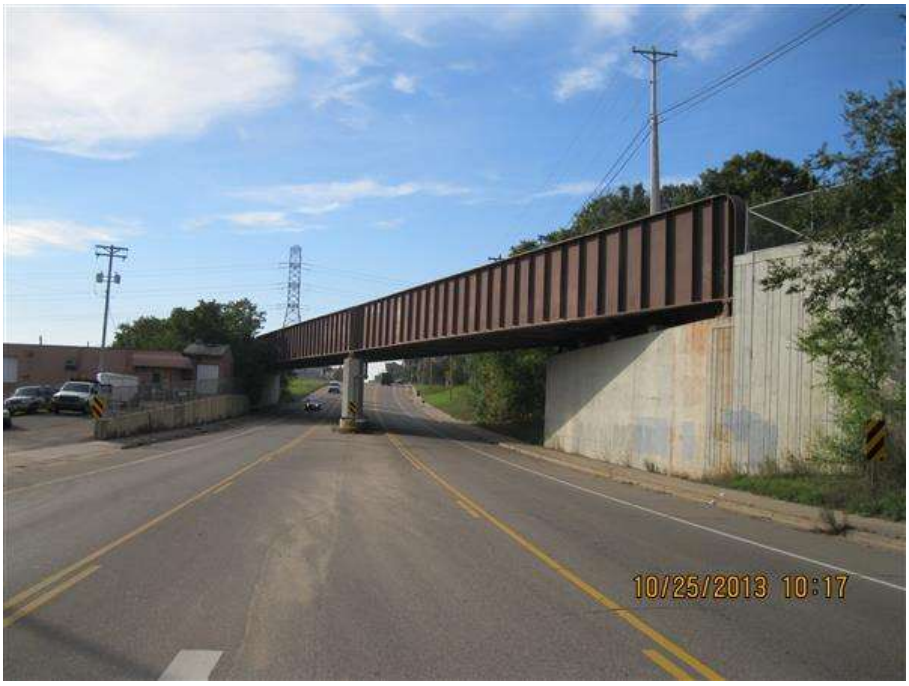
2016 ROUTINE
BRIDGE INSPECTION REPORT



BRIDGE # 62032
CP RAIL over CSAH 49(RICE ST)

DISTRICT: Metro **COUNTY:** Ramsey **CITY/TOWNSHIP:** Little Canada

STATE: Minnesota

Date of Inspection: 10/13/2016
Equipment Used:

Owner: County Highway Agency

Inspected By: Bodelson, Dan

Report Written By: Dan Bodelson
Report Reviewed By: Nicklaus Fischer
Final Report Date: 11/28/2016

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Minnesota Structure Inventory Report

Bridge ID: 62032 CP RAIL **over** CSAH 49(RICE ST) **Date:** 11/28/2016

GENERAL

Agency Br. No.
District Metro
Maint. Area **Crew**
County 062 - Ramsey
City Little Canada
Township
Desc. Loc. 0.5 MI S OF JCT TH 694
Sect., Twp., Range 31 - 030N - 22W
Latitude **Deg** 45 **Min** 2 **Sec** 17.80
Longitude **Deg** 93 **Min** 6 **Sec** 22.30
Custodian 02 - County Highway Agency
Owner 02 - County Highway Agency
BMU Agreement
Year Built 1986
MN Year Reconstructed
FHWA Year Reconstructed
MN Temporary Status
Bridge Plan Location 1 - CENTRAL
Date Opened to Traffic
On-Off System 0 - OFF
Legislative District 54B
ABC Suitable

STRUCTURE

Service On 2 - Railroad
Service Under 1 - Highway, w/ or w/out ped.
Main Span Type
3 - Steel 05 - Thru Girder
Main Span Detail
Appr. Span Type
Appr. Span Detail
Skew 74 L
Culvert Type
Barrel Length ft.
Cantilever ID

NUMBER OF SPANS

MAIN: 2 **APPR:** 0 **TOTAL:** 2
Main Span Length 142.4 ft.
Structure Length 315.0 ft.
Deck Width (Out-to-Out) 22.0 ft.
Deck Material 5 - Steel Plate (inclues orthotrc
Wear Surf Type N - Not Applicable (applies onl
Wear Surf Install Year
Wear Course/Fill Depth 0.00 ft.
Deck Membrane 0 - None
Deck Rebars N - Not Applicable (no deck)
Deck Rebars Install Year
Structure Area (Out-to-Out) 6930 sq. ft.
Roadway Area (Curb-to-Curb) sq. ft.
Sidewalk Width **Lt** 0.00 ft. **Rt** 0.00 ft.
Curb Height **Lt** 0.00 ft. **Rt** 0.00 ft.
Rail Type **Lt** NN **Rt** NN

ROADWAY

Bridge Match ID (TIS)
Roadway O/U Key none
Route Sys **Number**
Roadway Name or Description
Level of Service
Roadway Type
Control Section (TH Only)
Reference Point
Detour Length mi
Lanes **On** **Under** 2
ADT **Year**
HCADT 0 **ADTT** 0 **%**
Functional Class

RDWY DIMENSIONS

If Divided	NB-EB	SB-WB
Roadway Width	ft.	ft.
Vertical Clearance	ft.	ft.
Max. Vert. Clear.	ft.	ft.
Horizontal Clear.	ft.	ft.
Lateral Clearance	ft.	ft.
Appr. Surface Width	ft.	
Bridge Roadway Width	ft.	
Median Width On Bridge	ft.	

