



Latitude:46.93413, Longitude:-96.85065

Route:00928 Log:0.1

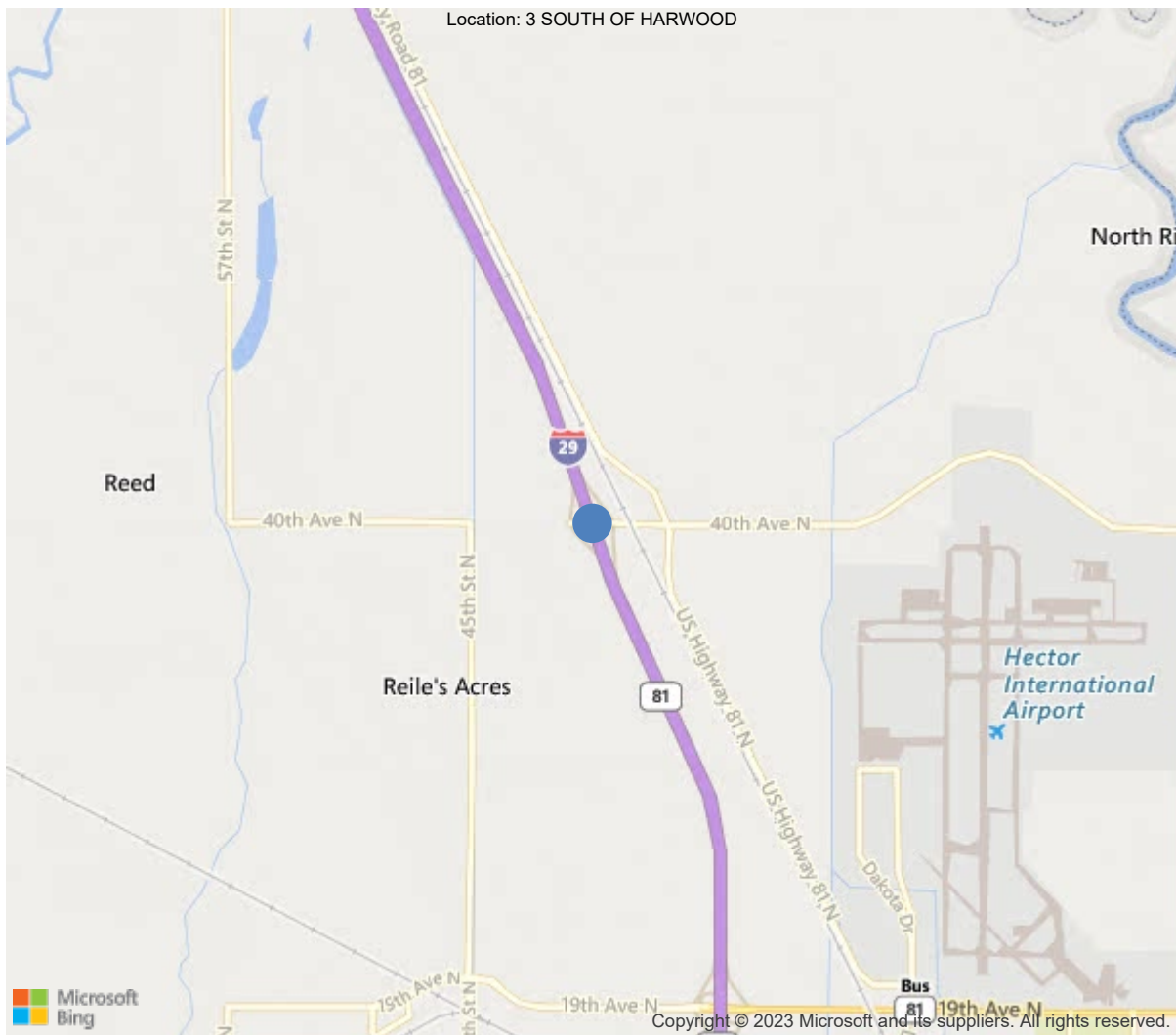
District 68, 9 - Cass

Owner: 1 - State Highway Agency

Place Code: 65860

Team Leader: Andrew Nefstead

Approved By: Andrew Nefstead



46.93413, -96.85065

IDENTIFICATION	
(1) State Names	38 - North Dakota
(8) Structure Number	0029-069.374
(5) Inventory Route	1
(2) Highway Agency District	8 - Fargo
(3) County Code	9 - Cass
(4) Place Code	65860
(6) Features Intersected	I-29/NORTH FARGO INT
(7) Facility Carried	CASS COUNTY 20
(9) Location	3 SOUTH OF HARWOOD
(11) Mile Point	0.1 mi
(12) Base Highway Network	No
(13) LRS Inventory Rte & Subrte	
(16) Latitude	46.9341333333333
(17) Longitude	-96.8506472222222
(98) Border Bridge State Code	-1
(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	4
(46) No. of Approach Spans	0
(107) Deck Structure Type	1 - Concrete Cast-in-Place
(108) Wearing Surface/Protective System	
Type of Wearing Surface	4 - Low slump Concrete
Type of Membrane	0 - None
Type of Deck Protection	0 - None
AGE AND SERVICE	
(27) Year Built	1966
(106) Year Reconstructed	1983
(42) Type of Service	61
On	6 - Overpass structure at an interchange or s
Under	1 - Highway, with or without pedestrian
(28) Lane	
On	2
Under	4
(29) Average Daily Traffic	2000
(30) Year of ADT	2019
(109) Truck ADT	16 %
(19) Bypass, Detour Length	2 mi
GEOMETRIC DATA	
(48) Length of Maximum Span	84 ft
(49) Structure Length	294.9 ft
(50) Curb or Sidewalk Width	
Left	0 ft
Right	0 ft
(51) Bridge Roadway Width Curb to Curb	29.9 ft
(52) Deck Width Out to Out	35.8 ft
(32) Approach Roadway Width (W/Shoulders)	32.2 ft
(33) Bridge Median	0 - No median
(34) Skew	20 Deg
(35) Structure Flared	0 - No flare
(10) Inventory Route Min Vert Clear	99.99 ft
(47) Inventory Route Total Horiz Clear	29.9 ft
(53) Min Vert Clear Over Bridge Rdwy	99.99 ft
(54) Min Vert Underclear	17.39 ft
Ref:	
(55) Min Lat Underclear RT	12.1 ft
Ref:	
(56) Min Lat Underclear LT	21.3 ft
NAVIGATION DATA	
(38) Navigation Control	N - Not applicable, no waterwa
(111) Pier Protection	
(39) Navigation Vertical Clearance	0 ft
(116) Vert-Lift Bridge Nav Min Vert Clear	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
(101) Parallel Structure	N - No parallel structure exis
(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 structu
(21) Maintain	1 - State Highway Agency
(22) Owner	1 - State Highway Agency
(37) Historical Significance	5 - Bridge is not eligible for
CONDITION	
(58) Deck	5
(59) Superstructure	6
(60) Substructure	6
(61) Channel & Channel Protection	N
(62) Culverts	N
LOAD RATING AND POSTING	
(31) Design Load	5 - MS 18 / HS 20
(63) Operating Rating Method	1
(64) Operating Rating	
Type	1 - Load Factor(LF)
Rating	59.6
(65) Inventory Rating Method	1 - Load Factor(LF)
(66) Inventory Rating	
Type	
Rating	35.6
(70) Bridge Posting	5 - Equal to or above legal loads
(41) Structure Open/Posted/Closed	A - Open, no restriction
APPRAISAL	
(67) Structural Evaluation	6
(68) Deck Geometry	5
(69) Clearances, Vertical/Horizontal	6
(71) Waterway Adequacy	N
(72) Approach Roadway Alignment	5
(36A) Bridge Railings	1 - Inspected feature meets current
(36B) Transitions	1 - Inspected feature meets current
(36C) Approach Guardrail	1 - Inspected feature meets current
(36D) Approach Guardrail Ends	1 - Inspected feature meets current
(113) Scour Critical Bridges	N - Bridge not over waterway.
PROPOSED IMPROVEMENTS	
(75) Type of Work	
(76) Length of Structure Improvement	0 ft
(94) Bridge Improvement Cost	\$ 0
(95) Roadway Improvement Cost	\$ 0
(96) Total Project Cost	\$ 0
(97) Year of Improvement Cost Estimate	
(114) Future ADT	2100
(115) Year of Future ADT	2039

