

Bridge M0491 Inspection Report



Latitude:33.45530, Longitude:-93.28456

Route:371 Section:05 Log:27.68

Arnold Road ID:50x371x5xA, Arnold Log mile:27.515

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

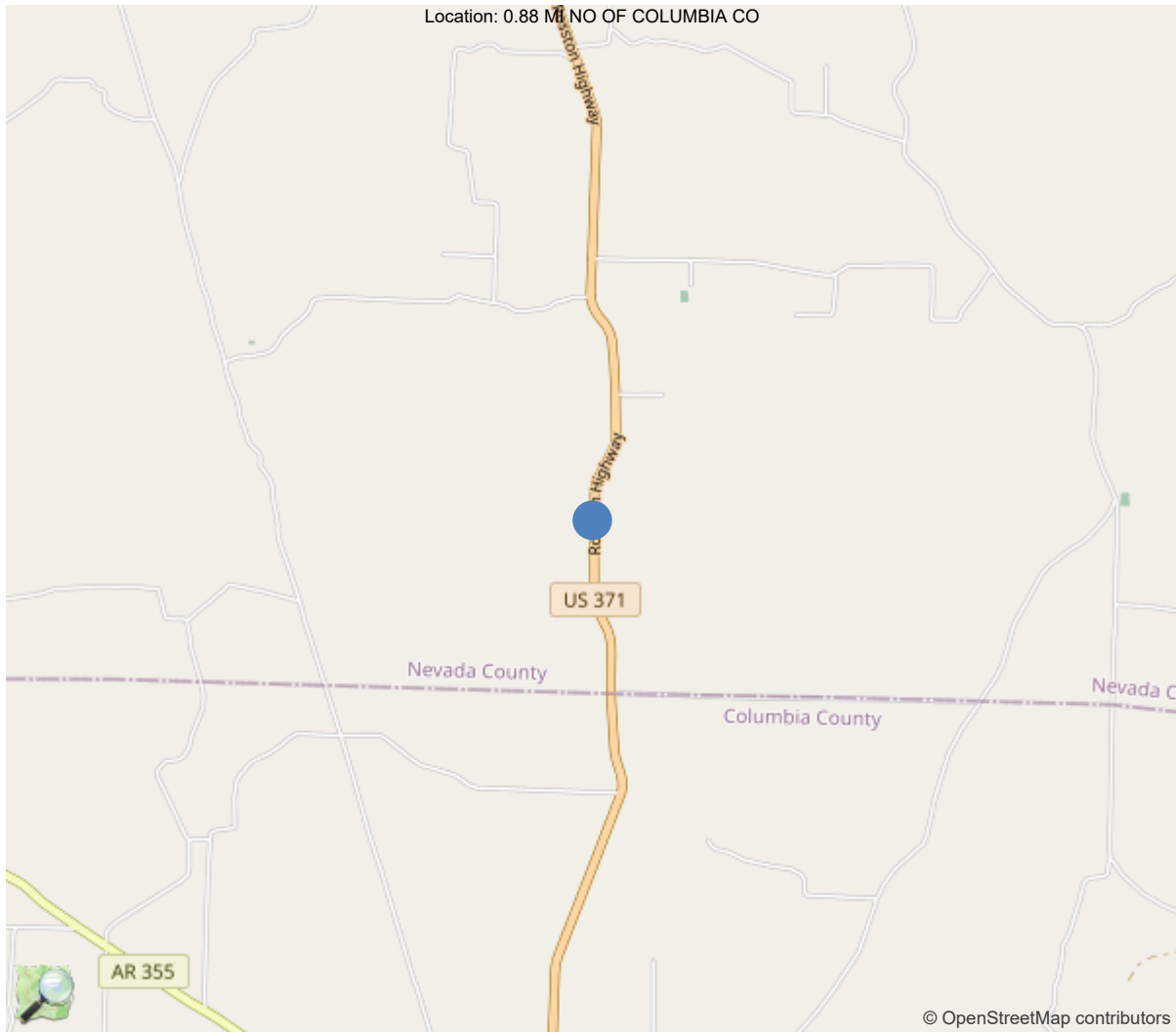
70 - Bridge Posting: 5 - Equal to or above legal loads

