2016 UPDATE BRIDGE INSPECTION REPORT



BRIDGE # 90415 CR 149 over STREAM

DISTRICT: Metro COUNTY: Ramsey

CITY/TOWNSHIP: WHITE BEAR

STATE: Minnesota Date of Inspection: 09/20/2016 Reason for Update Report: Equipment Used: Life Jacket, Probing Rod, Other - Waders

Owner: County Highway Agency

Inspected By: Essler, Brian



Report Written By: Brian Essler Report Reviewed By: Nicklaus Fischer Final Report Date: 11/28/2016

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Minnesota Structure Inventory Report

Bridge ID: 90415 CR 149	over Stream	Date: 11/28/2016
GENERAL	ROADWAY	INSPECTION
Agency Br. No.	Bridge Match ID (TIS) 0	Userkey 102
District Metro	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
Maint. Area Crew	Route Sys 07 - CNTY Number 249	Unofficial Functionally Obsolete N
County 062 - Ramsey	Roadway Name or Description	Unofficial Sufficiency Rating 83.8
City	CNTY 249	Routine Inspection Date 08/07/2015
Township 62001 - WHITE BEAR	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 0.8 MI N OF JCT CSAH 5	Roadway Type 2 - 2-way traffic	Inspector Name CO Bridge
Sect., Twp., Range 3 - 030N - 22W	Control Section (TH Only)	Status A - Open
Latitude Deg 45 Min 6 Sec 55.65	Reference Point 000+00.770	NBI CONDITION RATINGS
Longitude Deg 93 Min 1 Sec 40.44		Deck N - Not Applicable
Custodian 02 - County Highway Agency	5	Unsound Deck %
Owner 02 - County Highway Agency		Superstructure N - Not Applicable
BMU Agreement		Substructure N - Not Applicable Substructure N - Not Applicable
Year Built 1939	HCADT 0 ADTT 0 % Functional Class 19 - Urban - Local	Channel 5 - Bank eroded; Major damage
MN Year Reconstructed		Culvert 5 - Mod. to major deterioration
FHWA Year Reconstructed	RDWY DIMENSIONS	NBI APPRAISAL RATINGS
MN Temporary Status	If Divided NB-EB SB-WB	Structure Evaluation 5
Bridge Plan Location 0 - NO PLAN	Roadway Width 26.00 ft. ft.	Deck Geometry N
Date Opened to Traffic	Vertical Clearance ft. ft.	Underclearances N
On-Off System 0 - OFF	Max. Vert. Clear. ft. ft.	Water Adequacy 5 - Occasional Flooding - Sig
Legislative District 53B	Horizontal Clear. ft. ft.	Approach Alignment 6 - Equal to present minimu
ABC Suitable	Lateral Clearance ft. ft.	
STRUCTURE	Appr. Surface Width32.0ft.	
Service On 1 - Highway	Bridge Roadway Width 0.0 ft.	Bridge Railing 0 - SUBSTANDARD GR Transition 0 - SUBSTANDARD
Service Under 5 - Waterway	Median Width On Bridge ft.	GR Transition 0 - SUBSTANDARD Appr. Guardrail 0 - SUBSTANDARD
Main Span Type	MISC. BRIDGE DATA	GR Termini N - NOT REQUIRED
1 - Concrete 13 - Box Culvert	Structure Flared 0 - No flare	
Main Span Detail	Parallel Structure N - No parallel structure	IN DEPTH INSP.
Appr. Span Type	Field Conn. ID	Y/N Freq Date Frac. Critical N
	Abutment Foundation N - N/A	Frac. Critical N Underwater N
Appr. Span Detail	(Material/Type) N - N/A	Pinned Asbly. N
Skew 0	Pier Foundation N - N/A	Spec. Feat.
Culvert Type W62D	(Material/Type) N - N/A	WATERWAY
Barrel Length 34 ft.	Historic Status 5 - Not eligible	Drainage Area (sq. mi.)
Cantilever ID		
NUMBER OF SPANS	PAINT	Waterway Opening 24 sq. ft. Navigation Control 0 - No nav. control on waterw
MAIN: 2 APPR: 0 TOTAL: 2	Year Painted	Pier Protection
Main Span Length 6.5 ft.	Unsound Paint %	Nav. Clr. (ft.) Vert. ft. Horiz. ft.
Structure Length 14.2 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Width (Out-to-Out) 0.0 ft.	Primer Type	MN Scour Code E - CULVERT Year
Deck Material N - Not Applicable	Finish Type	CAPACITY RATINGS
Wear Surf Type 6 - Bituminous		Design Load 4 - H 20
Wear Surf Install Year	BRIDGE SIGNS	Operating Rating B - Assigned ratir 24.0
Wear Course/Fill Depth 0.50 ft.	Posted Load 0 - Not Required	Inventory Rating B - Assigned ratir 18.0
Deck Membrane N - Not Applicable (applies onl	Traffic 0 - Not Required	· · · ·
Deck Rebars N - Not Applicable (no deck)	Horizontal 0 - Not Required	
Deck Rebars Install Year	Vertical N - Not Applicable	Rating Date 01/10/1985
Structure Area (Out-to-Out) 0 sq. ft.		Minnesota Permit Codes
Roadway Area (Curb-to-Curb) sq. ft.		A: N - N/A
Sidewalk Width Lt 0.00 ft. Rt 0.00 ft.		B: N - N/A
Curb Height Lt 0.00 ft. Rt 0.00 ft.		C: N - N/A
Rail Type Lt 02 Rt 02		