INSPECTIONS *			
(90) Inspection Date	07/17/2023		
(91) Frequency	24		
(92) Critical Feature Inspection	Done	Freq. (Mon)	Date
A: Fracture Critical Detail	No		
B: Underwater Inspection	No		
C: Other Special Inspection			
* The inspection date and frequency information in this box contains the current NBI date and frequency information. Please refer to the report header for the date this inspection was conducted.			

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
12	Reinforced Concrete Deck	SF	10557	8611	1942	4	0
1080	Delamination/Spall/Patched Area	SF	19	0	17	2	0
1090	Exposed Rebar	SF	2	0	0	2	0
1120	Efflorescence/Rust Staining	SF	42	0	42	0	0
1130	Cracking (RC and Other)	SF	1875	0	1875	0	0
7000	Damage	SF	8	0	8	0	0
(12) 7/12/2021 - Deck has Low Slump Concrete Overlay.							
(1080-12) 7/12/2021, 7/17/2023 - Areas of Spalling to Wearing Surface of Deck with, 2 SF CS 3 Spall at West End in EB lane, area 6'L x 3'W.							
UNDERSIDE:							
Areas of Patching and Delam to underside of deck progressing with,							
Span 1:							
2 SF CS 2 Delam on North soffit, area of 2'L x 1'W.							
1 SF CS 2 Delam on North soffit at pier 2, area of 1' x 1'.							
Span 2:							
3 SF CS 2 Delam on North soffit, 3 areas at 1' x 1'.							
Span 3:							
8 SF CS 2 Patch South of girder 1, area of 2'L x 4'W.							
1 SF CS 2 Patch South of girder 1, area of 1' x 1'.							
2 SF CS 2 Delam on North soffit, area of 2'L x 1'W. See Photos.							
(1090-12) 7/17/2023 - Areas of CS 3 Spalling with Exposed Rebar to Underside of Deck with,							
Span 2:							
1 SF on North soffit.							
Span 3:							
1 SF on North soffit. Areas with estimated section loss up to 1/8". See photos.							
(1120-12) Cracking with efflorescence on underside of deck - 10/31/2019							
7/12/2021, 7/17/2023 - Seepage and Efflorescence to Underside of Deck progressing with,							
Span 2:							
24 SF between girders.							
Span 3:							
6 SF between girders.							
12 SF on North soffit. See Photos.							
(1130-12) Random cracking throughout deck - 10/31/2019							
7/12/2021 - Longitudinal Crack along CL of Underside of Deck of entire structure length. Crack widths estimated at ~0.014 to ~0.030. TOTAL = 295 SF.							
7/26/2021 - Various Transverse cracking to Deck Wearing Surface throughout at random and various spacing.							
EB Lane with 630 SF (42 Cracks @ 15' W) with widths 0.012 to 0.030.							
WB Lane with 675 SF (45 Cracks @ 15' Width) with widths 0.012 to 0.025. All cracks unsealed. Minor Delamination observed with initial sounding. See Various Photos.							
7/17/2023 - WEARING SURFACE:							
Continued and advancement of Cracking to Deck Wearing surface with:							
Longitudinal and Shear Cracks near Ends and Corners. Total = 50 SF							
Patterned Transverse Cracking to both lanes with:							
WB Lane - 57 Cracks @ 15' W = 855 SF							
EB Lane - 45 Cracks @ 15' W = 675 SF. Crack widths 0.008 to 0.025. All Cracks unsealed.							
UNDERSIDE DECK:							
No Change to Longitudinal Crack along CL throughout Structure Length. Total 295 SF. See Photos.							

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
(7000-12) 7/17/2023 - Area of CS 2 Blade Damage to Wearing Surface with, East end: 8 SF at CL, area of 6"L x 16"W. See photos.							
107	Steel Open Girder/Beam	LF	1175	0	1175	0	0
1000	Corrosion	LF	1175	0	1175	0	0
515	Steel Protective Coating	SF	12826	3206	0	0	9620
3420	Peeling/Bubbling/Cracking	LF	1924	0	0	0	1924
3440	Effectiveness (Steel Protective Coatings)	LF	7696	0	0	0	7696
(1000-107) minor to moderate corrosion throughout girders - 10/31/2019 7/12/2021 - Minor to Moderate Rusting to bare metal to Girders 1-4 in all Spans. No Section Loss Observed. See Photos. 7/17/2023 - No Change to Condition State or Quantity. Areas of Rusting include bottom and top flange, lips of flanges, and portions of Webs. No Section Loss observed. See Photos.							
(3420-515-107) Paint protection peeling through finish and primer coats - 10/31/2019 7/12/2021 - Freckled Bubbling and some peeling of coating to bare metal to Girders 1-4 mainly to the webs and bottom flanges. Estimated 10%. See Photos. 7/17/2023 - Continuing and Advancement of Rusting from CS 4 peeling of coating down to Bare Metal along lips of flanges and toes of flanges to webs. Estimated 15%. See Photos.							
(3440-515-107) 7/12/2021 - CS 4 Loss of Effectiveness of coating to Girders 1-4 with rusting to bare metal. Estimated 60% of Coating System. See Photos. 7/17/2023 - No Change to Condition State or Quantity. See Photos.							
205	Reinforced Concrete Column	EA	12	9	2	1	0
1080	Delamination/Spall/Patched Area	EA	1	0	0	1	0
1090	Exposed Rebar	EA	2	0	2	0	0
1130	Cracking (RC and Other)	EA	1	1	0	0	0
(1080-205) 7/12/2021 - Delamination to Column 3 at Pier 2. Column was previously patched and is sound. See photo. 7/17/2023 - Patch is now unsound and Delaminating, Changed to CS 3. See photo.							
(1090-205) 7/12/2021, 7/17/2023 - Exposed rebar to Columns progressing with, Pier 2: Column 2. Pier 3: Column 3. See photos.							
(1130-205) Vertical cracking in pier 2 columns 2 and 4 - 10/31/2019 7/12/2021 - Vertical CS 1 cracking to Column 1 at Pier 2, width of 0.004". See photo. 7/17/2023 - No change in condition state or quantity. See photo.							
215	Reinforced Concrete Abutment	LF	76	61	15	0	0
1120	Efflorescence/Rust Staining	LF	6	0	6	0	0
1130	Cracking (RC and Other)	LF	17	16	1	0	0
8001	Erosion	LF	8	0	8	0	0
(215) 7/17/2023 - Seepage and efflorescence to Abutment not coded due to erosion with, East Abutment: 1 LF South of Girder 1.							

