

## **Bridge M0495 Inspection Report**



Latitude:33.50014, Longitude:-93.29089

Route:371 Section:05 Log:24.4

Arnold Road ID:50x371x5xA, Arnold Log mile:24.309

District 03, 99 - Nevada County

Owner: 1 - State Highway Agency

Inspection Direction: 1 - N to S

### Bridge Posting Information

41 - Structure Open/Posted/Closed: A - Open, no restriction

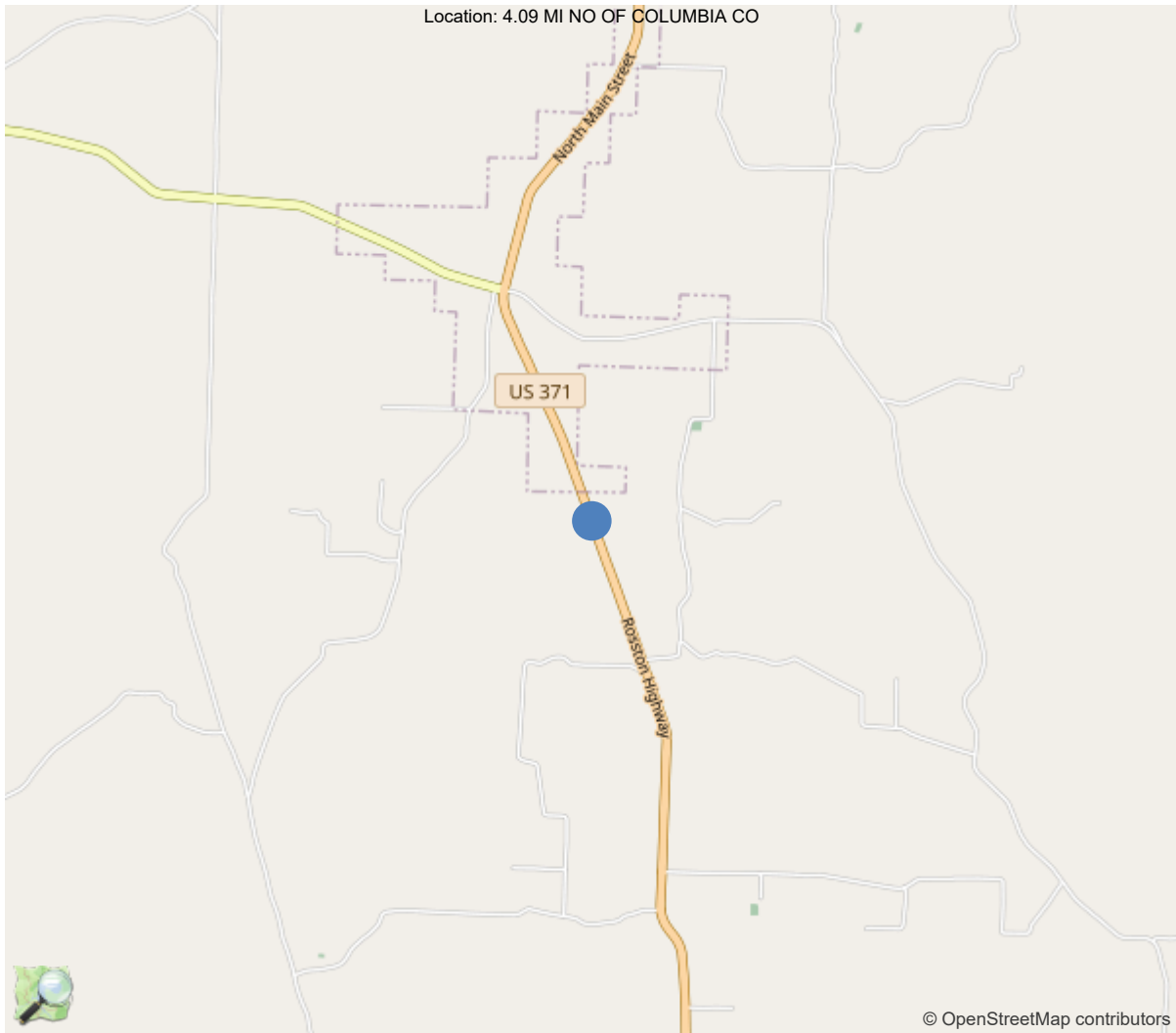
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	31		
Code 9 (31 Tons)	39		
Code 5 (40 Tons)	54		

