



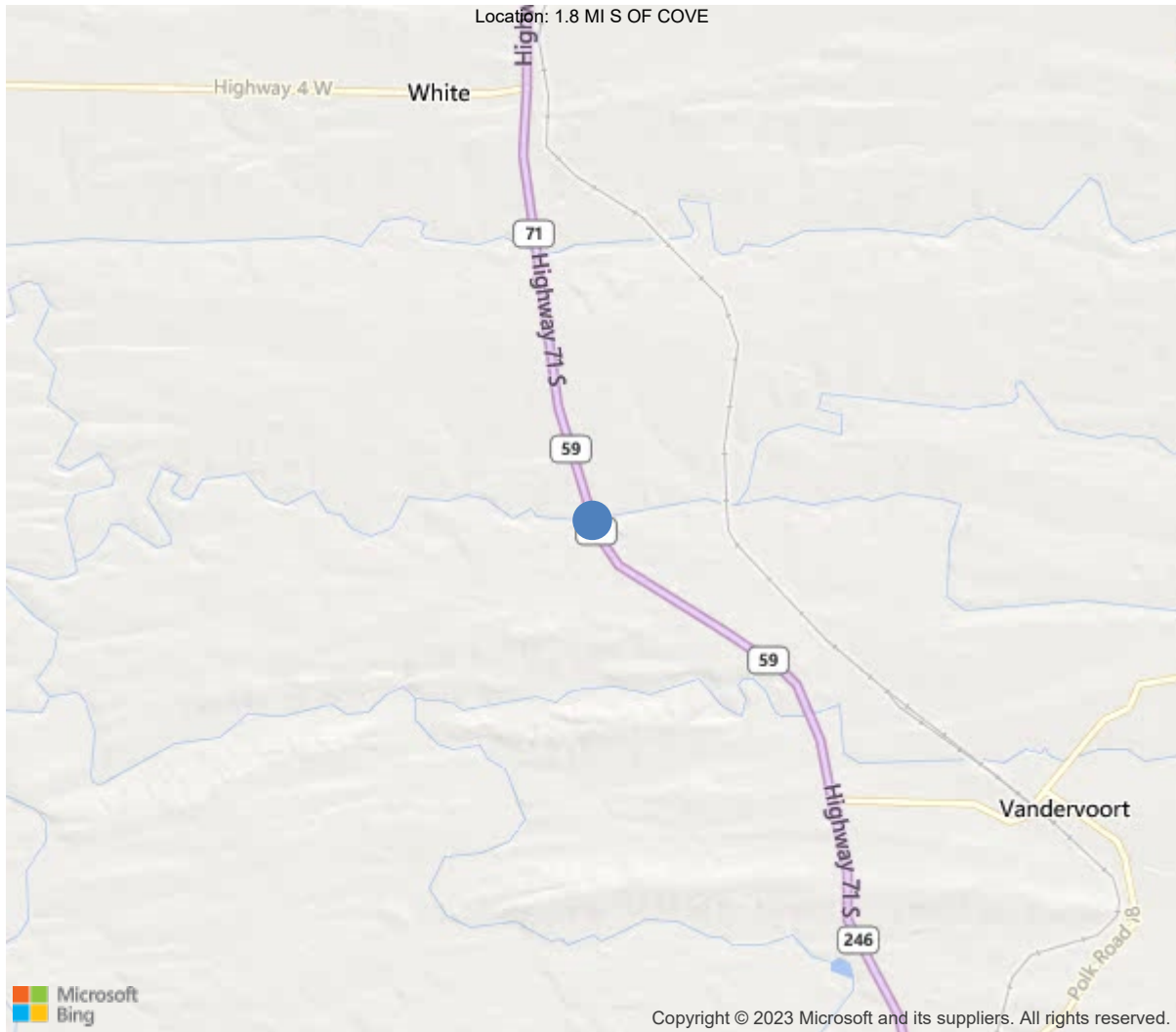
Latitude:34.40096, Longitude:-94.40572

Route:71 Section:08 Log:17.156

Arnold Road ID:57x71x8xA, Arnold Log mile:17.168

District 04, 113 - Polk County

Owner: 1 - State Highway Agency



34.40096, -94.40572



Asset #02145(Routine)

