



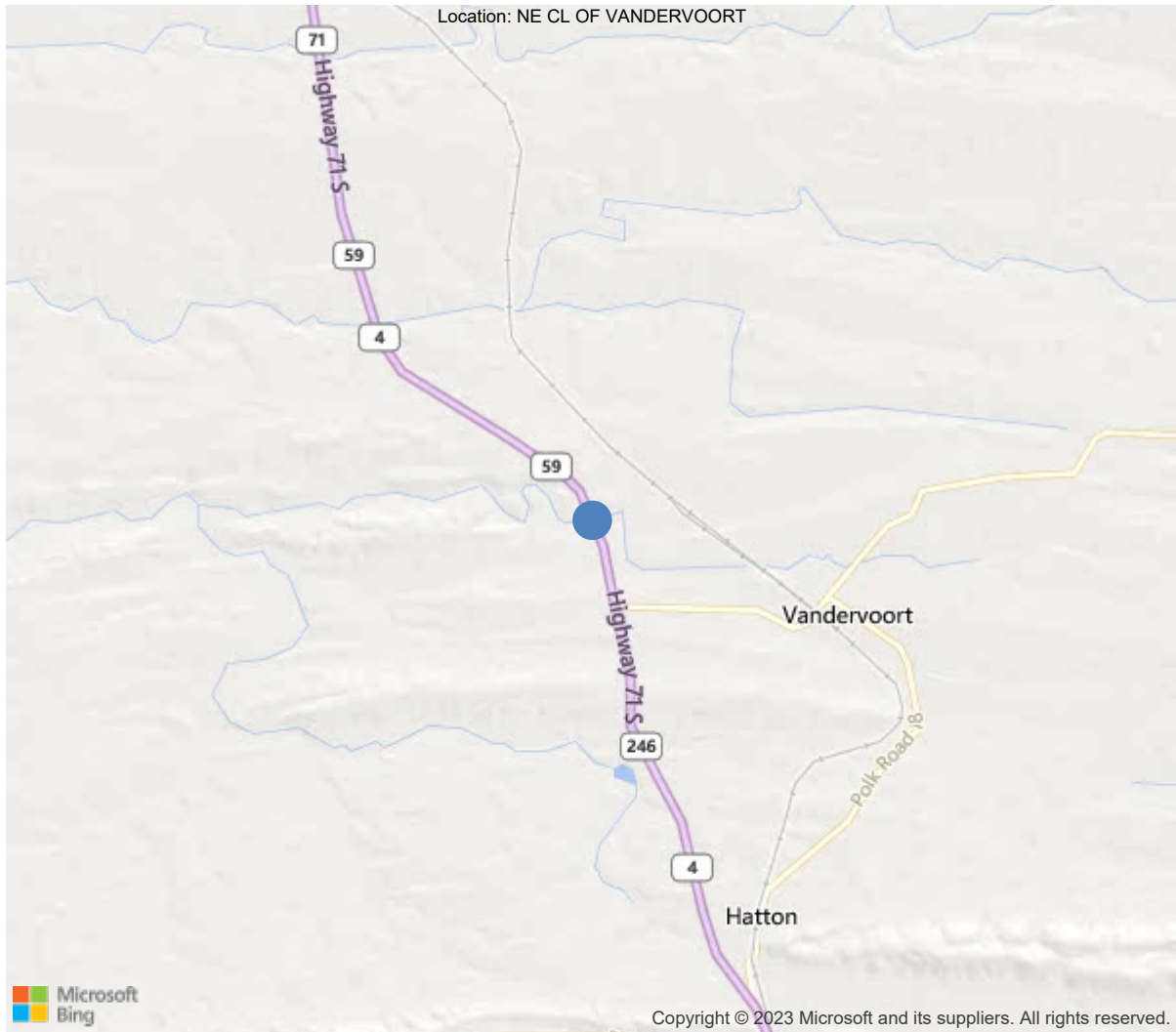
Latitude:34.38696, Longitude:-94.38667

Route:71 Section:08 Log:15.657

Arnold Road ID:, Arnold Log mile:

District 04, 113 - Polk County

Owner: 1 - State Highway Agency



34.38696, -94.38667



Asset #01853(Routine)

