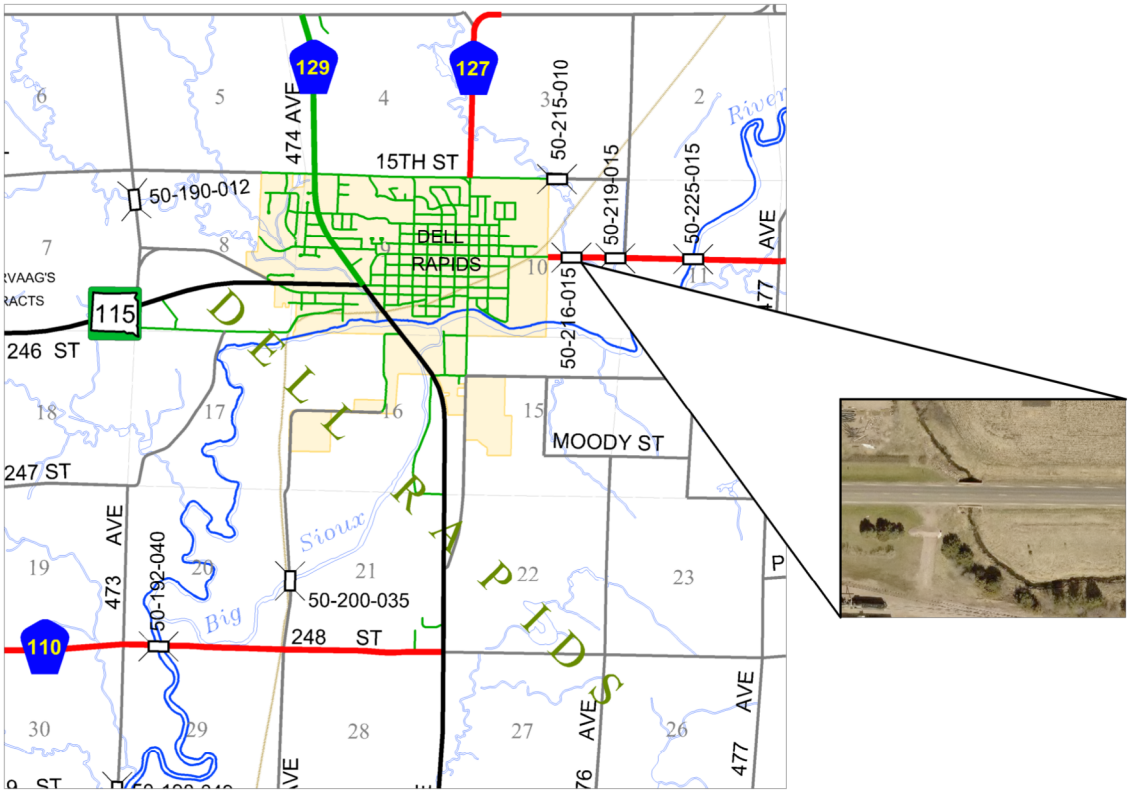
Bridge Inspection Report
for
Minnehaha County
South Dakota
2022
Structure No. 50-216-015
Jasper Street / Co. Hwy 104



Dell Rapids Township

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12059
CHRIS J. BROZIK
SOUTH DAKOTA

10/28/22

CIVIL DESIGN INC

MINNEHAHA COUNTY
18 62
SOUTH DAKOTA

Repair and Posting Recommendations
Bridges Maintained by Local Governments

Structure No. 50-216-015 **Hwy or Street** Jasper St. / Co. Hwy. 104

FA Route No. 6250 **Agency Responsible for Maintenance** Minnehaha Co.

Location 1.2 miles east and 0.2 miles north of Dell Rapids, SD.

Bridge Description 34.0 ft Three Span Continuous Concrete Bridge with Concrete Abutments.

0 Degree Skew - 30.2 ft Roadway Width.

Date Inspected 6/16/2022 **Year Built** 1922 - Reconstructed 1966

Posting Recommendations

Single Unit - N.A. tons Current Posting: Not Posted

Combination - N.A. tons Legal Loads: No Load Posting Required

Legal Loads Based on Article 6.1.4 of AASHTO "The Manual for Bridge Evaluation", Third Edition

Repair, Rehabilitation, and/or Replacement Recommendations

1. Install bridge railing rubrails and approach guardrails as required.
2. Install NE object marker that is damaged and lying on ground.
3. Straighten the 1st delineator along the NW approach.
4. Clean and repair/patch areas of scaling, spalling, and exposed rebar on the underside of the concrete slab.
5. Clean and repair/patch areas of deterioration and honeycombing at the center columns in the east & west bents.
6. Patch hole in slab along south side of original slab in west span.
7. Monitor underside of concrete slab for continued deterioration.
8. **Structure is currently in the 5-year capital improvement plan & scheduled for future replacement.**

The South Dakota Department of Transportation is required by Federal Statute to maintain an inventory of all bridges on all public traveled routes. Therefore, it is important that County and City Officials report any changes on bridges on their system. Examples of changes which should be reported are: Replacement of an existing bridge with pipe or new bridge, safety updated, rehabilitation or repair of an existing bridge etc. Changes should be reported to: South Dakota Department of Transportation, Local Government Assistance, Pierre, South Dakota, 57501.