Minnesota Structure Inventory Report

Bridge ID: 90415 CR 149 over STREAM

Date: 09/20/2016

+ G E N E R A L +	+ R O A D W A Y +	+INSPECTION+
Agency Br. No. Crew	Bridge Match ID (TIS) 0	Userkey 102
District 05 Maint. Area	Roadway O/U Key Route On Structure	Structurally Deficient N
County 062 - Ramsey	Route Sys 07 - CNTY Number 249	Functionally Obsolete N
City	Roadway Name or Description	Sufficiency Rating 83.8
Township 62001 - WHITE BEAR	CNTY 249	Routine Inspection Date 08/07/2015
Desc. Loc. 0.8 MI N OF JCT CSAH 5	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Sect., Twp., Range 3 - 030N - 22W	Roadway Type 2 - 2-way traffic	Inspector Name Essler, Brian
Latitude 45 ° 6 ' 55.65 "	Control Section (TH Only)	Status A - Open
Longitude 93 ° 1 ' 40.44 ''	Reference Point 000+00.770	
Custodian 02 - County Highway Agenc	Detour Length 3.0 mi.	+NBI CONDITION RATINGS+
Owner 02 - County Highway Agence 02 - County Highway Agence	Lanes ON 2 UNDER 0	Deck N Unsound
BMU Agreement	ADT 1900 YEAR 2005	Superstructure N Deck %
Year Built 1939	HCADT ADT %	Substructure N
MN Year Reconstructed	Functional Class 19 - Urban - Local	Channel 5
FHWA Year Reconstructed		Culvert 5
MN Temporary Status		+NBI APPRAISAL RATINGS+
Bridge Plan Location 0 - NO PLAN	+RDWY DIMENSIONS+	+NBI APPRAISAL RATINGS+
Date Opened to Traffic	If Divided NB-EB SB-WB	Structure Evaluation 5
On - Off System 0 - OFF	Roadway Width 26.00 ft. ft.	Deck Geometry N
Legislative District 53B	Vertical Clearance ft. ft.	Underclearances N
Potential ABC 2 - N/A	Max. Vert. Clear. ft. ft.	Waterway Adequacy 5
Fotential ABC 2 - N/A	Horizontal Clear. ft. ft.	Approach Alignment 6
+ S T R U C T U R E +	Lateral Clearance ft. ft.	
Service On 1 - Highway	Appr. Surface Width 32.0 ft.	+SAFETY FEATURES+
Service Under 5 - Waterway	Bridge Roadway Width 0.0 ft.	Bridge Railing 0 - SUBSTANDARD
Main Span Type 1 - Concrete	Median Width On Bridge ft.	GR Transition 0 - SUBSTANDARD
Main Span Design 13 - Box Culvert		Appr. Guardrail 0 - SUBSTANDARD
Main Span Detail	+ MISC. BRIDGE DATA+	GR Termini N - NOT REQUIRED
Appr. Span Type	Structure Flared 0 - No flare	
Appr. Span Design	Parallel Structure N - No parallel structure	+IN DEPTH INSP.+
Appr. Span Detail	Field Conn. ID	Y/N Freq Date
Skew 0	Abutment N - N/A	Frac. Critical N
Culvert Type W62D	Foundation (Material/Type) N - N/A	Underwater N
Barrel Length 34		Pinned Asbly. N
Cantilever ID	Pier Foundation N - N/A (Material/Type)	Spec. Feat.
	N - N/A	WATERWAY
Number of Spans	Historic Status 5 - Not eligible	+ W A T E R W A Y +
MAIN: 2 APPR: 0 TOTAL:		Drainage Area (sq. mi.)
Main Span Length	⁵ ft. + PAINT+	Waterway Opening (sf.) 24
Structure Length 1	2 ft.	Navigation Control 0 - No nav. control on
Deck Width (Out-to-Out)	⁰ ft. Year Painted	Pier Protection
Deck Material N - Not Applicable	Unsound Paint %	Nav. Clr. (ft.) Vert. 0.0 Horiz. 0.0
Wear Surf Type 6 - Bituminous	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Wear Surf Install Year	Primer Type	MN Scour Code E - CULVERT Year
Wear Course/Fill Depth 0.50 ft.	Finish Type	
Deck Membrane N - Not Applicable (app		+CAPACITY RATINGS+
Deck Rebars N - Not Applicable (no o	ck) + BRIDGE SIGNS+	Design Load 4 - H 20
Deck Rebars Install Year		Operating Rating 2 - HS TRUCK 24.0
Structure Area (Out-to-Out) 0	q. ft. Posted Load 0 - Not Required	Inventory Rating 2 - HS TRUCK 18.0
Roadway Area (Curb-to-Curb)	q. ft. Traffic 0 - Not Required	Posting VEH: SEMI: DBL:
Sidewalk Width 50A. Lt 0.00 ft. 50B. Rt 0	-	Rating Date 01/10/1985
Curb Height Lt 0.00 ft. Rt 0		Overweight Permit Codes
•	2	AN-N/A BN-N/A CN-N/A

