



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

Inspection Report for  
**B-03-025**

USH 53 NB over KNAPP ST  
Jun 09,2017



Type	Prior	Frequency (mos)	Performed
Routine	06-16-15	24	X
SIA Review	06-18-13	48	X

Latitude 45°18'51.80"N  
Longitude 91°40'35.56"W

Owner STATE HIGHWAY DEPT  
Maintainer STATE HIGHWAY DEPT

**Time Log**

**Team members**

Hours	Minutes	
1	0	wjk

Inspector	Name	Number	Signature	Date
	Kovaleski, William J	8007	<i>William J Kovaleski</i> E-signed by Bill(dotwjk)	09-08-17

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**Identification & Location**

Feature On: USH 53 NB	Section Town Range: S25 T33N R11W	Structure Number: <b>B-03-025</b>
Feature Under: KNAPP ST	County: BARRON	
Location 1.3M N JCT CTH I TO E	Municipality: PRAIRIE LAKE	Structure Name:

**Geometry**

measurements in feet, except where noted

Approach Roadway Width: 40	Bridge Roadway Width: 40.0	Total Length: 150.7
Approach Pavement Width: 24	Deck Width: 43.8	Deck Area (sq ft): 6600

**Traffic**

	Lanes	ADT	ADT year	Traffic Pattern
On	2	5500	2014	ONE WAY TRAFFIC
Under	2	2500	2008	TWO WAY TRAFFIC

**Capacity**

**Load Rating**

Inventory rating: HS15	Overburden depth (in): 3.0	Last rating date: 08-15-13	Controlling: INTERIOR DECK GIRDER Negative Moment
Operating rating: HS23	Deck surface material: INTEGRAL CONCRETE	Re-rate for capacity (Y/N):	Control location: SPAN 1
Posting:	Re-rate notes:		

**Hydraulic**

**Classification**

Scour Critical Code(113): (N) NO WATERWAY	Q100 (ft3/sec): 0	
High water elevation (ft): 0.0	Velocity (ft/sec): 0.0	Sufficiency #: 92.2

**Span(s)**

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONT PREST CONC	DECK GIRDER	45	39.5	
2	CONT PREST CONC	DECK GIRDER	45	64.0	Y
3	CONT PREST CONC	DECK GIRDER	45	43.0	

**Expansion joint(s)**

**Temperature:**

File:	New:
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**Clearance**

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical Under Cardinal	15.5		
Highway Min Vertical Under Non-Cardinal			
Horizontal Under Cardinal	50.5		
Horizontal Under Non-Cardinal			
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

**Special Components**

Component	Year	Work Performed	Note
DECK - IOWA MIX	1994	OVERLAY - CONCRETE	

**Construction History**

Year	Work Performed	FOS id
1994	OVERLAY - CONCRETE	1190-20-60
1972	NEW STRUCTURE	1196-04-72

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Structure No.: **B-03-025**

**Maintenance Items History**

Item	Recommended by	Status	Status change	Year completed
<b>Misc - Wash Bridge</b>	Kurtz, William G (8008)	REJECTED	09/08/17	
<b>Substructure - Repair Abutment / Wings</b>	Harrington, Daniel J (8004)	REJECTED	03/02/15	
Repair top of backwall at deck 16 SF				

**Maintenance Items**

Item	Priority	Recommended by	Status	Status change
<b>Approach - Other Work</b>	HIGH	Kurtz, William G (8008)	IDENTIFIED	06/18/15
Repair the APPR Drainage inlet.				
<b>Substructure - Other Work</b>	MEDIUM	Kurtz, William G (8008)	IDENTIFIED	06/18/15
Seal concrete columns.				
<b>Misc - Cut Brush</b>	LOW	Kurtz, William G (8008)	IDENTIFIED	06/18/15
Remove vegetation from structure.				

