

**2016 ROUTINE  
BRIDGE INSPECTION REPORT**



**BRIDGE # 62508  
CSAH 55(JACKSON) over PENNSYLVANIA AVE**

**DISTRICT: Metro                      COUNTY: Ramsey                      CITY/TOWNSHIP: St Paul**

**STATE: Minnesota**

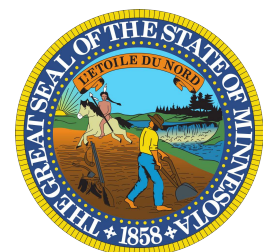
**Date of Inspection: 06/18/2016**

**Equipment Used:**

**Owner: County Highway Agency**

**Inspected By: Ekstrand, Ron; Engel, Michael; Reimer, Dan**

**Report Written By: Dan Reimer  
Report Reviewed By: Glenn Pagel  
Final Report Date: 09/28/2016**



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# Minnesota Structure Inventory Report

Bridge ID: 62508

CSAH 55(JACKSON) over PENNSYLVANIA AVE

Date: 09/28/2016

+ GENERAL +	+ ROADWAY +	+ INSPECTION +																				
<b>Agency Br. No.</b> <b>Crew</b> <b>District</b> 05 <b>Maint. Area</b> <b>County</b> 062 - Ramsey <b>City</b> St Paul <b>Township</b> <b>Desc. Loc.</b> 0.7 MI N OF JCT TH 94 <b>Sect., Twp., Range</b> 31 - 029N - 22W <b>Latitude</b> 44 °    57 '    40.14 '' <b>Longitude</b> 93 °    5 '    53.40 '' <b>Custodian</b> 02 - County Highway Agency <b>Owner</b> 02 - County Highway Agency <b>BMU Agreement</b> <b>Year Built</b> 1963 <b>MN Year Reconstructed</b> 1982 <b>FHWA Year Reconstructed</b> <b>MN Temporary Status</b> <b>Bridge Plan Location</b> 1 - CENTRAL <b>Date Opened to Traffic</b> <b>On - Off System</b> 1 - ON <b>Legislative District</b> 65A <b>Potential ABC</b> 2 - N/A	<b>Bridge Match ID (TIS)</b> 1 <b>Roadway O/U Key</b> Route On Structure <b>Route Sys</b> 04 - CSAH <b>Number</b> 55 <b>Roadway Name or Description</b> CSAH 55 <b>Level of Service</b> 1 - MAINLINE <b>Roadway Type</b> 2 - 2-way traffic <b>Control Section (TH Only)</b> <b>Reference Point</b> 000+00.000 <b>Detour Length</b> 1.0                      mi. <b>Lanes</b> <b>ON</b> 2 <b>UNDER</b> 4 <b>ADT</b> 6900 <b>YEAR</b> 2005 <b>HCA DT</b> <b>ADTT</b> % <b>Functional Class</b> 16 - Urban - Minor Arterial	<b>Userkey</b> 199 <b>Structurally Deficient</b> N <b>Functionally Obsolete</b> Y <b>Sufficiency Rating</b> 87.8 <b>Routine Inspection Date</b> 06/18/2016 <b>Routine Inspection Frequency</b> 24 <b>Inspector Name</b> Reimer, Dan <b>Status</b> A - Open																				
		+ NBI    CONDITION    RATINGS +																				
		<b>Deck</b> 7 <b>Unsound Deck %</b> 1 <b>Superstructure</b> 7 <b>Substructure</b> 7 <b>Channel</b> N <b>Culvert</b> N																				
		+ NBI    APPRAISAL    RATINGS +																				
		<b>Structure Evaluation</b> 6 <b>Deck Geometry</b> 6 <b>Underclearances</b> 3 <b>Waterway Adequacy</b> N <b>Approach Alignment</b> 8																				
		+ SAFETY    FEATURES +																				
		<b>Bridge Railing</b> 1 - MEETS STANDARDS <b>GR Transition</b> 0 - SUBSTANDARD <b>Appr. Guardrail</b> 0 - SUBSTANDARD <b>GR Termini</b> 0 - SUBSTANDARD																				
		+ IN    DEPTH    INSP. +																				
		<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 10%; text-align: center;">Y/N</th> <th style="width: 15%; text-align: center;">Freq</th> <th style="width: 15%; text-align: center;">Date</th> </tr> </thead> <tbody> <tr> <td><b>Frac. Critical</b></td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td><b>Underwater</b></td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td><b>Pinned Asbly.</b></td> <td style="text-align: center;">N</td> <td></td> <td></td> </tr> <tr> <td><b>Spec. Feat.</b></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Y/N	Freq	Date	<b>Frac. Critical</b>	N			<b>Underwater</b>	N			<b>Pinned Asbly.</b>	N			<b>Spec. Feat.</b>			