If calculated capacity is less than the Legal Load Listed, the Bridge Legally Requires Posting Signs to be installed by the Bridge Owner.



30"x36" AR



33.50014, -93.29089



## National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	M0495
(5) Inventory Route	1
(2) Highway Agency District	03 - District 03
(3) County Code	99 - Nevada County
(4) Place Code	0
(6) Features Intersected	CREEK
(7) Facility Carried	US 371 - 05- 24.40
(9) Location	4.09 MI NO OF COLUMBIA CO
(11) Mile Point	24.4 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000371050
(16) Latitude	33.500141
(17) Longitude	-93.290886
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	119
Material	1 - Concrete
Type	19 - Culvert
(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	N - Not applicable
(108) Wearing Surface/Protective System	
Type of Wearing Surface	N - Not applicable (applies only to stru
Type of Membrane	N - Not applicable (applies only to stru
Type of Deck Protection	N - Not applicable (applies only to stru
AGE AND SERVICE	
(27) Year Built	1954
(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	1600
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	21 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	10 ft
(49) Structure Length	21 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	0 ft
(52) Deck Width Out to Out	0 ft
(32) Approach Roadway Width (W/Shoulders)	34.1 ft
(33) Bridge Median	0 - No median
(34) Skew	0 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	99.9 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 w
(111) Pier Protection	1 - Navigation protection not
(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	6 - Rural Minor Arterial
(100) Defense Highway	0 - The inventory route is not
(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
(20) Toll	3 - On free road. The stru
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	N
(59) Superstructure	N
(60) Substructure	N
(61) Channel & Channel Protection	6
(62) Culverts	6
LOAD RATING AND POSTING	
(31) Design Load	2 - M 13.5 / H 15
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	44
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	26
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	
(68) Deck Geometry	N
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	6
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	0 - Inspected feature does not meet
(36B) Transitions	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(36D) Approach Guardrail Ends	0 - Inspected feature does not meet
(113) Scour Critical Bridges	8 - Bridge foundations determined t
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	1633
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			02/12/2024
(91) Frequency			24
(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: Jared Kegley, Inspection Date: 02/12/2024

### Specifications for National Bridge Inventory Sheets

IDENTIFICATION	
B.ID.01 Bridge Number	M0495
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	1954

LOCATION	
B.L.01 State Code	5 - Arkansas
B.L.02 County Code	99 - Nevada County
B.L.03 Place Code	00000 - N/A
B.L.04 Highway Agency District	03 - District 03
B.L.05 Latitude	33.500141
B.L.06 Longitude	-93.290886
B.L.07 Border Bridge Number	
B.L.08 Border Bridge State or Country Code	
B.L.09 Border Bridge Insp. Resp.	
B.L.10 Border Bridge Designated Lead State	
B.L.11 Bridge Location	4.09 MI NO OF COLUMBIA CO
B.L.12 Metropolitan Planning Organization	

CLASSIFICATION	
B.CL.01 Owner	S01 - State transportation departme
B.CL.02 Maint. Responsibility	S01 - State transportation departme
B.CL.03 Federal or Tribal Land Access	N - Not Applicable
B.CL.04 Historic Significance	N - Bridge is not eligible for the
B.CL.05 Toll	N - Bridge does not carry a toll ro
B.CL.06 Emergency Evacuation Designation	