MISC. BRIDGE DATA

Structure Flared 0 - No flare
Parallel Structure N - No parallel structure
Field Conn. ID
Abutment Foundation 1 - CONC
(Material/Type) 0 - UNKNOWN
Pier Foundation 1 - CONC
(Material/Type) 0 - UNKNOWN
Historic Status 5 - Not eligible

PAINT

Year Painted 1986
Unsound Paint % 30
Painted Area 50720 sq. ft.
Primer Type D - Organic Zinc - 3309
Finish Type H - Vinyl

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 -2
Routine Inspection Date 10/13/2016
Routine Inspection Frequency 12
Inspector Name CO Bridge
Status A - Open

NBI CONDITION RATINGS

Deck 7 - Good Condition
Unsound Deck %
Superstructure 7 - Good Condition
Substructure 6 - Satisfactory Condition
Channel N - Not Applicable
Culvert N - Not Applicable

NBI APPRAISAL RATINGS

Structure Evaluation N
Deck Geometry N
Underclearances 6
Water Adequacy N - Not Applicable
Approach Alignment 7 - Better than present minir

SAFETY FEATURES

Bridge Railing N - NOT REQUIRED
GR Transition N - NOT REQUIRED
Appr. Guardrail N - NOT REQUIRED
GR Termini N - NOT REQUIRED

IN DEPTH INSP.

	Y/N	Freq	Date
Frac. Critical	N		
Underwater	N		
Pinned Asbly.	N		
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 8 - RAILROAD
Operating Rating 5 - NRAP 80.0
Inventory Rating 5 - NRAP 80.0
Posting VEH: **SEMI:** **DBL:**
Rating Date

Minnesota Permit Codes

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

Minnesota Structure Inventory Report

Bridge ID: 62032 **CP RAIL over CSAH 49(RICE ST)** Date: 10/12/2016

+GENERAL+

Agency Br. No.	**Crew**
District	05 **Maint. Area**
County	062 - Ramsey
City	Little Canada
Township	
Desc. Loc.	0.5 MI S OF JCT TH 694
Sect., Twp., Range	31 - 030N - 22W
Latitude	45 ° 2 ' 17.80 "
Longitude	93 ° 6 ' 22.30 "
Custodian	02 - County Highway Agency
Owner	02 - County Highway Agency
BMU Agreement	
Year Built	1986
MN Year Reconstructed	
FHWA Year Reconstructed	
MN Temporary Status	
Bridge Plan Location	1 - CENTRAL
Date Opened to Traffic	
On - Off System	0 - OFF
Legislative District	54B
Potential ABC	2 - N/A

+STRUCTURE+

Service On	2 - Railroad
Service Under	1 - Highway, w/ or w/out ped.
Main Span Type	3 - Steel
Main Span Design	05 - Thru Girder
Main Span Detail	
Appr. Span Type	
Appr. Span Design	
Appr. Span Detail	
Skew	74 LEFT
Culvert Type	
Barrel Length	
Cantilever ID	

Number of Spans

MAIN: 2 **APPR:** 0 **TOTAL:**

Main Span Length	142.4 **ft.**
Structure Length	315.0 **ft.**
Deck Width (Out-to-Out)	22.0 **ft.**
Deck Material	5 - Steel Plate (inclues
Wear Surf Type	N - Not Applicable (applies
Wear Surf Install Year	
Wear Course/Fill Depth	0.00 **ft.**
Deck Membrane	0 - None
Deck Rebars	N - Not Applicable (no deck)
Deck Rebars Install Year	
Structure Area (Out-to-Out)	6930 **sq. ft.**
Roadway Area (Curb-to-Curb)	**sq. ft.**
Sidewalk Width	**50A. Lt** 0.00 **ft.** **50B. Rt** 0.00 **ft.**
Curb Height	**Lt** 0.00 **ft.** **Rt** 0.00 **ft.**
Rail Type	**Lt** NN **Rt** NN

+ROADWAY+

Bridge Match ID (TIS)	
Roadway O/U Key	
Route Sys	**Number**
Roadway Name or Description	
Level of Service	
Roadway Type	
Control Section (TH Only)	
Reference Point	
Detour Length	**mi.**
Lanes	**ON** **UNDER** 2
	ADT **YEAR**
HCADT	**ADTT** **%**
Functional Class	

+RDWY DIMENSIONS+

If Divided	**NB-EB**	**SB-WB**
Roadway Width	**ft.**	**ft.**
Vertical Clearance	**ft.**	**ft.**
Max. Vert. Clear.	**ft.**	**ft.**
Horizontal Clear.	**ft.**	**ft.**
Lateral Clearance	**ft.**	**ft.**
Appr. Surface Width	**ft.**	
Bridge Roadway Width	**ft.**	
Median Width On Bridge	**ft.**	

+MISC. BRIDGE DATA+

Structure Flared	0 - No flare
Parallel Structure	N - No parallel structure
Field Conn. ID	
Abutment	1 - CONC
Foundation (Material/Type)	0 - UNKNOWN
Pier Foundation (Material/Type)	1 - CONC 0 - UNKNOWN
Historic Status	5 - Not eligible

