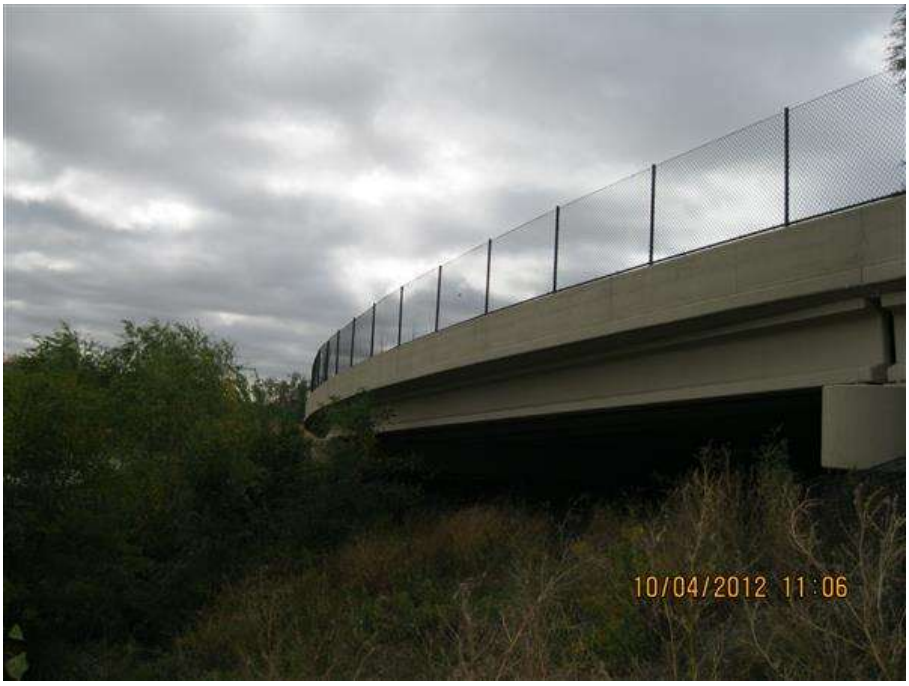
2015 ROUTINE
BRIDGE INSPECTION REPORT



BRIDGE # 62623
CSAH 16 over WEST VADNAIS SWAMP

DISTRICT: Metro **COUNTY: Ramsey** **CITY/TOWNSHIP: Vadnais Heights**

Date(s) of Inspection: 10/09/2015
Equipment Used:

Owner: County Highway Agency

Inspected By: Essler, Brian

Report Written By: Brian Essler
Report Reviewed By: Nicklaus Fischer
Final Report Date: 01/05/2016

MnDOT Bridge Office
3485 Hadley Avenue North
Oakdale, MN 55128

Table of Contents

MnDOT Structure Inventory Report

Bridge ID: 62623 CSAH 16 **over** WEST VADNAIS SWAMP **Date:** 01/05/2016

GENERAL

Agency Br. No.
District Metro
Maint. Area **Crew**
County 062 - Ramsey
City Vadnais Heights
Township
Desc. Loc. 0.1 MI E OF RICE ST
Sect., Twp., Range 33 - 030N - 22W
Latitude **Deg** 45 **Min** 2 **Sec** 48.21
Longitude **Deg** 93 **Min** 6 **Sec** 16.94
Custodian 02 - County Highway Agency
Owner 02 - County Highway Agency
BMU Agreement
Year Built 2008
MN Year Reconstructed
FHWA Year Reconstructed
MN Temporary Status
Bridge Plan Location 3 - COUNTY
Date Opened to Traffic
On-Off System 1 - ON
Legislative District 54B

STRUCTURE

Service On 1 - Highway
Service Under 0 - Other
Main Span Type
5 - Prestress or Precast 01 - Beam Span
Main Span Detail
Appr. Span Type
Appr. Span Detail
Skew 0
Culvert Type
Barrel Length ft.
Cantilever ID

NUMBER OF SPANS

MAIN: 5 **APPR:** 0 **TOTAL:** 5
Main Span Length 77.5 ft.
Structure Length 374.8 ft.
Deck Width (Out-to-Out) 37.3 ft.
Deck Material 1 - Concrete Cast-in-Place
Wear Surf Type 4 - Low Slump Concrete
Wear Surf Install Year 2008
Wear Course/Fill Depth 0.17 ft.
Deck Membrane 0 - None
Deck Rebars 1 - Epoxy Coated Reinforcing
Deck Rebars Install Year 2008
Structure Area (Out-to-Out) 19998 sq. ft.
Roadway Area (Curb-to-Curb) 18113 sq. ft.
Sidewalk Width **Lt** 0 ft. **Rt** 0 ft.
Curb Height **Lt** 0.00 ft. **Rt** 0.00 ft.
Rail Type **Lt** 21 **Rt** 21

ROADWAY

Bridge Match ID (TIS) 0
Roadway O/U Key Route On Structure
Route Sys 04 - CSAH **Number** 16
Roadway Name or Description
CSAH 16
Level of Service 1 - MAINLINE
Roadway Type 2 - 2-way traffic
Control Section (TH Only)
Reference Point 000+00.051
Detour Length 0.0 mi
Lanes **On** 2 **Under** 0
ADT 3900 **Year** 2012
HCADT 0 **ADTT** 0 **%**
Functional Class 16 - Urban - Minor Arterial

RDWY DIMENSIONS

If Divided	NB-EB	SB-WB
Roadway Width	34.0 ft.	ft.
Vertical Clearance	ft.	ft.
Max. Vert. Clear.	ft.	ft.
Horizontal Clear.	34.0 ft.	ft.
Lateral Clearance	ft.	ft.

Appr. Surface Width 32.0 ft.
Bridge Roadway Width 34.0 ft.
Median Width On Bridge ft.

MISC. BRIDGE DATA

Structure Flared 1 - Flared
Parallel Structure N - No parallel structure
Field Conn. ID
Abutment Foundation 1 - CONC
(Material/Type) 3 - FTG PILE
Pier Foundation 1 - CONC
(Material/Type) 3 - FTG PILE
Historic Status 5 - Not eligible

PAINT

Year Painted
Unsound Paint %
Painted Area sq. ft.
Primer Type
Finish Type

BRIDGE SIGNS

Posted Load 0 - Not Required
Traffic 0 - Not Required
Horizontal 0 - Not Required
Vertical 0 - Not Required

INSPECTION

Userkey 102
Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating 97.0
Routine Inspection Date 10/09/2015
Routine Inspection Frequency 12
Inspector Name County, Ramsey
Status A - Open

NBI CONDITION RATINGS

Deck 7 - Good Condition
Unsound Deck %
Superstructure 8 - Very Good Condition
Substructure 8 - Very Good Condition
Channel N - Not Applicable
Culvert N - Not Applicable

NBI APPRAISAL RATINGS

Structure Evaluation 8
Deck Geometry 5
Underclearances N
Water Adequacy 8 - Bridge Above Approache
Approach Alignment 5 - Somewhat better than m

SAFETY FEATURES

Bridge Railing 1 - MEETS STANDARDS
GR Transition 0 - SUBSTANDARD
Appr. Guardrail 0 - SUBSTANDARD
GR Termini 1 - MEETS STANDARDS

IN DEPTH INSP.

	Y/N	Freq	Date
Frac. Critical			
Underwater			
Pinned Asbly.			
Spec. Feat.			

WATERWAY

Drainage Area (sq. mi.)
Waterway Opening sq. ft.
Navigation Control N - Not applicable, no waterw
Pier Protection
Nav. Clr. (ft.) **Vert.** ft. **Horiz.** ft.
Nav. Vert. Lift Bridge Clear. (ft.)
MN Scour Code A - NON WATER' **Year**

CAPACITY RATINGS

Design Load A - HL 93
Operating Rating 1 - LF (LF) HS 38.4
Inventory Rating 1 - LF (LF) HS 20.6
Posting VEH: **SEMI:** **DBL:**
Rating Date 04/03/2015

MnDOT Permit Codes

A: N - N/A
B: N - N/A
C: N - N/A

MnDOT Structure Inventory Report

Additional Roadways

Bridge ID: 62623 CSAH 16 over WEST VADNAIS SWAMP **Date:** 01/05/2016

MnDOT BRIDGE INSPECTION REPORT

01/05/2016

Inspector: County, Ramsey

BRIDGE 62623 CSAH 16 OVER WEST VADNAIS SWAMP — ROUTINE INSP. DATE: 10/09/2015

County: Ramsey
City: Vadnais Heights
Township:
Section: 33 Township: 030N Range: 22W
Span Type: 5 - Prestressed Concrete 02 - Stringer/Multi-beam or Girder
List:
NBI Deck: 7 Super: 8 Sub: 8 Chan: N

Location: 0.1 MI E OF RICE ST
Route: 04 - CSAH 16 Ref. Pt.: 000+00.051
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:
Culv: N
Open, Posted, Closed: A - Open
MN Scour Code: A - NON WATERWAY

Length: 374.8 ft.
Deck Width: 37.3 ft.
Rdwy. Area/ Pct. Unsnd: 18113 sq. ft. / %
Paint Area/ Pct. Unsnd: sq. ft. / %
Culvert: N/A
Postings:

Appraisal Ratings - Approach: 5 Waterway: 8
Required Bridge Signs - Load Posting: 0 - Not Required Traffic: 0 - Not Required
Horizntal: 0 - Not Required Vertical: 0 - Not Required

Unofficial Structurally Deficient N
Unofficial Functionally Obsolete N
Unofficial Sufficiency Rating 97.0

Structure Unit:

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
109	Prestressed Concrete Girder or Beam	2	Routine	10/09/2015	2144 LF	1608	536	0	0	N/A
			Routine	10/13/2014	2144 LF	1608	536	0	0	N/A

☐ Requires Monitoring ☐ Monitored

Notes: [2011-2015] 75% ARE IN C.S. 1 & 25% ARE IN C.S. 2. THERE IS SOME RUSTING AT ENDS OF PRESTRESSED BEAM AT PIER #3.
[2009-2015] THERE IS SOME MINOR - MODERATE SPALLS PRESENT LOCATED AT UNDERNEATH SIDE OF UPPER I-BEAMS (TOP FLANGE).

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
215	Reinforced Concrete Abutment	2	Routine	10/09/2015	103 LF	103	0	0	0	N/A
			Routine	10/13/2014	103 LF	103	0	0	0	N/A

☐ Requires Monitoring ☐ Monitored

Notes: [2010-2015] SOME MINOR VERTICAL CRACKING WITH MINOR SPALLS PRESENT NORTH ABUTMENT. ALSO ON THE BACKWALL OF ABUT.
[2014-2015] SOME MINOR CRACKING PRESENT ON THE SOUTH ABUTMENT.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
234	Reinforced Concrete Pier Cap	2	Routine	10/09/2015	215 LF	185	30	0	0	N/A
			Routine	10/13/2014	215 LF	215	0	0	0	N/A

☐ Requires Monitoring ☐ Monitored

Notes: [2015] There is a 3' vertical on the east fascia & 10' horizontal cracks on each side of pier cap 3 east end with efflorescence.
[2015] There is graffiti on pier 2.
[2014] There is a 10' horizantal cracks on each side of pier cap 3 east end.
[2013-2014] THERE IS A 3' VERTICAL CRACK ON EAST FASCIA OF PIER CAP 3.
[2011-2014] CRACKING AT PIER #3 EAST FASCIA. THERE IS CRACKING THE ENTIRE LENGTH OF PIER CAP #3. ALSO SOME SPALLS PRESENT.

