

Bridge Inspection									
Bridge File Number	70580 -1 Bridge				Form Type	DT PCS			
Year Built/Year Supstr	1913/1913				Lot No.	1			
Bridge or Town Name	ENTRANCE				Inspector Name	Shane Hall			
Located Over	ATHABASCA RIVER, 8.11, WATERCRS-ST				Inspector Class	BR CLS A			
Located On	40:30 C1 4.741				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	17-Oct-2012			
Legal Land Location	NE SEC 1 TWP 51 RGE 26 W5M				Data Entry By	Theresa Lacusta			
Longitude, Latitude	-117:41:47, 53:22:40				Data Entry Date	26-Nov-2012			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	Eric Carcoux			
Contract Main. Area	CMA13				Review Date	19-Nov-2012			
Clear Roadway/Skew	8.2 /				Dept. Reviewer Name	Brent Herrick			
AADT/Year	2,040 / 2011 (A)				Dept. Review Date	06-Dec-2012			
Road Classification	RAU-209-110				Follow-Up By				
Detour Length (km)	420								
Allowable Load (t):	Single		Semi		Train		----> On Critical Spans ---->Critical Member		
Design Loading:	HS20						----> Primary Span		

Posting Information									
Required Load Posting (t)	Single			Semi			Truck Train		
Posted Loading (t)	Single			Semi			Truck Train		
Posted:	Lane	NB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	
Posted:	Lane	SB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	
Remarks	Not required. Allowable load not noted on form.								
Hazard Marker At Bridge (Y/N)	Yes								
Remarks	NW is too low. NE not in line with rail.-photo								
Other Sign Types	Information, Curve, 85 kph, Bump 250m, Slippery Deck, "Athabasca River".								

Utilities (Located at)									
Utility Attachments	TELEPHONE UTILITIES-PHONE LINE								
Telephone	Lower chord, D/S side, 2 lines.				Gas	Lower chord, D/S.			
Power	3 wires 10m North.				Municipal				
Others					Problem (Y/N)	Yes			
Remarks	Catwalk on bottom chord; missing West cable @ midrail. Conduit disconnected at SE corner.								

Approach Road									
			<b>Last</b>	<b>Now</b>	<b>Explanation of Condition</b>				
Horizontal Alignment			5	5	Private intersection @ NE. Sharp curve NB. Steep grade @ North end. No passing.				
Vertical Alignment			5	5					
Roadway Width (m)	8.800				ACP potholes @ South approach/joint - photo. ACP breaking up at North side of North joint.-photo				
Approach Bump			6	4					
Guardrail (Y/N)	Yes				Insufficient posts, no blocking. Type 1V guardrail @ NE, 3.8m. SE & NW - 38.0m; SW - 30.4m. Not thrie beam transition.				
Guardrail			6	6					
Length (m)	30.400								
Current Standard (Y/N)	No								
Termination Type	Turned Down								
Drainage			4	4	Gullies at SW, NW & NE corners undermining abutment & first pier pedestals. -photos Ponding @ each corner.-07-Feb-2009				
<b>Approach Road General Rating</b>			<b>5</b>	<b>5</b>					

Superstructure						
Bridge Component		Last	Now	Explanation of Condition		
(Primary Span : DT, 11 Spans, Lengths(m): 8.5-8.5-8.5-6.6-38.1-38.1-38.1-38.1-2.6-8.5-8.5, A-Ident Number: A0291-01;A0291-02;A0291-03;A0291-04)						
<b>Special Features</b>						
Special Feature			X			
(Type : )						
Special Feature			X			
(Type : )						
Wearing Surface/Deck Top Detail Ratings						
	N (%)	1 (%)	2 (%)	3 (%)		
<b>Last</b>	25	0	0	0		
<b>Now</b>						
Wearing Surface			5	4	Narrow longitudinal cracks. Spalls at several construction joint locations.-photo	
(Material Type : <b>CONCRETE</b> )						
(Thickness(mm) : <b>50</b> )						
Deck Top			N	N		
Deck Rideability			7	6		
Deck Joints			3	3	4 bolts missing pier 5 NB.-photo 10 bolts missing pier 6 NB.-photo  Coverpate @ P3 slapping under traffic.	
Temperature (deg. C)		3				
(Expansion Type : <b>ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES)</b> )						
(Fixed Type : <b>ASPHALTIC FIBRE BOARD</b> )						
Gap Size (mm)		Gap Location				
90		Pier 3				
75		Pier 4				
65		Pier 5				
80		Pier 6				
70		Pier 7				
Deck Drainage			N	5	Shallow ponding along both gutters. Membrane placed in gutter 60% peeled off.	
Drains Clogged (Y/N)		Yes				
Curbs/Median			4	4	CIP concrete barrier. Moderate scaling. Spall @ 20% bridge post locations.	
(Curb Type : <b>SINGLE SLOPE CONCRETE BARRIER</b> )						
Scaling (Percent Area)		20				
Bridge Rail			5	5	HSS top & mid rail bolted to top CIP barriers. 3 base plates missing 1 or 2 bolts - photo. Vertical cracks at outside face at most post locations. Wide horizontal/vertical cracks at several locations.	
(Type : <b>GALVANIZED STEEL BRIDGE TUBE</b> )						
Bridge Rail Posts			3	4		
(Type : <b>GALVANIZED POST STEEL;GALVANIZED POST STEEL</b> )						
Bridge Rail/Posts Coating			6	6		
(Type : <b>GALVANIZED</b> )						
Sidewalk			X	X		
Top Chord			7	7	Scale rust @ top flanges. Previous section loss & paint touchup.	
Diagonals			7	7		
Verticals			7	7		
Connections			6	6		
Floor Beams			5	5		
Bottom Chord			7	7		
Stringers			5	5		
Diaphragms/Cross Frame			7	7		