+PAINT+

Year Painted	1986
Unsound Paint %	30
Painted Area	50720 **sq. ft.**
Primer Type	D - Organic Zinc - 3309
Finish Type	H - Vinyl

+BRIDGE SIGNS+

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

+INSPECTION+

Userkey	102
Structurally Deficient	N
Functionally Obsolete	N
Sufficiency Rating	-2
Routine Inspection Date	10/13/2016
Routine Inspection Frequency	12
Inspector Name	Bodelson, Dan
Status	A - Open

+NBI CONDITION RATINGS+

Deck	7	**Unsound Deck %**
Superstructure	7	
Substructure	6	
Channel	N	
Culvert	N	

+NBI APPRAISAL RATINGS+

Structure Evaluation	N
Deck Geometry	N
Underclearances	6
Waterway Adequacy	N
Approach Alignment	7

+SAFETY FEATURES+

Bridge Railing	N - NOT REQUIRED
GR Transition	N - NOT REQUIRED
Appr. Guardrail	N - NOT REQUIRED
GR Termini	N - NOT REQUIRED

+IN DEPTH INSP.+

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

+WATERWAY+

Drainage Area (sq. mi.)	
Waterway Opening (sf.)	
Navigation Control	N - Not applicable, no
Pier Protection	_
Nav. Clr. (ft.)	**Vert.** 0.0 **Horiz.** 0.0
Nav. Vert. Lift Bridge Clear. (ft.)	
MN Scour Code	A - NON **Year**

+CAPACITY RATINGS+

Design Load	8 - RAILROAD	
Operating Rating	7 - RAILROAD	80.0
Inventory Rating	7 - RAILROAD	80.0
Posting	**VEH:**	**SEMI:** **DBL:**
Rating Date		

Overweight Permit Codes

A N - N/A **B** N - N/A **C** N - N/A

BRIDGE 62032 CP RAIL OVER CSAH 49(RICE ST) **ROUTINE INSP. DATE: 10/13/2016**

County: Ramsey
City: Little Canada
Township:
Section: 31 Township: 030N Range: 22W
Span Type: 3 - Steel 3 - Girder and Floorbeam
List: System
NBI Deck: 7 Super: 7 Sub: 6 Chan: N Culv: N

Location: 0.5 MI S OF JCT TH 694
Route: Ref. Pt.:
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:
Open, Posted, Closed: A - Open
MN Scour Code: A - NON WATERWAY

Length: 315.0 ft.
Deck Width: 22.0 ft.
Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Paint Area/ Pct. Unsnd: 50720 sq. ft. / 30%
Culvert: N/A
Postings:

Appraisal Ratings - Approach: 7 Waterway: N
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 N

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
107	Painted Steel Girder or Beam	2	Routine	10/13/2016	630 LF	410	220	0	0	0
			Routine	10/14/2015	630 LF	410	220	0	0	0

Notes: [1999-2015] Minor chalking and paint failure present on both sides.
[2012-2015] The north side contains 35% peeling of paint with rusting near top of bottom flange.
[2012-2015] There is some flecking of paint on the south side.
There is graffiti @ top inside girders 2007-2011.
Two 130" deep welded steel "Through Girders" serve as railing.

152	Painted Steel Floorbeam	2	Routine	10/13/2016	2402 LF	1681	721	0	0	0
			Routine	10/14/2015	2402 LF	1681	721	0	0	0

Notes: [2012-2015] Approximately 30% of floor beams contains minor rusting.
24" deep rolled steel floorbeams (30" spacing) - the skewed end floorbeams have independent bearings.

210	Reinforced Concrete Pier Wall	2	Routine	10/13/2016	89 LF	0	89	0	0	N/A
			Routine	10/14/2015	89 LF	0	89	0	0	N/A

Notes: [2014-2015] 9 - minor vertical cracks on east side
2012-2015] Reinforced Concrete Pier Wall contains numerous moderate spalls on both sides.
[2009-2015] The west side has 5 vertical cracks 18' each- two are near the construction joint.
[2011-2015] There is some scraping on the east side from County plows .
[2013] The east side has 6 minor horizontal cracks 80' each
[2009-2013] The east side has 8 vertical cracks 18' each- two are near the construction joint.
Utility line on west side of pier wall.

215	Reinforced Concrete Abutment	2	Routine	10/13/2016	180 LF	0	180	0	0	N/A
			Routine	10/14/2015	180 LF	0	180	0	0	N/A

Notes: [2015] moderate delamination of construction joints on both sides.
[2014-2015] East abutment has numerous minor cracks on north end, also some paint failure on SE corner
[2013-2015] East abutment has 50' minor horizontal cracks on south 1/2, 5' - 6' up from walk
[2013-2015] East abutment has 20' moderate horizontal cracks on south end, 2' - 3' up from walk
[2012-2015] East abutment has 8 X 15' = 120 LF of moderate vertical cracks with efflorescence.
[2014-2015] West abutment has 1' diagnal minor crack near parapet on south end
[2014-2015] 4" spall on west abutment 30' from north end
[2014-2015] scrapes on west abutment from snow plow
[2012-2015] West abutment has >200 LF of random moderate size cracks.
[2010-2015] West abutment has scrapes on west abutment from city plows.
[2011-2015] Moderate size spalling throughout. The north 10' of the West abutment has corrosion present .
[2012-2013] East abutment near SE corner has minor to moderate horizontal & vertical cracking with efflorescence.
[2012-2013] Both abutments contain moderate horizontal cracks & spalls. Minor deterioration of construction joints both sides.

