

Bridge Inspection									
Bridge File Number	13166 -1 Bridge				Form Type	TH PSR			
Year Built/Year Supstr	1935/1935				Lot No.	2			
Bridge or Town Name	DAPP				Inspector Name	Kris Bosters			
Located Over	PEMBINA RIVER, 8.11.84, WATERCRS-ST				Inspector Class	BR CLS A			
Located On	661:06 C1 10.686				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	24-Jun-2010			
Legal Land Location	NE SEC 4 TWP 62 RGE 27 W4M				Data Entry By	Theresa Lacusta			
Longitude, Latitude	-113:59:15, 54:20:29				Data Entry Date	19-Jul-2010			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	Arnold Assenheimer			
Contract Main. Area	CMA10				Review Date	13-Jul-2010			
Clear Roadway/Skew	7.3 /				Dept. Reviewer Name	Brent Herrick			
AADT/Year	360 / 2009 (A)				Dept. Review Date	22-Jul-2010			
Road Classification	RCU-209-110				Follow-Up By				
Detour Length (km)	16								
Allowable Load (t):	Single		Semi		Train		----> On Critical Spans ---->Critical Member		
Design Loading:	HS20				----> Primary Span				

Posting Information												
Required Vert. Clearance Posting (m)												
Posted Vertical Clearance (Y/N)		Yes										
Posted:	Lane	EB	On Bridge (m)	5.7	In Advance (Y/N)	No	Lane	WB	On Bridge (m)	5.7	In Advance (Y/N)	Yes
Remarks		EB 5.98m, WB 5.97m.										
Required Load Posting (t)		Single			Semi				Truck Train			
Posted Loading (t)		Single			Semi				Truck Train			
Posted:	Lane	EB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No				
Posted:	Lane	WB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No				
Remarks		Not required.										

Hazard Marker At Bridge (Y/N)	Yes											
Remarks	All hazard markers too low.											
Other Sign Types												

Utilities (Located at)										
Utility Attachments										
Telephone	Conduit on bottom chord South side.				Gas					
Power	2 wires North r/w.				Municipal					
Others					Problem (Y/N)	No				
Remarks										

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	
Vertical Alignment		9	7	
Roadway Width (m)	8.800			ACP is cracked and ravelling at approaches.-photo
Approach Bump		7	4	
Guardrail (Y/N)	Yes			1 section and 2 posts bowed out at NW due to collision, still functional. SE rail is leaning.-photo
Guardrail		4	4	
Length (m)	49.400			
Current Standard (Y/N)	No			
Termination Type	Turned Down			
Drainage		3	7	

Approach Road				
		Last	Now	Explanation of Condition
<b>Approach Road General Rating</b>		7	7	
Superstructure				
Bridge Component		Last	Now	Explanation of Condition
(Primary Span : TH, 3 Spans, Lengths(m): 16.8-76.2-18.3, A-Ident Number: )				
Special Features				
Special Feature			X	
(Type : )				
Special Feature			X	
(Type : )				
Wearing Surface/Deck Top Detail Ratings				
	N (%)	1 (%)	2 (%)	3 (%)
<b>Last</b>				1
<b>Now</b>	0.0	0.0	0.0	1.0
Wearing Surface/Deck Top		3	3	Numerous transverse cracks (varies narrow to wide) Spalls on EBL up to 400 x 200 x 50 deep. Concrete delaminated and 200mm dia. spall along finger plates.
(Material Type : <b>CONCRETE</b> )				
(Plank Thickness(mm) : <b>50</b> )				
(Plank Width(mm) : )				
Deck Rideability		6	6	
Deck Joints		5	5	Finger plate at pier 1 leaks, no drain trough underneath. Heavy staining on pier cap. P2 AIFB missing.
Temperature (deg. C)		20		
(Expansion Type : <b>FINGER PLATES</b> )				
(Fixed Type : <b>ASPHALTIC FIBRE BOARD</b> )				
Gap Size (mm)		Gap Location		
10		West pier - P1		
25		East pier - P2		
Curbs/Wheel Guards		4	5	Spalls on North & South curb faces from previous floor beam. Deck repair 14 locations.
(Curb Type : <b>Standard</b> )				
(Type : <b>CONCRETE</b> )				
(Curb Height(mm) : )				
(Width(mm) : )				
Bridge Rail		4	4	Triple flexbeam. Incorrect lap. Missing 3 connection bolts at laps on S. rail. Timber blocking between steel and flexbeam. Weathered timber blocking. 60 open holes at steel posts. Painted btl posts.
(Type : <b>GALVANIZED STEEL FLEX BEAM</b> )				
Bridge Rail Posts/Blocking		5	5	
(Type : <b>TREATED TIMBER;TREATED TIMBER</b> )				
Bridge Rail/Posts Coating		7	7	
(Type : <b>GALVANIZED</b> )				
Sidewalk		X	X	