MINNESOTA BRIDGE INSPECTION REPORT

11/28/2016	
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BRIDO	GE 90415 CR 149 OVE					ROUH		· DAIE.	08/07/20 ⁻	15
County		-	cation: 0.8 MI	N OF JCT CSAH	5	Length:	_	14.2 ft.	00/01/20	10
City:	· · · · · · · · · · · · · · · · · · ·			249 Ref. Pt.: (Deck Wid		0.0 ft.		
-	nip: 62001 - WHITE BEAR	Co	ntrol Section:			Rdwy. Ar	ea/ Pct. Ur	nsnd: sq.ft	/ %	
Section	: 3 Township: 030N	Range: 22W I	Maint. Area:			Paint Are	a/ Pct. Uns	and: sq. ft	/ %	
Span T	ype: 1 - Concrete 19 - Culvert (includes	Local Agency Bri	dge Nbr.:		Culvert:	W62D			
_ist:	frame culverts)					Postings:				
NBI De	ck: N Super: N Sub:	N Chan:	5 Culv: 5							
			Open, Po	sted, Closed: A	- Open					
Annrais	al Ratings - Approach: 6	Waterway: 5		Code: E - CUL	/ERT	11-	- #			
•••	ed Bridge Signs - Load Posting			Traffic: 0 -	Not Required			ucturally De actionally O		N
toquit		0 - Not Requir			Not Applicable			ficiency Ra		N 33.8
		o notnoqui						-	0	
ELEM NBR	ELEMENT NAME	ENV I	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
41	Reinforced Concrete Culvert	2	Update	09/20/2016	69 LF	0	69	0	0	N/A
			Routine	08/07/2015	69 LF	0	69	0	0	N/A
	to increase e		with depths & Wal	er making it diffic			pe cleane	a out inside	e anu at do	AT ENDS
	[2009] West) and leaching. vater is 0.5' lower	than top of ins	ide culvert.				
34	[2009] West	end is full of wa	iter. At east end v		than top of ins	ide culvert.	23	7	0	0
34	[2009] West [1988-2013] Metal Bridge Railing (Coated	end is full of wa Could use seal	ter. At east end v treatment.	vater is 0.5' lower				7 7	0 0	0
34	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013	end is full of wa Could use seal 2 3-2015] Railing	ter. At east end v treatment. Update Routine contains 7 LF of	vater is 0.5' lower	30 LF 30 LF on. Both rails no	0 0	23			-
	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011] Culvert Headwall, Wingwall on	end is full of wa Could use seal 2 3-2015] Railing Coating has de	ter. At east end v treatment. Update Routine contains 7 LF of	vater is 0.5' lower 09/20/2016 08/07/2015 moderate corrosi	30 LF 30 LF on. Both rails no	0 0	23			-
	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011]	end is full of wa Could use seal 2 3-2015] Railing Coating has de	ter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor	09/20/2016 08/07/2015 moderate corrosi corrosion on both	30 LF 30 LF on. Both rails no rails.	0 0 eed paint.	23 23	7	0	0
	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011] Culvert Headwall, Wingwall of Other End Treatment Notes: [2013 [2007-2015]	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalli	ter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east heady	vater is 0.5' lower 09/20/2016 08/07/2015 moderate corrosi corrosion on both 09/20/2016	30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA eadwall. Modera	0 0 eed paint. 0 0 ate scaling west head	23 23 2 2 s present wall.	7 0 0	0	0 N/A
88	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011] Culvert Headwall, Wingwall of Other End Treatment Notes: [2013 [2007-2015]	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalli	ter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east heady	vater is 0.5' lower 09/20/2016 08/07/2015 moderate corrosi corrosion on both 09/20/2016 08/07/2015 mer of the east he vall. Moderate cra	30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA eadwall. Modera	0 0 eed paint. 0 0 ate scaling west head	23 23 2 2 s present wall.	7 0 0	0	0 N/A
88	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011] Culvert Headwall, Wingwall of Other End Treatment Notes: [2013 [2007-2015] [2001-2005]	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalling of	ter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east headwall.	vater is 0.5' lower 09/20/2016 08/07/2015 moderate corrosi corrosion on both 09/20/2016 08/07/2015 mer of the east he vall. Moderate cra Scaling is preser	30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA eadwall. Moder- ack at center of at on both sides	0 0 eed paint. 0 0 ate scaling west head s with mino	23 23 2 2 is present wall. r corrosion	7 0 0 of rebar.	0 0 0	0 N/A N/A
88	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011] Culvert Headwall, Wingwall of Other End Treatment Notes: [2013 [2007-2015] [2007-2015] [2007-2015]	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalli Minor spalling of 2	tter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east headwall. Update Routine Routine	vater is 0.5' lower 09/20/2016 08/07/2015 moderate corrosic corrosion on both 09/20/2016 08/07/2015 mer of the east he vall. Moderate cra Scaling is preser 09/20/2016	30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA	0 0 eed paint. 0 0 ate scaling west head s with mino	23 23 2 2 is present wall. r corrosion 0	7 0 0 of rebar.	0 0 0 N/A	0 N/A N/A N/A