RECOMMENDATIONS MADE BY: _____ DATE: 6/16/2022

Chris Brozik, P.E.

Bridge Inspection Report

Structure No. 50-216-015 **Maint. Proj. No.**

Feature Carried Jasper St. / Co. Hwy. 104 **County** Minnehaha Co.

Feature Crossed Unnamed Tributary to Big Sioux River

Location 1.2 miles east and 0.2 miles north of Dell Rapids, SD.

Bridge Description 34.0 ft Three Span Continuous Concrete Bridge with Concrete Abutments.
0 Degree Skew - 30.2 ft Roadway Width.

Date Inspected	Inspectors	Temperature
06/16/22	Chris Brozik, P.E. & Anthony Peters	63 Deg F

Approach - Items 65.00 - 65.09

1. ALIGNMENT - The vertical and horizontal alignments are good.

2. CONDITION - Bituminous - Smooth.

3. JOINTS - None

4. GUARD RAILS - None

5. EMBANKMENT - Good - No sign of erosion behind the wingwalls. There is a CMP culvert underneath the roadway approach off the SW corner of the structure which discharges into the channel just off the end of the SW wingwall. There is some erosion evident off the end of the culvert, but it does not appear to be endangering the structure.

6. DRAINAGE - The drainage of the roadway is good.

7. SIGNAGE - Type 2 Object Markers - At all four (4) corners of the structure. The NE object marker is damaged and lying on the ground.

   Delineators - There are four (4) delineators located off the NW, NE, and SE corners and three (3) delineators located off the SW corner of the structure. The first delineator along the SW approach was not installed due to a residential entrance. The 1st delineator along the NW approach is slightly bent forward. Otherwise, the delineators appear to be in relatively good condition.

8. GPS COORDINATES - Latitude: 43.82602 North Longitude: -96.69411 West

Structure Number 50-216-015 **Date** 06/16/22

Deck - Items 58.00 - 58.17

1. DECK CONDITION - CRACKING, SCALING, SPALLING, AND DELAMINATIONS -

   Cast-in-place concrete - The top surface of the concrete slab is not visible due to the bituminous overlay.

2. OVERLAY - TYPE, THICKNESS, AND CONDITION -

   Bituminous - Approximate 6-inch average depth, smooth. Light vegetation growth is evident along edges of overlay.

3. JOINTS - OPENINGS - None

4. DRAINS - None

5. CURBS AND MEDIAN - Cast-in-place concrete - Some vertical hairline cracks and areas of light scaling and rust staining are evident throughout. Overall, the concrete curbs appear to be in relatively good condition.

6. SIDEWALKS - None

7. RAILING OR BARRIER - The railings consist of a painted steel channel mounted on painted double steel angle posts. The paint on the railing members appears to be in fair to good condition with some areas of surface rust evident.

8. LIGHTING - None

9. UTILITIES - None

10. DECK DELAMINATION SURVEY - Unable to perform a deck delamination survey due to the bituminous overlay.

Structure Number 50-216-015 **Date** 06/16/22

Superstructure - Items 59.00 - 59.20

1. UNDERSIDE OF DECK - Cast-in-place concrete - The original structure appears to have been widened approximately 7 ft along both sides. A significant amount of spalling is evident along the south side of the original slab in all spans and along north side of original slab in east span which have exposed reinforcing steel. The exposed portions of the reinforcing steel are heavily rusted with plating evident and moderate section loss, but does not appear to be affecting structure capacity at the time of inspection. Stalactites are evident along south side of original slab at the west and center spans. There are longitudinal hairline cracks and areas of light scaling evident throughout the original portion of the slab with a couple areas of efflorescence evident. Areas of light scaling are also evident on the underside of the widening portions of the concrete slab. There is an approximate 3"x5"x10" deep hole in the south side of the original slab in the west span which appears to extend to the bottom of the bituminous overlay.
2. BEARING DEVICES - None
3. GIRDERS OR BEAMS - STIFFENERS, WELDS, SPLICES, AND ETC. -

   None
4. DIAPHRAGMS - None
5. TRUSSES - MAIN MEMBERS, PORTALS, BRACING, GUSSET PLATES, AND ETC. -

   None
7. RIVETS OR BOLTS - None
8. WELDS - None
9. PAINT - None
10. DRAINAGE SYSTEM - None
11. UTILITIES - None
12. REACTION UNDER LOAD - No excessive deflection under heavy vehicle load.
13. COLLISION DAMAGE - None evident.