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	28		
Code 9 (31 Tons)	33		
Code 5 (40 Tons)	48		

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



33.45530, -93.28456

National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	M0491
(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 -27.68
(9) Location	0.88 MI NO OF COLUMBIA CO
(11) Mile Point	27.68 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000
(16) Latitude	33.4553
(17) Longitude	-93.28456
(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	1928
(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	39
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	24
(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	M0491
B.ID.02 Bridge Name	
B.ID.03 Previous Bridge No.	
B.W.01 Year Built	1928

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	33.4553
B.L.06 Longitude	-93.28456
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	0.88 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	0.67
B.LR.06 Operating Load Rating Factor	1.08
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	6 - SATISFACTORY - Widespread
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	7 - Some minor scour.
B.C.12 Bridge Condition Classification	F - Fair
B.C.13 Lowest Condition Rating	6 - SATISFACTORY - Widespread
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	3 - Low - once every 26 to 50 years
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			
C1			
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	
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			
A1			
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
P1			
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			
H1			
B.F.02 Feature Location	C - Carried on bridge	B.H.09 Annual ADT	1600
B.F.03 Feature Name	US 371 - 05 -27.68	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		B.H.16 Highway Max Usable Surface Width	99.9
B.H.07 LRS Mile Point	27.68	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
----------------------------------	----------------------------------	----------------------	-----------------------



Asset #M0491(Routine)

US 371 - 05 -27.68 over CREEK

Location: 0.88 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 minor streambank damage located in various locations both upstream and downstream of the box culvert. Debris is slightly restricting channel upstream of the box culvert. Channel is slightly misaligned on upstream side of channel.

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.) The culvert rating is a 6 this inspection due to spalling with exposed rebar, spalling and cracking with efflorescence in various locations of box culvert.

A-B.C.11 - B.C.11 Scour Condition Rating (New NBIS) (7 - Some minor scour.)

Scour rating is a 7 this inspection due to minor scour. Both the inlet and outlet ends of the box culvert have repairs that have been made prior to this inspection.

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
241	Reinforced Concrete Culvert	LF	96	31	56	9	0
1080	Delamination/Spall/Patched Area	LF	4	0	2	2	0
1090	Exposed Rebar	LF	6	0	0	6	0
1120	Efflorescence/Rust Staining	LF	3	0	2	1	0
1130	Cracking (RC and Other)	LF	12	0	12	0	0
1190	Abrasion/Wear (PSC/RC)	LF	40	0	40	0	0
(241) Spalling is located in various locations of both barrels 1 & 2. Exposed rebar is located in both barrels 1 & 2 throughout the ceiling of the box culvert. Efflorescence is located in various locations throughout the ceiling of both barrels 1 & 2. Minor cracking is located throughout both barrels 1 & 2. Minor abrasion is found near the bottom of box culvert in both barrels 1 & 2.							

Inspection Photos and Notes



Elevation



Upstream channel



Upstream channel



Downstream channel



Typical through shot of box culvert



Inventory



Outlet repairs for previous scour



Rip rap used for scour protection at inlet ends



Barrel 2 abrasion. CS2



Barrel 2 efflorescence. CS2



Barrel 2 exposed rebar. CS3



Barrel 2 spall. CS3



Barrel 2 cracking. CS2



Barrel 1 cracking. CS2



Barrel 1 efflorescence. CS2



Barrel 1 efflorescence with rust staining. CS3



Barrel 1 exposed rebar. CS3



Barrel 1 abrasion. CS2



Barrel 1 abrasion. CS2



Typical cracking throughout both barrels 1 & 2. CS2



Asset #M0491(Routine)

US 371 - 05 -27.68 over CREEK

Location: 0.88 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



Asset #M0491(Routine)

US 371 - 05 -27.68 over CREEK

Location: 0.88 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?



