

**2016 ROUTINE
BRIDGE INSPECTION REPORT**



**BRIDGE # 62569
CSAH 46(CLEVELAND) over CP RAIL**

DISTRICT: Metro

COUNTY: Ramsey

CITY/TOWNSHIP: Arden Hills

STATE: Minnesota

Date of Inspection: 10/05/2016

Equipment Used:

Owner: County Highway Agency

Inspected By: Essler, Brian

Report Written By: Brian Essler

Report Reviewed By: Nicklaus Fischer

Final Report Date: 12/02/2016

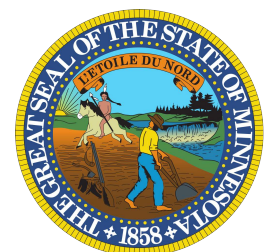


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Minnesota Structure Inventory Report

Bridge ID: 62569

CSAH 46 over CP RAIL
(CLEVELAND)

Date: 10/04/2016

+ GENERAL +	+ ROADWAY +	+ INSPECTION +			
Agency Br. No. Crew	Bridge Match ID (TIS) 0	Userkey 102			
District 05 Maint. Area	Roadway O/U Key Route On Structure	Structurally Deficient N			
County 062 - Ramsey	Route Sys 04 - CSAH Number 46	Functionally Obsolete N			
City Arden Hills	Roadway Name or Description CSAH 46	Sufficiency Rating 98.7			
Township	Level of Service 1 - MAINLINE	Routine Inspection Date 10/05/2016			
Desc. Loc. 0.5 MI S OF JCT CSAH 73	Roadway Type 2 - 2-way traffic	Routine Inspection Frequency 24			
Sect., Twp., Range 28 - 030N - 23W	Control Section (TH Only)	Inspector Name Essler, Brian			
Latitude 45° 3' 1.34"	Reference Point 011+00.298	Status A - Open			
Longitude 93° 11' 15.99"	Detour Length 1.0 mi.	+ NBI CONDITION RATINGS +			
Custodian 02 - County Highway Agency	Lanes ON 2 UNDER 0	Deck 7 Unsound Deck %			
Owner 02 - County Highway Agency	ADT 3287 YEAR 2008	Superstructure 7			
BMU Agreement	HCADT ADTT %	Substructure 8			
Year Built 2001	Functional Class 16 - Urban - Minor Arterial	Channel N			
MN Year Reconstructed		Culvert N			
FHWA Year Reconstructed		+ NBI APPRAISAL RATINGS +			
MN Temporary Status		Structure Evaluation 7			
Bridge Plan Location 3 - COUNTY	+ RDWY DIMENSIONS +			Deck Geometry 5	
Date Opened to Traffic	If Divided NB-EB SB-WB	Underclearances 6			
On - Off System 1 - ON	Roadway Width 39.40 ft. ft.	Waterway Adequacy N			
Legislative District 50B	Vertical Clearance ft. ft.	Approach Alignment 7			
Potential ABC 2 - N/A	Max. Vert. Clear. ft. ft.	+ SAFETY FEATURES +			
	Horizontal Clear. 39.3 ft. ft.	Bridge Railing 1 - MEETS STANDARDS			
	Lateral Clearance ft. ft.	GR Transition 0 - SUBSTANDARD			
	Appr. Surface Width 40.0 ft.	Appr. Guardrail 1 - MEETS STANDARDS			
	Bridge Roadway Width 39.4 ft.	GR Termini 1 - MEETS STANDARDS			
	Median Width On Bridge ft.	+ IN DEPTH INSP. +			
	+ MISC. BRIDGE DATA +			Frac. Critical Y/N Freq Date	
	Structure Flared 0 - No flare	Underwater N			
	Parallel Structure N - No parallel structure	Pinned Asbly. N			
	Field Conn. ID	Spec. Feat.			
	Abutment 1 - CONC				
	Foundation (Material/Type) 3 - FTG PILE				
	Pier Foundation N - N/A				
	Foundation (Material/Type) N - N/A				
	Historic Status 5 - Not eligible				
	+ PAINT +			+ WATERWAY +	
	Year Painted	Drainage Area (sq. mi.)			
	Unsound Paint %	Waterway Opening (sf.)			
	Painted Area sq. ft.	Navigation Control N - Not applicable, no			
	Primer Type	Pier Protection -			
	Finish Type	Nav. Clr. (ft.) Vert. 0.0 Horiz. 0.0			
	+ BRIDGE SIGNS +			Nav. Vert. Lift Bridge Clear. (ft.)	
	Posted Load 0 - Not Required	MN Scour Code A - NON	Year 2001		
	Traffic 0 - Not Required	+ CAPACITY RATINGS +			
	Horizontal 0 - Not Required	Design Load 9 - HS 25 (OR GREATER)			
	Vertical N - Not Applicable	Operating Rating 2 - HS TRUCK 42.9			
		Inventory Rating 2 - HS TRUCK 25.0			
		Posting VEH: SEMI: DBL:			
		Rating Date 1/18/2000			
		Overweight Permit Codes			
		A N - N/A B N - N/A C N - N/A			
+ STRUCTURE +					
Service On 5 - Highway-pedestrian					
Service Under 2 - Railroad					
Main Span Type 2 - Concrete Continuous					
Main Span Design 09 - Slab Span					
Main Span Detail					
Appr. Span Type					
Appr. Span Design					
Appr. Span Detail					
Skew 0					
Culvert Type					
Barrel Length					
Cantilever ID					
Number of Spans					
MAIN: 1 APPR: 0 TOTAL:					
Main Span Length 41.0 ft.					
Structure Length 46.9 ft.					
Deck Width (Out-to-Out) 48.8 ft.					
Deck Material 1 - Concrete Cast-in-Place					
Wear Surf Type 6 - Bituminous					
Wear Surf Install Year					
Wear Course/Fill Depth 0.30 ft.					
Deck Membrane 0 - None					
Deck Rebars 1 - Epoxy Coated Reinforcing					
Deck Rebars Install Year 2001					
Structure Area (Out-to-Out) 2282 sq. ft.					
Roadway Area (Curb-to-Curb) 1851 sq. ft.					
Sidewalk Width 50A. Lt 0.00 ft. 50B. Rt 6.60 ft.					
Curb Height Lt 0.67 ft. Rt 0.00 ft.					
Rail Type Lt 28 Rt 28					