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
311	Expansion Bearing	2	Routine	10/13/2016	20 EA	0	20	0	N/A	N/A
			Routine	10/14/2015	20 EA	0	20	0	N/A	N/A

Notes: [2012-2015] Moderate deterioration is present.
[2002-2015] Vertical & horizontal alignment are within limits.
Abutment bearings (and all floorbeam bearings) are expansion.

313	Fixed Bearing	2	Routine	10/13/2016	4 EA	0	4	0	N/A	N/A
			Routine	10/14/2015	4 EA	0	4	0	N/A	N/A

Notes: [2013-2015] Evidence of moderate corrosion is present.
Main girder pier bearings are fixed.

387	Reinforced Concrete Wingwall	2	Routine	10/13/2016	4 EA	0	4	0	0	N/A
			Routine	10/14/2015	4 EA	0	4	0	0	N/A

Notes: [2013-2015]SE wing has 21' minor cracks w/effluence on east & west ends.
[2002-2015] SE corner has minor vertical cracking w/deterioration of cork expansion joints.
[2015] SW corner has 20 LF minor horizontal cracking with efflorescence and occasional spalls.
[2013-2015] SW wing has 2' minor crack across top.
[2014-2015] NE wingwall has 2 1' minor vertical cracks
[2003-2015] NE corner has minor horizontal cracking w/spalls.
[2007-2015] NW WW has delamination @ NW corner near abutment. NW corner has numerous horizontal & vertical cracking w/spalling and deterioration of cork expansion joints.
Wingwalls have chain link fencing on top.
[2004-2014] SW corner has 20 LF minor horizontal cracking with occasional spalls.

401	Steel Ballast Plate Deck (Railroad Bridges)	1	Routine	10/13/2016	6932 SF	0	6932	0	0	0
			Routine	10/14/2015	6932 SF	0	6932	0	0	0

Notes: [2007-2015] Paint system has some failure- surface corrosion is present. Steel Ballast Plate Deck contains minor deck leakage.
[2013-2015] Bridge #62032 has a 7/8'' Steel ballast plate deck with rock ballast.
[2009-2015] Two ballast plate clips missing near east and west ends. Eight ballast plate clips are loose & hanging. Recommend removal of ballast plate clips.
Element #30 was deleted in 2007. Element #401 was created. There is one active railroad track.

964	Critical Finding Smart Flag	2	Routine	10/13/2016	1 EA	1	0	N/A	N/A	N/A
			Routine	10/14/2015	1 EA	1	0	N/A	N/A	N/A

Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.

981	Signing	2	Routine	10/13/2016	1 EA	0	1	0	0	0
			Routine	10/14/2015	1 EA	0	1	0	0	0

Notes: [2015] New 9 button at the south side pier wall.
[2004-2015] No horizontal clearance sign at SW corner.
[2009-2014] Crash attenuators are OK. 9 button at the south side pier wall is bent.
Crash attenuators have been repaired in 2007.
Damage to signs at crash attenuators due to traffic impact in 2004.

982	Approach Guardrail	2	Routine	10/13/2016	1 EA	0	1	0	N/A	N/A
			Routine	10/14/2015	1 EA	0	1	0	N/A	N/A

Notes: [2015] Crash attenuator are in good condition.
[2014] The south attenuator has been damaged
[2010-2013] Guardrail system is present and good condition.
Crash attenuator have been repaired in 2015.
Crash attenuators have been replaced at both sides of bridge in 2007. Replaced with Quadguard Type I & Type II.
Crash attenuators have been damaged at both ends of piers in 2004.

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
984	Deck & Approach Drainage	2	Routine	10/13/2016	1 EA	1	0	0	N/A	N/A
			Routine	10/14/2015	1 EA	1	0	0	N/A	N/A
	Notes: [2003-2015] Drainage system is functioning properly.									
985	Slopes & Slope Protection	2	Routine	10/13/2016	1 EA	1	0	0	N/A	N/A
			Routine	10/14/2015	1 EA	1	0	0	N/A	N/A
	Notes: [2015] Moderate erosion at NE wingwall. minor settlement at all others. [2003-2014] Slope protection is OK. Some minor settlement near wingwalls.									

General Notes: [2016] Bridge safety inspection was completed by Brian Essler & Dan Bodelson & Randy Bussiere on 10/13/2016.
[2015] Bridge safety inspection was completed by Brian Essler & Dan Bodelson on 10/14/2015.
[2014] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/17/2014.
[2014] New tracks & ballast were installed by Railroad this summer
[2013] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/25/2013.
[2012] Bridge safety inspection was completed by B. Wieman on 10/30/2012.
2011 Bridge safety inspection was completed by B. Wieman and D Bodelson on 10/28/2011. Lateral bracing is in place. No sign of collision damage 2011.
2010 Bridge safety inspection was completed by B. Wieman and D Bodelson 12/3/2010.
2009 Bridge safety inspection was completed by B. Wieman on 10/26/2009.
2007 Bridge safety inspection was completed by B. Wieman and B. Essler 8/21/2007.
2006 Bridge safety inspection was completed by Bret Wieman and Dan Bodelson 10/30/2006.
*BRIDGE #62032, YEAR 2000 - Turnback to Ramsey County. Ramsey County has ownership & maintenance responsibility.
*BRIDGE #62032, YEAR 1999 Railroad Bridge Constructed in 1986-87. Mn/DOT has ownership & maintenance responsibility.
[1999] Photos.