Structure Number 50-216-015 **Date** 06/16/22

Substructure - Items 60.00 - 60.05

1. ABUTMENTS -

   A. WINGWALLS - The wingwalls consist of cast-in-place concrete and are direct extensions of the backwalls. Some chips are evident along the tops of the wingwalls. It appears these chips occurred during the placement of the riprap. Overall, the wingwalls appear to be in relatively good condition.

   B. BACKWALLS - The backwalls consist of cast-in-place concrete. Both ends of the original backwalls were extended when the structure was widened. There are some areas of honeycombing evident in the original portions of the backwalls. A spall is evident at the north end of the original portion of the east backwall. The widening portions of the backwalls appear to be in relatively good condition.

   C. FOOTINGS - None

   D. PILE CAPS - None

2. PIERS OR BENTS -

   A. CAPS - Cast-in-place concrete - The original concrete caps were extended when the structure was widened. Some areas of light to moderate scaling are evident throughout and some vertical hairline cracks are evident over the columns. Overall, the concrete bent caps appear to be in satisfactory condition.

   B. COLUMNS - Cast-in-place concrete - There are five (5) concrete columns per bent (10 total columns). The original bents consisted of three (3) columns. The original end columns were added onto and an additional column was added at the ends of the bents when the structure was widened. A significant amount of deterioration and a lack of consolidation is evident towards the bottom of the center column in both bents.

   C. FOOTINGS - The portion of the concrete footings at columns #2 - #5 in both bents have been exposed, but do not appear to be undermined.

3. GROUT PADS - None

4. ANCHOR BOLTS - None

5. PILES - None visible.

6. BRACING - None

7. PAINT - None

Structure Number 50-216-015 **Date** 06/16/22

Substructure - Items 60.00 - 60.05 (Continued)

8. MOVEMENT -

   A. PLUMBNESS - Everything appears vertical.

   B. SETTLEMENT - None evident.

   C. HORIZONTAL - None evident.

Structure Number 50-216-015 **Date** 06/16/22

Channel and Channel Protection - Items 61.00 - 61.09

1. CHANNEL -

   A. ALIGNMENT - The channel alignment is fair. It appears a RHF skew would better fit the channel.

   B. VEGETATION - Good

   C. SCOUR - None

   D. DEBRIS - None

   E. FLOW LINE - Well defined.

2. EMBANKMENT EROSION - Minor amount of embankment erosion is evident in both the upstream and downstream channels.

3. WATERWAY ADEQUACY - Appears adequate.

4. SPUR DIKES & JETTIES - None

5. WING DAMS - None

6. RIP RAP - A significant amount of riprap has been placed along NW channel bank, in front of the wingwalls, and at the ends of the backwalls at the corners of the structure.

7. OBSERVED HIGH WATER ELEVATION - Appears to be approximately 2 to 3 feet below the bottom of the concrete slab.

8. STREAM BED - Appears relatively stable.

ELEMENT LEVEL INSPECTION
(Main Span)

Str. No.: 50-216-015		**Maint. Proj. No.:**	
Feature Carried: Jasper St. / Co. Hwy. 104		**MRM:**	**County:** Minnehaha Co.
Feature Crossed: Unnamed Tributary to Big Sioux River			
Location: 1.2 miles east and 0.2 miles north of Dell Rapids, SD.			
Bridge Description: 34.0 ft Three Span Continuous Concrete Bridge with Concrete Abutments.			
0 Degree Skew - 30.2 ft Roadway Width.			
Length: 34.0 ft	**Roadway width:** 30.2 ft		**Deck width:** 34.2 ft
Deck Area : Length x Deck Width = 1,163 Sq. ft			**Skew:** 0 degrees
Inspector(s): Chris Brozik, P.E. & Anthony Peters		**Date:** 06/16/22	

