



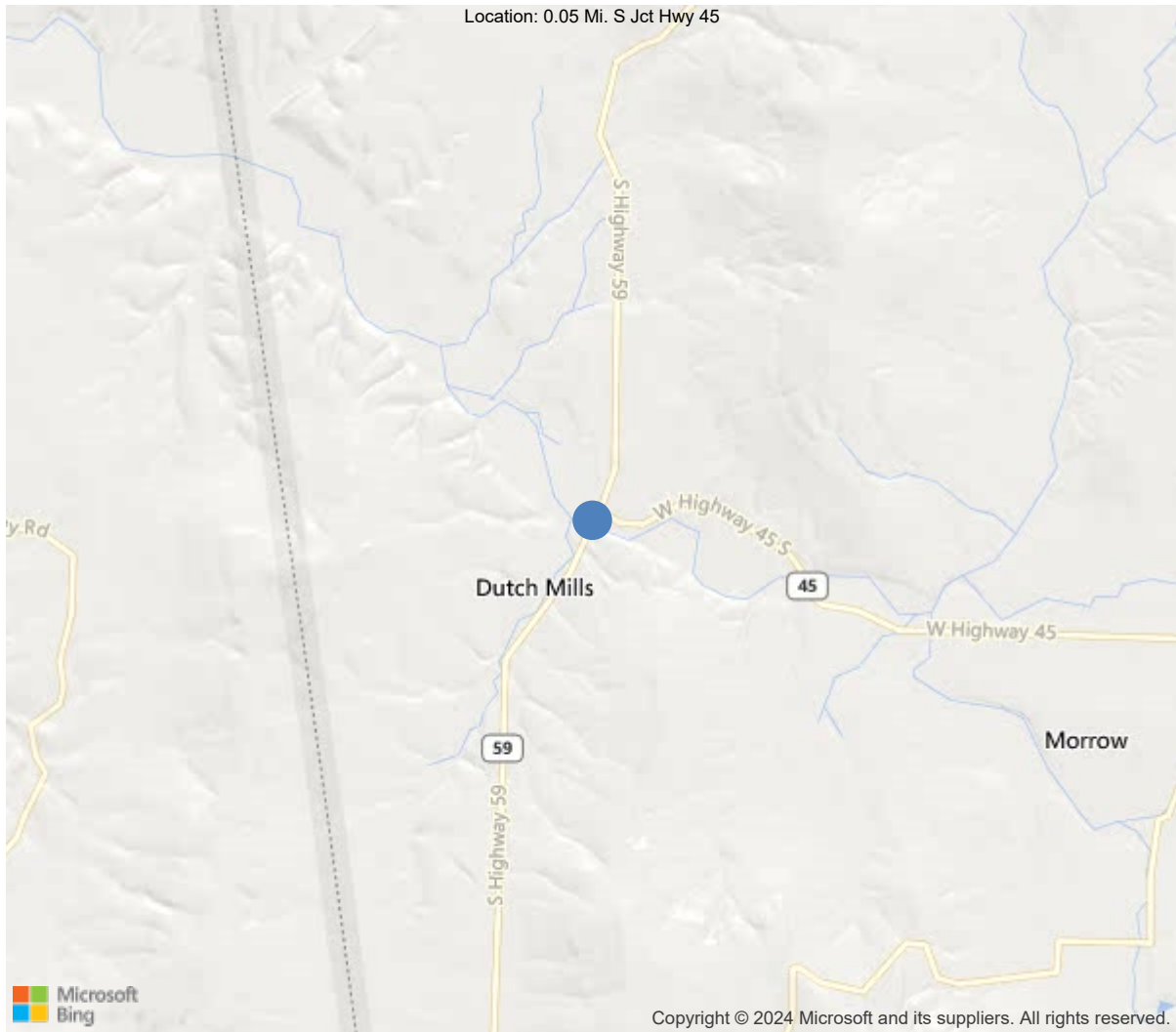
Latitude:35.88024, Longitude:-94.48656

Route:59 Section:04 Log:6.119

Arnold Road ID:72x59x4xA, Arnold Log mile:6.109

District 04, 143 - Washington County

Owner: 1 - State Highway Agency



35.88024, -94.48656





Asset #01672(Routine, NSTM)

SH 59-Wash Co. over Baron Fork Creek

Location: 0.05 Mi. S Jct Hwy 45

Team Lead: Eric West, Inspection Date: 06/23/2022

IDENTIFICATION	
(1) State Names	5 - Arkansas
(8) Structure Number	01672
(5) Inventory Route	1
(2) Highway Agency District	04 - District 04
(3) County Code	143 - Washington County
(4) Place Code	0
(6) Features Intersected	Baron Fork Creek
(7) Facility Carried	SH 59-Wash Co.
(9) Location	0.05 Mi. S Jct Hwy 45
(11) Mile Point	6.119 mi
(12) Base Highway Network	Yes
(13) LRS Inventory Rte & Subrte	0000059040
(16) Latitude	35.88024
(17) Longitude	-94.48656
(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	1 - Monolithic Concrete (concurrently pl
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1935
(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	1791
(30) Year of ADT	2018
(109) Truck ADT	1 %
(19) Bypass, Detour Length	20 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	70 ft
(49) Structure Length	185 ft
(50) Curb or Sidewalk Width	
Left	0.5 ft
Right	0.5 ft
(51) Bridge Roadway Width Curb to Curb	22.3 ft
(52) Deck Width Out to Out	23.5 ft
(32) Approach Roadway Width (W/Shoulders)	32.2 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	23.3 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	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 structure
(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	5
(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	43
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	26
(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	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	0 - Inspected feature does not meet
(36C) Approach Guardrail	0 - Inspected feature does not meet
(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	217 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 156
(96) Total Project Cost	\$ 631
(97) Year of Improvement Cost Estimate	2004
(114) Future ADT	2250
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date	06/23/2022		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	Yes	12	06/23/2022
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.			



