

#### COUNTY OF ANOKA

Public Services Division
HIGHWAY DEPARTMENT
1440 BUNKER LAKE BLVD.
ANDOVER, MN 55304
(763) 862-4200 FAX (763) 862-4201

Transmissell

DATE: 4/19/2013 Joe Mueller **Greg Anderson** Anoka County Highway Department **TKDA** 444 Cedar Street 1440 Bunker Lake Boulevard NW Suite 1500 Andover, MN 55304 Saint Paul, MN 55101 Phone: 763-238-8966 Fax: 763-862-4201 E-mail: greg.anderson@co.anoka.mn.us RE: Bridges: 02501, 02502, 02516, 02519, 02522, 02521, 02523, 02534, 02535, 02554 Description: Item(s): Half-size bridge plans 1 2 Bridge inspection reports 3 Bridge inventory reports Existing load rating calculations 4  $\boxtimes$ As you requested For your use For your approval Purpose: Other (see remarks) Review & return Reply to sender

Remarks: Joe, attached is the information you requested for the specific bridges. I was unable to locate load rating calculations for Bridge 02523 in our files.

If you any questions please contact me. Thank you Greg



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### Mn/DOT Structure Inventory Report

<b>Bridge ID:</b> 02502 CSAH 28	over SEELYE BROOK	
GENERAL	ROADWAY	INSPECTION
ancy Br. No.	Bridge Match ID (TIS) 0	Userkey 42
District Metro	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
Maint. Area Crew	Route Sys 04 - CSAH Number 28	Unofficial Functionally Obsolete N
County 002 - Anoka	Roadway Name or Description	Unofficial Sufficiency Rating 87.8
City St Francis	CSAH 28	Routine Inspection Date 12/19/2011
Township	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 0.1 MI W OF JCT CR 71	Roadway Type 2 - 2-way traffic	Inspector Name County, Anoka
Sect., Twp., Range 26 - 034N - 25W	Control Section (TH Only)	Status A - Open
Latitude Deg 45 Min 24 Sec 10.61	Reference Point 002+00.160	NBI CONDITION RATINGS
Longitude Deg 93 Min 25 Sec 4.04	Detour Length 1.0 mi	Deck 5 - Fair Condition
Custodian 02 - County Highway Agency	Lanes On 2 Under 0	Unsound Deck %
Owner 02 - County Highway Agency	ADT 996 Year 2008	Superstructure 6 - Satisfactory Condition
BMU Agreement	HCADT 60 ADTT 6 %	Substructure 6 - Satisfactory Condition
Year Built 1961	Functional Class 06 - Rural - Minor Arterial	Channel 5 - Bank eroded; Major damage
MN Year Reconstructed	RDWY DIMENSIONS	Culvert N - Not Applicable
FHWA Year Reconstructed	If Divided NB-EB SB-WB	NBI APPRAISAL RATINGS
MN Temporary Status		Structure Evaluation 6
Bridge Plan Location 3 - COUNTY		Deck Geometry 5
Date Opened to Traffic	Vertical Clearance ft. ft.	Underclearances N
On-Off System 1 - ON	Max. Vert. Clear. ft. ft.	Water Adequacy 7 - Slight Chance of Overton
Legislative District 17A	Horizontal Clear. ft. ft.	Approach Alignment 6 - Equal to present minimu
STRUCTURE	Tateral Clearance ft. ft.	SAFETY FEATURES
Service On 1 - Highway	Appr. Surface Width 28.0 ft.	Bridge Railing 0 - SUBSTANDARD
ice Under 5 - Waterway	Bridge Roadway Width 28.1 ft.	GR Transition 0 - SUBSTANDARD
Main Span Type	Median Width On Bridge ft.	Appr. Guardrail 1 - MEETS STANDARDS
7 - Timber 09 - Slab Span	MISC. BRIDGE DATA	GR Termini 1 - MEETS STANDARDS
Main Span Detail	Structure Flared 0 - No flare	IN DEPTH INSP.
Appr. Span Type	Parallel Structure N - No parallel structure	Y/N Freq Date
	Field Conn. ID	Frac. Critical
Appr. Span Detail	Abutment Foundation 2 - TIMBER	Underwater
Skew 0	(Material/Type) 4 - PILE BENT	Pinned Asbly.
Culvert Type	Pier Foundation N - N/A	Spec. Feat.
Barrel Length ft.	(Material/Type) N - N/A	WATERWAY
Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mí.)
NUMBER OF SPANS	Thistoric Status 5- Not engine	Waterway Opening 192 sq. ft.
MAIN: 1 APPR: 0 TOTAL: 1	PAINT	Navigation Control 0 - No nav. control on waterw
	Year Painted	Pier Protection
	Unsound Paint %	Nav. Clr. (ft.) Vert. ft. Horiz.
Structure Length 27.0 ft.  Deck Width (Out-to-Out) 30.2 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Width (Out-to-Out) 30.2 ft.  Deck Material 8 - Wood or Timber	Primer Type	MN Scour Code R - CRIT - MONIT Year 1995
Wear Surf Type 6 - Bituminous	Finish Type	CAPACITY RATINGS
Wear Surf Install Year		Design Load 4 - H 20
Wear Course/Fill Depth 0.33 ft.	BRIDGE SIGNS	Operating Rating 2 - AS HS 25.8
Deck Membrane 0 - None	Posted Load 0 - Not Required	Inventory Rating 2 - AS HS 18.1
Deck Rebars N - Not Applicable (no deck)	Traffic 0 - Not Required	-
Deck Rebars Install Year	Horizontal 1 - Object Markers	
Structure Area (Out-to-Out) 815 sq. ft.	Vertical N - Not Applicable	Rating Date 6/1/1991
dway Area (Curb-to-Curb) 764 sq. ft.	•	Mn/DOT Permit Codes
Sidewalk Width Lt 0.00 ft. Rt 0.00 ft.		A: N - N/A
Curb Height Lt 0.75 ft. Rt 0.92 ft.		B: N - N/A
m - 14 07 - 14 07		C: N - N/A

Rail Type

Lt 37

Rt 37

C: N-N/A

#### Mn/DOT BRIDGE INSPECTION REPORT

02/01/2012

Scour Smart Flag

361

2

Notes: R - Scour critical. Monitoring required.

Routine

Routine

Inspec	tor: County, Anoka									
BRID	GE 02502 CSA	H 28 OVER SEEL	YE BROOK			ROUT	INE INSF	. DATE:	12/19/20	11
County	r: Anoka		Location: 0.1 M	W OF JCT CR 7		Length:		27.0 ft.		(
City:	St Francis		Route: 04 - CSAI	1 28 Ref. Pt.:	002+00.160	Deck Wid		30.2 ft.		
Towns	*		Control Section:			•	rea/ Pct. Ur		•	
Section	•	: 034N Range: 25V				Paint Are	a/ Pct. Uns	snd: sq.f	t. / %	
•	Type: 7 - Wood or Tim	iber 01 - Slab	Local Agency B	ridge Nbr.:		Culvert:	N/A			
List:						Postings				
NBI De	eck: 5 Super: 6	Sub: 6 Cha	n: 5 Culv: N		_					
			•	osted, Closed: A						
Apprais	sal Ratings - Approac	h: 6 Waterway:	MN Scot	ır Code: R - CR∏	- MONITOR	Hr	official Str	icturally D	eficient l	N
	,	d Posting: 0 - Not Re	quired	Traffic: 0 -	Not Required		official Fur	•		N .
•		Horizntal: 1 - Object	•		Not Applicable		official Sul	•		87.8
Struct	ure Unit:	•			, ,	J.	.o.,,o.a, oa,	noionoj ra	ing .	37.0
							0774	OTV	077/	0771
ELEM NBR	ELEMENT N	AME ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
407	Bituminous Approac	ch 1	Routine	12/19/2011	2 EA	0	2	0	0	N/A
			Routine	11/04/2009	2 EA	0	2	0	0	N/A
		tes: (1999) Settlementh ends of the bridge.	t of bituminous at b	ooth abutments. (2	000) N/C. (200)	2) N/C. (12	2/04) N/C. (	1/09) Mode	erate settle	ment at
055	Timber Slab with Bi (AC) Overlay	tuminous 2	Routine	12/19/2011	818 SF	0	0	818	0	N/A
			Routine	11/04/2009	818 SF	0	0	818	0	N.
	bit	tes: Block & alligator uminous wearing surfa 09) Water is dripping t	ice. (2000) N/C. (							
206	Timber Column	2	Routine	12/19/2011	16 EA	0	16	0	0	N/A
			Routine	11/04/2009	16 EA	0	16	0	0	N/A
***************************************	No	tes: < none >								
216	Timber Abutment	2	Routine	12/19/2011	69 LF	0	69	0	0	N/A
			Routine	11/04/2009	69 LF	0	69	0	. 0	N/A
	No	tes: < none >								
225	Timber Pier Cap	2	Davida	40/40/0044	69 LF	0	69	0	0	N/A
235	fillibel Flei Cap	2	Routine	12/19/2011				-		
			Routine	11/04/2009	69 LF	0	69	0	. 0	N/A
	No	tes: < none >								<del> </del>
333	Masonry, Other or Combination Materi	2 al Railing	Routine	12/19/2011	171 LF	0	171	0	N/A	N/A
			Routine	11/04/2009	171 LF	0	171	0	N/A	N/A
	No	tes: (Railing Code 37	•							
			······································							

12/19/2011

11/04/2009

1 EA

1 EA

0

0

0

0

N/A

N/A

N/A

N/A

Structu	ıre Unit:										
ELEM N'BR	ELEMENT	NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
386	Timber Wingwall		2	Routine	12/19/2011	4 EA	0	4	0	0	N/A
	**			Routine	11/04/2009	4 EA	0	4	0	0	N/A
		Notes: < none	e >								
964	Critical Finding S	mart Flag	2	Routine	12/19/2011	1 EA	1	0	N/A	N/A	N/A
		_		Routine	11/04/2009	1 EA	1	0	N/A	N/A	N/A
		Notes: (11/06	6) No critica	al findings noted.							
981	Signing		2	Routine	12/19/2011	1 EA	0	1	0	0	0
301	g		_	Routine	11/04/2009	1 EA	1	0	0	0	0
		Notes: (11/11	I) Delineat	or sign posts are loos	e and slightly mi	saligned.					
982	Approach Guard	rail	2	Routine	12/19/2011	1 EA	0	1	0	N/A	N/A
J02	7 <b>,p,c - 2 -</b> 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -		_	Routine	11/04/2009	1 EA	0	1	0	N/A	N/A
		treatment, (20	002) SW ra	to the SW twisted en ill N/C, impact damag the south and north	je to the SE rail.	the SE guardrai (1/09) New end	I. (2000) I treatment	mpact dan s have bee	nage to the n installed	SW twiste at all four	d end corners,
985	Slopes & Slope I	Protection	2	Routine	12/19/2011	1 EA	0	0	. 1	N/A	N/A
000				Routine	11/04/2009	1 EA	0	0	1	N/A	N/A
		abutment (19	DOOLNIC (	oration of the grouted 2000) N/C (2002) Mo ted riprap at both ab	derate deteriora	tion of the arout	ed norab a	at the west	abutment.	(12/U4) NIC	oderate
 900	Curb & Sidewalk	<u> </u>	2	Routine	12/19/2011	1 EA	0	1	0	N/A	N/A
000				Routine	11/04/2009	1 EA	0	1	0	N/A	N/A
		Notes: < nor	ne >								

General Notes: Inspected By: G. Anderson & W. Howard 12/04/2002., G. Anderson & M. Werlinger 12/15/04., G. Anderson & M. Werlinger 11/04/09., G. Anderson & C. Osterhus 11/21/11.

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: (1999) Deterioration of grouted riprap at east abutment resulting in the channel bank beginning to slump. (2000) N/C. (2002) N/C. (12/04) N/C. (1/09) Deterioration of the riprap has exposed steel h-pile from a previous structure in the channel. (11/11) Major deterioration of the grouted riprap along both abutments is exposing more of the timber backwall.

62. Culvert NBI:

71. Waterway Adeq NBI:

72. Appr Roadway Alignment NBI:

Inventory Notes:

**ROUTINE INSP. DATE: 12/19/2011 CSAH 28 OVER SEELYE BROOK BRIDGE 02502** Structure Unit: ELEM NBR QTY CS 1 QTY CS 2 QTY CS 4 QTY Ce QTY **ELEMENT NAME ENV** REPORT TYPE INSP. DATE QUANTITY CS3

**Andrew Witter** 

Reviewer's Signature

**Gregory Anderson** 

Inspector's Signature

## Stro's Special S & Strg'rs.

## NON-COMPOSITE STRINGER RATING SHEET (FOR STEEL OR TIMBER SIMPLE SPANS)

12" Longit. Panel Deck Revised for .33' Overlay

MHD 22106A 6-73
lated by Robert R Tomcz
hecked by
1 6-3 <b>-</b> 91

,		Bridge No	02502 Yes	r built <u>1961</u>				
		County	Anoka	Roadway width (cur			•	<u></u>
1. 1.			an rated = L =		•			
ATA		Routs	CSAH 28		Feature crossed	i <u>Seevle Bro</u>	xok	<del></del>
۵				,				
		Floor: type	<u> Iamb. Timb</u>	thickness 1	2"	Curb: height	width	<del></del>
		Railing: type	3		height		width	
<del> </del>	1		er ft. of stringer:				"I *"7 /I ss. 22	
ے ا	<u>.</u>				1		174 lb./f	
	ξ		.33 X 3.6			**		
		String	er <u>3.67 X 1</u>	X 50			184 Ib/f	
2	2	· Railin	g or other			***	lb_/f	
	ב ב	7	Total dead load = W				358 Ib./	
"	_	Dead load N	Moment = 1/8 ( W )	$(L)^2 = \frac{1/8 \times 3^5}{1}$	58 X 26 <sup>2</sup>		<u>1250 ft. 11</u>	b.
$\vdash$	-		-		odulus = L	056 in3 - lass (		_in3 = SM
	1			o, 1969)* = \$ =		IVENTORY	OPERAT	
		•	_		t; <b>=</b>	1500 lb/in <sup>2</sup>	fo = 1500	
		Resisting M	loment = SM (f; or f	0)	1	32000 ft. lb. (1)	176000	ft. 1b. (
	0		• • •	•		30250 ft. lb.(2)	30250	) - ft. lb. (
	린		oad Moment of			30230 15.15		
	NATING		available for live load		<b>/</b> 1	01750 ft. 1b. 3	145750	) ft. lb.
	王	Moment av	ail. for live load =	(3) I + impact) (Dist. Facto	<b>*</b>	.01750 ft. lb. (4)	145750	) ft. 16.
-		Per Wheel I H 20 Mom		i + impacti (Disc racte	111			
	1		_		1	04000 ft. 1b. (5)	104000	) ft lb.
1		H Rating =	(20) =		н	19.6 6	н 28	3.0
	-		(5)					
		When line (5) or O	per.	Ma	ke Posting Calcu	altions as follows:	•	
	2	is as follows:						
1	δ	less than H3	Close bridge		1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	f	inha limit	**************************************
-	A	H3 un to H6	Use H value	from line (6) of Oper. from line (6) of Oper. o	on line (7) and n lice (8) and 1.	75 x H value from li	ne (ii) of Oper. on	line (9).
	=	H6 un to H12 H12 and over	When line (4)	of Oper. is less than th	ie moment for N	1-3 or M-352 type vi	ehicles of the	POSTÍNG
	2		rated soon let	noth, make Posting Cal	culations (8) and	1 (0).		LOADS
	CALCULATIONS		tructure unit govems oads accordingly.	Posting loads, indicate				whole tons
			MOMENT***	Gridge Limit	= (6) of Operati		`L	egal 🕜
	E	VEHICLE .	(No Impact)	M - 3 Posting load	(4) of Operati		· L	egal 8
	POSTING	M-3 =			Noment of S			
1	7	1	,	M - 3S2 Posting load	4 of Operati	ing .1-352 (36.6) =		<u>(9)</u>
1		M - 3S2 =		1	ivioment at it	4-352		

\*\*\* From Minnesota Truck Moments, Plate 3 without impact.

<sup>\*</sup> Standard Specifications for Highway Bridges, 1969, adopted by the American Associations of State Highway Officials

<sup>••</sup> Overburden may be wearing course or gravel fill etc. which is not a part of the Structural Floor.

When calcualted loads exceed 23.5 tons and 36.6 tons respectively no posting is required.

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#### Mn/DOT Structure Inventory Report

Date: 02/01/2012 over RUM RIVER CSAH 24 Bridge ID: 02501 INSPECTION ROADWAY **GENERAL** Userkey 42 Bridge Match ID (TIS) 0 cy Br. No. Unofficial Structurally Deficient N Roadway O/U Key Route On Structure District Metro Unofficial Functionally Obsolete N Route Sys 04 - CSAH Number 24 Crew Maint. Area **Unofficial Sufficiency Rating** 87.6 County 002 - Anoka Roadway Name or Description 11/16/2011 **Routine Inspection Date** St Francis CSAH 24 City Routine Inspection Frequency 24 Township Level of Service 1 - MAINLINE 0.2 MI E OF JCT CSAH 28 Inspector Name County, Anoka Desc. Loc. Roadway Type 2 - 2-way traffic - 034N - 24W Status Sect., Twp., Range 32 R **Control Section (TH Only)** Sec 12.95 Min 23 Latitude Deg 45 Reference Point 009+00.030 **NBI CONDITION RATINGS** Sec 26.59 Min 21 Longitude Deg 93 Deck 6 - Satisfactory Condition **Detour Lenath** mi Custodian 02 - County Highway Agency **Unsound Deck %** Under 0 On 2 Lanes 02 - County Highway Agency Owner 5 - Fair Condition Superstructure **ADT 11066** Year 2008 **BMU Agreement** Substructure 6 - Satisfactory Condition **ADTT 10 % HCADT** 1107 1964 6 - Bank slump; minor damage Year Built Channel **Functional Class** 06 - Rural - Minor Arterial 1985 Culvert N - Not Applicable **MN Year Reconstructed RDWY DIMENSIONS FHWA Year Reconstructed NBI APPRAISAL RATINGS** SB-WB If Divided NB-EB **MN Temporary Status** Structure Evaluation 5 Roadway Width 44.00 ft. Bridge Plan Location 3 - COUNTY **Deck Geometry** ft. ft. **Vertical Clearance Date Opened to Traffic** Underclearances Ħ Max. Vert. Clear. ft. **On-Off System** 1 - ON Water Adequacy 8 - Bridge Above Approache Horizontal Clear. 43.9 ft. Approach Alignment 7 - Better than present minir Legislative District 17A **Lateral Clearance** ft. ft. STRUCTURE SAFETY FEATURES Appr. Surface Width 44.0 0 - SUBSTANDARD **Bridge Railing** Service On 5 - Highway-pedestrian Bridge Roadway Width 44.0 ft. **GR Transition** 1 - MEETS STANDARDS ce Under 5 - Waterway Median Width On Bridge Appr. Guardrail 1 - MEETS STANDARDS Main Span Type MISC. BRIDGE DATA 1 - MEETS STANDARDS **GR Termini** 4 - Steel Continuous 01 - Beam Span Structure Flared 0 - No flare IN DEPTH INSP. Main Span Detail Parallel Structure N - No parallel structure Y/N Date Appr. Span Type Freq 2 - Riveted Field Conn. ID Frac. Critical Abutment Foundation 1 - CONC 60 mo. 10/01/2007 Underwater Υ Appr. Span Detail 3 - FTG PILE (Material/Type) Pinned Asbly. Skew Pier Foundation 1 - CONC Spec. Feat. **Culvert Type** WATERWAY **Barrel Length** (Material/Type) 3 - FTG PILE Cantilever ID Drainage Area (sq. mi.) 5 - Not eligible **Historic Status** Waterway Opening 9250 sq. ft. **NUMBER OF SPANS** PAINT Navigation Control 0 - No nav. control on waterw APPR: 0 MAIN: 4 TOTAL: 4 Year Painted 1964 Pier Protection Main Span Length 106.5 ft. **Unsound Paint %** ft. Horiz. Nav. Cir. (ft.) Vert. 390.6 ft. Structure Length Painted Area sq. ft. Nav. Vert. Lift Bridge Clear. (ft.) Deck Width (Out-to-Out) 52.8 ft. MN Scour Code N - STBL - LIM St Year 1996 Primer Type 1 - Lead - non 3309 1 - Concrete Cast-in-Place **Deck Material** Finish Type F - - Phenolic Resin Alum **CAPACITY RATINGS** 4 - Low Slump Concrete Wear Surf Type Wear Surf Install Year 1979 **Design Load** 5 - HS 20 **BRIDGE SIGNS** Wear Course/Fill Depth 0.17 Operating Rating 2 - AS HS 32.0 Posted Load 0 - Not Required Deck Membrane 0 - None Inventory Rating 2 - AS HS 19.4 1 - Speed Limit **Traffic** N - Not Applicable (no deck) **Deck Rebars** Posting VEH: SEMI: DBL: 1 - Object Markers Horizontal **Deck Rebars Install Year** Rating Date 6/1/1991 20624 Vertical N - Not Applicable Structure Area (Out-to-Out) Mn/DOT Permit Codes

A: N-N/A

B: N - N/A

C: N - N/A

sq. ft.

ft.

ft.

ft. Rt 6.00

ft. Rt 0.83

Rt 22

lway Area (Curb-to-Curb) 17190

Sidewalk Width

**Curb Height** 

Rail Type

Lt 0.00

Lt 0.00

Lt 17

#### Mn/DOT BRIDGE INSPECTION REPORT

02/01/2012

Inspector: County, Anoka

Abutment

Inspec	tor: County, Anoka									
BRID	GE 02501 CSAH 24 OVE	RRUM	RIVER			ROUT	INE INSP	. DATE:	11/16/20	11
List:	St Francis hip:	ler	Route: 04 - CSAH Control Section:  V Maint. Area: Local Agency Br  n: 6 Culv: N	ridge Nbr.:	28 009+00.030		dth: rea/ Pct. Ur ea/ Pct. Uns N/A		-	<b>6</b>
			•	osted, Closed: R ur Code: N - STBL	- LIM SCOUR					
Requir	red Bridge Signs - Load Posting: Horizntal:		8 quired	Traffic: , 1 -	Speed Limit Not Applicable	Ur Ur	nofficial Stru nofficial Fur nofficial Suf	ctionally C	) Dbsolete	N N 87.6
ELEM NBR	ure Unit: ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	OTY CS 4	QTY CS 5
407	Bituminous Approach	1	Routine	11/16/2011	2 EA	2	0	0	0	N/A
	Roadway		Routine	12/07/2009	2 EA	2	0	0	0	N/A
	Notes: < non	ie >						······································		
022	Low Slump O/L (Concrete Deck with Uncoated Rebar)	. 2	Routine	11/16/2011	20624 SF	0	20624	0	0	0
			Routine	12/07/2009	20624 SF	0	20624	0	0	٥
	Notes: (3/25/ portion of the leb.	94) Minor deck done	transverse cracks ir in 1986. (2002) Are	n deck that reflect teas around previou	to underside of is anchor bolt h	deck. The oles begin	e cracks are ining to spa	mostly or il. (12/04)	the remode 2 - 1 sq.ft.	deleo spalls in
107	Painted Steel Girder or Beam	2	Routine	11/16/2011	2297 LF	0	2297	0	0	0
	•		Routine	12/07/2009	2297 LF	0	2297	0	0	0
	Notes: < none	e >								
205	Reinforced Concrete Column	2	Routine	11/16/2011	3 EA	3	0	0	0	N/A
			Routine	12/07/2009	3 EA	3	0	0	0	N/A
	Notes: Note:	This eleme	ent applies to the ne	wer portion of the	bridge.					
210	Reinforced Concrete Pier Wall	2	Routine	11/16/2011	66 LF	44	0	22	0	N/A
			Routine	12/07/2009	66 LF	22	0	44	0	N/A
	(6/10/92) At a (12/2001) N/C	enterline of c. (2002) Ar ebar has be	ent applies to the old f pier #2, 2" band of reas of major spallir een exposed. (11/1	d portion of the brid medium scaling a ng at the waterline	round pier at w on pier #3 (12/	09) Areas	of major sp	alling at th	e waterline	on pier
215	Reinforced Concrete Abutment	2	Routine	11/16/2011	105 LF	97	0	8	0	N/A

12/07/2009

Routine

105 LF

Notes: (12/04) Insignificant vertical cracks are present. (1/09) Concrete delamination and rust staining at the north end of the west abutment, results of the leaking expansion joint at this location.