Element Condition States

Elem Num	Element Description	Env	Quantity	Units	Quantity in Condition State 1	2	3	4	
38	Reinforced Concrete Slab	2	1,163	SF	425	630	108		
1090	Exposed Rebar	2		SF			68		
1080	Delamination/Spall/Patched Area	2		SF		430			
1130	Cracking	2		SF		200			
1120	Efflorescence/Rust Staining	2		SF			40		
1190	Abrasion/Wear	2		SF					
1900	Distortion	2		SF					
4000	Settlement	2		SF					
6000	Scour	2		SF					
7000	Damage	2		SF					
814	AC w/o Membrane Overlay	2	1,027	SF	1,027				
3230	Effectiveness	2		SF					
3210	Delam./Spall/Patched Area/Pothole	2		SF					
3220	Crack	2		SF					
7000	Damage	2		SF					
205	Columns, Reinforced Concrete	2	10	EA		8	2		
1090	Exposed Rebar	2		EA					
1080	Delamination/Spall/Patched Area	2		EA		8	2		
1130	Cracking	2		EA					
1120	Efflorescence/Rust Staining	2		EA					
1190	Abrasion/Wear	2		EA					
1900	Distortion	2		EA					
4000	Settlement	2		EA					
6000	Scour	2		EA					
7000	Damage	2		EA					
215	Abutment, Reinforced Concrete	2	68	LF	28	40			
1090	Exposed Rebar	2		LF					
1080	Delamination/Spall/Patched Area	2		LF		40			
1130	Cracking	2		LF					

1120	Efflorescence/Rust Staining	2		LF					
1190	Abrasion/Wear	2		LF					
1900	Distortion	2		LF					
4000	Settlement	2		LF					
6000	Scour	2		LF					
7000	Damage	2		LF					
234	Pier Cap, Reinforced Concrete	2	68	LF	68				
1090	Exposed Rebar	2		LF					
1080	Delamination/Spall/Patched Area	2		LF					
1130	Cracking	2		LF					
1120	Efflorescence/Rust Staining	2		LF					
1190	Abrasion/Wear	2		LF					
1900	Distortion	2		LF					
4000	Settlement	2		LF					
6000	Scour	2		LF					
7000	Damage	2		LF					
330	Metal Bridge Railing	2	68	LF	68				
1010	Cracking	2		LF					
1020	Connection	2		LF					
1900	Distortion	2		LF					
1000	Corrosion	2		LF					
4000	Settlement	2		LF					
6000	Scour	2		LF					
7000	Damage	2		LF					
816	Lead Based Paint	2	196	SF	196				
3420	Peeling/Bubbling/Cracking	2		SF					
3440	Effectiveness	2		SF					
3410	Chalking	2		SF					
7000	Damage	2		SF					
817	Non-Lead Based Paint	2		SF					
3420	Peeling/Bubbling/Cracking	2		SF					
3440	Effectiveness	2		SF					
3410	Chalking	2		SF					
7000	Damage	2		SF					
818	Metallized/Galvanized Coating	2		SF					
3420	Peeling/Bubbling/Cracking	2		SF					
3440	Effectiveness	2		SF					
3410	Chalking	2		SF					
7000	Damage	2		SF					

Bridge Inspection Digital Photo Log

Structure No. **50-216-015**

Photo Number:	Date:	Description:
1	6/16/2022	Approach looking East
2	6/16/2022	Approach looking West
3	6/16/2022	Profile looking North
4	6/16/2022	Profile looking South
5	6/16/2022	CMP Culvert Outlet at SW Corner of Structure
6	6/16/2022	NE Object Marker Damaged and on Ground
7	6/16/2022	1st NW Approach Delineator Slightly Bent
8	6/16/2022	Top of Bituminous Overlay looking West
9	6/16/2022	South Bridge Rail
10	6/16/2022	North Bridge Rail
11	6/16/2022	Typical Rail Post Condition
12	6/16/2022	Underside of Existing Slab, South side of East Span
13	6/16/2022	Underside of Existing Slab, North side of East Span
14	6/16/2022	Underside of Existing Slab, South side of Center Span
15	6/16/2022	Underside of Existing Slab, North side of Center Span
16	6/16/2022	Underside of Existing Slab, South side of West Span
17	6/16/2022	Underside of Existing Slab, North side of West Span
18	6/16/2022	Hole in underside of Slab, South side of West Span
19	6/16/2022	West Backwall
20	6/16/2022	East Backwall
21	6/16/2022	NE Backwall Spall
22	6/16/2022	Typical Configuration of Bent
23	6/16/2022	West Bent Center Column Honeycombing
24	6/16/2022	East Bent Center Column Honeycombing
25	6/16/2022	Typical Exposed Concrete Footing (West Bent Column #3 shown)
26	6/16/2022	Upstream Channel looking NW
27	6/16/2022	Downstream Channel looking South
28	6/16/2022	Riprap along NW Channel Bank
29	6/16/2022	Riprap in front of SE Wingwall
30	6/16/2022	Riprap in front of NE Wingwall

