



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

Inspection Report for  
B-20-184

MERRIL AVE over DE NEVEU CREEK  
Oct 15, 2018



Type	Prior	Frequency (mos)	Performed
Routine	10-13-16	24	X
Interim	04-16-18	0	
SIA Review	10-08-14	48	X
Uw-Profile	04-16-18	24	X

Start Coordinates		End Coordinates (optional)	
Latitude	43°46'50.90"N	Latitude	
Longitude	88°25'49.70"W	Longitude	
Owner	CITY	Maintainer	CITY

Time Log

Team members

Hours	Minutes	Thomas Conto - Team Leader
0	50	Brian Schmidt - Team Member

Inspector	Name	Number	Signature	Signature Date
	Conto, Thomas J	3531	<i>Thomas J Conto</i> E-signed by Thomas J Conto(Tconto)	11-30-18

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**DT2007 2003 s.84.17 Wis. Stats.**

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**Identification & Location**

Feature On: MERRIL AVE	Section Town Range: S11 T15N R17E	Structure Number: <b>B-20-184</b>
Feature Under: DE NEVEU CREEK	County: FOND DU LAC	
Location 1.5M E JCT USH 45	Municipality: FOND DU LAC	Structure Name:

**Geometry**

measurements in feet, except where noted

Approach Roadway Width: 38	Bridge Roadway Width: 36.0	Total Length: 52.6
Approach Pavement Width: 27	Deck Width: 54.0	Deck Area (sq ft): 2840

**Traffic**

Lanes	ADT	ADT year	Traffic Pattern
On 2	3291	2015	TWO WAY TRAFFIC

**Capacity**

**Load Rating**

Inventory rating: HS37	Overburden depth (in): 0.0	Last rating date: 02-19-14	Controlling:
Operating rating: HS61	Deck surface material: CONCRETE	Re-rate for capacity (Y/N):	Control location:
Posting:	Re-rate notes:		

**Hydraulic**

**Classification**

Scour Critical Code(113): (8) STABLE-ABOVE TOP FOOTING	Q100 (ft3/sec): 2000	
High water elevation (ft): 758.1	Velocity (ft/sec): 5.7	Sufficiency #: 96.8

**Span(s)**

Span #	Material	Configuration	Depth (in)	Length (ft)	Main
1	PREST CONCRETE	BOX GIRDER	27	50.0	Y

**Expansion joint(s)**

**Temperature:**

File:	New:
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**Clearance**

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

**Construction History**

Year	Work Performed	FOS id
2006	NEW STRUCTURE	1420-14-70

**Maintenance Items History**

Item	Recommended by	Status	Status change	Year completed
<b>Approach - Other Work</b>	Lang, Anthony (2505)	COMPLETE	11/30/18	2018
Mudjack SW sidewalk slabs approaching bridge, backfill adjacent to sidewalk. SE walk was replaces 2018.				

**Maintenance Items**

Item	Priority	Recommended by	Status	Status change
<b>Deck - Patching</b>	MEDIUM	Lang, Anthony (2505)	IDENTIFIED	10/31/14
Patch spall in west center end of concrete overlay				
<b>Deck - Repair Railing</b>	LOW	Lang, Anthony (2505)	IDENTIFIED	10/31/14
Replace missing caps on decorative railing, paint railing. Recaulk joints and decorative railing bolts..				

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Structure No.: **B-20-184**

**Elements**

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	15		<b>Prestressed Concrete Top Flange</b>	SF	2,840	2,840	0	0	0
			Top of prestressed box beams not visible due to concrete overlay.						
		8514	Concrete Overlay	SF	2,840	1,727	1,109	4	0
			2" minimum concrete overlay. Chert pop outs. Hairline longitudinal cracks between box beams re-epoxied 2014. Compression spall at west approach and bridge center. TK-590 applied to deck, sidewalk and parapet 2014.						
		3210	Debonding/Spall/Patched Area/Pothole	SF		0	709	4	0
			Compression spall at west approach and bridge center. Smaller than 6" spalls developing and chert popouts distributed over entire deck. <b>6" spall 1/2" deep w/standing water at west edge of deck c/l.</b>						
		3220	Crack (Wearing Surface)	SF		0	400	0	0
			Old sealed cracks and new cracks <b>at beam joints</b> , water leaking through to bottom of box beams. <b>Epoxy beginning to fail.</b>						
X	104		<b>Prestressed Concrete Closed Web / Box Girder</b>	LF	657	657	0	0	0
			Minor efflorescence or past leakage between beams 4, <b>5</b> , 6, 7, <b>9</b> , 11 and 12 from north.						
X	215		<b>Reinforced Concrete Abutment</b>	LF	122	107	15	0	0
			Caulked parapet joint leaking onto abutment.						
		1080	Delamination - Spall - Patched Area	LF		118	4	0	0
			Caulked parapet joint leaking onto abutment, minor spalling.						
		1130	Cracking (RC)	LF		0	11	0	0
			<b>Random vertical narrow cracking in each abutment. 5 LF in east and 6 LF in west abutment</b>						
X	331		<b>Reinforced Concrete Bridge Rail</b>	LF	181	170	11	0	0
			Caulk failed in joints - re-caulk.						
		1090	Exposed Rebar	LF		0	1	0	0
			<b>Small spall with exposed, uncoated B404 at NW wing inside parapet.</b>						
		1130	Cracking (RC)	LF		0	10	0	0
			<b>Random vert hairline cracks.</b>						
X	8400		<b>Integral Wingwall</b>	EA	4	4	0	0	0
			<b>Leak from pavement joint</b> and staining <b>at each</b> abutment joints.						