97

. 0

N/A

	re Unit:					om:	OTA	0737	011/	$\Delta TV$
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
20	Reinforced Concrete Footing	2	Routine	11/16/2011	3 EA	2	0	0	1	N/A
			Routine	12/07/2009	3 EA	2	0	0	1	N/A
-	( approx. 3"), Deterioration hole in the fo	no exposed of pier 1 foo oting 78" from s with the placed in section los	oier 1 footing continued rebar visible. Piers of the continues. (11/0) of the north edge annued rebar location so, no rebar has been	#2 & #3 below gr 96) Pier 1: 7" of is d 15" from the ea the concrete co	rade. (12/2001) solated section last edge of the f re was tested fo	Continued oss, no re ooting exp r compres	d deterioral bar has be osed a #6 sive strenc	lion of pier en expose longitudina ith = 6866	a rooting. ( d. Cored a al rebar dov PSI. (1/09)	2002) 4" dia. vn 22", Pier 1:
34	Reinforced Concrete Pier Cap	2	Routine	11/16/2011	157 LF	155	2	0	0	N/A
			Routine	12/07/2009	157 LF	155	2	0	0	N/A
	Notes: (1/09	) Pier 3; sp	alling at the very soul	h end.						
00	Strip Seal Deck Joint	2	Routine	11/16/2011	105 LF	53	49	3	N/A	N/A
•	•		Routine	12/07/2009	105 LF	53	49	3	N/A	N/A
	Notes: (12/2	22/95) Leaki	ng at joint of deck an	d walk, west abu	tment.					
 01	Poured Deck Joint	2	Routine	11/16/2011	157 LF	0	157	0	N/A	N/A
O i	, , , , , , , , , , , , , , , , , , , ,		Routine	12/07/2009	157 LF	0	157	0	N/A	N/A
	Notes: < no	ne >								
10	Elastomeric (Expansion) Bearing	2	Routine	11/16/2011	18 EA	10	6	2	N/A	N//
	D#31110									
;	Noton: (199	16) F Abut	Routine	12/07/2009 ar deformation e	18 EA	10 ses are no	7 longer par	1 allel. Rema	N/A ining beari	N/A
311	Notes: (199 original abu	tments shov no longer i	Routine 4th bearing S-N, she v signs of deformation parallel, the bearing p g pad appears to be Routine	ar deformation ex n. (1/2001) N/C. oad appears to be	xcessive, surfac (1/09) E. Abut. a moving out fr	es are no th bearing om under	longer para g S-N, shea the beam s	allel. Rema ar deformat lightly. (11	nining beari lion excess /11) E. Abu N/A	ngs on ive, t. 3rd N//
311	Notes: (199 original abu surfaces are bearing S-N	tments shove no longer i the bearin	4th bearing S-N, she v signs of deformation parallel, the bearing part g pad appears to be	ar deformation e. n. (1/2001) N/C. oad appears to be moving out from	xcessive, surfac (1/09) E. Abut. a e moving out fr its original orie	es are no 4th bearing om under ntation.	longer para	allel. Rema ar deforma lightly. (11	ining beari tion excess /11) E. Abu	ngs on ive, t. 3rd N//
311	Notes: (199 original abu surfaces are bearing S-N	tments shove no longer i t, the bearin	4th bearing S-N, she visigns of deformation parallel, the bearing pg pad appears to be	ar deformation ean. (1/2001) N/C. oad appears to be moving out from	xcessive, surfac (1/09) E. Abut. e moving out fr its original orie 8 EA	es are no 4th bearing om under ntation.	longer para g S-N, shea the beam s	allel. Rema ar deformat lightly. (11	nining beari lion excess /11) E. Abu N/A	ngs on ive, t. 3rd
	Notes: (199 original abu surfaces are bearing S-N Expansion Bearing	tments shove no longer i t, the bearin	4th bearing S-N, she visigns of deformation parallel, the bearing pg pad appears to be	ar deformation ean. (1/2001) N/C. oad appears to be moving out from	xcessive, surfac (1/09) E. Abut. e moving out fr its original orie 8 EA	es are no 4th bearing om under ntation.	longer para g S-N, shea the beam s	allel. Rema ar deformat lightly. (11	nining beari lion excess /11) E. Abu N/A	ngs on ive, t. 3rd N//
	Notes: (199 original abu surfaces are bearing S-N Expansion Bearing Notes: < no	tments shove no longer   i, the bearing 2 one >	4th bearing S-N, she v signs of deformation parallel, the bearing r g pad appears to be Routine Routine	ar deformation e. n. (1/2001) N/C. oad appears to be moving out from 11/16/2011 12/07/2009	xcessive, surfac (1/09) E. Abut. A e moving out for its original orie 8 EA 8 EA	tes are no ath bearing om under ntation. 8	longer par y S-N, shea the beam s 0 0	allel. Rema r deformal lightly. (11 0 0	nining beari tion excess /11) E. Abu N/A N/A	ngs on ive, t. 3rd N// N//
	Notes: (199 original abu surfaces are bearing S-N Expansion Bearing Notes: < no	tments shove no longer   i, the bearing  2  one >	Ath bearing S-N, she visigns of deformation parallel, the bearing pg pad appears to be  Routine  Routine  Routine	ar deformation e: n. (1/2001) N/C. o pad appears to be moving out from 11/16/2011 12/07/2009	xcessive, surfac (1/09) E. Abut. a e moving out fr its original orie 8 EA 8 EA	tes are no 4th bearing om under ntation. 8 8	longer para g S-N, shea the beam s 0 0	allel. Rema ar deformal lightly. (11. 0 0	nining beari tion excess (11) E. Abu N/A N/A	ngs on ive, t. 3rd N// N//
3313	Notes: (199 original abusurfaces are bearing S-N  Expansion Bearing  Notes: < note    Fixed Bearing  Notes: < note    Reinforced Concrete Bridge	tments shove no longer   i, the bearing  2  one >	Ath bearing S-N, she visigns of deformation parallel, the bearing pg pad appears to be  Routine  Routine  Routine	ar deformation e: n. (1/2001) N/C. o pad appears to be moving out from 11/16/2011 12/07/2009	xcessive, surfac (1/09) E. Abut. a e moving out fr its original orie 8 EA 8 EA	tes are no 4th bearing om under ntation. 8 8	longer para g S-N, shea the beam s 0 0	allel. Rema ar deformal lightly. (11. 0 0	nining beari tion excess (11) E. Abu N/A N/A	ngs on ive, t. 3rd N// N// N//
313	Notes: (199 original abusurfaces are bearing S-N  Expansion Bearing  Notes: < no.	tments shove no longer   i, the bearing  2  one >  2  one >	Ath bearing S-N, she y signs of deformation parallel, the bearing p g pad appears to be Routine Routine Routine	ar deformation e. n. (1/2001) N/C. oad appears to be moving out from  11/16/2011  12/07/2009  11/16/2011  12/07/2009	xcessive, surfac (1/09) E. Abut. 4 e moving out fr its original orie 8 EA 8 EA 4 EA 4 EA	tes are no atth bearing om under ntation. 8 8 8	longer par g S-N, shea the beam s 0 0 0	allel. Rema r deformat lightly. (11, 0 0 0	nining beari tion excess /11) E. Abu N/A N/A N/A	ngs on ive, t. 3rd N// N// N//
313	Notes: (199 original abusurfaces are bearing S-N  Expansion Bearing  Notes: < note    Fixed Bearing  Notes: < note    Reinforced Concrete Bridge Railing	tments shove no longer    , the bearing     th	Ath bearing S-N, she visigns of deformation parallel, the bearing programme pad appears to be Routine Routine Routine Routine Routine Routine	ar deformation e: n. (1/2001) N/C. o n. (1/2001) N/C. o n. (1/2001) N/C. o n. (1/2001) N/C. o n. (1/2001)  11/16/2011  12/07/2009  11/16/2011  12/07/2009  de 25)	(1/09) E. Abut. 4 e moving out frits original orie  8 EA 8 EA 4 EA 4 EA 390 LF	tes are no atth bearing om under ntation.  8 8 4 4 0 0	longer par g S-N, shea the beam s 0 0 0 0	allel. Rema ar deformat lightly. (11, 0 0 0	nining beari tion excess /11) E. Abu N/A N/A N/A	ngs on ive, t. 3rd N// N// N//
313	Notes: (199 original abusurfaces are bearing S-N  Expansion Bearing  Notes: < note    Fixed Bearing  Notes: < note    Reinforced Concrete Bridge Railing	tments show no longer   the bearing the be	Ath bearing S-N, she y signs of deformation parallel, the bearing p g pad appears to be  Routine  Routine  Routine  Routine  Routine  Routine	ar deformation e: n. (1/2001) N/C. o n. (1/2001) N/C. o n. (1/2001) N/C. o n. (1/2001) N/C. o n. (1/2001)  11/16/2011  12/07/2009  11/16/2011  12/07/2009  de 25)	(1/09) E. Abut. 4 e moving out frits original orie  8 EA 8 EA 4 EA 4 EA 390 LF	tes are no atth bearing om under ntation.  8 8 4 4 0 0	longer par g S-N, shea the beam s 0 0 0 0	allel. Rema ar deformat lightly. (11, 0 0 0	nining bearition excess /11) E. Abu N/A N/A N/A O O	ngs on ive, t. 3rd N// N// N//
313	Notes: (199 original abu surfaces are bearing S-N  Expansion Bearing  Notes: < note    Fixed Bearing  Notes: < note    Reinforced Concrete Bridge Railing  Notes: Note (11/06) Insi	tments show no longer   the bearing the be	Ath bearing S-N, she is signs of deformation parallel, the bearing rig pad appears to be routine	ar deformation et n. (1/2001) N/C. o nad appears to be moving out from 11/16/2011 12/07/2009 11/16/2011 12/07/2009 de 25) hout, cork expan 11/16/2011	4 EA 4 EA 4 EA 390 LF sion material de	tes are no atth bearing om under intation.  8 8 4 4 0 0 0 eteriorating	onger parages of the beam services of the beam serv	allel. Rema ar deformal lightly. (11. 0 0 0 0	nining beari tion excess /11) E. Abu N/A N/A N/A 0 0	ngs on ive, t. 3rd N// N// N//
313	Notes: (199 original abu surfaces are bearing S-N  Expansion Bearing  Notes: < note    Fixed Bearing  Notes: < note    Reinforced Concrete Bridge Railing  Notes: Note (11/06) Inside the combination Material Railing	tments show no longer    , the bearing    , the bearing     2	Ath bearing S-N, she y signs of deformation parallel, the bearing r g pad appears to be  Routine	ar deformation et n. (1/2001) N/C. o oad appears to be moving out from 11/16/2011 12/07/2009 11/16/2011 12/07/2009 de 25) hout, cork expan 11/16/2011	xcessive, surface (1/09) E. Abut. A end wing out from its original ories as EA	tes are no atth bearing om under the total on.  8 8 8 4 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0	longer parages. S-N, sheathe beams of the be	allel. Rema ar deformat lightly. (11, 0 0 0 0	nining bearition excess /11) E. Abu N/A N/A N/A O O	ngs on ive, t. 3rd N// N// N//
313	Notes: (199 original abu surfaces are bearing S-N  Expansion Bearing  Notes: < note    Fixed Bearing  Notes: < note    Reinforced Concrete Bridge Railing  Notes: Note (11/06) Inside the combination Material Railing	tments show no longer    , the bearing    , the bearing     2	Ath bearing S-N, she visigns of deformation parallel, the bearing rig pad appears to be Routine	ar deformation et n. (1/2001) N/C. o oad appears to be moving out from 11/16/2011 12/07/2009 11/16/2011 12/07/2009 de 25) hout, cork expan 11/16/2011	xcessive, surface (1/09) E. Abut. A elemoving out from its original ories as EA as E	tes are no atth bearing om under the total on.  8 8 8 4 4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0	longer parages. S-N, sheathe beams of the be	allel. Rema ar deformat lightly. (11, 0 0 0 0	nining bearition excess /11) E. Abu N/A N/A N/A O O	N// N// N// N// N// N//
313	Notes: (199 original abusurfaces are bearing S-Notes: < note    Expansion Bearing  Notes: < note    Fixed Bearing  Notes: < note    Reinforced Concrete Bridge Railing  Notes: Note   (11/06) Inside    Notes: Note   (11/06) Inside    Notes: Note   (11/06) Inside    Note   Concrete Deck Cracking	tments show a no longer    , the bearing    , the bearing     2	Ath bearing S-N, she is signs of deformation parallel, the bearing rig pad appears to be routine Routi	ar deformation et n. (1/2001) N/C. oad appears to be moving out from 11/16/2011 12/07/2009 11/16/2011 12/07/2009 de 25) hout, cork expan 11/16/2011 12/07/2009 n concrete rail without the concrete factoric new concrete rail without the concrete rail wit	xcessive, surface (1/09) E. Abut. Ab	tes are no atth bearing om under the total nation.  8 8 4 4 0 0 0 eteriorating 0 on top (Rapin materia	longer pari g S-N, sheathe beam s 0 0 0 0 0 390 390 390 iling Code I deteriorat	allel. Rema ar deformal lightly. (11. 0 0 0 0	nining bearition excess /11) E. Abu N/A N/A N/A O O	ngs on ive, t. 3rd N// N// N//

Structu	ıre Unit:			•						
ELEM NBR	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY Cp f
359	Underside of Concrete Deck Smart Flag	2	Routine	11/16/2011	1 EA	0	0	1	0	0
			Routine	12/07/2009	1 EA	0	0	0	1	0
	Notes: Crac throughout o	king & efflo riginal deck	orescence/rust stainir area. (12/09) Rust st	ig predominate o aining evident ac	n portion of dec ljacent to the co	k added ir onstruction	n 1985. Mo joints on t	derate mar ne original	cracking e	evident he deck
387	Reinforced Concrete Wingwa	2	Routine	11/16/2011	4 EA	0	3	1	. 0	N/A
			Routine	12/07/2009	4 EA	0	4	0	0	N/A
	Notes: (12/1 SE wingwall.	1/96) wingv	valls have Minor crac	ks and spalls. (1	1/11) Concrete	delaminati	on with exp	osed reba	r on the fac	ce of the
964	Critical Finding Smart Flag	2	Routine	11/16/2011	1 EA	1	0.	N/A	N/A	N/A
			Routine	12/07/2009	1 EA	1	0	Ņ/A	N/A	N/A
	Notes: (11/0	6) No critica	al findings noted.							
981	Signing	2	Routine	11/16/2011	1 EA	1	0	0	0	0
			Routine	12/07/2009	1 EA	1	0	0	0	0
	Notes: < nor	ie >							····	
982	Approach Guardrail	2	Routine	11/16/2011	1 EA	1	0	0	N/A	N/A
			Routine	12/07/2009	1 EA	1	0	0	N/A	N/A
·			ted end treatment pla isted end treatment h			as been br	oken from	the anchor	post. (1/09	) Snow
985	Slopes & Slope Protection	2	Routine	11/16/2011	1 EA	0	0	1	N/A	
			Routine	12/07/2009	1 EA	0	0	1	N/A	N/A
	in SW slope Riprap has b west abutme	1996, witho een added. nt slope. (1/	undermining the grount adequate restoration (12/04) Minor deterion (19) Moderate erosion at the NW con	on resulting in slo tration of the slop and deterioration	pe erosion and e protection at	undermini both abutn	ing of grounents. (11/	ted riprap. 06) Modera	(1998) N/C ite erosion	. (1999) of the
986	Curb & Sidewalk	2	Routine	11/16/2011	1 EA	1	0	0	N/A	N/A
	·		Routine	12/07/2009	1 EA	1	0	0	N/A	N/A

General Notes:

General note: Bridge 02501 remodeled in 1985, widened deck 24'8", west abut. 18'6", east abut. 27'0", and added 3-9'8" pier columns.

Note: (09/19/97) Underwater inspection; Collins Engineers, Inc.

Note: (10/07) Underwater inspection; Collins Engineers, Inc.

NOTE: Structure should be scheduled for periodical in-depth inspections as under bridge elements can not be properly inspected during routine inspections.

Inspected by: G. Anderson & W. Howard 12/13/01., G. Anderson & W. Howard 12/04/2002., G. Anderson & M. Werlinger 12/15/04., G. Anderson & C. Osterhus 11/17/06., G. Anderson & C. Osterhus 1/21/09., G. Anderson & M. Werlinger 12/07/09., G. Anderson & C. Osterhus 11/16/11.

58. Deck NBI:

36A. Brdg Railings NBI:

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail Terminal NBI:

BRIDGE 02501 CSAH 24 O\	VER RUM	RIVER		ROUTI	NE INSP	. DATE:	11/16/201	11	
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
59. Superstructure NBI:									
60. Substructure NBI:									
61. Channel NBI:									
62. Culvert NBI:						•			
71. Waterway Adeq NBI:									
72. Appr Roadway Alignment NBI:									
Inventory Notes:									
Gregory And			ndrew V						
Inspector's Signature					Rev	viewer's Si	gnature		

**ROUTINE INSP. DATE: 11/16/2011** 

•

DEPARTMENT OF TRANSPORTATION BRIDGE RATING AND LOAD POSTING				
BRIDGE LOCATION AND DESC Bridge No. 02501	RIPTION	401		
T			4 ft. Rdwy over Ru	n River
Mile Point 009 + 00.030				
Year Built 1963	Loca	tion <u>0.2 Mi F</u>	of Jct CSAH 28	
Year Remodeled 1985	- 			
DATA USED FOR BASIS OF RE	PORT (check)			
Bridge Inventory File				
Bridge Inspection Report (date	1986 b	/ WAH	}	
☐ Current Bridge Rating and Load Po			N 8 1/4" Slab + W.	c · · ·
SXX Bridge Plans (Original, Repair and		NEW SECTION		
		•		•
Bridge Letter File  Additional Field Information Recu	ulend? Type R	V No	•	
•		A. 110		
	ual Analysis		•	
			Bridge No	02501
SUMMARY OF RATING AND L	OAD POSTING	ANALYSIS	anage No	
	Struct	are: <del>Group L'Escri</del> o		
Inventory Operating	beal	<u> </u>	OAD POSTING LIMI	TS
Rating Rating	Posting A≉a'd?	(Con	nplete when load posting is req	<u> </u>
н21 Н39	Yes	Vehicle Type M3 Weight = 237	Semi-Trailer CombType M3SZ Weight = 35T	Truck & Full Trailer Type M3-3 Weight = 36T
ог нs <u>19.4</u> нs <u>32</u>	_XX_No	Tors	Tons	Tons
Design Load (Live load category for wh	nich bridge was desi	cned) H-20		•
Safe Load Capacity Appraisal Rating	•	•		
CERTIFICATION				
I hereby certify that this re	•	RATED BY	,	
by me or under my direct supe		CHECKED	• <u>-</u>	
am a duly registered profession the laws of the State of Migra				
	7 ,	DATE		
Signed	vong re	•		
Date 6-6-91 Reg.	No. 6924			

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	•						

# STATE OF MINNESOTA DEPARTMENT OF HIGHWAYS BRIDGE RATING SHEET

STEEL BEAM - COMPOSITE

S01 Orginial Beams

**************************************
Sheet No. 1 of 2
Rated By Robert R. Tomczal
Checked By
D-4- 4-26-91

_	
BRIDGE LOCATION AND DESCRIPTION	
Bridge No	Description 4 span - 44 ft. Rdwy. over Rum River
T.H. NoCSAH_24	Description
Mile Point 009 + 00.030	Location 0.2 Mi. E. of Jct. CSAH 28
Year Built 1963	Location U.2 PH. D. CZ
Year Remodeled 1985	
, 0 01 11 - 11 - 11 - 11 - 11 - 11 - 11	

ar Remodeled_	1985			,	
IMMARY OF	RATING AND	LOAD POSTING	ANALYSIS	Bridge No	02501
TEEL BEAM - C			ure: Group I/D & No.		
Inventory	Operating Rating	Load Posting Req'd.?	LOAD POSTING LIMITS  (Complete when load posting is required)		equired)-
Rating	н 39	Yes .	Vehicle Type M3 Weight = 23T	Semi-Trailer Comb. Type M3S2 Weight = 36T	Truck & Full Trailer Type M3-3 Weight = 36T
or HE 19.4	нѕ32	XX_N°	Tons	Tons	

ANALYSIS DATA		INVENTORY	OPERATING	
RATING		2	2	1 .
Distribution Lanes	number		7 7	14
Distribution Width	ft.	11_		
	Ibs./sq. in.	23100	31500	31500
Allowable Stress		85 <u>29</u>	8529	8529
Stress Due to Dead Load 1	lbs./sq. in.	8323		1220
	lbs./sq. in.	1220	1220	J. 6. 6. V
Stress Due to Dead Lead 2		13351	21751	21751
Stress Avail. for Live Load/Lane	lbs_/sq. in.		2022	2586
Mom. Avail. for Live Load/Lane	ft, kips	1247	2032	

DESCRIPTION OF SECTION	
Point Rated +* *	Span No. 1
Span Length 85', 106'-6", 106'-6", 85'	Impact
AA! Slab Thick 8	3'4" W. C. Thick. 12 IIICI III 51007
Beams 48X3/8" = WEB Crrs 9'-4"	Comp. Sect. Mod. 951 III
12 x 5/8 TOP, 16 x 3/4 Bot Fl.	

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STATE OF MINNESOTA DEPARTMENT OF TRANSPORTATION BRIDGE RATING SHEET

Sheet No.	2of	2
Rated By	Robert R.	<u>Tom</u> czak
Checked E	Ву	<del></del>
Date	4-26-91	

#### STEEL BEAM - COMPOSITE & NON-COMPOSITE LOAD FACTOR

S02 - Beams Added in 1985	
BRIDGE LOCATION AND DESCRIPT	TION
Bridge No. 02501	Туре
CSAH 24	Description
Mile Point 009 + 00:030	
Year Built 1963	Location 0.2 Mi. E. of Jct. CSAH 28
Year Remodeled 1985	

SUMMARY C	F RATING AN	ID LOAD POSTIN	IG :		
INVENTORY RATING	OPERATING RATING	LOAD POSTING REQUIRED?	LOAD POSTING LIMITS (Complete when load posting is required)		
н	Н 53	Yes	Vehicle Type M3 Weight = 24T	Semi-Trailer Comb. Type M3S2 Weight = 36T	Truck & Full Trailer Type M3-3 Weight = 40T
or HS <u>26</u>	HS <u>44</u>	No XX	Tons	Tons	Tons

ANALYSIS DATA				
RATING	•	INVENTORY	OPERATING	RATING
Distribution Lanes	number	2	2	1
Distribution Width	ft.	11	11	14
Allowable Stress - Steel (FY)	lbs./sq. in.	50000	50000	50000
Critical Point Location	Number	2.5	2.5	2.5
Controlling Rating Factor	Name	<u>Moment</u>	<u>Moment</u>	Moment_
Moment Available for Unfactored Live Load per Beam	ft,-kips	<u>1510</u>	2516	2516
Moment Available for Unfactored Live Load per Lane	ftkips	<u> 1780</u>	2966	3775

DESCRIPTION OF SECTION			
Span Length <u>85, 106.5, 106.5, 85</u>		<u> </u>	/all Tool in clah
Roadway Width 44 Slab Thicknes			(2" Incl in slab
Beams Size: 48 X 1/2" WebsCtrs: 91-4"	Sect. Mod. for Live Load	1069.6	
14 X 3/4" TOP, 18 X 3/4" BOT FL			
		A SALAMAN MARKAL SAMPLE AND	
'			





March 18, 1987



Mr. Paul Ruud, P.E. Anoka County Highway Engineer Anoka County Court House Anoka, MN 55303

RE: Bridge ratings

Dear Paul:

Enclosed are the bridge ratings requested by Bill Howard, except for Br. 02501. Bridge 02501 should be reported to Matt Lang, Mn/DOT as a continuous steel beam span designed for HS20 loading by load factor method.

Sincerely,

ERICKSON ENGINEERING COMPANY

Robert R. Tomczak, P.E.

RRT/sap

Enclosures

		An experience of the second
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## Mn/DOT Structure Inventory Report

<b>Bridge ID:</b> 02516 TWP 1197	over W BRANCH SUN	
GENERAL.	ROADWAY	INSPECTION
ncy Br. No.	Bridge Match ID (TIS) 0	Userkey 42
District Metro	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
Maint. Area Crew	Route Sys 08 - TWNS Number 1197	Unofficial Functionally Obsolete N
County 002 - Anoka	Roadway Name or Description	Unofficial Sufficiency Rating 89.0
City	TWNS 1197	Routine Inspection Date 12/02/2011
Township 02006 - LINWOOD	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 0.2 MI W OF JCT CR 77	Roadway Type 2 - 2-way traffic	Inspector Name County, Anoka
Sect., Twp., Range 35 - 034N - 22W	Control Section (TH Only)	Status A - Open
Latitude Deg 45 Min 23 Sec 23.25	Reference Point 000+00.230	NBI CONDITION RATINGS
Longitude Deg 93 Min 2 Sec 38.2	Detour Length 4.0 mi	Deck 6 - Satisfactory Condition
Custodian 03 - Town or Township Highway Agen	Lanes On 2 Under 0	Unsound Deck %
Owner 03 - Town or Township Highway Agen	ADT 165 Year 1994	Superstructure 6 - Satisfactory Condition
BMU Agreement	HCADT 0 ADTT 0 %	Substructure 6 - Satisfactory Condition
Year Built 1964	Functional Class 08 - Rural - Minor Collector	Channel 3 - Protection failure
MN Year Reconstructed	RDWY DIMENSIONS	Culvert N - Not Applicable
FHWA Year Reconstructed	If Divided NB-EB SB-WB	NBI APPRAISAL RATINGS
MN Temporary Status	Roadway Width 28.40 ft. ft.	Structure Evaluation 6
Bridge Plan Location 3 - COUNTY	Vertical Clearance ft. ft.	Dock Geometry 6
Date Opened to Traffic	Max. Vert. Clear. ft. ft.	Underclearances N
On-Off System 0 - OFF		Water Adequacy 8 - Bridge Above Approach
Legislative District 52A	***************************************	Approach Alignment 5 - Somewhat better than n
STRUCTURE	Lateral Clearance ft. ft.	SAFETY FEATURES
Service On 1 - Highway	Appr. Surface Width 34.0 ft.	Bridge Railing 0 - SUBSTANDARD
vice Under 5 - Waterway	Bridge Roadway Width 28.4 ft.	GR Transition 0 - SUBSTANDARD
Main Span Type	Median Width On Bridge ft.	Appr. Guardrail 1 - MEETS STANDARDS
7 - Timber 09 - Slab Span	MISC. BRIDGE DATA	GR Termini 0 - SUBSTANDARD
Main Span Detail	Structure Flared 0 - No flare	IN DEPTH INSP.
Appr. Span Type	Parallel Structure N - No parallel structure	Y/N Freq Date
	Field Conn. ID	Frac. Critical
Appr. Span Detail	Abutment Foundation 2 - TIMBER	Underwater
Skew 0	(Material/Type) 4 - PILE BENT	Pinned Asbly.
Culvert Type	Pier Foundation N - N/A	Spec. Feat.
Barrel Length ft.	(Material/Type) N - N/A	WATERWAY
Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mi.)
NUMBER OF SPANS		¬ Waterway Opening 120 sq. ft
MAIN: 1 APPR: 0 TOTAL: 1	PAINT	Navigation Control 0 - No nav. control on water
Main Span Length 24.0 ft.	Year Painted	Pier Protection
Structure Length 26.0 ft.	Unsound Paint %	Nav. Clr. (ft.) Vert. ft. Horiz.
Deck Width (Out-to-Out) 30.4 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Material 8 - Wood or Timber	Primer Type	MN Scour Code K - LIMITED RISH Year 1995
Wear Surf Type 6 - Bituminous	Finish Type	CAPACITY RATINGS
Wear Surf Install Year	BRIDGE SIGNS	Design Load 4 - H 20
Wear Course/Fill Depth 0.58 ft.		Operating Rating 2 - AS HS 25.3
Deck Membrane 0 - None	Posted Load 0 - Not Required	Inventory Rating 2 - AS HS 17.1
Deck Rebars N - Not Applicable (no deck)	Traffic 0 - Not Required	Posting VEH: SEMI: DBL:
Deck Rebars Install Year	Horizontal 1 - Object Markers	Rating Date 6/1/1991
Structure Area (Out-to-Out) 790 sq. ft.	Vertical N - Not Applicable	Mn/DOT Permit Codes
adway Area (Curb-to-Curb) 743 sq. ft.		A: N - N/A
Sidewalk Width Lt 0.00 ft. Rt 0.00 ft.		B: N - N/A
Curb Height Lt 0.92 ft. Rt 0.92 ft.		C: N - N/A
<del></del>		

C: N - N/A

Rail Type

Lt 37

Rt 37

#### Mn/DOT BRIDGE INSPECTION REPORT

**ROUTINE INSP. DATE: 12/02/2011** 

02/09/2012

Inspector: County, Anoka

BRIDGE 02516 TWP 1197 OVER W BRANCH SUNRISE RIVER

Count	v: Anoka			Location: 0.2 MI	N OF JCT CR 77		Length:		26.0 ft.		
City:	y. Alloka			Route: 08 - TWNS			Deck Wid	ith.	30.4 ft.		į
-	ship: 02006 - LIN\	NOOD		Control Section:				ea/ Pct. Ur		a. ft. / %	
	,		ange: 22V	V Maint. Area:			-	a/ Pct. Uns		-	
	Type: 7 - Wood or	-	-	Local Agency Brid	dge Nbr.:		Culvert:	N/A	•		
List							Postings:	:			
NBI D	eck: 6 Super:	: 6 Sub: (	6 Cha	n: 3 Culv: N							
	•	•		Open, Pos	sted, Closed: A	- Open					
A	inal Datings Anny	anahi E V	Matanasass		Code: K - LIMIT	ED RISK		<i>***</i> * * * * * * * * * * * * * * * * *		<i></i>	
	isal Ratings - Appr red Bridge Signs -		Vaterway:		Traffic: 0 - I	Not Required		official Str	-		N
rtoquii	ica briage oigno	Horizntal:		•		Not Applicable		official Fur official Suf			N 89.0
<b>.</b>		1 1011111111111					O,	onda ou	noiency re	ita iy	03.0
Struct	ture Unit:										
ELEM NBR		T NIAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
HUIL	LEENILM	1 LALVENET	LIVV	NEI OIL III E	INO. DATE	- CONTINI					
407	Bituminous Appr Roadway	roach	1	Routine	12/02/2011	2 EA	2	0	0	0	N/A
		•		Routine	11/03/2009	2 EA	2	0	0	0	N/A
		settlement (3") Settlement of t	x 2" area) i the bitumin	ach rating should have near the road center nous surfacing at bot approaches were sn	line (repaired in se h abutments. (200	ummer of 1994	). (12/18/9	7) Settlem	ent reoccur	ring. (200	00)
984	Deck & Approac	h Drainage	1	Routine	12/02/2011	1 EA	0	1	0	N/A	N/
				Routine	11/03/2009	1 EA	0	1	0	N/A	N/A
		Notes: (1/09)	Clean deb	ris from the deck dra	ins.						
055	Timber Slab with (AC) Overlay	Bituminous	2	Routine	12/02/2011	786 SF	0	786	0	0	N/A
				Routine	11/03/2009	786 SF	0	786	0	0	N/A
				ninous surfacing was racks in the bitumino			(1/09) The	bituminou	s wearing :	surface w	as snow
206	Timber Column		2	Routine	12/02/2011	16 EA	0	15	1	0	N/A
		•		Routine	11/03/2009	16 EA	0	15	1	0.	N/A
				est pile of south abu moderate decay at	tment shows sign		e waterlin	e. (12/04)	The west p	ile of sou	th
216	Timber Abutmer	nt	2	Routine	12/02/2011	72 LF	0	72	0	0	N/A
				Routine	11/03/2009	72 LF	0	72	0	0	N/A
		Notes: < none	<b>;</b> >			_				٠	
	Timbor Dias C			Deville	40/00/0044	72   5	^	79	0	0	N/A
235	Timber Pier Cap	•	2	Routine	12/02/2011	72 LF	0	72 72			
			_	Routine	11/03/2009	72 LF	0	72	0	.0	N/A
_		Notes: < none	>			· · · · · · · · · · · · · · · · · · ·					
332	Timber Bridge R	tailing	2	Routine	12/02/2011	171 LF	0	171	0	N/A	N/A
				Routine	11/03/2009	171 LF	0	171	0	N/A	N/
		Notes: (Railin (11/09) Minor				ail.					, h

Structu	ure 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
361	Scour Smart Flag	2	Routine	12/02/2011	1 EA	0	0	1	N/A	N/A
			Routine	11/03/2009	1 EA	0	0	1	N/A	N/A
	Notes: (199 N/C.	9) Sour line	at or below the bottor	m of the abut, ba	cking planks ak	ong the so	uth abut. (2	2000) <b>N</b> /C.	(2002) N/C	C. (12/04)
386	Timber Wingwall	2	Routine	12/02/2011	4 EA	0	4	0	0	N/A
			Routine	11/03/2009	4 EA	0	4	0	0	N/A
	Notes: < no	ne >		•						
964	Critical Finding Smart Flag	2	Routine	12/02/2011	1 EA	1	0	N/A	N/A	N/A
		•	Routine	11/03/2009	1 EA	1	0	N/A	N/A	N/A
	Notes: (11/	06) No critic	al findings noted.							
981	Signing	2	Routine	12/02/2011	1 EA	1	0	0	0	0
	+		Routine	11/03/2009	1 EA	1	0	0	0	0
	Notes: All h All hazard m		ers are inplace. S.E.	hazard marker m	nissing (10/17/9	4). (12/21.	/95) N/C. (	1999) N/C.	(2000) N/C	C. (2002)
982	Approach Guardrail	2	Routine	12/02/2011	1 EA	0	1	0	N/A	N/A
			Routine	11/03/2009	1 EA	0	1	0	N/A	N/A
	Notes: (11/	09) Minor im	pact damage to SW	and NW guard ra	il.					
റൗട	Slopes & Slope Protection	2	Routine	12/02/2011	1 EA	0	1	0	N/A	N/A
			Routine	11/03/2009	1 EA	1	0	0	N/A	N/A
	erosion alor	g the S.W.	wingwall has migrated wingwall. (11/06) Eros 1) There is no slope/o	sion has been re	paired. (1/09) S	99) Erosio now cover	n has beer ed, no maj	repaired. or erosion	(12/04) Mir detected. (	nor 11/09) No
986	Curb & Sidewalk	2	Routine	12/02/2011	1 EA	0	1	0	N/A	N/A
			Routine	11/03/2009	1 EA	. 0	1	0	N/A	N/A
	Notes: (12/	04) Minor in	pact damage to the I	N.W. corner of the	e west curb.					

