



Hennepin County Transportation Department

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Structures Supervisor
Burlington Northern & Santa Fe RR
80 - 44th Avenue N.E.
Minneapolis, MN 55421

**2012 BRIDGE INSPECTION REPORTS
AND STRUCTURE INVENTORIES**

The 2012 BRIDGE INSPECTION REPORTS and Structure Inventories for bridges under your jurisdiction are enclosed. The reports and inventories have been submitted to the Minnesota Department of Transportation, Bridge Data Section, Oakdale, Minnesota, as required by Minnesota Statute 165.03.

Enclosed bridge number(s): 90434
 90602
 90625
 90655

If you have any questions regarding the above, please call me at (612) 596-0364.

Sincerely,

Bernard J. Jahn, P.E.
Bridge Engineer

Enclosure(s)

*Please Address the
Column Problems
on 90434 & 90625
They Are Serious*

*Also - 90655 Has a
Bearing Problem
on the Pier*

MnDOT Structure Inventory Report

Bridge ID: 90625

BNSF RR

over CSAH 153(LOWRY AVE NE)

Date: 11/05/2012

GENERAL

Agency Br. No. 708
 District Metro
 Maint. Area Crew
 County 027 - Hennepin
 City Minneapolis
 Township
 Desc. Loc. 0.3 MI E OF JCT TH 47
 Sect., Twp., Range 11 - 029N - 24W
 Latitude Deg 45 Min 0 Sec 47.36
 Longitude Deg 93 Min 15 Sec 29.77
 Custodian 27 - Railroad
 Owner 27 - Railroad
 BMU Agreement
 Year Built 1931
 MN Year Reconstructed
 FHWA Year Reconstructed
 MN Temporary Status
 Bridge Plan Location 4 - MUNICIPAL
 Date Opened to Traffic
 On-Off System 0 - OFF
 Legislative District 59A

STRUCTURE

Service On 2 - Railroad
 Service Under 1 - Highway, w/ or w/out ped.
 Main Span Type
 3 - Steel 01 - Beam Span
 Main Span Detail
 Appr. Span Type
 1 - Concrete 09 - Slab Span
 Appr. Span Detail
 Skew 25 R
 Culvert Type
 Barrel Length ft.
 Cantilever ID

NUMBER OF SPANS

MAIN: 2 APPR: 2 TOTAL: 4
 Main Span Length 26.5 ft.
 Structure Length 78.0 ft.
 Deck Width (Out-to-Out) 86.1 ft.
 Deck Material 1 - Concrete Cast-in-Place
 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) 6716 sq. ft.
 Roadway Area (Curb-to-Curb) 6717 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
 Route Sys Number
 Roadway Name or Description
 Level of Service
 Roadway Type
 Control Section (TH Only)
 Reference Point
 Detour Length mi.
 Lanes On Under 4
 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 1931
 Unsound Paint %
 Painted Area 20000 sq. ft.
 Primer Type 1 - Lead - non 3309
 Finish Type D - Alkyd Iron Oxide

BRIDGE SIGNS

Posted Load 0 - Not Required
 Traffic 0 - Not Required
 Horizontal 1 - Object Markers
 Vertical 1 - Rdwy. Clr. Restriction

INSPECTION

Userkey 67
 Unofficial Structurally Deficient Y
 Unofficial Functionally Obsolete
 Unofficial Sufficiency Rating -1
 Routine Inspection Date 05/21/2012
 Routine Inspection Frequency 12
 Inspector Name County, Hennepin
 Status A - Open

NBI CONDITION RATINGS

Deck 5 - Fair Condition
 Unsound Deck %
 Superstructure 5 - Fair Condition
 Substructure 3 - Serious Condition
 Channel N - Not Applicable
 Culvert N - Not Applicable

NBI APPRAISAL RATINGS

Structure Evaluation 4
 Deck Geometry
 Underclearances 0
 Water Adequacy N - Not Applicable
 Approach Alignment N - Not Applicable

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			
Underwater			
Pinned Asbly.			
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 1991

CAPACITY RATINGS

Design Load 8 - RAILROAD
 Operating Rating 2 - AS HS65.0
 Inventory Rating 2 - AS HS65.0
 Posting VEH: SEMI: DBL:
 Rating Date

MnDOT Permit Codes
 A: N - N/A
 B: N - N/A
 C: N - N/A

MnDOT Structure Inventory Report

Additional Roadways

Bridge ID: 90625

BNSF RR over CSAH 153(LOWRY AVE NE)