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<p>(1120-215) 7/12/2021, 7/17/2023 - Seepage, efflorescence and Rust Staining to abutments progressing with, West Abutment: 1 LF North of Girder 1. 1 LF rust staining under Girder 1. 1 LF rust staining under Girder 2. 2 LF under Girder 4. East Abutment: 1 LF under Girder 4. See photos. (1130-215) cracks counted in concrete abutment - 10/31/2019 7/12/2021, 7/17/2023 - Vertical CS 1 cracking to abutments progressing with, West Abutment: 1 LF under Girder 1, width of 0.010". 2 LF between Girders 1-2, widths of 0.004". 2 LF under Girder 2, widths of 0.006". 2 LF between Girders 2-3, widths of 0.004". 1 LF South of Girder 3, width of 0.004". East Abutment: 1 LF North of Girder 2, width of 0.010". 1 LF under Girder 2, width of 0.010". 1 LF South of Girder 2, width of 0.010". 1 LF CS 2 Vertical South of Girder 3, width of 0.025". 4 LF CS 1 Diagonal under and North of Girder 4, width of 0.008". 1 LF South of Girder 4, width of 0.006". See photos. (8001-215) East abutment is undermined - 10/31/2019 7/12/2021 - Erosion to East Abutment with 8 LF (8'L x 1'W x 3"-5"D) between Girders 1-2. See photo. 7/17/2023 - Erosion area has progressed to an area of 8'L x 2'W x 1"-5"D and has 1 exposed H pile. See photo.</p>							
234	Reinforced Concrete Pier Cap	LF	96	96	0	0	0
301	Pourable Joint Seal	LF	15	15	0	0	0
(301) 7/17/2023 - 15 LF of Pourable Joint in the EB Lane in Span 4.							
313	Fixed Bearing	EA	12	0	12	0	0
1000	Corrosion	EA	12	0	12	0	0
515	Steel Protective Coating	SF	60	39	0	0	21
3440	Effectiveness (Steel Protective Coatings)	EA	21	0	0	0	21
<p>(1000-313) 7/12/2021 - Minor Rusting to all bearings at Piers 2, 3, and 4. More rusting to Bearings 1 and 4. See Photos. 7/17/2023 - No Change to Condition State or Quantity. Piers 2, 3, and 4 Bearings 1 and 4 with advancement of Rusting. See Photos. (515-313) 7/12/2021 - Estimated 5 SF for EA Bearing. (3440-515-313) Paint protection is peeling through the finish coat - 10/31/2019 7/12/2021 - Loss of Effectiveness of coating to Bearings 1-4 at Piers 2, 3, and 4. Estimated an average of 25%. See Photos. 7/17/2023 - CS 4 Loss of Effectiveness to Piers 2, 3, and 4 Bearings 1-4. Bearings 1 and 4 Estimated at 50% and Bearings 2 and 3 estimated at 20%. See Photos.</p>							
330	Metal Bridge Railing	LF	591	591	0	0	0
331	Reinforced Concrete Bridge Railing	LF	591	370	160	61	0
1080	Delamination/Spall/Patched Area	LF	23	0	21	2	0
1090	Exposed Rebar	LF	58	0	0	58	0
1120	Efflorescence/Rust Staining	LF	32	0	32	0	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
1130	Cracking (RC and Other)	LF	142	35	107	0	0
1190	Abrasion/Wear (PSC/RC)	LF	1	0	0	1	0
(1080-331) 7/26/2021, 7/17/2023 - Areas of spalling/delam to curbs progressing with, North curb:							
1 LF CS 2 Delam on Posts 18, 19, 22, 23, 28, 31, 32.							
1 LF CS 2 Delam East of post 4.							
1 LF CS 2 Delam to underside of curb at post 8, area of 1' x 1'.							
2 LF CS 2 Delam between posts 6-7.							
1 LF CS 2 Delam West of post 17.							
South curb:							
1 LF CS 2 Delam on posts 15, 16, 19, 21, 24, 32.							
2 LF CS 3 Spall at West end, area of 2'L x 9"H x 2"D.							
1 LF CS 2 Delam at post 27.							
1 LF CS 2 Delam at post 29.							
1 LF CS 2 Delam on backside of East end post. See photos.							
(1090-331) 7/26/2021, 7/17/2023 - CS 3 Spalling with Exposed Rebar to Curbs progressing with, North curb:							
1 LF on Posts 1, 2, 3, 4, 5, 6, 7, 9, 11, 13, 16, 17, 20, 21, 25, 26, 27, 29, 30, 33, 34, 36.							
6 LF at West end.							
3 LF between Posts 1-2.							
1 LF West of Post 4 on Rail.							
1 LF at Post 4.							
12 LF between Posts 14-16.							
1 LF at East end.							
South curb:							
1 LF on Posts 1, 4, 6, 11, 12, 13, 14, 18, 28.							
2 LF at West end.							
1 LF to underside of curb at Post 10. All areas estimated with section loss up to 1/8". See photos.							
(1120-331) 7/26/2021, 7/17/2023 - Rust Staining to curbs progressing with, North curb:							
2 LF East of post 27.							
South curb:							
2 LF East of post 2.							
2 LF at post 3.							
5 LF between posts 7-9.							
2 LF between posts 12-14.							
1 LF West of post 20.							
1 LF at post 23.							
1 LF East of post 26.							
1 LF East of post 27.							
4 LF between posts 28-29.							
3 LF between posts 29-30.							
8 LF between posts 32-36. See photos.							

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
<p>(1130-331) Random cracking throughout concrete bridge rail - 10/31/2019 7/26/2021, 7/17/2023 - Various cracking throughout curbs progressing with, North curb: 23 LF CS 1 Verticals throughout, widths of 0.004"-0.010". 16 LF CS 2 Horizontal between posts 1-4, widths of 0.012"-0.050". 10 LF CS 2 Horizontal between posts 5-7, widths of 0.012"-0.050". 12 LF CS 2 Horizontal between posts 7-9, widths of 0.012"-0.050". 9 LF CS 2 Horizontal between posts 17-19, widths of 0.012"-0.040". 6 LF CS 2 Horizontal between posts 19-20, widths of 0.012"-0.050". 2 LF CS 2 Horizontal at post 22, widths of 0.025". 2 LF CS 2 Horizontal at post 23, widths of 0.030". 4 LF CS 2 Horizontal at post 25, widths of 0.025". 2 LF CS 2 Horizontal between posts 26-27, widths of 0.025". 4 LF CS 2 Various at East end, widths of 0.012"-0.020". South curb: 3 LF CS 2 Various near West end, widths of 0.020"-0.040". 12 LF CS 1 Verticals throughout, widths of 0.004"-0.010". 6 LF CS 2 Horizontal between posts 9-10, widths of 0.004"-0.025". 2 LF CS 2 Verticals in Span 2, widths of 0.012"-0.014". 3 LF CS 2 Horizontal between posts 28-29, widths of 0.004"-0.016". 26 LF CS 2 Horizontal between posts 32-36, widths of 0.012"-0.030". See photos.</p> <p>(1190-331) 7/17/2023 - Area of Moderate CS 3 Abrasion to South Curb on West end, section loss of 4"+. See photo.</p>							
815	Re Conc Backwall	LF	76	36	35	5	0
1120	Efflorescence/Rust Staining	LF	12	0	8	4	0
1130	Cracking (RC and Other)	LF	37	9	27	1	0
<p>(1120-815) 7/12/2021, 7/17/2023 - Various cracking with seepage and efflorescence to backwalls progressing with, West Backwall: 3 LF Moderate CS 3 North of Girder 1. 4 LF South of Girder 4. East Backwall: 2 LF North of Girder 1. 1 LF South of girder 1. 1 LF North of Girder 3. 1 LF Moderate CS 3 area South of Girder 4. See photos.</p> <p>(1130-815) 7/12/2021, 7/17/2023 - Vertical cracking to backwalls progressing with, West Backwall: 2 LF CS 2 Diagonal North of Girder 1, widths of 0.008"-0.020". 1 LF CS 1 between Girders 1-2, width of 0.008". 1 LF CS 1 North of Girder 2, width of 0.004". 1 LF CS 2 between Girders 2-3, width of 0.018". 5 LF CS 2 Various between Girders 2-3, widths of 0.004". 1 LF CS 2 between Girders 3-4, width of 0.020". 8 LF CS 2 Various between Girders 3-4, widths of 0.004"-0.006". 1 LF CS 1 Various North of Girder 4, width of 0.004"-0.006". East Backwall: 3 LF CS 1 between Girders 1-2, width of 0.004"-0.008". 3 LF CS 1 between Girders 2-3, width of 0.004"-0.008". 1 LF CS 2 between Girders 2-3, width of 0.014". 6 LF CS 2 between Girders 3-4, width of 0.006"-0.012". 3 LF CS 2 Diagonal South of Girder 4, width of 0.004"-0.050". 1 LF CS 3 Diagonal South of Girder 4, width of 0.060". See photos.</p>							
8398	Slope Protection	EA	1	0	1	0	0