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		+ WATERWAY +																				
		<b>Drainage Area (sq. mi.)</b> <b>Waterway Opening (sf.)</b> <b>Navigation Control</b> N - Not applicable, no <b>Pier Protection</b> <b>Nav. Clr. (ft.)</b> <b>Vert.</b> 0.0 <b>Horiz.</b> 0.0 <b>Nav. Vert. Lift Bridge Clear. (ft.)</b> <b>MN Scour Code</b> A - NON <b>Year</b>																				
		+ CAPACITY    RATINGS +																				
		<b>Design Load</b> 5 - HS 20 <b>Operating Rating</b> 2 - HS TRUCK                      26.4 <b>Inventory Rating</b> 2 - HS TRUCK                      15.8 <b>Posting VEH:</b> <b>SEMI:</b> <b>DBL:</b> <b>Rating Date</b> 10/16/2013 <b>Overweight Permit Codes</b> <b>A</b> N - N/A <b>B</b> N - N/A <b>C</b> N - N/A																				
+ STRUCTURE +	+ RDWY    DIMENSIONS +																					
<b>Service On</b> 5 - Highway-pedestrian <b>Service Under</b> 1 - Highway, w/ or w/out ped. <b>Main Span Type</b> 4 - Steel Continuous <b>Main Span Design</b> 01 - Beam Span <b>Main Span Detail</b> <b>Appr. Span Type</b> <b>Appr. Span Design</b> <b>Appr. Span Detail</b> <b>Skew</b> 40                      LEFT <b>Culvert Type</b> <b>Barrel Length</b> <b>Cantilever ID</b> F - Friction Hinge	<b>If Divided</b> <b>NB-EB</b> <b>SB-WB</b> <b>Roadway Width</b> 44.00                      ft.                      ft. <b>Vertical Clearance</b> ft.                      ft. <b>Max. Vert. Clear.</b> ft.                      ft. <b>Horizontal Clear.</b> 43.9                      ft.                      ft. <b>Lateral Clearance</b> ft.                      ft. <b>Appr. Surface Width</b> 44.0                      ft. <b>Bridge Roadway Width</b> 44.0                      ft. <b>Median Width On Bridge</b> ft.																					
		+ MISC.    BRIDGE    DATA +																				
		<b>Structure Flared</b> 0 - No flare <b>Parallel Structure</b> N - No parallel structure <b>Field Conn. ID</b> 2 - Riveted <b>Abutment Foundation (Material/Type)</b> 3 - FTG PILE <b>Pier Foundation (Material/Type)</b> 3 - FTG PILE <b>Historic Status</b> 5 - Not eligible																				
		+ PAINT +																				
		<b>Year Painted</b> 1982 <b>Unsound Paint %</b> 2 <b>Painted Area</b> 8000                      sq. ft. <b>Primer Type</b> 1 - Lead - non 3309 <b>Finish Type</b> D - Alkyd Iron Oxide																				
		+ BRIDGE    SIGNS +																				
		<b>Posted Load</b> 0 - Not Required <b>Traffic</b> 0 - Not Required <b>Horizontal</b> 0 - Not Required <b>Vertical</b> 0 - Not Required																				
<b>Number of Spans</b> <b>MAIN:</b> 4 <b>APPR:</b> 0 <b>TOTAL:</b> <b>Main Span Length</b> 50.8                      ft. <b>Structure Length</b> 173.0                      ft. <b>Deck Width (Out-to-Out)</b> 58.3                      ft. <b>Deck Material</b> 1 - Concrete Cast-in-Place <b>Wear Surf Type</b> 4 - Low Slump Concrete <b>Wear Surf Install Year</b> 1982 <b>Wear Course/Fill Depth</b> 0.17                      ft. <b>Deck Membrane</b> 0 - None <b>Deck Rebars</b> 1 - Epoxy Coated Reinforcing <b>Deck Rebars Install Year</b> 1982 <b>Structure Area (Out-to-Out)</b> 10086                      sq. ft. <b>Roadway Area (Curb-to-Curb)</b> 7610                      sq. ft. <b>Sidewalk Width</b> <b>50A. Lt</b> 6.00                      ft. <b>50B. Rt</b> 6.00                      ft. <b>Curb Height</b> <b>Lt</b> 0.83                      ft. <b>Rt</b> 0.83                      ft. <b>Rail Type</b> <b>Lt</b> 21 <b>Rt</b> 21																						