64	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011] Culvert Headwall, Wingwall of Other End Treatment Notes: [2013 [2007-2015] [2007-2015] [2007-2015]	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalli Minor spalling of 2	tter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east headwall. Update Routine Routine	09/20/2016 08/07/2015 moderate corrosic corrosion on both 09/20/2016 08/07/2015 mer of the east he vall. Moderate cra Scaling is preser 09/20/2016 08/07/2015	30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA	0 0 eed paint. 0 0 ate scaling west head s with mino	23 23 2 2 is present wall. r corrosion 0	7 0 0 of rebar.	0 0 0 N/A	0 N/A N/A N/A
64	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011] Culvert Headwall, Wingwall of Other End Treatment Notes: [2013 [2007-2015] [2001-2005] Critical Finding Smart Flag Notes: DO N	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalli Minor spalling c 2 IOT DELETE T	tter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east headv on east headvall. Update Routine HIS CRITICAL F	09/20/2016 08/07/2015 moderate corrosic corrosion on both 09/20/2016 08/07/2015 mer of the east he vall. Moderate cra Scaling is preser 09/20/2016 08/07/2015 INDING SMART	30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 1 EA 1 EA 1 EA 1 EA	0 0 eed paint. 0 0 ate scaling west head s with mino 1 1	23 23 2 2 is present wall. r corrosion 0 0	7 0 0 of rebar. N/A N/A	0 0 0 N/A N/A	0 N/A N/A N/A N/A
64	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2012 [2001-2011] Culvert Headwall, Wingwall or Other End Treatment Notes: [2013 [2007-2015] [2001-2005] Critical Finding Smart Flag Notes: DO N Signing	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalli Minor spalling c 2 10T DELETE T 1	tter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east headwall. Update Routine HIS CRITICAL F Update Routine	vater is 0.5' lower 09/20/2016 08/07/2015 moderate corrosic corrosion on both 09/20/2016 08/07/2015 mer of the east he vall. Moderate cra Scaling is preser 09/20/2016 08/07/2015 INDING SMART	30 LF 30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA	0 0 eed paint. 0 0 ate scaling west head s with mino 1 1	23 23 2 2 is present wall. r corrosion 0 0	7 0 0 of rebar. N/A N/A N/A	0 0 0 N/A N/A 0	0 N/A N/A N/A N/A 0
334 388 964 981	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2013 [2001-2011] Culvert Headwall, Wingwall of Other End Treatment Notes: [2013 [2007-2015] [2007-2015] [2001-2005] Critical Finding Smart Flag Notes: DO N Signing	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalli Minor spalling of 2 IOT DELETE T 1 3-2015] Horizon	tter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east headwall. Update Routine HIS CRITICAL F Update Routine tal clearance ma	vater is 0.5' lower 09/20/2016 08/07/2015 moderate corrosic corrosion on both 09/20/2016 08/07/2015 mer of the east he vall. Moderate cra Scaling is preser 09/20/2016 08/07/2015 INDING SMART 09/20/2016 08/07/2015 rker signs are in p	30 LF 30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA	0 0 eed paint. 0 0 0 ate scaling west head s with mino 1 1 1 1	23 23 2 2 is present wall. r corrosion 0 0	7 0 0 of rebar. N/A N/A 0 0	0 0 0 N/A N/A 0 0	0 N/A N/A N/A N/A 0 0
388	[2009] West [1988-2013] Metal Bridge Railing (Coated or Painted) Notes: [2012 [2001-2011] Culvert Headwall, Wingwall or Other End Treatment Notes: [2013 [2007-2015] [2001-2005] Critical Finding Smart Flag Notes: DO N Signing	end is full of wa Could use seal 2 3-2015] Railing Coating has de 2 3-2015] Major s Moderate spalli Minor spalling c 2 10T DELETE T 1	tter. At east end v treatment. Update Routine contains 7 LF of teriorated. Minor Update Routine pall at the NE con ng on east headwall. Update Routine HIS CRITICAL F Update Routine	vater is 0.5' lower 09/20/2016 08/07/2015 moderate corrosic corrosion on both 09/20/2016 08/07/2015 mer of the east he vall. Moderate cra Scaling is preser 09/20/2016 08/07/2015 INDING SMART 09/20/2016 08/07/2015	30 LF 30 LF 30 LF on. Both rails no rails. 2 EA 2 EA 2 EA 2 EA 2 EA 2 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA	0 0 eed paint. 0 0 ate scaling west head s with mino 1 1	23 23 2 2 is present wall. r corrosion 0 0	7 0 0 of rebar. N/A N/A N/A	0 0 0 N/A N/A 0	0 N/A N/A N/A N/A 0

