



Latitude:35.25678, Longitude:-94.42414

Route:45 Section:01 Log:19.02

Arnold Road ID:65x45x1xA, Arnold Log mile:18.699

District 04, 131 - Sebastian County

Owner: 1 - State Highway Agency

Inspection Direction: 2 - S to N

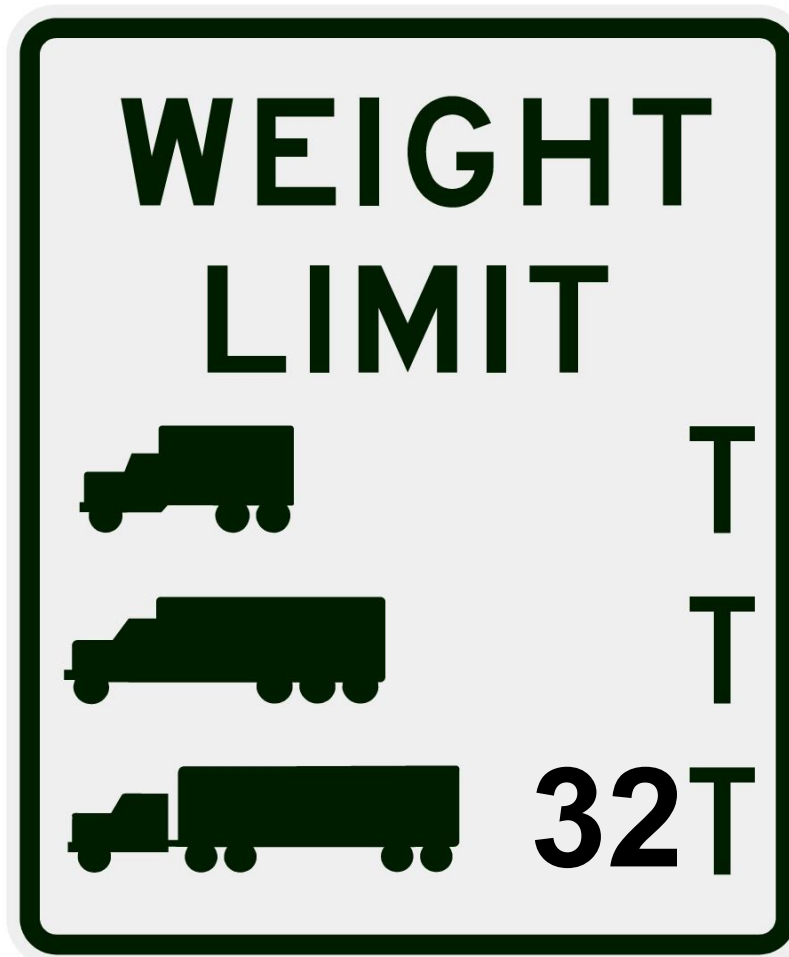
Bridge Posting Information

41 - Structure Open/Posted/Closed: P - Posted for load (may include other restrictions such a temporary bridges which are load posted)

