

**2016 ROUTINE
BRIDGE INSPECTION REPORT**



**BRIDGE # 62525
CSAH 31(WB MRYLD) over CP RAIL**

DISTRICT: Metro

COUNTY: Ramsey

CITY/TOWNSHIP: St Paul

STATE: Minnesota

Date(s) of Inspection: 05/23/2016

Equipment Used:

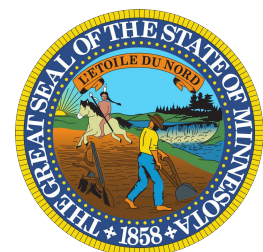
Owner: County Highway Agency

Inspected By: Ekstrand, Ron; Engel, Michael

Report Written By: Michael Engel

Report Reviewed By: Glenn Pagel

Final Report Date: 06/08/2016



Minnesota Structure Inventory Report

Bridge ID: 62525

CSAH 31(WB MRYLD)

over CP RAIL

Date: 06/08/2016

GENERAL	
Agency Br. No.	
District Metro	
Maint. Area	Crew
County 062 - Ramsey	
City St Paul	
Township	
Desc. Loc. 0.3 MI W OF JCT TH 35E	
Sect., Twp., Range 30 - 029N - 22W	
Latitude Deg 44 Min 58 Sec 36.45	
Longitude Deg 93 Min 5 Sec 31.29	
Custodian 02 - County Highway Agency	
Owner 02 - County Highway Agency	
BMU Agreement	
Year Built	1973
MN Year Reconstructed	
FHWA Year Reconstructed	
MN Temporary Status	
Bridge Plan Location 4 - MUNICIPAL	
Date Opened to Traffic	
On-Off System 1 - ON	
Legislative District 66A	
ABC Suitable	

STRUCTURE	
Service On 5 - Highway-pedestrian	
Service Under 2 - Railroad	
Main Span Type	
5 - Prestress or Precast 10 - Slab Span (V)	
Main Span Detail	
Appr. Span Type	
Appr. Span Detail	
Skew 35 L	
Culvert Type	
Barrel Length	ft.
Cantilever ID	

NUMBER OF SPANS			
MAIN: 3 APPR: 0 TOTAL: 3			
Main Span Length	41.5	ft.	
Structure Length	109.7	ft.	
Deck Width (Out-to-Out)	48.0	ft.	
Deck Material	1 - Concrete Cast-in-Place		
Wear Surf Type	1 - Monolithic Concrete (concr)		
Wear Surf Install Year			
Wear Course/Fill Depth	0.0	ft.	
Deck Membrane	0 - None		
Deck Rebars	0 - None		
Deck Rebars Install Year			
Structure Area (Out-to-Out)	5266	sq. ft.	
Roadway Area (Curb-to-Curb)	4392	sq. ft.	
Sidewalk Width	Lt 5.80	ft.	Rt 2.10
Curb Height	Lt 0.75	ft.	Rt 0.75
Rail Type	Lt 17		Rt 17

ROADWAY	
Bridge Match ID (TIS) 0	
Roadway O/U Key Route On Structure	
Route Sys 04 - CSAH Number 31	
Roadway Name or Description	CSAH 31
Level of Service 1 - MAINLINE	
Roadway Type 1 - 1-way traffic	
Control Section (TH Only)	
Reference Point 003+00.660	
Detour Length 1.0 mi	
Lanes	On 3 Under 0
	ADT 13894 Year 2008
HCADT 0 ADTT 0 %	
Functional Class 16 - Urban - Minor Arterial	

RDWY DIMENSIONS			
If Divided	NB-EB	SB-WB	
Roadway Width	40.00	ft.	ft.
Vertical Clearance		ft.	ft.
Max. Vert. Clear.		ft.	ft.
Horizontal Clear.	39.9	ft.	ft.
Lateral Clearance		ft.	ft.
Appr. Surface Width	40.0	ft.	
Bridge Roadway Width	40.0	ft.	
Median Width On Bridge		ft.	