ROADSIDE HARDWARE	
B.RH.01A Bridge Railing Type	
B.RH.01B Bridge Railing Year (YY)	
B.RH.01C Bridge Railing Test Level	
B.RH.02A Transition Type	
B.RH.02B Transition Year (YY)	
B.RH.02C Transition Test Level	

BRIDGE GEOMETRY	
B.G.01 NBIS Bridge Length	21
B.G.02 Total Bridge Length	21
B.G.03 Max Span Length	9.8
B.G.04 Min Span Length	10
B.G.05 Bridge Width Out-to-Out	
B.G.06 Bridge Width Curb-to-Curb	0
B.G.07 Left Curb or Sidewalk Width	0
B.G.08 Right Curb or Sidewalk Width	0
B.G.09 Approach Roadway Width	34.1

B.G.10 Bridge Median	0 - No median
B.G.11 Skew	0
B.G.12 Curved Bridge	N - Not curved
B.G.13 Max Bridge Height	
B.G.14 Sidehill Bridge	N - Not a sidehill bridge
B.G.15 Irregular Deck Area	
B.G.16 Calculated Deck Area	716.4

LOADS AND LOAD RATING	
B.LR.01 Design Load	H15 - H-15
B.LR.02 Design Method	
B.LR.03 Load Rating Date	
B.LR.04 Load Rating Method	LFR - Load Factor Rating
B.LR.05 Inventory Load Rating Factor	0.72
B.LR.06 Operating Load Rating Factor	1.22
B.LR.07 Controlling Legal Load Rating Factor	
B.LR.08 Routine Permit Loads	

INSPECTION REQUIREMENTS	
B.IR.01 NSTM Inspection Required	N - NSTM inspection not required.
B.IR.02 Fatigue Details	
B.IR.03 UW Inspection Required	N - Underwater inspection not requi
B.IR.04 Complex Feature	N - Bridge does not have complex fe

COMPONENT CONDITION RATINGS	
B.C.01 Deck Condition Rating	N - NOT APPLICABLE - Component
B.C.02 Superstructure Condition	N - NOT APPLICABLE - Component
B.C.03 Substructure Condition	N - NOT APPLICABLE - Component
B.C.04 Culvert Condition	7 - GOOD - Some minor defects.
B.C.05 Bridge Railing Condition	N - NOT APPLICABLE - Component
B.C.06 Bridge Railing Transitions Condition	N - NOT APPLICABLE - Component
B.C.07 Bridge Bearings Cond.	N - NOT APPLICABLE - Component
B.C.08 Bridge Joints Condition	N - NOT APPLICABLE - Bridge do
B.C.09 Channel Condition Rating	6 - SATISFACTORY - Widespread
B.C.10 Channel Protection Condition	N - NOT APPLICABLE - Bridge do
B.C.11 Scour Condition Rating	6 - Widespread minor or isolat
B.C.12 Bridge Condition Classification	G - Good
B.C.13 Lowest Condition Rating	7 - GOOD - Some minor defects.
B.C.14 NSTM Insp. Condition	
B.C.15 UW Inspection Condition	

APPRAISAL	
B.AP.01 Approach Roadway Alignment	G - Good
B.AP.02 Overtopping Likelihood	2 - Very low - once every 51 to 99
B.AP.03 Scour Vulnerability	AB-T - TEMP - Stable for scour, pos
B.AP.04 Scour Plan of Action	0 - A scour POA is not required.
B.AP.05 Seismic Vulnerability	0 - Seismic evaluation not complete

Team Lead: Jared Kegley, Inspection Date: 02/12/2024

SPAN SETS			
<b>C1</b>			
B.SP.02 # of Spans	2	B.SP.08 Deck Interaction	
B.SP.03 # of Beam Lines	1	B.SP.09 Deck Material and Type	0 - None
B.SP.04 Span Material	C01 - Reinforced concrete - ca	B.SP.10 Wearing Surface	
B.SP.05 Span Continuity	6 - Frame	B.SP.11 Deck Protective System	0 - None
B.SP.06 Span Type	F02 - Frame - four-sided	B.SP.12 Deck Reinforcing Protective System	
B.SP.07 Span Protective System	0 - None	B.SP.13 Deck Stay-In-Place Forms	