### General Observation

06/23/2022 - EJW & RSM - Routine and Fracture Critical Inspection conducted on this date. See element notes and Fracture Critical Report linked in "Files" tab for documentation. Aspen A40 inspection truck utilized to perform "Visual / Hands-on" inspection.

05/24/2021 - RSM & SPC: Fracture Critical and Underwater Type II inspections conducted this date. See element notes and Fracture Critical Report linked in "Files" tab for documentation. Snooper truck utilized to perform "Visual / Hands-on" inspection.

06/16/2020 - RSM & SPC: Routine and Fracture Critical inspections conducted this date. See element notes and Fracture Critical Report linked in "Files" tab for documentation. Snooper truck utilized to perform "Visual / Hands-on" inspection.

06/27/2019 - JCJ & TJL -Fracture Critical Inspection conducted on this date.

Visual / Hands On method of inspection.

No visible fatigue cracks apparent in the 2 girder system during this inspection.

Ambient temperature was 78 degrees Fahrenheit during the inspection. See Fracture Critical Report and Element Notes for additional information. Maintenance forces have placed a 1/4" chip and seal coat on the driving surface of the deck since the last inspection.

06/28/2018 - TJL - Elements were plan verified on this date.

06/27/2017 - Underwater Type II inspection conducted on this date. Probing indicates that up to 12" of the edges of the footing are exposed at Bent # 2 with no apparent undermining. The footings are exposed at Bent # 3 with no apparent undermining. Footings appear to be keyed into a solid rock channel. Past highwater events have exposed the left column at Bent # 1.

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

06/23/2022 - EJW & RSM - Fracture Critical Inspection conducted on this date. Visual / Hands On method of inspection from Aspen A40 platform. No visible cracks were found during the inspection.

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

05/24/2021 - RSM & SPC: Visual observation along with probing from a snooper truck revealed that the channel has drift accumulation at bents # 2 and # 3. The top and up to approximately 8' of the vertical face of footings at bents # 2 and # 3 are partially exposed at this inspection. The footings appear to be cast in a solid rock channel with no apparent undermining or scour problems at this inspection.

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**A-15 - Late Reason** (Optimize Schedule)

06/23/2022 - EJW - Structure inspected late due to heavy work load.

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Asset #01672(Routine, NSTM)

SH 59-Wash Co. over Baron Fork Creek

Location: 0.05 Mi. S Jct Hwy 45

Team Lead: Eric West, Inspection Date: 06/23/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	4348	3935	330	83	0
1080	Delamination/Spall/Patched Area	SF	147	0	111	36	0
1090	Exposed Rebar	SF	30	0	0	30	0
1120	Efflorescence/Rust Staining	SF	179	0	169	10	0
1130	Cracking (RC and Other)	SF	57	0	50	7	0
510	Wearing Surfaces	SF	10000	9980	20	0	0
3210	Delam/Spall/Patched Area/Pothole	SF	20	0	20	0	0
<p>(12) Driving surface has a chip and seal wearing surface. Previous inspection notes below for the driving surface retained for history purposes.</p> <p>-Span # 1 appears to makes contact with abutment # 1 backwall at this inspection. Maintenance forces have drilled holes in the top of the deck and poured epoxy in some of the full depth transverse cracks / spalled areas in span # 1. The repairs are still in place and appear to be holding at this inspection. Stains and spalling with areas of exposed reinforcing steel are still present in the deck undersurface between girders and in the deck overhangs at this inspection.</p> <p>-The deck has several delaminated areas in the haunch corrections adjacent to the girders.</p> <p>-There is spalling at the expansion joint dam with exposed reinforcing steel between the girders over Bent # 2. The majority of the exposed reinforcing steel has active corrosion with 1/8" + section loss typical.</p> <p>History of driving surface:</p> <p>-There are sealable transverse cracks and spalls at approximately 10' centers in Spans # 1 &amp; 3.</p> <p>-Some of the transverse cracks have been sealed on the surface in the past.</p> <p>-There are several temporary asphalt patches in place on the driving surface of the deck.</p> <p>(510-12) -The chip seal has several temporary asphalt patches.</p>							
107	Steel Open Girder/Beam	LF	370	55	217	98	0
1000	Corrosion	LF	315	0	217	98	0
515	Steel Protective Coating	SF	3947	3714	97	97	39
3440	Effectiveness (Steel Protective Coatings)	LF	233	0	97	97	39



Asset #01672(Routine, NSTM)

