STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Inspection Report for
B-29-038 (COLFAX ST. MAUSTON)

STH 58 over IH 90-IH 94
May 11,2017

Type	Prior	Frequency (mos)	Performed
Routine	05-27-15	24	X
Interim	03-21-16	0	
SIA Review	05-08-13	48	X

Latitude	43°48'42.01"N	Owner	STATE HIGHWAY DEPT
Longitude	90°04'20.60"W	Maintainer	STATE HIGHWAY DEPT

Time Log

Hours	Minutes
2	53

Team members

	Name	Number	Signature	Date
Inspector	Olson, Michael A	5024	Michael A Olson E-signed by Michael A Olson(ole110174)	05-16-17

BRIDGE INSPECTION REPORT
Wisconsin Department of Transportation
DT2007 2003 s.84.17 Wis. Stats.

Identification & Location

Feature On: STH 58	Section Town Range: S01 T15N R03E	Structure Number: **B-29-038**
Feature Under: IH 90-IH 94	County: JUNEAU	
Location: 1.0M N JCT STH 82 TO E	Municipality: MAUSTON	Structure Name: COLFAX ST. MAUSTON

Geometry

measurements in feet, except where noted

Approach Roadway Width: 30	Bridge Roadway Width: 36.0	Total Length: 297.8
Approach Pavement Width: 22	Deck Width: 38.5	Deck Area (sq ft): 11465

Traffic

	Lanes	ADT	ADT year	Traffic Pattern
On	2	6700	2016	TWO WAY TRAFFIC
Under	4	35300	2016	TWO WAY TRAFFIC

Capacity

Load Rating

Inventory rating: HS16	Overburden depth (in): 0.0	Last rating date: 06-14-08	Controlling: INTERIOR DECK GIRDER Moment
Operating rating: HS26	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location: 4.7 SPAN 2, 44.9
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 #:

Span(s)

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	CONT STEEL	DECK GIRDER		52.5	
2	CONT STEEL	DECK GIRDER		95.5	Y
3	CONT STEEL	DECK GIRDER		95.5	
4	CONT STEEL	DECK GIRDER		46.5	

Expansion joint(s)

Temperature:

Temperature: File: | New: 71

Joint #	Location	Type	Last inspection date	Last measure (in)	New measure (in)
2	NORTH ABUTMENT	STRIPSEAL	05-27-15	0.9	1.4

Clearance

Item	File Measurement (ft)	File Date	New Measurement (ft)
Highway Min Vertical Under Cardinal	17.1	09-Mar-2017	
Highway Min Vertical Under Non-Cardinal	16.06	09-Mar-2017	
Horizontal Under Cardinal	57.6		
Horizontal Under Non-Cardinal	57.8		
Highway Min Vertical On Cardinal			
Horizontal On Cardinal			

Special Components

Component	Year	Work Performed	Note
DECK CRACK SEALER - TK-9030	2015	MISCELLANEOUS PREVENTATIVE MAINTENANCE	
CONC. PROTECTIVE TREATMENT - TK-590-1 MS	2015	MISCELLANEOUS PREVENTATIVE MAINTENANCE	

Construction History

Year	Work Performed	FOS id
2015	MISCELLANEOUS PREVENTATIVE MAINTENANCE	0549-29-61
2013	ADD PIER CRASH WALL	1016-00-72
2008	NEW DECK	1016-08-72
2000	PAINTING	5882-02-70
1999	REPAIR SUBSTRUCTURE	1010-00-60
1985	PAINTING	
1985	OVERLAY - CONCRETE	0029-44-21
1964	NEW STRUCTURE	

Maintenance Items History

Item	Recommended by	Status	Status change	Year completed
Deck - Seal Surface Cracks		COMPLETE		2015
Deck - Seal w/ Concrete Sealer		COMPLETE		2015

