



Latitude:35.03551, Longitude:-90.71308

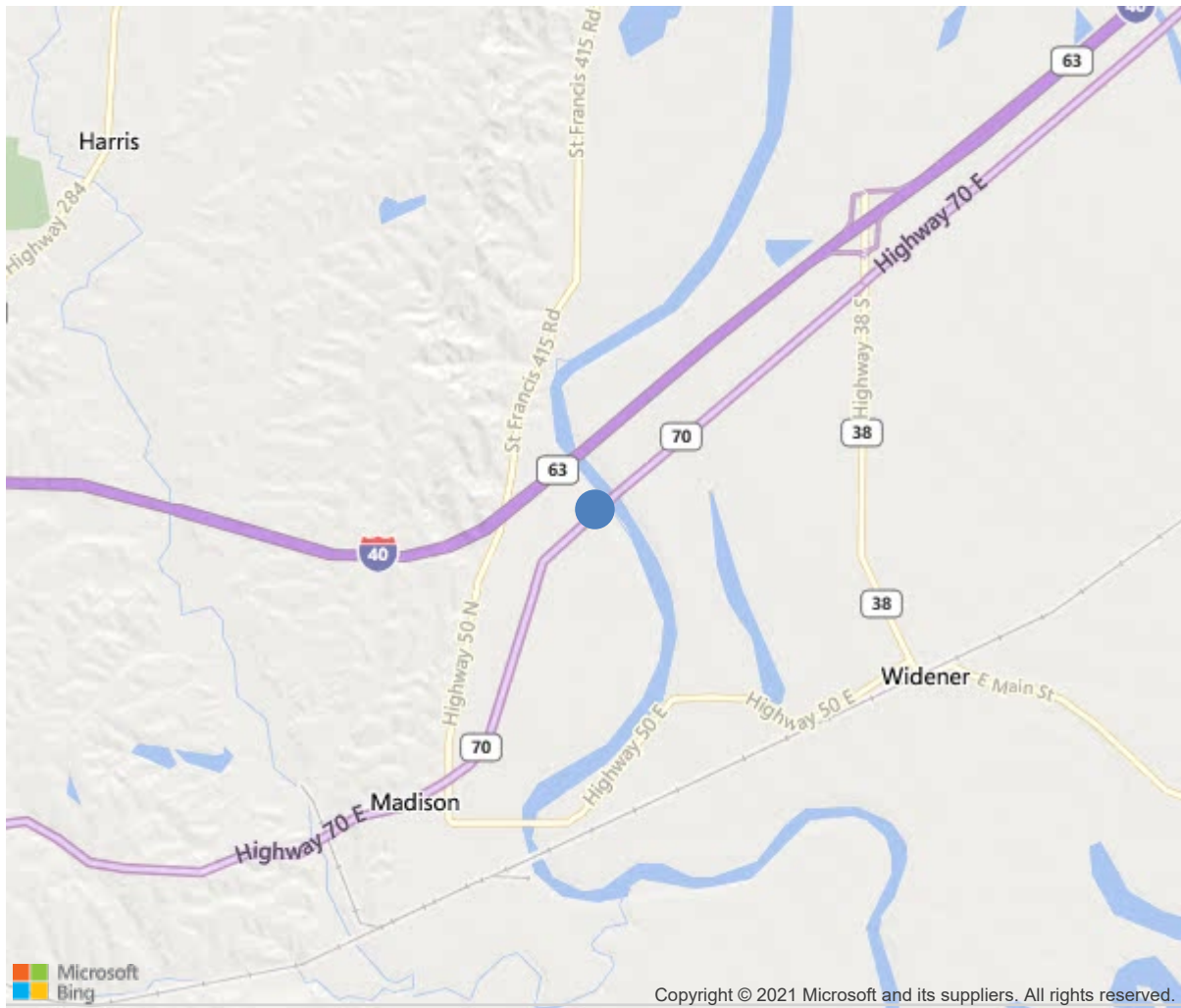
Route:70 Section:19 Log:5.19

Arnold Road ID:68x70x19xA, Arnold Log mile:5.175

District 01, St. Francis County

Owner: 1-State Highway Agency

5.19 Miles East Of Sh 1



35.03551, -90.71308





# Bridge #01391(Fracture Critical, Routine)

## Us-70/Sec-19/L5.19 over St. Francis River

### Location: 5.19 Miles East Of Sh 1

Team Lead: Drew Melton Inspection Date: May 10, 2021

IDENTIFICATION	
(1) State Names	Arkansas
(8) Structure Number	01391
(5) Inventory Route	70
(2) Highway Agency District	01
(3) County Code	123-St. Francis County, Arkansa
(4) Place Code	0
(6) Features Intersected	St. Francis River
(7) Facility Carried	Us-70/Sec-19/L5.19
(9) Location	5.19 Miles East Of Sh 1
(11) Mile Point	5.19 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	0000000000
(16) Latitude	35.03551
(17) Longitude	-90.71308
(98) Border Bridge State Code	
(99) Border Bridge Structure No.	
STRUCTURE TYPE AND MATERIAL	
(43) Main Structure Type	410
Material	4-Steel continuous
Type	10-Truss - Thru
(44) Approach Structure Type	32
Material	3-Steel
Type	2-Stringer/Multi-beam or girder
(45) No. of Spans in Main Unit	5
(46) No. of Approach Spans	4
(107) Deck Structure Type	1-Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	1-Monolithic Concrete (concurrently placed
Type of Membrane	0-None
Type of Deck Protection	0-None
AGE AND SERVICE	
(27) Year Built	1933
(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	1300
(30) Year of ADT	2018
(109) Truck ADT	18 %
(19) Bypass, Detour Length	7 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	233 ft
(49) Structure Length	921 ft
(50) Curb or Sidewalk Width	
Left	0.5 ft
Right	0.5 ft
(51) Bridge Roadway Width Curb to Curb	24 ft
(52) Deck Width Out to Out	25 ft
(32) Approach Roadway Width (W/Shoulders)	23.6 ft
(33) Bridge Median	0-No median
(34) Skew	0 Deg
(35) Structure Flared	No flare
(10) Inventory Route Min Vert Clear	15.41 ft
(47) Inventory Route Total Horiz Clear	24.9 ft
(53) Min Vert Clear Over Bridge Rdwy	15.41 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 water
(111) Pier Protection	1-Navigation protection not requ
(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	7-Rural Major Collector
(100) Defense Highway	0-The inventory route is not a S
(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 part of the
(20) Toll	3-On free road. The structure is toll-
(21) Maintain	1-State Highway Agency
(22) Owner	1-State Highway Agency
(37) Historical Significance	1-Bridge is on the National Register
CONDITION	
(58) Deck	5
(59) Superstructure	4
(60) Substructure	6
(61) Channel & Channel Protection	5
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	4-M 18 / H 20
(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	5
Rating	21
(70) Bridge Posting	2-20.0 - 29.9 % below
(41) Structure Open/Posted/Closed	P-Posted for load (may include o
APPRAISAL	
(67) Structural Evaluation	4
(68) Deck Geometry	4
(69) Clearances, Vertical/Horizontal	N
(71) Waterway Adequacy	8
(72) Approach Roadway Alignment	7
(36A) Bridge Railings	0-Inspected feature does not meet cur
(36B) Transitions	0-Inspected feature does not meet cur
(36C) Approach Guardrail	0-Inspected feature does not meet cur
(36D) Approach Guardrail Ends	0-Inspected feature does not meet cur
(113) Scour Critical Bridges	5-Bridge foundations determined to be
PROPOSED IMPROVEMENTS	
(75) Type of Work	Replacement of bridge or other
(76) Length of Structure Improvement	961 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 125
(96) Total Project Cost	\$ 1713
(97) Year of Improvement Cost Estimate	2004
(114) Future ADT	1210
(115) Year of Future ADT	2028

INSPECTIONS *			
(90) Inspection Date			05/2021
(91) Frequency			24 Months
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	Yes	24	05/2021
B: Underwater Inspection	No	0	
C: Other Special Inspection	No	0	

\* 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.