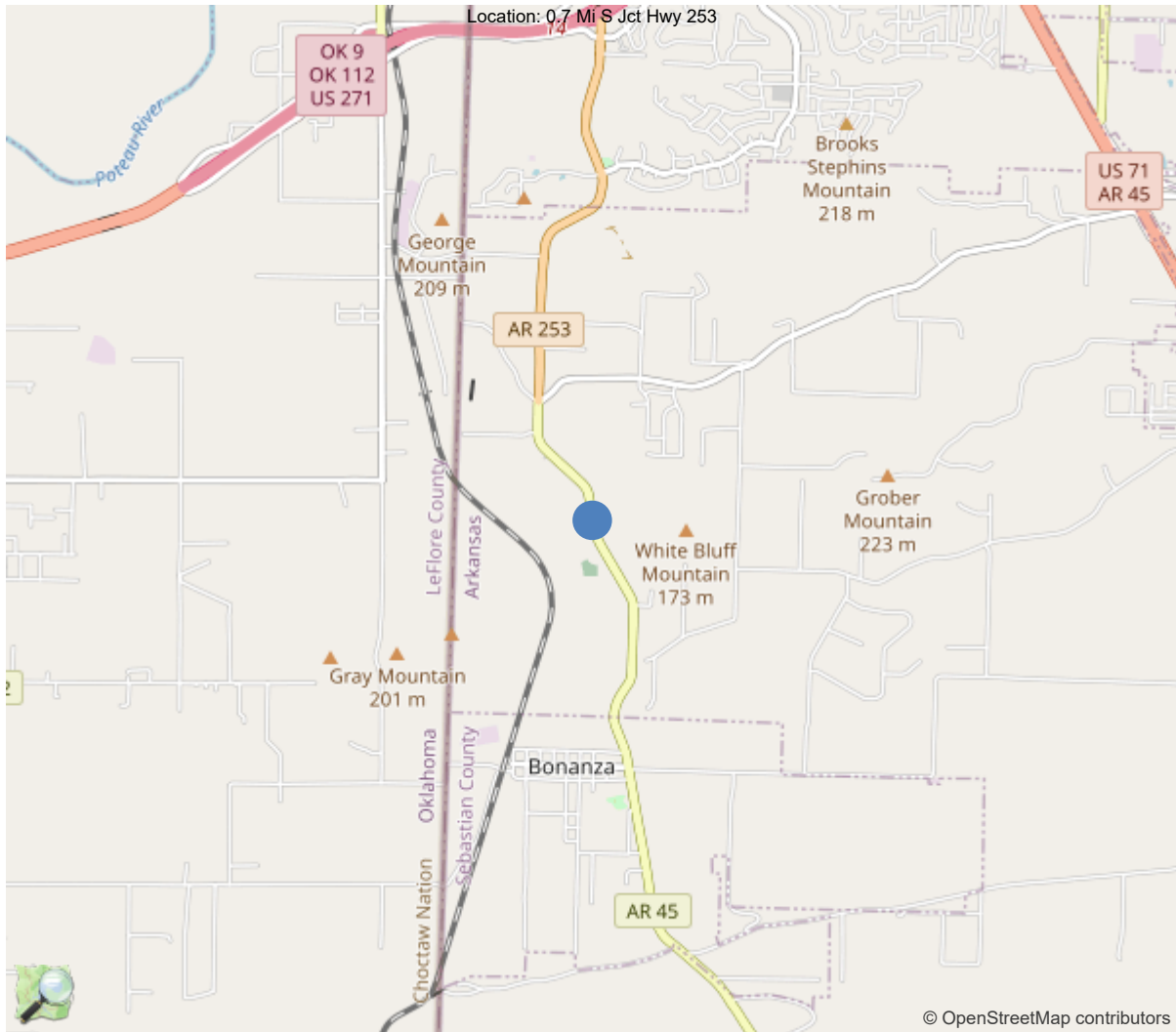
70 - Bridge Posting: 2 - 20.0 - 29.9 % below

Legal Load	Calculated Capacity	Beginning of Bridge Sign Current Value	End of Bridge Sign Current Value
Code 4 (22 Tons)	26		
Code 9 (31 Tons)	31		
Code 5 (40 Tons)	32	32	32

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



35.25678, -94.42414



Asset #00879(Routine, Underwater type 2)
State Highway 45 over Cedar Creek - Seb. Co.
Location: 0.7 Mi S Jct Hwy 253
Team Lead: Bob McEntyre Inspection Date: 09/25/2024