BRID	GE 90415 CR	149 OVER	R STREAM	И			ROUT	INE INSP	. DATE:	08/07/20 ⁻	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
987	Roadway over Cu	ulvert	2	Update	09/20/2016	1 EA	0	1	0	N/A	N/A
				Routine	08/07/2015	1 EA	0	1	0	N/A	N/A
				e is moderate settler er culvert has minor					over culver	t.	
	General Notes:	[2015] Bridg [2013] Inspe [2013] Bridg [2009] Bridg [2007] Bridg [2005] bridg ALL EXPOS	ge Safety In ection was o ge safety ins ge safety ins ge safety ins ge safety ins SED CONC	spection was update spection was comple completed by B. Wier spection was complet spection was complet spection by B. Wiema pection was complet RETE EPOXIED DUI CK DETERIORATIN	ted by Dan Bode nan and R. Buss ted by B. Wiema ted by B. Wiema an & B. Essler 7/2 ed by Bret Wiem RING SUMMER	elson & Brian Es siere. n 9/13/2011. n 6/11/2009. 24/2007. nan 8/19/2005. 82. #104 RAILI	NG DAMA		T) RAIL R	EPAIRED ⁻	1995.
	58. Deck NBI:	Culvert									
36A. E	Brdg Railings NBI:										
36E	8. Transitions NBI:										
36C. Ap	opr Guardrail NBI:										
36	D. Appr Guardrail Terminal NBI:										
59. Sı	perstructure NBI:	Culvert									
60.	Substructure NBI:	Culvert									
	61. Channel NBI:	Debris bloc	king culvert	on both ends.							
	62. Culvert NBI:	Culvert con	tains moder	ate scaling with crac	king and leaching	g. Major spall a	t the NE co	orner of the	east head	wall.	
71. Wa	terway Adeq NBI:	Less than 1	of freeboa	rding							
7	2. Appr Roadway Alignment NBI:										
	Inventory Notes:	There is a 0).85' bitumin	ous overlay over cul	vert.						