58. Deck NBI: Moderate paint failure and minor corrosion

36A. Brdg Railings NBI: Railroad bridge over roadway

36B. Transitions NBI: Railroad bridge over roadway

36C. Appr Guardrail NBI: Railroad bridge over roadway

36D. Appr Guardrail Terminal NBI: Railroad bridge over roadway

59. Superstructure NBI: Moderate paint failure and minor corrosion

60. Substructure NBI: Moderate cracks, delamination and spalls

61. Channel NBI: Not over water

62. Culvert NBI: Bridge

71. Waterway Adeq NBI: Not over water

72. Appr Roadway Alignment NBI: Minor sight distance problem with no speed reduction

Inventory Notes:

Dan Bodelson
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

MINNESOTA BRIDGE INSPECTION REPORT

11/28/2016

Inspector: CO Bridge

BRIDGE 62032 CP RAIL OVER CSAH 49(RICE ST)

County: Ramsey
City: Little Canada
Township:
Section: 31 Township: 030N Range: 22W
Span Type: 3 - Steel 3 - Girder and Floorbeam System
List:
NBI Deck: 7 Super: 7 Sub: 6 Chan: N

Location: 0.5 MI S OF JCT TH 694
Route: Ref. Pt.:
Control Section:
Maint. Area:
Local Agency Bridge Nbr.:
Culv: N
Open, Posted, Closed: A - Open
MN Scour Code: A - NON WATERWAY

Length: 315.0 ft.
Deck Width: 22.0 ft.
Rdwy. Area/ Pct. Unsnd: sq. ft. / %
Paint Area/ Pct. Unsnd: 50720 sq. ft. / 30%
Culvert: N/A
Postings:

Appraisal Ratings - Approach: 7 Waterway: N
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 N

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
30	Steel Deck Corrugated/Orthotropic/Etc.	Routine	10/13/2016	6930 SF	6791	0	139	0
		Migrated Values		6930 SF	6791	0	139	0

Notes: [2007-2016] Paint system has some failure- surface corrosion is present. Steel Ballast Plate Deck contains minor deck leakage.
[2013-2016] Bridge #62032 has a 7/8" Steel ballast plate deck with rock ballast.
[2009-2016] Two ballast plate clips missing near east and west ends. Eight ballast plate clips are loose & hanging. Recommend removal of ballast plate clips.
Element #30 was deleted in 2007. Element #401 was created. There is one active railroad track.

	510 - Wearing Surfaces	Routine	10/13/2016	6930 SF	6930	0	0	0
		Migrated Values		6930 SF	6930	0	0	0

Notes: [2016] Migrator assumed CS1.
Railroad bridge - no wearing surface.

107	Steel Open Girder/Beam	Routine	10/13/2016	630 LF	410	220	0	0
		Migrated Values		630 LF	410	220	0	0

Notes: [1999-2016] Minor chalking and paint failure present on both sides.
[2012-2016] The north side contains 35% peeling of paint with rusting near top of bottom flange.
[2012-2016] There is some flaking of paint on the south side.
There is graffiti @ top inside girders 2007-2011.
Two 130" deep welded steel "Through Girders" serve as railing.

	515 - Steel Protective Coating	Routine	10/13/2016	32550 SF	21158	11392	0	0
		Migrated Values		32550 SF	21158	11392	0	0

Notes: [2016] Migrator used inventory quantity of 50,720 SF and estimated the condition states.
[2016] 2 thru girders - 11' + 11' +1.5' + 1.5' +1.5' + 1.5' = 28' x 315' long = 8820 SF x 2 = 17,640 SF
2 thru girders - 315' x 11' high = 3465 SF x 2 = 6930 SF x 2 sides = 13,860 SF
60 - knee bracing - (2.0' + 0.5')/2 x7 = 8.75 SF x 2 sides = 17.5 SF each x 60 = 1050 SF
Total = 32,550 SF 35% in condition state 2, 65% in condition state 1

152	Steel Floor Beam	Routine	10/13/2016	2402 LF	1681	721	0	0
		Migrated Values		2402 LF	1681	721	0	0

Notes: [2012-2016] Approximately 30% of floor beams contains minor rusting.
24" deep rolled steel floorbeams (30" spacing) - the skewed end floorbeams have independent bearings.

	515 - Steel Protective Coating	Routine	10/13/2016	26629 SF	18640	7989	0	0
		Migrated Values		26629 SF	18640	7989	0	0

Notes: [2016] Migrator assumed quantity of 999 SF and estimated the condition states.
136 - floor beams - 2.25' + 2.25' + 1.1' + 1.1' +1.1' + 1.1' = 8.9' x 22' long = 195.8 SF x 136 = 26,629 SF
[2016] 30% in condition state 2, 70% in condition state 1.

