



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

# Inspection Report for B-24-009 ( PUCKYAN RIVER CROSSING. )

STH 23 over PUCKYAN RIVER  
Jun 19,2017



Type	Prior	Frequency (mos)	Performed
Routine	06-08-15	24	X
SIA Review	06-08-15	48	

Latitude 43°51'16.65"N  
Longitude 88°56'59.92"W

Owner STATE HIGHWAY DEPT  
Maintainer STATE HIGHWAY DEPT

## Time Log

## Team members

Hours	Minutes	
1	15	G. Lysne, M. Dent, C. Hampton

Name	Number	Signature	Date
Inspector Hardinger, Tom J	4001	<i>Tom J Hardinger</i> E-signed by Tom Hardinger(dottjh)	08-10-17

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**Identification & Location**

Feature On: STH 23	Section Town Range: S16 T16N R13E	Structure Number: <b>B-24-009</b>
Feature Under: PUCKYAN RIVER	County: GREEN LAKE	
Location 1.1M E JCT CTH A	Municipality: BROOKLYN	Structure Name: PUCKYAN RIVER CROSSING.

**Geometry**

measurements in feet, except where noted

Approach Roadway Width: 56	Bridge Roadway Width: 56.0	Total Length: 335.5
Approach Pavement Width: 36	Deck Width: 58.9	Deck Area (sq ft): 19760

**Traffic**

Lanes	ADT	ADT year	Traffic Pattern
On 3	6300	2014	TWO WAY TRAFFIC

**Capacity**

**Load Rating**

Inventory rating: HS17	Overburden depth (in):	Last rating date: 08-26-13	Controlling: INTERIOR DECK GIRDER Positive Moment
Operating rating: HS39	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location: SPAN 1
Posting:	Re-rate notes:		

**Hydraulic**

**Classification**

Scour Critical Code(113): (8) STABLE-ABOVE TOP FOOTING	Q100 (ft3/sec): 0	
High water elevation (ft): 0.0	Velocity (ft/sec): 0.0	Sufficiency #:

**Span(s)**

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONT PREST CONC	DECK GIRDER	45	81.5	
2	CONT PREST CONC	DECK GIRDER	45	82.1	Y
3	CONT PREST CONC	DECK GIRDER	45	82.1	
4	CONT PREST CONC	DECK GIRDER	45	81.5	

**Expansion joint(s)**

**Temperature:**

Joint #	Location	Type	Last inspection date	Last measure (in)	New measure (in)
1	WEST ABUTMENT	STRIPSEAL	06-08-15	1.5	1.3
2	EAST ABUTMENT	STRIPSEAL	06-08-15	1.3	1.8

**Clearance**

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

**Special Components**

Component	Year	Work Performed	Note
DECK - IOWA MIX	1988	OVERLAY - CONCRETE	

**Construction History**

Year	Work Performed	FOS id
2014	NEW BEARINGS	
2014	NEW DECK/WIDENING	1430-00-76
1988	OVERLAY - CONCRETE	0024-84-10
1966	NEW STRUCTURE	

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**Maintenance Items History**

Item	Recommended by	Status	Status change	Year completed
<b>Expansion Joints - Repair</b>	Hardinger, Tom J (4001)	REJECTED	01/09/17	
REPAIR WEST ABUTMENT JOINT. TJH WORKING ON PLAN. - PROJECT PROGRAMMED FOR 2021 - 1430-00-36/66.				
<b>Deck - Seal w/ Concrete Sealer</b>	Hardinger, Tom J (4001)	COMPLETE	01/09/17	2016
SEAL DECK WITH SEALER AND SEAL ALL CRACKS.				

**Maintenance Items**

Item	Priority	Recommended by	Status	Status change
<b>Expansion Joints - Clean</b>	MEDIUM	Hardinger, Tom J (4001)	IDENTIFIED	06/19/17
CLEAN TWICE A YEAR.				
<b>Deck - Clean and Sweep Deck/Drains</b>	MEDIUM	Hardinger, Tom J (4001)	IDENTIFIED	06/19/17
CLEAN & SWEEP TWICE A YEAR				