Brian Essler

Inspector's Signature

Nicklaus Fischer

Reviewer's Signature

MINNESOTA BRIDGE INSPECTION REPORT

11/28/2016

Inspector: CO Bridge

BRIDGE 90415 CR 149 OVER STREAM

	: Ramsey	Location: 0.8 MI	N OF JCT CSAH	5	Length:		14.2 ft.		
City:		Route: 07 - CNTY	249 Ref. Pt.: 0	000+00.770	Deck Wid	th:	0.0 ft.		
owns	hip: 62001 - WHITE BEAR	Control Section:			Rdwy. Are	ea/ Pct. Un	nsnd: sq.ft	t./%	
Section	n: 3 Township: 030N Range: 22V	V Maint. Area:			Paint Area	a/ Pct. Uns	and: sq. fi	t./%	
Span T .ist:	ype: 1 - Concrete 19 - Culvert (includes frame culverts)	Local Agency Bri	dge Nbr.:		Culvert: Postings:	W62D			
	ck: N Super: N Sub: N Cha	n: 5 Culv: 5			g				
			sted, Closed: A	- Open					
		-	r Code: E - CUL\	-					
••	sal Ratings - Approach: 6 Waterway:				Un	official Stru	ucturally De	eficient	Ν
Requir	ed Bridge Signs - Load Posting: 0 - Not Re			Not Required			ctionally C		Ν
	Horizntal: 0 - Not Re	quired	Vertical: N -	Not Applicable	Un	official Suf	ficiency Ra	ting	83.8
ELEM NBR	ELEMENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	
41	Reinforced Concrete Culvert	Update	09/20/2016	69 LF	0	69	0	0	
		Migrated Values		69 LF	0	69	0	0	
	 [2013] Culvert contains moderate scalin during inspection. [2005-2011] Culvert is filled with debris efficiency. [2001-2013] Minor deterioration with cr. [2009] West end is full of water. At east [1988-2013] Could use seal treatment. 	& water making it di acking and leaching	ifficult to view. Cu	lvert should be o		•			
330									
30	Metal Bridge Railing	Update	09/20/2016	30 LF	0	30	0	0	
30	Metal Bridge Railing	Update Migrated Values	09/20/2016	30 LF 30 LF	0 0	30 30	0 0	0 0	
30	Metal Bridge Railing Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated.	Migrated Values LF of moderate corr	osion. Both rails n	30 LF	-		-	-	
30	Notes: [2013-2015] Railing contains 7	Migrated Values LF of moderate corr	osion. Both rails n	30 LF	-		-	-	
30	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated.	Migrated Values LF of moderate corr Minor corrosion on b	osion. Both rails n ooth rails.	30 LF leed paint.	0	30	0	0	
30	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated.	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values	osion. Both rails n ooth rails. 09/20/2016	30 LF leed paint. 999 SF	0 999	30 0	0	0	
	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999	osion. Both rails n ooth rails. 09/20/2016 SF.	30 LF leed paint. 999 SF	0 999	30 0	0	0	
	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. 515 - Steel Protective Coating	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update	osion. Both rails n ooth rails. 09/20/2016	30 LF need paint. 999 SF 999 SF	0 999 999	30 0 0	0 0 0	0 0 0	
	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016	30 LF need paint. 999 SF 999 SF 1 EA 1 EA	0 999 999 999 1	30 0 0 0	0 0 0	0 0 0 0 0	
300	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a Critical Deficiencies or Safety Hazards	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values ERVED DURING TH	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016	30 LF need paint. 999 SF 999 SF 1 EA 1 EA	0 999 999 999 1	30 0 0 0	0 0 0	0 0 0 0 0	
300	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. I 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a Critical Deficiencies or Safety Hazards Notes: NO CRITICAL FINDINGS OBS	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016 HE LAST INSPEC	30 LF leed paint. 999 SF 999 SF 1 EA 1 EA TION.	0 999 999 1 1	30 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0	
00	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. I 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a Critical Deficiencies or Safety Hazards Notes: NO CRITICAL FINDINGS OBS	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values ERVED DURING TH Update Migrated Values NE corner of the eas headwall. Moderate	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016 HE LAST INSPEC 09/20/2016 t headwall. Model crack at center o	30 LF need paint. 999 SF 999 SF 1 EA 1 EA 1 EA TION. 2 EA 2 EA rate scaling is p f west headwall.	0 999 999 1 1 1 0 0 resent.	30 0 0 0 0 2 2 2	0 0 0 0 0 0	0 0 0 0 0	
70	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. I 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a Critical Deficiencies or Safety Hazards Notes: NO CRITICAL FINDINGS OBS Culvert End Treatment Notes: [2013-2015] Major spall at the N [2007-2015] Moderate spalling on east	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values ERVED DURING TH Update Migrated Values NE corner of the eas headwall. Moderate	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016 HE LAST INSPEC 09/20/2016 t headwall. Model crack at center o	30 LF need paint. 999 SF 999 SF 1 EA 1 EA 1 EA TION. 2 EA 2 EA rate scaling is p f west headwall.	0 999 999 1 1 1 0 0 resent.	30 0 0 0 0 2 2 2	0 0 0 0 0 0	0 0 0 0 0	
00	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. I 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a Critical Deficiencies or Safety Hazards Notes: NO CRITICAL FINDINGS OBS Culvert End Treatment Notes: [2013-2015] Major spall at the N [2007-2015] Moderate spalling on east [2001-2005] Minor spalling on east hea	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values ERVED DURING TH Update Migrated Values NE corner of the eas headwall. Moderate dwall. Scaling is pre	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016 HE LAST INSPEC 09/20/2016 t headwall. Moder crack at center of sent on both side	30 LF need paint. 999 SF 999 SF 1 EA 1 EA 1 EA TION. 2 EA 2 EA 2 EA rate scaling is p f west headwall s with minor cor	0 999 999 1 1 1 0 0 resent. rosion of r	30 0 0 0 0 2 2 2 ebar.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0	
300	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. I 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a Critical Deficiencies or Safety Hazards Notes: NO CRITICAL FINDINGS OBS Culvert End Treatment Notes: [2013-2015] Major spall at the N [2007-2015] Moderate spalling on east [2001-2005] Minor spalling on east hea	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values ERVED DURING TH Update Migrated Values NE corner of the eas headwall. Moderate dwall. Scaling is pre Update Migrated Values settlement at both e	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016 HE LAST INSPEC 09/20/2016 t headwall. Moder crack at center of sent on both side 09/20/2016 ends. Some deteri	30 LF leed paint. 999 SF 999 SF 1 EA 1 EA 1 EA 2 EA 2 EA 2 EA 2 EA rate scaling is p f west headwall. s with minor cor 1 EA 1 EA 0 EA	0 999 999 1 1 1 0 0 resent. rosion of r 0 0	30 0 0 0 0 0 2 2 2 ebar. 1 1	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	
300 370 371	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. I 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a Critical Deficiencies or Safety Hazards Notes: NO CRITICAL FINDINGS OBS Culvert End Treatment Notes: [2013-2015] Major spall at the N [2007-2015] Moderate spalling on east [2001-2005] Minor spalling on east hea Roadway Over Culvert Notes: [2009-2015] There is moderate	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values ERVED DURING TH Update Migrated Values NE corner of the eas headwall. Moderate dwall. Scaling is pre Update Migrated Values settlement at both e	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016 HE LAST INSPEC 09/20/2016 t headwall. Moder crack at center of sent on both side 09/20/2016 ends. Some deteri 992] Overlayed w	30 LF leed paint. 999 SF 999 SF 1 EA 1 EA 1 EA 2 EA 2 EA 2 EA 2 EA rate scaling is p f west headwall. s with minor cor 1 EA 1 EA 0 EA	0 999 999 1 1 1 0 0 resent. rosion of r 0 0	30 0 0 0 0 0 2 2 2 ebar. 1 1	0 0 0 0 0 0 0	0 0 0 0 0 0 0 0	
330 300 370 371 391	Notes: [2013-2015] Railing contains 7 [2001-2011] Coating has deteriorated. I 515 - Steel Protective Coating Notes: [2016] Migrator assumed CS1 a Critical Deficiencies or Safety Hazards Notes: NO CRITICAL FINDINGS OBS Culvert End Treatment Notes: [2013-2015] Major spall at the N [2007-2015] Moderate spalling on east [2001-2005] Minor spalling on east hea Roadway Over Culvert Notes: [2009-2015] There is moderate [2001-2007] Roadway over culvert has	Migrated Values LF of moderate corr Minor corrosion on b Update Migrated Values nd a quantity of 999 Update Migrated Values ERVED DURING TH Update Migrated Values NE corner of the eas headwall. Moderate dwall. Scaling is pre Update Migrated Values settlement at both e minor settlement. [1	osion. Both rails n ooth rails. 09/20/2016 SF. 09/20/2016 HE LAST INSPEC 09/20/2016 t headwall. Moder crack at center of sent on both side 09/20/2016 ends. Some deteri	30 LF leed paint. 999 SF 999 SF 1 EA 1 EA 1 EA 2 EA 2 EA 2 EA rate scaling is p f west headwall s with minor cor 1 EA 1 EA 0 EA	0 999 999 1 1 1 1 0 0 resent. rosion of r 0 0 inous over	30 0 0 0 0 0 2 2 2 ebar. 1 1 0 culvert.			

