

**2016 ROUTINE
BRIDGE INSPECTION REPORT**



**BRIDGE # 62627
CSAH 49 over BNSF RR**

DISTRICT: Metro

COUNTY: Ramsey

CITY/TOWNSHIP: St Paul

STATE: Minnesota

Date of Inspection: 05/07/2016

Equipment Used:

Owner: County Highway Agency

Inspected By: Ekstrand, Ron; Engel, Michael; Grau, Joe; Reimer, Dan

Report Written By: Ron Ekstrand
Report Reviewed By: Glenn Pagel
Final Report Date: 08/19/2016

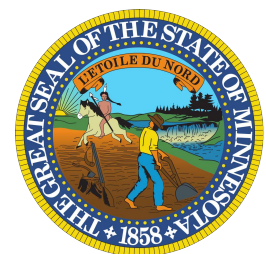


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Minnesota Structure Inventory Report

Bridge ID: 62627

CSAH 49 over BNSF RR

Date: 07/20/2016

+ GENERAL +	+ ROADWAY +	+ INSPECTION +																				
Agency Br. No. Crew District 05 Maint. Area County 062 - Ramsey City St Paul Township Desc. Loc. 1.8 MI S OF JCT TH 36 Sect., Twp., Range 19 - 029N - 22W Latitude 44 ° 58 ' 54.93 " Longitude 93 ° 6 ' 21.20 " Custodian 02 - County Highway Agency Owner 02 - County Highway Agency BMU Agreement Year Built 2009 MN Year Reconstructed FHWA Year Reconstructed MN Temporary Status Bridge Plan Location 3 - COUNTY Date Opened to Traffic 09/16/2009 On - Off System 1 - ON Legislative District 66A Potential ABC 2 - N/A	Bridge Match ID (TIS) 0 Roadway O/U Key Route On Structure Route Sys 04 - CSAH Number 49 Roadway Name or Description CSAH 49 Level of Service 1 - MAINLINE Roadway Type 2 - 2-way traffic Control Section (TH Only) Reference Point 001+00.802 Detour Length 1.0 mi. Lanes ON 4 UNDER 0 ADT 15400 YEAR 2011 HCA DT ADTT % Functional Class 16 - Urban - Minor Arterial	Userkey 199 Structurally Deficient N Functionally Obsolete Y Sufficiency Rating 79.1 Routine Inspection Date 05/07/2016 Routine Inspection Frequency 24 Inspector Name Ekstrand, Ron Status A - Open																				
		+ NBI CONDITION RATINGS +																				
		Deck 8 Unsound Deck % Superstructure 9 Substructure 9 Channel N Culvert N																				
		+ NBI APPRAISAL RATINGS +																				
		Structure Evaluation 9 Deck Geometry 2 Underclearances 6 Waterway Adequacy N Approach Alignment 9																				
		+ SAFETY FEATURES +																				
		Bridge Railing 1 - MEETS STANDARDS GR Transition 1 - MEETS STANDARDS Appr. Guardrail 1 - MEETS STANDARDS GR Termini 1 - MEETS STANDARDS																				
		+ IN DEPTH INSP. +																				
		<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th></th> <th style="text-align: center;">Y/N</th> <th style="text-align: center;">Freq</th> <th style="text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td>Frac. Critical</td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td>Underwater</td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td>Pinned Asbly.</td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td>Spec. Feat.</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Y/N	Freq	Date	Frac. Critical	N			Underwater	N			Pinned Asbly.	N			Spec. Feat.			
	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 <table style="width: 100%; border-collapse: collapse;"> <tr> <td>Nav. Clr. (ft.)</td> <td style="text-align: center;">Vert.</td> <td style="text-align: center;">0.0</td> <td style="text-align: center;">Horiz.</td> <td style="text-align: center;">0.0</td> </tr> </table> Nav. Vert. Lift Bridge Clear. (ft.) MN Scour Code A - NON Year	Nav. Clr. (ft.)	Vert.	0.0	Horiz.	0.0															
Nav. Clr. (ft.)	Vert.	0.0	Horiz.	0.0																		
		+ CAPACITY RATINGS +																				
		Design Load A - HL 93 Operating Rating 2 - HS TRUCK 39.9 Inventory Rating 2 - HS TRUCK 25.0 Posting VEH: SEMI: DBL: Rating Date 12/07/2011 Overweight Permit Codes A N - N/A B N - N/A C N - N/A																				
+ STRUCTURE +	+ RDWY DIMENSIONS +																					
Service On 5 - Highway-pedestrian Service Under 2 - Railroad Main Span Type 5 - Prestress or Precast Main Span Design 01 - Beam 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: 3 APPR: 0 TOTAL: Main Span Length 53.0 ft. Structure Length 142.9 ft. Deck Width (Out-to-Out) 65.5 ft. Deck Material 1 - Concrete Cast-in-Place Wear Surf Type 4 - Low Slump Concrete Wear Surf Install Year 2009 Wear Course/Fill Depth 0.20 ft. Deck Membrane 0 - None Deck Rebars 1 - Epoxy Coated Reinforcing Deck Rebars Install Year 2009 Structure Area (Out-to-Out) 9546 sq. ft. Roadway Area (Curb-to-Curb) 6728 sq. ft. Sidewalk Width 50A. Lt 7.3 ft. 50B. Rt 7.3 ft. Curb Height Lt 0.66 ft. Rt 0.66 ft. Rail Type Lt 28 Rt 28	If Divided NB-EB SB-WB Roadway Width 48.0 ft. ft. Vertical Clearance ft. ft. Max. Vert. Clear. ft. ft. Horizontal Clear. 48.0 ft. ft. Lateral Clearance ft. ft. Appr. Surface Width 48.0 ft. Bridge Roadway Width 48.0 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 (Material/Type) 4 - PILE BENT Pier Foundation (Material/Type) 4 - PILE BENT 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 N - Not Applicable																					