50-216-015_2022_1_CDI_Approach looking East

50-216-015_2022_2_CDI_Approach looking West

50-216-015_2022_3_CDI_Profile looking North

50-216-015_2022_4_CDI_Profile looking South

50-216-015_2022_5_CDI_CMP Culvert Outlet at SW Corner of Structure

50-216-015_2022_6_CDI_NE Object Marker Damaged and on Ground

50-216-015_2022_7_CDI_1st NW Approach Delineator Slightly Bent

50-216-015_2022_8_CDI_Top of Bituminous Overlay looking West

50-216-015_2022_9_CDI_South Bridge Rail

50-216-015_2022_10_CDI_North Bridge Rail

50-216-015_2022_11_CDI_Typical Rail Post Condition

50-216-015_2022_12_CDI_Underside of Existing Slab, South side of East Span

50-216-015_2022_13_CDI_Underside of Existing Slab, North side of East Span

50-216-015_2022_14_CDI_Underside of Existing Slab, South side of Center Span

50-216-015_2022_15_CDI_Underside of Existing Slab, North side of Center Span

50-216-015_2022_16_CDI_Underside of Existing Slab, South side of West Span

50-216-015_2022_17_CDI_Underside of Existing Slab, North side of West Span

50-216-015_2022_18_CDI_Hole in underside of Slab, South side of West Span

50-216-015_2022_19_CDI_West Backwall

50-216-015_2022_20_CDI_East Backwall

50-216-015_2022_21_CDI_NE Backwall Spall

50-216-015_2022_22_CDI_Typical Configuration of Bent

50-216-015_2022_23_CDI_West Bent Center Column Honeycombing

50-216-015_2022_24_CDI_East Bent Center Column Honeycombing

50-216-015_2022_25_CDI_Typical Exposed Concrete Footing (West Bent Column #3 shown)