US 71 - Polk Co. over Barren Creek

Location: 1.8 MI S OF COVE

Team Lead: Eric West, Inspection Date: 08/16/2021

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	02145
(5) Inventory Route	1
(2) Highway Agency District	04 - District 04
(3) County Code	113 - Polk County
(4) Place Code	0
(6) Features Intersected	Barren Creek
(7) Facility Carried	US 71 - Polk Co.
(9) Location	1.8 MI S OF COVE
(11) Mile Point	17.156 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000071080
(16) Latitude	34.400955
(17) Longitude	-94.405716
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	14
Material	1 - Concrete
Type	4 - Tee beam
(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	1940
(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	4500
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	7 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	31 ft
(49) Structure Length	93 ft
(50) Curb or Sidewalk Width	
Left	1.4 ft
Right	1.4 ft
(51) Bridge Roadway Width Curb to Curb	26.2 ft
(52) Deck Width Out to Out	31.1 ft
(32) Approach Roadway Width (W/Shoulders)	33.1 ft
(33) Bridge Median	0 - No median
(34) Skew	45 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	30.2 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	7
(59) Superstructure	7
(60) Substructure	6
(61) Channel & Channel Protection	7
(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	58
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	35
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	6
(68) Deck Geometry	3
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(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	120 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 400
(96) Total Project Cost	\$ 921
(97) Year of Improvement Cost Estimate	2003
(114) Future ADT	5855
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	08/16/2021		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
* 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.			



Asset #02145(Routine)

District: 04, County: 113 - Polk County

Team Lead: Eric West, Inspection Date: 08/16/2021

General Observation (False)

05222019 SPC- Element quantities plan verified.

A-15 - Late Reason (N/A)

08/16/2021 - EJW - Structure inspected late due to heavy workload.

A-46 - Asset Files

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Asset #02145(Routine)

US 71 - Polk Co. over Barren Creek

Location: 1.8 MI S OF COVE

Team Lead: Eric West, Inspection Date: 08/16/2021

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	2490	2469	21	0	0
1090	Exposed Rebar	SF	3	0	3	0	0
1120	Efflorescence/Rust Staining	SF	6	0	6	0	0
1130	Cracking (RC and Other)	SF	12	0	12	0	0
510	Wearing Surfaces	SF	2384	699	93	1592	0
3210	Delam/Spall/Patched Area/Pothole	SF	122	0	93	29	0
3220	Crack (Wearing Surface)	SF	1563	0	0	1563	0
(16) Undersurface: -The undersurface of the deck in span # 1 has a transverse crack with light efflorescence in bay # 1. -Span # 1 Rt has 3 shallow spalls with exposed reinforcing steel in the drip groove. Approach roadways: -North approach roadway has a pothole in the North bound lane. (510-16) -The asphalt driving surface of the deck has map cracking and a few potholes. -The asphalt driving surface is breaking apart over the expansion joints. -Maintenance forces have made a few temporary asphalt patches on the driving surface of the deck.							
110	Reinforced Concrete Open Girder/Beam	LF	372	371	0	1	0
1090	Exposed Rebar	LF	1	0	0	1	0
(110) -There is a 6" shallow spall with exposed reinforcing steel visible from the undersurface of span # 3, girder # 1 adjacent to bent # 3. Exposed reinforcing steel has initial section loss at this inspection.							
205	Reinforced Concrete Column	EA	12	3	8	1	0
1080	Delamination/Spall/Patched Area	EA	2	0	2	0	0
1090	Exposed Rebar	EA	1	0	0	1	0
1190	Abrasion/Wear (PSC/RC)	EA	6	0	6	0	0
(205) -There is light scale at base of columns typical. -Bent # 3, Column # 1 has a shallow spall with exposed reinforcing steel at the cap juncture with measurable section loss. The column has a softball sized spall with exposed reinforcing steel approximately 4' from the channel floor on the downstream side. -Abutment # 2, Column # 1 has several shallow spalls that appear to be from the form work during the construction process. -Abutment # 2, column # 2 has a shallow 12" long delaminated area at the cap juncture.							
210	Reinforced Concrete Pier Wall	LF	56	0	54	2	0
1090	Exposed Rebar	LF	2	0	0	2	0
1130	Cracking (RC and Other)	LF	4	0	4	0	0
1190	Abrasion/Wear (PSC/RC)	LF	50	0	50	0	0
(210) -Bent # 2 web wall has a full height vertical crack in both bays. -Bent # 3 pier wall has a full height vertical crack between columns # 2 and # 3. -Bent # 3 has 4' x 6" shallow spall with exposed reinforcing steel and one 10" spall with exposed reinforcing steel in the backface of bent # 3 web wall located between columns # 1 and # 2. Exposed reinforcing steel has initial section loss.							
215	Reinforced Concrete Abutment	LF	168	131	37	0	0