SH 59-Wash Co. over Baron Fork Creek

Location: 0.05 Mi. S Jct Hwy 45

Team Lead: Eric West, Inspection Date: 06/23/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<p>(107) -Superstructure paint system has areas with freckled / superficial rust coating.</p> <p>-Girders have isolated areas with active corrosion at the abutments and under the full depth cracks in the deck. Affected areas with corrosion have up to approximately 1/8" section loss to the top flanges during this inspection.</p> <p>-Span # 1, girder # 1 has heavy corrosion with section loss to the interior side of the top flange over diaphragm # 2 in an area that extends approximately 6' in length with up to an estimated 1/4" section loss in one location.</p> <p>-Span # 1, girder # 1 over abutment # 1 has approximately 1/8" section loss to interior side of web at diaphragm connection.</p> <p>-Span # 1, girder # 1 has approximately 1/16" section loss to base of web located adjacent to diaphragm # 2 connection.</p> <p>-Span # 1, girder # 2 bearing is approximately 1/4" from making contact with abutment # 1 backwall.</p> <p>-Span # 1, girder # 2 interior side of the web over bent # 2 has 1/8" section loss at the deck haunch juncture.</p> <p>-Span # 2, girder # 2 at bent # 2 has 1/8" section loss to interior side of web at deck haunch juncture.</p> <p>-Diaphragm over bent # 2 adjacent to girder # 2 has knife edge section loss with two dime sized holes rusted through the web and out of plane bending to top flange.</p> <p>-The bottom flange cover plate for girder # 2 in span # 2 adjacent to bent # 2 has minor bulging with approximately 1/16" pack rust.</p> <p>-The interior side of girder # 2 web over bent # 3 has up to 5/16" section loss adjacent to the expansion dam.</p> <p>-Span # 3, girder # 1 is approximately 3/8" from making contact with abutment # 2 backwall at this inspection.</p> <p>-Span # 3, girder # 1 has corrosion to the interior side of web at the diaphragm connection with up to 1/8" section loss.</p> <p>-Girder # 2 at abutment # 2 has active corrosion on the top flange with flaking rust due to water leakage at the bridge end joint.</p> <p>-Diaphragm over Bent # 3 adjacent to girder # 2 has active corrosion and holes in the top flange.</p> <p>-There are no visible fatigue cracks apparent or repairs to the active corrosion in the superstructure since the last inspection.</p>							
205	Reinforced Concrete Column	EA	4	1	1	2	0
1080	Delamination/Spall/Patched Area	EA	1	0	1	0	0
1090	Exposed Rebar	EA	2	0	0	2	0
<p>(205) -Bent # 2 Lt column has concrete deterioration at the base with an area of concrete section loss approximately 6" in diameter and 3" deep. The exterior face of column has vertical cracking and several areas of shallow spalling in the lower portion of the column. The top of the column has a 33" tall delaminated / spalled area along the exterior edge with exposed reinforcing steel.</p> <p>-Bent # 2 Column # 2 has vertical hairline map cracking located below the cap juncture.</p> <p>-Bent # 3 Column # 1 Lt exterior face has two 10" spalls with exposed reinforcing steel.</p> <p>-Bent # 3 Column # 2 has hairline vertical cracks in the Southwest corner.</p>							
210	Reinforced Concrete Pier Wall	LF	24	10	12	2	0
1010	Cracking	LF	5	0	5	0	0
1090	Exposed Rebar	LF	2	0	0	2	0
1190	Abrasion/Wear (PSC/RC)	LF	7	0	7	0	0
<p>(210) Web wall at Bents # 2 &amp; 3.</p> <p>Bent # 2:</p> <p>-Lower portion of Bent # 2 web wall has diagonal cracking.</p> <p>-Bent # 2 web wall has minor abrasion at the water elevation.</p> <p>Bent # 3:</p> <p>-Bent # 3 web wall aheadface has a 14" and 10" spalled area with exposed reinforcing steel.</p> <p>-Bent # 3 aheadface has a 14" shallow delamination adjacent to the spalling with exposed reinforcing steel.</p>							
215	Reinforced Concrete Abutment	LF	116	77	23	16	0



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Team Lead: Eric West, Inspection Date: 06/23/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1080	Delamination/Spall/Patched Area	LF	3	0	1	2	0
1090	Exposed Rebar	LF	14	0	0	14	0
1120	Efflorescence/Rust Staining	LF	5	0	5	0	0
1130	Cracking (RC and Other)	LF	17	0	17	0	0
<p>(215) Abutment # 1:</p> <p>-History files document past rotation at abutment # 1. Beams are approximately 1/8" from making contact with the abutment backwall at this inspection.</p> <p>-There are several softball sized spalls with exposed reinforcing steel in the stem wall and backwall of abutment # 1.</p> <p>-The expansion joint at abutment # 1 is closed at centerline of structure when viewed from the undersurface of the deck.</p> <p>Abutment # 2:</p> <p>-Abutment # 2 has a 15" spall with exposed reinforcing steel in the Left side of the stem wall.</p> <p>-There is hairline map cracking in the Left side of the backwall of abutment # 2.</p> <p>-There are 2 baseball sized spalls in the Right end of abutment # 2. One of the spalls has exposed reinforcing steel.</p>							
220	Reinforced Concrete Pile Cap/Footing	LF	41	41	0	0	0
(220) -The tops of the footings are exposed in areas.							
234	Reinforced Concrete Pier Cap	LF	34	29	1	4	0
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
1090	Exposed Rebar	LF	3	0	0	3	0
1130	Cracking (RC and Other)	LF	1	0	0	1	0
<p>(234) Bent # 2:</p> <p>Both ends of Bent # 2 cap have spalling with exposed reinforcing steel. The left end has a 24" x 8" spall with exposed reinforcing steel. The area surrounding the spall is delaminated. The Rt end of the cap backface has map cracking.</p> <p>Bent # 3:</p> <p>Bent # 3 cap has no apparent noteworthy deficiencies at this inspection.</p>							
305	Assembly Joint without Seal	LF	44	0	44	0	0
2350	Debris Impaction	LF	35	0	35	0	0
2370	Metal Deterioration or Damage	LF	9	0	9	0	0
<p>(305) -Abutment # 1 sliding plate assembly has a 3' long area that has broken or loose welds.</p> <p>-Abutment # 2 sliding plate assembly has a 7' long area of broken or loose welds near the centerline of bridge.</p> <p>-The sliding plate assemblies have aggregate from previous chip and seal wearing surface in the expansion portion of the assemblies.</p>							
311	Movable Bearing	EA	6	0	0	4	2
1000	Corrosion	EA	4	0	0	4	0
2210	Movement	EA	2	0	0	0	2
515	Steel Protective Coating	SF	30	4	4	4	18
3440	Effectiveness (Steel Protective Coatings)	EA	26	0	4	4	18