Superstructure						
Bridge Component				Last	Now	Explanation of Condition
<b>(Primary Span : TH, 3 Spans, Lengths(m): 16.8-76.2-18.3, A-Ident Number: )</b>						
Wide Load Damage (Y/N)	Yes				Top bracing has minor bends & bottom bracing has spread legs due to corrosion.  U9L9S 2mm crack on inside near L9S, under rivet head. U11U11 has 2 minor notches and shim plate missing behind gusset at all 4 corners. Missing 1 bolt on U1NU1S. Missing 15 bolts at U1S at L0U1S. Missing hanger bolt bay 12.  9 per bay. Most members have 5mm deep nicks from wide loads. Worst member is U1L1S and U2LZ5 which are also bent.  1 pin sheared P2 N. Missing nuts N & S P2.	
High Load Damage (Y/N)	No					
Top Chord			4	4		
Batter Posts			7	7		
Sway Bracings			5	5		
Diagonals			6	6		
Verticals			4	4		
Portals			4	4		
Connections			4	4		
Floor Beams			7	7		
Bottom Chord			7	7		
<b>(No. of Stringers : 108)</b>						
<b>Stringer Detail Ratings</b>						
	N (count)	1 (count)	2 (count)	3 (count)		
<b>Last</b>						
<b>Now</b>						
Stringers			7	7		
(Type : <b>STEEL</b> )						
(Width(mm) : <b>140</b> )						
(Depth(mm) : <b>380</b> )						
(Spacing(mm) : <b>853</b> )						
Paint Condition			5	5	Spot rusting & minor pitting.  Green.	
(Colour Description : )						
(Colour Code : )						
Touchup Required (Y/N)	No					
Bearings			3	3	L0N & L0S exp 70mm, twisted 12mm. PIN loose nut, P2N 1 pin sheared, P2N and S missing nuts.-photo	
Temperature (deg. C)	25					
(Expansion Type : <b>PINNED BEARING</b> )						
(Fixed Type : <b>ROLLER NEST BEARING</b> )						
Functioning (Y/N)	No					
Sub Deck/Deck Underside			6	6	Salt stains appearing through cracks. Minor honeycomb concrete.	
(Material Type : <b>CONCRETE</b> )						
(Plank Thickness(mm) : <b>150</b> )						
(Plank Width(mm) : )						
Defects (Percent Area)	1					
<b>Span Alignment Problems</b>						
Vertical (Y/N)	No					
Horizontal (Y/N)	No					
<b>Superstructure General Rating</b>			<b>3</b>	<b>3</b>		
Superstructure						
Bridge Component				Last	Now	Explanation of Condition
<b>(Secondary Span : RD)</b>						
<b>Special Features</b>						
Special Feature				X		
(Type : )						
Special Feature				X		
(Type : )						

<b>Superstructure</b>					
<b>Bridge Component</b>		<b>Last</b>	<b>Now</b>	<b>Explanation of Condition</b>	
<b>(Secondary Span : RD)</b>					
<b>Wearing Surface/Deck Top Detail Ratings</b>					
	N (%)	1 (%)	2 (%)	3 (%)	
<b>Last</b>					
<b>Now</b>					
Wearing Surface			5	5	4 lines wide cracks per span.
(Material Type : <b>CONCRETE</b> )					
(Thickness(mm) : <b>50</b> )					
Lateral Connection Problem (Y/N)	Yes				
Deck Top			N	N	
Deck Rideability			7	7	
Deck Joints			5	5	No drain trough under finger plate. (Spalling along East abutment up to 25mm deep.) Cover plate missing @ NW & NE at A1 & A2. AIFB missing @ P2.
Temperature (deg. C)	25				
(Expansion Type : <b>FINGER PLATES</b> )					
(Fixed Type : <b>ASPHALTIC FIBRE BOARD</b> )					
Gap Size (mm)		Gap Location			
10		Pier 1			
25		Pier 2			
Deck Drainage			6	6	Moderate seepage stains below P2 joint.
Drains Clogged (Y/N)	No				
Curbs/Median			7	7	
(Curb Type : <b>Standard</b> )					
Scaling (Percent Area)	0				
Bridge Rail			4	4	Single layer. Flexbeam @ West pier should be overlapped both sides, typical. 52 hardened washers missing & 1 nut left high on posts anchor bolts.
(Type : <b>GALVANIZED STEEL FLEX BEAM</b> )					
Bridge Rail Posts			4	4	
(Type : <b>GALVANIZED POST STEEL; GALVANIZED POST STEEL; GALVANIZED POST STEEL; GALVANIZED POST STEEL</b> )					
Bridge Rail/Posts Coating			7	7	
(Type : <b>GALVANIZED</b> )					
Sidewalk			X	X	
<b>Girder Detail Ratings</b>					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>					
<b>Now</b>					
Girders			8	8	(Number Of Girders : <b>14</b> )
Cracking (Y/N)	No				
Spalling (Percent Area)	0				
Diaphragms/Cross Frame			X	X	

