Asset #07108(Routine)
US 167 S-3 LM2.14 over Champagnolle Relief
Location: 2.26 Mi.NE Union CoLn
Team Lead: John Parks **Inspection Date:** 05/15/2024

Bridge 07108 Inspection Report



Latitude:33.36741, Longitude:-92.51433

Route:167 Section:03 Log:2.14

Arnold Road ID:7x167x3xA, Arnold Log mile:1.821

District 07, 13 - Calhoun County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

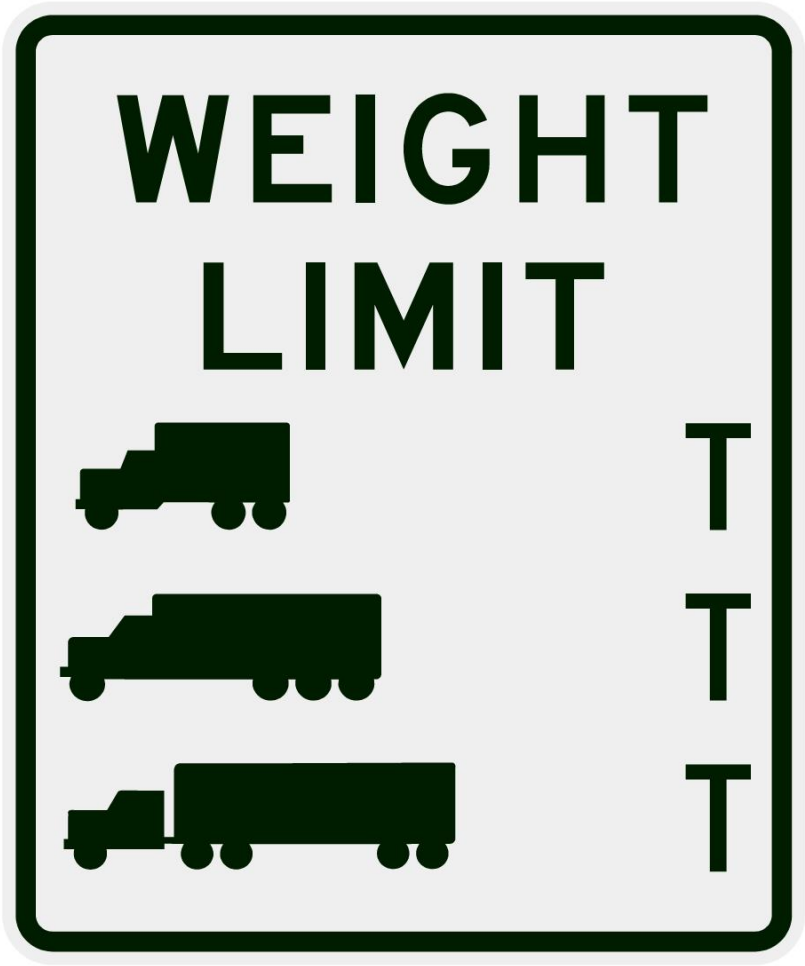
Bridge Posting Information

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

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

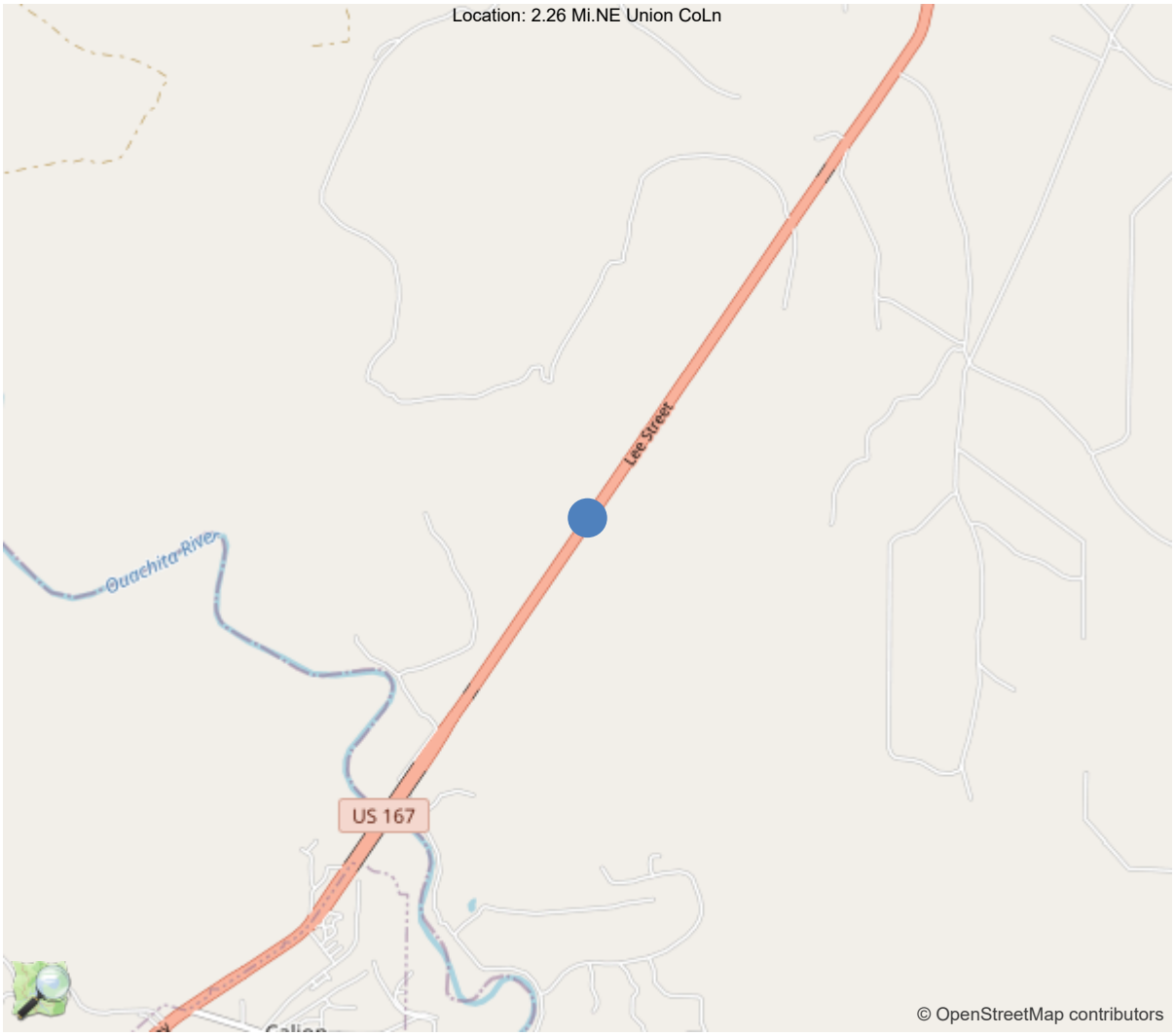
Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	40		
Code 9 (31 Tons)	50		
Code 5 (40 Tons)	60		

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

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National Bridge Inventory Data Sheet

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	07108
(5) Inventory Route	1
(2) Highway Agency District	07 - District 07
(3) County Code	13 - Calhoun County
(4) Place Code	0
(6) Features Intersected	Champagnolle Relief
(7) Facility Carried	US 167 S-3 LM2.14
(9) Location	2.26 Mi.NE Union CoLn
(11) Mile Point	2.14 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000167030
(16) Latitude	33.36741
(17) Longitude	-92.51433
(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	00
Material	0 - Other
Type	0 - Other
(45) No. of Spans in Main Unit	3
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	0 - None (no additional concrete thickne
Type of Membrane	0 - None
Type of Deck Protection	1 - Epoxy Coated Reinforcing
AGE AND SERVICE	
(27) Year Built	2009
(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	4200