ELEMENTS	DESCRIPTION	UNITS	TOTAL	CS1	CS2	CS3	CS4
4000	Settlement	EA	1	0	1	0	0
(8398) 7/12/2021 - West Slope Protection of Rock and Oil. Vegetation beginning to grow within Slope Protection. (4000-8398) 7/12/2021 - West Slope Protection with lateral movement away from Abutment up to 1'. See Photos. 7/17/2023 - West Slope Protection with continuation and advancement of Rock Separating from Abutment. Observed 1'-3" causing a trough along Abutment. See Photos.							
8401	Wings	EA	4	4	0	0	0

General Observation

Structure Inventoried from West to East with Girder 1 on the North Side and Pier 2 in Sequential Order after West Abutment.

Weather: 73°F, Partly Cloudy Skies with 8mph winds from the NW.

Deck overlay, rail retrofit and approach roadway paving in 2010. - 10/31/2019

7/12/2021 - The following has been removed from Significant Findings: Approaches have settled, NE curb broken. Abut cracking at girder seats and backwalls. Cracking in soffit along centerline. Minor random deck cracking. Numerous soffit cracks, some showing discoloration/rust. West pier, columns 2 and 3 has vertical crack. Curbs are deteriorating. - 10/31/2019

4-Strand High Tension Cable Guardrail in Median along SB I-29 under Contract in 2019.

Pier 2 and 4 with W-beam Guardrail for Protection.

East Embankment Slope of Embankment Material.

Deck Wearing Surface and Concrete and Metal Railing not completed due to Contract Work.

7/26/2021 - Deck Wearing Surface, Concrete and Metal Bridge Railing completed.

New HMA Approach to the East End under 2021 Contract.

Minor Vehicle Impact to W-Beam Guardrail in two locations within NE Quadrant.

7/17/2023 - Pier 3 with Attenuation Drums on the South End and 4 Strand Post Tension High Cable Guardrail along SB I-29 for Protection.

Significant Findings

East abutment undermined. East connection plates have pack rust forming. - 10/31/2019

7/12/2021, 7/26/2021, 7/17/2023 - Continued Erosion and Undermining along East Abutment with an area of 12' L (beyond abutment) x 8' W (Along abutment) x 1 1/2' Deep (from current grade). Undermining area is 1" to 5" D by 2' Undermined. Previous 1 1/2' W (Undermined). 1 H-Pile Exposed.

Longitudinal Crack along Underside of Deck CL. Crack widths estimated ~0.014 to ~0.030.

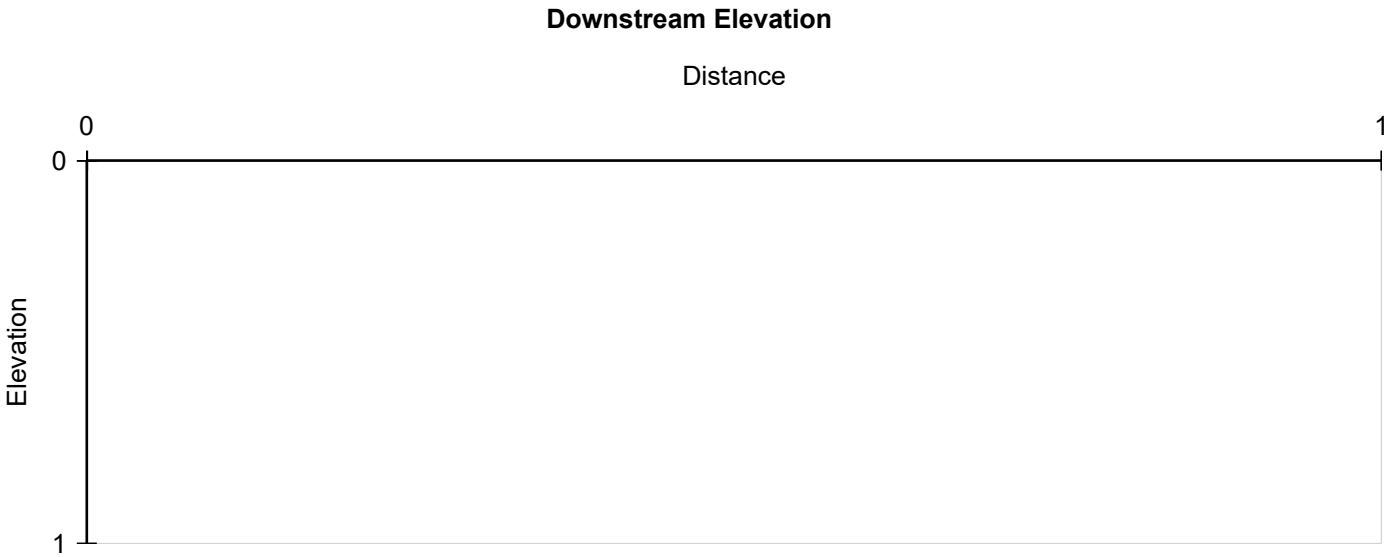
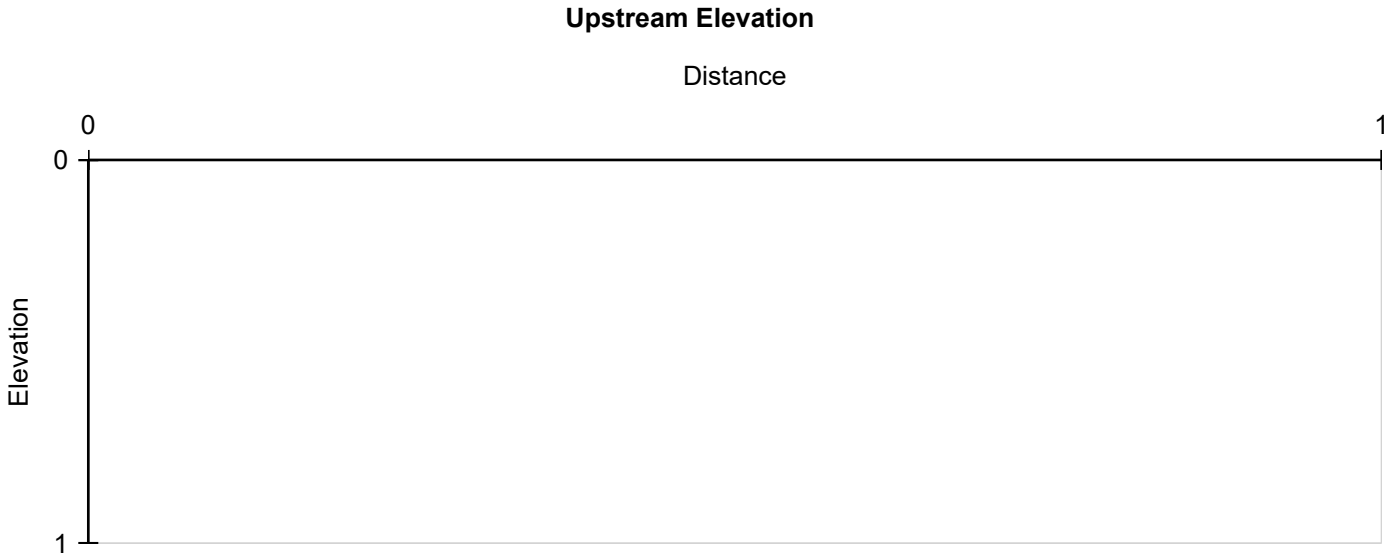
Rusting to Bare Metal to Girders 1-4 with Estimated now 75% of the Coating System has loss of Effectiveness and/or peeling and bubbling.