Superstructure						
Bridge Component		Last	Now	Explanation of Condition		
(Secondary Span : RD)						
Bearings		7	7			
Temperature (deg. C)	25					
(Expansion Type : <b>PINNED BEARING</b> )						
(Fixed Type : <b>ROLLER NEST BEARING</b> )						
Coating Adequate (Y/N)	Yes					
Functioning (Y/N)	Yes					
Deck Underside		8	8			
Stains (Percent Area)	0					
<b>Span Alignment Problems</b>						
Vertical (Y/N)	No					
Horizontal (Y/N)	No					
<b>Superstructure General Rating</b>		<b>7</b>	<b>7</b>			
Substructure						
Bridge Component		Last	Now	Explanation of Condition		
<b>Abutments</b>						
(Extended Backwall Piles (Y/N) : <b>N</b> )						
(Extended Backwall Piles Spacing(mm) : )						
(Total Number of Caps/Corbels : : )						
Bearing Seats/Caps/Corbels Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
<b>Last</b>						
<b>Now</b>						
Bearing Seats/Caps/Corbels		8	8			
(Type : <b>CONCRETE</b> )						
(Depth(mm) : )						
(Width(mm) : )						
Backwalls/Breastwalls		8	8			
Greatest Height (m)	1.40					
Wingwalls		7	7			
(Total Number of Bearing Piles : <b>0:0</b> )						
Piles Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
<b>Last</b>						
<b>Now</b>	1	0	0	0		
Piles		N	N			
Paint/Coating		7	7	Asphaltic protective coating.		

Substructure						
Bridge Component				Last	Now	Explanation of Condition
Abutment Stability				8	8	
Scour/Erosion				7	7	
<b>Piers/Bents</b>						
(Type : <b>PIER-SOLID</b> )						
(Total Number of Caps/Corbels : <b>1:1</b> )						
Bearing Seats/Caps/Corbels Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
<b>Last</b>						
<b>Now</b>						
Bearing Seats/Caps/Corbels				7	7	
(Type : <b>CONCRETE</b> )						
Medium random vertical & horizontal cracking on pier surface. Wide vertical crack c/l East pier.						
(Total Number of Bearing Piles : <b>0:0</b> )						
Piles Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
<b>Last</b>						
<b>Now</b>						
Pier Shaft/Piles				6	6	
Greatest Height (m)		4.20				
Bracing/Struts/Sheathing				X	X	
Nose Plate				7	7	
Paint/Coating				5	5	Paint eroded from surfaces. Silver.
(Colour Description : )						
(Colour Code : )						
Pier Stability				8	8	
Scour				8	8	
Debris (Y/N)		No				
<b>Substructure General Rating</b>				<b>6</b>	<b>6</b>	
Structure Usage						
				Last	Now	Explanation of Condition
<b>Channel</b>						
(U/S Direction : <b>S</b> )						
(D/S Direction : <b>N</b> )						
Alignment				6	6	
Bank Stability				5	4	10m wide erosion develop along U/S West bank.
HWM (m below Top of Curb)				(Bed to deck 10.2 m; water to deck 8.85 m. 15/Nov/2003)		
Drift (Y/N)		No				
Slope Protection				5	5	
(Type : <b>NATURAL; NATURAL</b> )						
Guidebank/Spurs				X	X	
Adequacy of Opening				8	8	
(Fish Compensation Measure 1 : <b>NONE</b> )						
(Fish Compensation Measure 2 : <b>NONE</b> )						

<b>Structure Usage</b>				
		<b>Last</b>	<b>Now</b>	<b>Explanation of Condition</b>
<b>Channel General Rating</b>		<b>5</b>	<b>5</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2010	Replace missing rail bolts.					
RETROFIT BRIDGE RAIL	2010	Reinstall truss flexbeam with correct lap, all connector bolts & exp joint.					
SEAL CURBS	2010	Patch spalls on curb faces.					
PATCH DECK	2010	Patch concrete spalls.					
SEAL DECK	2010	Seal cracks in deck.					
OVERLAY DECK							
RESET/ PAINT BEARINGS	2010	Replace expansion bearings, replace L12N anchor bolt & missing nuts @ L12S.					
REPAINT SUPERSTRUCTURE							
STRAIGHTEN/REPLACE MEMBERS	2010	Heat straighten U1L1S & U2L2S, add hanger bolt at L11SL12N.					
WASHING							
SHOTCRETE REPAIRS							
CORE TIMBER CAPS/CORBELS							
REPAIR/REPLACE TIMBER CAPS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2010	Reset all hazard markers to correct height.					
OTHER ACTION	2010	Install PVC drain trough & drip key under fingerplate. Add AIFB at P2 joint.					
OTHER ACTION	2010	Patch ACP at approaches.					
OTHER ACTION	2010	Reset SE guardrail, replace damaged section at NW.					
OTHER ACTION	2010	Install 15 bolts @ U1U1 portal. Install 1 bolt @ U1U2S & 1 hanger bolt in bay 12.					
OTHER ACTION	2010	Reset/replace missing coverplates @ NW & NE.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>50.0/50.0</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>52.4/52.5</b>	Est. Repl. Yr	2028	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor river alignment with photos. Monitor cracks at L9S.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy							



On 3-Year Program (Y/N)			
Proposed Action			
Previous Inspector's Name	Randy Bredo	Previous Assistant's Name	Robert Scarth
Next Inspection Date	24-Sep-2013	Previous Inspection Date	31-May-2007
Inspection Cycle (Default) (months)	39		
Comment			