MINNESOTA BRIDGE INSPECTION REPORT

12/02/2016

Inspector: CO Bridge

BRIDGE 62569 CSAH 46(CLEVELAND) OVER CP RAIL

County: Ramsey	Location: 0.5 MI S OF JCT CSAH 73	Length: 46.9 ft.
City: Arden Hills	Route: 04 - CSAH 46 Ref. Pt.: 011+00.298	Deck Width: 48.8 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: 1851 sq. ft. / %
Section: 28 Township: 030N Range: 23W Maint. Area:		Paint Area/ Pct. Unsnd: sq. ft. / %
Span Type: 2 - Concrete Continuous 1 - Slab	Local Agency Bridge Nbr.:	Culvert: N/A
List:		Postings:
NBI Deck: 7 Super: 7 Sub: 8 Chan: N Culv: N		
	Open, Posted, Closed: A - Open	
	MN Scour Code: A - NON WATERWAY	
Appraisal Ratings - Approach: 7 Waterway: N		Unofficial Structurally Deficient N
Required Bridge Signs - Load Posting: 0 - Not Required	Traffic: 0 - Not Required	Unofficial Functionally Obsolete N
Horizontal: 0 - Not Required	Vertical: N - Not Applicable	Unofficial Sufficiency Rating 98.7