Channel Protection: Old bridge piling remain in the channel approximately 100' upstream. (2000) Stream bed movement at the bridge is resulting in increased scour potential along the south abutment. (12/04) N/C. (1/09) The stream bed movement continues to deposit sediment along the north abutment and increasing scour potential along the south abutment, the channel should be cleaned and slope protection added along both abutments.

should be cleaned and slope protection added along both abutments. Inspected By: G. Anderson & W. Howard 12/11/02., G. Anderson & M. Werlinger 12/17/04., G. Anderson & M. Werlinger 11/29/06., 1/13/09 G. Anderson., G. Anderson & M. Werlinger 11/03/09., G. Anderson & C. Osterhus 12/2/11.

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: (12/11) The entire south wingwall is expose at the upstream end with the channel dangerously close to working its way behind it.

62. Culvert NBI:

71. Waterway Adeq NBI:

Structure Unit: **ELEM** QTY CS 1 QTY CS 2 QTY CS 4 QTY QTY NBR QUANTITY **ELEMENT NAME ENV** INSP. DATE REPORT TYPE CS3 Cp " 72. Appr Roadway Alignment NBI: **Inventory Notes: Gregory Anderson Andrew Witter** Inspector's Signature Reviewer's Signature

**ROUTINE INSP. DATE: 12/02/2011** 

TWP 1197 OVER W BRANCH SUNRISE RIVER

**BRIDGE 02516** 

# 

## NON-COMPOSITE STRINGER RATING SHEET (FOR STEEL OR TIMBER SIMPLE SPANS)

12" Longit Panel Deck Revised for .58' Overlay

	MHD 2210	<b>-</b>	G-1	
Rated	Robert	R	Tomcza	ī
	ed by			
m'	6-3-97			

-Ť					1064		·	26	ft.
		Bridge No	025	16 Ye	ar built <u>1964</u> .				
		County	A	noka	Roadway width (c	urb to curb) =	28.4 ft	No. of span	* <u> </u>
	•	Langth of sp	an rai	ted = L = 2			@		
ATA	· · · ·	Route	C	R 75		Feature cro	ssed <u>W.Be</u>	Sunrise Ri	ver
ă					-	•	Pier type		
		Abutment Ty	pe	Tr. Timb	***************************************				
		Floor: type	Par	nel Deck	thickness	2"	Curb: height _		idth
					cail_	height	-	width	
·		Halling: typ	<u> </u>	In Guaran	- Velada via	110.9.1			
	-	Dead load p	er ft. (	of stringer:				206	
ا م		***Qverb	urden	<u>.58 X 3</u> .	.67 X 144			306	_ lb./fc
OAD								7.04	_ lb./ft.
		String	jer	3.67 X 1	X 50		×	184	_ 16_/fc_
EAD		· Railin	a or o	wher Nec	<u>qlect</u>		<b></b>	<del></del>	_ lb_/fc_
	1	-	Total .	dead load = W	<u> </u>			· 490	_ lb./ft.
	1.	Oand land I	.com	mt = 1/8 (W)	(L)2 = <u>1/8 X</u>	490 X 25.	082	38526	_ ft. lb.
							.056 in3 - loss	. / \ \ =	1056 in3 = SM
1.									
ľ		Dist. factor	· (fron	n P. 29, AASH(	o, 1969)* = <sup>S</sup> =		INVENTORY	}	PERATING 1500 lb/in <sup>2</sup>
1	1			_		įį ≃	T20000 to 12		.76000 ft. lb. (
	1	Resisting M	lomen	17	<u>fo)</u> <u> </u>		132000 14.14.	9	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
NATING		less Dead le	oad M	loment of			38526 ft. lb.	.②	38526 ft. 1b. (
15					d and impact of	•			137474 ft. lb.;
2					<u> </u>	_ "	93474 ft. lb.		13/4/4 10.00
I		Moment av		or live load =	1 + impact) (Dist. Fac	tor)	93474 ft. lb.	.4	137474 ft. 16.
1	1	H 20 Mom			•				
	1						100320 ft. lb	:⑤	100320 It Ib
		H Rating =	• 😃	- (20) <del>-</del>		н	18.6	(6) H	27.4
	·	,	(9)					- × 1	
	When	line ③ or O	per.		N	Take Posting C	alcualtions as follow	ws:	
2	is	as follows:							
6	les	s than H3		Clase bridae					
	НЗ	Het et nu			from line (6) of One from line (6) of Oper.				or on line (Q)
	HE	up to H12 2 and over			of Oper. is less than				
2	3	2 and over			noth, make Posting C				LOADS
CALCIII ATIONS	NOT			re unit governs	Posting loads, indica	te the basis of	structure capacity	and determine	(in whole tons
		allowable l	<b>,</b>	iccordingly.	Gridge Limit	<b>=</b> (6) af Ope	rating =		Legal 7
	VE	HICLE .		NOMENT***	M - 3 Posting load	(4) of Ope	erating (23.25)	**************************************	
			(1	No Impact)	m • 3 r osting toad	Noment			_ Legal &
POCTING	M	-3 =			** 2020	d of Ope	erating	•	(9).
		-3S2 =		*	M - 3S2 Posting loa	Moment	of M-3S2 (36.6)		-1

\*\*\* From Minnesota Truck Moments, Plate 3 without impact.

<sup>\*</sup> Standard Specifications for Highway Bridges, 1969, adopted by the American Associations of State Highway Officials

<sup>••</sup> Overburden may be wearing course or gravel fill etc. which is not a part of the Structural Floor.

<sup>••••</sup> When calcualted loads exceed 23.5 tons and 36.6 tons respectively no posting is required.

·						
				•		* · · · · · · · · · · · · · · · · · · ·
	·					
			·			
					·	
					·	
					·	

#### Mn/DOT Structure Inventory Report

•		
Bridge ID: 02519 CSAH 22	over RUM RIVER	Date: 02/01/2012
GENERAL GENERAL	ROADWAY	INSPECTION
.cy Br. No.	Bridge Match ID (TIS) 0	Userkey 42
District Metro	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
Maint. Area Crew	Route Sys 04 - CSAH Number 22	Unofficial Functionally Obsolete N
County 002 - Anoka	Roadway Name or Description	Unofficial Sufficiency Rating 78.1
City Oak Grove	CSAH 22	Routine Inspection Date 11/21/2011
Township	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 0.2 MI E OF JCT CR 55	Roadway Type 2 - 2-way traffic	Inspector Name County, Anoka
Sect., Twp., Range 30 - 033N - 24W	Control Section (TH Only)	Status A - Open
Latitude Deg 45 Min 19 Sec 39.09	Reference Point 008+00.810	NBI CONDITION RATINGS
Longitude Deg 93 Min 22 Sec 22.62		Deck 5 - Fair Condition
Custodian 02 - County Highway Agency	Detour Length 5.0 mi Lanes On 2 Under 0	Unsound Deck %
Owner 02 - County Highway Agency		
BMU Agreement	ADT 8149 Year 2008	Superstructure 6 - Satisfactory Condition  Substructure 7 - Good Condition
Year Built 1969	HCADT 489 ADTT 6 %	Channel 5 - Bank eroded; Major damage
MN Year Reconstructed	Functional Class 06 - Rural - Minor Arterial	Culvert N - Not Applicable
FHWA Year Reconstructed	RDWY DIMENSIONS	
MN Temporary Status	If Divided NB-EB SB-WB	NBI APPRAISAL RATINGS
Bridge Plan Location 3 - COUNTY	Roadway Width 30.00 ft. ft.	Structure Evaluation 6
Date Opened to Traffic 10/1/1969	Vertical Clearance ft. ft.	Deck Geometry 4
On-Off System 1 - ON	Max. Vert. Clear. ft. ft.	Underclearances N
Legislative District 48A	Horizontal Clear. ft. ft.	Water Adequacy 8 - Bridge Above Approache
	Lateral Clearance ft. ft.	Approach Alignment 7 - Better than present minir
STRUCTURE	Appr. Surface Width 32.0 ft.	SAFETY FEATURES
Service On 1 - Highway	Bridge Roadway Width 30.0 ft.	Bridge Railing 1 - MEETS STANDARDS
ce Under 5 - Waterway	Median Width On Bridge ft.	GR Transition 1 - MEETS STANDARDS
Main Span Type	MISC. BRIDGE DATA	Appr. Guardrail 1 - MEETS STANDARDS
5 - Prestress or Precast 01 - Beam Span	Structure Flared 0 - No flare	GR Termini 1 - MEETS STANDARDS
Main Span Detail		IN DEPTH INSP.
Appr. Span Type	Parallel Structure N - No parallel structure	Y/N Freq Date
	Field Conn. ID	Frac. Critical
Appr. Span Detail	Abutment Foundation 1 - CONC	<b>Underwater</b> Y 60 mo. 08/01/2007
Skew 37 L	(Material/Type) 3 - FTG PILE	Pinned Asbly.
Culvert Type	Pier Foundation 1 - CONC	Spec. Feat.
Barrel Length ft.	(Material/Type) 3 - FTG PILE	WATERWAY
Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mi.) 1360.0
NUMBER OF SPANS	TAIRT	Waterway Opening 1834 sq. ft.
MAIN: 3 APPR: 0 TOTAL: 3	PAINT	Navigation Control 0 - No nav. control on waterw
Main Span Length 78.2 ft.	Year Painted	Pier Protection
Structure Length 238.9 ft.	Unsound Paint %	Nav. Clr. (ft.) Vert. ft. Horiz. ft
Deck Width (Out-to-Out) 34.2	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Material 1 - Concrete Cast-in-Place	Primer Type	MN Scour Code O - STBL - ACT F Year 1997
Wear Surf Type 4 - Low Slump Concrete	Finish Type	CAPACITY RATINGS
Wear Surf Install Year 1986	BRIDGE SIGNS	Design Load 4 - H 20
Wear Course/Fill Depth 0.16 ft.	<u> </u>	Operating Rating 2 - AS HS 30.8
Deck Membrane 0 - None	Posted Load 0 - Not Required	Inventory Rating 2 - AS HS21.4
Deck Rebars N - Not Applicable (no deck)	Traffic 0 - Not Required	Posting VEH: SEMI: DBL:
Deck Rebars Install Year	Horizontal 1 - Object Markers	<del>-</del>
Structure Area (Out-to-Out) 8170 sq. ft.	Vertical N - Not Applicable	Rating Date 6/1/1991
lway Area (Curb-to-Curb) 7169 sq. ft.		Mn/DOT Permit Codes
Sidewalk Width Lt 0.00 ft. Rt 0.00 ft.		A: N - N/A

**Curb Height** 

Rail Type

Lt 0.50

Lt 03

ft. Rt 0.50

Rt 03

B: N - N/A

C: N - N/A

#### Mn/DOT BRIDGE INSPECTION REPORT

**ROUTINE INSP. DATE: 11/21/2011** 

02/01/2012

Inspector: County, Anoka

BRIDGE 02519 CSAH 22 OVER RUM RIVER

County				OF 107 00 CC		1		200 0 #		7
Cit.			_ocation:     0.2 MI E Route:   04 - CSAH ;	OF JCT CR 55 22 Ref. Pt.: 0	N9100 040	Length: Deck Wid		38.9 ft. 34.2 ft.		l <sub>x</sub>
City: Fownsl	Oak Grove		Route: U4 - CSAH / Control Section:	ZZ Rei. Pt.: U	ιστυσίο (Ο			34.2 m. isnd: 7169	en ft / 0/-	
Section	•					•		isila. 7 109 ind: sq. ft	•	
	ype: 5 - Prestressed Concrete 02	-	Local Agency Brid	lae Nhr	•	Culvert:	N/A	situ. oq. it	. 7 70	
_ist:	Stringer/Multi-beam or Girde		Local Agency Disc	igo mor		Postings:				
NBI De	ck: 5 Super: 6 Sub: 7	Chan	5 Culv: N							
			Open, Pos	ted, Closed: A	- Open					
innraid	sal Ratings - Approach: 7 W	/aterway:		Code: O - STBL	ACT REQD	Ha	official Ctry	enternally Do	eficient N	,
• •	ed Bridge Signs - Load Posting: 0	•		Fraffic: 0 - I	Not Required			acturally De actionally O		
roden	Horizntal: 1	,			Not Applicable			ficiency Ra		• 8.1
<b>-</b> 44.						Oit	omolai oui	noichey ra	ung ,	0.1
structi	ure 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
59	Underside of Concrete Deck Smart Flag	1	Routine	11/21/2011	1 EA	0	0	0	1	0
	•		Routine	12/07/2009	1 EA	0	0	0	1	0
		delaminat	rust staining and evi on on the south ove							
07	Bituminous Approach Roadway	1	Routine	11/21/2011	2 EA	0	1	1	0	N/A
			Routine	12/07/2009	2 EA	1	1	0	0	Ň
	approaches we deck. (12/09) T approach.	re resurfac he pothole	t and potholing at bo ed in 2005, Bitumin s have been patche	ous spalling and d. (11/11) Moder	pothole are devate settlement	eloping ac of the east	djacent to t approach,	he west en major settl	d of the bri ement of th	dge ne west
22	Low Slump O/L (Concrete Deck with Uncoated Rebar)	2	Routine	11/21/2011	8170 SF	0	0	8170	0	0
			Routine	12/07/2009	8170 SF	0	8170	0	0	0
	Notes: (12/04)	D cracking	and enailed areas	12						anea a d
	delamination of bound lane.	the concre	ete overlay adjacent	to the deck joints	ourable joints o s, delamination	n the LEB at mid-spa	half of the	bridge. (11 i piers 1 an	/11) Wide : d 2 in the v	vest
 09	delamination of	the concre	ete overlay adjacent  Routine	to the deck joints	ourable joints o s, delamination 935 LF	at mid-spa	half of the an between	bridge. (11 piers 1 an	/11) Wide : d 2 in the v	vest
 D9	delamination of bound lane.  Prestressed Concrete Girder	the concre	ete overlay adjacent	to the deck joints	s, delamination	at mid-spa	n between	piers 1 an	d 2 in the v	vest N/A
09	delamination of bound lane.  Prestressed Concrete Girder	the concre	ete overlay adjacent Routine	11/21/2011	935 LF	at mid-spa	n between	piers 1 an	d 2 in the v	vest N/A
	delamination of bound lane.  Prestressed Concrete Girder or Beam	the concre	ete overlay adjacent Routine	11/21/2011	935 LF	at mid-spa	n between	piers 1 an	d 2 in the v	vest N/A N/A
	delamination of bound lane.  Prestressed Concrete Girder or Beam  Notes: < none	the concre	Routine Routine	11/21/2011 12/07/2009	935 LF	935 935	0 0	o piers 1 an	d 2 in the v	N/A N/A
	delamination of bound lane.  Prestressed Concrete Girder or Beam  Notes: < none  Reinforced Concrete Pier Wall	the concrete	Routine Routine Routine	11/21/2011 12/07/2009 11/21/2011 12/07/2009	935 LF 935 LF 935 LF 30 LF 30 LF	935 935 935	0 0 0	o piers 1 an  O  O	0 0 0	N/A N/A
10 10	delamination of bound lane.  Prestressed Concrete Girder or Beam  Notes: < none  Reinforced Concrete Pier Wall  Notes: (1/09) N	the concrete	Routine Routine Routine Routine Routine Routine	11/21/2011 12/07/2009 11/21/2011 12/07/2009	935 LF 935 LF 935 LF 30 LF 30 LF	935 935 935	0 0 0	o piers 1 an  O  O	0 0 0	N/A N/A N/A N/A
10	delamination of bound lane.  Prestressed Concrete Girder or Beam  Notes: < none  Reinforced Concrete Pier Wall  Notes: (1/09) N	the concrete 2 > 2 Alinor concrete	Routine Routine Routine Routine Routine Routine Routine Routine Routine	11/21/2011 12/07/2009 11/21/2011 12/07/2009 elow the waterlin	935 LF 935 LF 935 LF 30 LF 85 LF	935 935 935 0	0 0 0 30 30	0 0 0 0	0 0 0 0	N/A N/A N/A N/A N/A N/A
10	delamination of bound lane.  Prestressed Concrete Girder or Beam  Notes: < none  Reinforced Concrete Pier Wall  Notes: (1/09) Notes: Abutment	the concrete the c	Routine Routine Routine Routine Routine Routine Routine	11/21/2011 12/07/2009 11/21/2011 12/07/2009 elow the waterlin 11/21/2011 12/07/2009	3, delamination  935 LF  935 LF  30 LF  30 LF  85 LF	935 935 935 0 0	0 0 0 30 30	o o o o o o o o o o o o o o o o o o o	0 0 0 0	N/A N/A N/A N/A

ELEM			•			OT/	OTV	OTV	QTY	QTY
NBR —	ELEMENT NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	CS 4	CS 5
34	Reinforced Concrete Pier Cap	2	Routine	11/21/2011	75 LF	75	0	0	0	N/A
			Routine	12/07/2009	75 LF	75	0	0	0	N/A
	Notes: < none	>			· .					
00	Strip Seal Deck Joint	2	Routine	11/21/2011	85 LF	65	. 0	20	N/A	N/A
•			Routine	12/07/2009	85 LF	76	0	9	N/A	N/A
	east abutment	. (12/04) N	ar in strip seal over w I/C. (1/09) 2-1' & 1-6 tear at the east abutr	' tears at the wes	2001) N/C. (20 t abutment, 2' (	02) 2-1' tea tear at the	ars at the v east abutn	vest abutm nent. (11/11	ent, 1' tear i) 2-2' & 1-	at the ·12' tears
 01	Poured Deck Joint	2	Routine	11/21/2011	85 LF	0	0	85	N/A	N/A
•			Routine	12/07/2009	85 LF	0	0	85	N/A	N/A
	Notes: (12/11/ cracking and s	/96) Mino palling ak	r "D" cracking and spong the joints. (1/09)	alling along joint Major D-cracking	s. (2002) Major g and spalling a	adhesion long the jo	failure of the	ne joint sea LEB half c	lant, mode of the bridge	rate D e.
11	Expansion Bearing	2	Routine	11/21/2011	20 EA	0	17	3	N/A	N/A
, ,			Routine	12/07/2009	20 EA	12	5	3	N/A	N/A
13	the bearings.	2	Routine	11/21/2011	4 EA	4	0	0	N/A	N/A
			Routine	12/07/2009	4 EA	4	0	0	N/A	· N/A
	Notes: < none	<del>3</del> >								
331	Notes: < none Reinforced Concrete Bridge Railing	∍ > 2	Routine	11/21/2011	479 LF	470	0	9	0	
331	Reinforced Concrete Bridge Railing	2	Routine	11/21/2011	479 LF 479 LF	470 470	0	9	0	
331	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impac	2 ng Code 0	Routine	12/07/2009 orners, concrete	479 LF	470	0	9	0	N/A
	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impactant NE corne  Concrete Deck Cracking	2 ng Code 0	Routine 3) at the SW and NE co	12/07/2009 orners, concrete	479 LF	470	0	9	0	N/A N/A SW, NV
	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impac and NE corne	2 ng Code 0 tt damage rs, concre	Routine 3) at the SW and NE could be spalled and rebar	12/07/2009 orners, concrete exposed.	479 LF spalled and reb	470 ar exposed	0 d. (12/09) I	9 Impact dam	0 nage at the	N/A SW, NV
	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impact and NE corner  Concrete Deck Cracking Smart Flag	2 ng Code 0 nt damage rrs, concre	Routine 3) at the SW and NE coute spalled and rebar Routine	12/07/2009 orners, concrete exposed. 11/21/2011 12/07/2009	479 LF spalled and reb	470 ar exposed	0 d. (12/09) I	9 Impact dam	0 nage at the	N/A SW, NV
358	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impact and NE corne  Concrete Deck Cracking Smart Flag  Notes: (11/1/2)	2 ng Code 0 nt damage rs, concre 2	Routine 3) at the SW and NE coute spalled and rebar Routine Routine	12/07/2009 orners, concrete exposed. 11/21/2011 12/07/2009	479 LF spalled and reb	470 ar exposed	0 d. (12/09) I	9 Impact dam	0 nage at the	N/A SW, NV N/A
358	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impact and NE corner  Concrete Deck Cracking Smart Flag	2 ng Code 0 nt damage rrs, concre	Routine 3) at the SW and NE coute spalled and rebar Routine Routine ad moderate sized cre	12/07/2009 orners, concrete exposed. 11/21/2011 12/07/2009 acks adjacent to	479 LF spalled and reb 1 EA	470 ear exposed 0 eck joints.	0 d. (12/09) l	9 Impact dam 0	0 nage at the 0	N/A SW, NV N/A
358	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impact and NE corne  Concrete Deck Cracking Smart Flag  Notes: (11/11	2 ang Code 0 at damage rs, concre 2 at 1) Unseale 2	Routine 3) at the SW and NE coute spalled and rebar Routine Routine ed moderate sized cra	12/07/2009 orners, concrete exposed. 11/21/2011 12/07/2009 acks adjacent to 11/21/2011 12/07/2009	479 LF spalled and reb 1 EA the pourable de	470 ear exposed 0 eck joints.	0 d. (12/09) l 1	9 Impact dam 0	0 nage at the 0	N/A SW, NV N/A
358	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impact and NE corne  Concrete Deck Cracking Smart Flag  Notes: (11/1/1)  Scour Smart Flag  Notes: O - St	2 ang Code 0 at damage rs, concre 2 at 2 a	Routine 3) at the SW and NE coute spalled and rebar Routine Routine ed moderate sized cra Routine Routine Routine cour. Additional actions	12/07/2009  orners, concrete exposed.  11/21/2011  12/07/2009  acks adjacent to  11/21/2011  12/07/2009  on required.	479 LF spalled and reb 1 EA the pourable de	470 ear exposed 0 eck joints.	0 d. (12/09) l 1	9 Impact dam 0	0 nage at the 0	N/A SW, NV N/A N/A
358	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impact and NE corne  Concrete Deck Cracking Smart Flag  Notes: (11/11	2 ang Code 0 at damage rs, concre 2 at 2 a	Routine 3) at the SW and NE coute spalled and rebar Routine Routine ed moderate sized cra Routine Routine Routine	12/07/2009 orners, concrete exposed. 11/21/2011 12/07/2009 acks adjacent to 11/21/2011 12/07/2009	479 LF spalled and reb 1 EA the pourable de 1 EA 1 EA	470 ear exposed 0 eck joints. 1	0 d. (12/09) l 1 0 0	9 Impact dam 0 0	0 nage at the 0 N/A N/A	N/A SW, NV N/A N/A
358	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impact and NE corner  Concrete Deck Cracking Smart Flag  Notes: (11/11  Scour Smart Flag  Notes: O - S  Reinforced Concrete Wingwall	2 ag Code 0 at damage rs, concre 2  1) Unseale 2 table for s	Routine 3) at the SW and NE create spalled and rebar Routine Routine Routine Routine Routine Cour. Additional action Routine Routine Routine Routine Routine Routine Routine	12/07/2009 orners, concrete exposed.  11/21/2011 12/07/2009 acks adjacent to 11/21/2011 12/07/2009 on required.  11/21/2011 12/07/2009	479 LF spalled and reb  1 EA the pourable de  1 EA 1 EA 4 EA 4 EA	470 ear exposed 0 eck joints. 1 1	0 d. (12/09) 1 1 0 0	9 Impact dam 0 0 0	0 nage at the 0 N/A N/A 0 0	N/A SW, NV N/A N/A N/A
331 358 361 387	Reinforced Concrete Bridge Railing  Notes: (Railing (11/06) Impact and NE corner and NE corner Concrete Deck Cracking Smart Flag  Notes: (11/1/2)  Scour Smart Flag  Notes: O - S  Reinforced Concrete Wingwall  Notes: (11/0)	2 ag Code 0 at damage rs, concre 2  1) Unseale 2 table for s	Routine 3) at the SW and NE create spalled and rebar Routine Routine Routine Routine Routine Cour. Additional action Routine Routine Routine Routine Routine Routine Routine	12/07/2009 orners, concrete exposed.  11/21/2011 12/07/2009 acks adjacent to 11/21/2011 12/07/2009 on required.  11/21/2011 12/07/2009	479 LF spalled and reb  1 EA the pourable de  1 EA 1 EA 4 EA 4 EA	470 ear exposed 0 eck joints. 1 1	0 d. (12/09) 1 1 0 0	9 Impact dam 0 0 0	0 nage at the 0 N/A N/A 0 0	N/A SW, NV N/A N/A N/A

ELEM							QTY	QTY	QTY	QTY	QTY
NBR	ELEMENT	NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	CS 1	CS 2	CS 3	CS 4	ČS.
81	Signing		2	Routine	11/21/2011	1 EA	0	1	0	0	0
				Routine	12/07/2009	1 EA	0	1	0	0	0
		missing at the been repaired	NW corne t, the NE de	rs missing at SE & SV r of the bridge. (12/04 elineator post is bent. s missing. (11/11) Th	4) N/C. (11/06) T (12/09) The NE	he SE delineato delineator post	or post is b has been	ent. (11/06	) The SE o	lelineator p	ost has
982	Approach Guard	rail	2	Routine	11/21/2011	1 EA	0	1	0	N/A	N/A
				Routine	12/07/2009	1 EA	0	1	0	N/A	N/A
		guardrail end damage to the	treatments NE end tr	ach guard rail missing installed under contreatment and the NW	act SP 02-030-0 guardrail.	3. (1/09) impaci		to the NE e	nd treatme	nt. (11/09)	Impact
984	Deck & Approac	h Drainage	2	Routine	11/21/2011	1 EA	1	0	0	N/A	N/A
				Routine	12/07/2009	1 EA	1	0	0	N/A	N/A
		Notes: (10/10	)/95) Catcl	n basins at east end o	of bridge are clog	ged. (12/09) Ca	atch basin	grates are	open.		
985	Slopes & Slope	Protection	2	Routine	11/21/2011	1 EA	0	1	0	N/A	N/A
•			-	Routine	12/07/2009	1 EA	0	1	0	N/A	N/A
		fabric slope proboth abutmen	rotection at ts. Erosion	abutment fabric slope east abutment. (1/01 along the SW & NW tection continuing to	) N/C. (2002) Ur wingwalls. (12/0	ndermining & slu 4) N/C. (11/11)	imping of A 2" gap b	the concret between the	te fabric slo e abutment	ppe protect and the to	ion at
200	Curb & Sidewalk	:	2	Routine	11/21/2011	1 EA	1	0	0	N/A	V <sub>1</sub> ,v
986				Routine	12/07/2009	1 EA	1	0	0	N/A	ik .
986				Noderie	, , , , , , , , , , , , , , , , , , , ,						

General Notes: NOTE: Structure should be scheduled for periodical in-depth inspection as under bridge elements can not be properly inspected during routine inspections.

NOTE: (09/12/97) Underwater inspection only; Collins Engineers, Inc.

(8/07) Underwater inspection by Collins Engineers, Inc.

NOTE: Structure should be scheduled for periodical in-depth inspections as under bridge elements can not be properly inspected during routine inspections.

Channel Protection: The channel appears to be slightly migrating towards the east abutment. (12/09) Increased scouring along the toe of the east abutment slope protection indicates that the channel is attempting to migrate to the east. (11/11) Several logs have jammed against the upstream side of the west pier.

Inspected by: G. Anderson & W. Howard (12/10/02)., G. Anderson & M. Werlinger 12/15/04., G. Anderson & C. Osterhus 11/17/06., G. Anderson & C. Osterhus 1/23/09., G. Anderson & M. Werlinger 12/07/09., G. Anderson & C. Osterhus 11/21/11.

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:

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
/ i. Water	way Adeq NBI:									
<b>72</b> .	Appr Roadway Alignment NBI:									
lŧ	nventory Notes:									
					•					
	Gregory And	derson				A	indrew W	litter		

**CSAH 22 OVER RUM RIVER** 

Inspector's Signature

BRIDGE 02519

**ROUTINE INSP. DATE: 11/21/2011** 

Reviewer's Signature

#### PRESTRESSED CONCRETE RATING SHEET Z<sub>Diaphragm</sub> Revised for 2" conc W.C.

MHD 22106F 8-73

Ratad	by Robe	rt R	Tomcza
Check	ed by		
73.4-	6-3-	97	

•		Girders - C. Girders						
	T	Bridge No. 02519 Year built 1969 Total structure length 2389 ft.						
DATA		County Anoka Roadway width (curb to curb) = 30 ft No. of spans = 3						
		Length of span rated = L = 76.75 ft.						
		Route CSAH 22 Feature crossed Rum River						
		Abutment type Conc Parapet Pier type Solid Shaft Conc						
		Floor: type Conc thickness 6 3/4 Curb: height width						
		Railing: type 1 Lino Conc height width						
. 00010030	3	Dead load per ft. of girder  -**Overburden 2/12 X 8.83 X 150						
0	Girders: 45" T @ 8'-10" spcg. impact = .248  Distribution factor (from P. 29, AASHO, 1969)* = S = 1.606  Prestress steel: Fs1 = 270							
	INVENTORY RATING	Based on Ultimate Moment = MU  MU = J(A <sub>S</sub> ) (F <sub>S</sub> <sup>1</sup> ) (d) = 4413 Ft. Kips 1K (1)  less1. 3x Dead load Moment of 1737 Ft. Kips 1K (2)  = ultimate Moment avail. for live load and impact of 2676 Ft. Kips 1K (3)  3 = Moment avail. for live load and impact of 1217 Ft. Kips 1K (4)  2.2  Moment avail. for live load = 40  (1 + impact) (Dist. Factor)  1.248 1.606						
	=	H 20 Moment - Per Wheel Line - = H = H = H = H						
· 1		(a) HS 21.4						

			e.	* * <b>*</b> .