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Us-70/Sec-19/L5.19 over St. Francis River

Location: 5.19 Miles East Of Sh 1

Team Lead: Drew Melton, Inspection Date: May 10, 2021

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	23233	4880	15519	2734	100
1080	Delamination/Spall/Patched Area	SF	304	0	242	62	0
1090	Exposed Rebar	SF	80	0	0	80	0
1120	Efflorescence/Rust Staining	SF	848	0	424	424	0
1130	Cracking (RC and Other)	SF	2542	0	2542	0	0
1190	Abrasion/Wear (PSC/RC)	SF	1310	0	1270	40	0
510	Wearing Surfaces	SF	450	0	0	450	0
3210	Delam/Spall/Patched Area/Pothole	SF	100	0	0	100	0
3230	Effectiveness (Wearing Surface)	SF	350	0	0	350	0
(12)							
<p>Curbs at bent #3 right and bent #8 left have 1' spall with exposed rebar no section loss.</p> <p>Curbs spans #1,2,8,9 both sides have areas of exposed rebar due to poor concrete coverage approximately 40 square feet.</p> <p>Spans #1,2,8,9 deck has transverse open cracks spaced 2' apart with half being sealed with epoxy.</p> <p>Spans #1,2,8,9 deck has light to moderate scaling exposing coarse aggregate with some loose aggregate.</p> <p>Span #1,2,8,9 soffit-under surface has transverse cracks spaced 3' apart with half having light to moderate efflorescence and rust staining.</p> <p>Soffit-under surface in spans #1,2,8,9 have approximately 20 square feet of 1' to 2' spalls with exposed rebar with 10% section loss.</p> <p>Deck span #1 has 40 square feet of sound patches and 7 square feet of unsound patches.</p> <p>Deck span #1 has 7 square feet of shallow spalls one foot and under in size no rebar exposed.</p> <p>Deck span #1 has 2' of heavy scaling in left gutter at abutment #1 and 3' in right gutter at bent #2.</p> <p>Deck span #2 has 220 square feet of sound patches and 40 square feet of unsound patches.</p> <p>Deck span #2 has 8 square feet of shallow spalls one foot and smaller no rebar exposed.</p> <p>Deck span #2 has 3 square feet of heavy scaling in right gutter at bent #2.</p> <p>Deck span #2 right lane has 2' shallow spall and 2 one foot shallow spalls with no exposed rebar.</p> <p>Deck span #8 has 28 square feet of concrete repair that is sound.</p> <p>Deck span #8 has 2 small spalls.</p> <p>Deck span #9 has 35 square feet of concrete repair that is sound.</p> <p>Deck span #9 at bent #9 right side of joint spalled for 5' x 1' no exposed rebar.</p> <p>Deck span #9 right gutters have heavy scaling 2' x 15'.</p> <p>Asphalt overlay at abutment #2 has multiple spalls and repaired areas that are failing.</p> <p>Soffit-under surface at bent #2 span #1,2 between girders #3,4 each have forms left in place.</p> <p>Soffit-under surface span #2 at bent #3 between girders #1,2 and 4,5 each have a form left in place.</p> <p>Soffit-under surface span #1 between girders #2 and 3 has 1 1/2' x 2 1/2' spall with exposed rebar moderate section loss approx. 15' from bent #2 and 4' of shallow spalling beside top flange of girder.</p> <p>Soffit-under surface span #1 between girders #3 and 4 has 1' spall with exposed rebar moderate section loss.</p> <p>Soffit-under surface span #1 between girders #4 and 5 has 3' long transverse crack with exposed rebar moderate section loss mid span, and 2' of shallow spalling beside top flange of girder.</p> <p>Soffit-undersurface span #1 between girders #5 and 6 has 1' spall with exposed rebar moderate section loss.</p> <p>Soffit-under surface span #9 between girders #1,2 has 1' spall with exposed rebar moderate section loss.</p> <p>Soffit-under surface span #9 between girders #4,5 has 2 two foot spall with exposed rebar moderate section loss.</p>							
(12-510)							
Abutment #2 span #9 asphalt area on end of deck has multiple spalls and patched areas.							
107	Steel Open Girder/Beam	LF	1212	12	1075	100	25





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ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1000	Corrosion	LF	1200	0	1075	100	25
515	Steel Protective Coating	SF	8928	0	0	7142	1786
3440	Effectiveness (Steel Protective Coatings)	SF	8928	0	0	7142	1786
(107)							
<p>Paint on approach girders has 20% bare steel with rest of paint having limited effectiveness.</p> <p>All girders in approach spans have surface rust full length with ends of girders having corrosion with laminations with 30% section loss unless other wise noted.</p> <p>Span #1 girder #1 bent #1 has a t-splice first two feet by seven inches tall.</p> <p>Span #1 girder #2 bent #1 first 1' bottom flange original thickness .850" remaining .309", 65% section loss.</p> <p>Span #1 girder #3 bent #1 first 1' bottom flange original thickness .850" remaining .650", 25% section loss.</p> <p>Span #1 girder #4 bent #1 first 1' bottom flange original thickness .850" remaining .762", 10% section loss.</p> <p>Span #1 girder #5 bent #1 first 1' bottom flange original thickness .850" remaining .767", 10% section loss.</p> <p>Span #1 girder #6 bent #1 has a t-splice first two feet six inches tall.</p> <p>Span #1 girder #2 bent #2 last 1' bottom flange original thickness .850" remaining .520", 40% section loss.</p> <p>Span #1 girder #3 bent #2 last 1' bottom flange original thickness .850" remaining .272", 70% section loss.</p> <p>Span #1 girder #3 bent #2 at top of web at diaphragm connection has a eight inch by eight inch window.</p> <p>Span #1 girder #4 bent #2 last 1' bottom flange original thickness .850" remaining .270", 70% section loss.</p> <p>Span #1 girder #4 bent #2 at top of web at diaphragm connection has a eight inch by eight inch window.</p> <p>Span #2 bent #2 girder #2 has a L shape t-splice two foot long.</p> <p>Span #2 girder #3 bent #2 has a L shape t-splice one foot long.</p> <p>Span #2 girder #4 bent #2 has a L shape t-splice one foot long.</p> <p>Span #2 girder #5 bent #2, last 1' bottom flange original thickness .850" remaining .575", 65% section loss.</p> <p>Span #2 girder #2 bent #3, girder has 6" long x 1 1/2" hole in web at top flange at end of girder and a 2" long x 1" tall hole in web below diaphragm connection.</p> <p>Span #2 girder #3 bent #3 has half inch hole above diaphragm connection and 60% section loss below diaphragm connection.</p> <p>Span #2 girder #4 bent #3 has 3" long x 1 1/2" tall hole in web below diaphragm connection.</p> <p>Span #2 girder #5 bent #3 has 1" hole in web above diaphragm connection and a pin hole below diaphragm connection.</p> <p>Steel diaphragms in approach spans have large section loss some with 100% gone.</p> <p>Top flanges of girders in approach spans last three feet of girder ends have corrosion with up to 30% section loss.</p> <p>Bent #3 girders at diaphragm connection has corrosion with up to 85% section loss unless otherwise noted.</p> <p>Span #8,9 at bent #8,9 all 6 girders bottom flange for first foot has section loss up to 45% and web at diaphragm area has section loss up to 50% unless other wise noted.</p> <p>Span #8 girder #2 at bent #8 has a two inch hole in web above diaphragm.</p> <p>Span #8 girder #3 at bent #8 has a three inch hole in web above diaphragm.</p> <p>Span #8 girder #3 at bent #8 lower flange first two feet has areas of section loss up to a knife edge.</p> <p>Span #8 girder #4 at bent #8 has a two inch long hole in web above diaphragm and a six inch hole below diaphragm.</p> <p>Span #8 girder #4 at bent #8 lower flange first two feet has areas of section loss up to a knife edge.</p> <p>Span #8 bent #8 girder #5 has a three inch hole in web above diaphragm.</p> <p>Span #8 bent #9 girder #1,5 first two feet of bottom flange has corrosion up to a knife edge.</p> <p>Span #8 bent #9 girder #2 has a t-splice that is two foot long by eight inches tall.</p> <p>Span #8 bent #9 girder #3 has a t-splice that is two feet long by ten inches tall.</p> <p>Span #8 bent #9 girder #4 has a t-splice that is two feet long by ten inches tall.</p> <p>Span #9 girder #2,3,4 at bent #9 has holes at diaphragm connections.</p> <p>Span #9 girder ends at abutment ##2 have been cleaned and painted.</p> <p>Span #9 girder #1 abutment #2 has been t-spliced two foot long eight inches tall.</p> <p>Span #9 girder #4 abutment #2 bottom flange has up to 60% section loss last 1'.</p> <p>Span #9 girder #6 abutment #2 has been t-spliced two foot long eight inches tall.</p>							
113	Steel Stringer	LF	3840	0	864	2976	0
1000	Corrosion	LF	2400	0	0	2400	0
515	Steel Protective Coating	SF	16843	0	7580	7579	1684
3440	Effectiveness (Steel Protective Coatings)	SF	10536	0	4742	4741	1053