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	00879
(5) Inventory Route	1
(2) Highway Agency District	04 - District 04
(3) County Code	131 - Sebastian County
(4) Place Code	0
(6) Features Intersected	Cedar Creek - Seb. Co.
(7) Facility Carried	State Highway 45
(9) Location	0.7 Mi S Jct Hwy 253
(11) Mile Point	19.02 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.25678
(17) Longitude	-94.42414
(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	1
(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	1942
(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	6500
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	7 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	40.3 ft
(49) Structure Length	41.3 ft
(50) Curb or Sidewalk Width	
Left	1.5 ft
Right	1.5 ft
(51) Bridge Roadway Width Curb to Curb	25.9 ft
(52) Deck Width Out to Out	31.3 ft
(32) Approach Roadway Width (W/Shoulders)	32.2 ft
(33) Bridge Median	0 - No median
(34) Skew	30 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	25.9 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	0
(26) Functional Class	17 - Urban Collector
(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 structure
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	2 - Bridge is eligible for the
CONDITION	
(58) Deck	5
(59) Superstructure	5
(60) Substructure	5
(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	35
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	21
(70) Bridge Posting	2 - 20.0 - 29.9 % below
(41) Structure Open/Posted/Closed	P - Posted for load (may include
APPRAISAL	
(67) Structural Evaluation	
(68) Deck Geometry	2
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(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 to
PROPOSED IMPROVEMENTS	
(75) Type of Work	31 - Replacement of bridge or
(76) Length of Structure Improvement	67 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 12523
(96) Total Project Cost	\$ 268
(97) Year of Improvement Cost Estimate	2002
(114) Future ADT	7644
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	09/25/2024		
(91) Frequency	12		
(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.			



Asset #00879(Routine, Underwater type 2)

State Highway 45 over Cedar Creek - Seb. Co.

Location: 0.7 Mi S Jct Hwy 253

Team Lead: Bob McEntyre Inspection Date: 09/25/2024

General Observation

09/25/2024 - RSM & SPC: Routine and Underwater Type II Inspection conducted this date. See element notes and item 61 for documentation.

Inspection Procedure: Inspection performed by wading the channel in moderate depth water conditions. Water depth at time of Inspection approximately 3'.

Inspection Equipment: Waders, Range Poles, Flashlights.

58 - Deck (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

09/25/2024 - RSM & SPC: The deck is in fair overall condition. The driving surface is not visible due to an asphalt wearing surface. The undersurface of the deck in the exterior bay has areas of random cracking with efflorescence. The undersurface of the deck overhangs have cracking with efflorescence and spalls with exposed reinforcing steel.

59 - Superstructure (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

09/25/2024 - RSM & SPC: Superstructure is in fair overall condition with paint failures on several girders with areas of corrosion, flaking rust and section loss. Bearing devices have heavy corrosion with pack rust between the bearing plates.

60 - Substructure (5 - FAIR CONDITION - all primary structural elements are sound but may have minor section loss, cracking, spalling or scour.)

09/25/2024 - RSM & SPC: Substructure is in fair overall condition. The left and right sides of stone masonry abutment # 1 has settlement cracks that follow the masonry joints and propagate into the Southwest and Southeast wing walls. The crack in the Southwest wall propagates from base of abutment diagonally up the masonry joints extending approximately 9' in length to the top of the wing wall. The crack is up to 1/2" wide in locations. The concrete backwalls have some shallow spalling with exposed reinforcing steel. Stone Masonry stem walls have minor grout deterioration along the base. Abutment # 2 Backwall on the left side is fractured under the end post from apparent traffic impact.

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.)

09/25/2024 - RSM & SPC - Underwater Type II Inspection: Wading and probing in moderated depth water conditions revealed no apparent scour problems at this inspection.

A-15 - Late Reason (N/A)

09/25/2024 - RSM - Inspection conducted 1 month late due to heavy workload.

A-55 - Deck Washing Needed (Y)

Gutters have heavy dirt and debris accumulation that restricts the deck drains.

A-60 - Full Girder Painting Needed (Y)

09/25/2024 - RSM & SPC: The superstructure has a failing paint system with areas of active corrosion to the top flanges and girder ends.



