

**2012 ROUTINE
BRIDGE INSPECTION REPORT**



**BRIDGE # L8170
VALLEY CRK TR (53) over VALLEY CRK (TRIBUTARY)**

DISTRICT: Metro

COUNTY: Washington

CITY/TOWNSHIP: Afton

Date(s) of Inspection: 10/09/2012

Equipment Used:

Owner: City or Municipal Highway Agency

Inspected By: Lovelace, Barritt

Report Written By: Barritt Lovelace

Report Reviewed By:

Final Report Date:

MnDOT Bridge Office
3485 Hadley Avenue North
Oakdale, MN 55128



Table of Contents

<u>SECTION</u>	<u>PAGE</u>
SI&A	1
ADDITIONAL ROADWAYS	2
ROUTINE INSPECTION DATA	3
PICTURES	5

MnDOT Structure Inventory Report

Bridge ID: L8170

VALLEY CRK TR (53)

over VALLEY CRK (TRIBUTARY)

Date: 11/09/2012

GENERAL	
Agency Br. No.	
District	Metro
Maint. Area	Crew
County	082 - Washington
City	Afton
Township	
Desc. Loc.	1.1 MI E OF JCT CR 71
Sect., Twp., Range	16 - 028N - 20W
Latitude	Deg 44 Min 54 Sec 48.7
Longitude	Deg 92 Min 49 Sec 8.12
Custodian	04 - City or Municipal Highway Agency
Owner	04 - City or Municipal Highway Agency
BMU Agreement	
Year Built	1920
MN Year Reconstructed	
FHWA Year Reconstructed	
MN Temporary Status	
Bridge Plan Location	0 - NO PLAN
Date Opened to Traffic	
On-Off System	0 - OFF
Legislative District	57B

STRUCTURE	
Service On	1 - Highway
Service Under	5 - Waterway
Main Span Type	
3 - Steel	01 - Beam Span
Main Span Detail	
Appr. Span Type	
Appr. Span Detail	
Skew	20 R
Culvert Type	
Barrel Length	ft.
Cantilever ID	

NUMBER OF SPANS		
MAIN: 1	APPR: 0	TOTAL: 1
Main Span Length	13.5	ft.
Structure Length	15.5	ft.
Deck Width (Out-to-Out)	22.7	ft.
Deck Material	1 - Concrete Cast-in-Place	
Wear Surf Type	6 - Bituminous	
Wear Surf Install Year		
Wear Course/Fill Depth	1.50	ft.
Deck Membrane	0 - None	
Deck Rebars	N - Not Applicable (no deck)	
Deck Rebars Install Year		
Structure Area (Out-to-Out)	352	sq. ft.
Roadway Area (Curb-to-Curb)	334	sq. ft.
Sidewalk Width	Lt 0.00	ft. Rt 0.00
Curb Height	Lt 0.00	ft. Rt 0.00
Rail Type	Lt 02	Rt 02

ROADWAY	
Bridge Match ID (TIS)	0
Roadway O/U Key	Route On Structure
Route Sys	10 - MUN Number 53
Roadway Name or Description	MUN 53
Level of Service	1 - MAINLINE
Roadway Type	2 - 2-way traffic
Control Section (TH Only)	
Reference Point	001+00.050
Detour Length	3.0 mi
Lanes	On 2 Under 0
ADT	125 Year 1986
HCA DT	0 ADTT 0 %
Functional Class	09 - Rural - Local

RDWY DIMENSIONS			
If Divided	NB-EB	SB-WB	
Roadway Width	21.20	ft.	ft.
Vertical Clearance		ft.	ft.
Max. Vert. Clear.		ft.	ft.
Horizontal Clear.		ft.	ft.
Lateral Clearance		ft.	ft.
Appr. Surface Width	24.0	ft.	
Bridge Roadway Width	21.2	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	N - N/A
(Material/Type)	N - N/A
Historic Status	5 - Not eligible