MISC. BRIDGE DATA	
Structure Flared 0 - No flare	
Parallel Structure L - Left structure (South or West)	
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 N - Not Applicable	

INSPECTION	
Userkey 199	
Unofficial Structurally Deficient N	
Unofficial Functionally Obsolete N	
Unofficial Sufficiency Rating 79.4	
Routine Inspection Date 05/23/2016	
Routine Inspection Frequency 12	
Inspector Name CO Bridge	
Status G - New Bridge, Not Open Yet	

NBI CONDITION RATINGS	
Deck N - Not Applicable	
Unsound Deck %	
Superstructure N - Not Applicable	
Substructure N - Not Applicable	
Channel N - Not Applicable	
Culvert N - Not Applicable	

NBI APPRAISAL RATINGS	
Structure Evaluation 9	
Deck Geometry 4	
Underclearances 6	
Water Adequacy N - Not Applicable	
Approach Alignment 8 - Equal to present desirable	

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

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 waterway			
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 5 - HS 20		
Operating Rating 2 - AS HS 38.9		
Inventory Rating 2 - AS HS 21.4		
Posting VEH: SEMI: DBL:		
Rating Date 08/08/1973		
Minnesota Permit Codes		
A: N - N/A		
B: N - N/A		
C: N - N/A		

MINNESOTA BRIDGE INSPECTION REPORT

06/08/2016

BRIDGE 62525 CSAH 31(WB MRYLD) OVER CP RAIL

ROUTINE INSP. DATE: 05/23/2016

County: Ramsey	Location: 0.3 MI W OF JCT TH 35E	Length: 109.7 ft.
City: St Paul	Route: 04 - CSAH 31 Ref. Pt.: 003+00.660	Deck Width: 48.0 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: 4392 sq. ft. / %
Section: 30 Township: 029N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: sq. ft. / %
Span Type: 5 - Prestressed Concrete 1 - Slab	Local Agency Bridge Nbr.:	Culvert: N/A
List:		Postings:

NBI Deck: N Super: N Sub: N Chan: N Culv: N
 Open, Posted, Closed: G - New Bridge, Not Open Yet
 MN Scour Code: A - NON WATERWAY

Appraisal Ratings - Approach: 8	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	79.4

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
048	Low Slump O/L (Concrete Slab with Uncoated Rebar)	2	Routine	05/23/2016	5264 SF	0	0	0	0	5264
			Routine	03/14/2015	5264 SF	0	0	0	0	5264

Notes: Chloide drill dust samples were taken on this bridge in 2003 and the results are in the letter file for this bridge at the City of St. Paul. 03.
 (2009) Entire bridge driving surface is delaminating and asphalt patches cover most of the surface.
 Area of distress is over 25% of the total deck area. 2011-14
 Entire deck was overlaid with bituminous by the County. 2014-15

205	Reinforced Concrete Column	2	Routine	05/23/2016	6 EA	4	2	0	0	N/A
			Routine	03/14/2015	6 EA	4	2	0	0	N/A

Notes: Slight deterioration of piers. 91-07.
 The S.W. column is spalled for 3 lin. ft. 97-15

215	Reinforced Concrete Abutment	2	Routine	05/23/2016	121 LF	110	11	0	0	N/A
			Routine	03/14/2015	121 LF	110	11	0	0	N/A

Notes: Several vertical cracks in the abutments. 85-15
 Concrete on bottom of medians is spalled over this area. 81-07.
 Leaky abut joint. 2013-15
 Peeling paint at abut faces, graffiti present. 2013-15

234	Reinforced Concrete Pier Cap	2	Routine	05/23/2016	121 LF	0	61	60	0	N/A
			Routine	03/14/2015	121 LF	0	61	60	0	N/A

Notes: Moderate deterioration. Leaching, staining and surface scale. 2011-15
 Spalls - NW - 2011-15

301	Poured Deck Joint	2	Routine	05/23/2016	39 LF	0	39	0	N/A	N/A
			Routine	03/14/2015	39 LF	0	39	0	N/A	N/A

Notes: CL median joint - no sealant present. 2013-15

302	Compression Seal Deck Joint	2	Routine	05/23/2016	194 LF	0	100	94	N/A	N/A
			Routine	03/14/2015	194 LF	0	100	94	N/A	N/A

Notes: Sidewalk joints over piers need sealing. 96-07. OK-11
 Significant Leakage. 2011-15
 Gland pulled out at various locations. 2013-15