Date: 11/05/2012

ROADWAY		
Bridge Match ID (TIS):	0	
5A. Roadway On/Under:	2 - UNDERRECORD 2 TYPE (IF ONLY 1	
Bridge Route System:	4 - COUNTY HIGHWAY	
5D. Route Number:	153	
Roadway Name or Description		
CSAH 153(LOWRY AVE NE)		
5C. Level of Service:	1 - MAINLINE	
102. Direction of Traffic:	2 - 2-way traffic	
Control Section (TH Only):	27	
Reference Point:		
19. Detour Length (mi):	0.0	
Lanes:	4	
29. ADT:	13924	
30. Year:	2008	
26. Functional Class:	16	
Traffic Sequence Number:	61979	
InterRegional Corridor (TH Only):		
ROADWAY DIMENSIONS		
	NB-EB	SB-WB
Roadway Width (ft):	19.50	19.70
Vertical Clearance (ft):	13.8	14
Max. Vert. Clear. (ft):	13.8	14
Horizontal Clear. (ft):	19.4	19.6
	Left	Right
Lateral Clearance (ft):	0.4	0.4
32. Appr. Roadway Width	44.0	
51. Brdg Roadway Width (ft):	39.2	
Median Width (ft):	3.00	
10. Vertical Clearance (ft):	14	
47. Horizontal Clearance	19.6	

MnDOT BRIDGE INSPECTION REPORT

11/05/2012

Inspector: County, Hennepin

BRIDGE 90625 BNSF RR OVER CSAH 153(LOWRY AVE NE)

ROUTINE INSP. DATE: 05/21/2012

County: Hennepin	Location: 0.3 MI E OF JCT TH 47	Length: 78.0 ft.
City: Minneapolis	Route: Ref. Pt.:	Deck Width: 86.1 ft.
Township:	Control Section:	Rdwy. Area/ Pct. Unsnd: 6717 sq. ft. / %
Section: 11 Township: 029N Range: 24W Maint. Area:		Paint Area/ Pct. Unsnd: 20000 sq. ft. / %
Span Type: 3 - Steel 02 - Stringer/Multi-beam or Girder	Local Agency Bridge Nbr.: 708	Culvert: N/A
NBI Deck: 5 Super: 5 Sub: 3 Chan: N Culv: N		Postings:

Open, Posted, Closed: A - Open
MN Scour Code: A - NON WATERWAY

Appraisal Ratings - Approach: N Waterway: N	Unofficial Structurally Deficient Y
Required Bridge Signs - Load Posting: 0 - Not Required	Unofficial Functionally Obsolete
Horizontal: 1 - Object Markers	Unofficial Sufficiency Rating -1
Traffic: 0 - Not Required	
Vertical: 1 - Rdwy. Clr. Restriction	

Structure Unit:

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
012	Top of Concrete Deck (No Overlay - Uncoated Rebar)	1	Routine	05/21/2012	5005 SF	0	0	5005	0	0
			Routine	05/02/2011	5005 SF	0	5005	0	0	0
Notes: 12. Conc spalled w/ rebar exp @ W coping over EB.										
038	Top of Concrete Slab (No Overlay - Uncoated Rebar)	1	Routine	05/21/2012	1701 SF	0	0	1701	0	0
			Routine	05/02/2011	1701 SF	0	1701	0	0	0
Notes: 38. RR tracks and ballast on top of slab. Joint @ N and S spans misaligned vertically.										
107	Painted Steel Girder or Beam	4	Routine	05/21/2012	2221 LF	0	0	2221	0	0
			Routine	05/02/2011	2221 LF	0	0	2221	0	0
Notes: 107. Stringers hit and scraped many times. Different widths on the bottom of flanges. Several bottom flanges have minor dents from traffic impact.										
110	Reinforced Concrete Girder or Beam	4	Routine	05/21/2012	157 LF	0	150	0	7	N/A
			Routine	05/02/2011	157 LF	0	150	7	0	N/A
Notes: 110. Conc fascia beams. W fascia is a combination steel beam w/ conc on W face to make beam look like a "T". NE fascia severely damaged w/ rebar exp and one rebar sheared off. Fascia beams have impact damage and spalls.										
205	Reinforced Concrete Column	4	Routine	05/21/2012	46 EA	0	7	20	19	N/A
			Routine	05/02/2011	46 EA	0	7	20	19	N/A
Notes: 205. Many columns cracked w/ large delams and spalls. Rebar exp w/ section loss @ all piers. Center pier has 11 columns w/ major loss of section. BJJ to request BNSF RR complete analysis of deteriorated columns. When columns are repaired, place crash strut @ center columns. Lower portion painted white @ all piers.										
215	Reinforced Concrete Abutment	4	Routine	05/21/2012	190 LF	180	10	0	0	N/A
			Routine	05/02/2011	190 LF	180	10	0	0	N/A
Notes: 215. A few vert cracks. Popouts on faces. Lower portions painted white. S stained by seepage @ joint. Rust @ old form ties. Leakage in E center of N. Fine map cracking in S. Spalls in E const joint of S.										
234	Reinforced Concrete Pier Cap	4	Routine	05/21/2012	279 LF	259	14	6	0	N/A
			Routine	05/02/2011	279 LF	259	14	6	0	N/A
Notes: 234. Center and N cap stained from leakage thru deck. A few vert cracks in some caps. Vert spalls w/ exp rebar N side pier 2 and S side pier 1.										