PAINT	
Year Painted	2020
Unsound Paint %	100
Painted Area	sq. ft.
Primer Type	0 - Other - non 3309
Finish Type	L - Other (Unknown)

BRIDGE SIGNS	
Posted Load	0 - Not Required
Traffic	0 - Not Required
Horizontal	1 - Object Markers
Vertical	N - Not Applicable

INSPECTION	
Userkey	128
Unofficial Structurally Deficient	Y
Unofficial Functionally Obsolete	N
Unofficial Sufficiency Rating	43.4
Routine Inspection Date	10/09/2012
Routine Inspection Frequency	12
Inspector Name	WSB & Associates
Status	A - Open

NBI CONDITION RATINGS	
Deck	6 - Satisfactory Condition
Unsound Deck %	
Superstructure	4 - Poor Condition
Substructure	6 - Satisfactory Condition
Channel	5 - Bank eroded; Major damage
Culvert	N - Not Applicable

NBI APPRAISAL RATINGS	
Structure Evaluation	4
Deck Geometry	4
Underclearances	N
Water Adequacy	7 - Slight Chance of Overtop
Approach Alignment	8 - Equal to present desirable

SAFETY FEATURES	
Bridge Railing	0 - SUBSTANDARD
GR Transition	0 - SUBSTANDARD
Appr. Guardrail	0 - SUBSTANDARD
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	78 sq. ft.
Navigation Control	0 - No nav. control on waterway
Pier Protection	
Nav. Clr. (ft.)	Vert. ft. Horiz. ft.
Nav. Vert. Lift Bridge Clear. (ft.)	
MN Scour Code	E - CULVERT Year 2006

CAPACITY RATINGS	
Design Load	0 - Other/Unknown
Operating Rating	2 - AS HS 19.5
Inventory Rating	2 - AS HS 12.9
Posting VEH:	SEMI: DBL:
Rating Date	12/1/1997

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

MnDOT Structure Inventory Report

Additional Roadways

Bridge ID: L8170

VALLEY CRK TR (53) over VALLEY CRK (TRIBUTARY)

Date: 11/09/2012

MnDOT BRIDGE INSPECTION REPORT

11/09/2012

Inspector: WSB & Associates

BRIDGE L8170 VALLEY CRK TR (53) OVER VALLEY CRK (TRIBUTARY) ROUTINE INSP. DATE: 10/09/2012

County: Washington Location: 1.1 MI E OF JCT CR 71 Length: 15.5 ft.
 City: Afton Route: 10 - MUN 53 Ref. Pt.: 001+00.050 Deck Width: 22.7 ft.
 Township: Control Section: Rdwy. Area/ Pct. Unsnd: 334 sq. ft. / %
 Section: 16 Township: 028N Range: 20W Maint. Area: Paint Area/ Pct. Unsnd: sq. ft. / 100%
 Span Type: 3 - Steel 02 - Stringer/Multi-beam or Local Agency Bridge Nbr.: Culvert: N/A
 List: Girder Postings:
 NBI Deck: 6 Super: 4 Sub: 6 Chan: 5 Culv: N
 Open, Posted, Closed: A - Open
 MN Scour Code: E - CULVERT

Appraisal Ratings - Approach: 8 Waterway: 7 Unofficial Structurally Deficient Y
 Required Bridge Signs - Load Posting: 0 - Not Required Traffic: 0 - Not Required Unofficial Functionally Obsolete N
 Horizontal: 1 - Object Markers Vertical: N - Not Applicable Unofficial Sufficiency Rating 43.4