BRIDGE 90415 CR 149 OVER STREAM

ELEM NBR	ELEM	IENT NAME	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4
892	Slopes & Slope F	Protection	Update	09/20/2016	1 EA	1	0	0	0
			Migrated Values		1 EA	1	0	0	0
	Notes: Use thi	is element to rate the	condition of slopes and	slope protection.					
893	Guardrail		Update	09/20/2016	1 EA	0	0	0	1
			Migrated Values		1 EA	0	0	0	1
	Notes: [1995-2	2015] No guardrail, in	stallation is recommende	ed.					
894	Deck & Approach	n Drainage	Update	09/20/2016	1 EA	1	0	0	0
			Migrated Values		1 EA	1	0	0	0
	Notes: Use thi	s element to rate the	condition, function, and	adequacy of the	drainage syster	m.			
900	Protected Specie	S	Update	09/20/2016	1 EA	1	0	0	0
			Migrated Values		1 EA	1	0	0	0
	58. Deck NBI: Brdg Railings NBI:	[2007] Bridge safety [2005] bridge safety ALL EXPOSED CO #186 WOOD SILL E	inspection was comple- inspection by B. Wiema inspection was complet NCRETE EPOXIED DU BLOCK DETERIORATIN	an & B. Essler 7/ ed by Bret Wiem RING SUMMER	24/2007. nan 8/19/2005. 82. #104 RAILI		GED (EAS	ST) RAIL RI	EPAIRED 1995.
	3. Transitions NBI:								
	Depr Guardrail NBI: D. Appr Guardrail Terminal NBI:								
59. Si	uperstructure NBI:	Culvert							
60.	Substructure NBI:	Culvert							
	61. Channel NBI:	Debris blocking cul	vert on both ends.						
	62. Culvert NBI:	Culvert contains mo	derate scaling with crac	king and leachin	g. Major spall a	t the NE co	orner of the	e east head	wall.
71. Wa		Less than 1' of freet	-		-				
7	2. Appr Roadway Alignment NBI:								
	inventory Notes:	i nere is a 0.85° bitu	minous overlay over cul	vert.					