50-216-015_2022_26_CDI_Upstream Channel looking NW

50-216-015_2022_27_CDI_Downstream Channel looking South

50-216-015_2022_28_CDI_Riprap along NW Channel Bank

50-216-015_2022_29_CDI_Riprap in front of SE Wingwall

50-216-015_2022_30_CDI_Riprap in front of NE Wingwall

CHANNEL PROFILE

MINNEHAHA COUNTY

STR. NO. 50-216-015

MEASUREMENTS TAKEN FROM THE TOP OF: **RAIL**

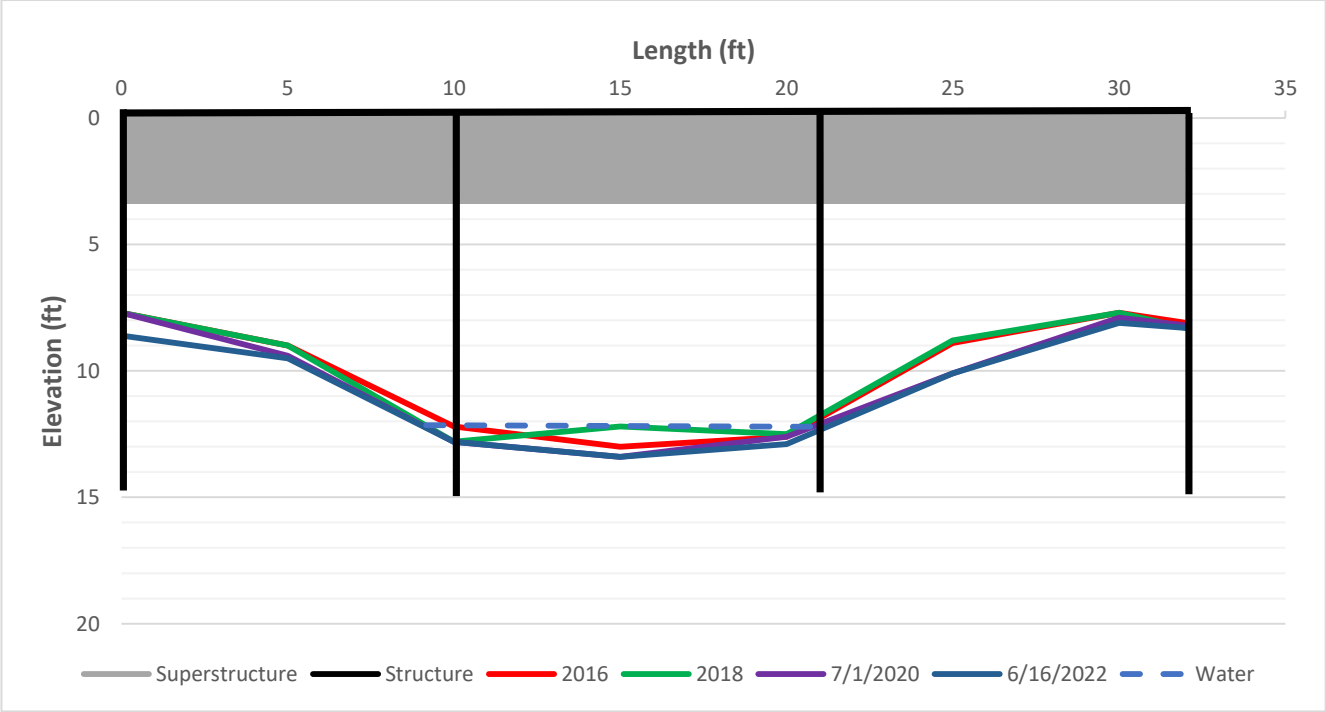
MEASUREMENTS TAKEN ON THE INLET SIDE OF THE STRUCTURE: **NORTH**

WATER ELEV: **12.6**

		2016	2018	7/1/2020	6/16/2022
West End	0	7.7	7.7	7.7	8.6
	5	9.0	9.0	9.4	9.5
	10	12.2	12.8	12.8	12.8
	15	13.0	12.2	13.4	13.4
	20	12.6	12.5	12.6	12.9
	25	8.9	8.8	10.1	10.1
	30	7.7	7.7	7.9	8.1
East End	32	8.1	8.3	8.2	8.3

ABUT./BENT	
1	0
2	10
3	21
4	32

Top of RAIL to bottom of Superstructure 3.5 ft.



Note: Only Partial Set of Construction Plans are enclosed in SDDOT bridge inspection file.

CIVIL DESIGN INC

General Bridge Data

(8) STR NO : 50-216-015

(7) FACILITY : JASPER ST, HWY 104

(6) FEAT INTER : TRIB TO BIG SIOUX RV

(9) LOCATION : 1.2E & 0.2N DELL RAPIDS

INTERCHANGE : N

SECTION(S) : 10 -1 -1 -1

TOWNSHIP(S) : 104N -1

RANGE(S) : 49W -1

(2) REGION : Mitchell

(3) COUNTY : 50 MINNEHAHA

(21) CUSTODIAN : 2 County Hwy Agency

(22) OWNER : 2 County Hwy Agency

MAINT PROJ :

(42A) SERV TYPE ON : 1 Highway

(42B) SERV TYPE UND : 5 Waterway

(103) TEMP STRUCTURE : Unknown (NBI)

(99) BORDER BRIDGE STR NO : -1

(98A) NEIGHBOR STATE : Unknown (P)

(98B) PERCENT SHARE : -2.00

Highway Carried (NBI 5)

(5B) ROUTE PREFIX : 4 County Hwy

(5C) LEVEL OF SERVICE : 1 Mainline

(5D) ROUTE NUMBER : 00000

(5E) DIRECT SUFFIX : 0 N/A (NBI)

MRM ENGLISH : 0.00

POSTED SPEED : 55 MPH

SCHOOL BUS RT : Y

MAIL RT : Y

(104) NHS SYSTEM : 0 Not on NHS

FA ROUTE : 6250

(26) FUNC CLASS : 07 Rural Mjr Collector

(28A) LANES : 2

(102) DIRECTION TRAFFIC : 2 2-way traffic

(105) FED LANDS HWY : 0 N/A (NBI)

(19) DETOUR : 9.00 mi

(29) ADT TOTAL : 1120.00

(30) YEAR OF ADT : 2021

(109) % TRUCK : 3.00 %

(53) MIN V CLR RT : 99.99 ft

(53) MIN V CLR LT : 0.00 ft

(10) MAX V CLR RT : 99.99 ft

(10) MAX V CLR LT : 0.00 ft

(47) HORIZ V CLR RT : 30.20 ft

(47) HORIZ V CLR LT : 0.00 ft

GIS Data

LATITUDE : 43.82602

LONGITUDE : -96.69411

DATE : 03/28/2016

COMMENT : Calculated GIS INFO

Main Span

(27) YEAR BUILT : 1922

(106) RECONSTR : 1966

(49) STR LENGTH : 34.00 ft

NBIS BRIDGE LENGTH : 32.00 ft

(48) MAX SPAN LENGTH : 11.00 ft

(43A) MATERIAL : 2 Concrete Continuous

(43B) DESIGN : 01 Slab

SD STR TYPE : X020

(107) DECK STR TYPE : 1 Concrete-Cast-in-Place

(52) DECK WIDTH : 34.20 ft

(51) BRIDGE RDWY WIDTH : 30.20 ft

(32) APPR RDWY WIDTH : 24.00 ft

(50A) LT SIDEWALK WIDTH : 0.00 ft

(50B) RT SIDEWALK WIDTH : 0.00 ft

(34) SKEW : 0.00°

SKEW DIR :