# MINNESOTA BRIDGE INSPECTION REPORT

09/28/2016

Inspector: CO Bridge

## BRIDGE 62508 CSAH 55(JACKSON) OVER PENNSYLVANIA AVE

County: Ramsey	Location: 0.7 MI N OF JCT TH 94	Length: 173.0 ft.
City: St Paul	Route: 04 - CSAH 55 Ref. Pt.: 000+00.000	Deck Width: 58.3 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: 7610 sq. ft. / 1%
Section: 31 Township: 029N Range: 22W Maint. Area:		Paint Area/ Pct. Unsnd: 8000 sq. ft. / 2%
Span Type: 4 - Steel Continuous 2 -	Local Agency Bridge Nbr.:	Culvert: N/A
List: Stringer/Multi-beam or Girder		Postings:
NBI Deck: 7 Super: 7 Sub: 7 Chan: N Culv: N		
	Open, Posted, Closed: A - Open	
	MN Scour Code: A - NON WATERWAY	

Appraisal Ratings - Approach: 8 Waterway: N	Unofficial Structurally Deficient N
Required Bridge Signs - Load Posting: 0 - Not Required	Unofficial Functionally Obsolete Y
Horizontal: 0 - Not Required	Unofficial Sufficiency Rating 87.8
Traffic: 0 - Not Required	
Vertical: 0 - Not Required	

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	06/18/2016	10086 SF	9935	50	101	0
		Migrated Values		10086 SF	9935	50	101	0
Notes: Transverse cracks with efflorescence NB lane and sidewalks. 2010-16 Under deck cracking present, N. abut - middle 4 bays. Reflect through to the top deck. 2014 Light leaching, loose delams and spalls with exposed rebar are present. 2016								
510	- Wearing Surfaces	Routine	06/18/2016	7610 SF	7458	76	38	38
		Migrated Values		7610 SF	7458	76	38	38
Notes: Low Slump Overlay with Epoxy Rebar Notes: Sealed and unsealed cracks are present. 2016 From .012 inch to 1/8 inch and wider. 2016 Spalls over 1/2 inch deep and patches are present. 2016								
107	Steel Open Girder/Beam	Routine	06/18/2016	1558 LF	1432	90	36	0
		Migrated Values		1558 LF	1432	90	36	0
Notes: Light rust at the bearing areas. 1993-2006 3/4" sag in east and west fascia beams. 1993 Surface corrosion is present, freckled rust. CS2 2016 Flaking rust or pack rust is present. CS3 2016								
515	- Steel Protective Coating	Routine	06/18/2016	13185 SF	5966	5274	648	1297
		Migrated Values		13185 SF	5966	5274	648	1297
Notes: Paint failure with rust is present. 2016 Chalking and fading paint. CS2 2016 Paint is peeling, primer in tact. CS3 2016 Paint and primer has failed. Exposed steel. CS4 2016 Corrosion and flaking rust present at beam ends and joint locations. 2016								
205	Reinforced Concrete Column	Routine	06/18/2016	12 EA	6	5	1	0
		Migrated Values		12 EA	6	5	1	0
Notes: Minor spall at the bottom of the SE column. Greater than 6" diameter. 2014-16 Spall on N. side of column - middle set - 2nd from east. 2014-16 Vertical cracking present through out. 2014-16 Footings at the base of the columns have several horizontal cracks. 2016 Delams present at different columns. 2016								
215	Reinforced Concrete Abutment	Routine	06/18/2016	188 LF	161	21	6	0
		Migrated Values		188 LF	161	21	6	0
Notes: Several vertical hairline cracks in the north and south abutment. 2000-16 1/8" horizontal crack 6' long at the first interior beam seat at the south abutment. 2000-16 Moderate cracking present. 2012-16 Minor delams. 2012-16								