Bridge ID: 02521 MSAS 116	over BNSF RR	Date: 02/01/2012
GENERAL	ROADWAY	INSPECTION
A 3CY Br. No.	Bridge Match ID (TIS) 0	Userkey 42
District Metro	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient Y
Maint. Area Crew	Route Sys 05 - MSAS Number 116	Unofficial Functionally Obsolete N
County 002 - Anoka	Roadway Name or Description	Unofficial Sufficiency Rating 83.0
City Coon Rapids	MSAS 116	Routine Inspection Date 11/23/2011
Township	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 0.3 MI SE OF JCT CSAH 1	Roadway Type 2 - 2-way traffic	Inspector Name County, Anoka
Sect., Twp., Range 26 - 031N - 24W	Control Section (TH Only)	Status A - Open
Latitude Deg 45 Min 8 Sec 46.85	Reference Point 001+00.255	NBI CONDITION RATINGS
Longitude Deg 93 Min 17 Sec 27.7		Deck 4 - Poor Condition
Custodian 02 - County Highway Agency	Detour Length 1.0 mi Lanes On 4 Under 0	Unsound Deck %
Owner 02 - County Highway Agency		Superstructure 6 - Satisfactory Condition
BMU Agreement		Substructure 5 - Fair Condition
Year Built 1972		Channel N - Not Applicable
MN Year Reconstructed	Functional Class 17 - Urban - Collector	Culvert N - Not Applicable
FHWA Year Reconstructed	RDWY DIMENSIONS	NBI APPRAISAL RATINGS
MN Temporary Status	If Divided NB-EB SB-WB	Structure Evaluation 5
Bridge Plan Location 3 - COUNTY	Roadway Width 37.70 ft. 37.70 ft.	Deck Geometry 9
Date Opened to Traffic	Vertical Clearance ft. ft.	Underclearances 5
On-Off System 0 - OFF	Max. Vert. Clear.	Water Adequacy N - Not Applicable
Legislative District 49B	Horizontal Clear. 37.6 ft. 37.6 ft.	Approach Alignment 7 - Better than present minir
STRUCTURE	Lateral Clearance ft. ft.	
	Appr. Surface Width 76.0 ft.	SAFETY FEATURES
Service On 1 - Highway	Bridge Roadway Width 75.4 ft.	Bridge Railing 1 - MEETS STANDARDS  GR Transition 0 - SUBSTANDARD
ce Under 2 - Railroad	Median Width On Bridge 2.99 ft.	Appr. Guardrail 1 - MEETS STANDARDS
Main Span Type 5 - Prestress or Precast 01 - Beam Span	MISC, BRIDGE DATA	GR Termini 1 - MEETS STANDARDS
Main Span Detail	Structure Flared 0 - No flare	
Appr. Span Type	Parallel Structure N - No parallel structure	IN DEPTH INSP.
White oban (The	Field Conn. ID	Y/N Freq Date Frac. Critical
Appr. Span Detail	Abutment Foundation 1 - CONC	Underwater
Skew 32 L	(Material/Type) 3 - FTG PILE	Pinned Asbly.
Culvert Type	Pier Foundation 1 - CONC	Spec. Feat.
Barrel Length ft.	(Material/Type) 3 - FTG PILE	WATERWAY
Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mi.)
NUMBER OF SPANS	Thistoric Status 5 - Not eligible	Waterway Opening sq. ff.
MAIN: 3 APPR: 0 TOTAL: 3	PAINT	Navigation Control N - Not applicable, no waterw
	Year Painted	Pier Protection
	Unsound Paint %	Nav. Clr. (ft.) Vert. ft. Horiz. ft.
Structure Length 240.6 ft.  Deck Width (Out-to-Out) 81.8 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Material 1 - Concrete Cast-in-Place	Primer Type	MN Scour Code A - NON WATER' Year 1991
Wear Surf Type 4 - Low Slump Concrete	Finish Type	CAPACITY RATINGS
Wear Surf Install Year 1983		Design Load 5 - HS 20
Wear Course/Fill Depth 0.17 ft.	BRIDGE SIGNS	Operating Rating 2 - AS HS 42.9
Deck Membrane 0 - None	Posted Load 0 - Not Required	Inventory Rating 2 - AS HS29.7
Deck Rebars N - Not Applicable (no deck)	Traffic 0 - Not Required	Posting VEH: SEMI: DBL:
Deck Rebars Install Year	Horizontal 0 - Not Required	
Structure Area (Out-to-Out) 19703 sq. ft.	Vertical N - Not Applicable	Rating Date 6/1/1991
dway Area (Curb-to-Curb) 18137 sq. ft.	•	Mn/DOT Permit Codes
Sidewalk Width Lt 0.00 ft. Rt 0.00 ft.		A: N - N/A R: N - N/A
Curb Height Lt 0.00 ft. Rt 0.00 ft.		B: N - N/A C: N - N/A
D-11 75 1400 D4 00		A* 14 + 14/V

Rail Type

Lt 22

Rt 22

C: N - N/A

02/01/2012

Inspector: County, Anoka

BRID	GE 02521 MSA	S 116 OVEF	R BNSF RR	t			ROUT	NE INSP	. DATE:	11/23/201	1
County	y: Anoka		Loca	tion: 0.3 MI	SE OF JCT CS	AH 1	Length:	2	40.6 ft.		
City:	Coon Rapids		Rout	e: 05 - MSAS	116 Ref. Pt.:	001+00.255	Deck Wid	lth:	81.8 ft.		
Towns	hip:		Cont	rol Section:			Rdwy. Ar	ea/ Pct. Un	snd: 1813	7 sq. ft. / %	
Section	n: 26 Township	: 031N Ran	ge: 24W Ma	aint. Area:			Paint Are	a/ Pct. Uns	and: sq. fi	. / %	
Span T	Type: 5 - Prestressed Stringer/Multi-be		Lo	cal Agency Bri	dge Nbr.:		Culvert: Postings:	N/A			
NBI De	eck: 4 Super: 6	Sub: 5	Chan: N	I Culv: N							
				Open, Po	sted, Closed:	A - Open					
Annrai	sal Ratings - Approac	h: 7 Wa	terway: N	MN Scou	r Code: A - NO	N WATERWAY	lin	official Stru	oturally Da	eficient Y	,
• •	red Bridge Signs - Loa			i	Traffic: 0	- Not Required			•	bsolete N	
rioquii	00 2 nago engino 1200	Horizntal: 0 -				- Not Applicable		official Suf	-		3.0
Obrand	uma timiti		•			••	0		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	9	5.0
	ture Unit:										
ELEM NBR		AME	ENV RE	PORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
022	Low Slump O/L (Co Deck with Uncoated		2	Routine	11/23/2011	19676 SF	0	0	0	19676	0
		,		Routine	11/20/2009	19676 SF	0	19676	0	0	0
109	Prestressed Concre or Beam		k delaminated	d on the mid sp	11/23/2011	2067 LF	2035	0	32	0	N/A
				Routine	11/20/2009		2035	32	0	0	Nim
	No be	tes: (1/09) Mi am ends at the	nor cracking a abutments.	and spalling or	the beam ends	at the abutment	s. (11/11) <b>i</b>	Moderate c	racking an	d spalling o	n the
205	Reinforced Concret	e Column	2	Routine	11/23/2011	12 EA	0	12	0	0	N/A
				Routine	11/20/2009	12 EA	12	0	0	0	N/A
	No	tes: (1/09) Th	e concrete sp	pecial surface f	inish is flaking a	nd pealing.					
215	Reinforced Concret Abutment	ė	2	Routine	11/23/2011	200 LF	0	170	30	0	N/A
				Routine	11/20/2009	200 LF	170	0	30	0	N/A
	de on (1/ be	laminating fror east abutmen 01) Spalled ar ginning to dela	n leaking exp t face also ad eas repaired aminate. (1/09	ansion joint at ljacent area is and cracks ha )) Major failure	bridge centerlin delaminated at l ve been pressur (delamination)	ly repaired crack e. oridge centerline e injected under of the concrete a i 2001 on both al	. (10/11/94 contract. (1 reas repair	(3) west abu (2/04) Seve	/22/94) sp tment crac eral areas	all w/expos ks with rust repaired in :	ed rebar stains. 2001 are
234	Reinforced Concret	e Pier Cap	2	Routine	11/23/2011	180 LF	0 -	180	0	0	N/A
				Routine	11/20/2009	180 LF	180	0	0	0	N/A
	No	ites: < none >									
300	Strip Seal Deck Joi	nt	2	Routine	11/23/2011	187 LF	185	2	0 -	N/A	N/A
				Routine	11/20/2009	187 LF	185	2	0	N/A	N/A
					t leaking at cent oth abutments.	er median at boti	n abutment	s. (1/01) Ne	ew glands	installed at	both

							QTY	QTY	QTY	QTY	QTY
ELEM "R —	ELEMENT	NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	CS 1	CS 2	CS 3	CS 4	CS 5
01	Poured Deck Joir	nt	2	Routine	11/23/2011	377 LF	0	0	377	N/A	N/A
				Routine	11/20/2009	377 LF	0	377	0	N/A	N/A
	;	Notes: (1999) I and joints resea adjacent to the	iled unde	lls in the deck/approa r contract. (11/06) Ad	ach slab adjacen lhesion failure th	t to the joint: (2) roughout all joir	0" @ LEB ' nts. (11/11)	W. appr.) ( The conc	1/01) Spalle rete deck is	ed areas re beginning	epaired to spai
11	Expansion Bearing	ng	2	Routine	11/23/2011	50 EA	38	12	0	N/A	N/A
				Routine	11/20/2009	44 EA	40	4	0	N/A	N/A
		Minor corrosion	present.	ng assembly installed (1/09) Moderate corr o 4 of the bearing on	osion and minor	section loss on	(south fasc the west	ia beam = abutment. (	1) under co 11/11) Mod	ontact. (11/ derate com	(06) osion
313	Fixed Bearing		2	Routine	11/23/2011	8 EA	8	0	0	N/A	N/A
		•		Routine	11/20/2009	8 EA	8	0	0	N/A	N/A
		Notes: (11/06)	Minor co	rrosion present.							
321	Concrete Approa Slab-Concrete W Surface		2	Routine	11/23/2011	2 EA	0	0	2	0	N/A
				Routine	11/20/2009	2 EA	0	1	1	0	N/A
	Reinforced Cond Railing	,, o.cge	2	Routine	11/23/2011	971 LF	971	0	0	0	N/A
	Þ	Notes: (Railing	Code 22	2)							
	,	(12/11/90) Nui (1/01) North an	nerous s d south c		xposed rebar. (3 aced with type F	/22/94) Delami	nation and (486") un	spall area	s in rails at	ailing = 48	cations. 6" (12/
387	Reinforced Conc	(12/11/90) Nui (1/01) North an Superficial vert bridge.	nerous s d south c	2) pall areas in rails w/e concrete rail was repl	xposed rebar. (3 aced with type F	/22/94) Delami	nation and (486") un	spall area	s in rails at	ailing = 48	cations. 6" (12/0
387	Reinforced Cond	(12/11/90) Nui (1/01) North an Superficial vert bridge.	merous s d south c ical crack	2) pall areas in rails w/e concrete rail was repla s throughout railing.	xposed rebar. (3 aced with type F (11/11) Moderate	/22/94) Delami concrete railing e concrete dete	nation and g (486") un rioration al	spall area der contrac ong the gu	s in rails at ot, median r tter line at t	railing = 48 the NW co	cations. 6" (12/0 rner of 1
 387	Reinforced Cond	(12/11/90) Nui (1/01) North an Superficial vert bridge.	nerous s d south c ical crack	2) pall areas in rails w/e concrete rail was repli is throughout railing.  Routine	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011	/22/94) Delami concrete railing e concrete dete	nation and g (486") un rioration al	spall area der contrac ong the gu	s in rails at ot, median r tter line at t	railing = 48 the NW cor	cations. 6" (12/0 rner of 1
		(12/11/90) Nui (1/01) North an Superficial vert bridge. crete Wingwall Notes: < none	nerous s d south c ical crack 2	2) pall areas in rails w/e concrete rail was repli is throughout railing.  Routine	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009	/22/94) Delami concrete railing e concrete dete	nation and g (486") un rioration al	spall area der contrac ong the gu	s in rails at ot, median r tter line at t	railing = 48 the NW cor	cations. 6" (12// rner of N// N//
	Reinforced Cond	(12/11/90) Nui (1/01) North an Superficial vert bridge. crete Wingwall Notes: < none	nerous s d south c ical crack	P) pall areas in rails w/e concrete rail was replace to throughout railing.  Routine  Routine	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011	/22/94) Delami concrete railing e concrete dete 4 EA 4 EA	nation and g (486") un rioration al 0 4	spall area der contrac ong the gu 4 0	s in rails at ct, median r tter line at t 0 0	ailing = 48 the NW cor	cations. 6" (12// rner of h
		(12/11/90) Nui (1/01) North an Superficial vert bridge. crete Wingwall Notes: < none	nerous specifications of the south of the so	P) pall areas in rails w/e concrete rail was replications stated throughout railing.  Routine  Routine  Routine	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009	/22/94) Delamiconcrete railing concrete dete	nation and g (486") un rioration al 0 4	spall area der contrac ong the gu 4 0	s in rails at ct, median r tter line at 0 0	railing = 48 the NW con  0 0 N/A	cations. 6" (12// rner of h
964	Critical Finding S	(12/11/90) Nui (1/01) North an Superficial vert bridge. crete Wingwall Notes: < none	nerous specifical crack  2  No critic	e) pall areas in rails w/e concrete rail was replications Routine Routine Routine Routine Routine Routine Routine Routine	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009 11/23/2011 11/20/2009	/22/94) Delamiconcrete railing e concrete dete 4 EA 4 EA 1 EA 1 EA	nation and g (486") un rioration al 0 4	spall area der contrac ong the gu 4 0	s in rails at ct, median r tter line at 0 0	railing = 48 the NW con  0  0  N/A	cations. 6" (12// rner of f N/A N/A
964		(12/11/90) Nui (1/01) North an Superficial vert bridge. crete Wingwall Notes: < none	nerous specifications of the south of the so	P) pall areas in rails w/e concrete rail was replices throughout railing.  Routine  Routine  Routine  Routine  Routine  Routine  Routine  Al findings noted.	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009 11/20/2009	/22/94) Delamiconcrete railing concrete dete	nation and g (486") un rioration al 0 4	spall area der contrac ong the gu 4 0	s in rails at ct, median r tter line at 0 0 0 N/A N/A	railing = 48 the NW core  0 0 N/A N/A	N/A
964	Critical Finding S	(12/11/90) Nui (1/01) North an Superficial vert bridge. crete Wingwall Notes: < none Smart Flag Notes: (11/06)	nerous special crack  2  No critic  2	e) pall areas in rails w/e concrete rail was replications Routine Routine Routine Routine Routine Routine Routine And the Routine Routine Routine Routine	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009 11/23/2011 11/23/2011 11/23/2011 11/20/2009	122/94) Delamiconcrete railing concrete determine a concrete determine 4 EA 4 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA	(486") un rioration al	spall area der contractions the gu	s in rails at ct, median r tter line at t 0 0 0 N/A N/A	railing = 48 the NW con  0 0 N/A N/A 0	N// N// 0
964	Critical Finding S	(12/11/90) Nui (1/01) North an Superficial vert bridge. Crete Wingwall  Notes: < none Smart Flag  Notes: (11/06)	nerous sid south of ical crack  2  No critic  2  No bridg	P) pall areas in rails w/e concrete rail was replicated to the contine replicated to the contine replication of the control of th	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009 11/23/2011 11/20/2009 11/20/2009 lace. (11/09) Del	122/94) Delamiconcrete railing concrete railing concrete determined to the	1 1 1 e at the NE	spall area der contractions the gu	s in rails at ct, median rater line at the	ailing = 48 the NW cor  0 0 N/A N/A 0 0	N/F N/F
964	Critical Finding S	(12/11/90) Nui (1/01) North an Superficial vert bridge. Crete Wingwall  Notes: < none Smart Flag  Notes: (11/06)	nerous special crack  2  No critic  2	P) pall areas in rails w/e concrete rail was replicated to the contine replicated to the contine replication of the contine repli	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009 11/23/2011 11/20/2009 lace. (11/09) Del	122/94) Delamiconcrete railing concrete determine a concrete determine 4 EA 4 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1 EA	(486") un rioration al	spall area der contractions the gu	s in rails at ct, median r tter line at t 0 0 0 N/A N/A	railing = 48 the NW con  0 0 N/A N/A 0	N// N// N// N// N//
964 981	Critical Finding S	(12/11/90) Nui (1/01) North an Superficial vert bridge. Crete Wingwall  Notes: < none Smart Flag  Notes: (11/06)  Notes: (11/06)	nerous special country of south coical crack  2  No critic  2  No bridg  2	P) pall areas in rails w/e concrete rail was replicated to the contine replicated to the contine replication of the control of th	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009 11/23/2011 11/20/2009 lace. (11/09) Del 11/23/2011 11/23/2011 11/23/2011 11/23/2009	1/22/94) Delamiconcrete railing concrete railing concrete determined at EA 4 EA 4 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1	(486") un rioration and 0 4 1 1 1 2 at the NE	spall area der contrac ong the gu	s in rails at ct, median rater line at the control of the control	railing = 48 the NW core  0 0 N/A N/A 0 0	N// N// N// N// N//
	Critical Finding S	(12/11/90) Nui (1/01) North an Superficial vert bridge. Crete Wingwall  Notes: < none Smart Flag  Notes: (11/06)  Notes: (11/06)	nerous special country of south coical crack  2  No critic  2  No bridg  2	pall areas in rails w/e concrete rail was replicant to the concrete rail was replicated to the concrete rail was replicated to the concrete rail was replicated to the contine Routine Routine Routine Routine ge delineators are input Routine Routine Routine Routine Routine	xposed rebar. (3 aced with type F (11/11) Moderate 11/23/2011 11/20/2009 11/23/2011 11/20/2009 lace. (11/09) Del 11/23/2011 11/23/2011 11/23/2011 11/23/2009	1/22/94) Delamiconcrete railing concrete railing concrete determined at EA 4 EA 4 EA 1 EA 1 EA 1 EA 1 EA 1 EA 1	(486") un rioration and 0 4 1 1 1 2 at the NE	spall area der contrac ong the gu	s in rails at ct, median rater line at the control of the control	railing = 48 the NW core  0 0 N/A N/A 0 0	N/A N/A N/A

Reviewer's Signature

Inspector's Signature

Structu	ıre Unit:										
ELEM NBR	ELEMEN	T NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY Ce
984	Deck & Approac	ch Drainage	2	Routine	11/23/2011	1 EA	0	1	0	N/A	N/A
	•			Routine	11/20/2009	1 EA	1	0	0	N/A	N/A
******************************		Notes: Majo (11/11) Eros approach pa	ion along th	slope in back of NE v e NE wingwall is allov	vingwall from dra ving runoff to und	inage outlet ov dermine the slo	erflow. (1) pe paving	2/15/97) R and contrit	epairs mad outing to the	de summer e undermin	of 1997 ing of th
985	Slopes & Slope	Protection	2	Routine	11/23/2011	1 EA	0	1	0	N/A	N/A
				Routine	11/20/2009	1 EA	0	1	0	N/A	N/A
		contract: (12 (11/09) Eros	/04) Erosior ion at the N	has undermined & buntermined to be along the NE corner of the bridge off to undermine the s	of the slope pay beginning to un	ing is resulting dermine the ap	water runr proach pai	ning under nel. (11/11)	the concret ) Erosion at	te slope pa long the NE	ving.
	General Notes	inspected of NOTE: Quality inspection. NOTE: Co. Inspected	during routir uantity chang ntract repair by: G. Ande	ld be scheduled for pone inspections, ges for conc railing, ses made in 2000 underson & W. Howard 12 n & C. Osterhus 1/06/	trip seal exp join r contract S.P. 0 /6/02., G. Ander	t and pourable j 2-030-03. son & M. Werlin	oints were	field meas	sured during	g the 1996	
		Railroad C	ontact: Lynr	1 Leibfried BNSF 763	.782.3492, cell 6	127706062, em	ail lynn.lei	bfried@bn	sf.com		
	58. Deck NBI	:									
36A. E	3rdg Railings NBI	:									
36B	I. Transitions NBI										i
36C. Ap	ppr Guardrail NBI	*									
36	D. Appr Guardrai Terminal NBI										
59. St	iperstructure NBI	:							•		
60.	Substructure NBI									-	
	61. Channel NBI	:									
	62. Culvert NBI	:									
71. Wa	terway Adeq NBI	•									٠
7	2. Appr Roadway Alignment NBI	<b>/</b> :									
	Inventory Notes	;	·								
	•										
	G	regory Ande	erson				А	ndrew W	itter		
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	onastada Siar			_			iouaria Sia			

# Spe'g. = S

# PRESTRESSED CONCRETE RATING SHEET

SPAN

MHD 22106F 8-73

Rated by Robert R. Tomczi
Checked by
Date 6-3-91

Revised for 2" W.C.

······································		Bridge No. 02521 Year built 1972 Total structure length 240.67 ft.	
		County Anoka Roadway width (curb to curb) = 2034 ft. No. of spans = 3	
	1	Langth of span rated = L = 83.42 ft.	
۷.	ı	Route Coon Rapids Blvd. Feature crossed BNRR	
DATA		Abutment type Conc Parapet Pier type Conc Cap on Conc Col	
		Floar: type Colic	
,		Railing: type Type G Conc height 2'-4" width	
-	-	Dead load per ft. of girder 277 lb./ft.	
2	⊋ │	**OverburdenZ/IZ X II.003 X I30	
	3	Floor =	
	ا د	Pailing Disphragus etc.	
	ת הא	Total dead load = W	
	-	Dead load Moment = 1/8 (W) (L) <sup>2</sup> = 1/8 X 2.717 X 83.422 = 2363 ft 1/6/ KIP	
-		Girders: 54"I @ 11'-1" spcg. impact = .24	
1	ATA	Distribution factor (from P. 29, AASHO, 1969)* = $\frac{S}{2} = \frac{2.015}{2.015}$ Prestress steel: $F_s^1 = \frac{270}{2.015}$ Kips/in <sup>2</sup> Number of strands = $\frac{44}{2.015}$	
		Prestress steel: $F_s^1 = 270$	
	띮	Size and area of strands = in.  Distance from centroid of prestress steel to extreme compressive fiber of concrete = d = 58 in.	
	GIRD	Distance from centroid of prestress steel to extreme compressive made of tension to the d-distance = J =918  The ratio of distance between centroid of compression and centroid of tension to the d-distance = J =918	
	۱۳	The ratio of distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of compression and centroid of tension to the distance between centroid of the distance between centroid of tension to the distance between centroid of the distance between centroid of tension to the distance between centroid of th	
		J value is approximately .90, but actual values may be computed by formulas on page 19.	
	1	Based on Ultimate Moment = Mu	
		$M_U = J(A_s) (F_s^1) (d) = From Computer = 8074 Ft. Kips 1K (1)$	
	0	less 1.3x Dead load Moment of 3072 Ft. Kios 1K 2	
	Z	= ultimate Moment avail. for live load and impact of	
	RA	0074	
	ORY	2.2	
•	INT	Moment avail. for live load = (1 + impact) (Dist. Factor) = 910 Ft. Kips 1K (5)	
	INVENTORY RATING	1.24 2.015 H 20 Moment ***per Wheel Line = 467 Ft. Kips 1K (6)	
.			
		H Rating = $\frac{9}{6}$ (20) = = H 39 HS = 29.7	
١			



Bridge ID: 02522 COON RAPI	DS BLVD <b>over</b> NB EAST RIVER I	RD(CSAH 1) Date: 02/01/2012
GENERAL	ROADWAY	INSPECTION
A cy Br. No. District Metro	Bridge Match ID (TIS) 2 Roadway O/U Key Route On Structure	Userkey 42 Unofficial Structurally Deficient N
Maint Area Crew	Route Sys 05 - MSAS Number 116	Unofficial Functionally Obsolete N
***************************************	Roadway Name or Description	Unofficial Sufficiency Rating 82.0
County 002 - Anoka		Routine Inspection Date 11/23/2011
City Coon Rapids	COON RAPIDS BLVD (MSAS 116)	Routine Inspection Frequency 24
Township Desc. Loc. AT THE JCT CR 3	Level of Service 1 - MAINLINE	Inspector Name County, Anoka
Sect., Twp., Range 26 - 031N - 24W	Roadway Type 2 - 2-way traffic	Status A - Open
Latitude Deg 45 Min 8 Sec 50.94	Control Section (TH Only)	7
Longitude Deg 93 Min 17 Sec 36.88	Reference Point 001+00.395	NBI CONDITION RATINGS  Deck 5 - Fair Condition
Custodian 02 - County Highway Agency	Detour Length 2.0 mi	Unsound Deck %
Owner 02 - County Highway Agency	Lanes On 4 Under 2	Superstructure 7 - Good Condition
BMU Agreement	ADT 30231 Year 2007	Substructure 5 - Fair Condition
Year Built 1972	HCADT 0 ADTT 0 %	Channel N - Not Applicable
MN Year Reconstructed	Functional Class 16 - Urban - Minor Arterial	Culvert N - Not Applicable
FHWA Year Reconstructed	RDWY DIMENSIONS	NBI APPRAISAL RATINGS
MN Temporary Status	If Divided NB-EB SB-WB	Structure Evaluation 5
Bridge Plan Location 3 - COUNTY	Roadway Width 37.70 ft. 37.70 ft.	Deck Geometry 9
Date Opened to Traffic	Vertical Clearance ft. ft.	Underclearances 5
On-Off System 0 - OFF	Max. Vert. Clear. ft. ft.	Water Adequacy N - Not Applicable
Legislative District 49B	Horizontal Clear. 37.6 ft. 37.6 ft.	Approach Alignment 7 - Better than present minir
	η Lateral Clearance ft. ft.	SAFETY FEATURES
STRUCTURE	Appr. Surface Width 76.0 ft.	Bridge Railing 1 - MEETS STANDARDS
Service On 1 - Highway	Bridge Roadway Width 75.4 ft.	GR Transition 0 - SUBSTANDARD
ce Under 1 - Highway, w/ or w/out ped.	Median Width On Bridge 2.99 ft.	Appr. Guardrail 1 - MEETS STANDARDS
Main Span Type 5 - Prestress or Precast 01 - Beam Span	MISC. BRIDGE DATA	GR Termini 1 - MEETS STANDARDS
Main Span Detail	Structure Flared 0 - No flare	IN DEPTH INSP.
Appr. Span Type	Parallel Structure N - No parallel structure	Y/N Freq Date
Appl. Opan Type	Field Conn. ID	Frac. Critical
Appr. Span Detail	Abutment Foundation 1 - CONC	Underwater
Skew 54 L	(Material/Type) 3 - FTG PILE	Pinned Asbly.
Culvert Type	Pier Foundation 1 - CONC	Spec. Feat
Barrel Length ft.	(Material/Type) 3 - FTG PILE	WATERWAY
Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mi.)
NUMBER OF SPANS		¬ Waterway Opening sq. ft.
MAIN: 3 APPR: 0 TOTAL: 3	-J PAINT	Navigation Control N - Not applicable, no waterw
MINING MELITY O LAIMEY 2	Year Painted	G .
Main Snan Langth 80 0 8	reas i anicea	Pier Protection
Main Span Length 89.0 ft.	Unsound Paint %	
Structure Length 211.4 ft.	•	Nav. Cir. (ft.) Vert. ft. Horiz. f Nav. Vert. Lift Bridge Clear. (ft.)
Structure Length 211.4 ft. Deck Width (Out-to-Out) 81.8 ft.	Unsound Paint %	Nav. Cir. (ft.) Vert. ft. Horiz.
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.	Unsound Paint % Painted Area sq. ft.	Nav. Cir. (ft.) Vert. ft. Horiz.
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.  Deck Material 1 - Concrete Cast-in-Place	Unsound Paint % Painted Area sq. ft. Primer Type Finish Type	Nav. Clr. (ft.) Vert. ft. Horiz. ft Nav. Vert. Lift Bridge Clear. (ft.) MN Scour Code A - NON WATER' Year 1991
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.  Deck Material 1 - Concrete Cast-in-Place  Wear Surf Type 4 - Low Slump Concrete	Unsound Paint % Painted Area sq. ft. Primer Type Finish Type BRIDGE SIGNS	Nav. Cir. (ft.) Vert. ft. Horiz. ft. Nav. Vert. Lift Bridge Clear. (ft.)  MN Scour Code A - NON WATER' Year 1991  CAPACITY RATINGS
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.  Deck Material 1 - Concrete Cast-in-Place  Wear Surf Type 4 - Low Slump Concrete  Wear Surf Install Year 1983	Unsound Paint % Painted Area sq. ft. Primer Type Finish Type  BRIDGE SIGNS  Posted Load 0 - Not Required	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 5 - HS 20
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.  Deck Material 1 - Concrete Cast-in-Place  Wear Surf Type 4 - Low Slump Concrete  Wear Surf Install Year 1983  Wear Course/Fill Depth 0.17 ft.  Deck Membrane 0 - None  Deck Rebars N - Not Applicable (no deck)	Unsound Paint % Painted Area sq. ft. Primer Type Finish Type  BRIDGE SIGNS  Posted Load 0 - Not Required Traffic 0 - Not Required	Nav. Cir. (ft.) Vert. ft. Horiz. ft. Nav. Vert. Lift Bridge Clear. (ft.) MN Scour Code A - NON WATER' Year 1991  CAPACITY RATINGS  Design Load 5 - HS 20 Operating Rating 2 - AS HS 37.9
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.  Deck Material 1 - Concrete Cast-in-Place  Wear Surf Type 4 - Low Slump Concrete  Wear Surf Install Year 1983  Wear Course/Fill Depth 0.17 ft.  Deck Membrane 0 - None  Deck Rebars N - Not Applicable (no deck)  Deck Rebars Install Year	Unsound Paint % Painted Area sq. ft. Primer Type Finish Type  BRIDGE SIGNS  Posted Load 0 - Not Required Traffic 0 - Not Required Horizontal 1 - Object Markers	Nav. Cir. (ft.) Vert. ft. Horiz. ft.  Nav. Vert. Lift Bridge Clear. (ft.)  MN Scour Code A - NON WATER' Year 1991  CAPACITY RATINGS  Design Load 5 - HS 20  Operating Rating 2 - AS HS 37.9  Inventory Rating 2 - AS HS 25.7  Posting VEH: SEMI: DBL:
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.  Deck Material 1 - Concrete Cast-in-Place  Wear Surf Type 4 - Low Slump Concrete  Wear Surf Install Year 1983  Wear Course/Fill Depth 0.17 ft.  Deck Membrane 0 - None  Deck Rebars N - Not Applicable (no deck)  Deck Rebars Install Year  Structure Area (Out-to-Out) 17621 sq.ft.	Unsound Paint % Painted Area sq. ft. Primer Type Finish Type  BRIDGE SIGNS  Posted Load 0 - Not Required Traffic 0 - Not Required Horizontal 1 - Object Markers	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 5 - HS 20 Operating Rating 2 - AS HS 37.9 Inventory Rating 2 - AS HS 25.7
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.  Deck Material 1 - Concrete Cast-in-Place  Wear Surf Type 4 - Low Slump Concrete  Wear Surf Install Year 1983  Wear Course/Fill Depth 0.17 ft.  Deck Membrane 0 - None  Deck Rebars N - Not Applicable (no deck)  Deck Rebars Install Year  Structure Area (Out-to-Out) 17621 sq. ft.  Liway Area (Curb-to-Curb) 15984 sq. ft.	Unsound Paint % Painted Area sq. ft. Primer Type Finish Type  BRIDGE SIGNS  Posted Load 0 - Not Required  Traffic 0 - Not Required  Horizontal 1 - Object Markers  Vertical 0 - Not Required	Nav. Cir. (ft.) Vert. ft. Horiz. ft. Nav. Vert. Lift Bridge Clear. (ft.) MN Scour Code A - NON WATER' Year 1991  CAPACITY RATINGS  Design Load 5 - HS 20 Operating Rating 2 - AS HS 37.9 Inventory Rating 2 - AS HS 25.7 Posting VEH: SEMI: DBL: Rating Date 6/1/1991  Mn/DOT Permit Codes
Structure Length 211.4 ft.  Deck Width (Out-to-Out) 81.8 ft.  Deck Material 1 - Concrete Cast-in-Place  Wear Surf Type 4 - Low Slump Concrete  Wear Surf Install Year 1983  Wear Course/Fill Depth 0.17 ft.  Deck Membrane 0 - None  Deck Rebars N - Not Applicable (no deck)  Deck Rebars Install Year  Structure Area (Out-to-Out) 17621 sq.ft.	Unsound Paint % Painted Area sq. ft. Primer Type Finish Type  BRIDGE SIGNS  Posted Load 0 - Not Required Traffic 0 - Not Required Horizontal 1 - Object Markers Vertical 0 - Not Required	Nav. Cir. (ft.) Vert. ft. Horiz. ft. Nav. Vert. Lift Bridge Clear. (ft.) MN Scour Code A - NON WATER' Year 1991  CAPACITY RATINGS  Design Load 5 - HS 20 Operating Rating 2 - AS HS 37.9 Inventory Rating 2 - AS HS 25.7 Posting VEH: SEMI: DBL: Rating Date 6/1/1991