Asset #00879(Routine, Underwater type 2)
State Highway 45 over Cedar Creek - Seb. Co.
Location: 0.7 Mi S Jct Hwy 253
Team Lead: Bob McEntyre Inspection Date: 09/25/2024

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	1104	861	173	70	0
1080	Delamination/Spall/Patched Area	SF	86	0	85	1	0
1090	Exposed Rebar	SF	13	0	0	13	0
1120	Efflorescence/Rust Staining	SF	56	0	0	56	0
1130	Cracking (RC and Other)	SF	88	0	88	0	0
510	Wearing Surfaces	SF	1050	170	36	844	0
3210	Delam/Spall/Patched Area/Pothole	SF	41	0	36	5	0
3220	Crack (Wearing Surface)	SF	839	0	0	839	0
<p>(12) Driving Surface: Asphalt driving surface is breaking up over the abutment deck joints with numerous temporary asphalt patches that are failing in areas. Asphalt driving surface has map cracking throughout with minor rutting in the wheel paths of the travel lanes and a few small spalls. Right Curb: Numerous areas of concrete deterioration with shallow spalling that exposes reinforcing steel. The exposed reinforcing steel has up to initial section loss. No significant changes or repairs apparent since the last inspection.</p> <p>Deck Undersurface: Undersurface of the deck overhangs have several areas of concrete deterioration with spalling that exposes the reinforcing steel. The reinforcing steel has been painted by maintenance forces in the past as a type of repair. Exposed reinforcing steel appears to have active corrosion and flaking rust showing through the paint in areas during this inspection. Bay # 3 and Right Overhang: Transverse cracking with light efflorescence developing.</p> <p>(510-12) Map cracking typical in the asphalt wearing surface. Numerous temporary asphalt patches on the driving surface. Several small spalled areas in asphalt wearing surface.</p>							
107	Steel Open Girder/Beam	LF	164	12	117	35	0
1000	Corrosion	LF	152	0	117	35	0
515	Steel Protective Coating	SF	1354	0	1031	304	19
3420	Peeling/Bubbling/Cracking	LF	324	0	324	0	0
3440	Effectiveness (Steel Protective Coatings)	LF	1030	0	707	304	19
<p>(107) Superstructure paint system has large areas of peeling / flaking paint in numerous locations. Ends of girders have areas of corrosion with minor flaking rust where water and debris leak through the expansion joints. Maintenance forces have applied a type of rust inhibitor to the girder ends in some locations. Girder # 4: Is approximately 1/2" from making contact with Abutment # 2 backwall. Girder # 4, Top and Bottom Flanges: Active corrosion with thick flaking rust and initial section loss. 18LF CS3. No visible cracks or apparent repairs since the last inspection.</p> <p>(515-107) Girders have several areas of flaking paint throughout and several areas of paint failures at web ends and bottom flanges near bearings.</p>							
215	Reinforced Concrete Abutment	LF	132	102	14	16	0
1080	Delamination/Spall/Patched Area	LF	13	0	13	0	0
1090	Exposed Rebar	LF	12	0	0	12	0



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Location: 0.7 Mi S Jct Hwy 253
Team Lead: Bob McEntyre Inspection Date: 09/25/2024