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
(113)							
Steel stringers in spans #3,4,7 have surface rust full length with 10% bare steel with rest of paint being split between limited effectiveness and moderate effectiveness.							
Steel stringers #1,5 (the outside ones) are corroded on top flange with laminations up to 1/4" thick with up to 15% section loss. The first and last 1' of these stringers are also corroded with section loss up to 10% unless otherwise noted.							
Steel stringers #2,3,4 (the inside ones) are corroded on top flange with laminations up to 1/8" thick with up to 5% section loss.							
Bent #4 span #4 stringer #1 bottom flange last 3' has up to 20% section loss.							
Bent #5 span #4 stringer #4 has right side top rivet sheared off.							
Span #7 floor beam #1 stringer #3 right ahead side top rivet sheared off.							
Span #7 floor beam #2 stringer #5 left back side top rivet sheared off.							
Span #7 stringer #5 at bent #7 is lifted up one inch breaking concrete stiffener.							
Span #7 stringer #1 at bent #8 web at top flange has a two inch hole on end.							
120	Steel Truss	LF	710	3	520	153	34
1000	Corrosion	LF	476	0	337	129	10
7000	Damage	LF	4	0	4	0	0
515	Steel Protective Coating	SF	92709	0	11588	50295	30826
3440	Effectiveness (Steel Protective Coatings)	SF	46586	0	0	31057	15529
3420	Peeling/Bubbling/Cracking	SF	15529	0	7764	7765	0
(120)							
Bridge truss has surface rust full length with 25% bare steel 25% peeling paint 50% limited effectiveness.							
All areas of bottom chord at gusset plate connections have active corrosion with up to 10% section loss unless otherwise noted.							
All connection plates from lower chord to floor beam connections at beginning and end of spans have up to 5% section loss unless otherwise noted.							
Span #3 porthole has impact damage near center.							
Span #3 right side vertical U3-L4 top half 3/4 way down is bent and twisted forward 2" due to impact damage.							
Span #3 right side U7-L8 diagonal has small dent and scrape on inner lower flange ten feet off of deck.							
Span #4 left side L0-U1 has 2" long ding head high bent up 1".							
Span #4 U6 sway bracing has minor collision damage over right lane							
Porthole at end of truss span #7 has impact damage in left lane bent down ward and towards the west 1 1/2".							
Span #3 cover plate on lower chord right side of bridge at L8 connection has hole rusted through.							
Span #4 cover plate on lower chord right side of bridge at L0,L8 connections have holes rusted through.							
Span #7 left side inner flange dented behind rail on diagonal between L3 U4.							
Span #7 left side of bridge at L2 connection bottom chord is corroded for 2' with 50% section loss.							
Span #7 right side lower chord cover plate at end of truss L8 connection has two inch crack at floor beam connection.							
152	Steel Floor Beam	LF	1040	4	597	381	58
1000	Corrosion	LF	709	0	297	358	54
515	Steel Protective Coating	SF	8291	0	1222	5240	1829
3440	Effectiveness (Steel Protective Coatings)	SF	5847	0	0	4385	1462
(152)							
Floor beams Spans #3,4,7 have surface rust full length with 25% bare steel, 75% limited effectiveness.							
Floor beams #1,9 in spans #3,4,7 have corrosion with lamination up to 1/2" thick on top flange between deck and beams with section loss up to 40% unless otherwise noted.							
Floor beams #1,9 in spans #3,4,7 have corrosion with laminations full length on bottom flanges and lower web primarily on ends with up to 20% section loss unless otherwise noted.							
Floor beams #2-8 in spans #3,4,7 have corrosion with laminations up to 1/4" thick on top flange between deck and beams with up to 15% section loss primarily outside 4' on each side of each floor beam unless otherwise noted.							





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<p>Floor beams #2-8 in spans #3,4,7 have corrosion on bottom flanges and lower web outside 4' on both ends of floor beams with up to 15% section loss unless otherwise noted.</p> <p>Span #3 at bent #3 floor beam has heavy corrosion full length top and bottom flanges with areas of section loss up to 60%.</p> <p>Span #3 at bent #4 floor beam #9 bottom flange right side of bridge at x bracing connection has section loss up to 50%.</p> <p>Span #4 first floor beam front side three feet from left side has three foot area lower web at lower flange that has corrosion with up to 40% section loss.</p> <p>Bent #4 span #4 first floor beam connection area in web at stringer #1 has corrosion with laminations with up to 20% section loss.</p> <p>Span #4 at bent #5 floor beam #9 right side at connection to lower chord last 2' has up to 90% section loss on lower flange and 20% section loss in web.</p> <p>Span #4 at bent #5 floor beam #9 right side first two feet top flange has areas of section loss up to 70% leading into web with section loss up to 20%.</p> <p>Span #4 at bent #5 floor beam #9 lower flange has corrosion with laminations full length leading into lower web with up to 20% section loss unless other wise noted.</p> <p>Span #7 floor beam #9 on ends for four feet top flange has corrosion laminations and section loss up to 50%.</p> <p>Span #7 first floor beam right side bottom of bottom flange to connection plate has section loss up to 50%.</p> <p>Span #7 first floor beam lower flange into web has a four foot area two feet from right side with corrosion and section loss up to 35%.</p> <p>Span #7 last floor beam left end for three feet lower flange into web has corrosion with laminations and section loss up to 90%.</p> <p>Span #7 last floor beam right end for three feet lower flange into web has corrosion with laminations and section loss up to 50%.</p>							
162	Steel Gusset Plate	EA	144	0	133	10	1
1000	Corrosion	EA	96	0	85	10	1
515	Steel Protective Coating	SF	1338	0	937	268	133
3440	Effectiveness (Steel Protective Coatings)	SF	994	0	696	199	99
(162)	<p>Paint has 10% bare steel, 20% limited effectiveness, 70% moderate effectiveness.</p> <p>Span # 3 beginning diagonal location L0 on right side of bridge back side of left gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.13" to gusset plate.</p> <p>Span #3 end diagonal location L8 right side of bridge back side of left and right gusset plates have active corrosion. Pact rust has formed between diagonal and gusset plate on left with section loss up to 0.136" to gusset plate, and on right with up to 0.158" section loss.</p> <p>Span #3 end diagonal location L8 left side of bridge backside of left gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.095" to gusset plate.</p> <p>Span #4 beginning diagonal location L0 left side of bridge ahead side of right gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.239" to gusset plate with up to 1/4" pack rust.</p> <p>Span #4 end diagonal location L8 right side of bridge back side of right gusset plate has active corrosion. One and a half inches of pact rust has formed between diagonal and gusset plate with section loss up to 0.239" to gusset plate.</p> <p>Span #7 beginning diagonal at location L0 right side of bridge ahead side of left gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.047" to gusset plate.</p> <p>Span #7, left side, lower gusset plate at L2 has 1/4" pack rust.</p> <p>Span #7 end diagonal location L8 right side of bridge back side of left gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.131" to gusset plate.</p> <p>Span #7 end diagonal location L8 left side of bridge back side of right and left gusset plates have active corrosion. Pact rust has formed between diagonal and gusset plate on left with section loss up to 0.037" to gusset plate, and on right with up to 0.142" section loss.</p>						
205	Reinforced Concrete Column	EA	15	11	1	3	0
1090	Exposed Rebar	EA	2	0	0	2	0
(205)	<p>Bent #2 both columns have moderate area with a crack, delamination, and a spall with exposed rebar.</p> <p>Bent #2 ahead face has 2 one foot delaminations and 1 two foot delaminations..</p>						
210	Reinforced Concrete Pier Wall	LF	140	99	7	34	0

ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1080	Delamination/Spall/Patched Area	LF	7	0	0	7	0
1090	Exposed Rebar	LF	3	0	3	0	0
1130	Cracking (RC and Other)	LF	3	0	3	0	0
(210)							
Bent #2 pier wall back face has three one foot delaminations, five one foot spalls and 2 small 6" spalls with exposed rebar and 3 vertical narrow cracks, ahead face has a three foot and a one foot delamination.							
Ben #9 pier wall both faces has cs2 vertical crack from cap to ground line.							
215	Reinforced Concrete Abutment	LF	70	35	0	35	0
6000	Scour	LF	35	0	0	35	0
(215)							
Abutment #2 cap is undermined full length up to 1'.							
234	Reinforced Concrete Pier Cap	LF	259	211	29	14	5
1080	Delamination/Spall/Patched Area	LF	13	0	10	3	0
1090	Exposed Rebar	LF	15	0	0	10	5
1130	Cracking (RC and Other)	LF	10	0	10	0	0
(234)							
Pier caps have light abrasion primarily on ends.							
Pier caps have a few vertical cs2 cracks various locations.							
Caps have debris on them due to joints.							
Bent #2 cap back face has six one foot spalls half with rebar exposed with 5% section loss.							
Bent #2 cap ahead face has 3 small spalls on left side with exposed rebar with 10% section loss.							
Bent #3 cap is spalled on right end with exposed rebar span #2 side reducing bearing area under girder to 50%.							
Bent #3 cap center ahead face has three foot delaminated area with two foot spall exposed rebar with 10% section loss.							
Bent #3 cap has small spall on left end.							
Bent #3 front face has 3' delamination at center line.							
Bent #8 front face has a two foot spall at top right side under bearing of girder #6 with exposed rebar with 5% section loss and 50% loss of bearing support.							
Bent #8 cap back face by column #1 has three foot long spall with exposed rebar to bottom where cap meets pier wall.							
Bent #8 cap ahead face close to column #2 has a three foot piece of rebar exposed where cap meets pier wall with 10% section loss.							
301	Pourable Joint Seal	LF	29	29	0	0	0
(301)							
Bent #2 joint in center has 4" section of pourable seal with joint steel have large areas of 100% section loss under bridge.							
Bent 9 has had all steel removed and has poured seal, 5' of deck right side spalled at joint.							
302	Compression Joint Seal	LF	50	0	0	13	37
2310	Leakage	LF	37	0	0	0	37
2340	Seal Cracking	LF	13	0	0	13	0
(302)							
Joint steel has no paint with up to 10% section loss on outside edges.							
Joint steel has no paint with corrosion between spans with section loss up to 20% near outside edges.							
Bent #5 joint seal is cracked and split full length 6' on each end has fallen out.							



ELEM	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
Bent #7 joint seal has fallen out.							
305	Assembly Joint without Seal	LF	160	34	74	50	2
2370	Metal Deterioration or Damage	LF	51	0	26	25	0
(305)							
Joint steel has no paint with corrosion between spans with section loss up to 20% near outside edges. Bents #3,8 has had top plate removed and span #2 has has 15' of steel removed. Joint at bent #9 has been replaced with pourable joint.							
311	Movable Bearing	EA	30	0	16	12	2
1000	Corrosion	EA	24	0	12	12	0
515	Steel Protective Coating	SF	78	1	0	22	55
3440	Effectiveness (Steel Protective Coatings)	SF	48	0	0	14	34
(311)							
Surface rust with limited loss of function with section loss up to 15% with some connection nuts rusted off. Movable bearings have no paint left on them. Span #1 girder #2 right anchor nut rusted off. Span #2 girder #4 right anchor nut rusted off.							
313	Fixed Bearing	EA	34	0	22	12	0
1000	Corrosion	EA	24	0	12	12	0
515	Steel Protective Coating	SF	131	0	0	42	89
3440	Effectiveness (Steel Protective Coatings)	SF	48	0	0	0	48
(313)							
Surface rust with limited loss of function with section loss up to 15% with some connection nuts rusted off. Fixed bearings have no paint left on them. Bent #3 girder #5 left anchor bolt broken.							
330	Metal Bridge Railing	LF	1829	0	1485	329	15
1000	Corrosion	LF	404	0	349	50	5
515	Steel Protective Coating	SF	8779	0	0	7901	878
3440	Effectiveness (Steel Protective Coatings)	SF	1939	0	0	1745	194
(330)							
Bridge rails have surface rust full length with 10% bare steel rest of paint has limited effectiveness. Bridge rails have areas of pact rust with section loss up to 20% in connection points and a few areas with 100% section loss.							



**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021





**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021

## Maintenance Needs

**Date Reported:** 04/28/2011  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Assigned  
**Component:** 120 - Steel Truss

---

## Deficiency Description

Span #3 cover plate on lower chord right side of bridge at L8 connection has hole rusted through.  
Span #4 cover plate on lower chord right side of bridge at L0,L8 connections have holes rusted through.  
Span #5 Left lower cord first foot on right side L0 location top flange has corrosion with section loss up to 50%.  
Span #5 Right lower cord first foot on left side L0 location top and bottom flanges have corrosion with section loss up to 50%.  
Span #5 3rd cross brace in upper truss top angle brace over left lane has two missing rivets.  
Span # 5 vertical U-5 connection 1st diagonal is welded to inside of gusset plate of upper truss.  
Span #5 cover plate on lower chord right side of bridge at L0 connection has holes rusted through with cracks staring to propagate.  
Span #5 cover plate on lower chord right side of bridge at vertical L4 has holes rusted through.  
Span #5 connection plate on lower chord left side of bridge at connection of floor beam at L0 connection has 20% section loss.  
Span #5 cover plate on lower chord left side of bridge at connection L0 has holes rusted through.  
Span #5 cover plate on lower chord left side of bridge at connection L6 has holes rusted through.  
Span #6 cover plate on lower chord right side of bridge at vertical L8 has holes rusted through.  
Spans #5,6 right side of bridge at verticals locations (L2),(L4),(L8),(L10) lower outside web of bottom chord has areas of holes in web.  
Span #5 right side of bridge at vertical L2 lower inside web of bottom chord has holes rusted through bottom hole is 7" long top hole is size of a dime.  
Span #5 right side of bridge at vertical L2 the inside upper flange has 1' long area on top flange of lower chord with 75% section loss running into connection plate to floor beam connection.  
Span #6 left side of bridge at vertical L8 lower inside web of bottom chord has holes rusted through.  
Span #6 right side of bridge at vertical L10 upper and lower inside web of bottom chord has areas of holes rusted through.  
Span #6 right side top of bottom chord last 1' at bent #7 has corrosion with section loss up to 60%.  
Span #6 both sides end of truss at bent #7 lower cord and connection plate to floor beam and x brace has section loss up to 50% at connection of top flange of lower cord and connection plate.  
Span #7 left side inner flange dented behind rail on diagonal between L3 U4.  
Span #7 left side of bridge at L2 connection bottom chord is corroded for 2' with 50% section loss.  
Span #7 right side lower chord cover plate at end of truss L8 connection has two inch crack at floor beam connection.

## Remarks

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Span #5 right side of bridge at vertical location L4  
lower outside web of bottom chord has area with a  
hole in web.



Span #6 right side of bridge at vertical location L8  
lower outside web of bottom chord has area of hole  
in web.



Span #5 right side of bridge at vertical location L2 lower inside web of bottom chord has area of hole in web.



Span #5 right side of bridge at vertical L2 lower inside web of bottom chord has holes rusted through bottom hole is 7" long top hole is size of a dime.

Span #5 right side of bridge at vertical L2 the inside upper flange has 1' long area on top flange of lower chord with 75% section loss.



Span #6 right side of bridge at vertical L8 lower inside web of bottom chord has holes rusted through.



Span #6 right side of bridge at vertical L10 upper and lower inside web of bottom chord has areas of holes rusted through.





Span #7 lower chord cover plate at end of truss on right side L8 connection has two inch crack at floor beam connection.



Span #5 right side of bridge at vertical location L2 lower outside web of bottom chord has area of hole in web.



Span #6 right side cover plate at bent #7 L12 connection.



Span #6 left side end of truss at bent #7 lower cord and connection plate to floor beam and x brace has section loss up to 70% at connection of top flange of lower cord and connection plate.



Span #6 lower cord ahead of L10 on inside or left side web near lower flange.



Span #6 lower cord ahead of L10 on outside or right side web near lower flange.





Span #5 at bent #5 right side lower cord inside at end above bearing has a transverse connection plate with section loss and holes.



Span #5 cover plate on lower chord right side of bridge at L0 connection has holes rusted through with cracks staring to propagate.

**Date Reported:** 04/28/2011  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** 302 - Compression Joint Seal

---

**Deficiency Description**

Bent #5 joint seal is cracked and split full length 6' on each end has fallen out.  
Bent #7 joint seal has fallen out.

**Remarks**

---



Bent #5 joint



Bent #7 joint



**Date Reported:** 04/28/2011  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** 113 - Steel Stringer

---

### Deficiency Description

Steel stringers in spans #3,4,7 have surface rust full length with 10% bare steel with rest of paint being split between limited effectiveness and moderate effectiveness.

Steel stringers #1,5 (the outside ones) are corroded on top flange with laminations up to 1/4" thick with up to 15% section loss. The first and last 1' of these stringers are also corroded with section loss up to 10% unless otherwise noted.

Steel stringers #2,3,4 (the inside ones) are corroded on top flange with laminations up to 1/8" thick with up to 5% section loss.

Bent #4 span #4 stringer #1 bottom flange last 3' has up to 20% section loss.

Span #7 stringer #5 at bent #7 is lifted up one inch breaking concrete stiffener.