Rail Type

Lt 22

Rt 22

02/01/2012

Inspector: County, Anoka

County	r: Anoka			Location: AT THE	JCT CR 3		Length:		211.4 ft.		
City:	Coon Rapid	is		Route: 05 - MSAS	116 Ref. Pt.: (	001+00.395	Deck Wid	lth:	81.8 ft.		
Townsi	hip:			Control Section:			Rdwy. Ar	ea/ Pct. U	nsnd: 1598	4 sq. ft. / 4	%
Section	n: 26 Town	iship: 031N Ra	inge: 24V	/ Maint. Area:			Paint Are	a/ Pct. Un:	and: sq. fi	t. / %	
Span T	ype: 5 - Prestres			Local Agency Brid	ge Nbr.:		Culvert:	N/A			
List:	Stringer/Mu	lti-beam or Girde	er				Postings:				
NBI De	eck: 5 Supe	r: 7 Sub: 6	6 Char	n: N Culv: N							
				Open, Pos	ted, Closed: A	- Open					
Annrais	sal Ratings - App	roach: 7 W	/aterway:		Code: A - NON	WATERWAY	16	-65-1-1-04			**
	ed Bridge Signs		•		raffic: 0 - I	Not Required			ucturally De		N
roquii	od Diidgo Olgilo	Horizntal: 1		•		Not Required			nctionally C		N
		rionzinai.	- Object i	viainoio v	Gracai.	rvot required	· Un	omiciai Sui	ficiency Ra	iting	82.0
Structi	ure Unit:										
ELEM		T 11414	E			O1144177774	QTY	QTY	QTY	QTY	QTY
NBR	ELEMEN	I I IVAIVIE	ENV	REPORT TYPE	INSP. DATE	QUANTITY	CS 1	CS 2	CS 3	CS 4	CS
022	Low Slump O/L Deck with Unco		2	Routine	11/23/2011	17298 SF	0	0	17298	0	0
				Routine	11/20/2009	17298 SF	0	0	17298	0	0
		delamination as adjacent to the	nd spalling expansior	ea on the rt southbou detected, an in-dept joint on LWB at the make the repair is de	h deck survey sl west abutment.	hould be perfor	med. (11/0	9) +/- 3' di:	ameter hole	e through	the deck
·····					<del>_</del>						
09	Prestressed Co or Beam	ncrete Girder	2	Routine	11/23/2011	1654 LF	1650	4	0	0	<b>\</b>
				Routine	11/20/2009	1654 LF	1650	4	0	0	N/A
		Notes: (11/09)	Span 3, th	ird beam from the no	orth; rust staining	on 4' of the b	ottom of the	beam.			
205	Reinforced Con	crete Column	2	Routine	11/23/2011	16 EA	0	16	0	0	N/A
				Routine	11/20/2009	16 EA	16	0	0	0	N/A
		Notes: Joint se	aler @ ba	se of columns deterio	orated. (1/01) Re	epaired under	contract.				
		· · · · · · · · · · · · · · · · · · ·					····				<del></del>
215	Reinforced Con Abutment	crete	2	Routine	11/23/2011	295 LF	0	147	148	0	N/A
	-			Routine	11/20/2009	295 LF	0	147	148	0	N/A
		some leaching (10/11/94) Veri rebar in several (12/04) Surface backwall concre	and spalls tical cracks I spalled an evidence ete at the conditions and rust stai	g evident at several of (03/23/94) vertical is in west abutment fareas of east abutmen of continued rebar could joint caused by warning at the previously	cracks in east a ce extended into t. (1/01/) Spalled prosion at the a ter leakage betw	butment face e b bridge seat in d areas repaire reas that where leen the cente	extended in a several and d and crack a repaired in a concrete r	to bridge s eas with ru s pressure n 2001, de ailings, (11	eat area in est stains. ( e injected u lamination !/09) East a	several lo 12/10/96) Inder cont and spalli abutment;	ecations. Exposed tract. ing of the major
00	Strip Seal Deck	Joint	2	Routine	11/23/2011	279 LF	279	0	0	N/A	N/A
				Routine	11/20/2009	279 LF	279	0	0	N/A	N/A
		under contract,	leakage c	eal exp. joint leaking on tinues at the cente the north bound land	r median at both	abutments. (1	its. (1/01) N 1/06) A 1' s	lew glands section of the	installed a he gland ha	t both abu	itments from the
01	Poured Deck Jo	pint	2	Routine	11/23/2011	551 LF	0	547	4	N/A	N
				Routine	11/20/2009	551 LF	468	83	0	N/A	N/A
		Notes: (1999) / contract. (11/06	Area of ma	jor spalls in deck/app	oroach slab at joi	ints. (1/01) S	alled areas	s repaired :	and the joir	its reseale	ed under

	re Unit:						QTY	QTY	QTY	QTY	QTY
LEM YBR	ELEMENT N	AME E	NV	REPORT TYPE	INSP. DATE	QUANTITY	ČS 1	CS 2	CS 3	CS 4	CS 5
 11	Expansion Bearing		2	Routine	11/23/2011	40 EA	0	40	0	N/A	N/Å
•	•			Routine	11/20/2009	40 EA	0	40	0	N/A	N/A
	No coi	otes: (1/01) Nev	w bearin	g assemblies install	ed at the east at	out. beams no.	4,5,6,7,8 (	south fasci	a beam = 1	) (11/06) N	linor
13	Fixed Bearing		2	Routine	11/23/2011	8 EA	0	8	0	N/A	N/A
				Routine	11/20/2009	8 EA	0	8	0	N/A	N/A
	No	otes: (11/06) M	inor cor	rosion present.							
21	Concrete Approach Slab-Concrete Wea		2	Routine	11/23/2011	2 EA	0	0	2	0	N/A
	Surface	•		Routine	11/20/2009	2 EA	0	0	2	0	N/A
	CITY COLUMN	acke on both ar	nnroach	approach panel need slabs, areas repaire . (11/09) Areas of de	d in 2001 are be	ginning to gelai	mnate. ( i i	/uoj oiliaii	contract. (1 isolated a	2/04) Diagoreas of D-co	onal racking
331	Reinforced Concre Railing	te Bridge	2	Routine	11/23/2011	948 LF	845	78	25	0	N/A
	Ramig			Routine	11/20/2009	948 LF	908	40	0	0	N/A
	m	alling (474") und ildspan. (11/06)	ier conti ) insignif	ract, median rail = 4 ficant vertical crackir	ng of all the railing	g. (1/09) Not vis	sible, snow	covered. (	11/09) LEI	3 median ra	iling
 	m sp Underside of Cond	nidspan. (11/06) palling at the gu	) insignif	icant vertical crackir	ng of all the railing	g. (1/09) Not vis	sible, snow	covered. (	11/09) LEE	3 median ra	illing 0
 	m sp	nidspan. (11/06) palling at the gu	) insignif utter line	icant vertical crackir	ng of all the railing	g. (1/09) Not Vis	sible, snow	covereu.	11/09) LE	o median ra	um ig
 	m sp Underside of Cond Smart Flag N	nidspan. (11/06) palling at the gu crete Deck	) insignit utter line 2	icant vertical crackir	ng of all the railing	g. (1/09) Not Vis 1 EA 1 EA	0	1	0 0	0 0	0
	m sp Underside of Cond Smart Flag N	nidspan. (11/06) palling at the guarete Deck lotes: (12/15/9) fflorescence.	) insignifutter line  2  7) Seve	Routine	ng of all the railing	g. (1/09) Not Vis 1 EA 1 EA	0	1	0 0	0 0	0
	Underside of Cond Smart Flag	nidspan. (11/06) palling at the guarete Deck lotes: (12/15/9) fflorescence.	) insignifutter line  2  7) Seve	Routine  Routine  Routine  Routine	11/23/2011 11/20/2009 median joint have	1 EA 1 EA 1 EA e rust stains and	0 0 d spall are	1 1 as. (11/06)	0 0 Minor crac	0 0 kking with	0 0 N/A
	Underside of Cond Smart Flag  N et	nidspan. (11/06) palling at the guarete Deck  Notes: (12/15/9) fflorescence.	) insignifutter line  2  7) Seve	Routine Routine Routine and areas along the	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009	1 EA 1 EA 2 rust stains and 4 EA 4 EA	0 0 d spall are: 0	1 1 as. (11/06)	0 0 Minor crac	0 0 king with 0	0 0 N/A
387	Underside of Cond Smart Flag  N et  Reinforced Concre	nidspan. (11/06) palling at the guarete Deck  lotes: (12/15/9) fflorescence.  ete Wingwall  Notes: (1/09) Mingwalls.	) insignifulter line  2  7) Seven	Routine Routine ral areas along the Routine Routine Routine vertical cracks on a	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009	1 EA 1 EA 2 rust stains and 4 EA 4 EA	0 0 d spall are: 0	1 1 as. (11/06)	0 0 Minor crac	0 0 king with 0	0 0 N/A N/A all four
387	Underside of Cond Smart Flag  N et	nidspan. (11/06) palling at the guarete Deck  lotes: (12/15/9) fflorescence.  ete Wingwall  Notes: (1/09) Mingwalls.	) insignifutter line  2  7) Seve	Routine Routine ral areas along the Routine Routine Routine vertical cracks on a	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009	1 EA 1 EA 1 EA 1 EA 4 EA 4 EA (11/09) Modera	0 0 spall are: 0 0 0 d spall are: 0 0	1 1 as. (11/06) 4 4 cracks and	0 0 Minor crac 0 0 d concrete	0 0 kking with 0 0 scaling on	0 0 N/A N/A all four
387	Underside of Cond Smart Flag  Net Reinforced Concre	nidspan. (11/06) palling at the guarete Deck  lotes: (12/15/9) fflorescence. ete Wingwall  Notes: (1/09) Mivingwalls.  mart Flag	) insignifulter line  2  7) Seve  2  doderate	Routine Routine ral areas along the Routine Routine Routine vertical cracks on a	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls.	1 EA 1 EA 2 rust stains and 4 EA 4 EA (11/09) Modera	0 0 spall area 0 0 ate vertical	1 1 as. (11/06) 4 4 cracks and	0 0 Minor crac 0 0 d concrete	0 0 king with 0 0 scaling on	0 0 N/A N/A all four
387 964	Underside of Cond Smart Flag  N et  Reinforced Concre  N w  Critical Finding Sn	nidspan. (11/06) palling at the guarete Deck  lotes: (12/15/9) fflorescence. ete Wingwall  Notes: (1/09) Mivingwalls.  mart Flag	) insignifulter line  2  7) Seve  2  loderate  2  No critic	Routine Routine Routine Routine Routine Routine Routine Routine Routine Vertical cracks on a Routine Routine Routine	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls. 11/23/2011 11/20/2009	1 EA 1 EA 1 EA 1 EA 4 EA 4 EA (11/09) Moders 1 EA 1 EA	0 0 spall area 0 0 ate vertical	1 1 as. (11/06) 4 4 cracks and	0 0 Minor crac 0 0 d concrete	0 0 king with 0 0 scaling on	0 0 N/A N/A all four
387	Underside of Cond Smart Flag  Net Reinforced Concre	nidspan. (11/06) palling at the guarete Deck  lotes: (12/15/9) fflorescence. ete Wingwall  Notes: (1/09) Mivingwalls.  mart Flag	) insignifulter line  2  7) Seve  2  doderate	Routine Routine Routine Routine Routine Routine Routine Vertical cracks on a Routine	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls. 11/23/2011 11/20/2009	1 EA 1 EA 1 EA 2 rust stains and 4 EA 4 EA (11/09) Modera 1 EA 1 EA	0 0 spall are: 0 0 ate vertical	1 1 as. (11/06) 4 4 cracks and 0	0 0 Minor crac 0 0 d concrete N/A N/A	0 0 king with 0 0 scaling on N/A N/A	0 0 N/A N/A all four N/A
387 964	Underside of Cond Smart Flag  Net Reinforced Concre  Net Critical Finding Sn	nidspan. (11/06) palling at the guarete Deck  lotes: (12/15/9) fflorescence. ete Wingwall  Notes: (1/09) Mivingwalls.  mart Flag  Notes: (11/06)	) insignifulter line  2  7) Seve  2  doderate  2  No critica  2	Routine Routine Routine Routine Routine Routine Routine Vertical cracks on a Routine	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls. 11/23/2011 11/20/2009	1 EA 1 EA 1 EA 4 EA 4 EA (11/09) Modera 1 EA 1 EA 1 EA 1 EA 1 EA	0 0 d spall are: 0 0 ate vertical 1 1 0 0	1 1 as. (11/06) 4 4 cracks and 0	0 0 Minor crac 0 0 d concrete N/A N/A	0 0 king with 0 0 scaling on N/A N/A	0 0 N/A N/A ail four N/A
387 964 981	Underside of Cond Smart Flag  Net Reinforced Concre Net Critical Finding Sm	nidspan. (11/06) palling at the gu crete Deck  Notes: (12/15/9 fflorescence.  ete Wingwall  Notes: (1/09) M vingwalls.  mart Flag  Notes: (11/06)	) insignifulter line  2  7) Seve  2  doderate  2  No critic  2	Routine Routine Routine Routine Routine Routine Routine Vertical cracks on a Routine Routine Routine Routine Routine Routine And the Routine	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls. 11/23/2011 11/20/2009 11/23/2011 11/20/2009 g. (1/0) The SW	1 EA 1 EA 1 EA 4 EA 4 EA (11/09) Moders 1 EA 1 EA 1 EA 1 EA 1 EA	0 0 d spall are: 0 0 ate vertical 1 0 0 0	1 1 as. (11/06) 4 4 cracks and 0	0 0 Minor crac 0 0 d concrete N/A N/A	0 0 king with 0 0 scaling on N/A N/A	0 0 N/A N/A all four N/A 0 0
387 964	Underside of Cond Smart Flag  Net Reinforced Concre  Net Critical Finding Sn	nidspan. (11/06) palling at the gu crete Deck  Notes: (12/15/9 fflorescence.  ete Wingwall  Notes: (1/09) M vingwalls.  mart Flag  Notes: (11/06)	) insignifulter line  2  7) Seve  2  doderate  2  No critica  2	Routine Routine Routine Routine Routine Routine Routine Vertical cracks on a Routine Routine Routine Routine And findings noted Routine Routine Routine Routine Routine Routine Routine Routine Routine	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls. 11/23/2011 11/20/2009 11/23/2011 11/20/2009 g. (1/0) The SW	1 EA 1 EA 1 EA 4 EA 4 EA (11/09) Modera 1 EA	0 0 d spall are: 0 0 ate vertical 1 0 0 ent.	1 1 as. (11/06) 4 4 cracks and 0 0	0 0 Minor crac 0 0 d concrete N/A N/A 0 0	0 0 0 king with 0 0 scaling on N/A N/A	O O N/A N/A ail four N/A O O
387 964 981	Underside of Cond Smart Flag  Net Reinforced Concre Net Critical Finding Sn	nidspan. (11/06) palling at the gu crete Deck  lotes: (12/15/9 fflorescence.  ete Wingwall  Notes: (1/09) M vingwalls.  mart Flag  Notes: (11/06)	) insignifulter line  2  7) Seve  2  doderate  2  No critical  2  The SW  2	Routine Routine Routine Routine Routine Routine Routine Vertical cracks on a Routine Routine Routine Routine And the Routine	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls. 11/23/2011 11/20/2009 g. (1/0) The SW 11/23/2011 11/23/2011	1 EA 1 EA 1 EA 4 EA 4 EA (11/09) Modera 1 EA	0 0 d spall are: 0 0 ate vertical 1 0 0 0	1 1 1 as. (11/06) 4 4 cracks and 0 0	0 0 Minor crac 0 0 d concrete N/A N/A 0 0	0 0 0 king with 0 0 scaling on N/A N/A	O O N/A N/A ail four N/A O O
387 964 981	Underside of Cond Smart Flag  Net Reinforced Concre Net Critical Finding Sm	nidspan. (11/06) palling at the gu crete Deck  lotes: (12/15/9 fflorescence.  ete Wingwall  Notes: (1/09) M vingwalls.  mart Flag  Notes: (11/06)	) insignifulter line  2  7) Seve  2  loderate  2  No critic  2  The SW  2	Routine Routine Routine Routine Routine Routine Routine Vertical cracks on a Routine	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls. 11/23/2011 11/20/2009 g. (1/0) The SW 11/23/2011 11/20/2009 t the SW corner of	1 EA 1 EA 1 EA 4 EA 4 EA (11/09) Moders 1 EA	0 0 d spall are: 0 0 ate vertical 1 1 0 0 ent.	1 1 1 as. (11/06) 4 4 cracks and 0 0	0 0 Minor crac 0 0 d concrete N/A N/A 0 0	0 0 0 king with 0 0 scaling on N/A N/A 0 0	0 0 N/A N/A all four N/A 0 0
387 964 981	Underside of Cond Smart Flag  Net Reinforced Concre Net Critical Finding Sn	nidspan. (11/06) palling at the gu crete Deck  lotes: (12/15/9 fflorescence.  ete Wingwall  Notes: (1/09) M vingwalls.  mart Flag  Notes: (11/06)	) insignifulter line  2  7) Seve  2  doderate  2  No critical  2  The SW  2	Routine Routine Routine Routine Routine Routine Routine Vertical cracks on a Routine Routine Routine Routine And the Routine	11/23/2011 11/20/2009 median joint have 11/23/2011 11/20/2009 Il four wingwalls. 11/23/2011 11/20/2009 g. (1/0) The SW 11/23/2011 11/23/2011	1 EA	0 0 d spall are: 0 0 ate vertical 1 0 0 ent.	1 1 1 as. (11/06) 4 4 cracks and 0 0	0 0 Minor crac 0 0 d concrete N/A N/A 0 0	0 0 0 king with 0 0 scaling on N/A N/A	0 0 N/A N/A ail four N/A 0 0

Inspector's Signature

Reviewer's Signature

DI/ID.	OL VZVZZ O	OOII IVI IL	O DEVD	OVER ND EAS!	MIVEN NO(CO	2A(3 1)	KOUI	HAE HAOL	. DATE.	111231201	1.5
Struct	ure Unit:								•		
ELEM NBR	ELEMEN	TNAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY C° "
984	Deck & Approac	ch Drainage	2	Routine	11/23/2011	1 EA	0	1	0	N/A	N/A
				Routine	11/20/2009	1 EA	1	0	0	N/A	N/A
				face drainage at NE wall causing slope en		97) Repair work	complete	d summer	1997. (11/1	11) Surface	
985	Slopes & Slope	Protection	2	Routine	11/23/2011	1 EA	0	1	0	N/A	N/A
				Routine	11/20/2009	1 EA	1	0	0	N/A	N/A
*****************				osion along the NW s the NE wingwall.	lope paving. (11/	09) Minor erosi	on along ti	he NW and	NE wingw	alls. (11/11)	)
	General Notes	inspected d NOTE: Qua inspection.	uring routir intity chang	ld be scheduled for pose inspections. ses for conc railing, st s made in 2000, S.P.	rip seal exp joint	•	_	_			
	•	Inspected b	y: G. Ande	rson & W. Howard 12 n & C. Osterhus 1/06/	/6/02., G. Anders						23/11.
	58. Deck NBI				,			,			
36A. E	Brdg Railings NBI	:									
36E	J. Transitions NBI	<u>:</u>									
36C. A	opr Guardrail NBI	:									
36	D. Appr Guardrai Terminal NBI										<i>i</i> .
59. St	perstructure NBI	:									
60.	Substructure NBI	:									
	61. Channel NBI	:									
	62. Culvert NBI	:									
71. Wa	terway Adeq NBI	:			•						
7	2. Appr Roadway Alignment NBI		·								
	Inventory Notes:	:									
		•									
	G	regory Ande	rson				Aı	ndrew Wi	tter		
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	anastaria Cian	·····		_		·	outed Circ	***************************************		

# Z<sub>Diaohragm</sub>

& Girders

## PRESTRESSED CONCRETE RATING SHEET

End Span Girder G-2 Revised for Additional 2" W.C.

MHD 22106F 8-73 Rated by Robert R. Tomcza Checked by \_\_ Data 6-3-91

1	Bridge No. 02522 Year built 1973 Total structure length 211.4 ft.
	County Anoka Roadway width (curb to curb) = 34 ft. No. of spans = 3
	Langth of span rated = L = 63.28 ft.
ATA	Route MSAS 116 Feature crossed CSAH 1
۵	Abutment type Conc Paraped Pier type Conc Capon Conc Col
	Floor: type Concrete thickness 8" . Curb: height width
**	Railing: type Type G height 3'-4' width
-	Dead load per ft. of girder  **Overburden 2" W.C. = 2/12 X 11 X 150 = 275 Ib./fc.
AD	**Overburden
9	Girder   b./it.
EAD	Railing, Diaphragms, etc. <u>167 + 162 + 50 + 50</u> = <u>429</u> lb./ft.
ā	Total dead load = W =
١.	Girders: 60" I @ 11' spcg. impact = .266  Distribution factor (from P. 29, AASHO, 1969) $= \frac{S}{L} = \frac{2.115}{L}$
DATA	Distribution factor (from P. 29, AASHO, 1969) $5.5$ Prestress steel: $F_s^1 = \underline{270}$ Kips/in <sup>2</sup> Number of strands = $\underline{24}$
	Size and area of strands = $\frac{153}{100}$ in 2 Total strand area = A <sub>5</sub> $\frac{3.67}{100}$ in 2
DER	Distance from centroid of prestress steel to extreme compressive fiber of concrete = $d = 64.5$ in.
GIRD	The ratio of distance between centroid of compression and centroid of tension to the d-distance = J =96
	J value is approximately .90, but actual values may be computed by formulas on page 77, AASHO, 1969.*
	Based on Ultimate Moment = My
	$M_U = J(A_s) (F_s^1) (d) = From Computer = 5097 Ft. Kips 1K (1)$
9	less 1, 3x Dead load Moment of 1807 Ft. Kios 1K (2)
ATH	= ultimate Moment avail. for live load and impact of 3290 Ft. Kips 1K 3
INVENTORY RATING	Moment avail. for live load and impact of 1495 Ft. Kips 1K 4
lo T	2.2  Moment avail. for live load = 41 + i-mast / Diet. Factor) = 558 Ft. Kips 1K (5)
	(1 + impact) (Dist. Factor) 1.266 2.115 ·
1 =	
	H Rating = $\frac{(5)}{(6)}$ (20) = = H = 36.8 (5A) HS = 25.7
	ns - 23.7