**Assessments**

Chk	Element	Defect	Description	UOM	Total	Quantity in Condition State			
						1	2	3	4
X	9001		<b>Drainage - Ends of Structure</b>	EA	4	4	0	0	0
			<b>No issues however some settling in all quadrants except SE, repaired in 2018</b>						
X	9009		<b>Sidewalk</b>	EA	2	2	0	0	0
			Numerous chert pop outs, minor undermined approach <b>NE</b> and <b>SW</b> wingwall. Transverse hairline cracks epoxy repaired 2009 & 2014. TK-590 applied 2014. Sidewalk settled at SW approaches.						
X	9010		<b>Aesthetic Treatments</b>	EA	1	0	0	1	0
			Stain has faded on parapet and paint dull, chipped with rust spots on painted railing which are no longer effective as aesthetic treatment.						
X	9045		<b>Slope Protection- Riprap</b>	EA	2	2	0	0	0

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X	9322		<b>Approach Roadway - Concrete (non-structural)</b>	EA	2	2	0	0	0
			Seal hot rubber joint.						
X	9335		<b>Decorative Rail</b>	EA	2	0	2	0	0
			Caulk bolt holes to prevent water penetration to concrete parapet. Minor paint peeling and nicks. Paint gloss is lost. Replace 3 caps on rail posts.						

**NBI Ratings**

	File	New
Deck	7	7
Superstructure	9	8
Substructure	9	7
Culvert	N	N
Channel	9	9
Waterway	9	9

**Structure Specific Notes**

**Inspection Specific Notes**

No scour problems.

**Inspector Site-Specific Safety Considerations**

**Structure Inspection Procedures**

**Special Requirements**

Chk	Hours	Cost	Comments
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**Underwater Probe Form  
B-20-184**

**General Site Conditions - Scour**

No scour

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

Banks protected by heavy riprap

**Substructure Notes**

Chk	Unit	Max Water Depth(ft)	Mode	Notes
X	Cardinal	0.0	Dry	1 to 1.5' Deep at Channel
X	Non Cardinal	0.0	Dry	1 to 1.5' Deep at Channel

Other  
Document Comment/Description

North elevation





Other  
Document Comment/Description

South elevation



**Other  
Document Comment/Description**

Looking down stream





**Other  
Document Comment/Description**

Looking up stream



**Routine**

**Document Comment/Description**

Partially sealed deck cracks between girders





**Routine**

**Document Comment/Description**

Failing epoxy sealer in deck cracks



**Routine**

**Document Comment/Description**

Spall in deck at west near centerline



**Routine**

**Document Comment/Description**

Leaking at back of box beams and abutment below approaches (typ.)





Routine  
Document Comment/Description

Settling at end of railing (typ.). SE wing filled in 2018



Routine  
Document Comment/Description

Abutment cracking (typ.)



Non-Image Documents

Type	Document	Document Comment/Description	Attached
UW Profile	b20-184_18_xpd1.pdf	Streambed profile North	X
UW Profile	b20-184_18_xpd2.pdf	Streambed profile South	X

# STRUCTURE INVENTORY AND APPRAISAL FIELD REVIEW FORM

**B-20-184**  
**MERRIL AVE over DE NEVEU CREEK**

## LOCATION

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

FOND DU LAC
43°46'50.90"N
88°25'49.70"W

## TRAFFIC SERVICE

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

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

52.6	
Left: 8.0	Right: 8.0
Angle(°): 15	Direction: <input checked="" type="checkbox"/> -RIGHT FORWARD -LEFT FORWARD
Cardinal	Non-Cardinal
36.0	36.0
54.0	54.0
38	27
Cardinal Under Clearance	Non-Cardinal Under Clearance