**Team Lead:** Eric West, **Inspection Date:** 06/23/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<p>(311) Abutment # 1:</p> <p>-Pack rust between the masonry plates and rockers with active corrosion typical. The Rt bearing has active corrosion and pack rust between the top and bottom portions of the rocker bearing.</p>							
<p>Abutment # 2:</p> <p>-The bearing devices have flaking rust between the masonry plates and the rockers.</p> <p>-The pins and connection in the bearings over abutment # 2 have significant section loss.</p> <p>-Bridge mate rust inhibitor has failed at the abutments.</p>							
313	Fixed Bearing	EA	2	0	0	2	0
1000	Corrosion	EA	2	0	0	2	0
515	Steel Protective Coating	SF	10	0	2	3	5
3440	Effectiveness (Steel Protective Coatings)	EA	10	0	2	3	5
(313) -Fixed bearings at Bent # 2 have active corrosion on the masonry plates.							
331	Reinforced Concrete Bridge Railing	LF	370	321	43	6	0
1080	Delamination/Spall/Patched Area	LF	17	0	16	1	0
1090	Exposed Rebar	LF	3	0	0	3	0
1130	Cracking (RC and Other)	LF	29	0	27	2	0
<p>(331) -Maintenance forces have grouted / repaired several areas of past collision damage to the bridge railing post and concrete curb since last inspection. Shallow spalls with exposed reinforcing steel still exists in some of the bridge railing posts.</p> <p>-The concrete curbs have transverse cracks at variable spacing. Maintenance forces have sealed numerous transverse cracks in the concrete curbs since last inspection. Unsealed cracks still exists in some locations.</p>							
<p>Approach railing:</p> <p>-The Northwest approach railing has collision damage that has created an area of sharp jagged edges near the bridge end.</p>							

## Deck

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	4348	3935	330	83	0
1080	Delamination/Spall/Patched Area	SF	147	0	111	36	0
1090	Exposed Rebar	SF	30	0	0	30	0
1120	Efflorescence/Rust Staining	SF	179	0	169	10	0
1130	Cracking (RC and Other)	SF	57	0	50	7	0
510	Wearing Surfaces	SF	10000	9980	20	0	0
3210	Delam/Spall/Patched Area/Pothole	SF	20	0	20	0	0
<p>(12) Driving surface has a chip and seal wearing surface. Previous inspection notes below for the driving surface retained for history purposes.</p> <p>-Span # 1 appears to makes contact with abutment # 1 backwall at this inspection.</p> <p>Maintenance forces have drilled holes in the top of the deck and poured epoxy in some of the full depth transverse cracks / spalled areas in span # 1. The repairs are still in place and appear to be holding at this inspection. Stains and spalling with areas of exposed reinforcing steel are still present in the deck undersurface between girders and in the deck overhangs at this inspection.</p> <p>-The deck has several delaminated areas in the haunch corrections adjacent to the girders.</p> <p>-There is spalling at the expansion joint dam with exposed reinforcing steel between the girders over Bent # 2. The majority of the exposed reinforcing steel has active corrosion with 1/8" + section loss typical.</p> <p>History of driving surface:</p> <p>-There are sealable transverse cracks and spalls at approximately 10' centers in Spans # 1 &amp; 3.</p> <p>-Some of the transverse cracks have been sealed on the surface in the past.</p> <p>-There are several temporary asphalt patches in place on the driving surface of the deck.</p> <p>(510-12) -The chip seal has several temporary asphalt patches.</p>							



Asset #01672(Routine, NSTM)

SH 59-Wash Co. over Baron Fork Creek

Location: 0.05 Mi. S Jct Hwy 45

Team Lead: Eric West, Inspection Date: 06/23/2022

## Superstructure

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
107	Steel Open Girder/Beam	LF	370	55	217	98	0
1000	Corrosion	LF	315	0	217	98	0
515	Steel Protective Coating	SF	3947	3714	97	97	39
3440	Effectiveness (Steel Protective Coatings)	LF	233	0	97	97	39
<p>(107) -Superstructure paint system has areas with freckled / superficial rust coating.</p> <p>-Girders have isolated areas with active corrosion at the abutments and under the full depth cracks in the deck. Affected areas with corrosion have up to approximately 1/8" section loss to the top flanges during this inspection.</p> <p>-Span # 1, girder # 1 has heavy corrosion with section loss to the interior side of the top flange over diaphragm # 2 in an area that extends approximately 6' in length with up to an estimated 1/4" section loss in one location.</p> <p>-Span # 1, girder # 1 over abutment # 1 has approximately 1/8" section loss to interior side of web at diaphragm connection.</p> <p>-Span # 1, girder # 1 has approximately 1/16" section loss to base of web located adjacent to diaphragm # 2 connection.</p> <p>-Span # 1, girder # 2 bearing is approximately 1/4" from making contact with abutment # 1 backwall.</p> <p>-Span # 1, girder # 2 interior side of the web over bent # 2 has 1/8" section loss at the deck haunch juncture.</p> <p>-Span # 2, girder # 2 at bent # 2 has 1/8" section loss to interior side of web at deck haunch juncture.</p> <p>-Diaphragm over bent # 2 adjacent to girder # 2 has knife edge section loss with two dime sized holes rusted through the web and out of plane bending to top flange.</p> <p>-The bottom flange cover plate for girder # 2 in span # 2 adjacent to bent # 2 has minor bulging with approximately 1/16" pack rust.</p> <p>-The interior side of girder # 2 web over bent # 3 has up to 5/16" section loss adjacent to the expansion dam.</p> <p>-Span # 3, girder # 1 is approximately 3/8" from making contact with abutment # 2 backwall at this inspection.</p> <p>-Span # 3, girder # 1 has corrosion to the interior side of web at the diaphragm connection with up to 1/8" section loss.</p> <p>-Girder # 2 at abutment # 2 has active corrosion on the top flange with flaking rust due to water leakage at the bridge end joint.</p> <p>-Diaphragm over Bent # 3 adjacent to girder # 2 has active corrosion and holes in the top flange.</p> <p>-There are no visible fatigue cracks apparent or repairs to the active corrosion in the superstructure since the last inspection.</p>							