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
013	Bituminous Overlay (Concrete Deck)	2	Routine	10/09/2012	352 SF	0	352	0	0	0
			Routine	01/06/2012	352 SF	0	352	0	0	0
Notes: 2012 - Some cracking and minor deterioration.										
107	Painted Steel Girder or Beam	2	Routine	10/09/2012	120 LF	0	0	0	90	30
			Routine	01/06/2012	120 LF	0	0	0	90	30
Notes: [2009] Girders show section loss near abutments. [2010] Entire bottom flange of S Facia Girder is severely deteriorated. N Facia Girder is badly corroded at each abutment. 2nd girder from N. is warped into a reverse curve. 3rd girder from N. has bent bottom flange. 2012 - Steel beam corrosion is continuing.										
215	Reinforced Concrete Abutment	2	Routine	10/09/2012	50 LF	45	5	0	0	N/A
			Routine	01/06/2012	50 LF	45	5	0	0	N/A
Notes: [2010] Vertical crack in SE abutment wall.										
313	Fixed Bearing	2	Routine	10/09/2012	16 EA	16	0	0	N/A	N/A
			Routine	01/06/2012	16 EA	16	0	0	N/A	N/A
Notes: [2010] No noticable problems.										
320	Concrete Approach Slab-Bituminous Wearing Surface	2	Routine	10/09/2012	2 EA	2	0	0	0	N/A
			Routine	01/06/2012	2 EA	2	0	0	0	N/A
Notes: < none >										
331	Reinforced Concrete Bridge Railing	2	Routine	10/09/2012	30 LF	22	3	5	0	N/A
			Routine	01/06/2012	30 LF	22	3	5	0	N/A
Notes: 2005 Approx 1.5' overburden within 8 " of top of railing. [2010] SW corner is broken off.										
361	Scour Smart Flag	2	Routine	10/09/2012	1 EA	1	0	0	N/A	N/A
			Routine	01/06/2012	1 EA	1	0	0	N/A	N/A
Notes: G - Foundation unknown. Evaluation and/or screening required. [2007] Conc. floor through bridge - no scour.										

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
387	Reinforced Concrete Wingwall	2	Routine	10/09/2012	4 EA	2	2	0	0	N/A
			Routine	01/06/2012	4 EA	2	2	0	0	N/A
Notes: 2012 - NE wing shows surface wear. SE wing has vertical crack. No shifting or tilting noted.										
964	Critical Finding Smart Flag	2	Routine	10/09/2012	1 EA	1	0	N/A	N/A	N/A
			Routine	01/06/2012	1 EA	1	0	N/A	N/A	N/A
Notes: DO NOT DELETE THIS CRITICAL FINDING SMART FLAG.										
981	Signing	2	Routine	10/09/2012	1 EA	1	0	0	0	0
			Routine	01/06/2012	1 EA	1	0	0	0	0
Notes: [2007] New end markers added.										
984	Deck & Approach Drainage	2	Routine	10/09/2012	1 EA	0	1	0	N/A	N/A
			Routine	01/06/2012	1 EA	0	1	0	N/A	N/A
Notes: < none >										
985	Slopes & Slope Protection	2	Routine	10/09/2012	1 EA	0	1	0	N/A	N/A
			Routine	01/06/2012	1 EA	0	1	0	N/A	N/A
Notes: 2012 - Slopes are very steep. Minor erosion has occurred. There is no traffic barrier.										

General Notes: 2012 - Bridge was load rated in 2012 and recently posted.

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: Channel is typically dry and was dry at time of inspection.

62. Culvert NBI:

71. Waterway Adeq NBI:

72. Appr Roadway
Alignment NBI:

Inventory Notes:

Barritt Lovelace

Inspector's Signature

Reviewer's Signature

Pictures



Photo 1 - Roadway over covert looking west



Photo 2 - upstream headwall looking north

Pictures



Photo 3 - south fascia beam looking south



Photo 4 - steel beams looking north

Pictures



Photo 5 - west abutment looking southwest



Photo 6 - East abutment looking southeast

Pictures



Photo 7 - north east wing wall



Photo 8 - upstream channel looking south

Pictures



Photo 9 - downstream channel looking north



Photo 10 - recently installed load posting sign