Moderate spalling with exposed rebar to portions of the North and South Curb near the corners and throughout with various posts delaminating and exposing reinforcing steel.

Critical Finding

Channel Profile

Station	Distance	Upstream	Downstream
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Facing North. Side View.



Facing East. Side View.



Facing NW. Exposed Rebar to North Railing Posts 3 and 4.



Facing NW. Exposed Rebar to North Railing Post 1.



Facing East. General of Deck Wearing Surface.



Facing South. Guardrail Transition at SW Corner. Similar at NW Corner.



Facing South and Downward. West Bridge End Joint.



Facing North. Exposed Rebar to North Railing Post 26.



Facing West. Exposed Rebar to North Railing Post 20.



Facing West and Downward. Exposed Rebar to Top of North curb from Posts 15-16.



Facing NW. Spalling with Exposed Rebar to North Railing at Post 13.



Facing NW. Exposed Rebar to North Railing at Post 7.



Facing NE. Moderate area of Spalling with Exposed Rebar to North Curb at West End.



Facing North and Downward. Rust Staining to North Curb near Post 27.



Facing North. North Rail Post 26 with Exposed Rebar.



Facing North. Delamination to North Railing Post 31.



Facing North. Delamination/Spalling to North Railing Post 31.



Facing NW. Horizontal Crack to Face of North Curb from posts 5-7.



Facing North. Delamination to North Curb face from Posts 6-7.



Facing NW. Horizontal Crack to Face of North Curb from Posts 2-3.



Facing NE. Spalling with Exposed Rebar to Face of North Curb from Posts 1-2.



Facing North. Horizontal Crack to Face of North curb from Posts 1-2.



Facing North and Downward. Typical Crack to North curb.



Facing North. Horizontal Crack to Face of North Curb at Post 22.



Facing NE. Continued Horizontal Cracking to Face of North Curb from Posts 17-19.



Facing NW. Delamination to Face of North Curb near Post 17.



Facing North. Minor Cracks typical to North Curb.



Facing East. Delamination to South Railing Post 21.



Facing NE. Delamination to South Railing at Post 32



Facing North. Guardrail Transition at NE Corner. Similar at SE Corner.



Facing North and Downward. East Bridge End Joint.



Facing NE and Downward. Various Cracks to North Curb near NE Corner.



Facing East and Downward. Moderate Abrasion to South Curb at SW Corner.



Facing East. Exposed Rebar to South Railing at Post 1.



Facing South. South Railing Post 13 with Exposed Rebar.



Facing SE. Delamination to South Railing Post 14.



Facing East. Delamination to South Railing Post 17.



Facing South and Downward. Rust Stain to Face of South Curb from Posts 19-20.



Facing South and downward. Horizontal Crack to Face of South Curb from Posts 9-10.



Facing South and Downward. Typical Cracks to South Curb.



Facing South and Downward. Rust stains to South Curb.



Facing SW. Various Cracks to South curb near Post 1.



Facing SE. Horizontal Cracks to Face of South Curb from Posts 35-36.



Facing SW and Downward. Continued Horizontal Crack to Face of South Curb from Posts 26-27.



Facing South. Rust stains with Horizontal Cracks to Face of South Curb from Posts 28-29.



Facing South. Spall to Face of South Curb at Post 29.



Facing South. Delam to Face of South Curb near Post 27.



Facing SE and Downward. Minor Blade Damage to East End of Deck Wearing Surface



Facing West. Approach View.



Facing NW. Vehicle Impact Damage to NE W-Beam.



Facing East. Cracked Wood Post within NE Quadrant.



Facing NE. Another View of the Vehicle Impact Damage to W-Beam within NE Quadrant.



Facing South and Downward. Transverse Crack to Deck Wearing Surface WB Lane.



Facing South and Downward. Transverse Crack to Deck Wearing Surface WB Lane.



Facing South and Downward. Patterned Transverse Cracking to Deck Wearing Surface WB Lane.



Facing South. Continued Patterned Transverse Cracking to Deck Wearing Surface.



Facing East and Downward. Attempting to show minor longitudinal Cracks to Deck Wearing Surface East End.



Facing South and Downward. Longitudinal Cracks to Deck Wearing Surface EB Lane.



Facing South and Downward. Transverse Crack to Deck Wearing Surface EB Lane.



Facing South and Downward. Transverse Crack to Deck Wearing Surface EB Lane.



Facing SE and Downward. Spall to West End of Deck Wearing Surface EB Lane.



Facing SW and Downward. Shear Cracks to Deck Wearing Surface NW Corner.



Facing West. Rust Stains to West Abutment under Girder 4.



Facing West. Minor Vertical Crack to West Abutment North of Girder 3.



Facing NW. Vertical Crack with Rust stains to West Abutment under Girder 1.



Facing South and Downward. Pourable Joint to EB Lane in Span 4.



Facing East and Downward. Minor Area of various Cracks to Deck Wearing Surface East End.



Facing East. Structure General along South Side.



Facing West. Vertical Crack to West Backwall in-between Girders 3 and 4.



Facing West. Vertical Crack to West Backwall in-between Girders 2 and 3.



Facing West. Vertical Crack to West Backwall in-between Girders 1 and 2.



Facing West. Diagonal Crack with seepage and efflorescence to West Backwall North End.



Facing North and Downward. West Slope Protection with Lateral Separation.



Facing SE. West Slope Protection.



Facing South. West Slope Protection along Abutment with Lateral Separation.



Facing NE. Rusting to Girder 4 in Span 1.



Facing NW and Upwards. Cracks with seepage and efflorescence to West backwall South End.



Facing South and Upwards. Delamination to North Soffit of Deck and Railing near Pier 2.



Facing South and Upwards. Delamination to North Soffit in Span 1.



Facing South and Upwards. Effectiveness of Coating to Girders in span 1.



Facing SW. Rusting to Girders in Span 1.



Facing SW. Peeling of Coating to Girder 1 in Span 1 near West End.



Facing West and Upwards. Longitudinal Crack along CL of Underside Deck in Span 1.



Facing East and Upwards. Longitudinal Crack to Underside Deck CL in Span 2.



Facing SE and Upwards. Unsound Patch with Delamination to Pier 2 Column 3.



Facing NE. Pier 2 Column 4 Exposed Rebar.



Facing SW. Minor Vertical Crack to Pier 2 Column 1.



Facing East and Upwards. Underside Deck Seepage and Efflorescence Span 2.



Facing West and Upwards. Loss of Effectiveness to coating system Girders in Span 2.