**BRIDGE 62508 CSAH 55(JACKSON) OVER PENNSYLVANIA AVE**

ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
234	Reinforced Concrete Pier Cap	Routine	06/18/2016	213 LF	209	4	0	0
		Migrated Values		213 LF	209	4	0	0
Notes: Exterior of SE cap has 2 LF spall. 2014-16 Interior of SE cap has 2 LF spall. 2014-16 Minor vertical cracks above exterior columns. 2016								
300	Strip Seal Expansion Joint	Routine	06/18/2016	148 LF	148	0	0	0
		Migrated Values		148 LF	148	0	0	0
301	Pourable Joint Seal	Routine	06/18/2016	148 LF	0	100	48	0
		Migrated Values		148 LF	0	100	48	0
Notes: Sealant has minor adhesion failure. CS2 2014-16 Sealant has complete adhesion failure or is missing. CS3 2016								
302	Compression Joint Seal	Routine	06/18/2016	75 LF	75	0	0	0
		Migrated Values		75 LF	75	0	0	0
311	Movable Bearing	Routine	06/18/2016	18 EA	9	9	0	0
		Migrated Values		18 EA	9	9	0	0
Notes: Bearing on the north and south piers are tipped 3/8" to 1/4" to the north. 2000 Expansion bearings located at piers 2 and 4. 2014								
	515 - Steel Protective Coating	Routine	06/18/2016	36 SF	27	9	0	0
		Migrated Values		36 SF	27	9	0	0
Notes: Light rust is present. 2016								
313	Fixed Bearing	Routine	06/18/2016	27 EA	27	0	0	0
		Migrated Values		27 EA	27	0	0	0
Notes: Fixed bearings located at the abuts and center pier #3. 2014 Abut bearings are sealed into the concrete back wall pour. 2016								
321	Reinforced Concrete Approach Slab	Routine	06/18/2016	3080 SF	2833	154	93	0
		Migrated Values		3080 SF	2833	154	93	0
Notes: Unsealed moderate cracks are present. 2016 Permanent patches are present. 2016 Temporary patches and wide cracks are present. 2016								
330	Metal Bridge Railing	Routine	06/18/2016	378 LF	328	50	0	0
		Migrated Values		378 LF	328	50	0	0
Notes: Chain link fence on top of the concrete bridge railing. 2016 Rust staining of the railing is present. 2016 Base plates and anchor bolts are rusty / corroded. 2016								
	515 - Steel Protective Coating	Routine	06/18/2016	2268 SF	0	1815	453	0
		Migrated Values		2268 SF	0	1815	453	0
Notes: Galvanized coating on fabric and posts. 2016 Chalking and fading of protective coating is present. 2016 Rust and corrosion of the fabric material. 2016								
331	Reinforced Concrete Bridge Railing	Routine	06/18/2016	378 LF	318	60	0	0
		Migrated Values		378 LF	318	60	0	0
Notes: Several cracks in east and west coping with leaching, especially at deflection joints in the railing. 85-99. Insignificant vertical cracks are present. 2016 A new coating was placed on the inside face of the concrete parapet. 08. Rust staining from the above metal railing is present. 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
800	Critical Deficiencies or Safety Hazards	Routine	06/18/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: NO CRITICAL FINDINGS OBSERVED DURING THE LAST INSPECTION. 2016							
810	Concrete Decks - Cracking & Sealing	Routine	06/18/2016	1052 LF	1052	0	0	0
		Migrated Values		1052 LF	1052	0	0	0
	Notes: Unsealed cracks less than .012 inch. 2016							
815	Plow Fingers	Routine	06/18/2016	1 EA	0	0	1	0
		Migrated Values		1 EA	0	0	1	0
	Notes: 4 plow fingers are missing. 2016							
850	Steel Hinge Assembly	Routine	06/18/2016	18 EA	0	18	0	0
		Migrated Values		18 EA	0	18	0	0
	Notes: 9 beam lines X 2 hinges = 18 hinge assemblies total The bearings at the hinge are expansion type. 2014 Surface corrosion is present. 2016							
855	Secondary Members (Superstructure)	Routine	06/18/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: Diaphragms							
883	Concrete Shear Cracking	Routine	06/18/2016	1 EA	1	0	0	0
		Migrated Values		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	06/18/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
	Notes: Four cracked panels at the top of the south slope paving. 86-12 Minor to moderate settlement. 2016							
893	Guardrail	Routine	06/18/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: Guard rails also on the roadway under the bridge. 2016							
894	Deck & Approach Drainage	Routine	06/18/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
895	Sidewalk, Curb, & Median	Routine	06/18/2016	1 EA	1	0	0	0
		Migrated Values		1 EA	1	0	0	0
	Notes: Numerous transverse and longitudinal cracks in walk. (Minor) 2014-16 Undermining starting to occur at the NW and NE corners. 2014-1 There is a spall at the NE approach walk. 2016							
899	Miscellaneous Items	Routine	06/18/2016	1 EA	0	1	0	0
		Migrated Values		1 EA	0	1	0	0
	Notes: Grounding wires are loose at the north end on both sides. 95-10.							
900	Protected Species	Routine	06/18/2016	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:

**BRIDGE 62508 CSAH 55(JACKSON) OVER PENNSYLVANIA AVE**

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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
	58. Deck NBI:							
	36A. Brdg Railings NBI:							
	36B. Transitions NBI:	Posted speed does NOT exceed 40 MPH.	2014					
	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:							

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Dan Reimer  
Inspector's Signature

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Glenn Pagel  
Reviewer's Signature



1. 11-04-2012 048.jpg



2. 11-04-2012 049.jpg



3. Center pier assy, 2nd column from E, N side.JPG



4. E concrete rail.JPG



5. N end of bridge.JPG



6. N pier assy, E column.JPG



7. NB lane at S expansion joint.JPG



8. NB lane towards the S.JPG



9. NE approach walk.JPG



10. NE gutter line.JPG



11. S approach panel.JPG



12. views 145.JPG



13. views 146.JPG



14. views 147.JPG



15. views 148.JPG



16. views 149.JPG



17. views 150.JPG



18. views 151.JPG



19. views 152.JPG



20. views 153.JPG



21. views 154.JPG



22. views 155.JPG



23. views 156.JPG



24. views 157.JPG



25. views 158.JPG



26. views 159.JPG



27. views 160.JPG



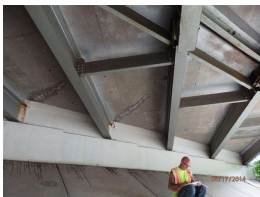
28. views 161.JPG



29. views 162.JPG



30. views 163.JPG



31. views 164.JPG



32. views 165.JPG



33. views 166.JPG



34. views 167.JPG



35. views 168.JPG





36. views 169.JPG



37. views 170.JPG



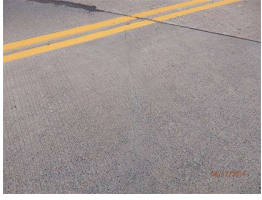
38. views 171.JPG



39. views 172.JPG



40. views 173.JPG



41. views 174.JPG



42. views 175.JPG