## 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		
<input checked="" type="checkbox"/> -SUB-STANDARD -STANDARD -NOT APPLICABLE		
<input checked="" type="checkbox"/> -SUB-STANDARD -STANDARD -NOT APPLICABLE		
<input checked="" type="checkbox"/> -SUB-STANDARD -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)
		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)
X	X	OTHER(99) (Please specify)  <b>Left:</b> TYPE C6 COMBINATION RAILING(100) <b>Right:</b> TYPE C6 COMBINATION RAILING(100)
		CONT GUARD RAIL
X		NO APP GRDRL
		NO ATTACHMENT
		22 MM(7/8") BOLT (Please enter quantity)
		25 MM(1") BOLT (Please enter quantity)
		OTHER (Please specify)
		(01) ENERGY ABSORBING TERMINAL/EAT
		(02) TURN DOWN
		(99) OTHER (Please specify)

Transition Type:

Approach Attachment Rail Note:  
Guardrail Termination Type:

Guardrail Termination Note:

## ROADWAY ALIGNMENT APPRAISAL

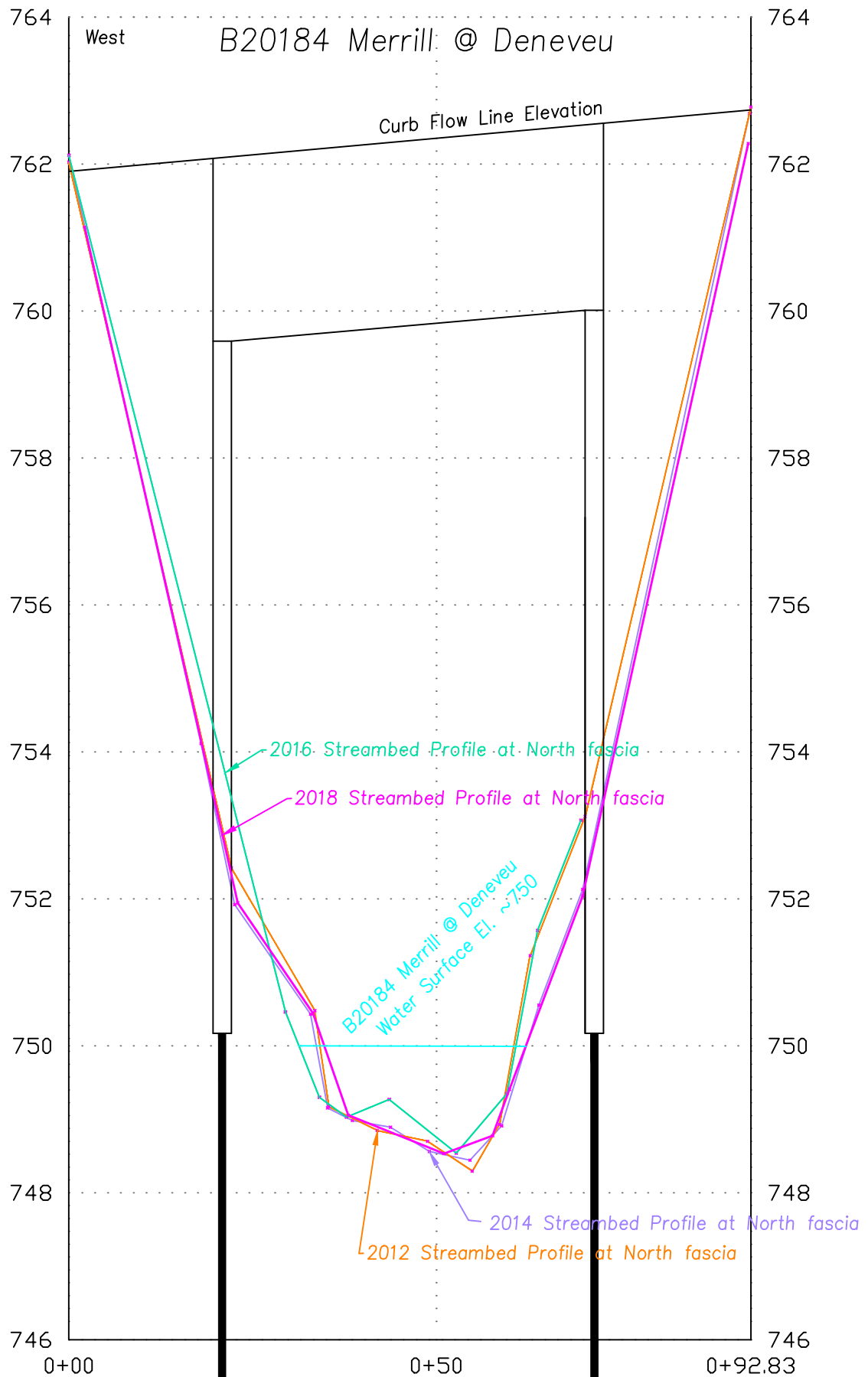
(72) Approach Alignment Appraisal:

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

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# NORTH



# SOUTH