Span #7 stringer #1 at bent #8 web at top flange has a two inch hole on end.

### Remarks

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Span #7 stringer #5 at bent #7 is lifted up one inch breaking concrete stiffener.



Span #7 stringer #1 at bent #8 web at top flange has a two inch hole on end.



Typical outside stringers near drains.



Typical areas beside stringers spalling due to pack rust on stringers top flange.





Bent #4 span #4 stringer #1 bottom flange last 3' has up to 20% section loss.



Typical corrosion on top flange of floor beam ends everywhere but ends of truss.



Typical stringer #1,5 at bents.

**Date Reported:** 04/28/2011  
**Priority:** C - Important  
**Type of Work:** Clean  
**Status:** Monitor  
**Component:** 162 - Steel Gusset Plate

---

### Deficiency Description

Span # 3 beginning diagonal location L0 on right side of bridge back side of left gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.13" to gusset plate.

Span #3 end diagonal location L8 right side of bridge back side of left and right gusset plates have active corrosion. Pact rust has formed between diagonal and gusset plate on left with section loss up to 0.136" to gusset plate, and on right with up to 0.158" section loss.

Span #3 end diagonal location L8 left side of bridge backside of left gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.095" to gusset plate.

Span #4 beginning diagonal location L0 left side of bridge ahead side of right gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.239" to gusset plate.

Span #4 end diagonal location L8 right side of bridge back side of right gusset plate has active corrosion. One and a half inches of pact rust has formed between diagonal and gusset plate with section loss up to 0.239" to gusset plate.

Span #7 beginning diagonal at location L0 right side of bridge ahead side of left gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.047" to gusset plate.

Span #7 end diagonal location L8 right side of bridge back side of left gusset plate has active corrosion. Pact rust has formed between diagonal and gusset plate with section loss up to 0.131" to gusset plate.

Span #7 end diagonal location L8 left side of bridge back side of right and left gusset plates have active corrosion. Pact rust has formed between diagonal and gusset plate on left with section loss up to 0.037" to gusset plate, and on right with up to 0.142" section loss.

### Remarks

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Gusset plate span #4 left side L0 connection.





Gusset plate span #4 end diagonal location L8 right side of bridge back side of right gusset plate has active corrosion. One and a half inches of pack rust has formed between diagonal and gusset plate with section loss up to 0.239" to gusset plate.



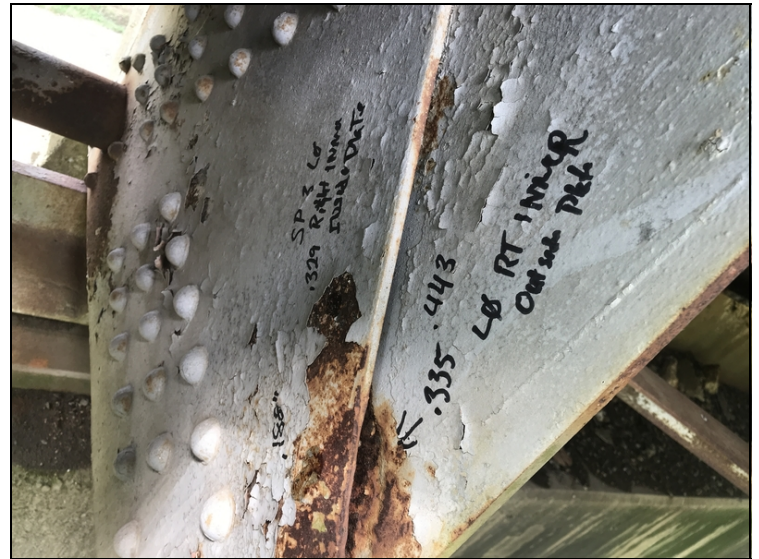
Gusset plate span #3 right side at bent #4 L8 connection



Gusset plate span #7 right side bent #8 L8 connection.



Gusset plate span #7 bent #8 left side L8 connection.



Gusset plate span #3 right L0 inner plate.





Gusset plate span #4 right side L0 connection.



Gusset plate span #3 right L0 connection.

**Date Reported:** 04/23/2012

**Priority:** D- Routine

**Type of Work:** Clean

**Status:** Monitor

**Component:** Bridge

---

### Deficiency Description

Paint all steel members have surface rust full length with approximately 25% bare steel rest of paint is limited effectiveness and some paint is peeling.

### Remarks

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Typical steel on bridge



Typical steel on bridge





**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Typical steel on bridge

**Date Reported:** 06/24/2013  
**Priority:** D- Routine  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** Miscellaneous

---

**Deficiency Description**

Span #3 bent #3 right side and bent # 8 both sides the curbs are spalled with exposed rebar.

**Remarks**

---



Bent #8 left curb



Span #3 bent #3 right curb



Span #3 bent #3 left curb



**Date Reported:** 06/24/2013  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Open  
**Component:** 12 - Reinforced Concrete Deck

---

### Deficiency Description

Deck span #1 has 7 square feet of unsound patches.  
Deck span #1 has 7 square feet of shallow spalls one foot and under in size no rebar exposed.  
Deck span #1 has 2' of heavy scaling in left gutter at abutment #1 and 3' in right gutter at bent #2.  
Deck span #2 has 40 square feet of unsound patches.  
Deck span #2 has 8 square feet of shallow spalls one foot and smaller no rebar exposed.  
Deck span #2 has 3 square feet of heavy scaling in right gutter at bent #2.  
Deck span #2 right lane has 2' shallow spall and 2 one foot shallow spalls with no exposed rebar.  
Deck span #3 left lane at bent #4 has 2' spall with no rebar exposed.  
Deck span #3 right lane 1/4 span has one foot spall no rebar exposed.  
Deck span #3 right lane 1/2 span has two foot spall no rebar exposed.  
Deck span #3 right lane 3/4 span has two foot spall no rebar exposed.  
Deck span #3 right lane at bent #4 has two foot spall no rebar exposed.  
Deck span #3 has 83 square feet of sound patches.  
Deck span #4 right lane at bent #4 has one foot spall no rebar.  
Deck span #4 right lane at 1/2 span has two foot spall no rebar exposed.  
Deck span #4 right lane 3/4 span has four one foot spalls no rebar exposed.  
Deck span #4 left lane has two 1' spalls with no rebar exposed at 3/4 span near white line.  
Deck span #4 has 10 square feet of shallow spalls one foot and smaller.  
Deck span #7 right gutter at 1/4 span has eight square foot area of epoxied scaling where epoxy is failing.  
Deck span #7 right gutter mid span has four square foot patched area of epoxy failing.  
Deck span #7 right gutter has two foot shallow spall and a one foot shallow spall at 3/4 span.  
Deck span #8 has 2 small spalls.  
Deck span #9 at bent #9 right side of joint spalled for 5' x 1' no exposed rebar.  
Deck span #9 right gutters have heavy scaling 2' x 15'.

### Remarks

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**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021

Span #1 deck



Span #2 deck



**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Span #3 deck



Span #3 right lane 1/4 span has one foot spall no rebar exposed.





Span #3 right lane 1/2 span has two foot spall no rebar exposed.



Span #3 right lane 3/4 span has two foot spall no rebar exposed.





**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

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**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Span #3 both lanes at bent #4 has multiple spalls.



Span #4 deck



Span #4 right lane at bent #4 has one foot spall no rebar.



Span #4 1/2 span on





**Bridge #01391**(Fracture Critical, Routine)

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**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Span #4 right lane 3/4 span has four one foot spalls no rebar exposed.



Span #7





Span #7 right side at gutter spalls.



Span#8



**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Span #9



**Date Reported:** 07/02/2013  
**Priority:** C - Important  
**Type of Work:** Clean  
**Status:** Monitor  
**Component:** Bridge

---

### Deficiency Description

Large trees and vegetation are growing beside and under bridge making snoopers access limited and vines are growing onto bridge deck.

### Remarks

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Vegetation hindering snoopers operation.



Bent #8 both sides have vines growing up bent onto truss and roadway.





Typical vegetation growing beside and onto bridge  
hindering access to inspection.