US 71 - Polk Co. over Little Hickory Creek

Location: NE CL OF VANDERVOORT

Team Lead: Bob McEntyre, Inspection Date: 07/02/2019

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	01853
(5) Inventory Route	1
(2) Highway Agency District	04 - District 04
(3) County Code	113 - Polk County
(4) Place Code	0
(6) Features Intersected	Little Hickory Creek
(7) Facility Carried	US 71 - Polk Co.
(9) Location	NE CL OF VANDERVOORT
(11) Mile Point	15.657 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000071050
(16) Latitude	34.386963
(17) Longitude	-94.386665
(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	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	6 - Bituminous
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1934
(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	4700
(30) Year of ADT	2014
(109) Truck ADT	1 %
(19) Bypass, Detour Length	5 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	26 ft
(49) Structure Length	79 ft
(50) Curb or Sidewalk Width	
Left	0.5 ft
Right	0.5 ft
(51) Bridge Roadway Width Curb to Curb	24.3 ft
(52) Deck Width Out to Out	25.6 ft
(32) Approach Roadway Width (W/Shoulders)	33.1 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	25.3 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	1
(26) Functional Class	2 - Rural Principal Arterial -
(100) Defense Highway	2 - The inventory route is on
(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	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	5
(59) Superstructure	5
(60) Substructure	6
(61) Channel & Channel Protection	6
(62) Culverts	N
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	41
(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	5
(68) Deck Geometry	2
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	6
(72) Approach Roadway Alignment	7
(36A) Bridge Railings	0 - Inspected feature does not meet
(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	8 - Bridge foundations determined t
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	105 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 400
(96) Total Project Cost	\$ 866
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	5855
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	08/11/2021		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
<p>* 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.</p>			



Asset #01853(Routine)

District: 04, County: 113 - Polk County

Team Lead: Bob McEntyre, Inspection Date: 07/02/2019

General Observation (False)

05222019 SPC- Element quantities plan verified. 07/11/2017 - JCJ & JML - Type 2 Underwater Inspection - Wading and probing during shallow and turbid water conditions indicate that the top of the Left footing at Bent 3 is exposed with no apparent scour problems at this inspection.

A-46 - Asset Files

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US 71 - Polk Co. over Little Hickory Creek

Location: NE CL OF VANDERVOORT

Team Lead: Bob McEntyre, **Inspection Date:** 07/02/2019

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	2338	1679	651	8	0
1080	Delamination/Spall/Patched Area	SF	105	0	102	3	0
1090	Exposed Rebar	SF	5	0	0	5	0
1120	Efflorescence/Rust Staining	SF	501	0	501	0	0
1130	Cracking (RC and Other)	SF	48	0	48	0	0
510	Wearing Surfaces	SF	1860	1849	0	11	0
3220	Crack (Wearing Surface)	SF	11	0	0	11	0
<p>(12) Driving surface:</p> <p>-The previous asphalt driving surface has been milled off and a new overlay approximately 1-1/2" thick has been placed on the deck. The new overlay has a few areas of cracking along the expansion joints.</p> <p>Undersurface:</p> <p>-The undersurface of the deck has areas of mapcracking and numerous transverse cracks with leakage and staining at approximately 5' spacing.</p> <p>-The end of the deck over bent # 2 deflects under live load where the top flanges of beams and diaphragms have significant section loss. The deck has transverse cracks located approximately 5' from the bent.</p> <p>-There is shallow spalling adjacent to the top flanges of the beams in several locations.</p> <p>-There are a few isolated spalls with exposed reinforcing steel visible from the undersurface of the deck.</p>							
107	Steel Open Girder/Beam	LF	388	359	0	26	3
1000	Corrosion	LF	29	0	0	26	3
515	Steel Protective Coating	SF	2197	440	439	878	440
3440	Effectiveness (Steel Protective Coatings)	LF	1757	0	439	878	440
<p>(107) -The superstructure has isolated areas with active corrosion and old section loss scars. Active corrosion is most noticeable in the ends of the beams adjacent to the expansion joints.</p> <p>-The end of the deck over bent # 2 deflects under live load where the top flanges of beams and diaphragms have significant section loss. The deck has transverse cracks located approximately 5' from the bent.</p> <p>-Span # 1, beam # 1 has a 3" area of knife edged section loss to bottom flange over abutment # 1.</p> <p>-Span # 2, beam # 3 over bent # 3 has section loss to bottom flange in an area approximately 1" long with 3/16" remaining section in the affected area.</p> <p>-Span # 3, beam # 4 over bent # 3 has approximately 50% section loss to bottom flange in a 1" long area.</p> <p>-Structure is noisy during live load impacts with heavy loads.</p> <p>-Freckled rust is visible in several locations.</p>							
205	Reinforced Concrete Column	EA	4	0	3	1	0
1080	Delamination/Spall/Patched Area	EA	1	0	1	0	0
1090	Exposed Rebar	EA	3	0	2	1	0
<p>(205) -Intermediate bents have light / medium abrasion at the base of columns. There are no apparent changes since the last inspection.</p> <p>-The backside of column # 2 of bent # 2 has a shallow softball sized spall with no exposed reinforcing steel near water elevation.</p> <p>-The channel has a tree wedged against bent # 2 and a large tree across channel at the outlet end of span # 2.</p> <p>-Bent # 3, column # 2 has several shallow spalls that expose reinforcing steel adjacent to the web wall.</p>							



