

Bridge Inspection							
Bridge File Number	71085 -1 Bridge			Form Type	TH		
Year Built/Year Supstr	1908/1908			Lot No.	1		
Bridge or Town Name	DOROTHY			Inspector Name	Owen Salava		
Located Over	RED DEER RIVER, 3, WATERCRS-ST			Inspector Class	BR CLS A		
Located On	848:02 C1 9.904			Assistant Name			
Water Body Cl./Year				Assistant Class			
Navigabil. Cl./Year				Inspection Date	27-Jan-2011		
Legal Land Location	NE SEC 4 TWP 27 RGE 17 W4M			Data Entry By	Marcia Chavez		
Longitude, Latitude	-112:19:55, 51:16:47			Data Entry Date	03-Mar-2011		
Road Authority	Alberta Transportation (AIT)			Reviewer Name	John O'Brien		
Contract Main. Area	CMA21			Review Date	27-Jan-2011		
Clear Roadway/Skew	5 / 0 deg.			Dept. Reviewer Name	Chris Black		
AADT/Year	80 / 2009 (A)			Dept. Review Date	07-Mar-2011		
Road Classification	RLU-208G-90			Follow-Up By			
Detour Length (km)	50						
Allowable Load (t):	Single	H 20 STRINGER	Semi	HS 37 STRINGER	Train	CS3 46 L3L4	----> 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	NB	On Bridge (m)	4.7	In Advance (Y/N)	Yes	Lane	SB	On Bridge (m)	4.7	In Advance (Y/N)	Yes
Remarks		4.920 W, 4.907 E SP3. Ok at 4.7										
Required Load Posting (t)		Single	21	Semi	37	Truck Train	47					
Posted Loading (t)		Single	21.0	Semi	37.0	Truck Train	47.0					
Posted:	Lane	NB	At Junction (Y/N)	Yes	In Advance (Y/N)	No	At Bridge (Y/N)	Yes				
Posted:	Lane	SB	At Junction (Y/N)	Yes	In Advance (Y/N)	No	At Bridge (Y/N)	Yes				
Remarks		SB jct also serves as advance. NB jct at HWY564 with 16/25/32. Missing number plaques from S1 and S2.										

Hazard Marker At Bridge (Y/N)	Yes											
Remarks	Low - 0.8m to bottom.											
Other Sign Types	STOP IF ONCOMING, ONE LANE BRG, STEEP HILL - one lane bridge											

Utilities (Located at)			
Utility Attachments			
Telephone	E bottom chord. E r.o.w.		Gas
Power	North of bridge 150m.		Municipal
Others			Problem (Y/N) No
Remarks			

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		4	4	Good to N. Steep winding grade. Starting 200m S of bridge.
Vertical Alignment		4	4	
Roadway Width (m)	6.800			Insufficient posts and length. TT post at steel end post location not attached at bottom - A1.
Approach Bump		6	6	
Guardrail (Y/N)	Yes			
Guardrail		6	6	
Length (m)	7.600			
Current Standard (Y/N)	No			
Termination Type	TURNED DOWN ENDS			
Drainage		6	6	Gravel windrows at S approach rail.
<b>Approach Road General Rating</b>		<b>4</b>	<b>4</b>	

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : TH, 3 Spans, Lengths(m): 61-61-38.1, A-Ident Number: A0055-05;A0106-02;A0106-03)					
<b>Special Features</b>					
Special Feature			X	Missing ident # at S1 and S2.	
(Type : )					
Special Feature			X		
(Type : )					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	
<b>Last</b>	0	0	0	3	
<b>Now</b>	60.0	0.0	0.0	0.0	
Wearing Surface/Deck Top			3	4	(Worn at ends and at isolated areas in deck - photo. Some loose plank ends. 15Sep2009). Some wear visible.
(Material Type : <b>UNTREATED TIMBER</b> )					
(Plank Thickness(mm) : <b>75</b> )					
(Plank Width(mm) : <b>305</b> )					
Deck Rideability			7	7	
Deck Joints			X	X	
Temperature (deg. C)					
(Expansion Type : )					
(Fixed Type : )					
Gap Size (mm)		Gap Location			
Curbs/Wheel Guards			4	4	(7 WG blocks twisted & 2 split. 2 top planks splintered. Minor damage. 15Sep2009). E curb snow covered.
(Curb Type : <b>Standard</b> )					
(Type : <b>TREATED TIMBER</b> )					
(Thickness(mm) : <b>305</b> )					
(Width(mm) : <b>100</b> )					
Bridge Rail			5	5	Triple layer. 1 post bolt loose. Non-std splices. 29 rail blocks are split or missing. Steel end post at NW + NE corner has a cracked weld.
(Type : <b>GALVANIZED STEEL FLEX BEAM</b> )					
Bridge Rail Posts/Blocking			4	4	
(Type : <b>TREATED TIMBER;TREATED TIMBER</b> )					
Bridge Rail/Posts Coating			6	6	
(Type : <b>GALVANIZED</b> )					
Sidewalk			X	X	