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
210	Reinforced Concrete Pier Wall	Routine	10/13/2016	89 LF	0	89	0	0
		Migrated Values		89 LF	0	89	0	0

Notes: [2014-2016] 9 - minor vertical cracks on east side
[2012-2016] Reinforced Concrete Pier Wall contains numerous moderate spalls on both sides.
[2009-2016] The west side has 5 vertical cracks 18' each- two are near the construction joint.
[2011-2016] There is some scraping on the east side from County plows .
[2013] The east side has 6 minor horizontal cracks 80' each
[2009-2013] The east side has 8 vertical cracks 18' each- two are near the construction joint.
Utility line on west side of pier wall.

215	Reinforced Concrete Abutment	Routine	10/13/2016	462 LF	40	422	0	0
		Migrated Values		462 LF	40	422	0	0

Notes: [2016] Migrator added 40 LF to abutment quantity to account for wingwalls (CS1:0 CS2:40 CS3:0 CS4:0).
[2016]Wingwalls - SW = 23', SE = 84', NW = 116', NE = 19'. Tiotal = 242 LF + 180' abutments = 422 LF
[2016] moderate delamination of construction joints on both sides.
[2014-2016] East abutment has numerous minor cracks on north end, also some paint failure on SE corner
[2013-2016] East abutment has 50' minor horizontal cracks on south 1/2, 5' - 6' up from walk
[2013-2016] East abutment has 20' moderate horizontal cracks on south end, 2' - 3' up from walk also some moderate spalling with rust stains.
[2012-2016] East abutment has 8 X 15' = 120 LF of moderate vertical cracks with efflorescence.
[2014-2016] West abutment has 1' diagnal minor crack near parapet on south end
[2014-2016] 4" spall on west abutment 30' from north end
[2014-2016] scrapes on west abutment from snow plow
[2012-2016] West abutment has >200 LF of random moderate size cracks.
[2010-2016] West abutment has scrapes with moderate spalling from city plows.
[2011-2016] Moderate size spalling throughout. The north 10' of the West abutment has corrosion present .
[2012-2013] East abutment near SE corner has minor to moderate horizontal & vertical cracking with efflorescence.
[2012-2013] Both abutments contain moderate horizontal cracks & spalls. Minor deterioration of construction joints both sides.

Wingwall notes: [2013-2016]SE wing has 21' minor cracks w/effluence on east & west ends with minor spalls.
[2002-2016] SE corner has minor vertical cracking w/deterioration of cork expansion joints.
[2015-2016] SW corner has 20 LF minor horizontal cracking with efflorescence and occasional spalls.
[2013-2016] SW wing has 2' minor crack across top.
[2014-2016] NE wingwall has 2 1' minor vertical cracks
[2003-2016] NE corner has minor horizontal cracking w/spalls.
[2007-2016] NW WW has 3' x 1' spall @ SW corner near abutment. NW corner has numerous horizontal & vertical cracking w/spalling and deterioration of cork expansion joints.
Wingwalls have chain link fencing on top.
[2004-2014] SW corner has 20 LF minor horizontal cracking with occasional spalls.

311	Movable Bearing	Routine	10/13/2016	20 EA	0	20	0	0
		Migrated Values		20 EA	0	20	0	0

Notes: [2012-2016] Moderate deterioration is present.
[2002-2016] Vertical & horizontal alignment are within limits.
Abutment bearings (and all floorbeam bearings) are expansion.

313	Fixed Bearing	Routine	10/13/2016	4 EA	0	4	0	0
		Migrated Values		4 EA	0	4	0	0

Notes: [2013-2016] Evidence of moderate corrosion is present.
Main girder pier bearings are fixed.

800	Critical Deficiencies or Safety Hazards	Routine	10/13/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0

Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION.

891	Other Bridge Signing	Routine	10/13/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0

Notes: [2015] New 9 button at the south side pier wall.
[2004-2016] No horizontal clearance sign at SW corner.
[2009-2014] Crash attenuators are OK. 9 button at the south side pier wall is bent.
Crash attenuators have been repaired in 2007.
Damage to signs at crash attenuators due to traffic impact in 2004.

BRIDGE 62032 CP RAIL OVER CSAH 49(RICE ST)

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
892	Slopes & Slope Protection	Routine	10/13/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: [2015-2016] Moderate erosion at NE wingwall. minor settlement at all others. [2003-2014] Slope protection is OK. Some minor settlement near wingwalls.							
893	Guardrail	Routine	10/13/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
	Notes: [2015-2016] Crash attenuator are in good condition. [2014] The south attenuator has been damaged [2010-2013] Guardrail system is present and good condition. Crash attenuator have been repaired in 2015. Crash attenuators have been replaced at both sides of bridge in 2007. Replaced with Quadguard Type I & Type II. Crash attenuators have been damaged at both ends of piers in 2004.							
894	Deck & Approach Drainage	Routine	10/13/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: [2003-2016] Drainage system is functioning properly.							
900	Protected Species	Routine	10/13/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: Use this element to track the presence of protected species living on this structure. [2016] No protective species found.							