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US 71 - Polk Co. over Little Hickory Creek

Location: NE CL OF VANDERVOORT

Team Lead: Bob McEntyre, Inspection Date: 07/02/2019

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
210	Reinforced Concrete Pier Wall	LF	40	37	3	0	0
1130	Cracking (RC and Other)	LF	3	0	3	0	0
(210) -There are a few isolated vertical hairline cracks in the web walls. The lower portion of webs are not visible at this inspection due to elevated water level.							
215	Reinforced Concrete Abutment	LF	73	50	19	4	0
1120	Efflorescence/Rust Staining	LF	4	0	1	3	0
1130	Cracking (RC and Other)	LF	1	0	0	1	0
1190	Abrasion/Wear (PSC/RC)	LF	18	0	18	0	0
(215) -There is minor debris accumulation on the abutments. -The top of the backwalls make contact with the diaphragms at abutment # 1. -There is a horizontal crack in the right side of abutment # 1 stem wall and East wing wall. -The abutment caps and stem walls have light abrasion due to leakage from the expansion joints.							
234	Reinforced Concrete Pier Cap	LF	49	49	0	0	0
(234) -Maintenance forces have replaced the joint seals in the past. There is no observed leakage over the intermediate bents at this inspection. -Bent caps have dirt, debris and asphalt accumulation from past open deck joint seals. -There are no apparent changes since the last inspection.							
301	Pourable Joint Seal	LF	50	50	0	0	0
(301) -Maintenance forces have replaced the joint seals with a type of fiber board in the past. No apparent leakage over the intermediate bents at this inspection. -The repairs at the deck joint do not match the grades of the original wearing surface and is causing additional impacts to the deck. -Structure is noisy when impacted by heavy loads.							
311	Movable Bearing	EA	15	0	0	15	0
1000	Corrosion	EA	15	0	0	15	0
515	Steel Protective Coating	SF	45	0	0	0	45
3440	Effectiveness (Steel Protective Coatings)	EA	45	0	0	0	45
(311) -Maintenance forces have placed shims between the masonry and sole plates in some of the bearing devices. The shims have heavy corrosion and have vibrated out of position in some locations. -Bearings have a failed paint system with active corrosion and measurable section loss throughout. -The structure is still noisy with impacted by traffic. -The bearings have section loss from past active corrosion. -The bearings at Bent # 2 are still covered with asphalt, have active corrosion with section loss and no repairs since the last inspection. -Active corrosion is showing through the paint system. There are no apparent noteworthy changes since the last inspection.							
313	Fixed Bearing	EA	15	0	0	15	0
1000	Corrosion	EA	15	0	0	15	0
515	Steel Protective Coating	SF	45	0	0	0	45
3440	Effectiveness (Steel Protective Coatings)	EA	45	0	0	0	45

US 71 - Polk Co. over Little Hickory Creek

Location: NE CL OF VANDERVOORT

Team Lead: Bob McEntyre, **Inspection Date:** 07/02/2019

[illegible]

Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	2338	1679	651	8	0
1080	Delamination/Spall/Patched Area	SF	105	0	102	3	0
1090	Exposed Rebar	SF	5	0	0	5	0
1120	Efflorescence/Rust Staining	SF	501	0	501	0	0
1130	Cracking (RC and Other)	SF	48	0	48	0	0
510	Wearing Surfaces	SF	1860	1849	0	11	0
3220	Crack (Wearing Surface)	SF	11	0	0	11	0
<p>(12) Driving surface:</p> <p>-The previous asphalt driving surface has been milled off and a new overlay approximately 1-1/2" thick has been placed on the deck. The new overlay has a few areas of cracking along the expansion joints.</p> <p>Undersurface:</p> <p>-The undersurface of the deck has areas of mapcracking and numerous transverse cracks with leakage and staining at approximately 5' spacing.</p> <p>-The end of the deck over bent # 2 deflects under live load where the top flanges of beams and diaphragms have significant section loss. The deck has transverse cracks located approximately 5' from the bent.</p> <p>-There is shallow spalling adjacent to the top flanges of the beams in several locations.</p> <p>-There are a few isolated spalls with exposed reinforcing steel visible from the undersurface of the deck.</p>							