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
38	Reinforced Concrete Slab	Routine	10/05/2016	2282 SF	2236	0	46	0
		Migrated Values		2282 SF	2236	0	46	0
Notes: [2010-2016] There is a longitudinal crack with efflorescence at centerline 1/2 length. [2003-2016] There are 4 cracks with efflorescence at south end and 4 cracks with efflorescence at north end. [2001-2016] Minor cracking at corners of soffit & abutment with efflorescence.								
510	Wearing Surfaces	Routine	10/05/2016	1851 SF	1814	0	37	0
		Migrated Values		1851 SF	1814	0	37	0
Notes: Concrete Slab with Cathodic Protection System Notes: [2012-2016] Distress area is under 2% (still in condition state #2). [2010-2016] There is 100 LF of minor cracking. There are 2- diagonal cracks at the NW & SW corners. One diagonal crack at the SE corner and 2 diagonal cracks at the NE corner. [2010-2016] There is some edge spalling @ north side near centerline. [2008-2016] Minor cracking with spalling & scaling present on both sides. West								
215	Reinforced Concrete Abutment	Routine	10/05/2016	279 LF	0	279	0	0
		Migrated Values		279 LF	0	279	0	0
Notes: [2016] Graffiti has been painted over. New graffiti on south abutment. [2016] Abutments are 49 LF, Wing Walls SE 41 LF, SW 48 LF, NE 44 LF & NW 48 LF [2010-2016] 98 LF in condition state 2. Approximately 80 LF of horizontal & vertical cracking. [2010-2016] North abutment contains 1 full height vert. crack + 10' vert. crack + 6' vert. crack & 9' horizontal crack. [2008-2016] There is a 6' scrape in the north abutment. [2010-2016] South abutment contains two- 12' and one- 10' vertical cracks. [2012] Graffiti on both abutments. Wingwall notes: [2016] Graffiti has been painted over. [2014-2016] 2 - 3' minor cracks in NE wing [2010-2016] Minor cracking (2-4' horizontal cracks+ 1-4' vert. crack, 1- vert. crack full ht) w/rusting at SW corner. SW WW also contains moderate spalls. [2010-2016] NW abutment wing has minor horizontal cracking & a 10' vertical crack with efflorescence. [2012-2016] SE and NE wing walls have a 10' vertical crack with efflorescence. [2003-2014] Graffiti on NW & SW abutment wing.								
301	Pourable Joint Seal	Routine	10/05/2016	75 LF	51	24	0	0
		Migrated Values		75 LF	51	24	0	0
Notes: [2016] 16' on north & 8' on south joint seal has minor adhesion & cohesion failure.. [2001-2016] Joint seal is showing signs of distress. [2004-2016] Minor adhesion & cohesion failure.								

BRIDGE 62569 CSAH 46(CLEVELAND) OVER CP RAIL

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
321	Reinforced Concrete Approach Slab	Routine	10/05/2016	2400 SF	2200	200	0	0
		Migrated Values		2400 SF	2200	200	0	0
<p>Notes: [2016] Approach slab length is 30FT and 40FT for the width for both slabs. [2016] There is a 1' moderate - 0.5' major spall at the south approach slab and deck joint. [2008-2016] The south approach has spalling at east & west sides. [2006-2016] South approach slab has 2- 30' and 1- 20' cracks. The north approach slab has 1- 20' and 2- 30' longitudinal crack. Total of 160 LF of longitudinal cracking. [2008-2016] Moderate settlement of bituminous approach roadway both ends at approach slabs (settlement >1"). Requires bituminous patching. [2014] There is a moderate - major spall at the south approach slab and deck joint.</p>								
330	Metal Bridge Railing	Routine	10/05/2016	276 LF	248	28	0	0
		Migrated Values		276 LF	248	28	0	0
<p>Notes: [2010-2016] Some chalking of paint system. [2016] 143.37 LF West side, 132.22 LF East side East side type P-1 conc. rail & structural tube railing w/fence design mod. T-3. West side mod. P-3 conc. rail & structural tube railing w/fence des. mod. T-3.</p>								
515 -	Steel Protective Coating	Routine	10/05/2016	1550 SF	1395	155	0	0
		Migrated Values		1550 SF	1395	155	0	0
<p>Notes: [2010-2016] Some chalking of paint system. [2016] West [(2.21'+5.87')/2X(2X6.65')]+[5.87'X130.08']. East [(2.21'+5.68')/2X(2X5.17')]+[5.68'X121.88'] East side type P-1 conc. rail & structural tube railing w/fence design mod. T-3. West side mod. P-3 conc. rail & structural tube railing w/fence des. mod. T-3.</p>								
331	Reinforced Concrete Bridge Railing	Routine	10/05/2016	279 LF	0	279	0	0
		Migrated Values		279 LF	0	279	0	0
<p>Notes: [2014-2016] 1' moderate spall on each joint of west rail from snow plow [2010-2016] impact damage of the west rail from snowplows causing moderate damage at south side of expansion joints. There is a major spall at the NW corner from plow. There is re-bar corrosion at the west fascia. [2010-2016] Major spall at the SE corner bottom rail and one Moderate spall. [2008-2016] Vertical cracking in between joints with moderate spalling on both sides. East side type P-1 conc. rail & structural tube railing w/fence design mod. T-3. West side mod. P-3 conc. rail & structural tube railing w/fence des. mod. T-3.</p>								
800	Critical Deficiencies or Safety Hazards	Routine	10/05/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
<p>Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION.</p>								
810	Concrete Decks - Cracking & Sealing	Routine	10/05/2016	125 LF	0	125	0	0
		Migrated Values		125 LF	0	125	0	0
<p>Notes: [2012 - 2016] There is a total of 125 LF minor to moderate unsealed deck cracks (mostly horizontal cracking @ corners).</p>								
891	Other Bridge Signing	Routine	10/05/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
<p>Notes: [2003-2016] Horizontal clearance signs are in place and functioning properly.</p>								
892	Slopes & Slope Protection	Routine	10/05/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
<p>Notes: [2008-2016] Some minor settlement of material at the abutments. [2008-2016] There is moderate erosion at all abutment wings of the bridge.</p>								
893	Guardrail	Routine	10/05/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
<p>Notes: [2002-2016] Guardrails are in place and functioning properly. [2003-2012] Movement of spacer blocks @ NE corner -need to be turned & nailed.</p>								