Structure Unit:

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
300	Strip Seal Deck Joint	2	Routine	10/09/2015	96 LF	96	0	0	N/A	N/A
			Routine	10/13/2014	96 LF	96	0	0	N/A	N/A

☐Requires Monitoring ☐Monitored

Notes: [2013-2015] SRTIP SEAL FILLED WITH DEBRIS , NEED TO BE CLEANED AND FLUSHED.
[2009-2013] THERE IS NO DETERIORATION OF STRIP SEAL WATERPROOF GLAND. EXPANSION JOINT DEVICE TYPE 5.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
310	Elastomeric (Expansion) Bearing	2	Routine	10/09/2015	10 EA	10	0	0	N/A	N/A
			Routine	10/13/2014	10 EA	10	0	0	N/A	N/A

☐Requires Monitoring ☐Monitored

Notes: [2009-2015] BEARINGS ARE IN GOOD CONDITION AND FUNCTIONING PROPERLY.
[2012] NO BULGING OF THE ELASTOMERIC BEARINGS.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
313	Fixed Bearing	2	Routine	10/09/2015	46 EA	46	0	0	N/A	N/A
			Routine	10/13/2014	46 EA	46	0	0	N/A	N/A

☐Requires Monitoring ☐Monitored

Notes: [2009-2015] THE FIXED BEARINGS ARE FREE OF DEBRIS AND ARE WITHOUT CORROSION. THE BEARINGS ARE FUNCTIONING AS INTENDED.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
321	Concrete Approach Slab-Concrete Wearing Surface	2	Routine	10/09/2015	2 EA	0	2	0	0	N/A
			Routine	10/13/2014	2 EA	0	2	0	0	N/A

☐Requires Monitoring ☐Monitored

Notes: [2012-2015] THE SOUTH APPROACH SLAB HAS 5- 15” LONGITUDINAL CRACKS AT THE EXPANSION JOINT.
[2009-2015] THERE IS A MAJOR 6” SPALL AT SW CORNER OF SOUTH APPROACH SLAB.
[2012-2015] THE NW APPROACH SLAB HAS 23- 15” LONGITUDINAL CRACKS AT THE EXPANSION JOINT. THERE IS MINOR DELAMINATION NEAR THE CB AT THE NW CORNER. [2010-2015] MODERATE SPALLING AT WEST END OF NORTH APPROACH SLAB.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
331	Reinforced Concrete Bridge Railing	2	Routine	10/09/2015	816 LF	408	408	0	0	N/A
			Routine	10/13/2014	816 LF	408	408	0	0	N/A

☐Requires Monitoring ☐Monitored

Notes: [2010-2015] 50 % IN CONDITION STATE 2. THERE IS MINOR TO MODERATE VERTICAL CRACKING W/EFFLORESCENCE BETWEEN JOINTS. THERE ARE NUMEROUS MINOR SPALLS PRESENT BOTH SIDES. BRIDGE RAIL CONSISTS OF TYPE P-4 RAILING WITH SPECIAL SURFACE FINISH #33522.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
358	Concrete Deck Cracking Smart Flag	2	Routine	10/09/2015	1 EA	1	0	0	0	N/A
			Routine	10/13/2014	1 EA	1	0	0	0	N/A

☐Requires Monitoring ☐Monitored

Notes: [2013-2015] THERE ARE 330 LF OF MINOR CRACKS IN SB LANE AND 380 LF OF MINOR CRACKS IN NB LANE.
[2009-2015] THERE ARE NUMEROUS BUT MINOR OR INSIGNIFICANT CRACKING AT EAST SIDE PIER #1 AND THE MEDIAN CRACKS ARE EXTENDING INTO THE DECK.

Structure Unit:

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
359	Underside of Concrete Deck Smart Flag	2	Routine	10/09/2015	1 EA	0	1	0	0	0
			Routine	10/13/2014	1 EA	0	1	0	0	0

☐Requires Monitoring ☐Monitored

Notes: [2011-2015] THERE IS A 12' MINOR- MODERATE CRACK WITH EFFLORESCENCE AT CENTERLINE PIER #2. [2011-2015] THERE ARE 100 LF OF MINOR DIAGONAL & TRANSVERSE CRACKING W/EFFLORESCENCE. [2009-2010] THERE ARE 20 LF OF DIAGONAL CRACKING W/EFFLORESCENCE AT EAST SIDE PIER #1. THERE ARE 30 LF OF TRANSVERSE CRACKING NORTH SIDE OF JOINT AT PIER #1.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
377	Low Slump O/L (Concrete Deck with Epoxy Rebar)	2	Routine	10/09/2015	19998 SF	0	19998	0	0	0
			Routine	10/13/2014	19998 SF	0	19998	0	0	0

☐Requires Monitoring ☐Monitored

Notes: [2015] THERE IS SOME OCCASIONAL MINOR TO MODERATE SPALLING THROUGHOUT. [2010-2015] THERE IS A 4" SPALL SOUTH SIDE OF PIER #1 WESTBOUND. [2009-2015] THERE ARE 50 LF OF MINOR DIAGONAL, LONGITUDINAL & TRANSVERSE CRACKING AT EAST SIDE OF PIER #1. [2009-2015] MODERATE SPALL AT EASTBOUND SPAN #1. [2009-2014] THERE IS SOME OCCASIONAL MINOR SPALLING THROUGHOUT. [2009-2015] THERE ARE MINOR TRANSVERSE CRACKS EXTENDING INTO THE DECK FROM MEDIAN CRACKS THROUGHOUT. THE 2" 3U17A WEARING COURSE WAS INSTALLED IN 2008.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
380	Secondary Structural Elements	2	Routine	10/09/2015	1 EA	1	0	0	0	N/A
			Routine	10/13/2014	1 EA	1	0	0	0	N/A

☐Requires Monitoring ☐Monitored

Notes: [2010-2015] STEEL DIAPHRAGMS (2860 TOTAL) HAVE NO DETERIORATION AND IN PROPER ALIGNMENT.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
382	Cast-In-Place (CIP) Piling	2	Routine	10/09/2015	26 EA	26	0	0	0	N/A
			Routine	10/13/2014	26 EA	26	0	0	0	N/A

☐Requires Monitoring ☐Monitored

Notes: [2011-2015] THERE IS SOME CHIPPING OF PAINT ON PILING #7 LOCATED AT THE EAST SIDE. [2009-2011] NO DETERIORATION OF PAINTED STEEL PILING 2009-2011. PILINGS WERE PAINTED FEDERAL COLOR #10075 OR 595B.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
387	Reinforced Concrete Wingwall	2	Routine	10/09/2015	4 EA	3	1	0	0	N/A
			Routine	10/13/2014	4 EA	3	1	0	0	N/A

☐Requires Monitoring ☐Monitored

Notes: [2012-2015] SOME MODERATE SPALLS PRESENT NEAR CRASH ATTENUATOR ON NW WING WALL. [2009-2015] NO SIGNIFICANT DETERIORATION PRESENT ON SW, SE & NE WING WALLS.

Structure Unit:

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
409	Chain Link Fence	2	Routine	10/09/2015	816 LF	816	0	0	0	0
			Routine	10/13/2014	816 LF	816	0	0	0	0

☐Requires Monitoring ☐Monitored

Notes: [2009-2015] CONDITION STATE #1. CHAIN LINK FENCE HAS LITTLE DETERIORATION. BLACK VINYL COATED TYPE W-1. SOME TIES ARE MISSING ON THE EAST SIDE.

964	Critical Finding Smart Flag	2	Routine	10/09/2015	1 EA	1	0	N/A	N/A	N/A
			Routine	10/13/2014	1 EA	1	0	N/A	N/A	N/A

☐Requires Monitoring ☐Monitored

Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.

965	Concrete Shear Cracking Smart Flag	2	Routine	10/09/2015	1 EA	1	0	0	0	N/A
			Routine	10/13/2014	1 EA	1	0	0	0	N/A

☐Requires Monitoring ☐Monitored

Notes:

981	Signing	2	Routine	10/09/2015	1 EA	1	0	0	0	0
			Routine	10/13/2014	1 EA	1	0	0	0	0

☐Requires Monitoring ☐Monitored

Notes: [2009-2015] ALL REQUIRED SIGNING IS PRESENT AND IS IN GOOD CONDITION.

982	Approach Guardrail	2	Routine	10/09/2015	1 EA	0	1	0	N/A	N/A
			Routine	10/13/2014	1 EA	0	1	0	N/A	N/A

☐Requires Monitoring ☐Monitored

Notes: [2015] SPACER BLOCKS ARE TWISTED AT THE SE CORNER.GUARDRAIL IS IN GOOD CONDITION.
[2013-2014] GUARDRAIL HAS BEEN REPAIREDAT SE CORNER. GUARDRAIL IS IN GOOD CONDITION.
[2012] THERE IS SEVERE COLLISION DAMAGE AT THE SE CORNER- REPAIRS ARE RECOMMENDED.
[2011] NEED SOME MINOR REPAIR TO GUARDRAIL SYSTEM AT SE CORNER OF BRIDGE. THE GUARDRAIL IS LOOSE AT THE SE CORNER.
[2009-2011] GUARDRAIL IS IN GOOD CONDITION. CRASH ATTENUATOR IS IN PLACE AT NW CORNER OF BRIDGE.

984	Deck & Approach Drainage	2	Routine	10/09/2015	1 EA	1	0	0	N/A	N/A
			Routine	10/13/2014	1 EA	1	0	0	N/A	N/A

☐Requires Monitoring ☐Monitored

Notes: [2009-2015] DRAINAGE SYSTEM IS FUNCTIONING PROPERLY.

Structure Unit:

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
985	Slopes & Slope Protection	2	Routine	10/09/2015	1 EA	1	0	0	N/A	N/A
			Routine	10/13/2014	1 EA	1	0	0	N/A	N/A

☐Requires Monitoring ☐Monitored

Notes: [2013-2015] THERE IS SOME SETTLEMENT AT THE SOUTH ABUTMENT AND AT THE NE CORNER.
[2009-2015] THERE IS SOME SETTLEMENT AT THE NORTH ABUTMENT AND AT THE SE CORNER.

ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
986	Curb & Sidewalk	2	Routine	10/09/2015	1 EA	1	0	0	N/A	N/A
			Routine	10/13/2014	1 EA	1	0	0	N/A	N/A

☐Requires Monitoring ☐Monitored

Notes: [2014-2015] There is numerous moderate transverse cracks in the median.
[2009-2015] THERE IS A MAJOR SPALL ON MEDIAN CURB AT NW CORNER. THE REST OF THE CURB IS IN GOOD CONDITION.

General Notes: [2015] 2015 bridge safety inspection was completed by Brian Essler and Dan Bodelson on 10-9-2015.
[2014] 2014 bridge safety inspection was completed by Brian Essler and Dan Bodelson on 10-13-2014.
Inspection dated 10-02-2013 by Brian Essler and Dan Bodelson and was entered by MnDOT Bridge Office.
[2013] 2013 BRIDGE SAFETY INSPECTION WAS COMPLETED BY Brian Essler and Dan Bodelson on 10/02/2013.

58. Deck NBI: Minor cracking and leaching

36A. Brdg Railings NBI: Type P-4

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail Terminal NBI: design speed 30 MPH Tangent terminal and Quadguard impact attenuator

59. Superstructure NBI: Minor Spalls and rusting of beams

60. Substructure NBI: Minor cracking and spalls

61. Channel NBI: No waterway

62. Culvert NBI: Bridge

71. Waterway Adeq NBI: No waterway

72. Appr Roadway Alignment NBI: Minor speed reduction due to grade at bridge.

Inventory Notes:

Brian Essler
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

Pictures

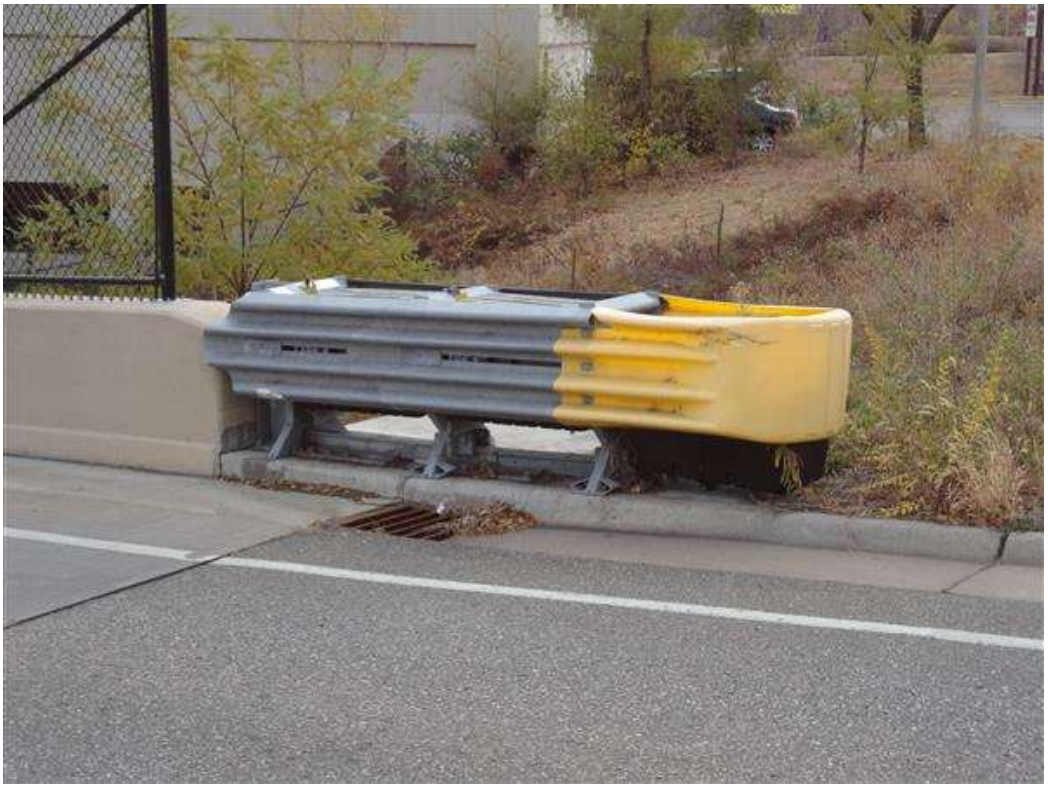


Photo 1 - NW Atten

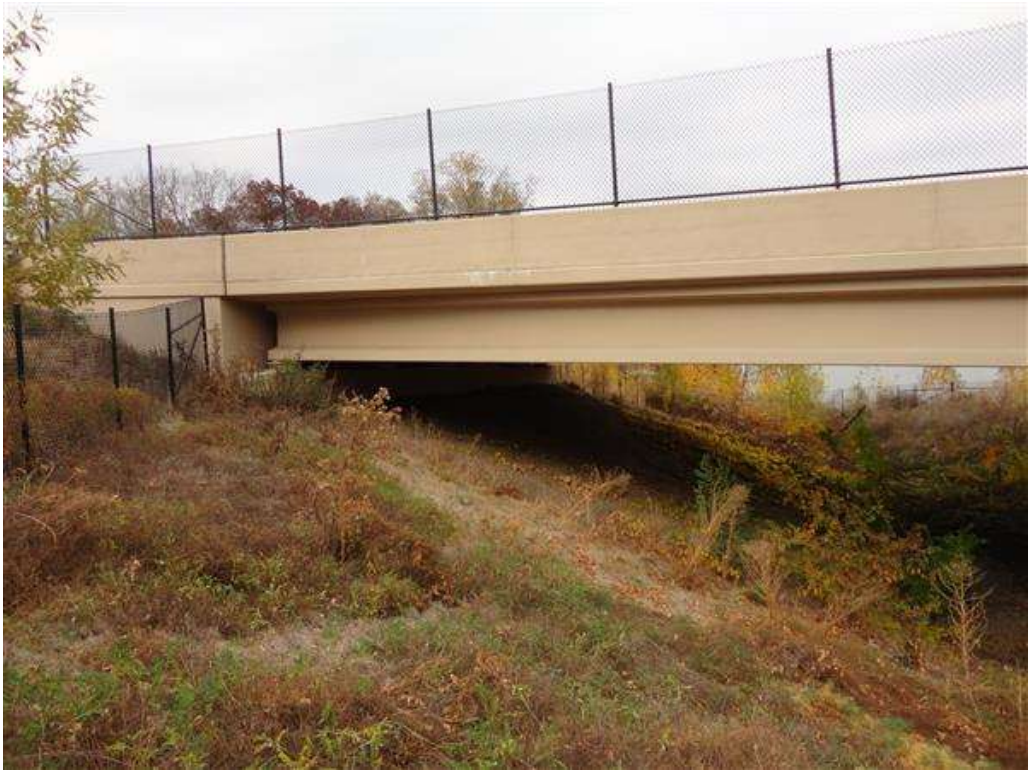


Photo 2 - NW Cor

Pictures

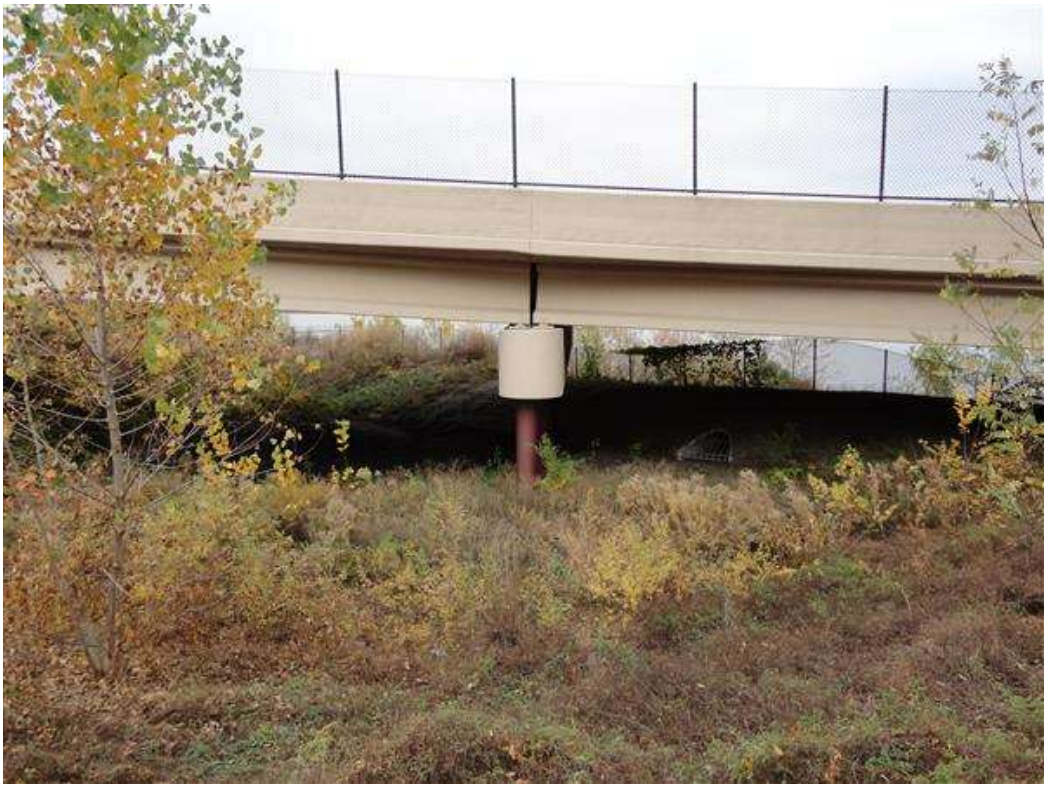


Photo 3 - Pier 1

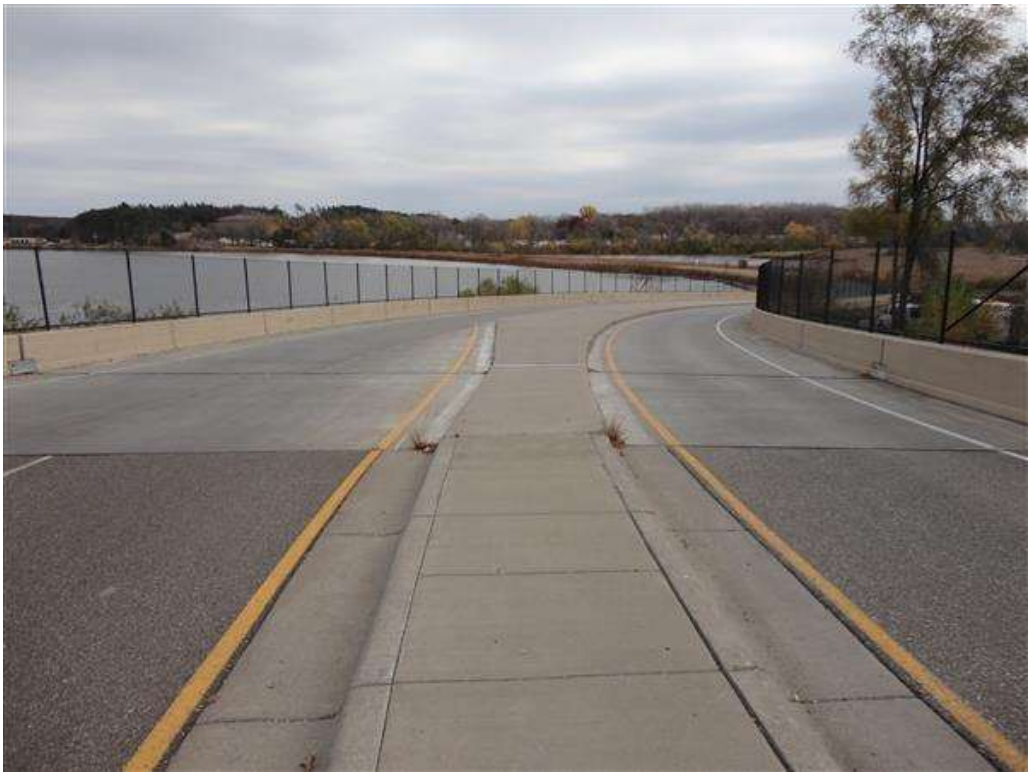


Photo 4 - West Appr

Pictures

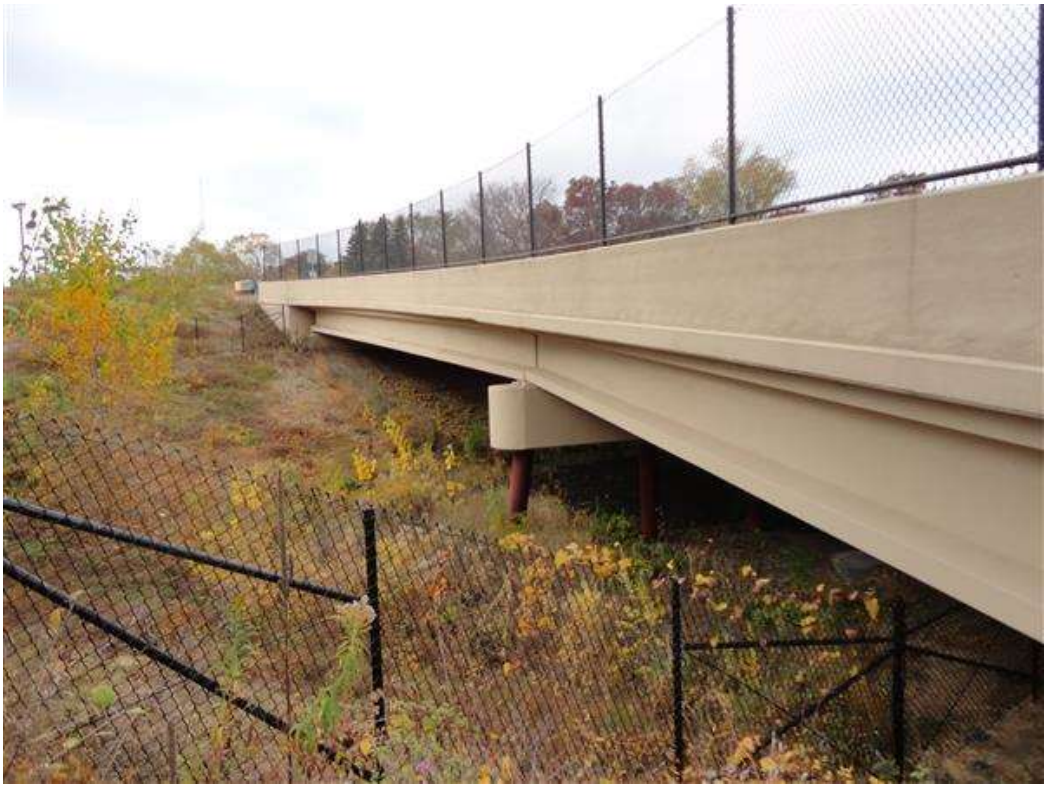


Photo 5 - West Side

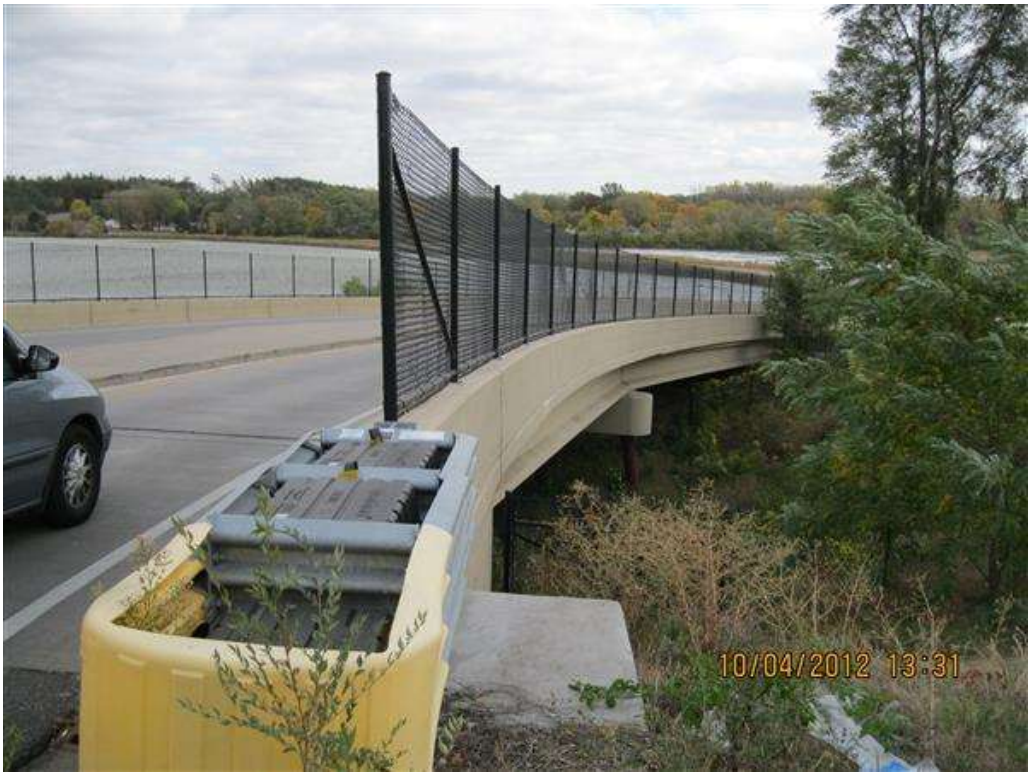


Photo 6 - attenuater

Pictures

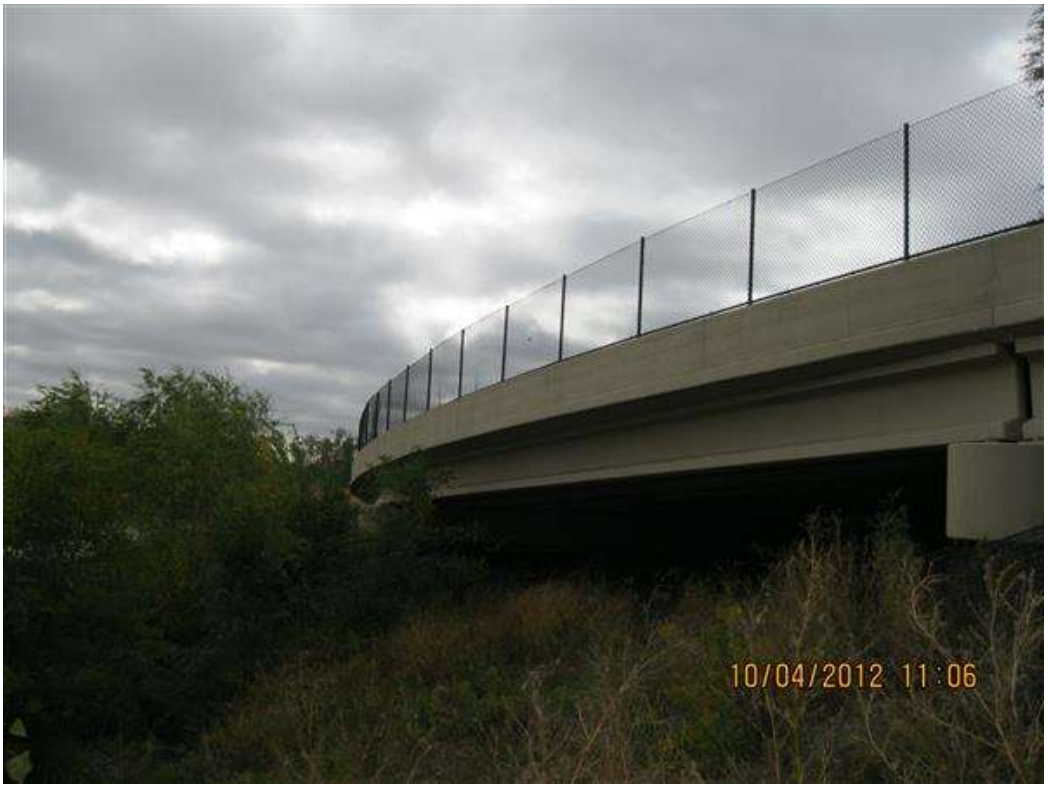


Photo 7 - east side

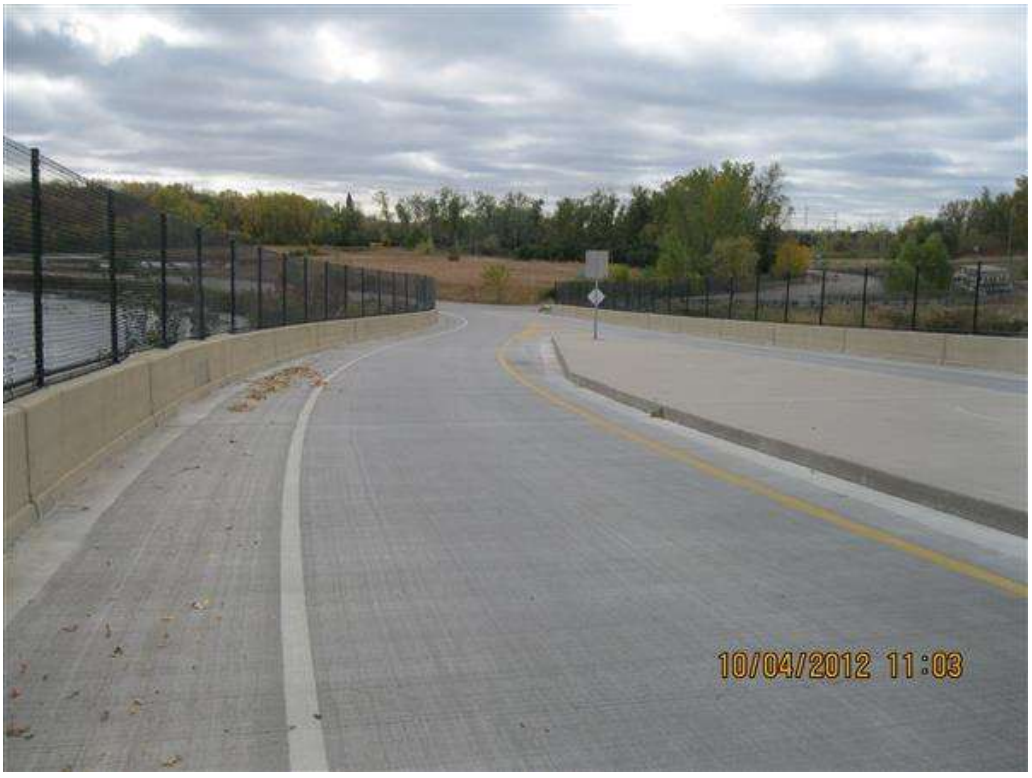


Photo 8 - EB1

Pictures

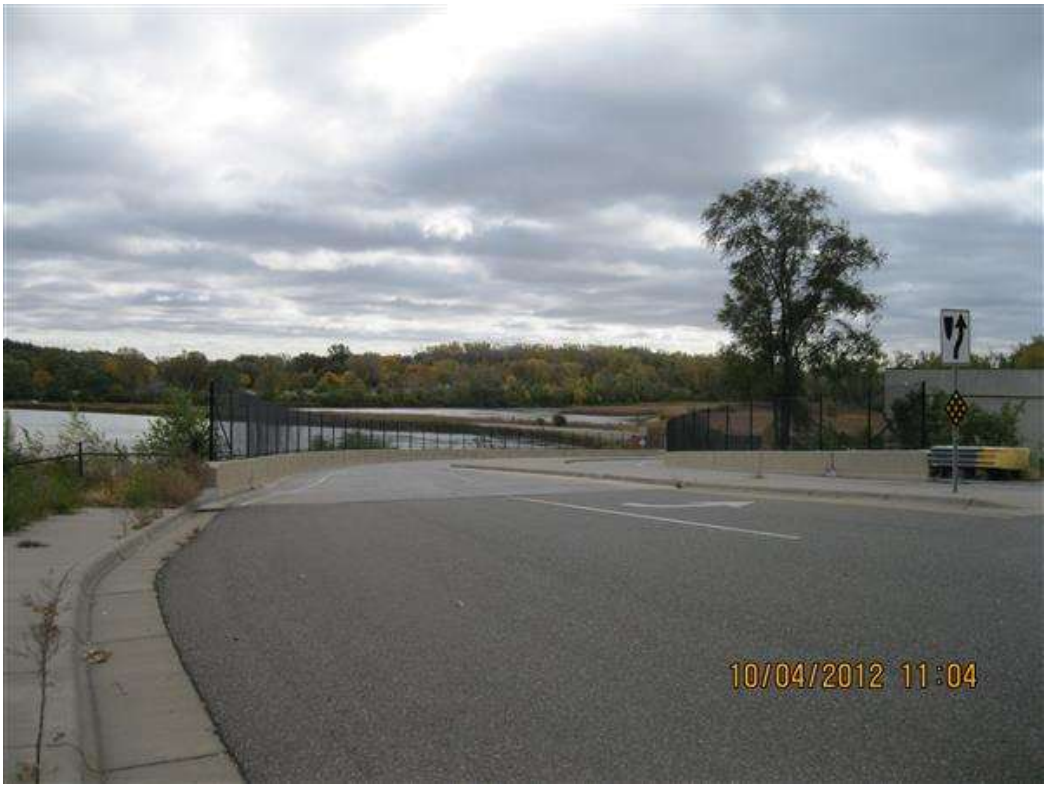


Photo 9 - EB2

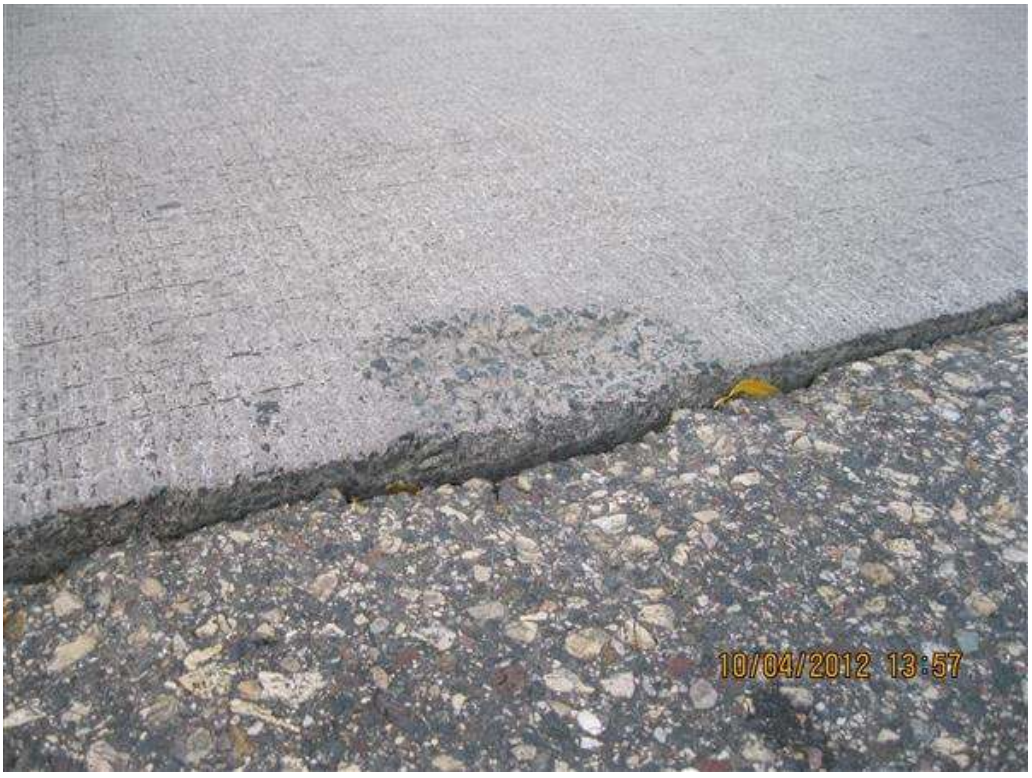


Photo 10 - SW Corner South Approach Slab

Pictures

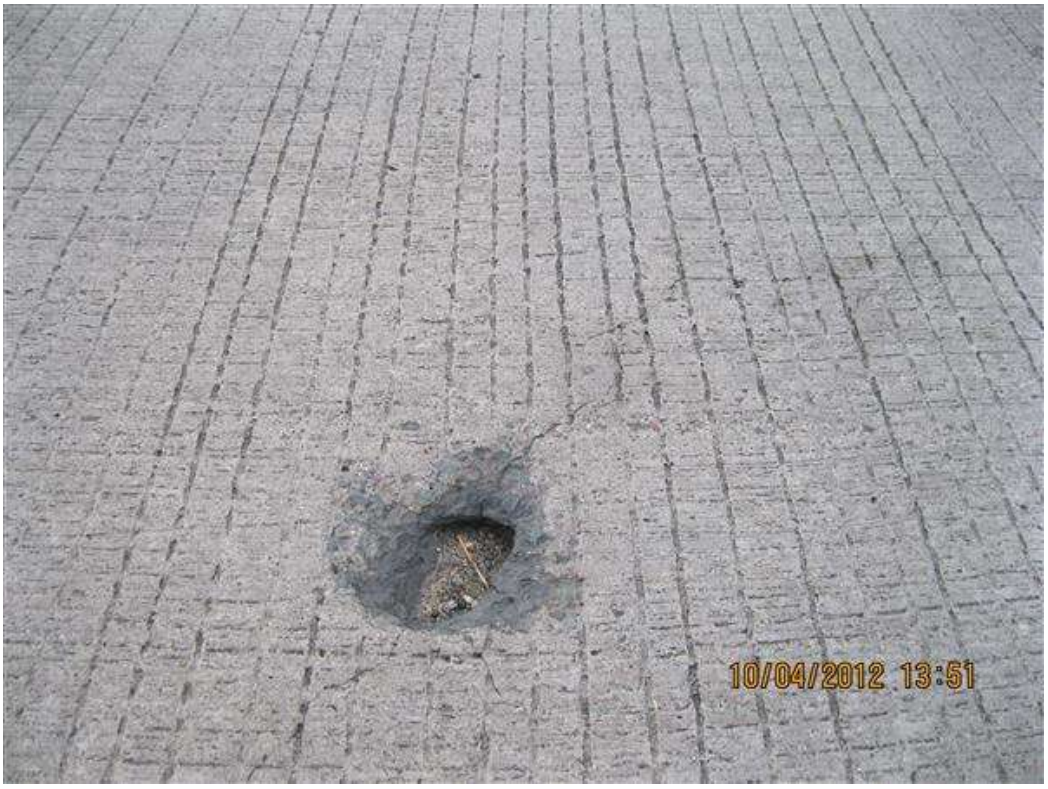


Photo 11 - Overlay South side Pier #1 WB

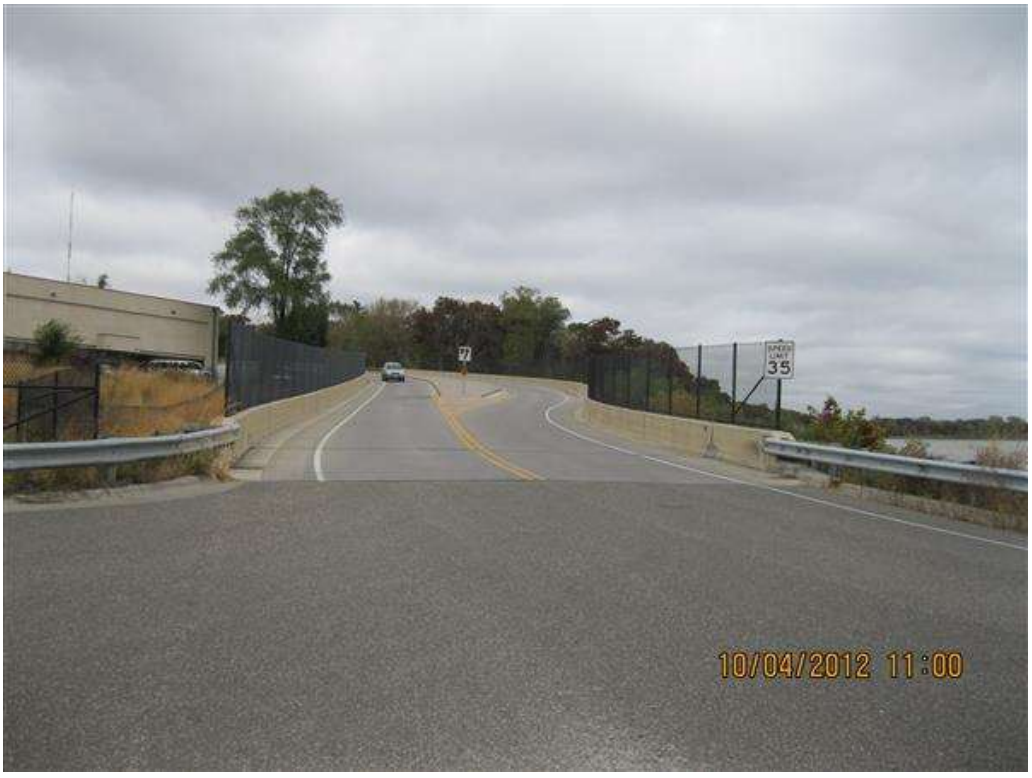


Photo 12 - WB1

Pictures

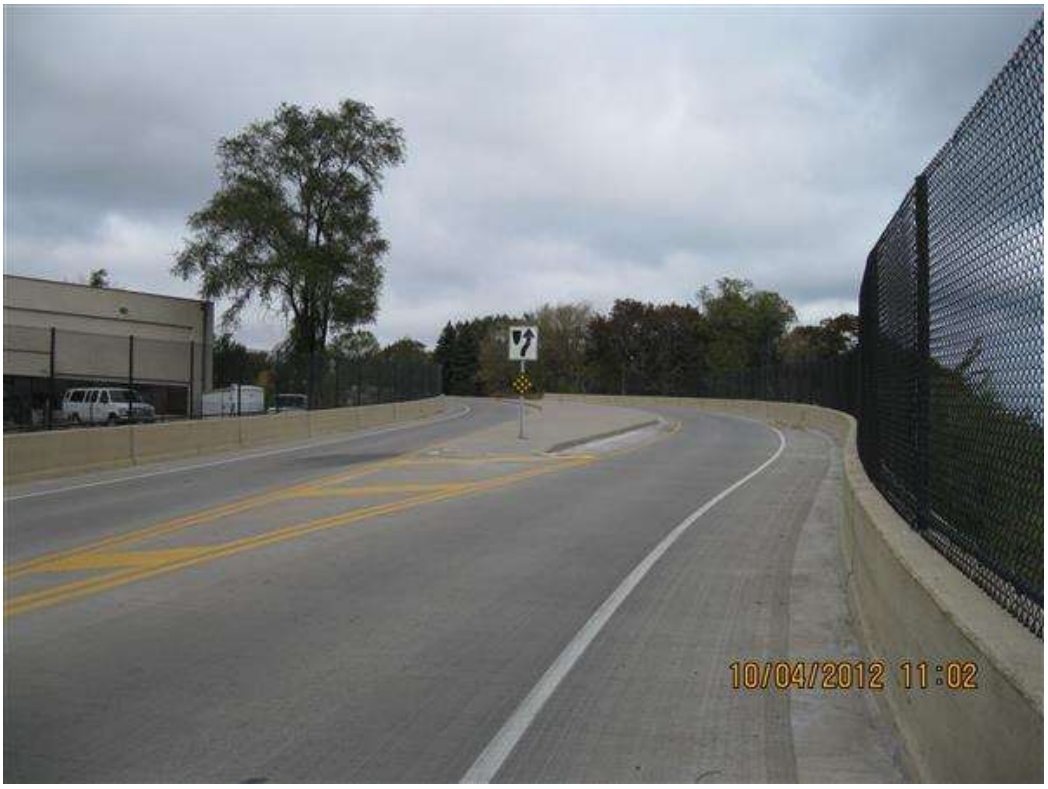


Photo 13 - WB2

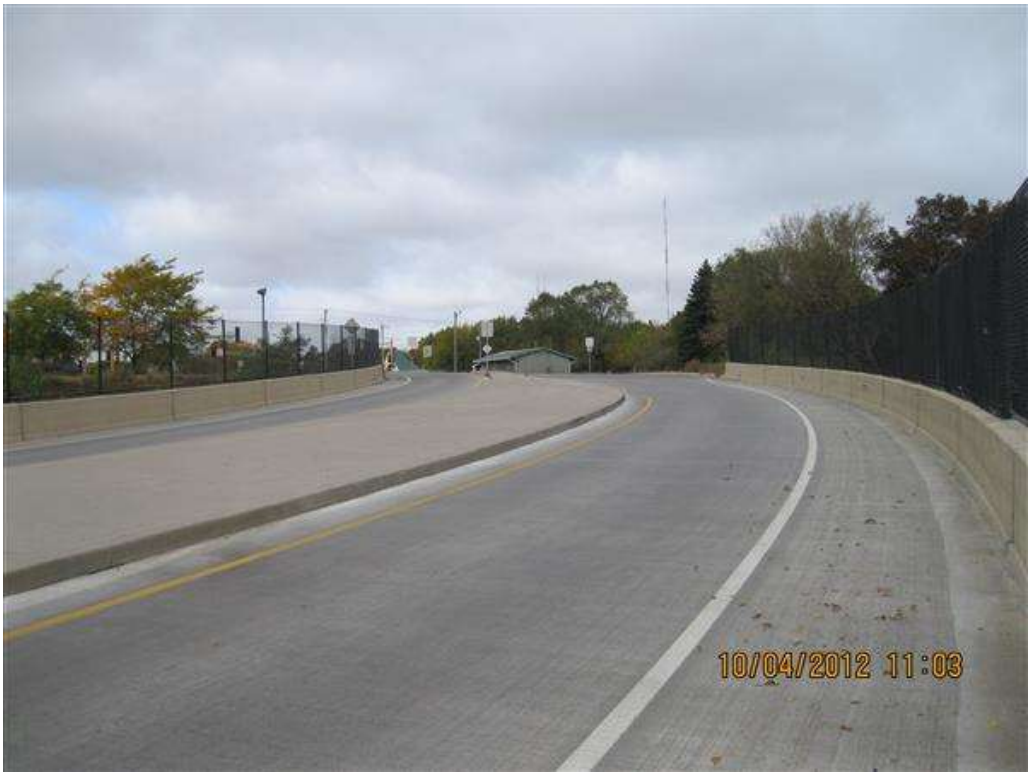


Photo 14 - WB3

Pictures

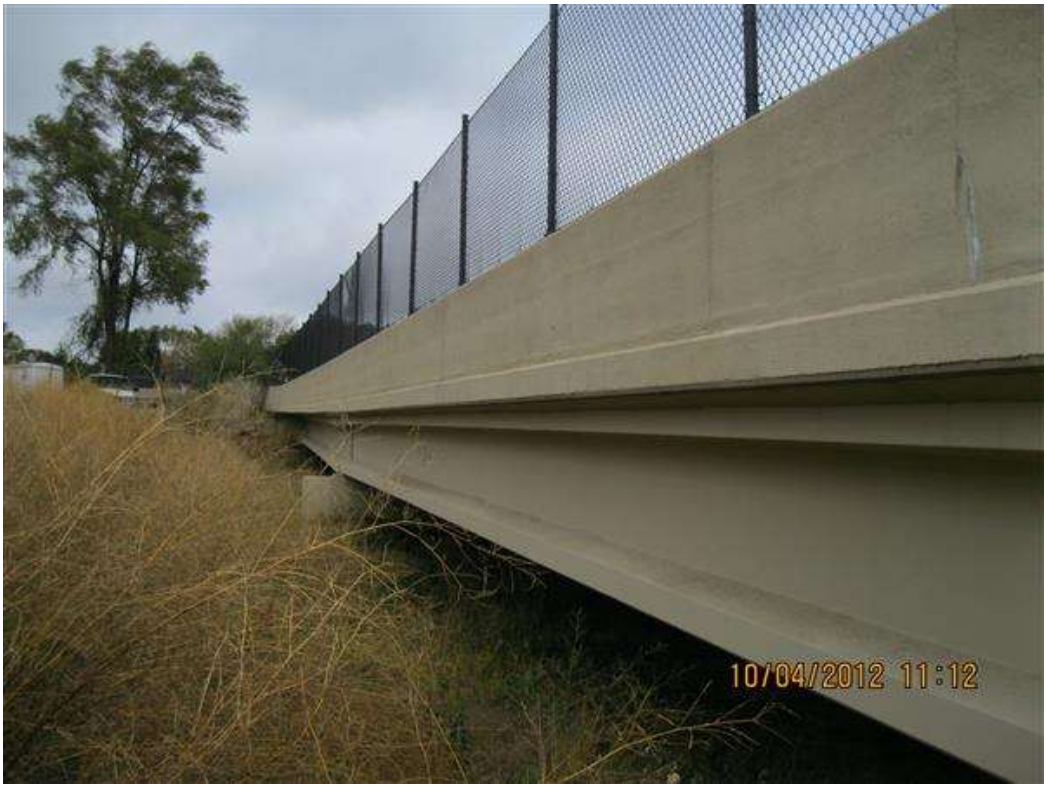


Photo 15 - West Bridge Rail

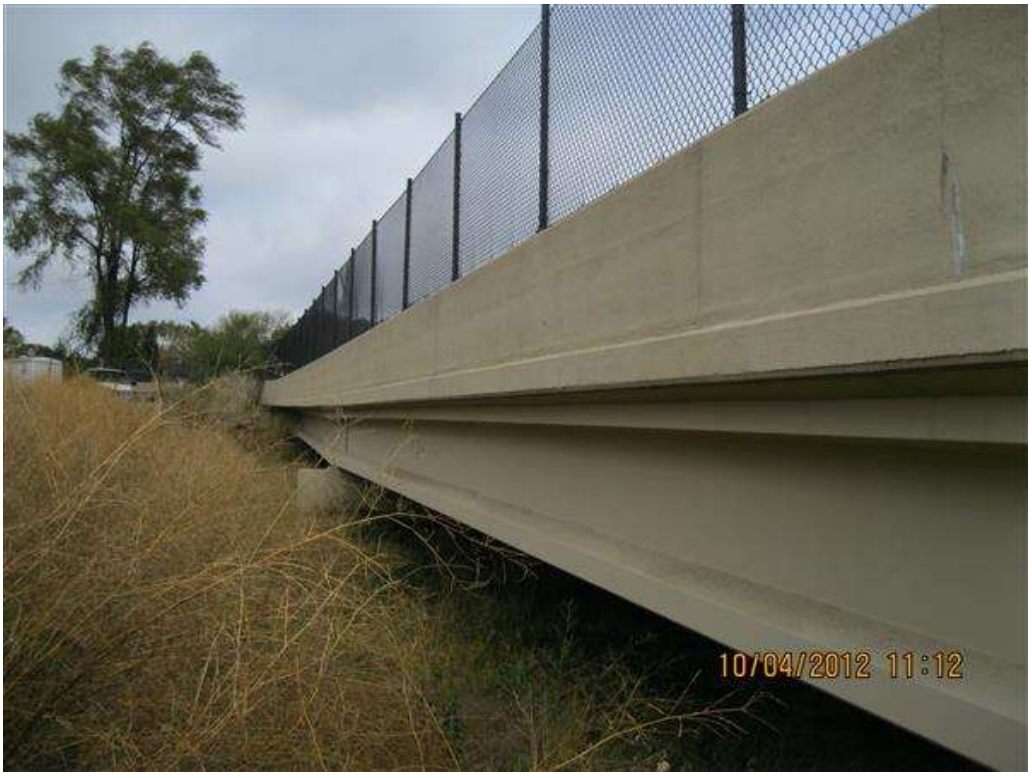


Photo 16 - West Bridge Rail

Pictures

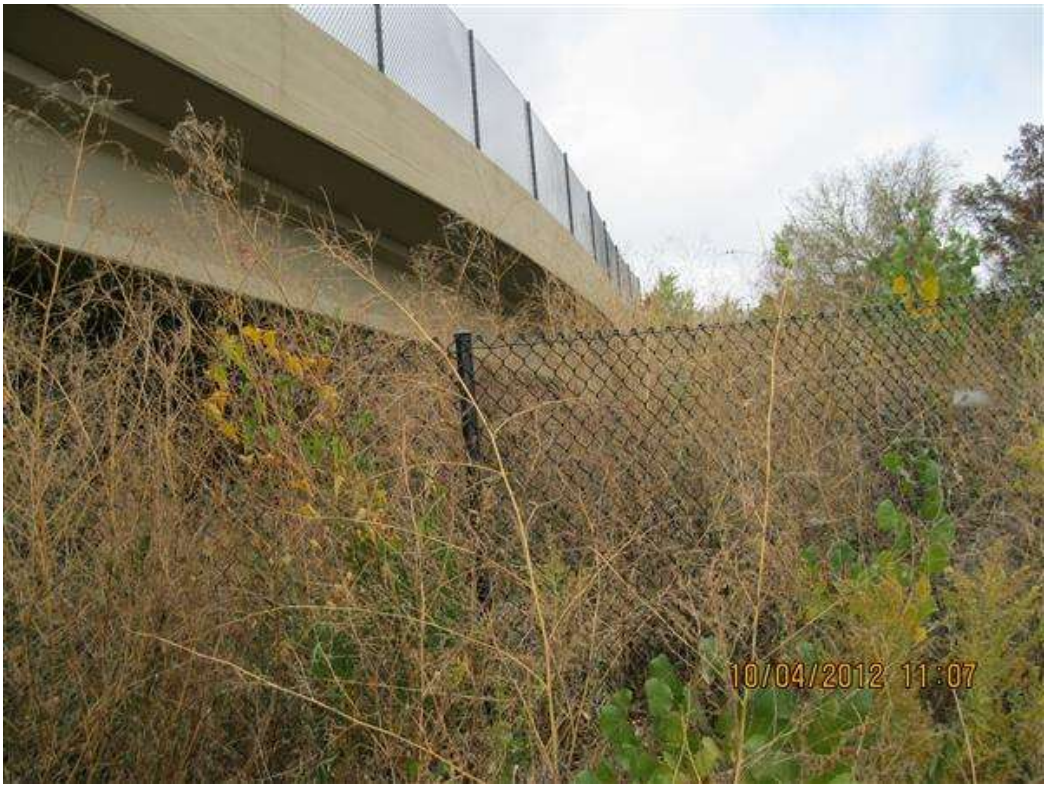


Photo 17 - west side

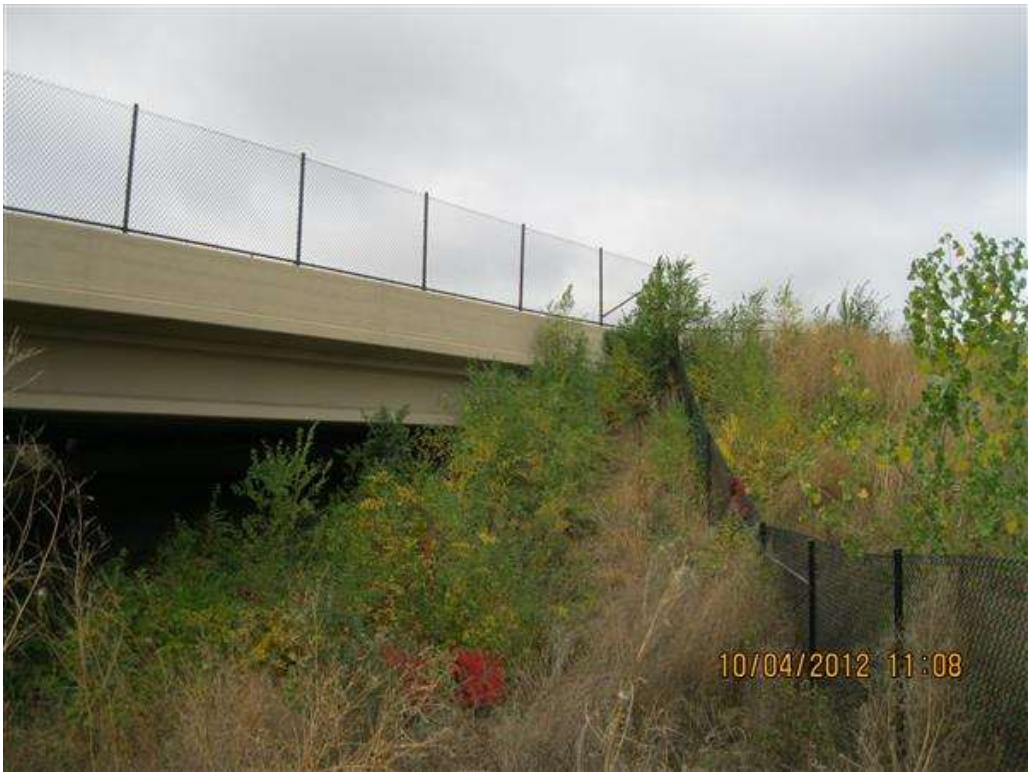


Photo 18 - west side1

Pictures

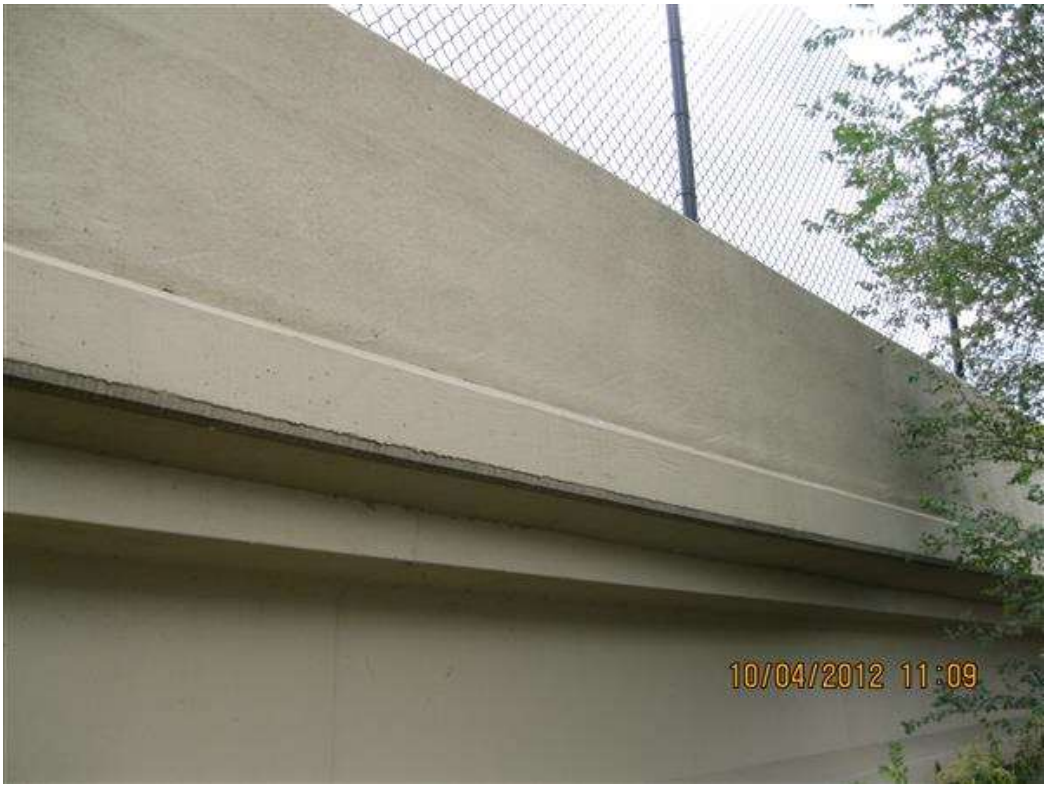


Photo 19 - west side3

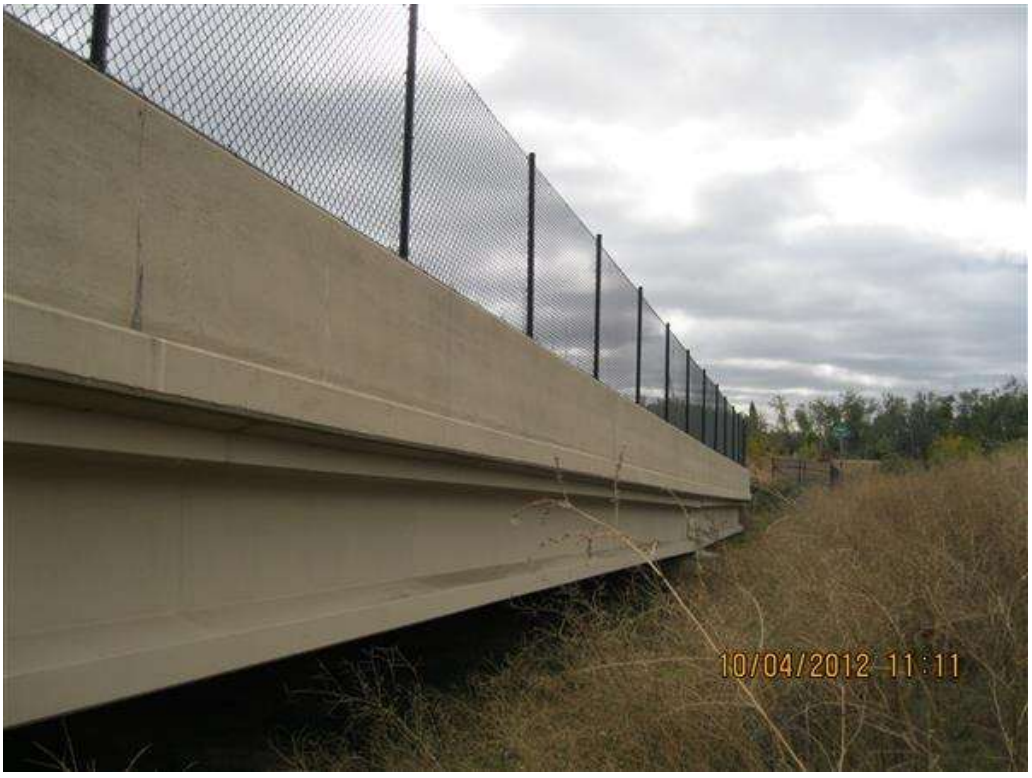


Photo 20 - west side4

Pictures

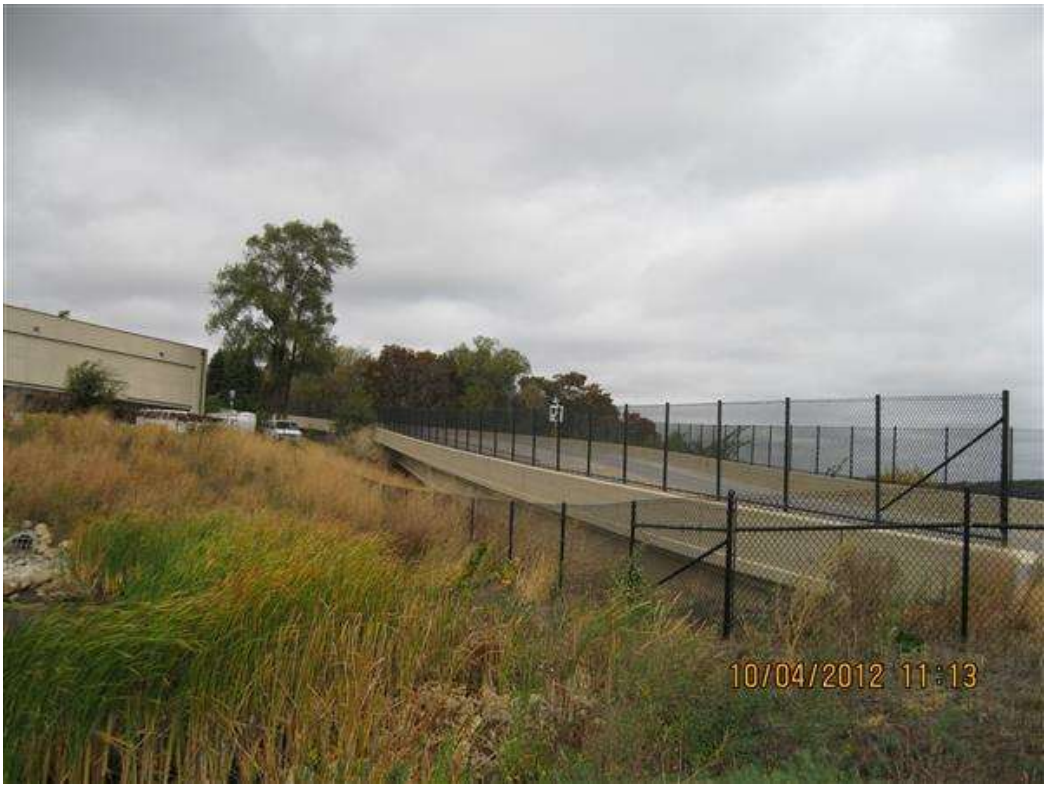


Photo 21 - west side6

1. 62623 NW Atten.JPG

2. 62623 NW Cor.JPG

3. 62623 Pier 1.JPG

4. 62623 West Appr.JPG

5. 62623 West Side.JPG

6. attenuater.JPG

7. east side.JPG

8. EB1.JPG

9. EB2.JPG

10. SW Corner South Approach Slab.JPG

11. Overlay South side Pier #1 WB.JPG

12. WB1.JPG

13. WB2.JPG

14. WB3.JPG