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Bridge ID: 02523 CSAH 2(447	HAVE) OVER BNSFRR	Date: 02/01/2012
GENERAL	ROADWAY	INSPECTION
ncy Br. No.	Bridge Match ID (TIS) 0	Userkey 42
District Metro	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
Maint. Area Crew	Route Sys 04 - CSAH Number 2	Unofficial Functionally Obsolete N
County 002 - Anoka	Roadway Name or Description	Unofficial Sufficiency Rating 95.0
City Fridley	CSAH 2	Routine Inspection Date 11/22/2011
Township	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 0.2 MI NE OF JCT CSAH 1	Roadway Type 2 - 2-way traffic	Inspector Name County, Anoka
Sect., Twp., Range 34 - 030N - 24W	Control Section (TH Only)	Status A - Open
Latitude Deg 45 Min 2 Sec 43.97	Reference Point 000+00.181	NBI CONDITION RATINGS
Longitude Deg 93 Min 16 Sec 24.26	Detour Length 3.0 mi	Deck 7 - Good Condition
Custodian 02 - County Highway Agency	Lanes On 2 Under 0	Unsound Deck %
Owner 02 - County Highway Agency	ADT 8350 Year 2008	Superstructure 6 - Satisfactory Condition
BMU Agreement	HCADT 501 ADTT 6 %	Substructure 6 - Satisfactory Condition
Year Built 1973	Functional Class 16 - Urban - Minor Arterial	Channel N - Not Applicable
MN Year Reconstructed	RDWY DIMENSIONS	Culvert N - Not Applicable
FHWA Year Reconstructed	If Divided NB-EB SB-WB	NBI APPRAISAL RATINGS
MN Temporary Status	Roadway Width 44.00 ft. ft.	Structure Evaluation 6
Bridge Plan Location 3 - COUNTY		Deck Geometry 6
Date Opened to Traffic		Underclearances 4
On-Off System 1 - ON	Max. Vert. Clear. ft. ft. ft.	Water Adequacy N - Not Applicable
Legislative District 50A	Horizontal Clear. 43.9 ft. ft.	Approach Alignment 5 - Somewhat better than m
STRUCTURE	Lateral Clearance ft. ft.	SAFETY FEATURES
Service On 5 - Highway-pedestrian	Appr. Surface Width 44.0 ft.	Bridge Railing 1 - MEETS STANDARDS
ice Under 2 - Railroad	Bridge Roadway Width 44.0 ft.	GR Transition 0 - SUBSTANDARD
Main Span Type	Median Width On Bridge ft.	Appr. Guardrail 1 - MEETS STANDARDS
4 - Steel Continuous 01 - Beam Span	MISC. BRIDGE DATA	GR Termini 1 - MEETS STANDARDS
Main Span Detail	Structure Flared 0 - No flare	IN DEPTH INSP.
Appr. Span Type	Parallel Structure N - No parallel structure	Y/N Freq Date
	Field Conn. ID 4 - Bolted	Frac. Critical
Appr. Span Detail	Abutment Foundation 1 - CONC	Underwater
Skew 0	(Material/Type) 3 - FTG PILE	Pinned Asbly.
Culvert Type	Pier Foundation 1 - CONC	Spec. Feat.
Barrel Length ft.	(Material/Type) 3 - FTG PILE	WATERWAY
Cantilever ID F - Friction Hinge	Historic Status 5 - Not eligible	Drainage Area (sq. mi.)
NUMBER OF SPANS	DAINT	Waterway Opening sq. ft.
MAIN: 8 APPR: 0 TOTAL: 8	PAINT 4001	Navigation Control N - Not applicable, no waterw
Main Span Length 205.0 ft.	Year Painted 1991	Pier Protection
Structure Length 1159.5 ft.	Unsound Paint %	Nav. Cir. (ft.) Vert. ft. Horiz.
Deck Width (Out-to-Out) 53.3 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Material 1 - Concrete Cast-in-Place	Primer Type 4 - Organic Zinc - non 3309	MN Scour Code A - NON WATER' Year 1991
Wear Surf Type 4 - Low Slump Concrete	Finish Type H - Vinyl	CAPACITY RATINGS
Wear Surf Install Year 1991	BRIDGE SIGNS	Design Load 5 - HS 20
Wear Course/Fill Depth 0.17 ft.	Posted Load 0 - Not Required	Operating Rating 2 - AS HS 65.0
Deck Membrane 0 - None	Traffic 0 - Not Required	Inventory Rating 2 - AS HS 34.3
Deck Rebars N - Not Applicable (no deck)	Horizontal 1 - Object Markers	Posting VEH: SEMI: DBL:
Deck Rebars Install Year Structure Area (Out-to-Out) 61801 sq. ft.	•	Rating Date 6/1/1974
Structure Area (Out-to-Out) 61801 sq. ft.  away Area (Curb-to-Curb) 51021 sq. ft.	Vertical N - Not Applicable	Mn/DOT Permit Codes
Sidewalk Width Lt 0.00 ft. Rt 5.50 ft.		A: N - N/A
Curb Height Lt 0.00 ft. Rt 0.00 ft.	•	B: N - N/A
Curp Height LL 0.00 ft NC 0.00 ft		C: N - N/A

Rail Type

Lt 07

Rt 30

10-1 ACHD DOES NOT HAVE A LOAD RATING ON FILE FOR THIS BRIDGE

C: N - N/A

02/01/2012

Inspector: County, Anoka

BRID	GE 02523 CSAH	1 2(44TH A	VE) OV	ER BNSF RR			ROUT	INE INSP	. DATE:	11/22/20	011
Count	=			Location: 0.2 MI			Length:	•	59.5 ft.		(
City:	Fridley			Route: 04 - CSAI	12 Ref. Pt.: (	000+00.181	Deck Wi		53.3 ft.	بیمین	.,
Towns	•	020M Ban		Control Section:			-	rea/ Pct. Un			%
	n: 34 - Township: Type: 4 - Steel Continu		ige: Z4v	<ul> <li>Maint: Area:</li> <li>Local Agency Br</li> </ul>	idae Nhr :		Culvert:	ea/ Pct. Uns N/A	sna: sq. 1	. 7 %	
List:	Stringer/Multi-be			Local Agency Di	lage Not		Postings				
NBI D	eck: 7 Super: 6	Sub: 6	Char	n: N Culv: N							
				• •	osted, Closed: A	•					
Appra	isal Ratings - Approach	: 5 Wa	iterway:	N Scot	ır Code: A - NON	VVATERVVAY	Ur	nofficial Stru	cturally De	eficient	N
Requi	red Bridge Signs - Load	l Posting: 0	- Not Rec	quired	Traffic: 0 -	Not Required		nofficial Fun	-		N
		Horizntal: 1	Object N	Markers	Vertical: N -	Not Applicable	Ur	nofficial Suf	ficiency Ra	iting	95.0
Struct	ture Unit:										
ELEN NBR		.ME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
		****				20,111.					
409	Chain Link Fence	•	1	Routine	11/22/2011	1150 LF	1150	0	0	0	0
				Routine	11/19/2009	1150 LF	1150	0	0	0	0
	Not	es: 8' Chain	link fence	e ·							
)22	Low Slump O/L (Cor Deck with Uncoated		2	Routine	11/22/2011	61796 SF	0	61796	0	0	0
				Routine	11/19/2009	61796 SF	0	61796	0	0	0
	Not	es: (2002) 2	- 3'x3' are	eas spalled out on	the deck surface. (	(12/04) N/C.					(
107	Painted Steel Girder	or Beam	2	Routine	11/22/2011	5794 LF	0	3476	0	2318	0
				Routine	11/19/2009	5794 LF	0	3476	0	2318	0
	with brid pee N/C	Mn/DOT bri ge is ""overd I. (1/01) N/C. . (1/09) Sign	dge staff esigned" (12/200 <sup>2</sup> ificant co	s have fatigue pron - the determination " significantly and t 1) N/C. (2002) Active rrosion in the areas at the east abutmen	is that there are f herefore the detail ve corrosion prese of the bridge deci	atigue prone de ls are not a big nt along the top	tails, there concern (1 and botto	e was no cr 1999) Paint om flanges	acking obs is beginning of both fas	erved and ng to chall cia beams	d the k and s. (12/04)
205	Reinforced Concrete	Column	2	Routine	11/22/2011	23 EA	0	22	1	0	N/A
				Routine	11/19/2009	23 EA	23	0	O	0	N/A
				nave concrete collis n of easterly pier; e				al cracks o	n concrete	collision	walls.
215	Reinforced Concrete Abutment		2	Routine	11/22/2011	102 LF	0	102	0	0	N/A
				Routine	11/19/2009	102 LF	102	0	0	0	N/A
	Note	es: < none >									
:34	Reinforced Concrete	Pier Cap	2	Routine	11/22/2011	404 LF	394	0	10	0	N/A
			_	Routine	11/19/2009	404 LF	404	0	0	0	N/A
	Note	es: (11/11) F	vidence	of shear cracking a				-	,	-	• • • •
							-				
300	Strip Seal Deck Join	t	2	Routine	11/22/2011	210 LF	208	0	2	N/A	N/
				Routine	11/19/2009	210 LF	209	0	1	N/A	N).
	Note glar	es: (1999) 2 id pulled fron	of gland extrusion	I pulled from extrus on at the east abutr	ion @ east abut. ( nent. (11/11) 2' of	1/01) N/C. (12/2 gland pulled fro	2001) N/C m extrusio	. (2002) N/0 on at the ea	C. (12/04) I st abutmei	N/C. (1999 nt.	9) 1' of 

ELEM							QTY	QTY	QTY	QTY	QTY
NBR	ELEMENT	NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	CS 1	CS 2	CS 3	CS 4	CS 5
01	Poured Deck Joi	nt	2	Routine	11/22/2011	213 LF	0	109	104	N/A	N/A
				Routine	11/19/2009	213 LF	0	109	104	N/A	N/A
		Notes: (12/04)	Major adi	nesion failure with ad	jacent spalling of	f the joints at bo	th approa	ch panels.			
11	Expansion Beari	ng	2	Routine	11/22/2011	40 EA	35	5	0	N/A	N/A
				Routine	11/19/2009	40 EA	35	5	0	N/A	N/A
		Notes: (12/200 corrosion of the	01) East al	outment bearing asse assemblies on the ea	emblies appear to st abutment.	o moving toward	d the abut	ment backv	vall. (12/04	) Moderate	
313	Fixed Bearing		2	Routine	11/22/2011	15 EA	15	0	0	N/A	N/A
				Routine	11/19/2009	15 EA	15	0	0	N/A	N/A
		Notes: < none	>	,							
321	Concrete Approa Slab-Concrete V Surface		2	Routine	11/22/2011	2 EA	0	1	1	0	N/A
				Routine	11/19/2009	2 EA	0	-1	1	0	N/A
		Notes: (10/12/ (12/2001) N/C	/94) Longi . (11/06) N	tudinal cracks in app loderate longitudinal	roach panel. Cra cracking of the v	icks at joint betweet approach p	ween appr anel.	oach panel	and deck.	(1/01) N/C	·.
33	Masonry, Other Combination Ma		2	Routine	11/22/2011	2320 LF	0	2320	. 0	N/A	N/A
				Routine	11/19/2009	2320 LF	0	2320	0	N/A	N/A
-		Notes: (Railin (11/09) Minor		. 07, Rt. 30) cracking and spallin	g throughout.						
358	Concrete Deck ( Smart Flag	Cracking	2	Routine	11/22/2011	1 EA	1	0	0	0	N/A
				Routine	11/19/2009						
		Notes:						····			
359	Underside of Co Smart Flag	ncrete Deck	2	Routine	11/22/2011	1 EA	0	0	1	0	0
				Routine	11/19/2009	1 EA	0	. 0	1	0	0
		metal work. (1 corrosion alon numerous are rust staining, coverhangs). N the bridge, An	2/2001) Ar g the top f as of corro delaminatio ote: it was oka Count	king and efflorescend reas of rust and efflor lange of the center si sion and leaching act on and splalling is vis reported to Anoka C y and MN/DOT resported to east abutment and it	rescence observence girder. (2002 ljacent to the beautible on the deck county on 12/20/10 onded and it was	ed at the east a c) Active corrosi ams on the stay overhangs (the 11 that a piece of discovered tha	butment o on continu inplace fo re are no s of the conc t the conc	n the stay ing. (12/04) rms. (11/11 stay inplace crete deck forete had fal	nplace forn ) N/C. (1/09 f) Extensive forms on the had fallen fillen from the	ns causing 9) Scattere e concrete the deck rom the ud e deck	active d crackin
387	Reinforced Con-	crete Wingwall	2	Routine	11/22/2011	4 EA	. 4	0	0	0	N/A
				Routine	11/19/2009	4 EA	4	0	0	0	N/A
		Notes: < none	>								
964	Critical Finding	Smart Flag	2	Routine	11/22/2011	1 EA	1	0	N/A	N/A	N/A
				Routine	11/19/2009	1 EA	1	0	N/A	N/A	N/A
		Notes: (11/06	) No critica	al findings noted.							
 981	Signing		2	Routine	11/22/2011	1 EA	1	0	0	0	0
	0 0		_	Routine	11/19/2009	1 EA	1	0	0	0	0

Structe	ure 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-F
982	Approach Guardrail	2	Routine	11/22/2011	1 EA	0	1	0	N/A	N/A
			Routine	11/19/2009	1 EA	1	0	0	N/A	N/A
	Notes: (11/1	1) Minor im	pact damage to the p	late beam railing	at all four come	ers of the l	oridge			
984	Deck & Approach Drainage	2	Routine	11/22/2011	1 EA	0	1	0	N/A	N/A
			Routine	11/19/2009	1 EA	0	1	0	N/A	N/A
	Notes: (1998 (12/04)N/C.	3) Deck drai	n system appears to	be plugged and	not functioning	as designe	ed. (12/200	1) N/C. (20	02) N/C.	·····
985	Slopes & Slope Protection	2	Routine	11/22/2011	1 EA	0	1	0	N/A	N/A
	•		Routine	11/19/2009	1 EA	0	1	0	N/A	N/A
	have been m continuing to	ade, erosio increase. (1	pparent under slope p n has increased. (1/0  2/2001) severity of e ement. (2002) Sever	1) No corrections rosion increasing	s have been ma g at the east ab	de, erosio utment. Er	n and underosion at the	ermining of e west abu	slope pavi	ng
986	Curb & Sidewalk	2	Routine	11/22/2011	1 EA	1	0	0	N/A	N/A
			Routine	11/19/2009	1 EA	1	0	0	N/A	N/A
	Notes: (12/1	5/97) 4"" by	6"" deep hole in side	walk 300""from	south end. (199	9) Hole ha	is been pal	ched.		

General Notes: GENE

GENERAL NOTE: THE BRIDGE WAS REHABILITATED IN 1991 (SAP 02-602-09)

GENERAL NOTE: Prior roadway runoff caused erosion of control joint and buckling of slope pavement at the east abutment. NOTE: Structure should be scheduled for periodical in-depth inspection as under bridge elements can not be properly inspected during routine inspections

Inspected by: G. Anderson & W. Howard (12/11/01). Inspected by: G. Anderson & W. Howard 12/06/02., G. Anderson & M. Werlinger 12/09/04., G. Anderson & C. Osterhus 11/15/06., G. Anderson & C. Osterhus 11/19/09., G. Anderson & C. Osterhus 11/19/09., G. Anderson & C. Osterhus 11/19/09.

Railroad Contact: Lynn Leibfried BNSF 763.782.3492, cell 6127706062, email lynn.leibfried@bnsf.com

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:

Structure	Unit:							A12		
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
	Gregory And Inspector's Sig		····				ndrew W lewer's Sig			······································

**ROUTINE INSP. DATE: 11/22/2011** 

BRIDGE 02523 CSAH 2(44TH AVE) OVER BNSF RR

					**.
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		•			
		•			
	•				

	1 Structure inventory	
Bridge ID: 02534 CR 71	over SEELYE BROOK	
GENERAL	ROADWAY	INSPECTION
cy Br. No.	Bridge Match ID (TIS) 0	Userkey 42
District Metro	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
Maint. Area Crew	Route Sys 07 - CNTY Number 71	Unofficial Functionally Obsolete N
County 002 - Anoka	Roadway Name or Description	Unofficial Sufficiency Rating 82.7
City St Francis	CNTY 71	Routine Inspection Date 11/21/2011
Township	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 0.1 MI S OF JCT CSAH 28	Roadway Type 2 - 2-way traffic	Inspector Name County, Anoka
Sect., Twp., Range 35 - 034N - 25W	Control Section (TH Only)	Status A - Open
Latitude Deg 45 Min 23 Sec 52.6	Reference Point 001+00.350	NBI CONDITION RATINGS
Longitude Deg 93 Min 24 Sec 39.4	Detour Length 6.0 mi	Deck 6 - Satisfactory Condition
Custodian 02 - County Highway Agency	Lanes On 2 Under 0	Unsound Deck %
Owner 02 - County Highway Agency	ADT 572 Year 2008	Superstructure 7 - Good Condition
BMU Agreement	HCADT 0 ADTT 0 %	Substructure 5 - Fair Condition
Year Built 1986	Functional Class 07 - Rural - Major Collector	Channel 5 - Bank eroded; Major damage
MN Year Reconstructed	RDWY DIMENSIONS	Culvert N - Not Applicable
FHWA Year Reconstructed	If Divided NB-EB SB-WB	NBI APPRAISAL RATINGS
MN Temporary Status	Roadway Width 32.10 ft. ft.	Structure Evaluation 5
Bridge Plan Location 3 - COUNTY	Vertical Clearance ft. ft.	Deck Geometry 6
Date Opened to Traffic 9/1/1986	Max. Vert. Clear. ft. ft.	Underclearances N
On-Off System 1 - ON		Water Adequacy 9 - Bridge Above Flood Water
Legislative District 17A	Horizontal Clear. ft. ft.	Approach Alignment 8 - Equal to present desirable
STRUCTURE	Lateral Clearance ft. ft.	SAFETY FEATURES
Service On 1 - Highway	Appr. Surface Width 40.0 ft.	Bridge Railing 0 - SUBSTANDARD
ce Under 5 - Waterway	Bridge Roadway Width 32.1 ft.	GR Transition 0 - SUBSTANDARD
Main Span Type	Median Width On Bridge ft.	Appr. Guardrail 1 - MEETS STANDARDS
7 - Timber 09 - Slab Span	MISC. BRIDGE DATA	GR Termini 1 - MEETS STANDARDS
Main Span Detail	Structure Flared 0 - No flare	IN DEPTH INSP.
Appr. Span Type	Parallel Structure N - No parallel structure	Y/N Freq Date
	Field Conn. ID	Frac. Critical
Appr. Span Detail	Abutment Foundation 2 - TIMBER	Underwater
Skew 0	(Material/Type) 4 - PILE BENT	Pinned Asbly.
Culvert Type	Pier Foundation 8 - CIP	Spec. Feat.
Barrel Length ft.	(Material/Type) 4 - PILE BENT	WATERWAY
Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mi.) 40.0
NUMBER OF SPANS		Waterway Opening 310 sq. ft.
MAIN: 3 APPR: 0 TOTAL: 3	PAINT	☐ Navigation Control 0 - No nav. control on waterw
Main Span Length 24.0 ft.	Year Painted	Pier Protection
Structure Length 72.0 ft.	Unsound Paint %	Nav. Cir. (ft.) Vert. ft. Horiz. ft
Deck Width (Out-to-Out) 34.0 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Material 8 - Wood or Timber	Primer Type	MN Scour Code R - CRIT - MONIT Year 1995
Wear Surf Type 6 - Bituminous	Finish Type	CAPACITY RATINGS
Wear Surf Install Year	BRIDGE SIGNS	Design Load 5 - HS 20
Wear Course/Fill Depth 0.33 ft.		Operating Rating 2 - AS HS 33.6
Deck Membrane 0 - None	Posted Load 0 - Not Required	Inventory Rating 2 - AS HS 24.0
Deck Rebars N - Not Applicable (no deck)	Traffic 0 - Not Required	Posting VEH: SEMI: DBL:
Deck Rebars Install Year	Horizontal 0 - Not Required	Rating Date 3/1/1987
Structure Area (Out-to-Out) 2448 sq. ft.	Vertical N - Not Applicable	Mn/DOT Permit Codes
way Area (Curb-to-Curb) 2314 sq. ft.		A: N - N/A
Sidewalk Width Lt 0.00 ft, Rt 0.00 ft.		B: N - N/A
Curb Height Lt 1.00 ft. Rt 1.00 ft.		

C: N - N/A

Rt 06

Lt 06

Curb Height

Rail Type

**ROUTINE INSP. DATE: 11/21/2011** 

02/01/2012

Inspector: County, Anoka

BRIDGE 02534 CR 71 OVER SEELYE BROOK

Bituminous Approach 1 Routine 11/21/2011 2 EA 0 2 0 0 N/A Roadway Routine 11/04/2009 2 EA 0 2 0 0 N/A  Notes: (1/09) Minor settlement and map cracking at both ends of the bridge.  Routine 11/21/2011 2443 SF 0 2443 0 0 N/A  Routine 11/21/2011 2443 SF 0 2443 0 0 N/A  Routine 11/04/2009 2443 SF 0 2443 0 N/A  Routine 11/04/2009 2443 SF 0 2443 0 N/A  Notes: Wearing surface milled and a 3" overlay placed (7/94). (12/11/97) Transverse and longitudinal cracks have reoccurred. Wearing surface. (1999) Impending potholes in bituminous surface. (2000) 1" bituminous overlay placed in 2000, transverse and longitudinal cracks have reoccurred in the wearing surface. (2002) Cracks have been sealed, new cracks developing. (12/24) N/C. (1/09) Map cracking of the bituminous surface, evidence of water leaking through the deck. (11/11)  Several patched potholes exist in the bituminous wearing surface, water continues to leak through the deck.	County	/: Anoka			Location: 0.1 MIS	OF JCT CSAH	28	Length:		72.0 ft.	· · · · · · · · · · · · · · · · · · ·	(
Section: 35   Township: 034N   Range: 25W   Maint Area:	City:	St Francis		l	Route: 07 - CNTY 7	71 Ref. Pt.: (	001+00.350	Deck Wid	dth:	34.0 ft.		
Span Type: 7 - Wood or Timber 01 - Slab   Local Agency Bridge Nbr.:   Culvert   N/A   Postings:	Towns	hip:		•	Control Section:			Rdwy. Ar	ea/ Pct. Ui	nsnd: 2314	sq. ft. / %	
Lieb   Postings   Po			•	-	Maint, Area:			Paint Are	a/ Pct. Un	snd: sq. f	t. / %	
NBI Deck: 6   Super: 7   Sub: 5   Char: 5   Cutv: N   Open, Posted, Closed: A - Open   MN Scour Code: R - CRIT - MONITOR   Unofficial Structurally Deficient   N   Nature		Type: 7 - Wood or	Timber 01 - Sla	ab	Local Agency Brid	ge Nbr.:		Culvert:	N/A			
Open, Posted, Closed: A - Open   MN Scour Code: R - CRIT - MONITOR   Unofficial Structurally Deficient   N   N   N   N   N   N   N   N   N								Postings:				
Appraisal Ratings - Approach: 8   Waterway: 9   MN Scour Code: R - CRIT - MONITOR   Unofficial Structurally Deficient   N	NBI De	eck: 6 Super	: 7 Sub:	5 Chan								
Appraisal Ratings - Approach: 8   Waterway: 9   Unofficial Structurally Deficient N   Required Bridge Signs - Load Posting: 0 - Not Required   Varrical: N - Not Applicable   Unofficial Structurally Deficient N   Required   Varrical: N - Not Applicable   Unofficial Structurally Deficient N   Required   Varrical: N - Not Applicable   Unofficial Structurally Deficient N   Required   Varrical: N - Not Applicable   Unofficial Structurally Deficiency Rating   82.7		•			•		•					
Required Bridge Signs - Load Posting: 0 - Not Required Horizontal: 0 - Not Required Vertical: N - Not Applicable Unofficial Functionally Obsolete N Unofficial Sufficiency Rating 82.7	Apprais	sal Ratings - Appr	oach: 8 V	Naterway:		Code: R - CRIT	- MONITOR	l In	official Str	schurally De	aficient	M
Horizntal: 0 - Not Required   Vertical: N - Not Applicable   Unofficial Sufficiency Rating   82.7		= ,,		•	uired T	raffic: 0 - I	Not Required					
Structure Unit:   ELEMENT NAME			Horizntal:	0 - Not Req	uired \	/ertical: N -	Not Applicable			• •		
ELEMENT NAME   ENV   REPORT TYPE   INSP. DATE   QUANTITY   CS1   CS2   CS3   CS4   CS1	Structi	ure I Init:									9	
NBR   ELEMENT NAME   ENV   REPORT TYPE   INSP. DATE   QUANTITY   CS 1   CS 2   CS 3   CS 4   CS 2   CS 3   CS 4												
Biltuminous Approach   1   Routine   11/21/2011   2 EA   0   2   0   0   NIA			ΓNAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY					QTY CS 5
Routine   11/04/2009   2 EA   0   2   0   0   N/A												
Routine	107		roach	1	Routine	11/21/2011	2 EA	0	2	0	0	N/A
Timber Slab with Bituminous   2   Routine   11/21/2011   2443 SF   0   2443   0   0   0   N/A					Routine	11/04/2009	2 EA	0	2	0	0	N/A
Routine			Notes: (1/09)	Minor settle	ment and map crack	king at both ends	of the bridge.					
Routine		7:	D'1									· · · · · · · · · · · · · · · · · · ·
Routine	155		Bituminous	2	Routine	11/21/2011	2443 SF	0	2443	0	0	N/A
Wearing surface. (1999) Impending potholes in bituminous surfacing. (2000) 1" bituminous overlay placed in 2000, transverse and longitudinal cracks have reoccurred in the wearing surface. (2002) Cracks have been sealed, new cracks developing. (12/24) N/C. (1/09) Map cracking of the bituminous surface, evidence of water leaking through the deck. (11/11) Several patched potholes exist in the bituminous wearing surface, evidence of water leaking through the deck. (11/11) Several patched potholes exist in the bituminous wearing surface, evidence of water leaking through the deck. (11/11) Several patched potholes exist in the bituminous wearing surface, evidence of water leaking through the deck. (11/11) Several patched potholes exist in the bituminous wearing surface, evidence of water leaking through the deck. (11/11) Several patched potholes exist in the bituminous wearing surface, evidence of water leaking through the deck. (11/11) Several patched potholes exist in the bituminous wearing surface, evidence of water leaking through the deck. (11/11) Several patched potholes exist in the bituminous wearing surface, evidence of water leaking through the deck. (11/11) Several patched potholes exist in the bituminous wearing surface, evidence of water leaking through the deck. (11/11) Several patched potholes the deck. (11/11) Several patched potholes the deck. (11/11) Several patched patched potholes the deck. (11/11) Several patched potholes the deck. (11/11) Several patched patch					Routine	11/04/2009	2443 SF	0	2443	0	0	N/^
Routine   11/04/2009   12 EA   0   12   0   0   N/A			wearing surfact transverse and developing. (1)	æ. (1999) In J longitudina 2/24) N/C. (	npending potholes in al cracks have reocci 1/09) Map cracking (	n bituminous surf urred in the wear of the bituminous	acing. (20) ring surface. (20) s surface, evide	00) 1" bitu 002) Crack nce of wat	minous ove s have be- ter leaking	erlay place en sealed, through the	d in 2000, new crack	s
Notes: < none >    Notes: < none >   Notes: < none >   Notes: < none >   Notes: < none >   Notes: < none >   Notes: < none >   Notes: < none >   Notes: < none >   Notes: < none >   Notes:   No	206	Timber Column		2	Routine	11/21/2011	12 EA	0	12	0	0	N/A
Timber Abutment   2   Routine   11/21/2011   75 LF   1   75   0   0   N/A					Routine	11/04/2009	12 EA	0	12	0	0	N/A
Routine   11/04/2009   75 LF   1   75   0   0   N/A			Notes: < none	· >		-				٠		
Routine   11/04/2009   75 LF   1   75   0   0   N/A	.40	Timber Abutman										
Notes: < none >    Notes: < none >   Notes: < none >   Notes:   State   State	16	i imber Abutinen	Ĭ.	2							0	
Timber Pier Cap 2 Routine 11/21/2011 148 LF 0 148 0 0 N/A Routine 11/04/2009 148 LF 0 148 0 0 N/A Notes: Pier cap = 72 LF, Abutment cap = 76 LF.  Timber Bridge Railing 2 Routine 11/21/2011 144 LF 126 18 0 N/A N/A Routine 11/04/2009 144 LF 126 18 0 N/A N/A Notes: (Railing Code 06) (11/06) Impact damage to the west rail at midspan. (1/09) Impact damage to the east rail at midspan and the SE corner.  Scour Smart Flag 2 Routine 11/21/2011 1 EA 1 0 0 N/A N/A Routine 11/04/2009 1 EA 1 0 0 N/A N/A					Routine	11/04/2009	75 LF	1	75	0	0	N/A
Routine   11/04/2009   148 LF   0   148   0   0   0   N/A			Notes: < none	: > 	***************************************			~				
Routine   11/04/2009   148 LF   0   148   0   0   0   N/A	:35	Timber Pier Cap		2	Routine	11/21/2011	148 LF	0	148	0	0	N/A
Notes: Pier cap = 72 LF, Abutment cap = 76 LF.  Timber Bridge Railing 2 Routine 11/21/2011 144 LF 126 18 0 N/A N/A  Routine 11/04/2009 144 LF 126 18 0 N/A N/A  Notes: (Railing Code 06) (11/06) Impact damage to the west rail at midspan. (1/09) Impact damage to the east rail at midspan and the SE corner.  Scour Smart Flag 2 Routine 11/21/2011 1 EA 1 0 0 N/A N/A  Routine 11/04/2009 1 EA 1 0 0 N/A N/A							148 LF	0		0	0	
Routine 11/04/2009 144 LF 126 18 0 N/A N/A  Notes: (Railing Code 06) (11/06) Impact damage to the west rail at midspan. (1/09) Impact damage to the east rail at midspan and the SE corner.  Scour Smart Flag 2 Routine 11/21/2011 1 EA 1 0 0 N/A N/A  Routine 11/04/2009 1 EA 1 0 0 N/A N/A			Notes: Pier ca	p = 72 LF, /					-			,
Routine 11/04/2009 144 LF 126 18 0 N/A N/A  Notes: (Railing Code 06) (11/06) Impact damage to the west rail at midspan. (1/09) Impact damage to the east rail at midspan and the SE corner.  61 Scour Smart Flag 2 Routine 11/21/2011 1 EA 1 0 0 N/A N/A  Routine 11/04/2009 1 EA 1 0 0 N/A N/A	22	Timber Bridge D	ailing	•	Daufi	44/04/0044	144   =	420	10		<b>A</b> 1/A	\$1/A
Notes: (Railing Code 06) (11/06) Impact damage to the west rail at midspan. (1/09) Impact damage to the east rail at midspan and the SE corner.  Scour Smart Flag 2 Routine 11/21/2011 1 EA 1 0 0 N/A N/A Routine 11/04/2009 1 EA 1 0 0 N/A N/A	NZ	miner offde K	amy	4								
61 Scour Smart Flag 2 Routine 11/21/2011 1 EA 1 0 0 N/A N/A Routine 11/04/2009 1 EA 1 0 0 N/A N/A												
Routine 11/04/2009 1 EA 1 0 0 N/A		Scour Smart Flag	· · · · · · · · · · · · · · · · · · ·	**********		······································		•				
	161		3	~	Marina				J	J		14/74
	861				Douting	44/04/2000	1 ⊏∧	1	Λ	Λ	A1/A	N .