Elements

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**12**		**Reinforced Concrete Deck-Coated Reinforcing**	SF	11,544	10,349	1,195	0	0
		1080	Delamination - Spall - Patched Area	SF		0	0	0	0
		1130	Cracking (RC) Hairline cracking with efflorescence throughout. **Span 1 (south): ~ 60 sf of hairline cracking with lite efflorescence.** **Span2: ~530 sf of hairline cracking with lite efflorescence.** **Span 3: ~ 540 sf of hairline cracking with lite efflorescence.** **Span 4: ~ 65 sf of hairline cracking with lite efflorescence.**	SF		0	1,195	0	0
	8000		Wearing Surface (Bare) (15) Visual insp. Hairline cracking throughout.	SF	10,721	10,719	2	0	0
		3210	Debonding/Spall/Patched Area/Pothole Small spall at pier 2 on the west shoulder, and a small spall in span 2 in the south bound driving lane.	SF		0	2	0	0
		3220	Crack (Wearing Surface)	SF		0	0	0	0
X	**107**		**Steel Open Girder** (11) Bottom flanges over roadway and haunch showing active corrosion.	LF	1,478	368	1,060	50	0
		1000	Corrosion (15) Visual. Corrosion affecting **75**% of girder length - areas of light speckle rust and active corrosion - mostly over roadway.	LF		0	1,060	50	0
	8516		Painted Steel GRAY, RPNTD '00, CLASS A, 13900SF	SF	14,375	11,495	0	0	2,880
		3440	Effectiveness (Steel Protective Coatings) Approximately **2**0% of the area has rusting.	SF		0	0	0	2,880

X	**205**		**Reinforced Concrete Column**	EA	12	4	6	2	0
			Col 1, P1= many cracks @ salt spray area & spalls at ground line the spalls have been patched and are sound.						
			Delamination - Spall - Patched Area	EA		0	3	2	0
		1080	**Pier 1: Col 1: spalls at ground line the spalls have been patched and are sound. (CS2=1)** **Pier 2: C2 spall with exposed rebar. (CS3= 1)** **Pier 3:** 1 Small spall near top C3 with rust staining (CS2) and a spall near top of C2 with exposed rebar (CS3) Surface repair areas on P2 & P3.						
			Cracking (RC)	EA		0	3	0	0
		1130	**Pier 1: Col 1, many cracks @ salt spray area.** **Pier 2:** **Pier 3:** Hairline cracking C2 east side, and C1 east side.						
X	**215**		**Reinforced Concrete Abutment**	LF	94	81	13	0	0
			SCAT. HL CRKS						
			Delamination - Spall - Patched Area	LF		0	4	0	0
		1080	North **a**butment**: 2**' of sound patch **under G1, 2' of delamination under G2,** **South:**						
			Cracking (RC)	LF		0	9	0	0
		1130	North Abutment: hairline crack with efflorescence behind G1**, under G3, and 2 narrow vertical cracks between G3 and G4 in the back wall. (CS 2= 4')** South Abutment: hairline cracks with efflorescence be**hind G2, between G3&G4 (2'), be**tween G4&G5, and behind G5. **(CS2=5')**						
X	**234**		**Reinforced Concrete Cap**	LF	130	97	29	4	0
			Rebar chair bottoms rusting and popped thru bottom of cap at all piers. P1: horiz HL crks under B1. P3: HLV crks @ ends and under G's. (13) P3 HLH crks above C4 caused by rebar corrosion from former leaking deck drain. P2 - Closed spalls on north face.						
			Delamination - Spall - Patched Area	LF		0	8	4	0
		1080	**P1**: Small **patched** area o**n east end. Delamination on west end 4'. (CS 2= 5')** **P2 : Delamination** below G**5,** G4 and **between G1 and G2. Spalls with exposed rebar between G1 and G2. (CS2=3' CS3=4')** **P3:**						
			Cracking (RC)	LF		0	21	0	0
		1130	P3: Narrow map cracking between C3 &C4**(11')**. A narrow **horizont**al crack between C2&C3 **(4')**, and above C4. P2: Narrow horizontal crack between C3&C4						
X	**300**		**Strip Seal Expansion Joint**	LF	125	125	0	0	0
			Leakage, Seal Adhesion, Damage,Cracking	LF		0	0	0	0
		2310	**North: Multiple hairline cracks most have been sealed.** **South: Multiple hairline cracks most have been sealed.**						
X	**311**		**Moveable Bearing**	EA	20	0	15	5	0
			Includes 2 hold down bearings @ N.A. most "keeper" bars pushed or breaking welds from bridge skew movement. (13) Active corrosion on ext bearings. SA: B1 - sole plt cupped significantly (photo). Girders slid +1/2" east (photo of B2). NA: girders slid +/-1/4" west.						
			Corrosion	EA		0	15	5	0
		1000	North Abutment: Bearings 2-4 CS2 corrosion has started. Bearing 1 active corrosion. Bearing 5 active corrosion and the keeper is broke off. Pier 1: Corrosion has started on all 5. Pier 3: Corrosion has started on B1-B4, and B5 has active corrosion. South Abutment: B2-B4 corrosion has started, and B1 and B5 have active corrosion.						
			Movement	EA		0	0	0	0
		2210							
			Alignment	EA		0	0	0	0
		2220							