(30) Year of ADT	2018
(109) Truck ADT	19 %
(19) Bypass, Detour Length	56 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	52 ft
(49) Structure Length	158.2 ft
(50) Curb or Sidewalk Width	
Left	0.6 ft
Right	0.6 ft
(51) Bridge Roadway Width Curb to Curb	64 ft
(52) Deck Width Out to Out	67.2 ft
(32) Approach Roadway Width (W/Shoulders)	64 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	64 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	0 ft
Ref:	
(55) Min Lat Underclear RT	0 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	1
(26) Functional Class	2 - Rural Principal Arterial -
(100) Defense Highway	0 - The inventory route is not
(101) Parallel Structure	N - No parallel structure exis
(102) Direction of Traffic	2 - way traffic
(103) Temporary Structure	
(105) Federal Lands Highways	0 - N/A
(110) Designated National Network	1 - The inventory route is par
(20) Toll	3 - On free road. The structu
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	7
(59) Superstructure	8
(60) Substructure	7
(61) Channel & Channel Protection	7
(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	60
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
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	
(68) Deck Geometry	9
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	8
(36A) Bridge Railings	1 - Inspected feature meets current
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	5 - 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	$
(97) Year of Improvement Cost Estimate	
(114) Future ADT	4655
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			05/15/2024
(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.