Brian Essler

Inspector's Signature

Nicklaus Fischer

Reviewer's Signature



Photo 1 -



Photo 2 -



Photo 3 -



Photo 4 -



Photo 5 -



Photo 6 -



Photo 7 -



Photo 8 -

Culvert

Bridge No.: 90415

Culvert									
ltem	Description	Condition	Comments						
Culvert Overall:	NBI Item 62	5	Culvert contains moderate scaling with cracking and leaching. Major spall at the NE corner of the east headwall.						

Minnesota Scour Code: E -

E - CULVERT

	Waterway Inspection								
ltem No.	Yes, No, NA or Not Visible	Description							
1.		Is there a significant build-up of debris?							
2.		Is there erosion of the embankment around the headwalls?							
3.		Is there any indication of cracking or settlement of the culvert barrel or headwalls?							
4.		Is there shifting of the channel alignment or erosion of the stream banks? Also are there cracks in the soil of the banks parallel to the stream?							
5.		Do scour measurements indicate that the streambed is below the bottom of the cutoff walls at the ends of the culvert?							
6.		Is there evidence of distress in the roadway or approaches such as cracks in the pavement and sags in the guardrail or roadway? Also, is there cracking, erosion, or failure of the side slopes at or adjacent to the culvert?							
7.		Is there an indication of "piping" of water along the outside of the culvert such as cavities adjacent to the barrel?							
8.		Is the culvert without a bottom and scour measurements indicate that the streambed is below the plan streambed elevations?							
9.		Has the riprap or other scour protection been damaged or otherwise made ineffective?							
10.		If the culvert was designed to be buried (fill inside the culvert), is the material still in the barrel?							

Notes:

- Streambed sounding data is to be documented.

- Soundings of the streambed should be done at each end of the culvert. If Items #5 or #8 are "Yes", then a streambed profile of the scoured area should be done.

- If "Yes" is the answer to any items on the checklist, notify the Program Administrator for further instructions.

Bу

Comments:

Completed On

Channel

				Bridge No.:	90415			
			Chann	el				
	ltem	Description	Condition		Comments			
Channe	l Overall:	NBI Item 61	5	_ Debris bloo	cking culvert on both ends.			
		В	ank Protection	/Revetment				
Upstrea	<i>Item</i> m Bank Protectior	Description	Condition		Comments			
Downst	ream Bank Protect	tion:						
Bridge I	Revetment:							
Minneso	ota Scour Code:	E - CULVERT						
			Underwater In	spection				
Underw	ater Inspection By	Divers:						
No. of P	iers To Be Inspect	ted:						
			Naterway Char	acteristics				
Referen	ce Point:	High Wat	er Elev.:		Current Water Elev.:			
Pile Tip	Elev.:	Low Wate	er Elev.:		Current Streambed Elev.:			
		Scour Ho	ole Elev.:		Current Scour Hole Elev.:			
		Waterway Ins	spection: (Not a	applicable f	or culverts)			
ltem No.	Yes, No, NA or Not Visible		Descript	tion				
1.		Is there a significant build-	up of debris?					
2.		Is there a change in the ho	rizontal alignment	of the handrail	or structure members such as be	ams?		
3.		Is there any indication of ve	ertical movement o	of the superstru	ucture?			
4.		Is there shifting of the char banks parallel to the strear		rosion of the s	tream banks? Also are there crack	ks in the soil of the		
5.		Is there a significant chang	e in the alignment	of hte exterior	bearings?			
6.		Are there cracks or other s	igns of distress in t	the approach p	pavement?			
7.		Is the water currently on th	e superstructure?					
8.		Are the slopes unstable?						
9.		Do scour measurements in	idicate: (place a ch	eck by all that	apply.)			
		A. that the streamed	is two or more feet	t below the bot	tom of pier footings which are sup	ported on piles?		
		B. scour below the be	ottom of spread foc	otings?				
		C. scour below the be	ottom of high abutr	ment footings?				
		D. that the streambed has scoured five feet or more below the original streambed elevation at pier bents?						

10.

Notes:

- Streambed sounding data is to be documented.

- Per Minnesota Bridge Inspection Manual Section 2.2.5, at bridges that require x-sections, take channel x-sections, along the upstream and/or downstream face of the bridge.

- If "Yes" is the answer to any items on the checklist, notify the Program Administrator for further instructions.

Comments:

Completed On By

Scour POA

Bridge No.: 90415

Scour POA

1. Is POA on File?

2. Date of most recent POA:

3. Here is a link to Minnesota's Bridge Scour website for other

- <u>http://www.dot.state.mn.us/bridge/hydraulics/scour.html</u>
- The Scour POA should be kept in the bridge file and/or uploaded to SIMS using the "Inspection Files" tab.

Implementation

Scour POAs are required to be implemented by FHWA.

1. Is this POA being implemented?