Superstructure						
Bridge Component		Last	Now	Explanation of Condition		
<b>(Primary Span : TH, 3 Spans, Lengths(m): 61-61-38.1, A-Ident Number: A0055-05;A0106-02;A0106-03)</b>						
Wide Load Damage (Y/N)	Yes			(See 2009 UT Report for details. 15Sep2009).		
High Load Damage (Y/N)	Yes					
Top Chord		7	7	S2 L0U1W minor wide load dent.		
Batter Posts		5	5			
Sway Bracings		5	5	S1 U5L5 has bullet hole.		
Diagonals		6	6	S1 U3L3E, S2 U2L2E, S2 U3L3E dents from wide load damage.		
Verticals		5	5	S3 U1U1, U6U6 high load damage.		
Portals		4	4	Top brace bolts loose in S1.		
Connections		4	4			
Floor Beams		7	7			
Bottom Chord		5	5			
<b>(No. of Stringers : 56;56;42)</b>						
<b>Stringer Detail Ratings</b>						
	N (count)	1 (count)	2 (count)	3 (count)		
<b>Last</b>					61m spans 5 lines @ 140x380mm, 2 lines (exterior) 85 x 380 mm. Stringers on 38.1 m span. 120 x 255 mm. Spacing for span 1: 370 mm.	
<b>Now</b>						
Stringers			7	7		
(Type : <b>STEEL</b> )						
(Width(mm) : <b>140</b> )						
(Depth(mm) : <b>380</b> )						
(Spacing(mm) : <b>1370</b> )						
Paint Condition		6	6	Active corrosion between some connections - overall paint is in good condition.		
(Colour Description : <b>YELLOW</b> )						
(Colour Code : <b>13538</b> )						
Touchup Required (Y/N)	No					
Bearings		3	3	5 of 6 roller nests are skewed as much as 70mm. Span 1 over expanded 75mm at A1.		
Temperature (deg. C)	-3					
(Expansion Type : <b>ROLLER NEST BEARING</b> )						
(Fixed Type : <b>PINNED BEARING</b> )						
Functioning (Y/N)	No			(P2 E roller nest is 50mm misaligned - photo. 15Sep2009). Skirts missing.		
Sub Deck/Deck Underside		6	6			
(Material Type : <b>TREATED TIMBER</b> )						
(Plank Thickness(mm) : <b>100</b> )						
(Plank Width(mm) : <b>305</b> )						
Defects (Percent Area)	0					
<b>Span Alignment Problems</b>						
Vertical (Y/N)	No					
Horizontal (Y/N)	No					
<b>Superstructure General Rating</b>		<b>3</b>	<b>3</b>			
Substructure						
Bridge Component		Last	Now	Explanation of Condition		
<b>Abutments</b>						
(Extended Backwall Piles (Y/N) : <b>Y</b> )						
(Extended Backwall Piles Spacing(mm) : <b>1500</b> )						