**Date Reported:** 05/20/2014  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Assigned  
**Component:** 234 - Reinforced Concrete Pier Cap

---

### Deficiency Description

Bent #2 cap back face has six one foot spalls half with rebar exposed with 5% section loss.  
Bent #2 cap ahead face has 3 small spalls on left side with exposed rebar with 10% section loss.  
Bent #3 cap center ahead face has three foot delaminated area with two foot spall exposed rebar with 10% section loss.  
Bent #3 cap has small spall on left end.  
Bent #3 front face has 3' delamination at center line.  
Bent #5 cap right end has vertical cracks under bearing area.  
Bent #5 cap ahead face has a one foot spall in center with exposed rebar with 20% section loss.  
Bent #7 cap ahead face in center has one foot spall with exposed rebar 10% section loss.  
Bent #7 cap has 1' spall on right end with exposed rebar no section loss.  
Bent #7 cap back face left side has some cs2 cracks under bearing.  
Bent #7 cap back face in center has two cs2 vertical cracks with light efflorescence.  
Bent #8 cap back face by column #1 has three foot long spall with exposed rebar to bottom where cap meets pier wall.  
Bent #8 cap ahead face close to column #2 has a three foot piece of rebar exposed where cap meets pier wall with 10% section loss.

### Remarks

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Bent #8 cap back face by column #1 has three foot long spall with exposed rebar to bottom where cap meets pier wall.



Bent #8 cap ahead face close to column #2 has a three foot piece of rebar exposed where cap meets pier wall with 10% section loss.





Bent #7 cap back face left side has some cs2 cracks under bearing.



Bent #7 cap back face in center has two cs2 vertical cracks with light efflorescence.





Bent #3 cap center ahead face has three foot delaminated area with two foot spall exposed rebar with 10% section loss.

**Date Reported:** 05/20/2014  
**Priority:** D- Routine  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** 215 - Reinforced Concrete Abutment

---

**Deficiency Description**

Abutment #2 cap is undermined 1' for full length.

**Remarks**

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Abutment #2

**Date Reported:** 05/26/2016  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Open  
**Component:** Channel

---

**Deficiency Description**

Bent #8 span #7 right side has large area of erosion up to twenty feet deep running into river and exposing Bent #7 column #2 on right side over six feet.

**Remarks**

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Erosion area right side span #7 bent #8





Bridge #01391 (Fracture Critical, Routine)

Us-70/Sec-19/L5.19 over St. Francis River

Location: 5.19 Miles East Of Sh 1

Team Lead: Drew Melton Inspection Date: May 10, 2021

**Date Reported:** 05/10/2017  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** 152 - Steel Floor Beam

---

### Deficiency Description

Floor beams Spans #3,4,7 have surface rust full length with 25% bare steel, 75% limited effectiveness.  
Floor beams #1,9 in spans #3,4,7 have corrosion with lamination up to 1/2" thick on top flange between deck and beams with section loss up to 40% unless otherwise noted.  
Floor beams #1,9 in spans #3,4,7 have corrosion with laminations full length on bottom flanges and lower web primarily on ends with up to 20% section loss unless otherwise noted.  
Floor beams #2-8 in spans #3,4,7 have corrosion with laminations up to 1/4" thick on top flange between deck and beams with up to 15% section loss primarily outside 4' on each side of each floor beam unless otherwise noted.  
Floor beams #2-8 in spans #3,4,7 have corrosion on bottom flanges and lower web outside 4' on both ends of floor beams with up to 15% section loss unless otherwise noted.  
Span #4 floor beam #1 front side three feet from left side has three foot area lower web at lower flange that has corrosion with up to 40% section loss.  
Bent #4 span #4 floor beam #1 connection area in web at stringer #1 has corrosion with laminations with up to 20% section loss.  
Span #4 at bent #5 floor beam #9 lower flange has corrosion with laminations full length leading into lower web with up to 20% section loss unless otherwise noted.  
Span #7 floor beam #1 lower flange into web has a four foot area two feet from right side with corrosion and section loss up to 35%.  
Floor beams Spans #5,6 have surface rust full length with 15% bare steel, 50% moderate effectiveness, and 35% limited effectiveness.  
Floor beam first and last in spans #5,6 have corrosion with lamination up to 1/4" thick on top flange between deck and beams with section loss up to 15% unless otherwise noted.  
Floor beams first and last in spans #5,6 have corrosion with laminations full length on bottom flanges and lower web primarily on ends with up to 10% section loss unless otherwise noted.  
Floor beams interior beams in spans #5,6 have corrosion with laminations up to 1/8" thick on top flange between deck and beams with up to 5% section loss primarily outside 4' on each side of each floor beam unless otherwise noted.  
Span #5 floor beam connection plate rivets to lower chord at bent #6 right side vertical rivet heads have up to 50% section loss. Connection plate has holes rusted through.

### Remarks

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Typical ends of floor beams on all truss spans except those at bents.



Span #4 at bent #5 floor beam #9 lower flange has corrosion with laminations full length leading into lower web with up to 20% section loss.



Span #6 bent #7 floor beam.



Span #5 bent #5 floor beam #1





Span #4 bent #4 floor beam #1



Typical bottoms of floor beam #1,9 spans #3,4,7 on ends at connections.



Span #4 at bent #4 connection area of floor beam  
#1 and stringer #1 left side of bridge.

**Date Reported:** 05/10/2017

**Priority:** D- Routine

**Type of Work:** Repair

**Status:** Monitor

**Component:** Bridge

---

### Deficiency Description

Span #5 3rd cross brace in upper truss top angle brace over left lane has two missing rivets.

Bent #5 span #4 stringer #4 has right side top rivet sheared off.

Span #7 floor beam #1 stringer #3 right ahead side top rivet sheared off.

Span #7 floor beam #2 stringer #5 left back side top rivet sheared off.

### Remarks

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Span #7 floor beam #1 stringer #3 right ahead side top rivet sheared off.



Span #5 3rd cross brace in upper truss top angle brace over left lane has two missing rivets.





Bent #5 span #4 stringer #4 has right side top rivet sheared off.

**Date Reported:** 05/10/2017  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** 311 - Movable Bearing

---

**Deficiency Description**

Movable bearing pins to truss connection have wear with 1/4 below pin on hole connection span #3,4,7.

**Remarks**

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Typical wear in pins to bearing connection on truss.



Typical wear in pins to bearing connection on truss.

**Date Reported:** 05/22/2018  
**Priority:** D- Routine  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** 12 - Reinforced Concrete Deck

---

**Deficiency Description**

Bent #2 span #1,2 between girders #3,4 has forms left in place.  
Span #2 at bent #3 soffit between girders #1,2 and 4,5 has a form left in place.

**Remarks**

---



Bent #2 span #1,2 between girders #3,4 has forms left in place.



Typical form left in place



**Date Reported:** 05/22/2018  
**Priority:** D- Routine  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** 107 - Steel Open Girder/Beam

---

**Deficiency Description**

Approach spans steel diaphragms between girders all have large amounts of section loss and some are rusted away.

**Remarks**

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Typical approach spans diaphragms Spans  
#1,2,8,9

**Date Reported:** 05/22/2018  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Monitor  
**Component:** 107 - Steel Open Girder/Beam

---

### Deficiency Description

All girders in approach spans have surface rust full length with ends of girders having corrosion with laminations with 30% section loss unless other wise noted.

Span #1 girder #3 bent #1 first 1' bottom flange original thickness .850" remaining .650", 25% section loss.

Span #1 girder #4 bent #1 first 1' bottom flange original thickness .850" remaining .762", 10% section loss.

Span #1 girder #5 bent #1 first 1' bottom flange original thickness .850" remaining .767", 10% section loss.

Top flanges of girders in approach spans last three feet of girder ends have corrosion with up to 30% section loss.

Span #8,9 at bent #8,9 all 6 girders bottom flange for first foot has section loss up to 45% and web at diaphragm area has section loss up to 50% unless other wise noted.

### Remarks

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Top flanges of girders in approach spans last three feet of girder ends have corrosion with up to 30% section loss.



Span #8 bent #8 girder #2 web first foot at top at diaphragm connection has corrosion with laminations and section loss up to 50%.