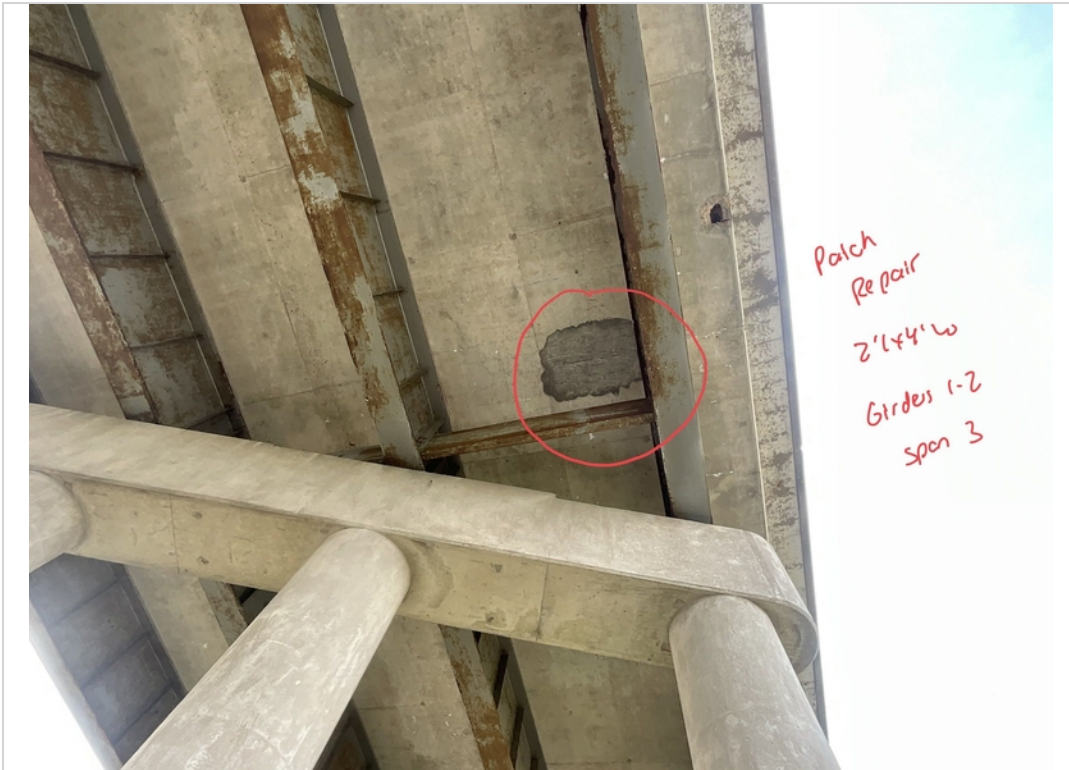
Facing NW. General of Pier 2 and Pier 2 Protection.



Facing SE and Upwards. Rusting to Girders 1-4 in Span 2.



Facing SE and Upwards. Areas of Delamination and Exposed Rebar to North Soffit in Span 2.



Facing West and Upwards. Patch Repair to Underside Deck near Pier 3.



Facing East and Upwards. Loss of effectiveness of Girders 1-4 in Span 3.



Facing West and Upwards. Exposed Rebar to Pier 3 Column 3.



Facing North. Pier 3 Protection.



Facing South and Upwards. Rusting to Bare Metal to Girders in Span 2.



Facing SE. Rusting to Girders in Span 4.



Facing South and Upwards. Peeling of Coating to Lips of Bottom Flanges of Girders in Span 4.



Facing NW and Upwards. Rusting to Girders in Span 3.



Facing East and Upwards. Longitudinal Crack to Underside Deck in Span 3 along CL.



Facing South and Upwards. Delamination and Exposed Rebar to North Soffit in Span 3.



Facing South. East Embankment Slope along Abutment.



Facing SW. Peeling and Bubbling of Coating to Girder 3 in Span 4.



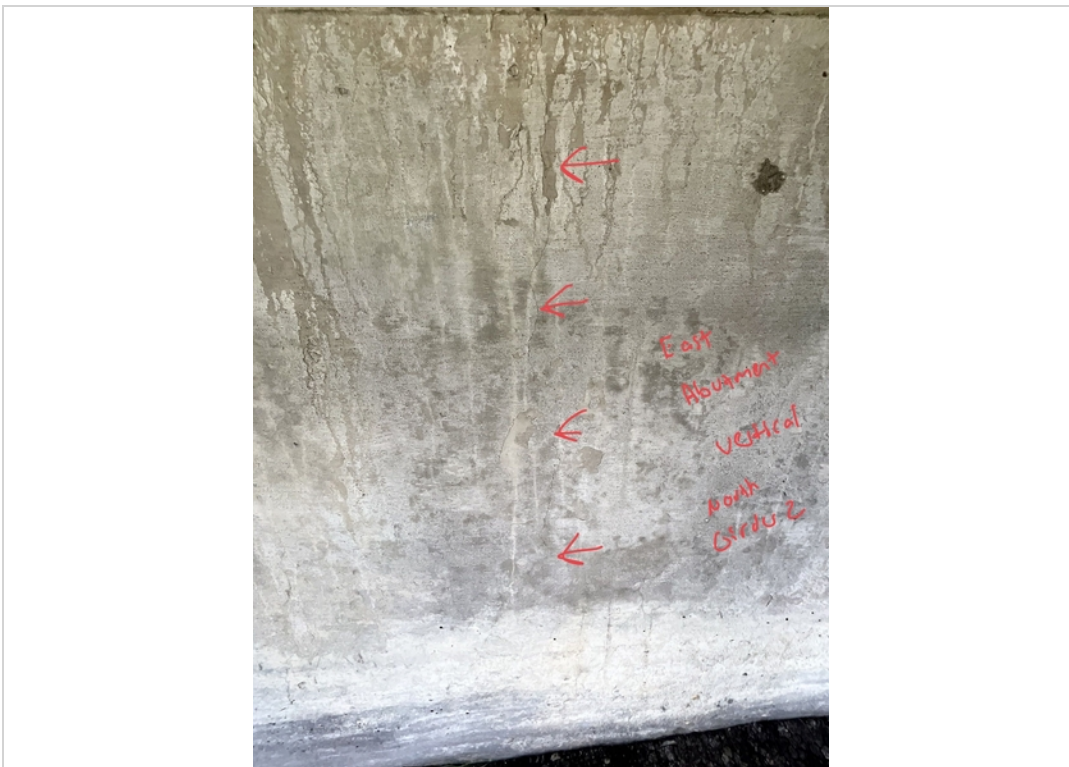
Facing NE. Rusting to Girder 4 near East End.



Facing West. Peeling of Coating to Girder 1 in Span 4.



Facing West. Structure General along North Side.



Facing East. Attempting to show minor vertical crack to East Abutment North of Girder 2.



Facing East. Vertical Crack with seepage and efflorescence to East Abutment under Girder 1.