SUBSTRUCTURE SETS			
<b>A1</b>			
B.SB.02 No. of Substructure Units	2	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	F01 - Footing - not on rock
B.SB.04 Substructure Type	A01 - Abutment - cantilever/wa	B.SB.07 Foundation Protective System	0 - None
<b>P1</b>			
B.SB.02 No. of Substructure Units	1	B.SB.05 Substructure Protective System	0 - None
B.SB.03 Substructure Material	C01 - Reinforced concrete - ca	B.SB.06 Foundation Type	F01 - Footing - not on rock
B.SB.04 Substructure Type	P01 - Pier - wall	B.SB.07 Foundation Protective System	0 - None

HIGHWAY FEATURES			
<b>H1</b>			
B.F.02 Feature Location	C - Carried on bridge	B.H.09 Annual ADT	1600
B.F.03 Feature Name	US 371 - 05- 24.40	B.H.10 Annual ADTT	16
B.H.01 Functional Classification	4 - Minor Arterial	B.H.11 Year of Annual ADT	2018
B.H.02 Urban Code	99999	B.H.12 Highway Max Usable Vertical Clearance	99.9
B.H.03 NHS Designation	N - Non-NHS	B.H.13 Highway Min Vertical Clearance	99.9
B.H.04 National Highway Freight Network	N - Not on the NHFN	B.H.14 Highway Min Horizontal Clearance, Left	
B.H.05 STRAHNET Designation	N - Not a STRAHNET route	B.H.15 Highway Min Horizontal Clearance, Right	
B.H.06 LRS Route ID	371050	B.H.16 Highway Max Usable Surface Width	99.9
B.H.07 LRS Mile Point	24.4	B.H.17 Bypass Detour Length	21
B.H.08 Lanes On Highway	2	B.H.18 Crossing Bridge Number	

HIGHWAY ROUTES					
Highway Parent	B.RT.01 Route Designation	B.RT.02 Route Number	B.RT.03 Route Direction	B.RT.04 Route Type	B.RT.05 Service Type
H1	R01	371	2-T - TEMP - Two-way traffic - NS or EW	2 - U.S. route	1 - Mainline



Team Lead: Jared Kegley, Inspection Date: 02/12/2024

WATERWAY FEATURES

W1			
B.F.02 Feature Location	B - Below bridge	B.N.03 Movable Bridge Max Navigation Vertical Clearance	
B.F.03 Feature Name	Creek	B.N.04 Navigation Channel Width	
B.N.01 Navigable Waterway	N - Not navigable waters	B.N.05 Navigation Channel Min Horizontal Clearance	
B.N.02 Navigation Min Vertical Clearance		B.N.06 Substructure Navigation Protection	

POSTING STATUS DATA

B.PS.01 Load Posting Status	B.PS.02 Posting Status Change Date
PO - Permanent and Open	

LOAD EVALUATION AND POSTING

B.EP.01 Legal Load Configuration	B.EP.02 Legal Load Rating Factor	B.EP.03 Posting Type	B.EP.04 Posting Value
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Asset #M0495(Routine)

US 371 - 05- 24.40 over CREEK

Location: 4.09 MI NO OF COLUMBIA CO

Team Lead: Jared Kegley Inspection Date: 02/12/2024

### Inspection Notes

**61 - Channel/Channel Protection** (6 - Bank is beginning to slump. River control devices and embankment protection have widespread minor damage. There is minor stream bed movement evident. Debris is restricting the channel slightly.) Channel rating is a 6 this inspection due to streambank damage located in various locations both upstream and downstream sides of the box culvert.