X	**313**		**Fixed Bearing**	EA	5	0	5	0	0
			PIER 2; REPAINTED 2000.						
		1000	Corrosion	EA		0	5	0	0
			Corrosion has started on all 5.						
X	**331**		**Reinforced Concrete Bridge Rail**	LF	656	574	82	0	0
			HL vert cracks spaced +/-5 ft across bridge.						
		1080	Delamination - Spall - Patched Area	LF		0	2	0	0
			Two minor spalls.						
		1130	Cracking (RC)	LF		0	80	0	0
			Both rails have hl to narrow vertical cracks **about every 5' approx. 80 of them have efflorescence on the back side.**						
X	**8400**		**Integral Wingwall**	EA	4	3	1	0	0
			NW: **NE:** **SW:** **SE:**						
		8902	Wall Movement	EA		0	0	0	0
		8903	Wall Deterioration	EA		0	1	0	0
			South East wing has 1 small spall.						
X	**8801**		**Jacketing**	EA	3	1	2	0	0
		1080	Delamination - Spall - Patched Area	EA		1	2	0	0
			P1C4 delamination near the bottom**, and hairline to narrow map cracking throughout**. P1**C3 hairline to narrow cracking throughout.** **P1C2** delamination just above the crash wall**, and hairline to narrow cracking throughout.**						

Assessments

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State 1	2	3	4
X	**9001**		**Drainage - Approach** 4 Concrete Flumes **NW:** **NE: small spall at the end of the parapet.** **SE:** **SW:**	EA	4	4	0	0	0
X	**9004**		**Drainage - Drainage Along Structure (Deck Drains)** 6 deck drains.	EA	6	6	0	0	0
X	**9030**		**Signs - Object Markers** **NW:** **NE:** **SE:** **SW:**	EA	4	4	0	0	0
X	**9042**		**Slope Protection- Concrete** Some vegetation growing in the concrete joints.	EA	2	2	0	0	0
X	**9167**		**Steel Diaphragm** **Span 1: No** corrosion **on 3 of 4 at** the **south abutment, but corrosion is starting on the remaining 8.** **Span 2: No corrosion on 3, but corrosion is starting on 10 and is activ**e **on anothe**r **7.** **Span 3: No corrosion on 2, but corrosion is starting on 16 and is active on another 6.** **Span 4: No corrosion on 4 at the north abutment, but corrosion is starting on the remaining 8.**	EA	68	12	43	13	0

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Structure No.: **B-29-038**

X	**9322**		**Approach Roadway - Concrete (non-structural)**	EA	2	1	1	0	0
			South Approach has a small spall at the centerline.						