Asset #M0491(Routine)

US 371 - 05 -27.68 over CREEK

Location: 0.88 MI NO OF COLUMBIA CO

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

A-66 - Approach minor pothole/leveling needed



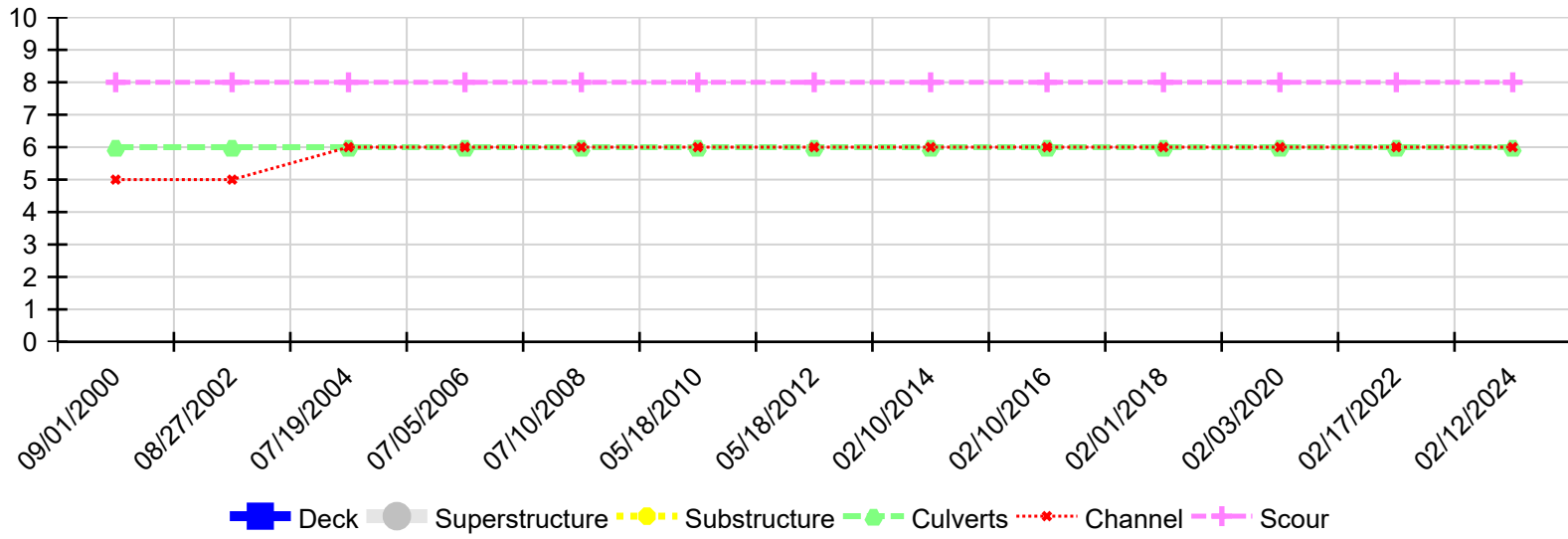
Asset #M0491(Routine)

US 371 - 05 -27.68 over CREEK

Location: 0.88 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	6	6	8
02/03/2020	N	N	N	6	6	8
02/01/2018	N	N	N	6	6	8
02/10/2016	N	N	N	6	6	8
02/10/2014	N	N	N	6	6	8
05/18/2012	N	N	N	6	6	8
05/18/2010	N	N	N	6	6	8
07/10/2008	N	N	N	6	6	8
07/05/2006	N	N	N	6	6	8
07/19/2004	N	N	N	6	6	8
08/27/2002	N	N	N	6	5	8
09/01/2000	N	N	N	6	5	8