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1130	Cracking (RC and Other)	LF	1	0	1	0	0
7000	Damage	LF	4	0	0	4	0
(215) R.C. Abutment: Abutment # 1 Backwall: 6" shallow spall with exposed reinforcing steel in Bay # 2 and a 4" shallow spall with exposed reinforcing in the abutment cap under Bay # 1. 3LF CS3. Abutment # 1 Right Wing Wall: Replaced in the past with no apparent noteworthy problems. Abutment # 2 Backwall: Numerous shallow spalls with exposed reinforcing steel above the bridge seat. Caulking used as a type of repair to the spalled areas is beginning to deteriorate but is in place during this inspection. Exposed reinforcing steel has active corrosion and layers of flaking rust. Abutment # 2 Backwall, Left Side: Fractured under the end post from apparent traffic impact. 4LF CS3.							
217	Masonry Abutment	LF	132	82	20	30	0
1120	Efflorescence/Rust Staining	LF	7	0	0	7	0
1610	Mortar Breakdown (Masonry)	LF	23	0	0	23	0
1640	Masonry Displacement	LF	4	0	4	0	0
4000	Settlement	LF	16	0	16	0	0
(217) Abutment # 1: Grout deterioration at the water elevation. 23LF CS3. Abutment # 2, Right Wing wall has a fracture / delamination approximately 18" below the bottom of the deck and the end post is slightly leaning due to old collision damage. No apparent change from previous inspections. Abutment # 2, Right Wing wall has several displaced stones along the top and end of wall. Abutment # 1, Left and Right Wing Walls have settlement cracks that follow the masonry joints. The crack in the Southwest wall propagates from base of abutment diagonally up the masonry joints extending approximately 9' in length to the top of the wing wall. The crack is up to 1/2" wide in locations. The wing wall has areas of efflorescence leaching out of grout joints. Maintenance Forces have made some grouted repairs to the settlement crack in the Southwest wing wall in the past. The stone displacement to the right wing wall of abutment # 1 has been repaired in the past. The repairs are holding during this inspection. No significant changes apparent since the last inspection.							
305	Assembly Joint without Seal	LF	60	0	0	60	0
2350	Debris Impaction	LF	60	0	0	60	0
(305) Assembly joints are overlaid with asphalt and are not visible. Asphalt is breaking up over the deck joints at the abutments. The joints appear to leak water and dirt on the bearings and the substructure.							
311	Movable Bearing	EA	4	0	0	4	0
1000	Corrosion	EA	4	0	0	4	0
515	Steel Protective Coating	SF	8	0	0	0	8
3440	Effectiveness (Steel Protective Coatings)	EA	8	0	0	0	8
(311) Abutment # 2 (North Abutment)-Expansion Bearing. Bearings have a failed paint system, active corrosion and layers of rust between the masonry and sole plates. Rust inhibitor applied to the masonry plates in the past appears to have lost its effectiveness. There are no significant changes apparent since the last inspection. (515-311) Protective paint system has failed.							
313	Fixed Bearing	EA	4	0	0	4	0
1000	Corrosion	EA	4	0	0	4	0



Elevation looking East.



Inventory looking North.



North approach load posting.



South approach load posting.



Gutters have heavy dirt and debris accumulation that restricts the deck drains.



Abutment # 1: Dirt and debris accumulation in bearing area.



Inspection



Typical undersurface



Abutment # 2



Driving surface.



Driving surface.



Right exterior girder: Corrosion with flaking rust / section loss.



Right exterior girder: Corrosion with flaking rust / section loss.



Abutment # 1 bearing area.



Girder # 1, Abutment # 1: Corrosion with flaking rust. 5LF CS3.



Abutment # 1: General view.



Abutment # 2 Backwall: Spalls with exposed reinforcing steel. 8LF CS3.



Abutment # 1 Bearing Area: General view.



Abutment # 2 Backwall, Left Side: Fractured under the end post from apparent traffic impact. 4LF CS3.



09/25/2024

Abutment # 1 Cap, Bay # 1: Shallow spall with exposed reinforcing steel. 1LF CS3.

Maintenance Needs

Date Reported: 08/09/2018

Priority: C - Important

Type of Work: Bearing Repair/Replacement

Status: Monitor

Component: Superstructure

Deficiency Description

Bearings -

The bearings have heavy corrosion with thick pack rust between sole plates and rocker devices that appear to be restricting movement.

Remarks



09/30/2024

Abutment # 2: Bearing # 2: Corrosion with flaking rust / section loss. 1EA CS3.



09/30/2024

Abutment # 2: Bearing # 1: Corrosion with flaking rust / section loss. 1EA CS3.



09/30/2024

Abutment # 1, Bearing # 1: Corrosion with flaking rust / section loss. 1EA CS3.



08/20/2020

Abutment # 1 bearing #2 active corrosion.

Maintenance Needs

Date Reported: 08/10/2018

Priority: D- Routine

Type of Work: Substructure Repair

Status: Monitor

Component: Substructure

Deficiency Description

Substructure -

The left and right sides of stone masonry abutment # 1 have settlement cracks that follow the masonry joints and propagate into the Southwest and Southeast wing walls. The crack in the Southwest wall propagates from base of abutment diagonally up the masonry joints extending approximately 9' in length to the top of the wing wall. The crack is up to 1/2" wide in locations.