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

Comment: 06/23/2022 - EJW & RSM - Fracture Critical Inspection conducted on this date. Visual / Hands On method of inspection from Aspen A40 platform. No visible cracks were found during the inspection.







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Location: 0.05 Mi. S Jct Hwy 45

Team Lead: Eric West, Inspection Date: 06/23/2022

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
234	Reinforced Concrete Pier Cap	LF	34	29	1	4	0
1080	Delamination/Spall/Patched Area	LF	1	0	1	0	0
1090	Exposed Rebar	LF	3	0	0	3	0
1130	Cracking (RC and Other)	LF	1	0	0	1	0
(234) Bent # 2: Both ends of Bent # 2 cap have spalling with exposed reinforcing steel. The left end has a 24" x 8" spall with exposed reinforcing steel. The area surrounding the spall is delaminated. The Rt end of the cap backface has map cracking.  Bent # 3: Bent # 3 cap has no apparent noteworthy deficiencies at this inspection.							

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

Comment: 05/24/2021 - RSM & SPC: Visual observation along with probing from a snooper truck revealed that the channel has drift accumulation at bents # 2 and # 3. The top and up to approximately 8' of the vertical face of footings at bents # 2 and # 3 are partially exposed at this inspection. The footings appear to be cast in a solid rock channel with no apparent undermining or scour problems at this inspection.



Elevation



Roadway



Typical driving surface of the deck.



Span #1 typical undersurface of the deck.





Span #3 typical undersurface of the deck.



Span #1 Lt transverse cracking under the wheel path over girder #1.



Span #1 transverse cracking repair.



Bent #2 deck haunch spalling with exposed reinforcing steel.





Span #2 & 3 Rt overhang spalling with exposed reinforcing steel.



Bent #3 backface spalling with exposed reinforcing steel in the deck haunch.



Span #2 Lt spalling with exposed reinforcing steel.



Span #3 undersurface spalling with exposed reinforcing steel.





Temporary asphalt patches on the driving surface.



Span #1 temporary asphalt repair.



Span #1 girder #1 interior diaphragm connection with 1/16" section loss to the base of the web.



Span #1 Lt top flange active corrosion with pack rust and section loss.





Span 3 girder 2 imperfection.



Span 3 girder 1 at abutment 2-Section loss to bottom flange



Bent #2 Rt diaphragm holes in the flange.



Bent #3 Rt diaphragm with active corrosion and 100% section loss along the top flange.





Bent #3 Rt diaphragm with active corrosion and section loss.



Span #3 Girder #2 @ Abutment #2 active corrosion with pack rust along the top flange.



Bent #3 Lt spalling with exposed reinforcing steel.



Bent #3 typical.





Bent #2 typical.



Abutment #1 Rt spalling with exposed reinforcing steel.



Abutment #1 Lt spalling with exposed reinforcing steel.



Bent #2 Lt spalling with exposed reinforcing steel.





Bent #2 Rt aheadface spalling with exposed reinforcing steel.



Abutment #2 assembly joint.



Abutment #1 assembly joint .



Abutment #1 Rt bearing active corrosion with pack rust.





Abutment #1 Lt bearing active corrosion with pack rust.



Abutment #2 bearing #1 active corrosion with pack rust and significant section loss to the bearing and pin.



Abutment #2 bearing #1 active corrosion with pack rust.



Abutment #2 bearing #2 active corrosion with pack rust.



### Maintenance Needs

Date Reported: 06/25/2015

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Element

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### Deficiency Description

Superstructure -

-Girders have areas with active corrosion over the abutments, intermediate bents, and under the full depth cracks in the deck. Section loss to top flanges range from 1/8" up to approximately 1/4" in some locations.

-Span # 2, girder # 2 over bent # 3 has corrosion with up to 5/16" section loss to interior side of web at expansion dam juncture.

-Girder # 1 over bent # 2 has approximately 1/16" section loss to web under the expansion dam.

Diaphragms have heavy corrosion in some locations.

-The diaphragm over bent # 2 adjacent to girder # 2 has knife edge section loss with two dime sized holes rusted through and out of plane bending to top flange.

-The diaphragm over Bent #3 Rt has active corrosion and areas of 100% section loss along the top flange.

### Remarks

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Bent #3 Rt diaphragm with active corrosion and 100% section loss along the top flange.



Bent #2 Rt diaphragm holes in the flange.



Girder 1 over bent 2-Approximately 1/16" section loss to web.



The web of girder # 1 over bent # 3 has up to 5/16" section loss adjacent to the expansion dam.





Girder # 1 of span # 1 has approximately 1/16" section loss to base of web located adjacent to diaphragm # 2 connection.



Span 1, diaphragm # 2-Corrosion with section loss.