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Team Lead: Bob McEntyre, **Inspection Date:** 07/02/2019

Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	388	359	0	26	3
1000	Corrosion	LF	29	0	0	26	3
515	Steel Protective Coating	SF	2197	440	439	878	440
3440	Effectiveness (Steel Protective Coatings)	LF	1757	0	439	878	440

(107) -The superstructure has isolated areas with active corrosion and old section loss scars. Active corrosion is most noticeable in the ends of the beams adjacent to the expansion joints.

-The end of the deck over bent # 2 deflects under live load where the top flanges of beams and diaphragms have significant section loss. The deck has transverse cracks located approximately 5' from the bent.

-Span # 1, beam # 1 has a 3" area of knife edged section loss to bottom flange over abutment # 1.

-Span # 2, beam # 3 over bent # 3 has section loss to bottom flange in an area approximately 1" long with 3/16" remaining section in the affected area.

-Span # 3, beam # 4 over bent # 3 has approximately 50% section loss to bottom flange in a 1" long area.

-Structure is noisy during live load impacts with heavy loads.

-Freckled rust is visible in several locations.

Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
205	Reinforced Concrete Column	EA	4	0	3	1	0
1080	Delamination/Spall/Patched Area	EA	1	0	1	0	0
1090	Exposed Rebar	EA	3	0	2	1	0
(205) -Intermediate bents have light / medium abrasion at the base of columns. There are no apparent changes since the last inspection. -The backside of column # 2 of bent # 2 has a shallow softball sized spall with no exposed reinforcing steel near water elevation. -The channel has a tree wedged against bent # 2 and a large tree across channel at the outlet end of span # 2. -Bent # 3, column # 2 has several shallow spalls that expose reinforcing steel adjacent to the web wall.							
210	Reinforced Concrete Pier Wall	LF	40	37	3	0	0
1130	Cracking (RC and Other)	LF	3	0	3	0	0
(210) -There are a few isolated vertical hairline cracks in the web walls. The lower portion of webs are not visible at this inspection due to elevated water level.							
215	Reinforced Concrete Abutment	LF	73	50	19	4	0
1120	Efflorescence/Rust Staining	LF	4	0	1	3	0
1130	Cracking (RC and Other)	LF	1	0	0	1	0
1190	Abrasion/Wear (PSC/RC)	LF	18	0	18	0	0
(215) -There is minor debris accumulation on the abutments. -The top of the backwalls make contact with the diaphragms at abutment # 1. -There is a horizontal crack in the right side of abutment # 1 stem wall and East wing wall. -The abutment caps and stem walls have light abrasion due to leakage from the expansion joints.							
234	Reinforced Concrete Pier Cap	LF	49	49	0	0	0
(234) -Maintenance forces have replaced the joint seals in the past. There is no observed leakage over the intermediate bents at this inspection. -Bent caps have dirt, debris and asphalt accumulation from past open deck joint seals. -There are no apparent changes since the last inspection.							



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Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4



Inventory 1 looking North.



Tree across channel at the outlet end of span # 2.



Span # 2, beam # 3 over bent # 3 has section loss to bottom flange in an area approximately 1' long with 3/16" remaining section in the affected area.



Span # 1, beam # 1 has a 3" area of knife edged section loss to bottom flange over abutment # 1.



General view of abutment # 2 bearing area.



Abutment # 1, right side-Horizontal cracking.



Span # 3, bearing # 5 over bent # 3-Corrosion.



Span # 3, bay # 4 at abutment # 2-Spalling with exposed reinforcing steel in deck underside.



Bent # 3 bearing area.



General view of bent # 3.



Span # 3, beam # 4 over bent # 3 has approximately 50% section loss to bottom flange.



General view of bent # 2 in span # 2.



Span # 2, bay # 3-Mapcracking with efflorescence in deck underside.



Bent # 3 expansion joint.



Bent # 3 web wall has a narrow vertical crack near centerline.



General view of abutment # 1 bearing area.



The channel has a tree wedged against bent # 2.



Span # 3, bearing # 4 at abutment # 2-Heavy corrosion.



General view of bent # 2.



General view of span # 3 undersurface with transverse cracking and staining.



General view of bent caps.