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ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
894	Deck & Approach Drainage	Routine	10/05/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: [2008-2016] There is moderate erosion at all abutment wings of the bridge. [2002-2016] Drainage system is working properly. Fill is needed along the abutment wings to slope away from wingwalls.								
895	Sidewalk, Curb, & Median	Routine	10/05/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
Notes: [2016] 20' of sidewalk is settled along the railing at the SE quadrant [2014-2016] 1" settlement of walk behind curb @ NE corner of bridge [2008-2016] Moderate movement of curb & walk from bituminous approach at both ends of bridge on the east side of Cleveland Avenue . Ramsey County will monitor the movement. [2006-2016] Curb on the bridge has minor deterioration. [2001-2016] There is a dip in the sidewalk and the curb 115' south of the bridge on the east side. [2010] Void @ NE corner has been filled- will monitor the sidewalk. [2008] Major settlement @ NE corner. There is a settlement depth of 2.5' which is undermining the sidewalk. [2008] Moderate settlement @ NE corner. Need fill @ NE & SE corners.								
900	Protected Species	Routine	10/05/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: [2016] There is no protected species living on this structure.								

General Notes: [2016] Bridge safety inspection was completed by B. Essler and D. Bodelson 10/5/2016.
 [2014] Bridge safety inspection was completed by D. Bodelson and B. Essler 10/10/2014.
 [2012] Bridge safety inspection was completed by B. Wieman and D. Bodelson 10/22/2012.
 [2012] Cap blocks for modular block retaining wall located at the NE corner are missing.
 [2003-2012] Bituminous is settling at several locations south of the bridge on the east side. Also some settlement north of the bridge on the east side.
 [2000-2006] There is settlement of the curb & sidewalk south of the bridge on the east side.
 [2010] Bridge safety inspection was completed by B. Wieman 10/18/2010.
 [2010-2012] Settlement of bituminous @ north approach slab requires bituminous patching. Some cracking and settlement of bit. approach north of bridge on the east side.
 [2008] Bridge safety inspection was completed by B. Paine, B. Wieman and B. Essler 10/29/2008.
 2006 bridge safety inspection was completed by Bret Wieman and Dan Bodelson. 11/13/2006.
 Bridge # 62569 was constructed in 2000.
 [2000-2006] There is settlement of the curb & sidewalk south of the bridge on the east side.
 Bridge # 62569 was constructed in 2000.

- 58. Deck NBI:
- 36A. Brdg Railings NBI:
- 36B. Transitions NBI:
- 36C. Appr Guardrail NBI:
- 36D. Appr Guardrail Terminal NBI:
- 59. Superstructure NBI:
- 60. Substructure NBI:
- 61. Channel NBI:
- 62. Culvert NBI:
- 71. Waterway Adeq NBI:
- 72. Appr Roadway Alignment NBI:

Inventory Notes: Bridge # 62569 was constructed in 2000.

BRIDGE 62569 CSAH 46(CLEVELAND) OVER CP RAIL

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
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Brian Essler
Inspector's Signature

Nicklaus Fischer
Reviewer's Signature

Pictures



Photo 1 - 62569 No Abut



Photo 2 - 62569 So Abut

Pictures



Photo 3 - 62569 So Approach



Photo 4 - 62569 Top

Pictures



Photo 5 - 62569 West Side