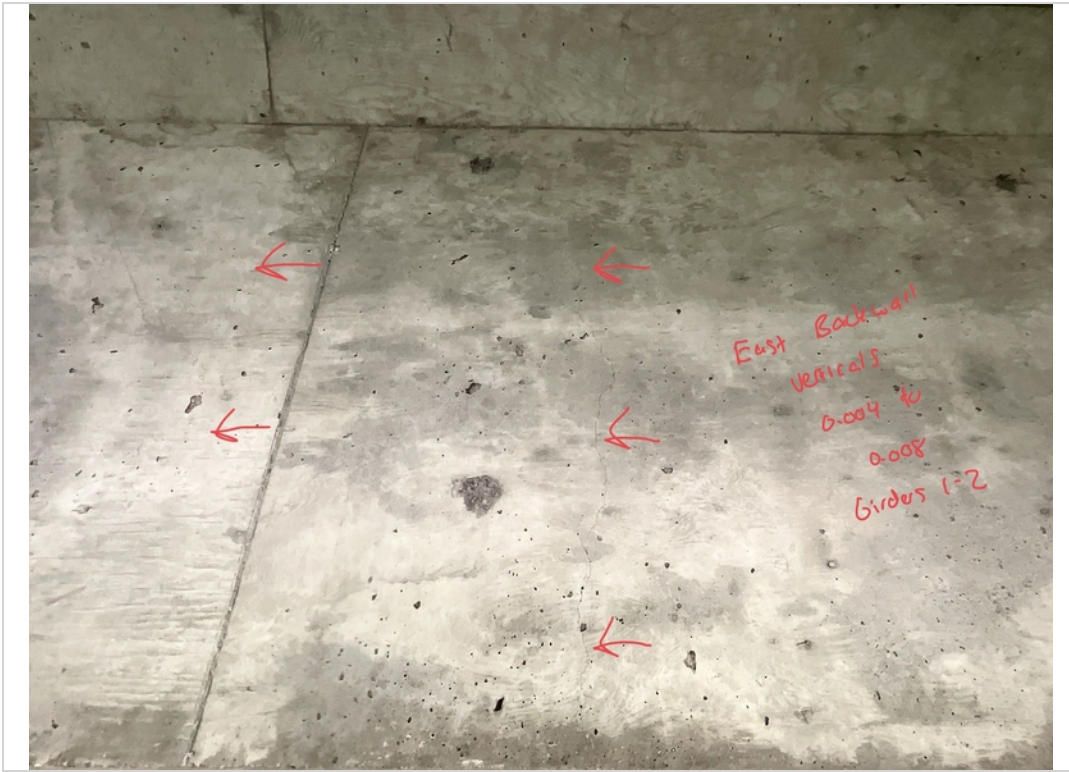
Facing East. Erosion area under East Abutment Exposing 1 Pile.



Facing East. Continued Erosion area to East Abutment.



Facing SW. East Embankment Slope.



Facing East and Upwards. Vertical Cracks to East Backwall in-between Girders 1 and 2.



Facing SE. Vertical Crack with seepage and efflorescence to East Backwall North of Girder 1.



Facing East. Vertical Crack with 1 crack having Seepage and Efflorescence to East Abutment under Girder 4.



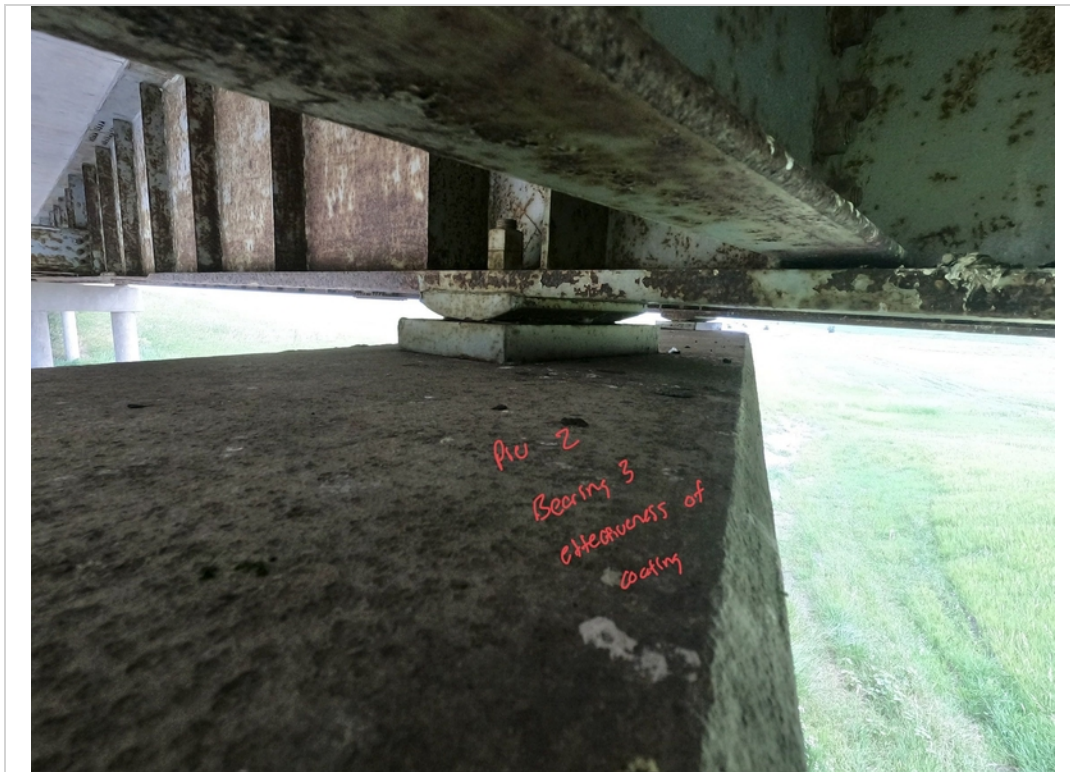
Facing East. Attempting to show minor vertical cracks to East Abutment North of Girder 4.



Facing East. Minor Vertical Crack to East Abutment South of Girder 3.



Facing North. Pier 2 Bearing 4 Rusting.



Facing SE. Pier 2 Bearing 3 Effectiveness of Coating.



Facing South. Pier 2 Bearing 1 Rusting.



Facing East. Area of Moderate Cracking to East Backwall South End.



Facing East. Vertical Crack to East Backwall in-between Girders 2 and 3.



Facing North. Pier 4 Bearing 4 Rusting.



Facing South. Pier 4 Bearing 1 Effectiveness of Coating.



Facing North. Rusting to tPier 3 Bearing 4.



Facing SE. Pier 3 Bearing 2 Rusting.



Facing South. Pier 2 Bearing 1 Effectiveness of Coating.

Maintenance Needs

Date Reported: 07/12/2021

Priority: Medium

Type of Work: Repair Erosion

Status: Under Review

Component: Element

Deficiency Description

Continued Erosion and Undermining along East Abutment and progressing down the embankment slope. Erosion trench area of 12' L (beyond abutment). Erosion area along abutment of 8' L Undermining area is 1" to 5" D by 2' Undermined. Previous 1 1/2' W (Undermined).

Remarks

Recommendation to provide fill and grade along Abutment and East Embankment Slope. See Photos.



Facing East. Erosion area under East Abutment Exposing 1 Pile.



Facing East. Continued Erosion area to East Abutment.

Maintenance Needs

Date Reported: 07/12/2021

Priority: Medium

Type of Work: ----- Other -----

Status: Under Review

Component: Element

Deficiency Description

West Slope Protection Rock and Oil with Lateral Movement and Settlement away from Abutment now up to 1'-3". Previous 1'. Area is causing a trough.

Remarks

Recommendation to fill with appropriate rock and apply oil to area along Abutment. See Photos.



Facing North and Downward. West Slope Protection with Lateral Separation.



Facing South. West Slope Protection along Abutment with Lateral Separation.

Maintenance Needs

Date Reported: 07/27/2021

Priority: Medium

Type of Work: Apply Healer / Sealer to Deck

Status: Under Review

Component: Element

Deficiency Description

All cracking to Deck Wearing surface are unsealed.