(45) NO MAIN SPANS : 3

(46) NO APPR SPANS : 0

(31) DESIGN LOAD : 0 Unknown

(33) BRIDGE MEDIAN : 0 No median

(35) STR FLARED : 0 No flare

Box Culvert Data

BOX CULVERT SIZE : 0 X 0 X 0

FILL HT OVER BOX : 0.00 ft

LENGTH OF LONGEST CELL : 0.00 ft

Rail Data

(36) SAFETY FEAT : 0000

BRIDGE RAIL 1 : 06 - STL DISCONT CHANNEL RAIL

RAIL TRANS 1 : 00 - NO TRANSITION PROVIDED

APPR RAIL 1 : 00 - NO APPROACH RAIL

APPR RAIL TERM 1 : 00 - NO TERMINALS PROVIDED

NBI Prop Work

(75A) WORK TYPE : 31 Repl-Load Capacity

(75B) WORK BY : 1 Contract

(76) IMPROV LENGTH : 184.06 ft

(94) BRIDGE IMPROV COST : $263,756.00

(95) RDWAY IMPROV COST : $26,376.00

(96) TOTAL PROJECT COST : $449,960.00

(97) YEAR OF IMPROV COST : $2,018.00

(114) ADT FUTURE : 1400.00

(115) YEAR OF ADT FUTURE : 2036

Steel Paint

UNDERCOAT :

TOPCOAT :

YEAR :

COLOR :

Status

SUFF RATE : 48.50

FED SUFF RATE : 63.40

FED SR DATE : 03/14/2022

DEFICIENCY : S

CANDIDATE : H

Deck Data

(108A) WEARING SURFACE : 6 Bituminous

DECK PROTECTION : None

OVERLAY THICKNESS : 6.00 in

DECK DELAM AREA : 0.00 sq ft

DECK DELAM DATE :

DECK SURVEY :

CHLORIDE : N

RESTEEL DEPTH : N

ELECTRO POTENT : N

Load Rating Data

(41) OPER STATUS : A Open, no restriction

(66) INV HS20 : 21.60 tons

(65) METHOD : 0 Field eval and docs

(64) OP HS20 : 36.00 tons

(63) METHOD : 0 Field eval and docs

TRUCK TYPE 3 : 24.00 tons

TRUCK TYPE 3S2 : 40.00 tons

TRUCK TYPE 3-2 : 46.00 tons

NRL : 40.00 tons

SHV-4 : 27.00 tons

SHV-5 : 31.00 tons

SHV-6 : 34.80 tons

SHV-7 : 38.80 tons

EV2 : tons

EV3 : tons

BARS NO : JDG

Hydraulics

DRAINAGE AREA : 3.35 sq mi

OBSERV HW ELEV : 0.00 ft

YEAR : 01/01/1901

DESIGN FREQ : 0.00

DESIGN FLOW : 0.00 cfs

DESIGN VELOCITY : 0.00 fps

DESIGN AREA : 0.00 sq ft

DESIGN YEAR :

DESIGN HW ELEV : ft

100 YEAR FLOW : 0.00 cfts

100 YEAR HW ELEV : ft

V MAX : fps

SCOUR SCREENING : 2

SCOUR RATING : U

TOPEKA SHINER : N

Rail Paint

UNDERCOAT : LEAD-BASED PAINT

TOP COAT : LEAD-BASED PAINT

YEAR :

COLOR : ORANGE

Highway Carried (Under Record)

(5A) RECORD TYPE :
(5B) ROUTE PREFIX :
(5C) LEVEL OF SERVICE :
(5D) ROUTE NUMBER :
(5E) DIRECT SUFFIX :
MRM :
ADM JUR :
(104) NHS SYSTEM :
FA ROUTE :
(26) FUNC CLASS :
(28B) LANES :
(101) DIRECTION OF TRAFFIC :
(19) DETOUR LENGTH : mi
(29) ADT :
(30) ADT YEAR :

(54) MIN V CLR RT :
(54) MIN V CLR LT :
(10) MAX V CLR RT :
(10) MAX V CLR LT :
(47) HORIZ CLR RT :
(47) HORIZ CLR LT :
(55) OUT UNDCLR RT :
(55) OUT UNDCLR LT :
(56) MED UNDCLR RT :
(56) MED UNDCLR LT :

Project Number	PCN	Date Done
NA	none	01/01/1922

Inspection

GENERAL COMMENT : -1
REGION COMMENT : -1
FREE COMMENT : -1

INSPECTION TYPE	LAST INSPECTION DATE	REQUIRED	INSPECTION FREQUENCY	NEXT INSP DATE
NBI	06/16/2022		24 month(s)	06/16/2024
FRACTURE CRITICAL	NA	N	NA	NA
UNDERWATER	NA	N	NA	NA
SPECIAL	NA	N	NA	NA
ELEMENT INSPECTION	06/16/2022		24 month(s)	06/16/2024

INSPKEY : BHSS
APPRAIS BY : CLB
APPRAIS DATE : 10/03/2022
QA INSPECTOR :
QA INSP DATE :
LAST INSPECTION BY :
CONSULTANT CODE : CIVIL DESIGN