Inspection Notes

General Observation

This is a continuous span, steel multigirder bridge, with composite R.C. deck, R.C. caps, and Pre-cast prestressed R.C. Piles. The Routine inspection encompasses the assessment of all components of the bridge. A drone is used for Span 2 and waders are worn to access the underside of the bridge. The tools used are flashlights, tape measures, pit gauges, level, and probing rod to identify and assess the severity of any defects.

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58 - Deck (7 - GOOD CONDITION - some minor problems.)

Deck is rated 7 due to longitudinal and transverse cracks up to 0.025" throughout the entire deck. The undersurface overhangs have minor cracks with efflorescence.

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59 - Superstructure (8 - VERY GOOD CONDITION - no problems noted.)

The superstructure is rated 8 due to no defects observed and the weathering steel patina is a fine granular consistency.

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60 - Substructure (7 - GOOD CONDITION - some minor problems.)

The substructure is rated 7 due to minor cracks with efflorescence in the abutment backwalls and minor spall to the top of the backwalls.

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62 - Culverts (N - Not applicable. Used if structure is not a culvert.)

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61 - Channel/Channel Protection (7 - Bank protection is in need of minor repairs. River control devices and embankment protection have a little minor damage. Banks and/or channel have minor amounts of drift.)
The channel is rated 7 due to being well vegitated and stable, minimal debris in the stream.

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71 - Waterway Adequacy (8 - Bridge deck above roadway approaches. Slight chance of overtopping roadway approaches.)

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72 - Approach Roadway Alignment (8 - Equal to present desirable criteria)

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113 - Scour Critical Bridges (5 - Bridge foundations determined to be stable for assessed or calculated scour condition. Scour is determined to be within the limits of footing or piles (Example B) by assessment (i.e.,bridge foundations are on rock formations that have been determined to resist scour within the service life of the bridge), by calculations or by installation of properly designed countermeasures (see HEC 23).)

A-51 - Inspection Direction (2 - S to N)

A-15 - Late Reason (N/A)

A-45 - Bats Present

A-108 - Load Rating Requested

A-119 - Scour Assessment Request

A-B.C.11 - B.C.11 Scour Condition Rating (New NBIS) (7 - Some minor scour.)
The scour condition is rated 7 due to insignificant local scour around the piles, stream bed is sandy silty material.

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National Bridge Element Quantities and Notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	10624	8174	2450	0	0
1120	Efflorescence/Rust Staining	SF	42	0	42	0	0
1130	Cracking (RC and Other)	SF	2408	0	2408	0	0

(12) Span 1: 469SF cracking CS2, 13SF efflorescence CS2.
Topside Longitudinal and transverse cracks up to 0.025".
Left overhang has scattered minor cracks with efflorescence.
Right overhang has scattered minor cracks with efflorescence.

Span 2: 982SF cracking CS2, 18SF efflorescence CS2.
Topside Longitudinal and transverse cracks up to 0.025"
Left overhang has scattered minor cracks with efflorescence.
Right overhang has scattered minor cracks with efflorescence.

Span 3: 957SF cracking CS2, 11SF efflorescence CS2.
Topside Longitudinal and transverse cracks up to 0.025"
Left overhang no defects observed.
Right overhang has scattered minor cracks with efflorescence.