Span 2, girder 2 at bent # 2 has 1/8" section loss to interior side of web at deck haunch juncture.



Span # 2, girder # 2 over bent # 3 has corrosion with up to 5/16" section loss to interior side of web at expansion dam juncture.





Span # 3, girder # 1 has corrosion to the interior side of web at the diaphragm connection with up to 1/8" section loss. Photo 2.

### Maintenance Needs

Date Reported: 06/24/2015

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Element

---

### Deficiency Description

Bearings -

The expansion bearings have active corrosion, layers of rust, and section loss between the masonry plates and the rockers.

The fixed bearings have active corrosion forming on the base of the bearings.

### Remarks

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Abutment #1 Rt bearing active corrosion with pack rust.



The expansion bearings have active corrosion, layers of rust, and section loss between the masonry plates and the rockers.

The fixed bearings have active corrosion forming on the base of the bearings.



The expansion bearings have active corrosion, layers of rust, and section loss between the masonry plates and the rockers.

The fixed bearings have active corrosion forming on the base of the bearings.



Abutment # 2-Corrosion to bearings.



### Maintenance Needs

Date Reported: 06/24/2015

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Element

---

### Deficiency Description

R.C. Deck -

The deck has sealable full depth transverse cracking with areas of spalling with exposed reinforcing steel in the undersurface. The deck haunch / expansion dam over Bent # 2 has spalls with exposed reinforcing steel that are visible from the undersurface of the deck.

### Remarks

06/23/2022 - EJW - The deck now has a chip seal wearing surface, the curbs, overhangs and the deck undersurface still have numerous deficiencies that have not been repaired.

---



Span 3 undersurface-Spalling with exposed reinforcing steel.



Expansion dam over bent 2-Spalling with exposed reinforcing steel.



**Maintenance Needs**

**Date Reported:** 06/24/2015

**Priority:** C - Important

**Type of Work:** Repair (General)

**Status:** Monitor

**Component:** Element

---

**Deficiency Description**

Expansion Joints -

The expansion joint assemblies at the North and South bridge ends appear to be loose in locations. The assemblies are noisy when impacted by traffic.

**Remarks**

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Abutment #2 assembly joint.



Abutment 1 sliding plate assembly.

### Maintenance Needs

Date Reported: 06/25/2015

Priority: C - Important

Type of Work: Repair (General)

Status: Monitor

Component: Element

---

### Deficiency Description

Abutment # 2 Rocker Bearing Pins -

The rocker bearing pins at connections at abutment # 2 have corrosion with significant section loss. The pin at bearing # 1 is the most extreme with up to approximately 1/4" section loss.

### Remarks

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Abutment #2 bearing #1 active corrosion with pack rust and significant section loss to the bearing and pin.



The rocker bearing pins at connections at abutment # 2 have corrosion with significant section loss. The pin at bearing # 1 is the most extreme with up to approximately 1/4" section loss.



**Maintenance Needs**

**Date Reported:** 06/18/2020

**Priority:** C - Important

**Type of Work:** Repair (General)

**Status:** Repair Documented

**Component:** Miscellaneous

---

**Deficiency Description**

Northeast approach railing -

The Northeast approach railing has collision damage that has broken the post that supports the turndown portion of the railing.

The Northwest approach railing near the bridge end has minor collision damage that has created sharp jagged edges in the railing.

**Remarks**

06/23/2022 - EJW - Maintenance forces have replaced the Northeast approach guardrail. New maintenance need created for the collision damage that has created jagged edges in the railing.

---



The Northwest approach railing has collision damage that has created sharp jagged edges in the railing near the bridge end.



The Northeast approach railing has collision damage that has broken the post that supports the turndown portion of the railing.



Northeast approach guardrail has been replaced.



**Maintenance Needs**

**Date Reported:** 06/18/2020

**Priority:** C - Important

**Type of Work:** (Inactive) (Inactive) 1 - Clean

**Status:** Monitor

**Component:** Channel

---

**Deficiency Description**

Channel -

The channel has drift accumulation at bents # 2 and # 3.

**Remarks**

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Bent #2 drift accumulation.



The channel has drift accumulation at bents # 2 and # 3.



Drift accumulation at bent # 2.



Drift accumulation at bent # 3.



**Maintenance Needs**

**Date Reported:** 06/18/2020

**Priority:** D- Routine

**Type of Work:** Repair (General)

**Status:** Monitor

**Component:** Element

---

**Deficiency Description**

Deck -

The undersurface of the deck has spalling with exposed reinforcing steel between the girders and in the deck overhangs.

**Remarks**

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Span 2-Spalling with exposed reinforcing steel.



Span 2, left side over bent 3-Spalling with exposed reinforcing steel in deck overhang.

**Maintenance Needs**

**Date Reported:** 07/06/2022

**Priority:** D- Routine

**Type of Work:** Repair (General)

**Status:** Open

**Component:** Substructure

---

**Deficiency Description**

Substructure-

The abutments and the intermediate bents have concrete spalling with exposed reinforcing steel. The exposed reinforcing steel has active corrosion and section loss.

**Remarks**

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Bent #3 Lt spalling with exposed reinforcing steel.



Abutment #1 Lt spalling with exposed reinforcing steel.





Bent #2 Lt spalling with exposed reinforcing steel.



Bent #2 Rt aheadface spalling with exposed reinforcing steel.

**Maintenance Needs**

**Date Reported:** 07/06/2022

**Priority:** D- Routine

**Type of Work:** Replace (General)

**Status:** Open

**Component:** Approach

---

**Deficiency Description**

Approach Bridge Rail-

The Northwest approach railing near the bridge end has minor collision damage that has created sharp jagged edges in the railing.