15. West Bridge Rail.JPG

16. West Bridge Rail.JPG

17. west side.JPG

18. west side1.JPG

19. west side3.JPG

20. west side4.JPG

21. west side6.JPG

Culvert

Bridge No.: 62623

Culvert

Item	*Description*	*Condition*	*Comments*
Culvert Overall:	**NBI Item 62**	N	Bridge

MnDOT Scour Code: A - NON WATERWAY

Waterway Inspection

Item No.	Yes, No, NA or Not Visible	Description
1.		Is there a significant build-up of debris?
2.		Is there erosion of the embankment around the headwalls?
3.		Is there any indication of cracking or settlement of the culvert barrel or headwalls?
4.		Is there shifting of the channel alignment or erosion of the stream banks? Also are there cracks in the soil of the banks parallel to the stream?
5.		Do scour measurements indicate that the streambed is below the bottom of the cutoff walls at the ends of the culvert?
6.		Is there evidence of distress in the roadway or approaches such as cracks in the pavement and sags in the guardrail or roadway? Also, is there cracking, erosion, or failure of the side slopes at or adjacent to the culvert?
7.		Is there an indication of "piping" of water along the outside of the culvert such as cavities adjacent to the barrel?
8.		Is the culvert without a bottom and scour measurements indicate that the streambed is below the plan streambed elevations?
9.		Has the riprap or other scour protection been damaged or otherwise made ineffective?
10.		If the culvert was designed to be buried (fill inside the culvert), is the material still in the barrel?

Notes:

- Streambed sounding data is to be documented.

- Soundings of the streambed should be done at each end of the culvert. If Items #5 or #8 are "Yes", then a streambed profile of the scoured area should be done.

- If "Yes" is the answer to any items on the checklist, notify the Program Administrator for further instructions.