General Notes: [2016] Bridge safety inspection was completed by Brian Essler & Dan Bodelson & Randy Bussiere on 10/13/2016.
[2015] Bridge safety inspection was completed by Brian Essler & Dan Bodelson on 10/14/2015.
[2014] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/17/2014.
[2014] New tracks & ballast were installed by Railroad this summer
[2013] Bridge safety inspection was completed by Dan Bodelson & Brian Essler on 10/25/2013.
[2012] Bridge safety inspection was completed by B. Wieman on 10/30/2012.
2011 Bridge safety inspection was completed by B. Wieman and D Bodelson on 10/28/2011. Lateral bracing is in place. No sign of collision damage 2011.
2010 Bridge safety inspection was completed by B. Wieman and D Bodelson 12/3/2010.
2009 Bridge safety inspection was completed by B. Wieman on 10/26/2009.
2007 Bridge safety inspection was completed by B. Wieman and B. Essler 8/21/2007.
2006 Bridge safety inspection was completed by Bret Wieman and Dan Bodelson 10/30/2006.
*BRIDGE #62032, YEAR 2000 - Turnback to Ramsey County. Ramsey County has ownership & maintenance responsibility.
*BRIDGE #62032, YEAR 1999 Railroad Bridge Constructed in 1986-87. Mn/DOT has ownership & maintenance responsibility.
[1999] Photos.

58. Deck NBI: Moderate paint failure and minor corrosion

36A. Brdg Railings NBI: Railroad bridge over roadway

36B. Transitions NBI: Railroad bridge over roadway

36C. Appr Guardrail NBI: Railroad bridge over roadway

36D. Appr Guardrail Terminal NBI: Railroad bridge over roadway

59. Superstructure NBI: Moderate paint failure and minor corrosion

60. Substructure NBI: Moderate cracks, delamination and spalls

61. Channel NBI: Not over water

62. Culvert NBI: Bridge

71. Waterway Adeq NBI: Not over water

72. Appr Roadway Alignment NBI: Minor sight distance problem with no speed reduction

Inventory Notes:

BRIDGE 62032 CP RAIL OVER CSAH 49(RICE ST)