MINNESOTA BRIDGE INSPECTION REPORT

08/19/2016

Inspector: CO Bridge

BRIDGE 62627 CSAH 49 OVER BNSF RR

County: Ramsey	Location: 1.8 MI S OF JCT TH 36	Length: 142.9 ft.
City: St Paul	Route: 04 - CSAH 49 Ref. Pt.: 001+00.802	Deck Width: 65.5 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: 6728 sq. ft. / %
Section: 19 Township: 029N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: sq. ft. / %
Span Type: 5 - Prestressed Concrete 2	Local Agency Bridge Nbr.:	Culvert: N/A
List:		Postings:

NBI Deck: 8 Super: 9 Sub: 9 Chan: N Culv: N
 Open, Posted, Closed: A - Open
 MN Scour Code: A - NON WATERWAY

Appraisal Ratings - Approach: 9 Waterway: N		Unofficial Structurally Deficient N
Required Bridge Signs - Load Posting: 0 - Not Required	Traffic: 0 - Not Required	Unofficial Functionally Obsolete Y
Horizontal: 0 - Not Required	Vertical: N - Not Applicable	Unofficial Sufficiency Rating 79.1

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
12	Reinforced Concrete Deck	Routine	05/07/2016	9546 SF	9532	14	0	0
		Migrated Values		9546 SF	9532	14	0	0
	Notes: MODERATE CRACKING/LIGHT LEACHING BELOW SIDEWALKS AND POURED DECK JOINTS. 2013-16							
510	Wearing Surfaces	Routine	05/07/2016	6728 SF	6728	0	0	0
		Migrated Values		6728 SF	6728	0	0	0
	Notes: 176' x .10' = 17.6 SF of unsealed crack affected area. 2016							
109	Prestressed Concrete Open Girder/Beam	Routine	05/07/2016	987 LF	987	0	0	0
		Migrated Values		987 LF	987	0	0	0
205	Reinforced Concrete Column	Routine	05/07/2016	4 EA	4	0	0	0
		Migrated Values		4 EA	4	0	0	0
215	Reinforced Concrete Abutment	Routine	05/07/2016	174 LF	174	0	0	0
		Migrated Values		174 LF	174	0	0	0
234	Reinforced Concrete Pier Cap	Routine	05/07/2016	127 LF	127	0	0	0
		Migrated Values		127 LF	127	0	0	0
300	Strip Seal Expansion Joint	Routine	05/07/2016	131 LF	131	0	0	0
		Migrated Values		131 LF	131	0	0	0
301	Pourable Joint Seal	Routine	05/07/2016	131 LF	121	10	0	0
		Migrated Values		131 LF	121	10	0	0
	Notes: 10' of loss adhesion present. 2015-16							
310	Elastomeric Bearing	Routine	05/07/2016	14 EA	14	0	0	0
		Migrated Values		14 EA	14	0	0	0