**Remarks**

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Northwest approach guardrail collision damage.





**Asset #01672**(Routine, NSTM)

**SH 59-Wash Co. over Baron Fork Creek**

**Location: 0.05 Mi. S Jct Hwy 45**

**Team Lead: Eric West, Inspection Date: 06/23/2022**

## **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	



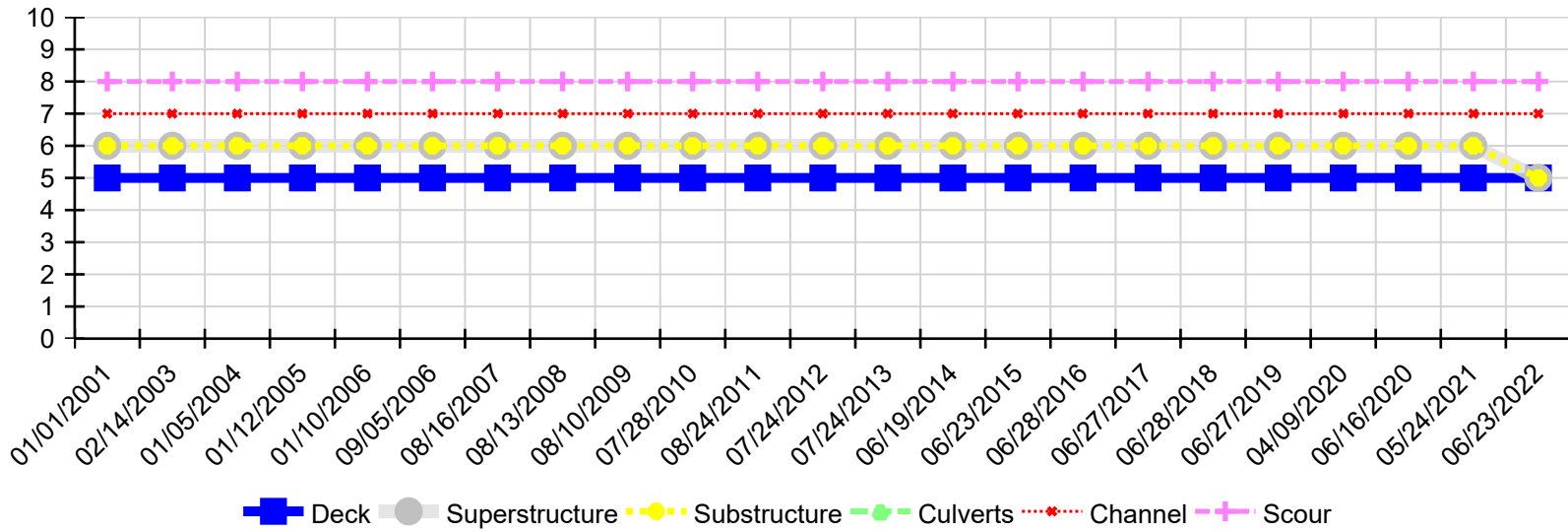
Asset #01672(Routine, NSTM)

SH 59-Wash Co. over Baron Fork Creek

Location: 0.05 Mi. S Jct Hwy 45

Team Lead: Eric West, Inspection Date: 06/23/2022

Condition History



Inspection Date	Deck	Superstructure	Substructure	Culverts	Channel	Scour
06/23/2022	5	5	5	N	7	8
05/24/2021	5	6	6	N	7	8
06/16/2020	5	6	6	N	7	8
04/09/2020	5	6	6	N	7	8
06/27/2019	5	6	6	N	7	8
06/28/2018	5	6	6	N	7	8
06/27/2017	5	6	6	N	7	8
06/28/2016	5	6	6	N	7	8
06/23/2015	5	6	6	N	7	8
06/19/2014	5	6	6	N	7	8
07/24/2013	5	6	6	N	7	8
07/24/2012	5	6	6	N	7	8
08/24/2011	5	6	6	N	7	8
07/28/2010	5	6	6	N	7	8
08/10/2009	5	6	6	N	7	8
08/13/2008	5	6	6	N	7	8
08/16/2007	5	6	6	N	7	8
09/05/2006	5	6	6	N	7	8
01/10/2006	5	6	6	N	7	8
01/12/2005	5	6	6	N	7	8
01/05/2004	5	6	6	N	7	8
02/14/2003	5	6	6	N	7	8
01/01/2001	5	6	6	N	7	8





**Asset #01672**(Routine, NSTM)

**SH 59-Wash Co. over Baron Fork Creek**

**Location: 0.05 Mi. S Jct Hwy 45**

**Team Lead: Eric West, Inspection Date: 06/23/2022**

**NSTM Inspection Report and Procedure**  
**Bridge No. 01672 0.05 Mi. S Jct Hwy 45**

**A-128 - Description of Structure**

**A-129 - Range Of Dates, Personnel and Responsibilities**

**A-130 - Access Equipment**

**B.IR.02 Fatigue Prone Details**

**B.C.14 NSTM Inspection Condition**

**B.IR.04 Complex Feature**



**Asset #01672**(Routine, NSTM)

**SH 59-Wash Co. over Baron Fork Creek**

**Location: 0.05 Mi. S Jct Hwy 45**

**Team Lead: Eric West, Inspection Date: 06/23/2022**

**Reference Photos:**





Asset #01672(Routine, NSTM)

SH 59-Wash Co. over Baron Fork Creek

Location: 0.05 Mi. S Jct Hwy 45

Team Lead: Eric West, Inspection Date: 06/23/2022

Bridge #01672 NSTM Member Inspection Log

Member or Element (NSTM)	Access Equipment	Condition Rating	General Condition Notes
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NSTM specific defect notes