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
82	Cast-In-Place (CIP) Piling	2	Routine	11/21/2011	10 EA	0	0	0	10	N/A
	4		Routine	11/04/2009	10 EA	0	0	0	10	N/A
	section loss loss continu	s at cap & wat ue, paint caull	oiling. CIP piling has terline. (2000) Active king over the entire k timber caps have se	corrosion and se ength of the pile s	ection loss of pil shells. (12/04) N	e snells co	intinuing, (	ZUUZ) COM	osion and s	section
886	Timber Wingwall	2	Routine	11/21/2011	4 EA	0	4	0	0	N/A
	<b>.</b>		Routine	11/04/2009	4 EA	0	4	0	0	N/A
	Notes: < n	one >								
64	Critical Finding Smart Flag	2	Routine	11/21/2011	1 EA	1	0	N/A	N/A	N/A
	, ,		Routine	11/04/2009	1 EA	1	0	N/A	N/A	N/A
	Notes: (11	/06) No critica	al findings noted.							
81	Signing	. 2	Routine	11/21/2011	1 EA	0	1	0	0	0
	-		Routine	11/04/2009	1 EA	0	1	0	0	0
	Notes: (11	/09) NE delin	eator slightly bent.							·····
82	Approach Guardrail	2	Routine	11/21/2011	1 EA	0	1	0	N/A	N/A
-	• •		Routine	11/04/2009	1 EA	1	0	0	N/A	N/A
	Notes: (1' NW guard	I/09) Guardra rail.	il has been extended	I and new end tre	atment installe	d at all fou	r corners. (	(11/11) lmp	act damag	e to the
 >	Slopes & Slope Protection	. 2	Routine	11/21/2011	1 EA	0	0	1	N/A	N/A
•			Routine	11/04/2009	1 EA	0	1	0	N/A	N/A
	arouted rin	orap is deterio	ing of grouted riprap trating and undermin ing of the grouted rip	ing in the SW cor	ner. (11/11) Th	) Minor ero e lateral m	sion at the ovement o	SW wingw of the chang	vall. (11/09) nel is result	) The ing in th

General Notes: Channel Protection: (1999) Floating bog is restricting channel at upstream end of bridge. (2000) Floating bog has been removed from the channel. (12/04) The channel appears to be laterally moving to the south at the upstream end of the bridge causing sedimentation to deposit along the north side of the channel. (1/09) Sediment deposits in the channel on both sides of the bridge is restricting the channel and forcing the flow towards the abutments. Inspected by: G. Anderson & W. Howard 12/04/02., G. Anderson & M. Werlinger 12/15/04., G. Anderson & M. Werlinger 11/20/06., G. Anderson 1/08/09., G. Anderson & M. Werlinger 11/04/09., G. Anderson & C. Osterhus 11/21/11.

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:

. .. Waterway Adeq NBI:

72. Appr Roadway Alignment NBi:

Inventory Notes:

Andrew Witter

Reviewer's Signature

**Gregory Anderson** 

Inspector's Signature

	Ç	Curb-y		Ν
<b>‡</b> _	I I	T		
Strg'r.	Spcg. = S		C Strg'rs.	

# NON-COMPOSITE STRINGER RATNG SHEET (FOR STEEL OR TIMBER SIMPLE SPANS)

TIMBER PANELS

MHD 22106A
Rated by \_\_\_\_\_\_
Checked by \_\_\_\_\_\_
Date \_\_\_\_\_\_

		/			
	Bridge No. O	0534 Year built	<u> </u>	Total structure length	/2 ft.
	County JAN	OKKZ Road	dway width (curb to	curb) = <u>Fc2</u> ft. I	Vo. of spans = 3
	Length of span ra	ted = L =	ft. Distribu	ition factor (from P. 29, AASH	0, 1969]*= \$ 44
DATA	Route	14 4 3 <u>- 3 - 3 - 1</u>	Feat	ure crossed <u>SEE2</u>	E Brook
à	Abutment type	TREATED	IMBER	Pier type /c2	O CID
	1	uci loras Tin	thickness /-2	// Curb: height /c	3" width 12"
	Railing: type	AM TIMB	hei	ght	width
	Dead load per ft.	of stringer:	2 2 44 2 1 4 4 4		20
LOAD	**Overburden	1.0 x \	3674 50	=	58 16./ft. 84 16./ft.
					lb./ft.
EAD	Railing or o	thar		<b>=</b>	lb./ft.
Ω	Total	dead load = W			122_ lb./ft
	Dead load Mome	nt = 1/8 (W) (L)2	= 1/8 (325		1292 ft.1b.
	Stringers:		. = S Sec. modulus	= 1056 in3 - loss (	) = 1056 in3 = SM
1	Impact =			Inventory,	Operating
	Resisting Momen	t = SM (f; or fo)	1056 ()	f <sub>i</sub> = 1500 lb/in <sup>2</sup> 132000 ft. lb.(1)	fo = 2000 lb/in <sup>2</sup> 176000 ft. lb. (1)
ق	less Dead load M		12	2/292 ft. lb.(2)	21292 ft. lb. 2
RATING	= Moment availa	ble for live load and in	npact of	110708 ft. lb. 3	154708 ft. 1b. 3
H	Moment avail. fo	r live load = $\frac{1}{(1 + impa)}$	(3) = oct) (Dist. Factor)	110 70 8 ft. lb. 4	154708 11.16. (4)
	H 20 Mom.***			92000 ft. lb.(5)	92000 ft. 1b. (5)
	H Rating = 4	(20) =		- /	н 5 33,6 6
	(5)	(20)		H5 24 6	H 2 23/6
	A. Bridge length	20 feet: When H Ratin	g at Operating (6) is l	less than 16, make Posting Calc the Moment for M-3 or M3S2 to	ulation (7).
NS	enan length mal	re Postina Calculations	(8) and (9).		
유	C. If any substructs allowable loads	are unit governs Postin		pasis of structure capacity and c	letermine POSTING LOADS
15			BRIDGE LENGTH	_	LEGALO
		MOMENT***	Bridge Limit BRIDGE LENGTH	= (6) of operating (.75)	
POSTING CALCULATIONS	VEHICLE	(No Impact)	M - 3 Posting load	(A) of operating	- LEAL®
I I	M - 3 ⇒	46-17-18-18-18-18-18-18-18-18-18-18-18-18-18-	M - 2 Losting toga	Moment of M-3	1
ő	M - 3S2=		M - 3S2 Posting load	d = 4 of operating (36.6) Moment of M-3S2	= \(\int_{\text{GPFL}}^{\text{9}}\)
				Moment of WI-352	

<sup>\*</sup>Standard Specifications for Highway Bridges, 1969, adopted by the American Associations of State Highway Officials.

<sup>\*\*</sup>Overburden may be wearing course or gravel fill etc. which is not a part of the Structural Floor.

<sup>\*\*\*</sup> From Minnesota Truck Moments, Plate 3 without impact.

<sup>\*\*\*\*</sup>When calculated loads exceed 23.5 tons and 36.6 tons respectively, no posting is required.

Bridge ID: 02535 CSAH 7	over SEELYE BROOK	Date: 02/01/2012
GENERAL	ROADWAY	INSPECTION
A. (cy Br. No.	Bridge Match ID (TIS) 0	Userkey 42
District Metro	Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
Maint. Area Crew	Route Sys 04 - CSAH Number 7	Unofficial Functionally Obsolete N
County 002 - Anoka	Roadway Name or Description	Unofficial Sufficiency Rating 86.1
City Oak Grove	CSAH 7	Routine Inspection Date 11/21/2011
Township	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 1.2 MI S OF JCT CSAH 24	Roadway Type 2 - 2-way traffic	Inspector Name County, Anoka
Sect., Twp., Range 7 - 033N - 24W	Control Section (TH Only)	Status A - Open
Latitude Deg 45 Min 21 Sec 58.82	Reference Point 013+00.210	NBI CONDITION RATINGS
Longitude Deg 93 Min 22 Sec 22.16	Detour Length 3.0 mi	Deck 6 - Satisfactory Condition
Custodian 02 - County Highway Agency	Lanes On 2 Under 0	Unsound Deck %
Owner 02 - County Highway Agency	ADT 7042 Year 2008	Superstructure 7 - Good Condition
BMU Agreement	HCADT 423 ADTT 6 %	Substructure 5 - Fair Condition
Year Built 1984	Functional Class 07 - Rural - Major Collector	Channel 7 - Needs minor repairs
MN Year Reconstructed	RDWY DIMENSIONS	Culvert N - Not Applicable
FHWA Year Reconstructed	If Divided NB-EB SB-WB	NBI APPRAISAL RATINGS
MN Temporary Status		Structure Evaluation 5
Bridge Plan Location 3 - COUNTY	· · · · · · · · · · · · · · · · · · ·	Deck Geometry 6
Date Opened to Traffic 10/1/1984	Vertical Clearance ft. ft.	Underclearances N
On-Off System 1 - ON	Max. Vert. Clear. ft. ft.	Water Adequacy 9 - Bridge Above Flood Water
Legislative District 48A	Horizontal Clear. ft. ft.	Approach Alignment 8 - Equal to present desirable
STRUCTURE	Lateral Clearance ft. ft.	SAFETY FEATURES
Service On 1 - Highway	Appr. Surface Width 32.0 ft.	Bridge Railing 0 - SUBSTANDARD
ce Under 5 - Waterway	Bridge Roadway Width 44.1 ft.	GR Transition 0 - SUBSTANDARD
Main Span Type	Median Width On Bridge ft.	Appr. Guardrail 1 - MEETS STANDARDS
7 - Timber 09 - Slab Span	MISC. BRIDGE DATA	GR Termini 1 - MEETS STANDARDS
Main Span Detail	Structure Flared 0 - No flare	IN DEPTH INSP.
Appr. Span Type	Parallel Structure N - No parallel structure	Y/N Freq Date
	Field Conn. ID	Frac. Critical
Appr. Span Detail	Abutment Foundation 2 - TIMBER	Underwater
Skew 0	(Material/Type) 4 - PILE BENT	Pinned Asbly.
Culvert Type	Pier Foundation 8 - CIP	Spec. Feat.
Barrel Length ft.	(Material/Type) 4 - PILE BENT	WATERWAY
Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mi.) 48.0
NUMBER OF SPANS		Waterway Opening 265 sq. ft.
MAIN: 3 APPR: 0 TOTAL: 3	PAINT	Navigation Control 0 - No nav. control on waterw
Main Span Length 20.0 ft.	Year Painted	Pier Protection
Structure Length 60.0 ft.	Unsound Paint %	Nav. Clr. (ft.) Vert. ft. Horiz. ft.
Deck Width (Out-to-Out) 46.0 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Material 8 - Wood or Timber	Primer Type	MN Scour Code R - CRIT - MONIT Year 1995
Wear Surf Type 6 - Bituminous	Finish Type	CAPACITY RATINGS
Wear Surf Install Year	BRIDGE SIGNS	Design Load 5 - HS 20
Wear Course/Fill Depth 0.33 ft.		Operating Rating 2 - AS HS 40.6
Deck Membrane 0 - None	Posted Load 0 - Not Required	Inventory Rating 2 - AS HS 29.6
Deck Rebars N - Not Applicable (no deck)	Traffic 0 - Not Required	Posting VEH: SEMI: DBL:
Deck Rebars Install Year	Horizontal 0 - Not Required	Rating Date 3/1/1987
Structure Area (Out-to-Out) 2760 sq. ft.	Vertical N - Not Applicable	Mn/DOT Permit Codes
way Area (Curb-to-Curb) 2648 sq. ft.		A: N - N/A
Sidewalk Width Lt 0.00 ft. Rt 0.00 ft.		B: N - N/A
Curb Height Lt 1.00 ft. Rt 1.00 ft.		C: N - N/A
Rail Type Lt 06 Rt 06		

02/01/2012

Inspector: County, Anoka

_	GE 02535 CSAH 7 OVI		BROOK			11001			11/21/20	• •
County	: Anoka	Loc	cation: 1.2 MI	S OF JCT CSAH	24	Length:		60,0 ft.		(
City:	Oak Grove	Ro	ute: 04 - CSAH	17 Ref. Pt.: 0	13+00.210	Deck Wid	lth:	46.0 ft.		
Townsl	nip:	Co	ntrol Section:			-	ea/ Pct. Un		*	
Section	•	~					a/ Pct. Uns	nd: sq. f	t. / %	
-	ype: 7 - Wood or Timber 01 -	Slab I	Local Agency Bri	idge Nbr.:		Culvert:	N/A			
_ist:	ratu A. Ourana 7. Out	. E Ohan	7 O.J., N	•		Postings:				
NBI De	ck: 6 Super: 7 Sub	: 5 Chan:			Onne					
			•	sted, Closed: A - r Code: R - CRIT	•				*	
Apprais	sal Ratings - Approach: 8	Waterway: 9		rodd: it-ordr		Un	official Stru	cturally De	eficient l	4
Require	ed Bridge Signs - Load Posting	g: 0 - Not Requir	ed	Traffic: 0 - N	Not Required	Un	official Fun	ctionally C	bsolete i	1
	Horiznta	ıl: 0 - Not Requir	ed	Vertical: N - I	Not Applicable	Un	official Suff	iciency Ra	iting 8	36.1
Structi	ure Unit:									
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
107	Bituminous Approach Roadway	· <b>1</b>	Routine	11/21/2011	1 EA	0	1	0	0	N/A
			Routine	11/04/2009	1 EA	1	0	0	0	N/A
				deck at both ends	of the bridge. (1	1/11) Map	cracking a	and pothol	es adjacen	t to the
	deck at both	n ends of the brid	lge.		····					<del>~_~~</del>
	Timber Slab with Bituminous	2	Routine	11/21/2011	2756 SF	0	2756	0	0	N/A
J55	(AC) Overlay	2	Nodene	11/21/2011	210001	v	2,00	•		
)55	(AC) Overlay	_	Routine	11/04/2009	2756 SF	0	2756	0	0	<b>b</b>
	(AC) Overlay  Notes: (12/ have been r bituminous: (1/09) Potho	11/97) Overlayer outed & sealed. surfacing. (11/06 bles evident, evic	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le		2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F	0 al cracks i veloping. undersid otholes ar	2756 n bituminoi (12/04) Uns e, bitumino	0 us surfacin sealed cradus us surfacin	ig. (1999) ( cks exist in ig map cra	the cking.
 206	(AC) Overlay  Notes: (12/ have been r bituminous: (1/09) Potho	11/97) Overlayer outed & sealed. surfacing. (11/06 bles evident, evic	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le	11/04/2009 94-03-07. Transver cks in the bituminor of the deck timbers taking through the	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F	0 al cracks i veloping. undersid otholes ar	2756 n bituminoi (12/04) Uns e, bitumino	0 us surfacin sealed cradus us surfacin	ig. (1999) ( cks exist in ig map cra	the cking.
	(AC) Overlay  Notes: (12/ have been r bituminous: (1/09) Potho surfacing or	11/97) Overlayed outed & sealed. surfacing. (11/06 oles evident, evic n the deck. Chec	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting	11/04/2009 94-03-07. Transver cks in the bituminor of the deck timbers aking through the g of the deck timbe	2756 SF rse & longituding us surfacing de s evident on the deck. (11/11) F rs at the south	0 al cracks i veloping. undersid otholes ar abutment.	2756 n bituminoi (12/04) Uns e, bitumino nd extensiv	0 us surfacin sealed crac us surfacin e cracking	g. (1999) ( cks exist in ng map cra of the bitu	the cking. minous
	(AC) Overlay  Notes: (12/ have been r bituminous: (1/09) Potho surfacing or	11/97) Overlayed outed & sealed. surfacing. (11/06 oles evident, evid n the deck. Check	Routine d SEPT 97, CP 9 (2002) New crac i) Minor splitting dence of water le king and splitting Routine	11/04/2009 94-03-07. Transver cks in the bituminor of the deck timber taking through the g of the deck timbe	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south	0 al cracks i veloping, e undersid- totholes ar abutment.	2756 n bituminot (12/04) Uns e, bitumino nd extensiv	0 us surfacin sealed cra- us surfacin e cracking	ig. (1999) (cks exist in ng map cra of the bitu	the cking. minous N/A
206	(AC) Overlay  Notes: (12/ have been r bituminous (1/09) Potho surfacing or	11/97) Overlayed outed & sealed. surfacing. (11/06 oles evident, evid n the deck. Check	Routine d SEPT 97, CP 9 (2002) New crac i) Minor splitting dence of water le king and splitting Routine	11/04/2009 94-03-07. Transver cks in the bituminor of the deck timber taking through the g of the deck timbe	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south	0 al cracks i veloping, e undersid- totholes ar abutment.	2756 n bituminot (12/04) Uns e, bitumino nd extensiv	0 us surfacin sealed cra- us surfacin e cracking	ig. (1999) (cks exist in ng map cra of the bitu	the cking. minous N/A
206	(AC) Overlay  Notes: (12/ have been r bituminous s (1/09) Potho surfacing or  Timber Column  Notes: < no	11/97) Overlayed outed & sealed, surfacing, (11/06 oles evident, evid in the deck. Check 2	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine Routine	11/04/2009 94-03-07. Transvertes in the bituminor of the deck timbers the pof the deck timber 11/21/2011 11/04/2009	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA	0 al cracks i veloping. ( e undersid rotholes ar abutment.  0 0	2756 n bituminor (12/04) Uns e, bitumino nd extensiv  16 16	0 us surfacin sealed cra- us surfacin e cracking 0 0	g. (1999) (cks exist in g map cra of the bitu	the cking. minous N/A N/A
206	(AC) Overlay  Notes: (12/ have been r bituminous s (1/09) Potho surfacing or  Timber Column  Notes: < no	11/97) Overlayed outed & sealed. surfacing. (11/06 oles evident, evid in the deck. Check 2	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine Routine Routine	11/04/2009 94-03-07. Transverths in the bituminor of the deck timbers the gof the deck timber 11/21/2011 11/04/2009	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA	0 al cracks i veloping. e underside otholes ar abutment. 0 0	2756 n bituminot (12/04) Uns e, bitumino nd extensiv  16 16	0 us surfacinsealed cracking cracking 0 0	g. (1999) (cks exist in any map cra of the bitu	the cking. minous N/A N/A
206	(AC) Overlay  Notes: (12/ have been r bituminous: (1/09) Potho surfacing or  Timber Column  Notes: < no	11/97) Overlayed outed & sealed. surfacing. (11/06 oles evident, evid in the deck. Check 2	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine Routine Routine	11/04/2009 94-03-07. Transvertes in the bituminor of the deck timbers the pof the deck timber 11/21/2011 11/04/2009	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA	0 al cracks i veloping. e underside otholes ar abutment. 0 0	2756 n bituminot (12/04) Uns e, bitumino nd extensiv  16 16	0 us surfacinsealed cracking cracking 0 0	g. (1999) (cks exist in any map cra of the bitu	the cking. minous N/A N/A
206	(AC) Overlay  Notes: (12/ have been r bituminous: (1/09) Potho surfacing or  Timber Column  Notes: < no	11/97) Overlayed outed & sealed. surfacing. (11/06 bles evident, evident, evident deck. Check 2 and > 2	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine Routine Routine Routine Routine	11/04/2009 94-03-07. Transvertes in the bituminor of the deck timbers aking through the gof the deck timber 11/21/2011 11/04/2009 11/21/2011 11/04/2009	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA  98 LF  98 LF	0 al cracks i veloping. ( e undersid- rotholes ar abutment.  0 0 0	2756 n bituminor (12/04) Unse, bituminor d extensiv  16 16 98 98	0 us surfacin sealed cra us surfacin e cracking  0 0 0	g. (1999) (cks exist in any map cra of the bitu	the cking. minous N/A N/A N/A
206	(AC) Overlay  Notes: (12/have been right bituminous: (1/09) Pothod surfacing or Timber Column  Notes: < note   Timber Abutment  Notes: < note   Timber Pier Cap	11/97) Overlayed outed & sealed. surfacing. (11/06 bles evident, evident, evident deck. Check 2 and > 2	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine Routine Routine Routine Routine Routine Routine	11/04/2009 94-03-07. Transvertexs in the bituminor of the deck timbers the pof the deck timber of the deck timber 11/21/2011 11/04/2009 11/21/2011 11/04/2009	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA  98 LF  98 LF	0 al cracks i veloping. e underside otholes ar abutment.  0 0 0	2756 n bituminot (12/04) Unse, bitumino dextensiv  16 16 98 98	0 us surfacinsealed cracking cracking 0 0 0	g. (1999) (cks exist in ng map cra of the bitu  0 0 0	the cking. minous N/A N/A N/A
16	(AC) Overlay  Notes: (12/have been right bituminous: (1/09) Pothod surfacing or Timber Column  Notes: < note   Timber Abutment  Notes: < note   Timber Pier Cap	11/97) Overlayed outed & sealed. surfacing. (11/06 oles evident, evident, evident deck. Check on the deck. Check one >	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine Routine Routine Routine Routine Routine Routine Routine Example Routine Routine Routine Routine Routine Routine	11/04/2009 94-03-07. Transvertexs in the bituminor of the deck timbers the pof the deck timber of the deck timber 11/21/2011 11/04/2009 11/21/2011 11/04/2009	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA  98 LF  98 LF	0 al cracks i veloping. e underside otholes ar abutment.  0 0 0	2756 n bituminot (12/04) Unse, bitumino dextensiv  16 16 98 98	0 us surfacinsealed cracking cracking 0 0 0	g. (1999) (cks exist in ng map cra of the bitu  0 0 0	the cking. minous N/A N/A N/A
16	(AC) Overlay  Notes: (12/have been right bituminous: (1/09) Pothod surfacing or Timber Column  Notes: < note   Timber Abutment  Notes: < note   Timber Pier Cap	11/97) Overlayed outed & sealed. surfacing. (11/06 bles evident, evid the deck. Check of the deck. Check on the 2 one > 2 one > 2 one > 2	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine	11/04/2009 94-03-07. Transver cks in the bituminor of the deck timber saking through the g of the deck timbe 11/21/2011 11/04/2009  11/21/2011 11/04/2009  100 LF.  11/21/2011	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA  98 LF  98 LF  197 LF  197 LF	0 al cracks i veloping. e undersid- totholes ar abutment.  0 0 0 0	2756 n bituminor (12/04) Uns e, bitumino nd extensiv  16 16 98 98 98 197	0 us surfacin sealed cra us surfacin e cracking  0 0 0 0	g. (1999) (cks exist in ng map cra of the bitu  0 0 0 0	N/A N/A N/A N/A
206	(AC) Overlay  Notes: (12/have been right bituminous: (1/09) Pothod surfacing or Timber Column  Notes: < note   Timber Abutment  Notes: < note   Timber Pier Cap  Notes: Pier Timber Bridge Railing	11/97) Overlayed outed & sealed. surfacing. (11/06 bles evident, evid the deck. Check of the deck. Check on the 2 one > 2 one > 2 one > 2	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine Routine Routine Routine Routine Routine Routine Routine Example Routine Routine Routine Routine Routine Routine	11/04/2009 94-03-07. Transverteks in the bituminor of the deck timbers taking through the gradient of the deck timber 11/21/2011 11/04/2009 11/21/2011 11/04/2009 11/21/2011 11/04/2009	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA  98 LF  98 LF  197 LF  197 LF	0 al cracks i veloping. e underside otholes ar abutment.  0 0 0 0 0 394	2756 In bituminor (12/04) Unse, bituminor of extensive 16 In 16 In 16 In 16 In 198 In 197 In 197 In 197	0 us surfacin sealed cracking 0 0 0 0 0	g. (1999) (cks exist in ng map cra of the bitu  0 0 0 0 N/A	the cking, minous  N/A N/A N/A N/A N/A N/A N/A
206 216 235	(AC) Overlay  Notes: (12/have been right bituminous: (1/09) Pothor surfacing or Timber Column  Notes: < note   Timber Abutment  Notes: < note   Timber Pier Cap  Notes: Pier  Timber Bridge Railing  Notes: (Rai	11/97) Overlayed outed & sealed. surfacing. (11/06 bles evident, evid the deck. Check of the deck. Check on the deck. Check on the deck. Check on the deck. Check of	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine	11/04/2009 94-03-07. Transverteks in the bituminor of the deck timbers taking through the gof the deck timbe 11/21/2011 11/04/2009 11/21/2011 11/04/2009 100 LF. 11/21/2011 11/04/2009	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA  98 LF  98 LF  197 LF  197 LF  394 LF  394 LF	0 al cracks i veloping. e undersid- otholes ar abutment.  0 0 0 0 0 394 394	2756 n bituminor (12/04) Unse, bitumino nd extensiv  16 16 16 98 98 197 197	0 us surfacinsealed cracking us surfacine cracking 0 0 0 0 0 0	g. (1999) (cks exist in ng map cra of the bitu  0 0 0 0  N/A N/A	N/A N/A N/A N/A N/A N/A N/A
206 216 235	(AC) Overlay  Notes: (12/have been right bituminous: (1/09) Pothod surfacing or Timber Column  Notes: < note   Timber Abutment  Notes: < note   Timber Pier Cap  Notes: Pier Timber Bridge Railing	11/97) Overlayed outed & sealed. surfacing. (11/06 bles evident, evident, evident he deck. Check	Routine d SEPT 97, CP 9 (2002) New crac ) Minor splitting lence of water le king and splitting Routine	11/04/2009 94-03-07. Transver cks in the bituminor of the deck timber saking through the g of the deck timbe 11/21/2011 11/04/2009  11/21/2011 11/04/2009  100 LF.  11/21/2011	2756 SF rse & longitudin us surfacing de s evident on the deck. (11/11) F rs at the south  16 EA  16 EA  98 LF  98 LF  197 LF  197 LF	0 al cracks i veloping. e underside otholes ar abutment.  0 0 0 0 0 394	2756 In bituminor (12/04) Unse, bituminor of extensive 16 In 16 In 16 In 16 In 198 In 197 In 197 In 197	0 us surfacin sealed cracking 0 0 0 0 0	g. (1999) (cks exist in ng map cra of the bitu  0 0 0 0 N/A	N/A N/A N/A N/A N/A N/A