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4

Dan Bodelson
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

Pictures

Photo 1 -

Photo 2 -

Pictures

Photo 3 -

Photo 4 -

Pictures

Photo 5 -

Photo 6 -

Pictures

Photo 7 -

Photo 8 -

Pictures

Photo 9 -

Photo 10 -

Pictures

Photo 11 -

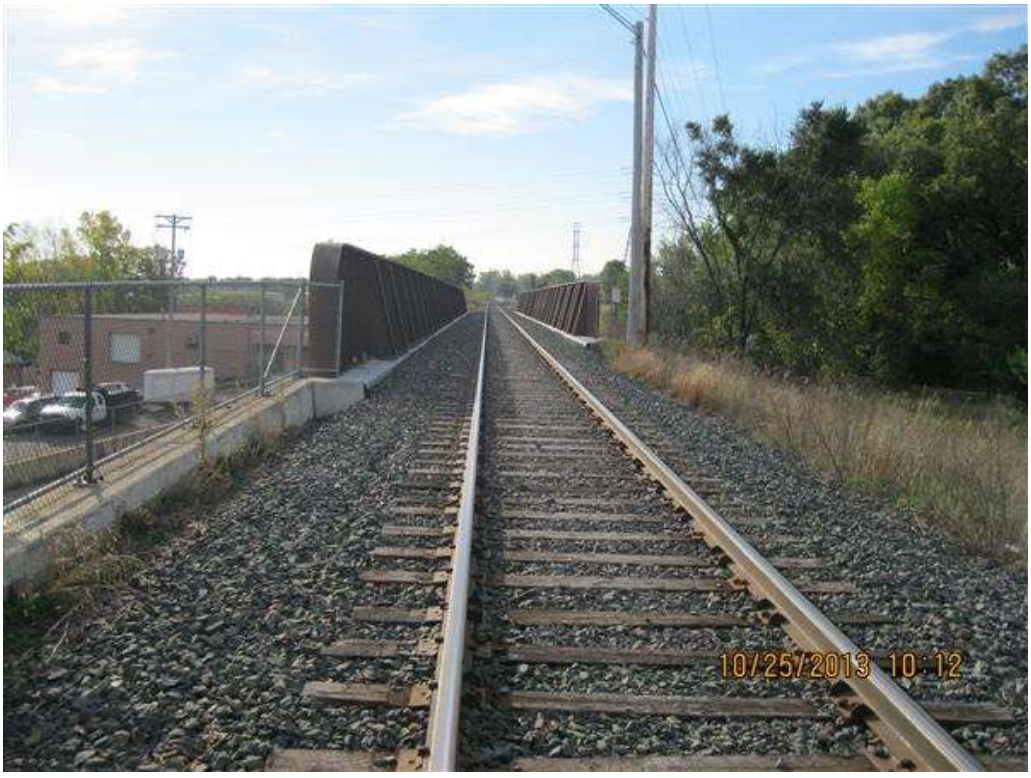

Photo 12 -

Pictures

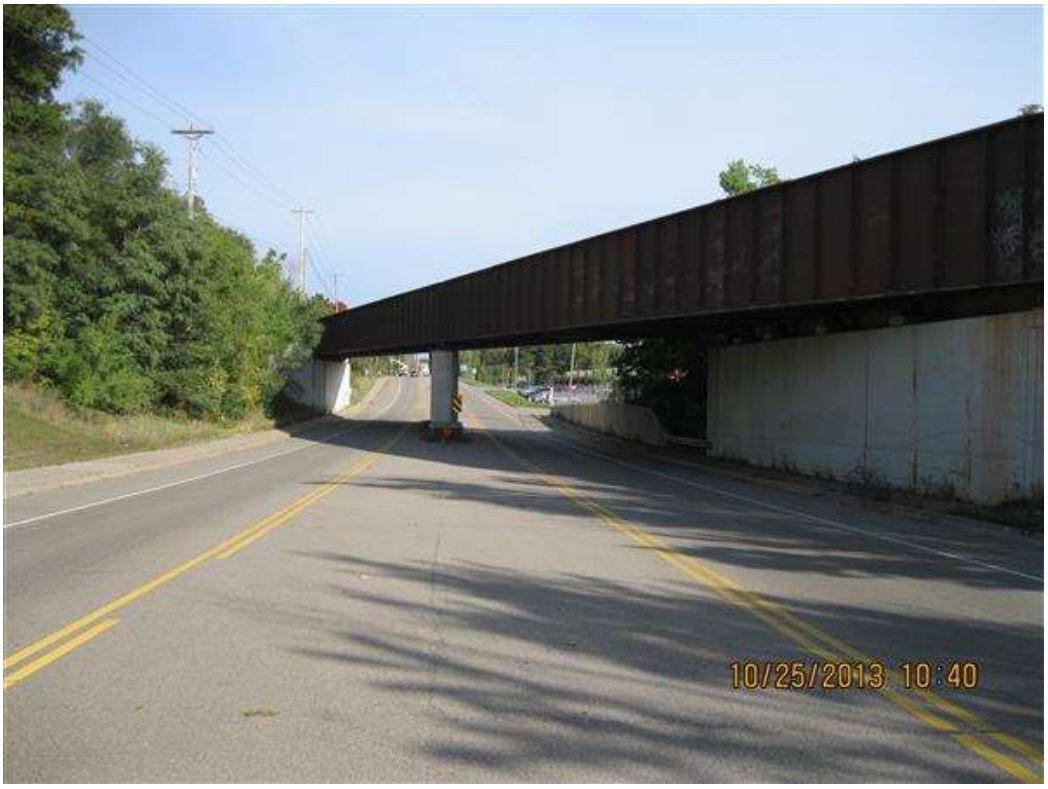

Photo 13 -

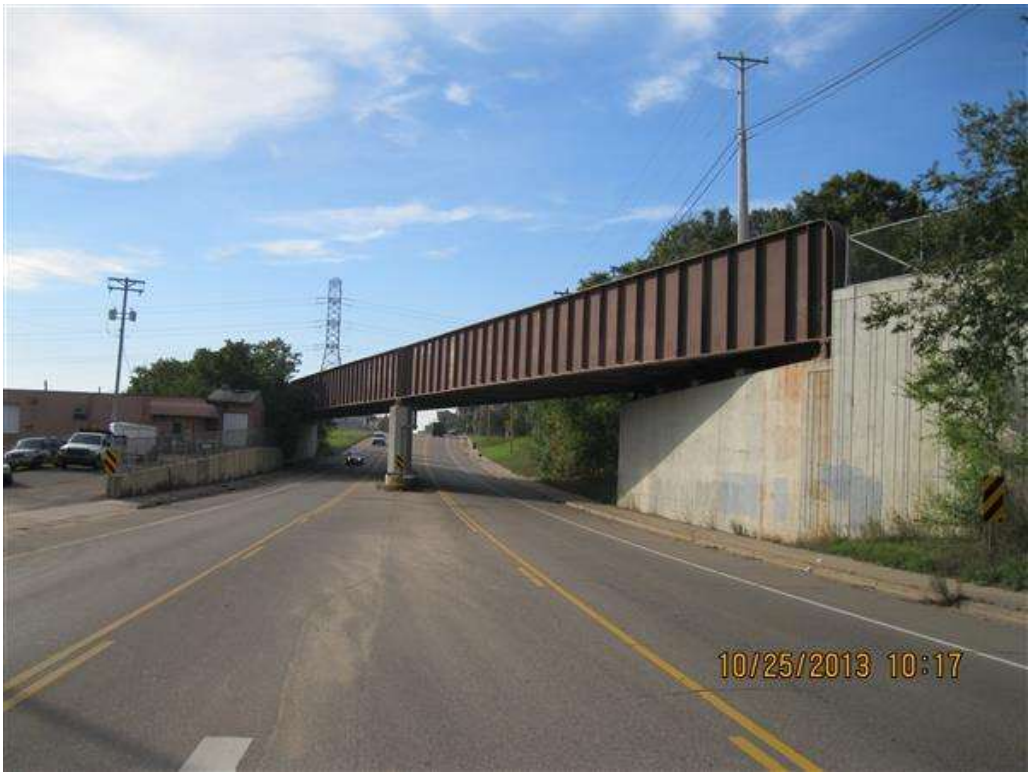

Photo 14 -

Pictures

Photo 15 -

Photo 16 -

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 Minnesota 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.: 62032

BRIDGE OWNER: County Highway Agency

DATE INSPECTED: 10/13/2016

STRUCTURE TYPE: Steel
irder and Floorbeam System

FACILITY CARRIED: CP RAIL

FEATURES INTERSECTED: CSAH 49(RICE ST)

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

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
   ☐ Complex ☐ Increased Inspection Frequency

   Explain recommended actions:

6. Other comments:

Bridge Office Reviewer