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US 71 - Polk Co. over Barren Creek

Location: 1.8 MI S OF COVE

Team Lead: Eric West, Inspection Date: 08/16/2021

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1190	Abrasion/Wear (PSC/RC)	LF	35	0	35	0	0
(215) -The substructure has shallow 1" spalls (at approximately 24" centers) around the ends of the tie wire used during the construction process typical in this type of structure. -The South bound lane at abutment # 1 has minor settlement in the approach roadway. -Abutment #1 has no apparent settlement problems at this inspection. -Abutment # 2 cap has an 18" delaminated area near the center line of the abutment over column # 2.							
220	Reinforced Concrete Pile Cap/Footing	LF	5	3	2	0	0
6000	Scour	LF	2	0	2	0	0
(220) -Bent # 2 Column #3 footing is partially exposed. No apparent undermining to footing at this inspection.							
234	Reinforced Concrete Pier Cap	LF	76	74	1	1	0
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
1090	Exposed Rebar	LF	1	0	0	1	0
(234) -The caps have a few isolated minor spalls and delaminated areas. -The repair to the back face of bent # 3 cap on the left side is cracked and delaminated. -The right side of bent # 2 cap has a shallow 6" spall with exposed reinforcing steel.							
305	Assembly Joint without Seal	LF	152	0	0	152	0
2350	Debris Impaction	LF	152	0	0	152	0
(305) -The expansion joints are primarily covered in asphalt and not visible. -The asphalt wearing surface is breaking apart over the expansion joints. -The expansion joints leak water on the substructure.							
311	Movable Bearing	EA	12	0	4	8	0
1000	Corrosion	EA	12	0	4	8	0
515	Steel Protective Coating	SF	48	6	0	11	31
3440	Effectiveness (Steel Protective Coatings)	EA	42	0	0	11	31
(311) -The bearings have been painted in the past. The paint system is failing with layers of flaking rust forming and numerous bearings with rust showing through the paint. -The bearings have corrosion with layers of flaking rust between sole and masonry plates in several locations.							
313	Fixed Bearing	EA	12	0	1	11	0
1000	Corrosion	EA	12	0	1	11	0
515	Steel Protective Coating	SF	48	48	0	0	0
(313) -Bearings have a failing paint system with corrosion and thick flaking rust between sole and masonry plates in several locations. -Abutment # 2, bearing # 2 has minor movement during heavy live load impacts.							
331	Reinforced Concrete Bridge Railing	LF	186	173	11	2	0
1080	Delamination/Spall/Patched Area	LF	9	0	9	0	0
1090	Exposed Rebar	LF	2	0	0	2	0
1130	Cracking (RC and Other)	LF	2	0	2	0	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
(331)	-The bridge railing has a few insignificant shallow spalls in the posts and the vertical face of the concrete curbs. -Span # 2, right post support over bent # 2 has a 12" spall with exposed reinforcing steel under the deck overhang. -Span # 2, Lt post support over Bent # 2 has a 12" spall with exposed reinforcing steel under the deck overhang.						

Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
16	Reinforced Concrete Top Flange	SF	2490	2469	21	0	0
1090	Exposed Rebar	SF	3	0	3	0	0
1120	Efflorescence/Rust Staining	SF	6	0	6	0	0
1130	Cracking (RC and Other)	SF	12	0	12	0	0
510	Wearing Surfaces	SF	2384	699	93	1592	0
3210	Delam/Spall/Patched Area/Pothole	SF	122	0	93	29	0
3220	Crack (Wearing Surface)	SF	1563	0	0	1563	0
<p>(16) Undersurface:</p> <p>-The undersurface of the deck in span # 1 has a transverse crack with light efflorescence in bay # 1.</p> <p>-Span # 1 Rt has 3 shallow spalls with exposed reinforcing steel in the drip groove.</p> <p>Approach roadways:</p> <p>-North approach roadway has a pothole in the North bound lane.</p> <p>(510-16) -The asphalt driving surface of the deck has map cracking and a few potholes.</p> <p>-The asphalt driving surface is breaking apart over the expansion joints.</p> <p>-Maintenance forces have made a few temporary asphalt patches on the driving surface of the deck.</p>							

Team Lead: Eric West, **Inspection Date:** 08/16/2021

Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
110	Reinforced Concrete Open Girder/Beam	LF	372	371	0	1	0
1090	Exposed Rebar	LF	1	0	0	1	0
(110) -There is a 6" shallow spall with exposed reinforcing steel visible from the undersurface of span # 3, girder # 1 adjacent to bent # 3. Exposed reinforcing steel has initial section loss at this inspection.							

Substructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
205	Reinforced Concrete Column	EA	12	3	8	1	0
1080	Delamination/Spall/Patched Area	EA	2	0	2	0	0
1090	Exposed Rebar	EA	1	0	0	1	0
1190	Abrasion/Wear (PSC/RC)	EA	6	0	6	0	0
(205) -There is light scale at base of columns typical. -Bent # 3, Column # 1 has a shallow spall with exposed reinforcing steel at the cap juncture with measurable section loss. The column has a softball sized spall with exposed reinforcing steel approximately 4' from the channel floor on the downstream side. -Abutment # 2, Column # 1 has several shallow spalls that appear to be from the form work during the construction process. -Abutment # 2, column # 2 has a shallow 12" long delaminated area at the cap juncture.							
210	Reinforced Concrete Pier Wall	LF	56	0	54	2	0
1090	Exposed Rebar	LF	2	0	0	2	0
1130	Cracking (RC and Other)	LF	4	0	4	0	0
1190	Abrasion/Wear (PSC/RC)	LF	50	0	50	0	0
(210) -Bent # 2 web wall has a full height vertical crack in both bays. -Bent # 3 pier wall has a full height vertical crack between columns # 2 and # 3. -Bent # 3 has 4' x 6" shallow spall with exposed reinforcing steel and one 10" spall with exposed reinforcing steel in the backface of bent # 3 web wall located between columns # 1 and # 2. Exposed reinforcing steel has initial section loss.							
215	Reinforced Concrete Abutment	LF	168	131	37	0	0
1080	Delamination/Spall/Patched Area	LF	2	0	2	0	0
1190	Abrasion/Wear (PSC/RC)	LF	35	0	35	0	0
(215) -The substructure has shallow 1" spalls (at approximately 24" centers) around the ends of the tie wire used during the construction process typical in this type of structure. -The South bound lane at abutment # 1 has minor settlement in the approach roadway. -Abutment #1 has no apparent settlement problems at this inspection. -Abutment # 2 cap has an 18" delaminated area near the center line of the abutment over column # 2.							
220	Reinforced Concrete Pile Cap/Footing	LF	5	3	2	0	0
6000	Scour	LF	2	0	2	0	0
(220) -Bent # 2 Column #3 footing is partially exposed. No apparent undermining to footing at this inspection.							
234	Reinforced Concrete Pier Cap	LF	76	74	1	1	0
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
1090	Exposed Rebar	LF	1	0	0	1	0
(234) -The caps have a few isolated minor spalls and delaminated areas. -The repair to the back face of bent # 3 cap on the left side is cracked and delaminated. -The right side of bent # 2 cap has a shallow 6" spall with exposed reinforcing steel.							



Team Lead: Eric West, Inspection Date: 08/16/2021

Culvert

ELEMENTS	DESCRIPTION	UNITS	TOTAL				
				CS1	CS2	CS3	CS4



Elevation



Roadway



Typical driving surface of the deck.