107	Steel Open Girder/Beam	LF	1405	1405	0	0	0
515	Steel Protective Coating	SF	8957	8957	0	0	0

(107) Span 1:
Girder 1 no defects observed.
Girder 2 no defects observed.
Girder 3 no defects observed.
Girder 4 no defects observed.
Girder 5 no defects observed.
Girder 6 no defects observed.
Girder 7 no defects observed.
Girder 8 no defects observed.
Girder 9 no defects observed.
Span 2:
Girder 1 no defects observed.
Girder 2 no defects observed.
Girder 3 no defects observed.
Girder 4 no defects observed.
Girder 5 no defects observed.
Girder 6 no defects observed.
Girder 7 no defects observed.
Girder 8 no defects observed.
Girder 9 no defects observed.
Span 3:
Girder 1 no defects observed.
Girder 2 no defects observed.
Girder 3 no defects observed.
Girder 4 no defects observed.
Girder 5 no defects observed.
Girder 6 no defects observed.
Girder 7 no defects observed.
Girder 8 no defects observed.

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
Girder 9 no defects observed. (515-107) All weathering steel patina is CS1							
215	Reinforced Concrete Abutment	LF	134	108	26	0	0
1120	Efflorescence/Rust Staining	LF	26	0	26	0	0
(215) Bent 1: 6LF efflorescence CS2. 4LF spall CS2 Backwall has scattered vertical cracks with efflorescence. Top of the backwall, has minor spalls scattered across the top back corner. Bent 4: 4LF efflorescence CS2. 12LF spall CS2 Backwall has scattered vertical cracks with efflorescence. Top of the backwall, has minor spalls scattered across the top ahead corner.							
226	Prestressed concrete piles	EA	18	18	0	0	0
(226) Bent 2: Pile 1 no defects observed. Pile 2 no defects observed. Pile 3 no defects observed. Pile 4 no defects observed. Pile 5 no defects observed. Pile 6 no defects observed. Pile 7 no defects observed. Pile 8 no defects observed. Pile 9 no defects observed. Bent 3: Pile 1 no defects observed. Pile 2 no defects observed. Pile 3 no defects observed. Pile 4 no defects observed. Pile 5 no defects observed. Pile 6 no defects observed. Pile 7 no defects observed. Pile 8 no defects observed. Pile 9 no defects observed.							
234	Reinforced Concrete Pier Cap	LF	134	134	0	0	0
(234) Bent 2: no defects observed. Bent 3: no defects observed.							
301	Pourable Joint Seal	LF	134	94	40	0	0
2350	Debris Impaction	LF	40	0	40	0	0
(301) Bent 1: 20LF debris CS2 Debris in joints at the shoulders. Bent 4: 20LF debris CS2 Debris in joints at the shoulders.							
310	Elastomeric Bearing	EA	36	36	0	0	0
(310) Bent 2:							

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
	Bearing 1 no defects observed. Bearing 2 no defects observed. Bearing 3 no defects observed. Bearing 4 no defects observed. Bearing 5 no defects observed. Bearing 6 no defects observed. Bearing 7 no defects observed. Bearing 8 no defects observed. Bearing 9 no defects observed. Bent 3: Bearing 1 no defects observed. Bearing2 no defects observed. Bearing 3 no defects observed. Bearing 4 no defects observed. Bearing 5 no defects observed. Bearing 6 no defects observed. Bearing 7 no defects observed. Bearing 8 no defects observed. Bearing 9 no defects observed.						
331	Reinforced Concrete Bridge Railing	LF	312	263	49	0	0
1130	Cracking (RC and Other)	LF	49	0	49	0	0
	(331) Left Rail: 27LF crack CS2 Scattered vertical cracks. Right Rail: 22LF crack CS2 Scattered vertical cracks.						

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Inspection Photos and Notes



Elevation



Deck overview



Typical view of the deck under surface



Typical view of the Superstructure

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Typical substructure



Channel right side downstream



Channel left side upstream



Approach



Typical view of the weathering steel patina, fine granular consistency.

Routine Maintenance

Check Box Maintenance Items

Type of Maintenance	Is Recommended?
A-54 - Sealable Deck Cracks	Yes
A-55 - Deck Washing Needed	Yes
A-56 - Joint Cleaning/Flushing Needed	No
A-57 - Beam End and Bearing Paint Needed	No
A-58 - Cap Cleaning/Flushing Needed	No
A-59 - Joint Repair Needed	No
A-60 - Full Beam Painting Needed	No
A-61 - Polymer Overlay Advised	No
A-62 - Hydro and LMC Advised	No
A-63 - Missing/Incorrect Log Mile Signage	No
A-64 - Vegetation Removal Requested	No
A-65 - Clogged deck drains?	
A-66 - Approach minor pothole/leveling needed	