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
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**Asset #01672**(Routine, NSTM)

**SH 59-Wash Co. over Baron Fork Creek**

**Location: 0.05 Mi. S Jct Hwy 45**

**Team Lead:** Eric West, **Inspection Date:** 06/23/2022

### Signatures

Signature

Printed Name

Date

*John P. Wilson*

John Wilson

07/07/2022

*Eric J. West*

(Team Lead) Eric West

07/07/2022



# **FRACTURE CRITICAL INSPECTION PROCEDURE**

## **BRIDGE 01672**

### **DISTRICT 4 – Washington (72)**

### **ROUTE: State Hwy 59 / SECTION 4 / LM 6.12**

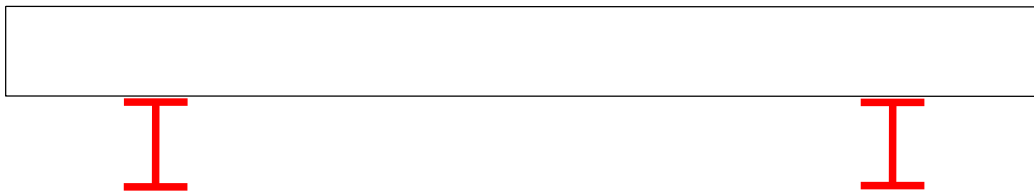
Bridge 01672 is a 3 span continuous steel stringer/girder structure bearing on 2 abutments and 2 intermediate concrete pier bents. The deck is cast in place reinforced concrete that bears directly on top of the 2 Girder system.

The fracture critical members are the 2 continuous steel girders.

Fracture critical inspection will consist of a hands-on visual inspection for any evidence of cracking, section loss or any other notable deterioration of member.

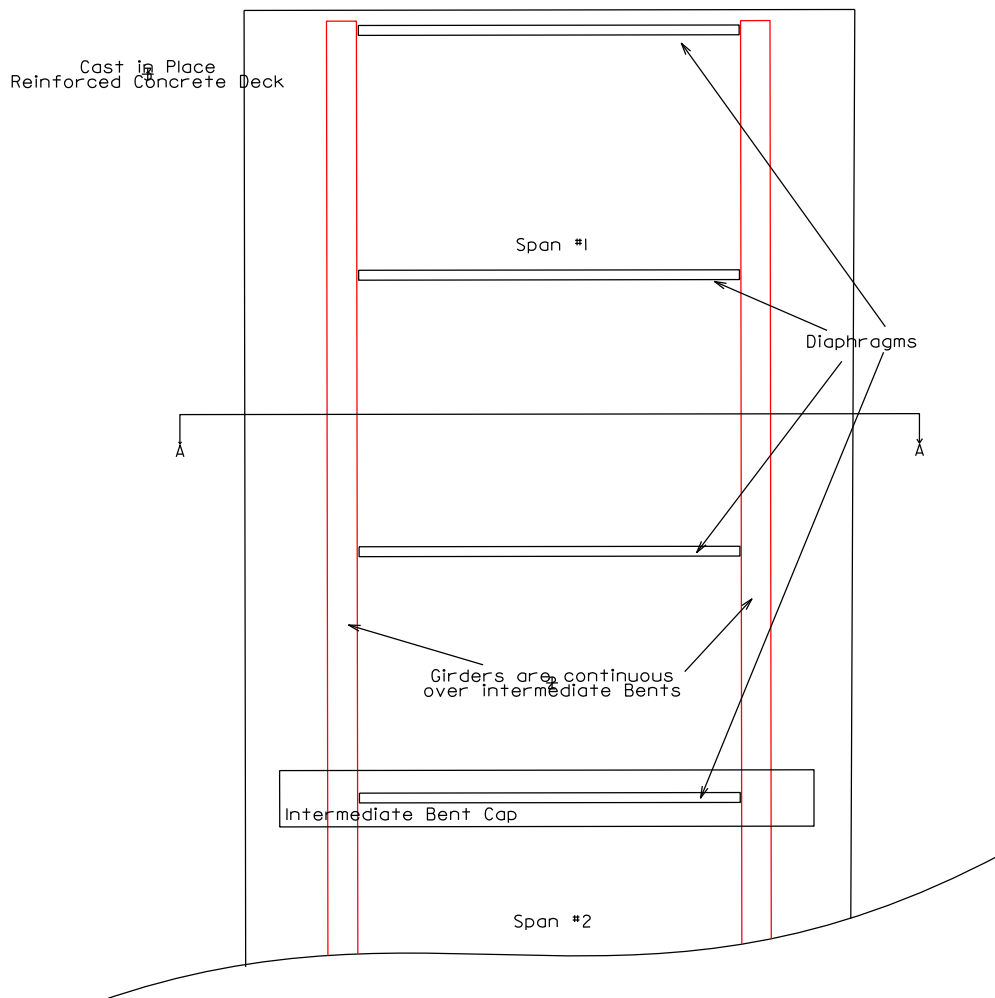
These members are accessible by ladder from the ground or by hanging a ladder off the sides of the bridge. No special inspection equipment required. Useful tools include a wire brush or scraper to remove surface/pack rust and calipers to measure section loss of steel members.

This Bridge was built under  
State Job #4192



SECTION A-A

PLAN VIEW



Insp. JPB and MFF

BRIDGE INSPECTION REPORT FORM 111

Date 07/24/2012

Dist. 4 Co. 72 Rt. 59 Sec. 4 Log 6.12 Br. No. 01672