Remarks

09/25/2024 - RSM - Settlement cracks still exists with no change.

08/20/2020 - EJW & JPW - Maintenance forces have made some minor grouted repairs along the Left wing wall cracking. The grout repairs are cracked.



09/25/2024

The left and right sides of stone masonry abutment # 1 have settlement cracks that follow the masonry joints and propagate into the Southwest and Southeast wing walls. The crack in the Southwest wall propagates from base of abutment diagonally up the masonry joints extending approximately 9' in length to the top of the wing wall. The crack is up to 1/2" wide in locations.



02/16/2020

Southwest wing wall-Settlement crack up to 1/2" wide.

Maintenance Needs

Date Reported: 08/29/2013

Priority: D- Routine

Type of Work: Substructure Repair

Status: Monitor

Component: Substructure

Deficiency Description

Substructure Back Walls -
Substructure backwalls have areas of spalling with exposed reinforcing steel.

Remarks



Abutment # 2 Backwall: Spalls with exposed reinforcing steel. 8LF CS3.



Spalling in abutment # 2 backwall. Photo between girders # 2 and # 3.

Maintenance Needs

Date Reported: 09/25/2012

Priority: D- Routine

Type of Work: Substructure Repair

Status: Monitor

Component: Substructure

Deficiency Description

South abutment -

The base of the South abutment (abutment # 1) has grout deterioration between the stones at the water elevation.

Remarks



Abutment # 1: Grout deterioration at the water elevation.
23LF CS3.



Abutment #1-Grout deterioration between stones.

Maintenance Needs

Date Reported: 09/25/2012

Priority: D- Routine

Type of Work: Deck Repair

Status: Monitor

Component: Deck

Deficiency Description

Deck -

The asphalt driving surface of the deck has map cracking, minor rutting in the travel lanes, and is breaking up over the deck joints at the abutments creating potholes at the bridge ends.

Remarks



Asphalt breaking apart over abutment # 2.



Left Lane: Potholes in asphalt driving surface.



The asphalt driving surface of the deck has map cracking, minor rutting in the travel lanes, and is breaking up over the deck joints at the abutments creating potholes at the bridge ends.

Maintenance Needs

Date Reported: 09/02/2011

Priority: D- Routine

Type of Work: Deck Repair

Status: Monitor

Component: Deck

Deficiency Description

Deck -

The undersurface of the overhang portion of the deck has areas of spalling with exposed reinforcing steel on the right and left sides of the structure.

Remarks



Left Deck Overhang, 8' From Abutment # 2: 16" spall with exposed reinforcing steel. 2SF CS3.



Left Deck Overhang, At Abutment # 1: 4SF CS3.

Maintenance Needs

Date Reported: 09/02/2011

Priority: D- Routine

Type of Work: Repair (General)

Status: Monitor

Component: Deck

Deficiency Description

Concrete curb -

The concrete curb on the right side of structure has concrete deterioration with shallow spalling that exposes reinforcing steel.

Remarks



Right Curb: Areas of soft and deteriorating concrete with exposed reinforcing steel throughout. 22LF CS3.



Right curb-Concrete deterioration with spalling that exposes reinforcing steel.



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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	Yes
A-59 - Joint Repair Needed	Yes
A-60 - Full Beam Painting Needed	Yes
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-54 - Sealable Deck Cracks (Yes)

A-55 - Deck Washing Needed (Yes)

Gutters have heavy dirt and debris accumulation that restricts the deck drains.



Gutters have heavy dirt and debris accumulation that restricts the deck drains.

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

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

A-58 - Cap Cleaning/Flushing Needed (Yes)



Abutment # 1: Dirt and debris accumulation in bearing area.

A-59 - Joint Repair Needed (Yes)

A-60 - Full Girder Painting Needed (Yes)

09/25/2024 - RSM & SPC: The superstructure has a failing paint system with areas of active corrosion to the top flanges and girder ends.



Right exterior girder: Corrosion with flaking rust / section loss.



Girder # 1, Abutment # 1: Corrosion with flaking rust. 5LF CS3.