NBI Ratings

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

Structure Specific Notes

ALL BEAMGUARD REPLACED & UPGRADED IN 1996. PAINT INDEX = 13900 SF (2000).
205)1999 COL RPR PROJ; CONC ENCPSLTD PIER 1- COLS 2,3,&4; SURF RPRD PIER 1-COL AND PIER 3 COL'S 1&2; L-MOD TIGHT VER & HOR CRKS IN EA ENCPSLTD COL; P1 COLS 2,3&4 OPEN VER CRKS; P2 COLS 1&2 VER CRKS W/SPL IN COL2
107) 2000 PAINT PROJECT: CLASS A W/ 2 YR WAREENTY AS OF 6/ 2000.
PAINT SYSTEM USED: SHERWIN WILLIAMS: CORATHANE PRIMER, IRONOX A & B. EPA # USED: WIR 00047688.
359 MOD AREAS OF DISCOLORATION/EFFLOR NEAR PIER 3 OVER G3, APPROX. 10'X20'.

Inspection Specific Notes

P3 Crash wall at Pier 3, no problems found.
P1 Crash wall at Pier 1, 2" of delamination at C2, and a medium crack at C2, and a narrow Crack at C1.

Inspector Site-Specific Safety Considerations

Structure Inspection Procedures

Special Requirements

Chk	Hours	Cost	Comments

Routine

Document Comment/Description

Elevation view looking east.

Routine

Document Comment/Description

Typical of bearings with active corrosion.

Routine

Document Comment/Description

Typical of the underside of deck and girders in spans one and four.

Routine

Document Comment/Description

Typical of underside and girders in spans two and three.

Routine

Document Comment/Description

Cupped sole plate on pairing one N. abutment.

Routine

Document Comment/Description

Spall with exposed rebar in P2C2.

Routine

Document Comment/Description

Spall with exposed rebar in P3C2.

Routine

Document Comment/Description

Roadway view looking south.

STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

B-29-038
STH 58 over IH 90-IH 94

LOCATION

(3) Municipality:	MAUSTON
(16) Latitiude(° ' "):	43°48'42.01"N
(17) Longitude(° ' "):	90°04'20.60"W

TRAFFIC SERVICE

(28A) Lanes On:	2
(28B) Lanes Under:	4
(102) Traffic Pattern On:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(102) Traffic Pattern Under:	-NO TRAFFIC -ONE WAY TRAFFIC X-TWO WAY TRAFFIC
(19) Detour Length(mi):	5

GEOMETRY

(49) Structure Length(ft):	297.8	
(50) Sidewalk Width(ft):	**Left:** 0.0	**Right:** 0.0
(50) Curb Width(ft):		
(52) Culvert Barrel Length(ft):		
(34) Skew:	**Angle(°):** 45	**Direction:** -RIGHT FORWARD X-LEFT FORWARD
	Cardinal	**Non-Cardinal**
(51) Bridge Roadway Width(ft):	36.0	36.0
(52) Deck Width(ft):	38.5	38.5
Right Wingwall Length(ft):	10.8	9.0
Left Wingwall Length(ft):	9.0	10.8
(32) Approach Roadway Width(ft):	30	0
	Cardinal Under Clearance	**Non-Cardinal Under Clearance**
(47) Minimum Horizontal(ft):	57.6	57.8
(55) Minimum Right Lateral(ft):	12.0	11.9
(56) Minimum Left Lateral(ft):	28.4	28.9

RAILING APPRAISAL

(36A) Bridge Rail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36B) Transition Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36C) Approach Guardrail Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE
(36D) Guardrail Termination Adequacy:	-SUB-STANDARD X-STANDARD -NOT APPLICABLE

Outer Rail: 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-THRIE BEAM(79)
		TYPE H ON VERTICAL PARAPET(80)
		TIMBER(38)
		OTHER(99) (Please specify)

Transition Type:	
	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)

Approach Attachment Rail Note:	
Guardrail Termination Type:	X (01) ENERGY ABSORBING TERMINAL/EAT
	(02) TURN DOWN
	(99) OTHER (Please specify)
Guardrail Termination Note:	

ROADWAY ALIGNMENT APPRAISAL

(72) Approach Alignment Appraisal:	
	3 Intolerable- Substantial speed reduction
	6 Fair- Minor speed reduction
X	8 Good- No speed reduction

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