The backside of column # 2 of bent # 2 has a shallow softball sized spall with no exposed reinforcing steel near water elevation.



Bent # 3-Asphalt and dirt accumulation on cap.



General view of bent # 2.



Abutment # 2-Dirt and debris accumulation.



Bent # 3 bearing area.



Transverse cracking with efflorescence in deck overhangs.



Expansion joint at abutment # 2.



Bent # 3, column # 2 has several shallow spalls that expose reinforcing steel adjacent to the web wall.



Span # 1, beam # 2 at abutment # 1-Corrosion with flaking rust.



Span # 3, right side-Shallow spalling along top flange.



Bent # 3-Dirt and accumulation.



Span # 2, post #1 on right side has a softball sized spalled area at base of post.



Elevation looking West from right side.



Span # 3, beam # 4-Old section loss to top flange over bent # 3.



Bent # 2 expansion joint.



General view of abutment # 2.



General view of driving surface.



Asphalt in expansion joints.



General view of span # 2 undersurface.





Asset #01853(Routine)

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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	



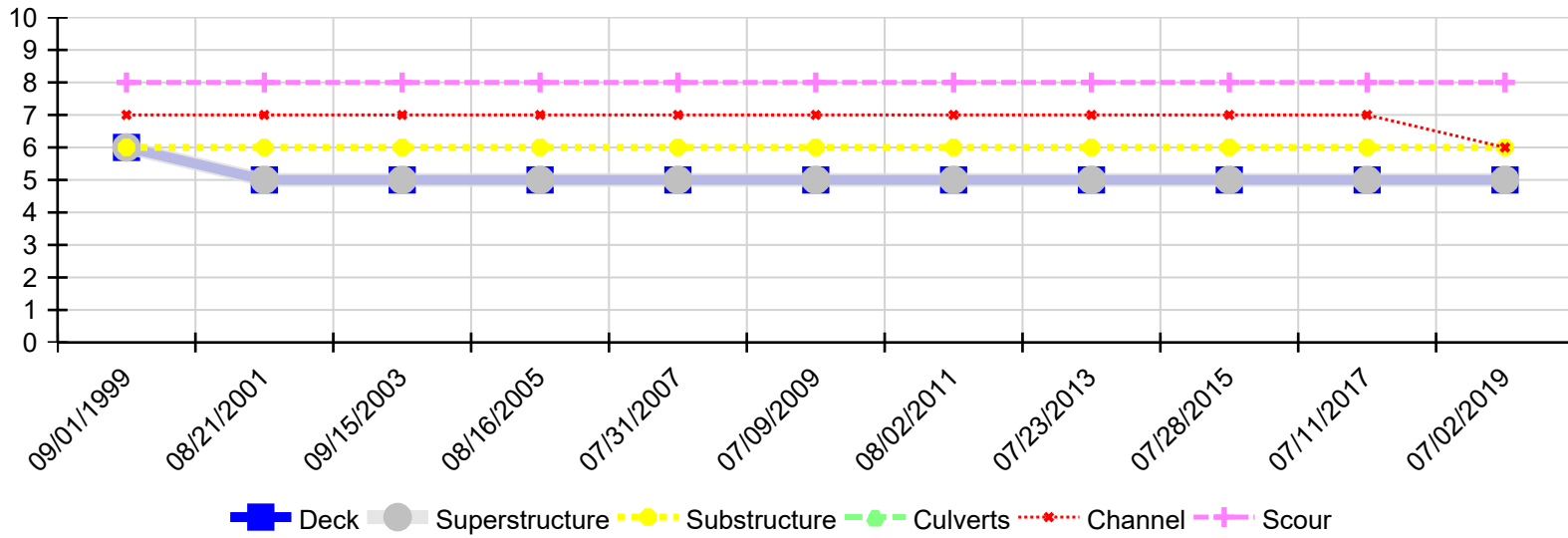
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Location: NE CL OF VANDERVOORT

Team Lead: Bob McEntyre, Inspection Date: 07/02/2019

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
07/02/2019	5	5	6	N	6	8
07/11/2017	5	5	6	N	7	8
07/28/2015	5	5	6	N	7	8
07/23/2013	5	5	6	N	7	8
08/02/2011	5	5	6	N	7	8
07/09/2009	5	5	6	N	7	8
07/31/2007	5	5	6	N	7	8
08/16/2005	5	5	6	N	7	8
09/15/2003	5	5	6	N	7	8
08/21/2001	5	5	6	N	7	8
09/01/1999	6	6	6	N	7	8