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)

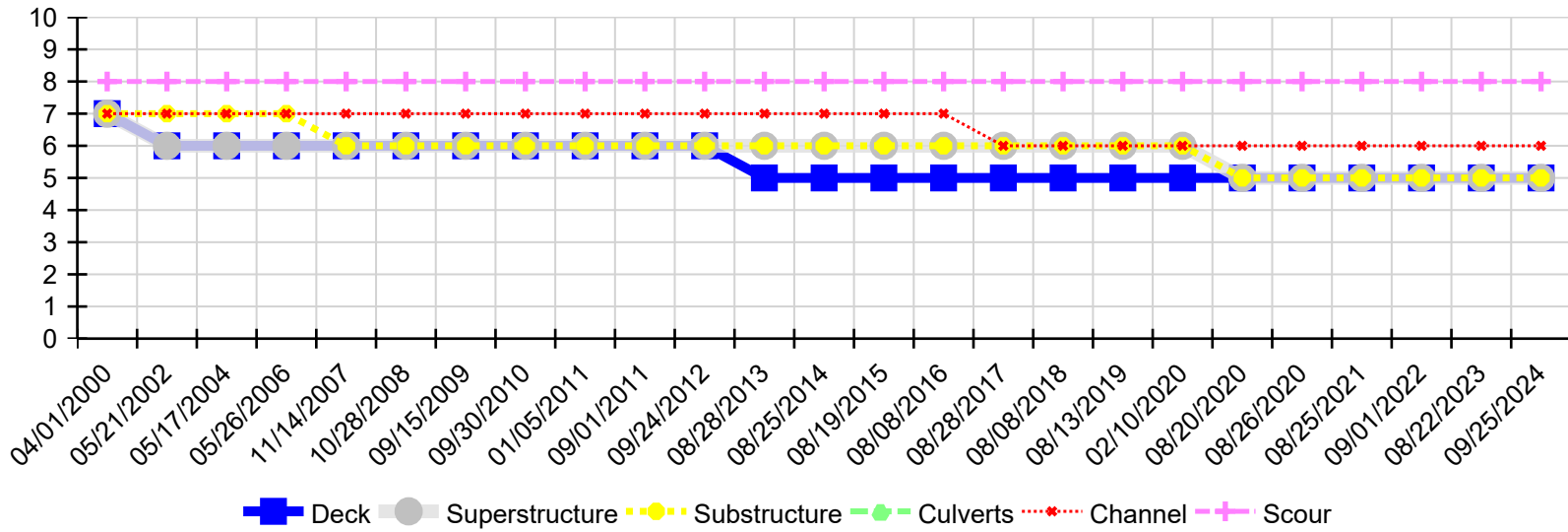


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Location: 0.7 Mi S Jct Hwy 253

Team Lead: Bob McEntyre Inspection Date: 09/25/2024

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
09/25/2024	5	5	5	N	6	8
08/22/2023	5	5	5	N	6	8
09/01/2022	5	5	5	N	6	8
08/25/2021	5	5	5	N	6	8
08/26/2020	5	5	5	N	6	8
08/20/2020	5	5	5	N	6	8
02/10/2020	5	6	6	N	6	8
08/13/2019	5	6	6	N	6	8
08/08/2018	5	6	6	N	6	8
08/28/2017	5	6	6	N	6	8
08/08/2016	5	6	6	N	7	8
08/19/2015	5	6	6	N	7	8
08/25/2014	5	6	6	N	7	8
08/28/2013	5	6	6	N	7	8
09/24/2012	6	6	6	N	7	8
09/01/2011	6	6	6	N	7	8
01/05/2011	6	6	6	N	7	8
09/30/2010	6	6	6	N	7	8
09/15/2009	6	6	6	N	7	8
10/28/2008	6	6	6	N	7	8
11/14/2007	6	6	6	N	7	8
05/26/2006	6	6	7	N	7	8
05/17/2004	6	6	7	N	7	8
05/21/2002	6	6	7	N	7	8
04/01/2000	7	7	7	N	7	8