	ıre Unit:										
ELEM *'SR	ELEMENT NA	AME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
82	Cast-In-Place (CIP)	Piling	2	Routine	11/21/2011	14 EA	0	0	0	14	N/A
				Routine	11/04/2009	14 EA	0	0	0	14	N/A
	pier leal	rs. (12/12/95 kage throug ction loss on a timber caps	5) Corrosion the decl	steel piles corroded fon at the waterline. C  k. (1999) Increasing coells. (2002) Corrosion vere section loss and	enter pile shell o corrosion and sec n and section los	f each pier has ction loss evider is continuing. (1	major con nt on all pi 2/04) N/C	osion with le shells. (2 . (1/09) (1/0	section los 2000) Incre 39) Steel co	s caused basing corre connection p	y sion and slates at
386	Timber Wingwall		2	Routine	11/21/2011	4 EA	0	4	0	0	N/A
	•"			Routine	11/04/2009	4 EA	0	4	0	0	N/A
	No	otes: (12/04)	4-4" utilit	y conduits have been	placed through	the NE wingwa	ll.				
964	Critical Finding Sma	art Flag	2	Routine	11/21/2011	1 EA	1	0	N/A	N/A	N/A
				Routine	11/04/2009	1 EA	1	0	N/A	N/A	N/A
	No	otes: (11/06)	No critica	al findings noted.							
	Signing		2	Routine	11/21/2011	1 EA	0	1	0	0	0
981	olymny		Z	Noutino	11/21/2011						
981				Routine	11/04/2009	1 EA	0	1	0	0	. 0
981	No (20	002) NE brid	Delineato		11/04/2009 NW corners of b ) NE bridge delii	1 EA ridge are sever neator bent sligl	elv bent. (:	2000) Delin	eators hav	e been rep	aired.
	No (20	002) NE brid ghtly. (11/11	Delineato	Routine or sign posts at NE & ator damaged. (12/04	11/04/2009 NW corners of b ) NE bridge delii	1 EA ridge are sever neator bent sligl	elv bent. (:	2000) Delin	eators hav	e been rep	aired.
	No (20 slig	002) NE brid ghtly. (11/11	Delineato Ige deline ) NE and	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator	11/04/2009 NW corners of b NE bridge delir posts bent sligh	1 EA ridge are sever neator bent slightly.	ely bent. (: htly. (11/0	2000) Delin 9) NE and	eators hav SW bridge	e been rep delineators	aired. bent
	No (20 slig Approach Guardrail	002) NE brid ghtly. (11/11	Delineato lge deline ) NE and	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine	11/04/2009 NW corners of b NE bridge delir posts bent sligh 11/21/2011 11/04/2009	1 EA ridge are severe neator bent slightly. 1 EA 1 EA	ely bent. (: htly. (11/0:	2000) Delin 9) NE and 9	eators hav SW bridge	e been rep delineators N/A	aired. bent N/A
981  982  984	No (20 slig Approach Guardrail	002) NE brid ghtly. (11/11 I otes: (12/11	Delineato lge deline ) NE and	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine Routine	11/04/2009 NW corners of b NE bridge delir posts bent sligh 11/21/2011 11/04/2009	1 EA ridge are severe neator bent slightly. 1 EA 1 EA	ely bent. (: htly. (11/0:	2000) Delin 9) NE and 9	eators hav SW bridge	e been rep delineators N/A	aired. bent N/A
982	No (20 slig Approach Guardrail No	002) NE brid ghtly. (11/11 I otes: (12/11	Delineato Ige deline ) NE and 2 /97) New	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine Routine guardrail installed 19	11/04/2009 NW corners of b ) NE bridge delir posts bent sligh 11/21/2011 11/04/2009 97, CP 94-03-07	1 EA ridge are severe neator bent slightly. 1 EA 1 EA	ely bent. (: htly. (11/0: 1	0 0 0 0	eators hav SW bridge 0 0	e been rep delineators N/A N/A	aired. bent N/A N/A
982	No (20 slig Approach Guardrail No Deck & Approach D	002) NE brid ghtly. (11/11 I otes: (12/11	Delineato lge deline ) NE and 2 /97) New 2	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine Routine guardrail installed 19	11/04/2009 NW corners of b NE bridge delir posts bent sligh 11/21/2011 11/04/2009 97, CP 94-03-07 11/21/2011	1 EA ridge are severenceator bent slightly. 1 EA 1 EA	ely bent. (; htly. (11/0; 1 1	2000) Delin 9) NE and 9 0 0	eators hav SW bridge 0 0	e been rep delineators N/A N/A N/A	N/A N/A
982	No (20 slig Approach Guardrail No Deck & Approach D	002) NE brid ghtly. (11/11 I otes: (12/11 Orainage otes: < none	Delineato lge deline ) NE and 2 /97) New 2	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine Routine guardrail installed 19	11/04/2009 NW corners of b NE bridge delir posts bent sligh 11/21/2011 11/04/2009 97, CP 94-03-07 11/21/2011	1 EA ridge are severenceator bent slightly. 1 EA 1 EA	ely bent. (; htly. (11/0; 1 1	2000) Delin 9) NE and 9 0 0	eators hav SW bridge 0 0	e been rep delineators N/A N/A N/A	N/A N/A
982	No (20 slig Approach Guardrail No Deck & Approach D	002) NE brid ghtly. (11/11 I otes: (12/11 Orainage otes: < none	Delineato Ige deline ) NE and 2 /97) New 2	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine Routine guardrail installed 19 Routine Routine	11/04/2009 NW corners of b NE bridge delir posts bent sligh 11/21/2011 11/04/2009 97, CP 94-03-07 11/21/2011 11/04/2009	1 EA ridge are severe neator bent slightly.  1 EA 1 EA 1 EA 1 EA	ely bent. (; http: (11/0) 1 1 1	0 0 0 0 0	eators hav SW bridge 0 0	e been rep delineators N/A N/A N/A N/A	aired. s bent N/A N/A N/A
982	No (20 slig Approach Guardrail No Deck & Approach D No Slopes & Slope Pro	ones: (12/11  Orainage  otes: < none otection  otes: Erosio umes have b 2/04) Erosio	Delineato lge deline ) NE and 2 /97) New 2	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine Routine guardrail installed 19: Routine Routine Routine Routine	11/04/2009  NW corners of bely NE bridge deliated by NE bridge deliated bridge deliated by NE bridge deliated bridge delia	1 EA ridge are sevent slightly.  1 EA 1 E	ely bent. () htty. (11/0)  1  1  1  0  0 dermine grouted rine bridge.	2000) Delir 9) NE and 3 0 0 0 0 1 1 1 outed ripra prap contin (11/06) The	o eators have switched by bridge of the state of the stat	e been rep delineators  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/	N/A N/A N/A N/A N/A N/A Concrete
982 984 	No (20 slig Approach Guardrail No Deck & Approach D No Slopes & Slope Pro	ones: (12/11  Orainage  otes: < none otection  otes: Erosio umes have b 2/04) Erosio	Delineato lge deline ) NE and 2 /97) New 2	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine Routine guardrail installed 19: Routine	11/04/2009  NW corners of belt NE bridge delired by	1 EA ridge are sevent slightly.  1 EA 1 E	ely bent. () htty. (11/0)  1  1  1  0  0 dermine grouted rine bridge.	2000) Delir 9) NE and 3 0 0 0 0 1 1 1 outed ripra prap contin (11/06) The	o eators have switched by bridge of the state of the stat	e been rep delineators  N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/	N/A N/A N/A N/A N/A N/A Concrete
982	Approach Guardrail  No  Deck & Approach D  No  Slopes & Slope Pro  No  (1)  re	ones: (12/11  Orainage  otes: < none otection  otes: Erosio umes have b 2/04) Erosio	Delineato lge deline ) NE and 2 /97) New 2 2 2 on behind been poure on underm 09) Minor	Routine or sign posts at NE & ator damaged. (12/04 NW bridge delineator Routine Routine guardrail installed 19/04 Routine NW & NE wingwalls. End along the NW & NI wining the grouted riprerosion and undermine Routine Routin	11/04/2009  NW corners of belt NE bridge delired posts bent slight 11/21/2011 11/04/2009  97, CP 94-03-07  11/21/2011 11/04/2009  11/21/2011 11/04/2009  (1999) Erosion be wingwalls, und ap at the NW & Ining of the groute	1 EA ridge are severe neator bent slightly.  1 EA 1 E	ely bent. (; htty. (11/0)  1  1  1  0  0 dermine granted rine bridge, the NE wi	2000) Delir 9) NE and 3 0 0 0 0 0 1 1 1 outed ripra prap contin (11/06) The	o eators have seed or	N/A	N/A N/A N/A N/A N/A Oncrete

General Notes: Inspected by: G. Anderson & M. Werlinger 12/15/04., G. Anderson & C. Osterhus 11/17/06., G. Anderson 1/08/09., G. Anderson & M. Werlinger 11/04/09., G. Anderson & C. Osterhus 11/21/11.

58. Deck NBI:

36A. Brdg Railings NBI:

36B. Transitions NBI:

36C. Appr Guardrail NBI:

36D. Appr Guardrail Terminal NBI:

59. Superstructure NBI:

**BRIDGE 02535 CSAH 7 OVER SEELYE BROOK ROUTINE INSP. DATE: 11/21/2011** Structure Unit: ELEM QTY QTY QTY QTY QTY NBR **ELEMENT NAME ENV** REPORT TYPE INSP. DATE QUANTITY CS<sub>1</sub> CS 2 CS3 **CS 4** 60. Substructure NBI: 61. Channel NBI: 62. Culvert NBI: 71. Waterway Adeq NBI: 72. Appr Roadway Alignment NBI: Inventory Notes:

> **Gregory Anderson** Inspector's Signature

**Andrew Witter** 

Reviewer's Signature

		C:	irb->/		i	N
-					•	
	Spcg.	= S	•	Q.s	trg'rs.	

### ON-COMPOSITE STRINGER RATNG SHEET (FOR STEEL OR TIMBER SIMPLE SPANS)

	22106A 8-73
Rated by	
Shecked by	18-37
7216	
	ft.

. [										
1				Total structure length	•					
	County	TNOKEL	Roadway width (curb	to curb) = 44 ft. A	lo. of spans =					
	Length of spa	an rated = L =	20 ft.	Stringers: #sp	cg.=s = 44"					
ATA	Route	2544 Q	<u> </u>	eature crossed SEELE	e deport					
۵	Abutment typ	No TRENTE	D. T. April Com	Pier type Z	PH- BEUT					
				2 Curb: height						
				Gurb: neight	and many					
	Railing: type		has a second and the	height	width					
	Dead load pe	r ft. of stringer:								
و				<u> </u>						
OAD	Floor_		× 44/12 × 5	<u> </u>	183 lb./ft.					
7	Stringe	r	•							
EAD	· Railing	or other	***************************************		lb./ft.					
۵	T	otal dead load = W .			275 lb/fc					
	Dead load Moment = 1/8 (W) (L)2 = 1/8 × 275 × 202 = 1.3750 ft lb.									
				ulus = 1056 in3 - loss (	1=1056 in3 = SM					
}	Dist. factor	from P. 29, AASH	0, 1969)*=\$= <u>44</u>	INVENTORY	OPERATING					
	1		•	ちゅうぜかべ lb/ind l	fo= 2000 lb/in2					
	Resisting Moment = SM (fi or fo) 1056 x f 13,2000 ft. lb. (1) 176,000 ft. lb. (1)									
RATING	less Dead to	d Moment of 13750 ft. lb. 2 13750 ft. lb. 2								
Ĭ₹	■ Moment a	Moment available for live load and impact of /18250 ft. lb. (3) 162250 ft. lb. (3)								
포	Moment ava	il. for live load =	③ I + impact) (Dist. Factor)	" 118250 ft.lb.(4)	162250 ft 1h (1					
	Per Wheel L H 20 Mom.	-	Fimpacti (Dist. Pactor)	. *						
l		_		80000 ft. 16.5	80000 ft. lb. (					
	H Rating =	(20) <del>=</del>		HS 29.6 6	HS 40.6 (					
<u> </u>	*	<u> </u>			1					
.,	When line (5) of Ope is as follows:	er.	Make	Posting Calcualtions as follows:						
١ź	less than H3	Close bridge								
۱Ĕ	H3 up to H6	Use H value t	from line (6) of Oper. o	ı line (7) and post for single weig	ht limit					
15	H6 up to H12	Use H value (	rom line (6) of Oper. on I	ine (B) and 1.75 x H value from lin	e (ii) of Oper. on line (9).					
13	H12 and over	When line (4)	of Oper, is less than the ingth, make Posting Calcul	moment for M-3 or M-3S2 type vel	nicles of the POSTING LOADS					
CALCULATIONS	NOTE: If any substr			e basis of structure capacity and d	etermine (in whole tons)					
		ads accordingly.		(6) of Operating	KEGOL O					
	VEHICLE .	MOMENT***		(4) of Operating (23,25)						
POSTING	Tallivati.	(No Impact)	M - 3 Posting load =	Moment of M-3	LEGAL (9)					
Įğ	M-3 =		M 202 Destinated	4) of Operating	10000					
_	M-3S2 =	•	M - 3S2 Posting load =	Moment of M-3S2 (36.6)	*CGWZ (9)					

<sup>\*</sup> Standard Specifications for Highway Bridges, 1969, adopted by the American Associations of State Highway Officials

<sup>••</sup> Overburden may be wearing course or gravel fill etc. which is not a part of the Structural Floor.

<sup>\*\*\*</sup> From Minnesota Truck Moments, Plate 3 without impact.

<sup>\*\*\*\*</sup> When calcualted loads exceed 23.5 tons and 36.6 tons respecitively no posting is required,

,					197 - 197 - 198 -
		·			
			**	·	

Bridge ID: 02554 MUN 31(AQ	UA LANE) OVET RICE CREEK	Date: 02/06/2012
	ROADWAY	INSPECTION
GENERAL	<u>                                   </u>	Userkey 42
, cy Br. No.	Bridge Match ID (TIS) 0  Roadway O/U Key Route On Structure	Unofficial Structurally Deficient N
District Metro	- · · · · · · · · · · · · · · · · · · ·	Unofficial Functionally Obsolete N
Maint. Area Crew	Route Sys 10 - MUN Number 31	
County 002 - Anoka	Roadway Name or Description	***************************************
City Lino Lakes	MUN 31	
Township	Level of Service 1 - MAINLINE	Routine Inspection Frequency 24
Desc. Loc. 0.2 MI E OF JCT TH 49	Roadway Type 2 - 2-way traffic	Inspector Name County, Anoka
Sect., Twp., Range 20 - 031N - 22W Latitude Deg 45 Min 9 Sec 48.87	Control Section (TH Only)	Status A - Open
	Reference Point 000+00.370	NBI CONDITION RATINGS
Longitude Deg 93 Min 6 Sec 56.18	Detour Length 1.0 mi	Deck 7 - Good Condition
Custodian 12 - Local Park, Forest, or Res. Agenc	Lanes On 2 Under 0	Unsound Deck %
Owner 12 - Local Park, Forest, or Res. Agenc	ADT 430 Year 1995	Superstructure 7 - Good Condition
BMU Agreement	HCADT 0 ADTT 0 %	Substructure 6 - Satisfactory Condition
Year Built 1991	Functional Class 19 - Urban - Local	Channel 6 - Bank slump; minor damage
MN Year Reconstructed	RDWY DIMENSIONS	Culvert N - Not Applicable
FHWA Year Reconstructed	If Divided NB-EB SB-WB	NBI APPRAISAL RATINGS
MN Temporary Status	Roadway Width 32.00 ft. ft.	Structure Evaluation 6
Bridge Plan Location 3 - COUNTY	Vertical Clearance ft. ft.	Deck Geometry 6
Date Opened to Traffic	Max. Vert. Clear. ft. ft.	Underclearances N
On-Off System 0 - OFF	Horizontal Clear. 31.9 ft. ft.	Water Adequacy 9 - Bridge Above Flood Water
Legislative District 53A	Lateral Clearance ft. ft.	Approach Alignment 6 - Equal to present minimus
STRUCTURE	Appr. Surface Width 32.0 ft.	SAFETY FEATURES
Service On 5 - Highway-pedestrian	Bridge Roadway Width 32.0 ft.	Bridge Railing 1 - MEETS STANDARDS
ce Under 5 - Waterway		GR Transition 0 - SUBSTANDARD
Main Span Type	Median Width On Bridge ft.	Appr. Guardrail 0 - SUBSTANDARD
7 - Timber 09 - Slab Span	MISC. BRIDGE DATA	GR Termini 0 - SUBSTANDARD
Main Span Detail	Structure Flared 0 - No flare	IN DEPTH INSP.
Appr. Span Type	Parallel Structure N - No parallel structure	Y/N Freq Date
	Field Conn. ID	Frac. Critical
Appr. Span Detail	Abutment Foundation 2 - TIMBER	Underwater
Skew 0	(Material/Type) 4 - PILE BENT	Pinned Asbly.
Culvert Type	Pier Foundation 8 - CIP	Spec. Feat.
Barrel Length ft.	(Material/Type) 4 - PILE BENT	WATERWAY
Cantilever ID	Historic Status 5 - Not eligible	Drainage Area (sq. mi.) 120.0
NUMBER OF SPANS	DAINT	Waterway Opening 330 sq.ft.
MAIN: 3 APPR: 0 TOTAL: 3	PAINT	Navigation Control 0 - No nav. control on waterw
Main Span Length 22.0 ft.	Year Painted	Pier Protection
Structure Length 62.0 ft.	Unsound Paint %	Nav. Clr. (ft.) Vert. ft. Horiz. ft.
Deck Width (Out-to-Out) 34.6 ft.	Painted Area sq. ft.	Nav. Vert. Lift Bridge Clear. (ft.)
Deck Material 8 - Wood or Timber	Primer Type	MN Scour Code 1 - LOW RISK Year 1997
Wear Surf Type 6 - Bituminous	Finish Type	CAPACITY RATINGS
Wear Surf Install Year	BRIDGE SIGNS	Design Load 5 - HS 20
Wear Course/Fill Depth 0.17 ft.		Operating Rating 2 - AS HS 32.7
Deck Membrane 0 - None	Posted Load 0 - Not Required	Inventory Rating 2 - AS HS 23.5
Deck Rebars N - Not Applicable (no deck)	Traffic 0 - Not Required	Posting VEH: SEMI: DBL:
Deck Rebars Install Year	Horizontal 0 - Not Required	Rating Date 2/1/1993
Structure Area (Out-to-Out) 2145 sq. ft.	Vertical N - Not Applicable	Mn/DOT Permit Codes
iway Area (Curb-to-Curb) 1981 sq. ft.		A: N - N/A
Sidewalk Width Lt 8.00 ft. Rt 0.00 ft.  Curb Height Lt 0.83 ft. Rt 0.83 ft.		B: N - N/A

Rail Type

Lt 56

Rt 56

02/06/2012

Inspector: County, Anoka

BRID	GE 02554 M	UN 31(AQU	A LANE)	OVER RICE CR	REEK		ROUT	NE INSF	DATE:	11/17/20	11
•	Lino Lakes ship:		ange: 22W	Location: 0.2 MI Route: 10 - MUN Control Section: V Maint. Area: Local Agency Br		000+00.370	Paint Are Culvert:	ea/ Pct. Ur a/ Pct. Uns N/A			
List: NBI D	eck: 7 Super	: 7 Sub:	6 Chan	n: 6 Culv: N			Postings:				
Apprai	isal Ratings - Appr	oach: 6 \	Naterway:	Open, Po MN Scou	osted, Closed: A ir Code: I - LOW	RISK	Un	official Str	ucturally De	eficient l	N
Kequii	red Bridge Signs -	_	0 - Not Red 0 - Not Red	•		Not Required Not Applicable		official Fur official Suf	•		N 98.0
Struct	ture Unit:										
ELEM NBR		T NAME	ENV	REPORT TYPE	INSP. DATE	QUANTITY	QTY CS 1	QTY CS 2	QTY CS 3	QTY CS 4	QTY CS 5
407	Bituminous App	roach	1	Routine	11/17/2011	2 EA	0	2	0	0	N/A
	,	e .		Routine	11/02/2009	2 EA	0	2	0	0	N/A
		N/C. (2002) M repaired. (12/0	ajor settlen )5) Moderal	oproach - transvers nent of the bitumino te settlement of the d. (11/09) Moderat	us roadway at bot bituminous appro	h ends of the b ach slabs at bo	ridge. (12/ th ends of	04) Bitumir the bridge	ous appro (1/09) The	aches have e bituminou	e been
982	Approach Guard	Irail	1	Routine	11/17/2011	1 EA	0	0	1	N/A	<b>*</b> **
				Routine	11/02/2009	1 EA	0	0	1	N/A	Ňm
		Notes: (11/09	) No guardi	rail inplace.							
055	Timber Slab with (AC) Overlay	Bituminous	2	Routine	11/17/2011	2142 SF	0	2142	0	0	N/A
				Routine cracking of the biturate size and dens				0 ious surfac	0 e was sno	0 w covered.	N/A (11/09)
206	Timber Column		2	Routine	11/17/2011	16 EA	16	0	0	0	N/A
		•		Routine	11/02/2009	16 EA	16	0	0	0	N/A
		Notes: < none	> >								
216	Timber Abutmer	nt	2	Routine	11/17/2011	95 LF	95	0	0	0	N/A
				Routine	11/02/2009	95 LF	95	0	0	0	N/A
		Notes: < none	<b>}</b> >					,			
235	Timber Pier Cap	)	2	Routine	11/17/2011	187 LF	187	0	0	0	N/A
	·			Routine	11/02/2009	187 LF	187	0	0	0	N/A
		Notes: Pier ca	ap = 92 LF,	Abutment cap = 96	S LF.						
332	Timber Bridge R	ailing	2	Routine	11/17/2011	407 LF	397	0	10	N/A	N/A
	•			Routine	11/02/2009	407 LF	397	0	10	N/A	N/A
		of 3"x4" rail ale (11/06) The tir	x4" rail alor ong the wal nber railing	ng sidewalk @ SE o k at the SE corner that paralleled the g is missing adjace	of the bridge is bro bituminous path b	ken and missir eyond the NW	ig. (12/05) corner of ti	The timber	railing ha	s been repa	aired.

Structi	ure Unit:										٠
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
 382	Cast-In-Place (Cl	IP) Piling	2	Routine	11/17/2011	14 EA	0	0	14	0	N/A
				Routine	11/02/2009	14 EA	0	0 .	14	0	N/A
		naint with area	s of corros	shells have chalked ion at the waterline 12/04) N/C. (12/05)	and at the pier ca	ns. (2002) Cori	rosion of th	ie steel pik	shells cor	shells have ntinuing at l	chalked the
386	Timber Wingwall		2	Routine	11/17/2011	4 EA	4	0	0	0	N/A
000	•			Routine	11/02/2009	4 EA	4	0	0	0	N/A
	•	Notes: < none	; >								~~~~
964	Critical Finding S	Smart Flag	2	Routine	11/17/2011	1 EA	1	0	N/A	N/A	N/A
	•	~		Routine	11/02/2009	1 EA	1	. 0	N/A	N/A	N/A
		Notes: (11/06	) No critica	I findings noted.							
981	Signing		2	Routine	11/17/2011	1 EA	0	0	1	0	0
	ŭ v			Routine	11/02/2009	1 EA	0	1	0	0	0
		the SIM and N	W corners	arker missing @ SV of the bridge have b ded and loss of refle	een painted with	graffiti. (11/06)	The NW o	lelineator f	acing mate	rial is failin	g. (1/09)
985	Slopes & Slope	Protection	2	Routine	11/17/2011	1 EA	0	1 1	0	N/A	N/A
				Routine	11/02/2009	1 EA	0	1	0	N/A	N/A
		deterioration of undermining & path. (2000) N Erosion along	of limeston & slumping N/C. (2002) the SE an	d riprap cracked und e riprap material. (1 @ waterline, erosio Severe erosion alor d NE wingwalls has ngwalls. (8/07) The gerline is increasing.	2/29/97) Addition n along SE wing\ ng the SE and NI been repaired. (* trouted riorap is l	ial riprap has be wall.(1999) Eros E wingwalls has 12/05) Minor ero beginning to slu	een placed sion along seroded av osion along imp along	at NVV and SE & NE volvey part of the SE at the abutment	d SE wingv vingwalls b the bitumi nd SW wing ents. (1/09)	valis, (1998 eginning to nous trail. ( gwalls, (11/ Deteriorati	erode b (12/04) /06) Mind
~	Curb & Sidewall	k	2	Routine	11/17/2011	1 EA	0	0	1	N/A	N/A
986				O a settino a	11/02/2009	1 EA	0	0	1	N/A	N/A
986				Routine	11/02/2009						

Channel Protection: (1998) Bank protection being eroded on upstream end of bridge. (1999) Brush/debris in channel under bridge restricting waterway. (2000) N/C. (2002) The brush and debris has been removed from the channel. (12/05) The waterway is unrestricted. (11/06) Dislodged riprap under the bridge is acting as a dam restricting the waterway slightly. (1/09) A beaver dam under the bridge is restricting the channel. (11/09) Logs and brush under the bridge restricting the channel. (11/11) The channel is free of logs and brush.

(11/11) The channel is free of logs and brush.

Inspected by: G. Anderson & W. Howard 12/11/02., G. Anderson & M. Werlinger 12/13/04., G. Anderson & M. Werlinger 12/12/05., G. Anderson & M. Werlinger 11/22/06., G. Anderson & M. Werlinger 8/03/07., G. Anderson & C. Osterhus 1/07/09.,

G. Anderson & M. Werlinger 11/02/09., G. Anderson & K. Rank 11/17/11.

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:

Structure Unit: QTY CS 1 QTY CS 2 QTY CS 4 **ELEM** QTY QTY NBR **ELEMENT NAME ENV** REPORT TYPE INSP. DATE QUANTITY CS3 CF 5 62. Culvert NBI: 71. Waterway Adeq NBI: 72. Appr Roadway Alignment NBI: Inventory Notes: **Gregory Anderson Andrew Witter** 

**ROUTINE INSP. DATE: 11/17/2011** 

Reviewer's Signature

**MUN 31(AQUA LANE) OVER RICE CREEK** 

Inspector's Signature

**BRIDGE 02554** 

<u>.</u>	23			(FOR STEEL OR TIMBER SIMP	LE SPANSI	Rated by D.D.				
1)				•		Checked by				
arceate.	Si	trg'r Spcq. = S	Strg'rz		•	Date 2-11-93				
	•									
		Bridge Na.	D2554 v.	ar built 1991	Total structure length	62 ft.				
		County A		Roadway width (curb to curb)	1 <u>32</u> te	Na. of spans = 3				
•						oen. = S				
3.7	ŀ		an rated = $L = \frac{21}{}$	T. Stringers						
ATA		ROUTE AQUA LANE FEATURE CROSSED RICE CREEK								
à		Abutiment ty	P. TREATED	TIMBER "	Pier type Pile	BENT 12" C.I.P.				
		Floor: type.	TREATED TIM	BER thickness (2"	Curb: height	width				
		Railing: type	· GLU-LAN	height	2-10"	width				
-	╫	Dead load pe	er ft. of stringer:							
<u>ا</u> ا		- · · ·	-		<b>74</b>	lb./ft.				
O A D						lb./ft.				
19						Ib/fc				
		_		lb_/ft.						
1 A B						lb./ft.				
(			*		185	38 fr. 1b.				
1		Dead load l	Mament = 1/8 (W)	(t)2 =						
		lmpact =		Sec. modulus =	79Z in3 -loss (	$= \frac{792}{\text{in}^3 \times \text{SM}}$				
		•	r (from P. 29, AASH	0 1969)* = \$ =	INVENTORY	OPERATING				
1	1			ft.	= 18(2 1b/in2	fo = 2411 lb/in <sup>2</sup>				
-		Resisting M	119588 tr. 14.0	159148 telb.						
9	2	Resisting Moment = SM (fi or fo) 12 18538 ft.				18538 ft. 1b. (				
	DALING TALING		available for live loa	d and impact of	101050 tt.16.3	140610 tr. 15.				
			rail. for live load = -	3 1 + impact) (Dist. Factor)	101050 ft. 1b. (4)	140610 to 16.				
		Per Wheel 1 H 20 Mom		. — impact (Disc Factor)						
	-		Ø		86000 ft. 1b. (5)					
		H Rating *	<u>(4)</u> (20) =	<u>1</u> -	<u> 4S 23.5</u> @	н <u>S 32.7</u>				
-				N.T	. C-11-1					
	2	When line (5) or O	per.	wake rosting	Calcualtions as follows:					
	ố [	less than H3	Clase bridge							
-	Ę	H3 un to H6		from line (6) of Oner, on line (7 from line (6) of Oper, on line (8) a						
.	<b>≟</b>	H6 up to H12		of Oper. is less than the moment						
	CALCULATIONS	H12 and over	rated spon le	nath, make Postina Calculations (	இ.and இ.	LOADS				
	됭		tructure unit governs	Posting loads, indicate the basis of		determine (in whole tons				
		allowable i	oads accordingly.	Gridge Limit = 6 of 0	perating *	LEGAL 7				
	ĭ	VEHICLE .	MOMENT***	M - 3 Posting load = 4 of O	perating (23.25)	LEGAL®				
	5		(No Impact)	Momen	nt of M-3					
	POSTING	M-3 =		M 257 Period (4) of O	perating	LEGAL @				
-		M - 352 =	· ·	M - 3S2 Posting load = 4 or 0	perating at of A1-3S2 (36.6)	LCOALG				

NON-COMPOSITE STRINGER RATING SHEET

MHD 22106A 8-73

<sup>•</sup> Standard Specifications for Highway Bridges, 1969, adopted by the American Associations of State Highway Officials

<sup>••</sup> Overburden may be wearing course or gravel fill etc. which is not a part of the Structural Floor.

<sup>\*\*\*</sup> From Minnesota Truck Moments, Plate 3 without impact.

<sup>\*\*\*\*</sup> When calcualted loads exceed 23.5 tons and 36.6 tons respectively no posting is required.

<sup>\*</sup> see ATTACHED Sheet.



PHONE NO.: 218 927 6401

DATE: 02-10-1993 TIME: 09:58:14 Kenneth A. Johnson, P.E.

## **BRIDGE DESIGN**

# Stress-Laminated Longitudinal Deck

### GIVEN INFORMATION:

Project designation: Bridge No. 02554

Project location: Anoka County, Minnesota

Species of timber to be used: Northern Pine (Table 4D)

Commercial grade: No. 1

Size classification: Beams and Stringer

The timber is rough full sawn and has moisture content less than 19%. Tabulated allowable design values for the species selected:

Extreme fiber stress in bending (psi): 1,050 Compression perpendicular to grain (psi): 435

Modulus of elasticity = E = 1,300,000

Dimensions of span to be designed:

Effective span length (feet): 21.5

Curb to curb roadway width (feet): 32

Design load: HS20

Bituminous thickness (in): 3

Width of one curb (feet): 1

Number of laminates per butt joint in 4 feet along span: 4

### COMPUTED VALUES:

Live load moment for AASHTO HS20 lane load

172.00 ft-klps

Modified allowable extreme fiber stress in bending: 1,811.3 psi

Deck Thickness (inches)	Distribution Width (inches)	Dead load Moment (in-lbs)	Live load Moment (in-lbs)	Total Moment (in-lbs)	Section Modulus (inches <sup>3</sup> )	Extreme Fiber stress (psl)
12.00	44.00	222,458	1,032,000	1,254,458	792.0	1,583.9
14.00	48.00	265,794	1,032,000	1,297,794	1,176.0	1,103.6
16.00	52.00	312,982	1,032,000	1,344,982	1,664.0	808.3
18.00	56.00	364.022	1,032,000	1,396,022	2,268.0	615.5

Deck	Live load	Live load Deflection		Min. Prestress	Min. spacing	Max. spacing
Thickness (inches)	Distance (inches)	L/Δ Ratio (L/Δ)	Deflection (inches)	For Bending (psi)	1 in. dia. rod (inches)	1 in. dia. rod (inches)
12.00	0.67	387	0.217	110	44.3	67.6
14.00	0.38	671	0.150	110	37.9	58.0
16.00	0.24	1,085	0.109	110	33.2	50.7
18.00	0.16	1.663	0.083	110	29.5	45.1

	Deck	Design Rod	Plate	Plate	Plate	Rating of Span		
	Thickness (inches)	Spacing (feet)	Width (Inches)	Length (inches)	Thickness (inches)	Inventory H S	Operating H\$	
	12,00	4.00	10.00	25.00	3.587	23.5	32.7	
•	14.00	4.00	12.00	24.00	3.219	36.1	49.8	
	16.00	3.00	14.00	18.00	1.431	52.3	71.6	
	18.00	3.00	16.00	18.00	1.431	72.6	98.8	

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•								