**Date Reported:** 05/22/2018  
**Priority:** B - Pressing; 6 month completion goal  
**Type of Work:** Repair  
**Status:** Assigned  
**Component:** 107 - Steel Open Girder/Beam

---

### Deficiency Description

Bent #1 girder #1 first 2' of lower flange has 70% section loss. Has been repaired  
Bent #1 span #1 girder #6 first foot lower flange has 70% section loss. Has been repaired  
Span #1 girder #2 bent #1 first 1' bottom flange original thickness .850" remaining .309", 65% section loss.  
Span #1 girder #3 bent #2 last 1' bottom flange original thickness .850" remaining .272", 70% section loss.  
Span #1 girder #4 bent #2, last 1' bottom flange original thickness .850" remaining .270", 70% section loss.  
Span #2 girder #5 bent #2, last 1' bottom flange original thickness .850" remaining .575", 65% section loss.  
Span #2 girder #2 bent #3, girder has 6" long x 1 1/2" hole in web at top flange at end of girder and a 2" long x 1" tall hole in web below diaphragm connection.  
Span #2 girder #3 bent #3 has half inch hole above diaphragm connection and 60% section loss below diaphragm connection.  
Span #2 girder #4 bent #3 has 3" long x 1 1/2" tall hole in web below diaphragm connection.  
Span #2 girder #5 bent #3 has 1" hole in web above diaphragm connection and a pin hole below diaphragm connection.  
Bent #3 girders at diaphragm connection has corrosion with up to 85% section loss unless otherwise noted.  
Span #8 girder #2 at bent #8 has a two inch hole in web above diaphragm.  
Span #8 girder #3 at bent #8 has a three inch hole in web above diaphragm.  
Span #8 girder #3 at bent #8 lower flange first two feet has areas of section loss up to a knife edge.  
Span #8 girder #4 at bent #8 has a two inch long hole in web above diaphragm and a six inch hole below diaphragm.  
Span #8 girder #4 at bent #8 lower flange first two feet has areas of section loss up to a knife edge.  
Span #8 bent #8 girder #5 has a three inch hole in web above diaphragm.  
Span #8 bent #9 girder #1,5 first two feet of bottom flange has corrosion up to a knife edge.  
Span #9 girder #2,3,4 at bent #9 has holes at diaphragm connections.  
Span #9 girder #4 abutment #2 bottom flange has up to 60% section loss last 1'.

### Remarks

05/11/2021 Bent #1 girders #1,6 have been spliced.

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**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021

Bent #2 span #1,2 girder #4 lower flange for first foot has 50% to 75% section loss on bottom of flange.



Span #2 girder #2 at bent #3 has a six inch long hole in web at top above diaphragm.



Bent #2 girder #3 span #1,2 lower flange for first foot has section loss up to 70%.



Span #8 at bent #9 girder #3.



Span #9 girder #2 abutment #2



Span #9 girder #3 abutment #2.





Span #9 girder #4 abutment #2.



Span #2 girder #5 bent #2 has 1" hole in web above diaphragm connection and a pin hole below diaphragm connection.



Span #2 girder #4 bent #3 has 3" long x 1 1/2" tall hole in flange below diaphragm connection.



Span #2 girder #3 bent #3 has half inch hole above diaphragm connection and 60% section loss below diaphragm connection.





Span #2 girder #2 bent #3, girder has 6" long x 1 1/2" hole in web at top flange at end of girder and a 2" long x 1" tall hole in web below diaphragm connection.



Span #2 girder #5 at bent #2, 1' from end of girder has a 4" long area across bottom flange original thickness .850" remaining .575".





Span #2 girder #3 at bent #3, 1' from end of girder has 6" long area across bottom flange original thickness .850" remaining .260".



Span #2 girder #3 at bent #2 1' from end of girder has 5" long area across bottom flange original thickness .850" remaining .250".



Span #2 girder #2 at bent #2 1' from end of girder has 5" long area across bottom flange original thickness .850" remaining .183", next 2' has .750" remaining



Span #1 girder #2 at bent #2 left side of flange.





Span #2 bent #2 girder #2 has an 1 1/2" x 6" area of 100% section loss on the end at top.



Span #1 girder #2 at bent #2 1' from end of girder has 5" long area across bottom flange original thickness .850" remaining .520".





Span #1 girder #3 at bent #2 1' from end of girder has 5" long area across bottom flange original thickness .850" remaining .272".



Span #8 bent #8 girder #2 lower flange



Span #9 bent #9 right side girder #5.



Span #1 girder #2 bent #1 first 1' bottom flange  
original thickness .850" remaining .309"





Span #8 bent #8 girder #5 has a three inch hole in web above diaphragm.



Span #8 girder #3 at bent #8 has a three inch hole in web above diaphragm.





Span #8 girder #3 at bent #8 lower flange first two feet has areas of section loss up to a knife edge.



Span #8 girder #2 at bent #8 has a two inch hole in web above diaphragm.



Span #8 bent #9 girder #1,5 first two feet of bottom flange has corrosion up to a knife edge.



Span #9 bent #9 girder #2





Span #9 bent #9 girder #3



Span #9 bent #9 girder #4





Span #8 girder #4 at bent #8 has a two inch long hole in web above diaphragm and a six inch hole below diaphragm.



Span #8 girder #4 at bent #8 lower flange first two feet has areas of section loss up to a knife edge.



Span #1 girder #1 bent #1 has a t-splice first two feet by seven inches tall.



Span #1 girder #6 bent #1 has a t-splice first two feet six inches tall.



**Date Reported:** 06/09/2020  
**Priority:** A - Safety deficiency; requires prompt action  
**Type of Work:** Repair  
**Status:** Repair Documented  
**Component:** 107 - Steel Open Girder/Beam

---

### Deficiency Description

Span #2 girder #3 bent #2, last 1' bottom flange original thickness .850" remaining .250", 75% section loss.  
Span #2 girder #3 bent #2 bottom flange has 3/4" hole rusted through ahead of bearing.  
Span #2 girder #2 bottom flange into lower web for first foot of girder has up to 85% section loss.  
Span #8 bent #9 girder #2,3,4 last one foot of lower flange has corrosion with laminations and section loss up to 100%.  
Span #9 bent #10 girder #1 first foot lower flange has corrosion with laminations and section loss up to 100%.  
Span #9 bent #10 girder #6 has corrosion with laminations last foot of lower flange with section loss up to 100% and web at bottom flange on end has eight inch area of holes in web near top flange and has 3" x 6" area of 100% section loss in web at lower flange at end of girder.

### Remarks

05/11/2021 Span #2 girders #2,3 at bent #2 have been spliced since last inspection.  
05/11/2021 Span #8 girders #2,3,4 at bent #9 have been spliced since last inspection.  
05/11/2021 Span #9 girders #1,6 at bent #10 have been spliced since last inspection.

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Span #2 girder #3 at bent #2 bottom flange has 3/4" hole rusted through ahead of bearing.



Span #9 girder #1 bent #10 lower flange.





Span #9 girder #6 bottom flange bent #10



Span #8 bent #9 bottom of girder #4



Span #8 bent #9 bottom of girder #3



Span #8 bent #9 bottom of girder #2





Span #2 girder #3 at bent #2 bottom flange has 3/4" hole rusted through ahead of bearing.



Span #2 bent #2 girder #2 has an L shape t-splice two foot long.





Span #2 girder #3 bent #2 has a L shape t-splice one foot long.



Span #2 girder #4 bent #2 has a L shape t-splice one foot long.



Span #9 girder #6 abutment #2 has been t-spliced  
two foot long eight inches tall.



Span #9 girder #1 abutment #2 has been t-spliced  
two foot long eight inches tall.



Span #8 bent #9 girder #2 has a t-splice that is two foot long by eight inches tall.



Span #8 bent #9 girder #3 has a t-splice that is two feet long by ten inches tall.





Span #8 bent #9 girder #4 has a t-splice that is two feet long by ten inches tall.

**Date Reported:** 06/09/2020  
**Priority:** B - Pressing; 6 month completion goal  
**Type of Work:** Repair  
**Status:** Assigned  
**Component:** 152 - Steel Floor Beam

---

### Deficiency Description

Span #3 at bent #3 floor beam #1 has heavy corrosion full length top and bottom flanges with areas of section loss up to 60%.

Span #3 at bent #4 floor beam #9 bottom flange right side of bridge at x bracing connection has section loss up to 50%.

Span #4 at bent #5 floor beam #9 right side at connection to lower chord last 2' has up to 90% section loss on lower flange and 20% section loss in web.

Span #4 at bent #5 floor beam #9 right side first two feet top flange has areas of section loss up to 70% leading into web with section loss up to 20%.

Span #7 floor beam #9 on ends for four feet top flange has corrosion laminations and section loss up to 50%.

Span #7 floor beam #1 right side bottom of bottom flange to connection plate has section loss up to 50%.

Span #7 floor beam #9 left end for three feet lower flange into web has corrosion with laminations and section loss up to 90%.

Span #7 floor beam #9 right end for three feet lower flange into web has corrosion with laminations and section loss up to 50%.

### Remarks

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Span #7 floor beam #9 left end for three feet lower flange into web has corrosion with laminations and section loss up to 90%.



Span #3 floor beam #1.



Span #3 at bent #3 floor beam #1 has heavy corrosion full length top and bottom flanges with areas of section loss up to 60%.



Span #3 floor beam #9.





Span #3 at bent #4 floor beam #9 bottom flange right side of bridge at x bracing connection has section loss up to 50%.



Span #4 at bent #5 floor beam #9 right side first two feet top flange has areas of section loss up to 70% leading into web with section loss up to 20%.