Span # 1 typical undersurface of the deck.



Abutment #1 with no apparent significant settlement of the approach roadway.



Abutment #1 wearing surface over the expansion joint.



Span #1 asphalt deterioration with potholes in the northbound lane.



Bent #2 wearing surface over the intermediate bent.



Abutment #2 wearing surface over the expansion joint.



Typical driving surface cracking.



Span #2, Bent #3 Column #1 spalling with exposed reinforcing steel.



Span # 2, Bent # 3 Bay # 1 spalling with exposed reinforcing steel.



Bent #2 typical.



Bent #3 typical asphalt deterioration over the intermediate bents.



Bent #3 bearings with active corrosion and layers of flaking rust.



Span # 1 Bent # 2 active corrosion with layers of flaking rust between the masonry and bearings.



Span #2, Bent #2 bearings with active corrosion and layers of flaking rust.



Abutment #1 bearings with active corrosion and layers of flaking rust.



Span # 2, Lt post support over Bent # 2 has a 12" spall with exposed reinforcing steel under the deck overhang.



Span #1 Rt over Bent #2 spalling with exposed reinforcing steel.

Maintenance Needs

Date Reported: 07/02/2019
Priority: D- Routine
Type of Work: Repair (General)
Status: Monitor
Component: Substructure

Deficiency Description

Substructure -

The previous repair to the top of column # 1 of bent # 3 has spalled off exposing the reinforcing steel. Exposed steel has measurable section loss. The column has a softball sized spall with exposed reinforcing steel approximately 4' from the channel floor on the downstream side.

The repair to the backface of bent # 3 cap over column # 1 is cracked and delaminated.

The backface of bent # 2 cap on the right side has a shallow 6" spall with exposed reinforcing steel.

Remarks



The repair to the backface of bent # 3 cap on the left side over column # 1 is cracked and delaminated.



Bent # 3, column # 1-Spalling with exposed reinforcing steel.

Date Reported: 07/23/2013
Priority: C - Important
Type of Work: Repair (General)
Status: Monitor
Component: Deck

Deficiency Description

Driving Surface -
The asphalt driving surface is breaking apart over the expansion joints.

Remarks



Bent #2 wearing surface over the intermediate bent.



Potholes forming in driving surface over bent # 3 expansion joint.

Date Reported: 07/16/2015
Priority: D- Routine
Type of Work: Repair (General)
Status: RepairDocumented
Component:

Deficiency Description

Approach Roadway -The North approach roadway has a pothole in the Northbound lane.

Remarks

08/16/2021 - EJW - Potholes have been filled with asphalt.



North approach roadway has a pothole in the Northbound lane.



Potholes have been filled with asphalt.



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Date Reported: 07/16/2015
Priority: C - Important
Type of Work: Repair (General)
Status: Monitor
Component: Substructure

Deficiency Description

Substructure -

The left side of abutment # 1 has voids between Columns # 1 & 2 under the web wall and under the left wing wall.

Remarks

08/16/2021 - EJW - Updated deficiency description on this date, maintenance forces have made repairs to the approach roadway with no apparent settlement or noticeable problems to the approach roadway.



Abutment #1 Lt undermining scale.



Abutment #1 Lt undermining.



Bent 1, Left side.



Bent 1 Left wingwall



Asset #02145(Routine)

US 71 - Polk Co. over Barren Creek

Location: 1.8 MI S OF COVE

Team Lead: Eric West, Inspection Date: 08/16/2021

Date Reported: 07/27/2017
Priority: C - Important
Type of Work: Repair (General)
Status: Monitor
Component: Superstructure

Deficiency Description

Bearings -

The bearings over all bents have a failing paint system with corrosion and layers of flaking rust between sole and masonry plates in several locations.

Abutment # 2, Bearing # 2 has minor movement during heavy live load impacts.

Remarks



Bent # 3, bearing # 2-Corrosion with thick flaking rust.



Span # 2, bearing # 1 over bent # 3-Corrosion with section loss to masonry plate.