Substructure								
Bridge Component		Last	Now	Explanation of Condition				
(Total Number of Caps/Corbels : <b>11:9</b> )				A1 4 corbels each bearing. A2 3 corbels each bearing Tag on N. abut indicates coring in June 2008  Top cap cracked at A1. Rot starting in ends of N abut. corbels - photo.				
Bearing Seats/Caps/Corbels Detail Ratings								
	N (count)	1 (count)	2 (count)				3 (count)	
<b>Last</b>	0	0	0				0	
<b>Now</b>	0	0	0				0	
Bearing Seats/Caps/Corbels			4				4	
(Type : <b>TREATED TIMBER</b> )								
(Depth(mm) : <b>305</b> )								
(Width(mm) : <b>305</b> )								
Backwalls/Breastwalls			7				7	
Greatest Height (m)		2.10						
Wingwalls			7	7				
(Total Number of Bearing Piles : <b>8:8</b> )				A1 piles not visible - assume 8 piles.				
Piles Detail Ratings								
	N (count)	1 (count)	2 (count)				3 (count)	
<b>Last</b>	8	0	0				0	
<b>Now</b>	8	0	0				0	
Piles			6				6	
Paint/Coating			X				X	
Abutment Stability			6				6	
Scour/Erosion			7				7	
<b>Piers/Bents</b>								
(Type : <b>PIER-SOLID</b> )								
(Total Number of Caps/Corbels : <b>1:1</b> )				Crack alongside W bearing on S pier with delamination and staining. - photo.				
Bearing Seats/Caps/Corbels Detail Ratings								
	N (count)	1 (count)	2 (count)				3 (count)	
<b>Last</b>	0	0	0				0	
<b>Now</b>	0	0	0				0	
Bearing Seats/Caps/Corbels			4				4	
(Type : <b>CONCRETE</b> )								
(Total Number of Bearing Piles : <b>0:0</b> )								
Piles Detail Ratings								
	N (count)	1 (count)	2 (count)				3 (count)	
<b>Last</b>	0	0	0	0				
<b>Now</b>	0	0	0	0				
Pier Shaft/Piles			7	7				
Greatest Height (m)		7.60						
Bracing/Struts/Sheathing			X	X				
Nose Plate			7	7				
Paint/Coating			4	4				
(Colour Description : )				Rusting at waterline. Silver.				
(Colour Code : )								
Pier Stability			8	8				
Scour			6	N				
Debris (Y/N)		No						

Substructure				
Bridge Component		Last	Now	Explanation of Condition
<b>Substructure General Rating</b>		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel</b>				
(U/S Direction : <b>W</b> )				
(D/S Direction : <b>E</b> )				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Curb)				No visible HWM.
Drift (Y/N)	No			
Slope Protection		7	7	
(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>Channel General Rating</b>		7	7	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2011	Reweld NE/NW end post. Replace 29 rail blocks.Tighten 1 post bolt.					
RETROFIT BRIDGE RAIL							
SEAL CURBS	2011	Replace damaged blocks, if not yet done.					
PATCH DECK	2011	Nail loose stripdeck and patch, if not yet done.					
SEAL DECK							
OVERLAY DECK							
REPLACE STRIP DECK							
REPLACE SUB DECK							
RESET/ PAINT BEARINGS	2011	Reset roller nests.					
REPAINT SUPERSTRUCTURE							
STRAIGHTEN/REPLACE MEMBERS							
WASHING							
SHOTCRETE REPAIRS							
CORE TIMBER CAPS/CORBELS							
REPAIR/REPLACE TIMBER CAPS	2011	Replace timber caps/corbels with steel.					
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2011	Repair bullet hole at S1 U5L5W.					
OTHER ACTION	2011	Patch top of P1.					
OTHER ACTION	2011	Install truss indent at S1 & S2.					
OTHER ACTION	2011	Install N/B posted loading signs, 21/37/97t.					
OTHER ACTION	2011	Reset hazard markers to standard.					
OTHER ACTION	2011	Upgrade guardrail to standard. Remove gravel windrows.					
OTHER ACTION	2011	Tighten top bracing bolts in S1.					
OTHER ACTION	2011	Drill stress raiser crack at U6E, if not yet done.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>38.9/38.9</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>33.0/34.0</b>	Est. Repl. Yr	2029	Maint. Reqd. (Y/N)	Yes
Special Comments for Next Inspection			Department Comments				

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy	Continue to maintain as required. CB to review UT, coring reports to identify necessary repairs. With normal maintenance bridge should be ok until 2035. RS				
On 3-Year Program (Y/N)	Y				
Proposed Action	2004.06.10 Start of rot found in some corbels & SW corner of back cap and moisture in front south abutment cap. There are 3 to 4 subcaps at each bearing point. Monitor normal BIM. Repair 2007				
Previous Inspector's Name	Owen Salava	Previous Assistant's Name	Paul Carter		
Next Inspection Date	27-Apr-2014	Previous Inspection Date	15-Sep-2009		
Inspection Cycle (Default) (months)	39				
Comment					