other
(45) No. of Spans in Main Unit	2
(46) No. of Approach Spans	0
(107) Deck Structure Type	1-Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	6-Bituminous
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1976
(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	603
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	15 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	42 ft
(49) Structure Length	62 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	26.2 ft
(52) Deck Width Out to Out	29.3 ft
(32) Approach Roadway Width (W/Shoulders)	27.9 ft
(33) Bridge Median	0-No median
(34) Skew	45 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	27.6 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	7-Rural Major Collector
(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	6
(61) Channel & Channel Protection	7
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	0-Other or Unknown
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1-Load Factor(LF)
Rating	35
(65) Inventory Rating Method	1-Load Factor(LF)
(66) Inventory Rating	
Type	2
Rating	21
(70) Bridge Posting	2-20.0 - 29.9 % below
(41) Structure Open/Posted/Closed	P-Posted for load (may include o
APPRAISAL	
(67) Structural Evaluation	5
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	6
(36A) Bridge Railings	0-Inspected feature does not meet cur
(36B) Transitions	0-Inspected feature does not meet cur
(36C) Approach Guardrail	0-Inspected feature does not meet cur
(36D) 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	Bridge rehabilitation because
(76) Length of Structure Improvement	62 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 80
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	1086
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			11/2021
(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.			

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	1715	1400	201	114	0
1120	Efflorescence/Rust Staining	SF	218	0	134	84	0
1130	Cracking (RC and Other)	SF	97	0	67	30	0
510	Wearing Surfaces	SF	1622	1040	537	45	0
3210	Delam/Spall/Patched Area/Pothole	SF	11	0	11	0	0
3220	Crack (Wearing Surface)	SF	571	0	526	45	0
(12)							
MINOR TO MODERATE CRACKING THROUGHOUT OVERLAY. MINOR CRACKING & SPALLING IN OVERLAY AT JOINTS. MINOR CRACKING W / EFFLOR THROUGHOUT SOFFIT. MINOR TO MODERATE LONG. CRACKING W / EFFLOR. IN SPAN 1 IN SOFFIT.							
107	Steel Open Girder/Beam	LF	248	110	103	35	0
1000	Corrosion	LF	138	0	103	35	0
515	Steel Protective Coating	SF	1736	836	500	300	100
3440	Effectiveness (Steel Protective Coatings)	SF	900	0	500	300	100
(107)							
MINOR SURFACE & FRECKLED RUST THROUGHOUT BEAMS. MINOR TO MODERATE RUST ON ENDS OF BEAMS. MODERATE TO MAJOR RUST & SECTION LOSS ON ENDS OF BEAM 4 AT ABUTMENT 1, BEAMS 2 & 3 AT PIER 2 ON BK. & AHD. SIDES, HOLE RUSTED THRU WEB AT BOTTOM FLANGE ON BEAM 3 AHD. SIDE OF PIER 2 APPROX. 2' AHD OF PIER.							
205	Reinforced Concrete Column	EA	3	3	0	0	0
215	Reinforced Concrete Abutment	LF	132	123	9	0	0
1080	Delamination/Spall/Patched Area	LF	3	0	3	0	0
1130	Cracking (RC and Other)	LF	6	0	6	0	0
(215)							
MINOR VERTICAL CRACKING. MINOR CRACKING & SPALLING IN BEARING AREAS UNDER BEAMS 1, 2 & 3 AT ABUTMENT 1.							
234	Reinforced Concrete Pier Cap	LF	37	37	0	0	0
304	Open Expansion Joint	LF	37	37	0	0	0
330	Metal Bridge Railing	LF	124	0	124	0	0
1000	Corrosion	LF	124	0	124	0	0
515	Steel Protective Coating	SF	372	0	0	372	0
3440	Effectiveness (Steel Protective Coatings)	SF	372	0	0	372	0
(330)							



ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
	MINOR RUST ON RAIL. MINOR TO MODERATE CHECKING & SPLITTING IN WOOD POST.						



Elevation



Inventory





Weight Limit Sign in Place at Beginning of Bridge.



Weight Limit Sign in Place at End of Bridge.





Typ. Condition of Deck.



Typ. Condition of Soffit.





Typ. Condition of Joint.



Typ. Cracking in Overlay at Abutments.





Typ. Rust on Ends of Beams.



**Bridge #M4000**(Routine, Underwater type 2)

**SH 333 over Branch**

**Location: 5.5 I W Jct SH 7 & 333**

**Team Lead:** William Wood **Inspection Date:** November 04, 2021

## Maintenance Needs

**Date Reported:** 10/28/2014

**Priority:** D- Routine

**Type of Work:** None

**Status:** Monitor

**Component:**

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### Deficiency Description

Timber post on the right side of bridge.  
Decay in several timber post.

### Remarks

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**Bridge #M4000**(Routine, Underwater type 2)

**SH 333 over Branch**

**Location: 5.5 I W Jct SH 7 & 333**

**Team Lead:** William Wood **Inspection Date:** November 04, 2021

**Date Reported:** 10/28/2014

**Priority:** G - General/ Preventive maintenance

**Type of Work:** None

**Status:** Monitor

**Component:**

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**Deficiency Description**

Minor bank erosion on the left side at the east end of the bridge.

**Remarks**

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**Date Reported:** 12/02/2019  
**Priority:** C - Important  
**Type of Work:** None  
**Status:** Monitor  
**Component:**

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### Deficiency Description

Open joint over pier #2 is allowing gravel, asphalt and dirt to buildup on top of the cap of pier #2 which may be contributing to the accelerated rusting of the ends of some beams. Asphalt overlay also has some minor to moderate spalls at the joint.