Span #4 at bent #5 floor beam #9 right side at connection to lower chord last 2' has up to 90% section loss on lower flange and 20% section loss in web.



Span #7 bent #8 floor beam #9





Span #7 floor beam #9 right end for three feet lower flange into web has corrosion with laminations and section loss up to 50%.



Span #7 floor beam #9 on ends for four feet top flange has corrosion laminations and section loss up to 50%.





Span #7 bent #7 floor beam #1



**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021

**Date Reported:** 05/13/2021

**Priority:** D- Routine

**Type of Work:** Clean

**Status:** Open

**Component:** Deck

---

### Deficiency Description

Gutters have dirt and debris in them.

### Remarks

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Typical debris in gutters.

**Date Reported:** 05/13/2021  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Open  
**Component:** 12 - Reinforced Concrete Deck

---

**Deficiency Description**

Asphalt overlay at abutment #2 has multiple spalls and repaired areas that are failing.

**Remarks**

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Abutment #2 span #9 asphalt area on end of deck has multiple spalls and patched areas.



**Date Reported:** 05/13/2021  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Open  
**Component:** 12 - Reinforced Concrete Deck

---

### Deficiency Description

Spans #1,2,8,9 deck has transverse open cracks spaced 2' apart with half being sealed with epoxy.  
Spans #1,2,8,9 deck has light to moderate scaling exposing coarse aggregate with some loose aggregate.  
Deck spans #3,4,7 has transverse open cracks spaced 2' apart with half being sealed with epoxy.  
Deck spans #3,4,7 has light scaling exposing coarse aggregate little loose aggregate.  
Deck each truss span #3,4,7 has crack through to deck 6' from bents.  
Deck spans #5,6 has transverse cracks spaced 3' apart half being sealed with epoxy.

### Remarks

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Span #5,6



Span #9



**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Span#8



Span #7





**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Span #4 deck



Span #3 deck





**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Span #2 deck



Span #1 deck

**Date Reported:** 05/13/2021  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Open  
**Component:** 12 - Reinforced Concrete Deck

---

### Deficiency Description

Soffit-under surface span #1 between girders #2 and 3 has 1 ½' x 2 ½' spall with exposed rebar moderate section loss approx. 15' from bent #2 and 4' of shallow spalling beside top flange of girder.  
Soffit-under surface span #1 between girders #3 and 4 has 1' spall with exposed rebar moderate section loss.  
Soffit-under surface span #1 between girders #4 and 5 has 3' long transverse crack with exposed rebar moderate section loss mid span, and 2' of shallow spalling beside top flange of girder.  
Soffit-undersurface span #1 between girders #5 and 6 has 1' spall with exposed rebar moderate section loss.  
Soffit-under surface in spans #3,4,7 have transverse cracks spaced 2' apart with 1/3 having light efflorescence with rust staining.  
Soffit-under surface in spans #3,4,7 have approximately 20 square feet of 1' to 2' spalls with exposed rebar with 10% section loss.  
Soffit-under surface span #9 between girders #1,2 has 1' spall with exposed rebar moderate section loss.  
Soffit-under surface span #9 between girders #4,5 has 2 two foot spall with exposed rebar moderate section loss.

### Remarks

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Span #7 soffit-under surface



Span #1 soffit-under surface





Span #3 soffit-under surface.



Span #4 soffit-under surface





Span #9 soffit-under surface

**Date Reported:** 05/13/2021  
**Priority:** D- Routine  
**Type of Work:** Clean  
**Status:** Open  
**Component:** 330 - Metal Bridge Railing

---

### Deficiency Description

Bridge rails have surface rust full length with 10% bare steel rest of paint has limited effectiveness.  
Bridge rails have areas of pact rust with section loss up to 20% in connection points and a few areas with 100% section loss.  
Span #5 at bent #5 left side and span #6 at bent #7 left side both have collision damage.

### Remarks

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Left bridge rail



Right bridge rail



Span #5 left rail damage near bent #5.



**Date Reported:** 05/13/2021  
**Priority:** B - Pressing; 6 month completion goal  
**Type of Work:** Repair  
**Status:** Open  
**Component:** 305 - Assembly Joint without Seal

---

**Deficiency Description**

Bent #4 joint has two foot area of all joint steel missing in left lane causing a large hole at joint.

**Remarks**

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Bent #4 joint

**Date Reported:** 05/13/2021  
**Priority:** D- Routine  
**Type of Work:** Repair  
**Status:** Open  
**Component:** 305 - Assembly Joint without Seal

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**Deficiency Description**

Joints at bents #2,3,4,8 assembly joint slider plates have been removed or partly removed allowing debris to enter.

**Remarks**

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Bent #2 joint



Bent #3 joint



**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021



Bent #4 joint



**Date Reported:** 05/17/2021  
**Priority:** C - Important  
**Type of Work:** Repair  
**Status:** Open  
**Component:** 311 - Movable Bearing

---

#### Deficiency Description

Spans #1,2,8,9 bearings have surface rust with limited loss of function with section loss up to 15% with some connection nuts rusted off.

Bearings have no paint left on them.

Span #1 girder #2 right anchor nut rusted off.

Span #2 girder #4 right anchor nut rusted off.

Bent #3 girder #5 left anchor bolt broken.

#### Remarks

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Span #2 girder #4 right anchor nut rusted off.

**Date Reported:** 05/17/2021  
**Priority:** D- Routine  
**Type of Work:** Clean  
**Status:** Open  
**Component:** 311 - Movable Bearing

---

### Deficiency Description

Paint on movable bearings truss spans 3,4,5,6,7 have 70% bare steel with 30% limited effectiveness.  
Truss spans 3,4,5,6,7 bearings are corroded with laminations with section loss up to 10% unless other wise noted.  
Paint on fixed bearings truss spans 3,4,5,6,7 50% bare steel 50% is limited effectiveness.

### Remarks

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Typical fixed bearing truss.



Bent #5 left side bearings



Typical movable bearing truss.



**Date Reported:** 05/17/2021  
**Priority:** B - Pressing; 6 month completion goal  
**Type of Work:** Repair  
**Status:** Open  
**Component:** 234 - Reinforced Concrete Pier Cap

---

### Deficiency Description

Bent #3 cap is spalled on right end with exposed rebar span #2 side reducing bearing area under girder to 50%.  
Bent #8 front face has a two foot spall at top right side under bearing of girder #6 with exposed rebar with 5% section loss and 50% loss of bearing support.

### Remarks

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Bent #3 span # 2 cap spalled reduced bearing area to 50%.



Bent #8 front face has a two foot spall at top right side under bearing of girder #6 with exposed rebar with 5% section loss and 50% loss of bearing.



Span #2 bent #3 cap ahead face under girder #6.



Span #2 bent #3 cap ahead face under girder #6.





Bent #8 back face has a two foot spall at top right side under bearing of girder #6 with exposed rebar with 5% section loss and 50% loss of bearing.



Bent #3 cap right side has large spall exposing bearing plate for span #2 girder #6.



**Date Reported:** 05/17/2021  
**Priority:** D- Routine  
**Type of Work:** Clean  
**Status:** Open  
**Component:** 234 - Reinforced Concrete Pier Cap

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**Deficiency Description**

Caps have debris on them due to joints.

**Remarks**

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Caps have debris on them due to joints.

**Date Reported:** 05/18/2021  
**Priority:** D- Routine  
**Type of Work:** Repair  
**Status:** Open  
**Component:** Substructure

---

**Deficiency Description**

Pier walls and columns have several areas of cracks, delaminations, and spalls with exposed rebar.

**Remarks**

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Bent #4 ahead face cs3 crack in center of pier wall.



Bent #2 ahead face



Bent #2 back face.



Bent #9 ahead face





Bent #5 ahead face



Bent #5 back face.



**Bridge #01391**(Fracture Critical, Routine)

**Us-70/Sec-19/L5.19 over St. Francis River**

**Location: 5.19 Miles East Of Sh 1**

**Team Lead:** Drew Melton **Inspection Date:** May 10, 2021

### **Inspection Comments**

Original Job layout: D# 3331 Other drawing nos. 3333, 3310-17, 3567-8, 26112-116.

Large trees and vegetation are growing beside and under bridge making snoopers access limited and vines are growing onto bridge deck.

Bent #8 span #7 right side has large area of erosion up to twenty feet deep running into river and exposing Bent #7 column #2 on right side over six feet.

Gutters have dirt and debris in them.

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### **Deck Notes**

05/12/2021 lowered deck from 6 to 5 due to lots of spalls, scaling, and a few full depth failures.

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### **Superstructure Notes**

05/22/2018 lowered superstructure from 5 to 4 due to advanced deterioration to approach span only girder ends and adding a one year special.