Remarks

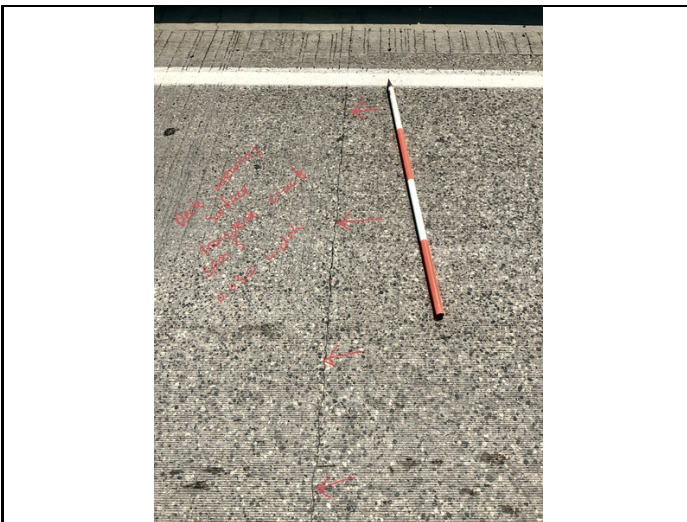
Recommendation to apply appropriate and approved sealant to cracking as per the Maintenance Manual. See Photos.



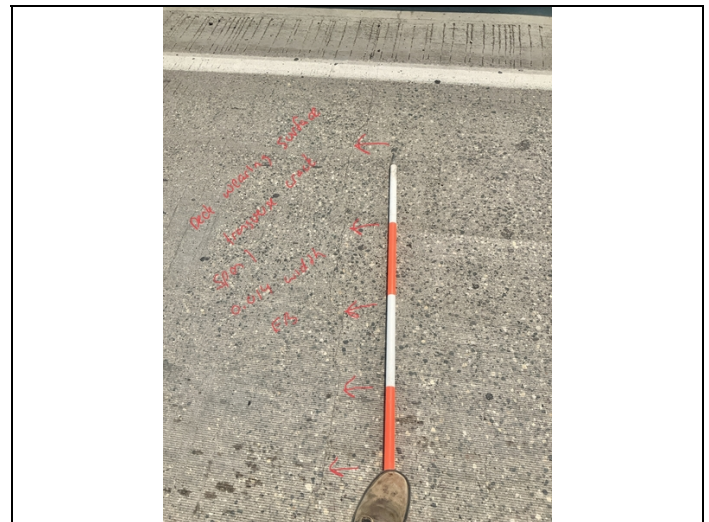
Facing South and Downward. Deck Wearing Surface
Transverse Crack to EB Lane.



Facing South and Downward. Transverse Crack to Deck
Wearing Surface in the EB Lane of Span 2.



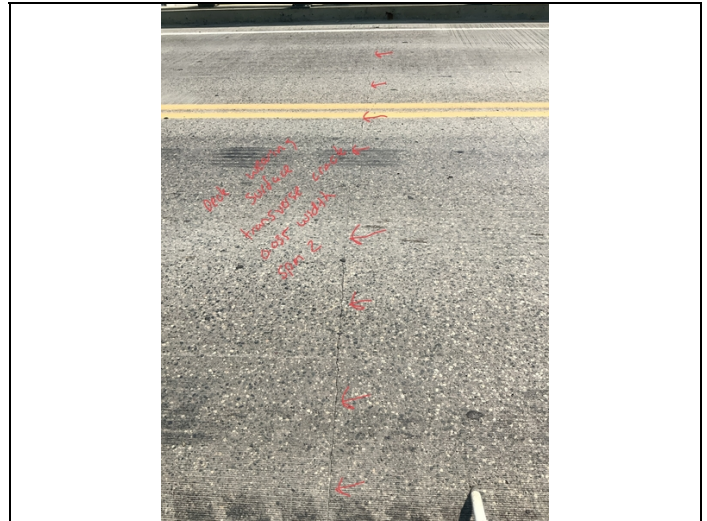
Facing South and Downward. Transverse Crack to Deck
Wearing Surface in the EB Lane of Span 3.



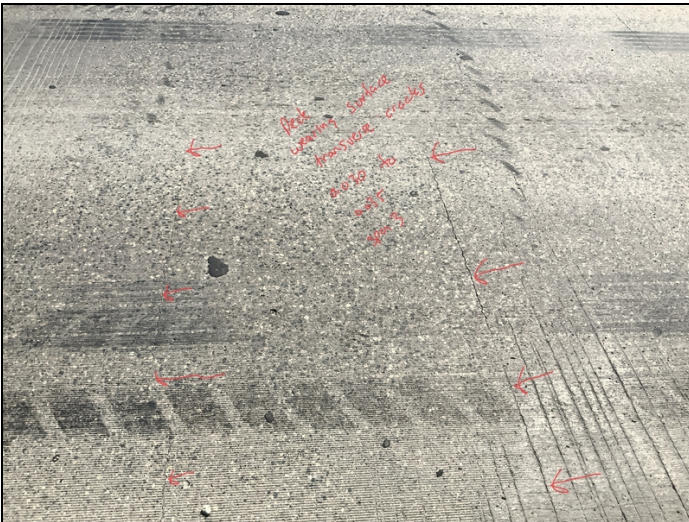
Facing South and Downward. Transverse Crack to Deck
Wearing Surface in the EB Lane of Span 1.



Facing South and Downward. Transverse Crack to Deck Wearing Surface in the EB Lane of Span 1.



Facing South and Downward. Transverse Crack to Deck Wearing Surface in both lanes of Span 2.



Facing South and Downward. Transverse Cracking to Deck Wearing Surface in WB Lane of Span 3.



Facing SW and Downward. Transverse cracking to Deck Wearing Surface of the WB Lane of Span 4.



Facing SW and Downward. Shear Crack to Deck Wearing Surface near NW Corner.

Maintenance Needs

Date Reported: 07/27/2021

Priority: High

Type of Work: ----- Other -----

Status: Under Review

Component: Element

Deficiency Description

Moderate spalling with exposed rebar to portions of the North and South Curb near ends, Corners, and throughout. Various posts with delamination and exposing reinforcing steel throughout both Railings.

Remarks

Recommendation to Remove Delaminated Concrete and perform spall repairs/patches to the various areas. See Photos.



Facing East and Downward. Spalling to South Curb at West End.



Facing South. Moderate Spalling to South Curb at SW Corner.



Facing South. Exposed Rebar to South Railing Post 12.



Facing NW. Moderate Spalling to North Curb near SW Corner.



Facing NW. Spalling with Exposed Rebar to North Rail at Post 2.



Facing NE. Spalling and Delamination to North Curb near West End.



Facing East and Downward. Another View of the Moderate Spalling to North Curb near West End.



Facing North. Spalling with Exposed Rebar to North Curb at Post 4.



Facing NW. Spalling with Exposed Rebar to North Railing at Post 3.



Facing NW. Spalling with Exposed Rebar to North Rail Post 7.



Facing West and Downward. Exposed Rebar to Top of North Curb near Pier 3.



Facing NW. Spalling with Exposed Rebar to North Railing at Post 13.



Facing NW. Spalling to North Railing at Post 22.



Facing NW. Spalling with Exposed Rebar to North Railing at Post 20.



Facing North. Exposed Rebar to North Railing at Post 36.

Maintenance Needs

Date Reported: 07/28/2021

Priority: Medium

Type of Work: Maintain General Safety Features

Status: Under Review

Component: Approach

Deficiency Description

Vehicle Impact Damage to W-Beam within NE Quadrant.

Remarks

Recommendation to remove and replace W-Beam Section(s). See Photo.



Facing NW. Vehicle Impact Damage to NE W-Beam.



Facing East. Cracked Wood Post within NE Quadrant.



Facing NE. Another View of the Vehicle Impact Damage to W-Beam within NE Quadrant.