Structure Unit:

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	4	Routine	05/21/2012	88 EA	0	88	0	N/A	N/A
			Routine	05/02/2011	88 EA	0	88	0	N/A	N/A
Notes: 311. Rusted.										
313	Fixed Bearing	4	Routine	05/21/2012	88 EA	0	88	0	N/A	N/A
			Routine	05/02/2011	88 EA	0	88	0	N/A	N/A
Notes: 313. Rusted. Pack rust and some advanced corrosion on both sides of pier 2.										
331	Reinforced Concrete Bridge Railing	1	Routine	05/21/2012	157 LF	141	9	7	0	N/A
			Routine	05/02/2011	157 LF	141	9	7	0	N/A
Notes: 331. Conc weathered and spalled. W rail spalled w/ rebar exp and rusted in a few places. Ballast rocks can fall through E rail onto traffic below.										
358	Concrete Deck Cracking Smart Flag	2	Routine	05/21/2012	1 EA	1	0	0	0	N/A
			Routine	05/02/2011	1 EA	1	0	0	0	N/A
Notes: 358.										
359	Underside of Concrete Deck Smart Flag	2	Routine	05/21/2012	1 EA	0	0	1	0	0
			Routine	05/02/2011	1 EA	0	1	0	0	0
Notes: 359. Spans 2 and 3 - Efflor @ stringer flanges. Considerable leakage over N and center piers. Conc spalled w/ rebar exp @ W coping over EB. Leaking and efflor @ const joint in all spans. Long cracks in N span, W side. Spalls, some w/ rebar exp in N span.										
362	Traffic Impact Smart Flag	2	Routine	05/21/2012	1 EA	0	0	1	N/A	N/A
			Routine	05/02/2011	1 EA	0	1	0	N/A	N/A
Notes: 963. Fascia beam and steel girder impacts.										
387	Reinforced Concrete Wingwall	4	Routine	05/21/2012	4 EA	0	4	0	0	N/A
			Routine	05/02/2011	4 EA	0	4	0	0	N/A
Notes: 387. Walls weathered. Rust @ old wire form ties. Diag cracks in NE. Numerous popouts in NW, SE and SW. Fine horiz and map cracks in NW.										
964	Critical Finding Smart Flag	2	Routine	05/21/2012	1 EA	1	0	N/A	N/A	N/A
			Routine	05/02/2011	1 EA	1	0	N/A	N/A	N/A
Notes: 964.										
981	Signing	2	Routine	05/21/2012	1 EA	0	0	1	0	0
			Routine	05/02/2011	1 EA	0	0	1	0	0
Notes: 981. Horiz clearance marker X4-4 @ NE and SW corners. Center pier has reflector signs-WB sign damaged. Lights mounted on center pier. Directional signs @ center pier. WB restricted clearance sign on bridge is missing, EB is damaged. Vert clearance sign (13'-6") @ approaches. No advance vert clear signs-reported to operations & Minneapolis. Narrow bridge sign @ E approach, none @ W. No parking between 7-9 AM and 4-6 PM M-F @ N side of street. No parking between 4-6 PM @ S side. All Keep Right and horiz clearance signs on approach columns are discolored and have graffiti on them.										
984	Deck & Approach Drainage	2	Routine	05/21/2012	1 EA	1	0	0	N/A	N/A
			Routine	05/02/2011	1 EA	1	0	0	N/A	N/A
Notes: 984. OK.										

Structure Unit:

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
988	Miscellaneous Items	2	Routine	05/21/2012	1 EA	1	0	0	N/A	N/A
			Routine	05/02/2011	1 EA	1	0	0	N/A	N/A

Notes: 988. 1" conduit attached to N abut, pier 3 and between beams near E side. 1" conduit is attached to W fascia and runs along S pier to luminaires. 1" conduit S side pier 1. 2 lights @ N walkway, 2 @ WB roadway, 2 @ EB roadway and 2 @ S walkway. Curb spalled @ median and outside gutters. S curb has several areas of exp rebar. Curb @ median is badly deteriorated, w/ 20% of it gone. Minimal horiz clearance. 3' high metal ret wall holding ballast rock @ SE corner. Graffiti on S pier.

General Notes: Bridge 90625(708) BNSF RR/CSAH 153(Lowry Ave NE) 5/21/12. BJJ, WJM and PTH.
 NOTES: Call Pat Grant for sign issues on bridges in City of Minneapolis-office 612-673-5757; cell 612-221-5305. Minimum vert clearance = 13.8' @ WB. Repair agreement: BNSF RR. Still no advance warning signs EB or WB-2012.

Recommended Repairs:

- 205. Repair severely deteriorated conc columns-request BNSF RR to complete analysis of columns - HIGH PRIORITY.
- 331. Modify E rail to prevent ballast from falling onto traffic below.
- 981. No advance vertical clearance signs-reported to operations and City of Minneapolis.
- 988. Repair curbs.

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:

Bernard Jahn

Inspector's Signature

Bernard Jahn

Reviewer's Signature