Comments:

Completed On _____ By _____

Channel

Bridge No.: 62623

Channel

Item	*Description*	*Condition*	*Comments*
Channel Overall:	**NBI Item 61**	N	No waterway

Bank Protection/Revetment

Item	*Description*	*Condition*	*Comments*
Upstream Bank Protection:			
Downstream Bank Protection:			
Bridge Revetment:			

MnDOT Scour Code: A - NON WATERWAY

Underwater Inspection

Underwater Inspection By Divers:

No. of Piers To Be Inspected:

Waterway Characteristics

Reference Point:		**High Water Elev.:**		**Current Water Elev.:**	
Pile Tip Elev.:		**Low Water Elev.:**		**Current Streambed Elev.:**	
		Scour Hole Elev.:		**Current Scour Hole Elev.:**	

Waterway Inspection: (Not applicable for culverts)

Item No.	Yes, No, NA or Not Visible	Description
1.		Is there a significant build-up of debris?
2.		Is there a change in the horizontal alignment of the handrail or structure members such as beams?
3.		Is there any indication of vertical movement of the superstructure?
4.		Is there shifting of the channel alignment or erosion of the stream banks? Also are there cracks in the soil of the banks parallel to the stream?
5.		Is there a significant change in the alignment of hte exterior bearings?
6.		Are there cracks or other signs of distress in the approach pavement?
7.		Is the water currently on the superstructure?
8.		Are the slopes unstable?
9.		Do scour measurements indicate: (place a check by all that apply.)

- ☐ A. that the streamed is two or more feet below the bottom of pier footings which are supported on piles?
- ☐ B. scour below the bottom of spread footings?
- ☐ C. scour below the bottom of high abutment footings?
- ☐ D. that the streambed has scoured five feet or more below the original streambed elevation at pier bents?

10. _____ Have the scour countermeasures been damaged or otherwise made ineffective?