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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
313	Fixed Bearing	Routine	05/07/2016	28 EA	28	0	0	0
		Migrated Values		28 EA	28	0	0	0
321	Reinforced Concrete Approach Slab	Routine	05/07/2016	1920 SF	1918	2	0	0
		Migrated Values		1920 SF	1918	2	0	0
Notes: Insignificant cracking is present. 2015-16 One small spall at each approach. 2015-16								
330	Metal Bridge Railing	Routine	05/07/2016	444 LF	444	0	0	0
		Migrated Values		444 LF	444	0	0	0
	515 - Steel Protective Coating	Routine	05/07/2016	1469 SF	1469	0	0	0
		Migrated Values		1469 SF	1469	0	0	0
331	Reinforced Concrete Bridge Railing	Routine	05/07/2016	454 LF	454	0	0	0
		Migrated Values		454 LF	454	0	0	0
Notes: Concrete bridge rail has minor vertical cracks. 2013-16								
800	Critical Deficiencies or Safety Hazards	Routine	05/07/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION. [2012-2016] NONE FOUND.								
810	Concrete Decks - Cracking & Sealing	Routine	05/07/2016	176 LF	0	176	0	0
		Migrated Values		176 LF	0	176	0	0
Notes: 176 LF of unsealed cracking. 2016 15 Moderate transverse cracks. N. bound lane. 2016 8 Moderate transverse cracks. S. bound lane. 2016								
861	Non-Integral Retaining Wall	Routine	05/07/2016	4 EA	4	0	0	0
		Migrated Values		4 EA	4	0	0	0
892	Slopes & Slope Protection	Routine	05/07/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
893	Guardrail	Routine	05/07/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: Posted speed is NOT over 40 MPH. 2014-16								
894	Deck & Approach Drainage	Routine	05/07/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: Deck drainage to roadway CBs - North and South of bridge. 2014-16								
895	Sidewalk, Curb, & Median	Routine	05/07/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
Notes: Approach sidewalk panel has sunk. NE side - minor plow damage. 2014 Moderate cracking on both sidewalks. 2016								

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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
899	Miscellaneous Items	Routine	05/07/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
Notes: 4 lights on the bridge. 2016 4 lights on the approaches. 2016								
900	Protected Species	Routine	05/07/2016	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. None found in 2016.								

General Notes: July 2014: Bridge NEW added to inventory by MnDOT Bridge Office.

BNSF Contacts:
 Michael Anderson (763) 782-3310 (612) 749-3401 cell michael.anderson5@bnsf.com
 Lane Gilliland (612) 219-4219 cell

- 58. Deck NBI: Insignificant minor cracking is present. 2015
- 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:

Ron Ekstrand
 Inspector's Signature

Glenn Pagel
 Reviewer's Signature



1. 4-16-2010_ID.jpg



2. approach spall - N.side.JPG



3. 2010 deck view_SB_1.jpg



4. 2014 Deckview 008.JPG



5. 2014 Elevation view 011.JPG



6. 024.JPG



7. 025.JPG



8. 2013 google view_4.png



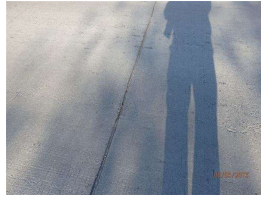
9. approach spall - N.side.JPG



10. approach spall - S.side.JPG



11. joint filler adhesion failure_1.JPG



12. joint filler adhesion failure_2.JPG



13. transverse cracking of walks.JPG