**Elements**

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	12		<b>Reinforced Concrete Deck</b>	SF	6,601	6,552	49	0	0
		1130	Cracking (RC) <b>Few hrline transverse cracks w lt eff.</b>	SF		6,552	49	0	0
	8514		Concrete Overlay Random cracking small spall right lane span 3. map cracking throughout deck	SF	6,601	0	6,601	0	0
		3210	Debonding/Spall/Patched Area/Pothole SPL CS2 35SF   DELAM 132SF. <b>Asphalt filled at joints.</b>	SF		0	167	0	0
		3220	Crack (Wearing Surface) <b>Fine map cracking throughout - all w/ 50% CS3</b>	SF		0	6,434	0	0
X	109		<b>Prestressed Concrete Open Girder</b>	LF	600	598	2	0	0
		1080	Delamination - Spall - Patched Area Impact Damage SPL CS2 1LF.	LF		0	2	0	0
X	205		<b>Reinforced Concrete Column</b>	EA	6	6	0	0	0
X	215		<b>Reinforced Concrete Abutment</b>	LF	97	81	12	4	0
			Crack vertical below G #1& #2 bearing N abut. settlement in front 1'+ Rust stained but dry. S abut stained but dry 2011. 2013 backwall N abut needs repair to op 16 SF. N&S ABUT have staining, but are dry.						
		1080	Delamination - Spall - Patched Area S ABUT G1 SPL CS3 1LF   G2 SPL CS3 1LF   G4 SPL CS3 1LF   E SPL CS3 1LF.	LF		0	0	4	0
		1130	Cracking (RC) 6/16/2015 S ABUT CRK CS2 4LF. 6/16/2015 N ABUT CRK CS2 8LF.	LF		0	12	0	0

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X	234		Reinforced Concrete Cap	LF	91	91	0	0	0
X	301		Pourable Joint Seal	LF	49	39	0	10	0
			south joint needs to be repoured. 2011 south joint needs 10 LF re-pour.						
		2310	Leakage, Seal Adhesion, Damage, Cracking	LF		0	0	10	0
			10ft of north end asphalt filled - where spalled header block.						
X	304		Open Expansion Joint	LF	49	49	0	0	0
X	310		Elastomeric Bearing	EA	4	4	0	0	0
X	311		Moveable Bearing	EA	8	0	8	0	0
			some rust forming						
		1000	Corrosion	EA		0	8	0	0
			Freckle rust starting to form.						
X	331		Reinforced Concrete Bridge Rail	LF	298	0	148	150	0
			Minor cracks and spalls east parapet crack horizontal full length of span 1, 6 inches from top..						
		1130	Cracking (RC)	LF		0	148	150	0
			Horiz cracking begin delam - approx. 50 to 80%. Approx 50% CS3						
X	8400		Integral Wingwall	EA	4	0	4	0	0
			Straight and Plumb						
		8902	Wall Movement	EA		0	3	0	0
			SE 0" out   1/4" down. SW 0" out   1/4" down. NW 0" out   1/4" down.						
		8903	Wall Deterioration	EA		0	1	0	0
			Spalling NE						

**Assessments**

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	9001		Drainage - Approach	EA	4	4	0	0	0
X	9030		Signs - Object Markers	EA	2	2	0	0	0
X	9043		Slope Protection- Crushed Aggregate with Bit.	EA	2	1	1	0	0
			N needs to have vegetation removed.						
X	9168		Concrete Diaphragm	EA	15	14	1	0	0
			1 spall bay 1 S abut backwall.						
X	9322		Approach Roadway - Concrete (non-structural)	EA	2	0	1	1	0
			Cracking, settlement and edge cracking - asp filled CL joint.						

**NBI Ratings**

	File	New
Deck	6	6
Superstructure	7	7
Substructure	7	7
Culvert	N	N
Channel	N	N
Waterway	N	N

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**Structure Specific Notes**

**OLD:** Random map cracking throughout, cracked approach slab. \*\*\*1/15/97\*\*\* Overall cond of structure is very good. Reinforced concr columns, caps, north abut. ps girders, deck are all very good. Southeast **abutment corner (8LF) has 8 verical cracks. 250 LF of 358 crack. No maintenance request itmes at this time. Delam 0.98%- 1996.**  
**(99)structure in very good shape. Cleaning out drain seem to have cured water problem at SE corner of S abutment.**  
**(01) Structure is in very good condition. South abut. slope failure SE corner below water problem on s abut. Water damage to SE corner og Abut. from freze /thaw on wet corner. Washout on NE corner of N abut. not serious but needs to be repaired. Settlement at both abutments, and loose slope paving.**

**Inspection Specific Notes**

**Inspector Site-Specific Safety Considerations**

**Structure Inspection Procedures**

Walk-thru

**Special Requirements**

Chk	Hours	Cost	Comments
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**Routine**