A-54 - Sealable Deck Cracks (Yes)

A-55 - Deck Washing Needed (Yes)

A-56 - Joint Cleaning/Flushing Needed (No)

A-57 - Beam End and Bearing Painting Needed (No)

A-58 - Cap Cleaning/Flushing Needed (No)

A-59 - Joint Repair Needed (No)

A-60 - Full Beam Painting Needed (No)

A-61 - Polymer Overlay Advised (No)

A-62 - Hydro and LMC Advised (No)

A-63 - Missing/Incorrect Log Mile Signage (No)

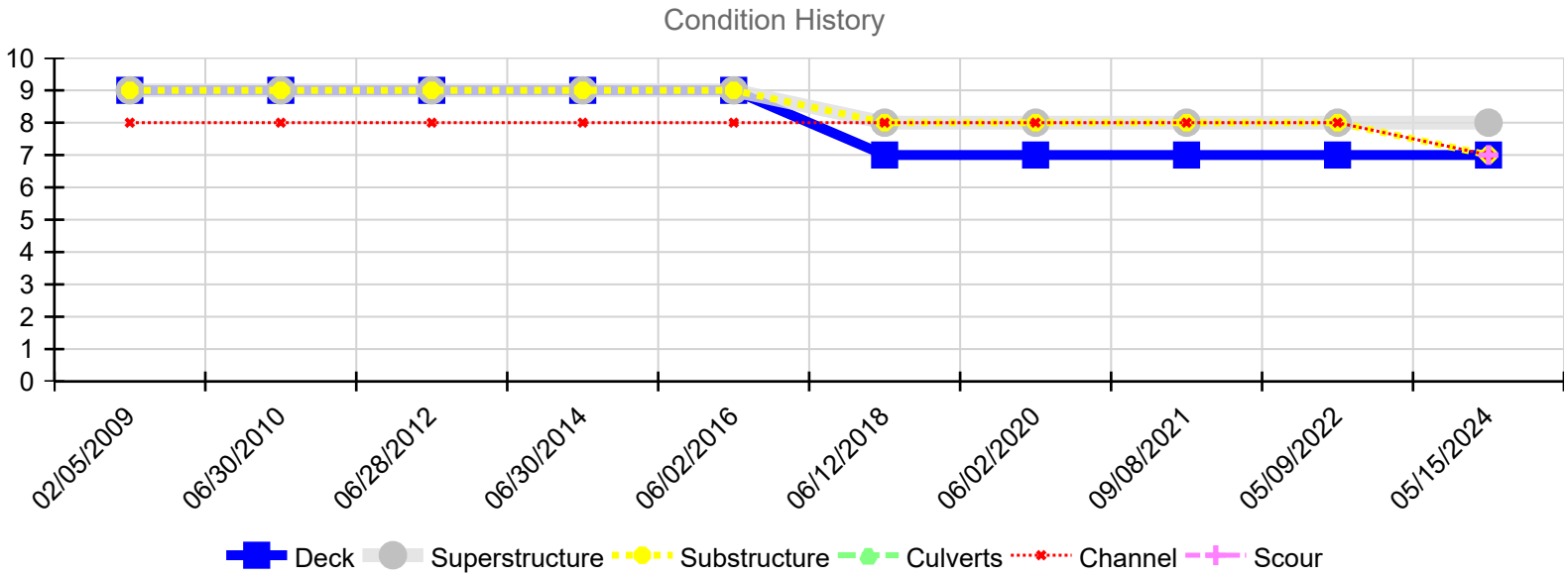
A-64 - Vegetation Removal Requested (No)

A-65 - Clogged deck drains?

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A-66 - Approach minor pothole/leveling needed

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Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
05/15/2024	7	8	7	N	7	7
05/09/2022	7	8	8	N	8	N
09/08/2021	7	8	8	N	8	N
09/08/2021	7	8	8	N	8	N
06/02/2020	7	8	8	N	8	N
06/12/2018	7	8	8	N	8	N
06/02/2016	9	9	9	N	8	N
06/30/2014	9	9	9	N	8	N
06/28/2012	9	9	9	N	8	N
06/30/2010	9	9	9	N	8	N
02/05/2009	9	9	9	N	8	N