Date Reported: 08/17/2021
Priority: D- Routine
Type of Work: Repair (General)
Status: Open
Component: Approach

Deficiency Description

Approach Guardrail-
The Southwest approach guardrail has minor collision damage.

Remarks



Southwest approach guardrail with minor collision damage that has damaged several rail posts.



Southwest approach guardrail with minor collision damage.

Date Reported: 08/17/2021
Priority: D- Routine
Type of Work: Repair (General)
Status: Open
Component: Deck

Deficiency Description

R.C. Deck-
The deck has a few potholes in the asphalt driving surface.

Remarks



Span #1 asphalt deterioration with potholes in the northbound lane.



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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	



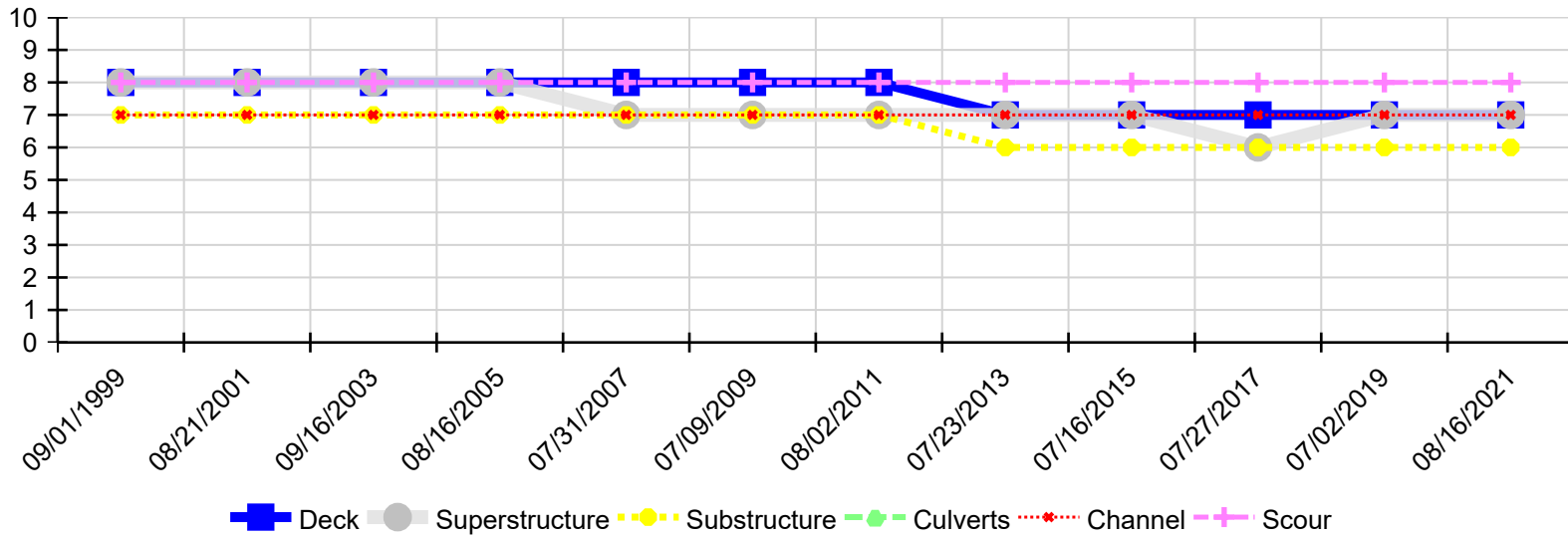
Asset #02145(Routine)

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Location: 1.8 MI S OF COVE

Team Lead: Eric West, Inspection Date: 08/16/2021

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
08/16/2021	7	7	6	N	7	8
07/02/2019	7	7	6	N	7	8
07/27/2017	7	6	6	N	7	8
07/16/2015	7	7	6	N	7	8
07/23/2013	7	7	6	N	7	8
08/02/2011	8	7	7	N	7	8
07/09/2009	8	7	7	N	7	8
07/31/2007	8	7	7	N	7	8
08/16/2005	8	8	7	N	7	8
09/16/2003	8	8	7	N	7	8
08/21/2001	8	8	7	N	7	8
09/01/1999	8	8	7	N	7	8