**Document Comment/Description**

East parapet - horiz cracking





**Routine**

**Document Comment/Description**

Typ deck map cracking



Routine  
Document Comment/Description

South abutment





**Routine**  
**Document Comment/Description**

North abutment



Routine  
Document Comment/Description  
North approach and joint



# STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

**B-03-025**  
**USH 53 NB over KNAPP ST**

## LOCATION

(3) Municipality:  
 (16) Latitude(° ' "):  
 (17) Longitude(° ' "):

PRAIRIE LAKE
45°18'51.80"N
91°40'35.56"W

## TRAFFIC SERVICE

(28A) Lanes On:  
 (28B) Lanes Under:  
 (102) Traffic Pattern On:  
 (102) Traffic Pattern Under:  
 (19) Detour Length(mi):

2
2
-NO TRAFFIC <input checked="" type="checkbox"/> ONE WAY TRAFFIC -TWO WAY TRAFFIC
-NO TRAFFIC -ONE WAY TRAFFIC <input checked="" type="checkbox"/> TWO WAY TRAFFIC
1

## GEOMETRY

(49) Structure Length(ft):  
 (50) Sidewalk Width(ft):  
 (50) Curb Width(ft):  
 (52) Culvert Barrel Length(ft):  
 (34) Skew:  
  
 (51) Bridge Roadway Width(ft):  
 (52) Deck Width(ft):  
 Right Wingwall Length(ft):  
 Left Wingwall Length(ft):  
 (32) Approach Roadway Width(ft):  
  
 (47) Minimum Horizontal(ft):  
 (55) Minimum Right Lateral(ft):  
 (56) Minimum Left Lateral(ft):

150.7	
Left: 0.0	Right: 0.0
3.8	
Angle(°): 34	Direction: -RIGHT FORWARD <input checked="" type="checkbox"/> LEFT FORWARD
Cardinal	Non-Cardinal
40.0	40.0
43.8	43.8
40	0
Cardinal Under Clearance	Non-Cardinal Under Clearance
50.5	
14.3	
14.2	

## RAILING APPRAISAL

(36A) Bridge Rail Adequacy:  
 (36B) Transition Adequacy:  
 (36C) Approach Guardrail Adequacy:  
 (36D) Guardrail Termination Adequacy:  
 Outer Rail:

-SUB-STANDARD <input checked="" type="checkbox"/> STANDARD -NOT APPLICABLE		
-SUB-STANDARD <input checked="" type="checkbox"/> STANDARD -NOT APPLICABLE		
-SUB-STANDARD <input checked="" type="checkbox"/> STANDARD -NOT APPLICABLE		
-SUB-STANDARD <input checked="" type="checkbox"/> STANDARD -NOT APPLICABLE		
Left	Right	Type
		TYPE F (TWO SQUARE TUBES) - STEEL(8)
		TYPE F (3 SQUARE TUBES) - STEEL(65)
		TYPE F (4 SQUARE TUBES) - STEEL(72)
		TYPE M-STEEL 3 SQUARE TUBES(93)
X	X	SLOPED FACE PARAPET LF(91)
		SLOPED FACE PARAPET HF(92)
		VERTICAL FACE PARAPET TYPE A(74)
		TYPE W-THREE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
		OTHER(99) (Please specify)
	CONT GUARD RAIL	
	NO APP GRDRL	
	NO ATTACHMENT	
5	22 MM(7/8") BOLT (Please enter quantity)	
	25 MM(1") BOLT (Please enter quantity)	
	OTHER (Please specify)	
X	(01) ENERGY ABSORBING TERMINAL/EAT	
	(02) TURN DOWN	
	(99) OTHER (Please specify)	

## ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:

	3 Intolerable- Substantial speed reduction
	6 Fair- Minor speed reduction
X	8 Good- No speed reduction



1190-20-60

B.O

## DESIGN DATA

## LIVE LOAD:

INVENTORY RATING: HS 15

OPERATIONAL RATING: HS 24

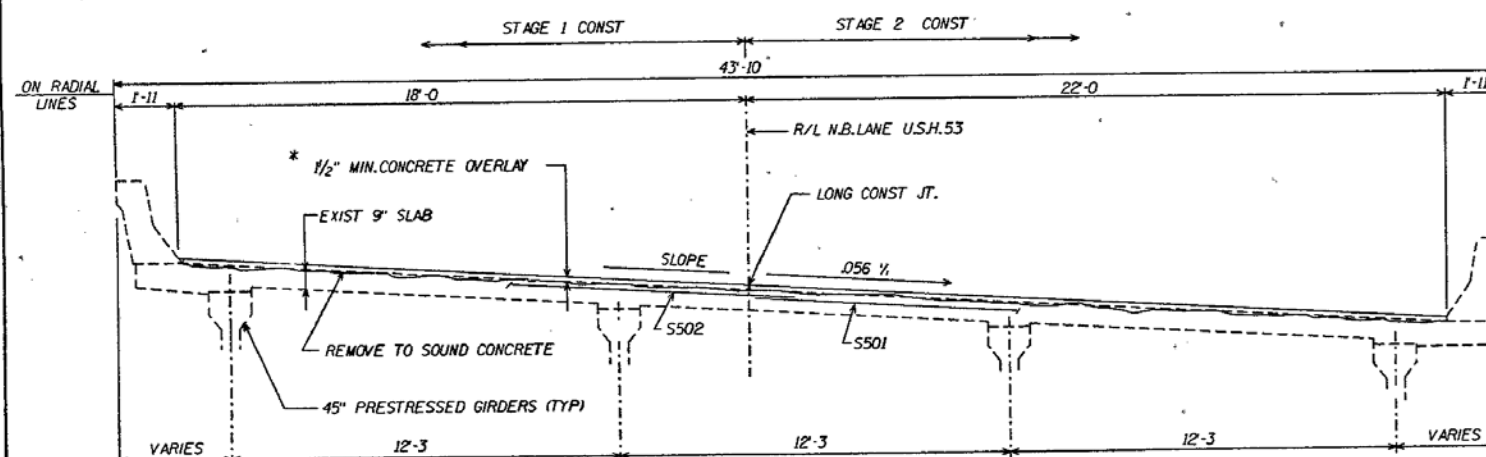
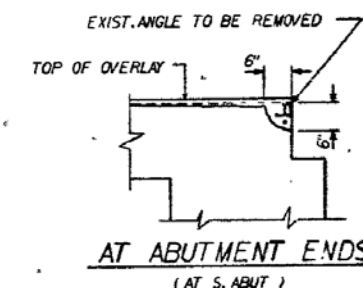
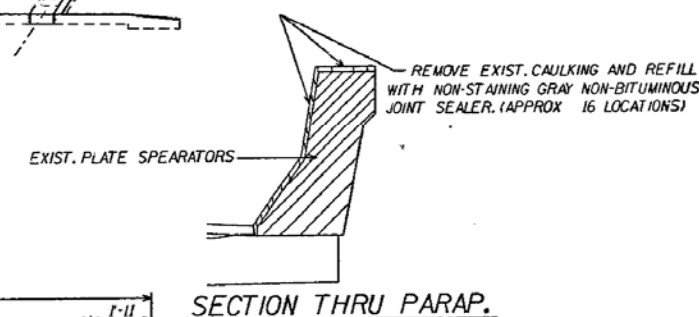
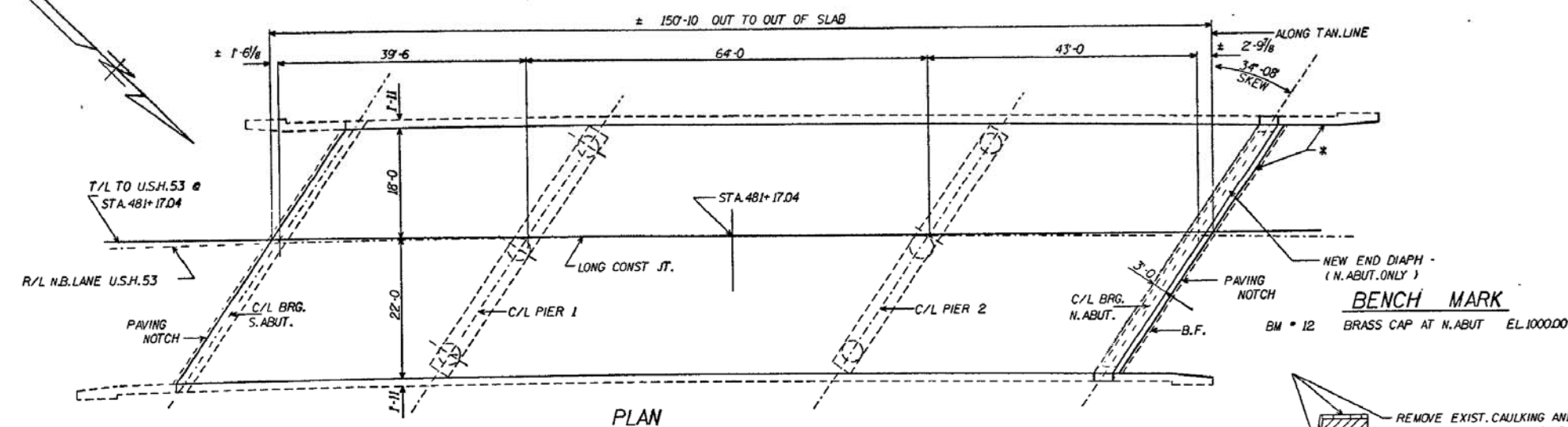
MAX. STD. PERMIT VEHICLE LOAD = 210 KIPS