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
320	Concrete Approach Slab-Bituminous Wearing Surface	2	Routine	05/23/2016	2 EA	0	2	0	0	N/A
			Routine	03/14/2015	2 EA	0	2	0	0	N/A
Notes: East approach is down at joint with bridge. 07-13 It's still down on the north shoulder up to 1 1/2". Corrected with asphalt patch. 07. Leaching thru joints between the voided slabs. 92-14 Deck guard applied to wearing course in 1991. Severe longitudinal cracks at joints between voided slabs. 92-15 Several old routing repairs have failed. 00-15 Patched with asphalt. 07. The northwest curb has sunk 3" below the sidewalk at the joint with the bridge. 91-15 Corrected with asphalt. 2011										
333	Masonry, Other or Combination Material Railing	2	Routine	05/23/2016	110 LF	50	60	0	N/A	N/A
			Routine	03/14/2015	110 LF	50	60	0	N/A	N/A
Notes: Combo - concrete and metal railing. 2013 Hairline vertical cracking in the concrete railing. 2013-15 Concrete railing needs paint. 2013-15										
358	Concrete Deck Cracking Smart Flag	4	Routine	05/23/2016	1 EA	0	0	0	1	N/A
			Routine	03/14/2015	1 EA	0	0	0	1	N/A
Notes: Deck has unsealed cracks of severe size and density. 2011-14 Entire deck was overlaid with bituminous in 2014.										
359	Underside of Concrete Deck Smart Flag	2	Routine	05/23/2016	1 EA	1	0	0	0	0
			Routine	03/14/2015	1 EA	1	0	0	0	0
Notes: Significant leeching and efflorescence present on entire underside of the deck. 2009-15 Prestressed voided slabs - DO NOT use this smart flag. 2011-15										
387	Reinforced Concrete Wingwall	2	Routine	05/23/2016	2 EA	2	0	0	0	N/A
			Routine	03/14/2015	2 EA	2	0	0	0	N/A
Notes: The northwest retaining wing wall is separated 1 1/2" from the pier column. 99-13 Staining and surface scale. 2013-15										
964	Critical Finding Smart Flag	2	Routine	05/23/2016	1 EA	1	0	N/A	N/A	N/A
			Routine	03/14/2015	1 EA	1	0	N/A	N/A	N/A
Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.										
982	Approach Guardrail	2	Routine	05/23/2016	1 EA	0	1	0	N/A	N/A
			Routine	03/14/2015	1 EA	0	1	0	N/A	N/A
Notes: Impact damage NE end of approach guardrail. 2013-15 20' east of bridge. 2013										
985	Slopes & Slope Protection	2	Routine	05/23/2016	1 EA	0	1	0	N/A	N/A
			Routine	03/14/2015	1 EA	0	1	0	N/A	N/A
Notes: Concrete slopes are steep. 2013 Grass slopes need brushing. 2013-15										

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	05/23/2016	1 EA	0	1	0	N/A	N/A
			Routine	03/14/2015	1 EA	0	1	0	N/A	N/A

Notes: Moderate cracking and spalling. 2011-15
Asphalt patches at walk approaches. 2013-15

988	Miscellaneous Items	1	Routine	05/23/2016	1 EA	1	0	0	N/A	N/A
			Routine	03/14/2015	1 EA	1	0	0	N/A	N/A

Notes: Pier walls are all graffiti. 2013-15

General Notes: 2016 Bridge Re-hab. Project is underway. Ramsey County Project. 2016

58. Deck NBI: 2016 Bridge Re-hab. Project

36A. Brdg Railings NBI:

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail
Terminal NBI:

59. Superstructure NBI: 2016 Bridge Re-hab. Project

60. Substructure NBI: 2016 Bridge Re-hab. Project

61. Channel NBI:

62. Culvert NBI:

71. Waterway Adeq NBI:

72. Appr Roadway
Alignment NBI:

Inventory Notes:

Michael Engel

Inspector's Signature

Glenn Pagel

Reviewer's Signature

MINNESOTA BRIDGE INSPECTION REPORT

06/08/2016

Inspector: CO Bridge

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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
38	Reinforced Concrete Slab	Routine	05/23/2016	0	0	0	0	0
		Migrated Values	06/08/2016	0	0	0	0	0
Notes: 2016 Bridge Re-habilitation Project is underway. Ramsey County Project. 2016								
510	- Wearing Surfaces	Routine	05/23/2016		0	0	0	0
		Migrated Values	06/08/2016		0	0	0	0
205	Reinforced Concrete Column	Routine	05/23/2016	6 EA	4	2	0	0
		Migrated Values	06/08/2016	6 EA	4	2	0	0
Notes: Slight deterioration of piers. 91-07. The S.W. column is spalled for 3 lin. ft. 97-15								
215	Reinforced Concrete Abutment	Routine	05/23/2016	0	0	0	0	0
		Migrated Values	06/08/2016	0	0	0	0	0
Notes: 2016 Bridge Re-habilitation Project is underway. Ramsey County Project. 2016								
234	Reinforced Concrete Pier Cap	Routine	05/23/2016	0	0	0	0	0
		Migrated Values	06/08/2016	0	0	0	0	0
Notes: 2016 Bridge Re-habilitation Project is underway. Ramsey County Project. 2016								
301	Pourable Joint Seal	Routine	05/23/2016	0	0	0	0	0
		Migrated Values	06/08/2016	0	0	0	0	0
Notes: CL median joint - no sealant present. 2013-15								
302	Compression Joint Seal	Routine	05/23/2016	0	0	0	0	0
		Migrated Values	06/08/2016	0	0	0	0	0
330	Metal Bridge Railing	Routine	05/23/2016	0	0	0	0	0
		Migrated Values	06/08/2016	0	0	0	0	0
515	- Steel Protective Coating	Routine	05/23/2016	0 SF	0	0	0	0
		Migrated Values	06/08/2016	0 SF	0	0	0	0
331	Reinforced Concrete Bridge Railing	Routine	05/23/2016	0	0	0	0	0
		Migrated Values	06/08/2016	0	0	0	0	0

BRIDGE 62525 CSAH 31(WB MRYLD) OVER CP RAIL

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
800	Critical Deficiencies or Safety Hazards	Routine	05/23/2016	1 EA	1	0	0	0
		Migrated Values	06/08/2016	1 EA	1	0	0	0
Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION.								
810	Concrete Decks - Cracking & Sealing	Routine	05/23/2016	0 LF	0	0	0	0
		Migrated Values	06/08/2016	0 LF	0	0	0	0
883	Concrete Shear Cracking	Routine	05/23/2016	1 EA	1	0	0	0
		Migrated Values	06/08/2016	1 EA	1	0	0	0
Notes: Use this element to monitor the presence of shear cracking on concrete elements. Pay particular attention to the concrete pier caps.								
892	Slopes & Slope Protection	Routine	05/23/2016	1 EA	1	0	0	0
		Migrated Values	06/08/2016	1 EA	1	0	0	0
Notes: Concrete slopes are steep. 2013 Grass slopes need brushing. 2013-15								
893	Guardrail	Routine	05/23/2016	1 EA	1	0	0	0
		Migrated Values	06/08/2016	1 EA	1	0	0	0
894	Deck & Approach Drainage	Routine	05/23/2016	1 EA	1	0	0	0
		Migrated Values	06/08/2016	1 EA	1	0	0	0
Notes: Use this element to rate the condition, function, and adequacy of the drainage system.								
895	Sidewalk, Curb, & Median	Routine	05/23/2016	1 EA	1	0	0	0
		Migrated Values	06/08/2016	1 EA	1	0	0	0
899	Miscellaneous Items	Routine	05/23/2016	1 EA	1	0	0	0
		Migrated Values	06/08/2016	1 EA	1	0	0	0
900	Protected Species	Routine	05/23/2016	1 EA	1	0	0	0
		Migrated Values	06/08/2016	1 EA	1	0	0	0
Notes: Use this element to track the presence of protected species living on this structure.								

General Notes: 2016 Bridge Re-hab. Project is underway. Ramsey County Project. 2016

58. Deck NBI: 2016 Bridge Re-hab. Project

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71. Waterway Adeq NBI:

72. Appr Roadway
Alignment NBI:

Inventory Notes:

Michael Engel

Inspector's Signature

Glenn Pagel

Reviewer's Signature

Pictures

2016 Bridge Re-hab. Project Ramsey County

Photo 1 - 2016.PNG



Photo 2 - 2016 bridge Re-hab. Project.jpg

Pictures



Photo 2 - 2016 bridge Re-hab. Project.jpg