**Elements**

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	12		<b>Reinforced Concrete Deck</b>	SF	19,760	18,560	1,200	0	0
			WIDENED & REDECKED 2014.						
		1080	Delamination - Spall - Patched Area	SF		0	0	0	0
		1130	Cracking (RC)	SF		0	1,200	0	0
			<b>SPAN 1: 6 FULL WIDTH TRANSV CRACKS ALONG SKEW; 360 SF IN C2. SPAN 2: 7 FULL WIDTH TRANSV CRACKS ALONG SKEW; 420 SF IN C2. SPAN 3: 7 FULL WIDTH TRANSV CRACKS ALONG SKEW; 420 SF IN C2.</b>						
	8000		Wearing Surface (Bare)	SF	19,760	17,760	2,000	0	0
			2014.						
		3220	Crack (Wearing Surface)	SF		0	2,000	0	0
X	109		<b>Prestressed Concrete Open Girder</b>	LF	1,653	1,630	21	2	0
			3 NORTH GIRDER LINES ADDED 2014 (G1A-G1C WITH G1C NORTHLY GIRDER); SEVERAL INDIVIDUAL GIRDER REPLACEMENTS IN EXISTING 5 GIRDER LINES (FORMER G1 IN SPAN 1, G8 IN -SPAN 4. <b>8 TOTAL-45 INCH GIRDERS.</b>						
		1080	Delamination - Spall - Patched Area	LF		0	21	2	0
X	210		<b>Reinforced Concrete Pier Wall</b>	LF	80	80	0	0	0
			NEW NORTH STEMS ADDED 2014.						
		1080	Delamination - Spall - Patched Area	LF		0	0	0	0
	1130		Cracking (RC)	LF		0	0	0	0

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X	215		<b>Reinforced Concrete Abutment</b>	LF	166	156	10	0	0
			EACH EXTENDED NORTH APPROX 30' - 2014. EXISTING BACKWALLS REPLACED 2014.						
		1080	Delamination - Spall - Patched Area	LF		0	0	0	0
		1130	Cracking (RC)	LF		0	10	0	0
			SCAT VC'S ON ABUTMENT BODY; 5' EACH ABUT IN C2.						
X	234		<b>Reinforced Concrete Cap</b>	LF	215	205	9	1	0
			NEW NORTHERN CAPS ADDED 2014.						
		1080	Delamination - Spall - Patched Area	LF		0	3	1	0
			SMALL DELAM IN E FACE OF PIER 1 NEAR G8 AND G4. 1' EACH IN C2. <b>SMALL SPALL E FACE OF PIER 1 W REBAR @ G4; 1 LF IN C3.</b> <b>SHALLOW SPALL S. END, PIER 2; 1 LF IN C2.</b>						
		1130	Cracking (RC)	LF		0	6	0	0
			PIER 1: 1 VC IN SOUTH SECTION. PIER 2: 1 VC IN SOUTH SECTION. PIER 3: 4 VC'S IN SOUTH SECTION. ALL C2.						
X	300		<b>Strip Seal Expansion Joint</b>	LF	160	160	0	0	0
			WEST JOINT DEPRESSED 1.5" AND CONTRACTOR SAWED 45 DEGREE ANGLE BEVEL TO JOINT EXTRUSION. JOINT OPENING AT SURFACE IS +/- 5". BUILT THIS WAY IN 2014.						
		2310	Leakage, Seal Adhesion, Damage, Cracking	LF		0	0	0	0
		2360	Adjacent Deck or Header Damage	LF		0	0	0	0
			<b>SPALLS: SMALL EDGE SPALLS, ESPECIALLY IN EB SHOULDER (SNOW PLOW DAMAGE).</b>						
X	311		<b>Moveable Bearing</b>	EA	16	16	0	0	0
			NEW AT ABUTS IN 2014.						
		1000	Corrosion	EA		0	0	0	0
		2210	Movement	EA		0	0	0	0
		2220	Alignment	EA		0	0	0	0
X	313		<b>Fixed Bearing</b>	EA	48	48	0	0	0
			PIERS; CIP 2014.						
		1000	Corrosion	EA		0	0	0	0
X	331		<b>Reinforced Concrete Bridge Rail</b>	LF	729	634	95	0	0
			NEW 2014.						
		1080	Delamination - Spall - Patched Area	LF		0	0	0	0
		1130	Cracking (RC)	LF		0	95	0	0
			<b>NORTH: 45 VC'S, MOST SEALED.</b> <b>SOUTH: 50 VC'S, MOST SEALED.</b>						
X	8400		<b>Integral Wingwall</b>	EA	4	4	0	0	0
		8902	Wall Movement	EA		0	0	0	0
		8903	Wall Deterioration	EA		0	0	0	0