Notes:

- Streambed sounding data is to be documented.

- Per MnDOT Bridge Inspection Manual Section 2.2.5, at bridges that require x-sections, take channel x-sections, along the upstream and/or downstream face of the bridge.

- If "Yes" is the answer to any items on the checklist, notify the Program Administrator for further instructions.

Comments:

Completed On _____ By _____

Scour POA

Bridge No.: 62623

Scour POA

1. Is POA on File? _____
2. Date of most recent POA: _____
3. Here is a link to MnDOT's Bridge Scour website for other resources:
   - *http://www.dot.state.mn.us/bridge/hydraulics/scour.html*
   - The Scour POA should be kept in the bridge file and/or uploaded to SIMS using the "Inspection Files" tab.

Implementation

Scour POAs are required to be implemented by FHWA.

1. Is this POA being implemented? _____

Channel Section

Upstream

Custom Label	Location	Elevation

Downstream

Custom Label	Location	Elevation

Distance Measured From:

Elev. of Ref. Pt:

Depth to Water Surface:

WS Elev:

Vertical Datum:

Comments:

Distance Measured From:

Elev. of Ref. Pt:

Depth to Water Surface:

WS Elev:

Vertical Datum:

Maintenance

Element	Source Code	Work Code	Description	P/R	Priority	Work Order #	Year Due	Last Viewed	Entered	Start Date	Completed

BRIDGE STRUCTURAL ASSESSMENT REPORT

PURPOSE:

This report is a structural assessment of the structure and its ability to carry loads based on conditions identified in the attached bridge inspection report. The assessment is only a cursory review intended to provide guidance as to the relative hazards for structural conditions and deficiencies identified. This report is mandatory for all fracture critical bridges and is completed by the MnDOT Bridge Office upon receipt of the 7 Day FC Report; however, it is an OPTIONAL tool for agencies to utilize at their discretion for all other inspection types.