### Remarks

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Pier #2 - Gravel, asphalt and dirt buildup on top of the cap full length.



Open joint over pier #2. Asphalt overlay has some minor to moderate spalls at the joint.

**Date Reported:** 12/02/2019

**Priority:** D- Routine

**Type of Work:** None

**Status:** Monitor

**Component:**

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### Deficiency Description

Underside of Deck

All Spans, Between beams 3 and 4 - minor to moderate cracks with efflorescence the full length of bridge.

Span #1, between beams 2 and 3 has moderate crack. Approximately 15 sf. C2 cracks

### Remarks

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Span #1 between beams 3 and 4 minor to moderate cracks with efflorescence. Span #2 is typical.



Span #1 between beams 2 and 3 has moderate crack. Approximately 15 sf. C2 cracks



**Date Reported:** 12/02/2019  
**Priority:** G - General/ Preventive maintenance  
**Type of Work:** None  
**Status:** Monitor  
**Component:**

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**Deficiency Description**

Abut #1 - Minor cracks with efflorescence in a few places throughout.  
Abut #1 - Minor spall with no rebar exposed in bearing area under beam #'s 1, 2 & 3

**Remarks**

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Abut. #1 - minor spall with no rebar exposed in bearing area under beam #1. Typical under beams 2 and 3.



Abut #1 - Minor cracks with efflorescence in a few places throughout . 6 Lf. C2 efflorescence

**Date Reported:** 12/04/2019  
**Priority:** C - Important  
**Type of Work:** None  
**Status:** Monitor  
**Component:**

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**Deficiency Description**

There is approximately 4" of gravel build up in the gutter against the curbs on both sides of the bridge.

**Remarks**

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Approximately 4 inches of gravel build up in the gutter against the curbs on both sides of the bridge.



**Date Reported:** 12/05/2019

**Priority:** D- Routine

**Type of Work:** None

**Status:** Monitor

**Component:**

---

**Deficiency Description**

Wearing surface  
Moderate to large cracks in overlay.  
Minor spalls along joint over pier #2

**Remarks**

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Minor to moderate cracks in overlay in span #3.



Open joint over pier #2. Asphalt overlay has some minor to moderate spalls at the joint.



Span #1 has moderate longitudinal crack full length of the span. C3 crack



**Date Reported:** 11/07/2012  
**Priority:** B - Pressing; 6 month completion goal  
**Type of Work:** None  
**Status:** Monitor  
**Component:**

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### Deficiency Description

Beam #s 2 and 3 at each side of pier # 2.  
Section loss in the lower part of the web and on the bottom flange.

11/20/2019 Inspection – G.L.D. and M.L.M.

Upon this inspection we are adding the following:

Beam #4 at abutment #1 has minor to moderate pack rust and minor section loss on the top of the bottom flange on both sides of the beam for approximately 2 ½ ft. back from the end of the beam.

Beam #3 on the ahead side of pier #2 now has complete section loss (hole) in the lower web near the end of the beam.  
New pictures have been added.

### Remarks

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Beam #3, ahead side of pier #2 has moderate pack rust in lower web and top of the bottom flange. There is complete section loss (hole) in the lower web approx. 2' back from the end of the beam.



Beam #3 backside of pier #2 has moderate pack rust and moderate section loss in the lower web and the bottom flange.



Beam #4 at abut. #1 - moderate to heavy pack rust with minor section loss.



Beam #2 backside of pier #2.





Beam #2 ahead side of pier #2 has moderate to major section loss on right side of the bottom flange.



Beam #3, ahead side of pier #2 has some minor pack rust with minor section loss in the top of the bottom flange and moderate rust in the lower web.



**Bridge #M4000**(Routine, Underwater type 2)

**SH 333 over Branch**

**Location: 5.5 I W Jct SH 7 & 333**

**Team Lead:** William Wood **Inspection Date:** November 04, 2021

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### **Deck Notes**

DECK - MINOR TO MODERATE CRACKING THROUGHOUT OVERLAY. MINOR CRACKING & SPALLING IN OVERLAY AT JOINTS. MINOR CRACKING W / EFFLOR THROUGHOUT SOFFIT. MINOR TO MODERATE LONG. CRACKING W / EFFLOR. IN SPAN 1 IN SOFFIT.

RAIL - MINOR RUST ON RAIL. MINOR TO MODERATE CHECKING & SPLITTING IN WOOD POST.

OPEN JOINTS - GOOD

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### **Superstructure Notes**

4 BEAM PAINTED STEEL MULTI BEAM - MINOR SURFACE & FRECKLED RUST THROUGHOUT BEAMS. MINOR TO MODERATE

RUST ON ENDS OF BEAMS. MODERATE TO MAJOR RUST & SECTION LOSS ON ENDS OF BEAM 4 AT ABUTMENT 1, BEAMS 2 & 3 AT PIER 2 ON BK. & AHD. SIDES, HOLE RUSTED THRU WEB AT BOTTOM FLANGE ON BEAM 3 AHD. SIDE OF PIER 2 APPROX. 2' AHD OF PIER.

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### **Substructure Notes**

ABUTMENTS - MINOR VERTICAL CRACKING. MINOR CRACKING & SPALLING IN BEARING AREAS UNDER BEAMS 1, 2 & 3 AT ABUTMENT 1.

COLUMNS - GOOD

CAPS - GOOD