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**Assessments**

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	9004		<b>Drainage - Drainage Along Structure (Deck Drains)</b> 2 SURFACE DRAINS EAST END, NEW 2014.	EA	2	2	0	0	0
X	9043		<b>Slope Protection- Crushed Aggregate with Bit.</b> TOP 2/3'S OF SLOPES AT ABUTS. NEW 2014.	EA	2	2	0	0	0
X	9045		<b>Slope Protection- Riprap</b> NEW ADDED AT BOTTOMS - 2014.	EA	2	2	0	0	0
X	9167		<b>Steel Diaphragm</b> MIDSPAN. 7/SPAN. REPLACED FORMER CONCRETE ON OLDER PORTION. GIRDERS SHOW MINOR SHALLOW SPALLS FROM INSTALLATION. DIAPH'S CONNECTING OLD SECTION TO NEW HAVE EXTENSIONS.	EA	28	28	0	0	0
X	9168		<b>Concrete Diaphragm</b> 7 EACH PER PIER. PIER 1: CRKD IN BAYS 3, 5 AND 6, EAST SIDE. PIER 3: CRKD IN BAY 7 - WEST. <b>P2: CRACKED BAYS. P3: BAY 4. SCAT CRACKS IN PIER DIAPHRAMS.</b>	EA	20	13	6	1	0
X	9322		<b>Approach Roadway - Concrete (non-structural)</b> NEW 2014.	EA	2	2	0	0	0

**NBI Ratings**

	File	New
Deck	8	7
Superstructure	7	7
Substructure	7	7
Culvert	N	N
Channel	8	8
Waterway	8	8

**Structure Specific Notes**

NAME PLATE IN SW PARAPET.
<b>JOINT REPLACEMENT PROJECT SCHEDULED FOR WEST JOINT IN 2020.</b>

**Inspection Specific Notes**

APPEARS PIER 1 EXTENSION BUILT +/- 6" FURTHER NORTH THAN OTHERS. EVIDENT IN DIAPHRAM CONNECTIONS IN THIS BAY.
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**Inspector Site-Specific Safety Considerations**

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**Structure Inspection Procedures**

ROUTINE INSPECTION WITH REACHALL. PARK AT BRIDGE INSPECT UNDER BRIDGE WITH REACHALL. GREEN LAKE HIGHWAY PROVIDES TRAFFIC CONTROL. INSPECT TOPSIDE ELEMENTS DURING LANE CLOSURE. <b>INSPECTION OFF S. SIDE 2017. ALTERNATE SIDES EACH INSPECTION.</b>
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**Special Requirements**

Chk	Hours	Cost	Comments
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**Underwater Probe Form  
B-24-009**

**General Site Conditions - Scour**

NONE NOTED.

**General Site Conditions - Embankment Erosion/Conditions**

WELL VEGETATED.

**Substructure Notes**

Unit	Max Water Depth(ft)	Mode	Notes
Cardinal		Dry	WEST: CRUSHED AGGREGATE COVERED WITH EMULSION.
Pier 1	2.0	Wade	
Pier 2	2.0	Wade	
Pier 3	2.0	Wade	
Non Cardinal		Dry	EAST: CRUSHED AGGREGATE COVERED WITH EMULSION.



Routine  
Document Comment/Description

TYPICAL ABUTMENT AND SLOPE PAVING



Routine  
Document Comment/Description

TYPICAL PIER AND WIDENING





Routine  
Document Comment/Description

GIRDER END CRK/DELAM (2015)



Routine  
Document Comment/Description

GIRDER FELT WORKING OUTWARD OR NOT CUT OFF.





Routine  
Document Comment/Description

PIER WIDENING



Routine  
Document Comment/Description





Routine  
Document Comment/Description

ABUTMENT SLOPES - TYPICAL





**Routine**

**Document Comment/Description**

WEST ABUTMENT JOINT. open over 5" at surface.



**Routine**

**Document Comment/Description**

G8 (FORMER G5), SPAN 2. PATCH 2014.





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

G4 SPAN 3 PATCH



**Routine**

**Document Comment/Description**

FORMER G5 NEAR EAST ABUT





**Routine**

**Document Comment/Description**

FORMER G5 AT WEST ABUTMENT. PATCHED DELAM (2014).





**Routine**

**Document Comment/Description**

TYPICAL BRIDGE DECK LOOKING EAST.



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

TYPICAL ABUT AND SLOPE PAVING W/RIPRAP.



**Routine**

**Document Comment/Description**

SIGNIFICANT LONG AND TRANS CRACKS ACROSS DECK.





**Routine**

**Document Comment/Description**

TRANS CRACKS ACROSS DECK FULL WIDTH.