BRIDGE NO.: 62623

BRIDGE OWNER: County Highway Agency

DATE INSPECTED: 10/09/2015

STRUCTURE TYPE: Prestressed Concrete Stringer/Multi-beam or Girder

FACILITY CARRIED: CSAH 16

FEATURES INTERSECTED: WEST VADNAIS SWAMP

TYPE OF INSPECTION:
- ☑ ROUTINE
- ☐ FRACTURE CRITICAL
- ☐ PINNED ASSEMBLY:
- ☐ SPECIAL:
- ☐ DAMAGE:
- ☐ OTHER:

Check all that apply:

Redundancy:
- ☐ Load Path
- ☐ Structural
- ☐ Internal

Connection Type:
- ☐ Riveted
- ☐ Bolted
- ☐ Welded
- ☐ Other:

1. Was a critical finding identified during this inspection or upon structural review? ☐ Yes ☐ No

   a) If selected "**Yes**" above, state briefly the finding(s):

2. If a critical finding was identified, what is the current status?
   - ☐ Pending
   - ☐ Resolved
   - ☐ N/A

   a) Briefly state actions taken:

3. Does the condition of any bridge component indicate impaired function? Examples of bridge components with impaired function include elements that are: frozen or immoveable, out-of-plumb or misaligned, distorted or structurally deformed, excessively deteriorated, cracked, broken, eroded or scoured. ☐ Yes ☐ No

a) If selected "**Yes**" above, state briefly the component(s) and condition(s):

4. Does the overall condition of the bridge, or any of its components mentioned in Question 3, suggest the need for detailed structural analysis and/or a revised load rating? ☐ Yes ☐ No

   a) If selected "**Yes**", state the reason for this recommendation and indicate a proposed timeframe in accordance with State of Minnesota Rule 8810.9500 (Subpart 2):

5. Based on the structural assessment of these findings, recommendations include:

   ☐ Repair/Maintenance ☐ Monitoring Plan
   ☐ Other ☐ Increased Inspection Frequency

   Explain recommended actions:

6. Other comments:

Bridge Office Reviewer