Condition Ratings

(58) DECK : 4
(59) SUPER : 4
(60) SUB : 5
(62) CULVERT : N
(113) SCOUR : U
(61) CHANNEL : 6
APPROACH : 7 -1

Appraisal Ratings

STR APPR : 4 -1
DECK GEOM : 5 -1
UNDERCLR : N -1
WATERWAY : 8 -1
APPR ALIGN : 8 -1
BR POST : 5 LEGAL LOADS
SCOUR SCREENING : 2
SCOUR RATING : U

Elements	Unit	ID	Env	Quantity	Units	Q 1	Q 2	Q 3	Q 4
Re Concrete Slab	**MAIN**	**38**	**2**	**1163.00**	**sq.ft**	**425.00**	**630.00**	**108.00**	**0.00**
Cast-in-place concrete - The top surface of the concrete slab is not visible due to the bituminous overlay. Cast-in-place concrete - The original structure appears to have been widened approximately 7 ft along both sides. A significant amount of spalling is evident along the south side of the original slab in all spans and along north side of original slab in east span which have exposed reinforcing steel. The exposed portions of the reinforcing steel are heavily rusted with plating evident and moderate section loss, but does not appear to be affecting structure capacity at the time of inspection. Stalactites are evident along south side of original slab at the west and center spans. There are longitudinal hairline cracks and areas of light scaling evident throughout the original portion of the slab with a couple areas of efflorescence evident. Areas of light scaling are also evident on the underside of the widening portions of the concrete slab. There is an approximate 3"x5"x10" deep hole in the south side of the original slab in the west span which appears to extend to the bottom of the bituminous overlay.								
— Delamination/Spall/Patched Area	MAIN	1080	2	430.00	sq.ft	0.00	430.00	0.00	0.00
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— Exposed Rebar	MAIN	1090	2	68.00	sq.ft	0.00	0.00	68.00	0.00
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— Efflorescence/Rust Staining	MAIN	1120	2	40.00	sq.ft	0.00	0.00	40.00	0.00
— Cracking (RC and Other)	MAIN	1130	2	200.00	sq.ft	0.00	200.00	0.00	0.00
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— AC w/o Membrane Overlay	MAIN	814	2	1,027.00	sq.ft	1,027.00	0.00	0.00	0.00
Bituminous - Approximate 6-inch average depth, smooth. Light vegetation growth is evident along edges of overlay.									
Re Conc Column	**MAIN**	**205**	**2**	**10.00**	**each**	**0.00**	**8.00**	**2.00**	**0.00**
Cast-in-place concrete - There are five (5) concrete columns per bent (10 total columns). The original bents consisted of three (3) columns. The original end columns were added onto and an additional column was added at the ends of the bents when the structure was widened. A significant amount of deterioration and a lack of consolidation is evident towards the bottom of the center column in both bents.									
— Delamination/Spall/Patched Area	MAIN	1080	2	10.00	each	0.00	8.00	2.00	0.00
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Re Conc Abutment	**MAIN**	**215**	**2**	**68.00**	**ft**	**28.00**	**40.00**	**0.00**	**0.00**
The backwalls consist of cast-in-place concrete. Both ends of the original backwalls were extended when the structure was widened. There are some areas of honeycombing evident in the original portions of the backwalls. A spall is evident at the north end of the original portion of the east backwall. The widening portions of the backwalls appear to be in relatively good condition. The wingwalls consist of cast-in-place concrete and are direct extensions of the backwalls. Some chips are evident along the tops of the wingwalls. It appears these chips occurred during the placement of the riprap. Overall, the wingwalls appear to be in relatively good condition.									
— Delamination/Spall/Patched Area	MAIN	1080	2	40.00	ft	0.00	40.00	0.00	0.00
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Re Conc Pier Cap	**MAIN**	**234**	**2**	**68.00**	**ft**	**68.00**	**0.00**	**0.00**	**0.00**
Cast-in-place concrete - The original concrete caps were extended when the structure was widened. Some areas of light to moderate scaling are evident throughout and some vertical hairline cracks are evident over the columns. Overall, the concrete bent caps appear to be in satisfactory condition.									
Metal Bridge Railing	**MAIN**	**330**	**2**	**68.00**	**ft**	**68.00**	**0.00**	**0.00**	**0.00**
The railings consist of a painted steel channel mounted on painted double steel angle posts. The paint on the railing members appears to be in fair to good condition with some areas of surface rust evident.									
— Lead Based Paint	MAIN	816	2	196.00	sq.ft	196.00	0.00	0.00	0.00
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Action	Agency Status	Agency Priority	Assigned to	Rec. Date	Str No	Assigned To	Notes	Target Year
			No					