**62 - Culverts** (6 - Deterioration or initial disintegration, minor chloride contamination, cracking with some leaching, or spalls on concrete or masonry walls and slabs. Local minor scouring at curtain walls, wingwalls or pipes. Metal culverts have a smooth curvature, non-symmetrical shape, significant corrosion or moderate pitting.) Dropped culvert rating to a 6 this inspection due to spalling, exposed rebar, cracking, as well as abrasion being found in various locations throughout both barrels 1 & 2.

**A-B.C.11 - B.C.11 Scour Condition Rating (New NBIS)** (6 - Widespread minor or isolated moderate scour.) Scour rating is a 6 this inspection due to isolated moderate scour around both inlet and outlet ends of barrels 1 & 2.

## National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
241	Reinforced Concrete Culvert	LF	96	42	53	1	0
1080	Delamination/Spall/Patched Area	LF	12	0	11	1	0
1090	Exposed Rebar	LF	2	0	2	0	0
1130	Cracking (RC and Other)	LF	10	0	10	0	0
1190	Abrasion/Wear (PSC/RC)	LF	30	0	30	0	0
(241) Spalling is found throughout both barrels 1 & 2 as well as in various location of inlet and outlet end headwalls. CS2 & CS3 Exposed rebar is found in both barrels 1 & 2. CS2 Minor cracking is found in various locations in both barrels 1 & 2. CS2 Abrasion is found near the bottom of both barrels 1 & 2 as well as in various locations of both headwalls at inlet and outlet ends. Abrasion is also found at the top of barrels 1 & 2 where the add on section has been added. CS2							

## Inspection Photos and Notes



Elevation



Upstream channel



Downstream channel



Typical through shot of culvert





Inventory



Scour around inlet end footing at both barrels 1 & 2.



Scour around inlet end footing at both barrels 1 & 2.



Honey coming to barrel 2





Barrel 2 spalling



Spalling in barrel 2. CS3



Barrel 2 exposed rebar. CS2



Spalling to inlet end headwall. CS2





Typical cracking throughout both barrels. CS2



Typical cracking throughout both barrels. CS2



Barrel 1 add on section, honeycombing and spalling. CS2



Barrel 1 add on section, honeycombing and spalling. CS2





Spalling to headwall on outlet end above barrel 2. CS2



Asset #M0495(Routine)

US 371 - 05- 24.40 over CREEK

Location: 4.09 MI NO OF COLUMBIA CO

Team Lead: Jared Kegley Inspection Date: 02/12/2024

## Routine Maintenance

### Check Box Maintenance Items

Type of Maintenance	Is Recommended?
A-54 - Sealable Deck Cracks	
A-55 - Deck Washing Needed	
A-56 - Joint Cleaning/Flushing Needed	
A-57 - Beam End and Bearing Paint Needed	
A-58 - Cap Cleaning/Flushing Needed	
A-59 - Joint Repair Needed	
A-60 - Full Beam Painting Needed	
A-61 - Polymer Overlay Advised	
A-62 - Hydro and LMC Advised	
A-63 - Missing/Incorrect Log Mile Signage	
A-64 - Vegetation Removal Requested	
A-65 - Clogged deck drains?	
A-66 - Approach minor pothole/leveling needed	

**A-54 - Sealable Deck Cracks**

**A-55 - Deck Washing Needed**

**A-56 - Joint Cleaning/Flushing Needed**



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**US 371 - 05- 24.40 over CREEK**

**Location: 4.09 MI NO OF COLUMBIA CO**

**Team Lead: Jared Kegley Inspection Date: 02/12/2024**

**A-57 - Girder End and Bearing Painting Needed**

**A-58 - Cap Cleaning/Flushing Needed**

**A-59 - Joint Repair Needed**

**A-60 - Full Girder Painting Needed**

**A-61 - Polymer Overlay Advised**

**A-62 - Hydro and LMC Advised**

**A-63 - Missing/Incorrect Log Mile Signage**

**A-64 - Vegetation Removal Requested**

**A-65 - Clogged deck drains?**





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**US 371 - 05- 24.40 over CREEK**