## ALLOWABLE DESIGN STRESSES:

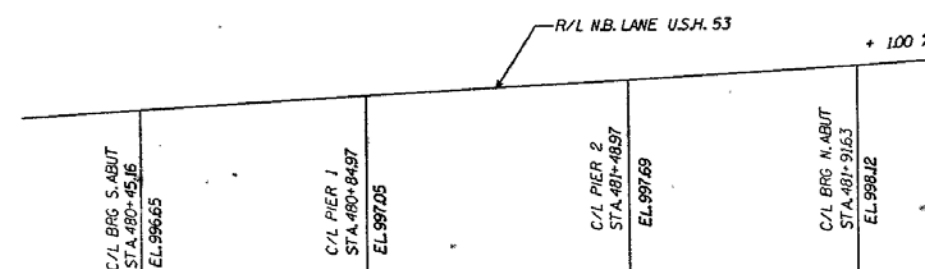
CONCRETE MASONRY OVERLAY  $f'c = 4000$  PSI

## GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED

CONTRACTOR SHALL VERIFY DIMENSIONS IN THE FIELD.  
(ALL DIM. ARE PLUS (+) OR (-))PROTECTIVE SURFACE TREATMENT COVERAGE SHALL BE  
150 SQ. FT. PER GAL. OR PER MANUF. RECOMMENDATIONS.BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2"  
CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

\* AVE. OVERLAY THICKNESS = 2 1/8"

CROSS SECTION THRU ROADWAY  
(LOOKING NORTH)

PROFILE GRADELINE - U.S.H. 53 NB

## LIST OF DRAWINGS

1. OVERLAY
2. EXPANSION DEVICE
3. PRESTRESSED GIRDER BEARINGS

## TOTAL ESTIMATED QUANTITIES

CONCRETE MASONRY OVERLAY, DECKS	71	CY.
HIGH STRENGTH BAR STEEL REINFORCEMENT, BRIDGES	1810	LBS
PROTECTIVE SURFACE TREATMENT	41	GAL
EXPANSION DEVICE B-3-25	1	LS.
PREPARATION, DECKS	94	SY.
CLEANING, DECKS	670	SY.
JOINT REPAIR	23	SY.
PREFORMED ELASTOMERIC COMPRESSION JT. SEALER, 2"	81	LF.
REMOVING BEARINGS	4	EA.
LAMINATED ELASTOMERIC BEARING PADS	4	EA.
FULL DEPTH DECK REPAIR	5	SY.

BRIDGE OFFICE CONTACT:  
R.L. REESE (608) 266-8488  
K.A. BAHLER (608) 266-8490

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS			
STRUCTURE B-3-25			
U.S.H. 53 OVER KNAPP STR.			
COUNTY	BARRON	TOWN	PRairie Lake
DESIGN SPEC.	AASHTO 1990	LOAD	CONSTR. SPEC. 1989
DESIGNED BY	V.T. CON'D. KAB	CHIEF	R.G. K.M.
APPROVED	Stanley R. W. Neer	DATE	1-21-92
OVERLAY			SHEET 1 OF 3
			NOV '92

I.D. 1190-20-30

B-3-25