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**A-66 - Approach minor pothole/leveling needed**



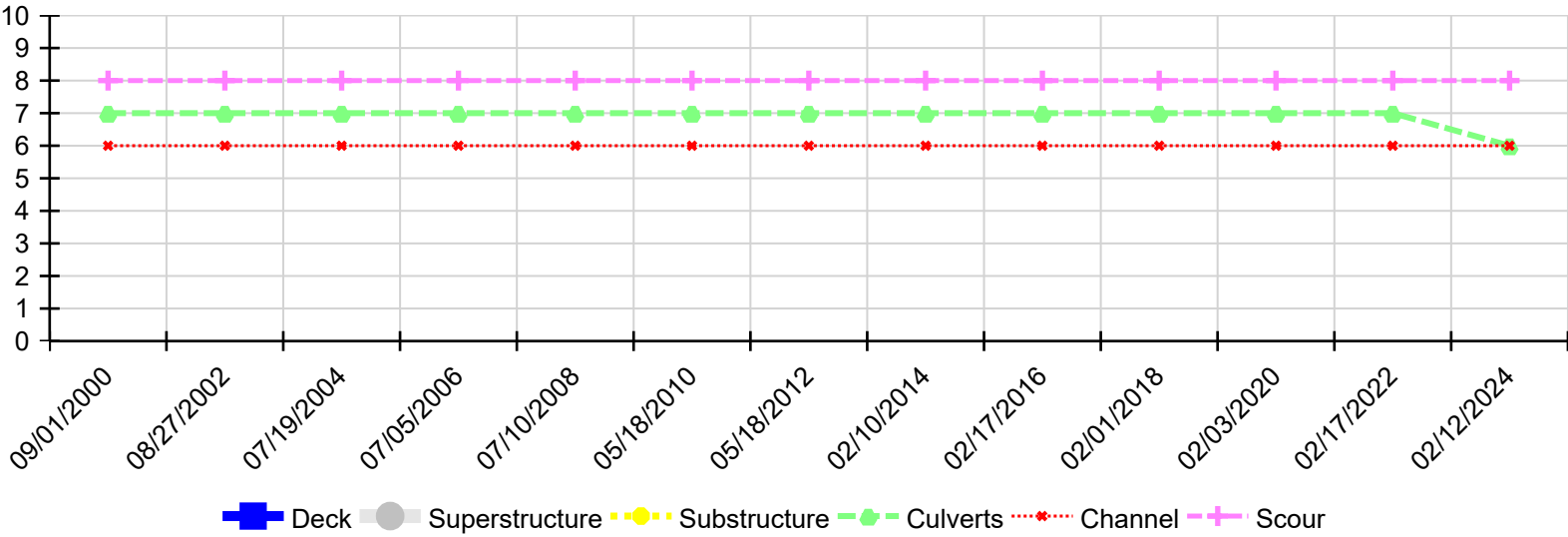
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US 371 - 05- 24.40 over CREEK

Location: 4.09 MI NO OF COLUMBIA CO

Team Lead: Jared Kegley Inspection Date: 02/12/2024

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
02/12/2024	N	N	N	6	6	8
02/17/2022	N	N	N	7	6	8
02/03/2020	N	N	N	7	6	8
02/01/2018	N	N	N	7	6	8
02/17/2016	N	N	N	7	6	8
02/10/2014	N	N	N	7	6	8
05/18/2012	N	N	N	7	6	8
05/18/2010	N	N	N	7	6	8
07/10/2008	N	N	N	7	6	8
07/05/2006	N	N	N	7	6	8
07/19/2004	N	N	N	7	6	8
08/27/2002	N	N	N	7	6	8
09/01/2000	N	N	N	7	6	8