Superstructure						
Bridge Component		Last	Now	Explanation of Condition		
(Primary Span : DT, 11 Spans, Lengths(m): 8.5-8.5-8.5-6.6-38.1-38.1-38.1-38.1-2.6-8.5-8.5, A-Ident Number: A0291-01;A0291-02;A0291-03;A0291-04)						
Paint Condition		5	5	Corrosion staining at plate laps and edges. Corrosion starting at edges of top floor beams. Green.		
(Colour Description : )						
(Colour Code : )						
Touchup Required (Y/N)	No					
Bearings		N	N	Not accessible to closely inspect.		
Temperature (deg. C)	3					
(Expansion Type : <b>REINFORCED PAD BEARING</b> )						
(Fixed Type : <b>PINNED BEARING</b> )						
Coating Adequate (Y/N)	Yes					
Functioning (Y/N)	Yes					
Deck Underside		5	5			
Stains (Percent Area)	10					
(Snow Slots Filled : )						
<b>Span Alignment Problems</b>						
Vertical (Y/N)	No					
Horizontal (Y/N)	No					
<b>Superstructure General Rating</b>		<b>5</b>	<b>5</b>			
Superstructure						
Bridge Component		Last	Now	Explanation of Condition		
(Secondary Span : HC)						
<b>Special Features</b>						
Special Feature			X			
(Type : )						
Special Feature			X			
(Type : )						
Wearing Surface/Deck Top Detail Ratings						
	N (%)	1 (%)	2 (%)	3 (%)		
<b>Last</b>	25	0	0	0		
<b>Now</b>						
Wearing Surface		5	4	See DT comments.		
(Material Type : <b>CONCRETE</b> )						
(Thickness(mm) : <b>50</b> )						
Lateral Connection Problem (Y/N)	No					
Deck Top		N	N			
Deck Rideability		7	6			
Deck Joints		3	3	All type 3 joints failed & leaking.		
Bump (Y/N)	No					
Deck Drainage		3	5	See DT comments.		
Drains Clogged (Y/N)	No					
Curbs/Median		4	4	See DT comments. Cast-in-place concrete barrier.		
(Curb Type : <b>SINGLE SLOPE CONCRETE BARRIER</b> )						
Scaling (Percent Area)	20					

Superstructure							
Bridge Component		Last	Now	Explanation of Condition			
(Secondary Span : HC)							
Bridge Rail		5	5	Missing 1 or 2 bolts in base plate at 3 locations. See DT comments.			
(Type : GALVANIZED STEEL BRIDGE TUBE)							
Bridge Rail Posts		3	3				
(Type : GALVANIZED POST STEEL;GALVANIZED POST STEEL)							
Bridge Rail/Posts Coating		6	6				
(Type : GALVANIZED)							
Sidewalk		X	X				
Girder Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)	Cannot get close enough for detailed inspection, too high. Viewed from ground. Est. 19 girders with 3 ratings.		
Last	40	0	0	15			
Now	270		1	19			
Girders		3	2	8 lines HC girder, 2 lines P/C barrier section. Deck truss spans also utilize HC girders are also rated in this sduction. Exterior HC, wide longitudinal cracking, spalls in AZ. Span 6 G8, possible reduced bearing seat, diaphragm rebar exposed, spall in AZ in 1 leg, not visible.-09-Feb-2009  Span 1-spalling in AZ bearing area of 6/8 HC girders. Other spans too far to inspect closely. Exposed rebar corroding with section loss in several girders. - cannot confirm amount. North spanG9 loss of bearing section in one leg , rebar corroding side of leg delaminating.-photo Numerous curb girders with severe delaminations.-photo			
Last Complete Inspection Date		20-Apr-2007					
Cracking (Y/N)		Yes					
Spalling (Percent Area)		5					
Lift or Connector Pocket Grouted (Y/N)							
(Number Of Girders : 70)							
Span Alignment Problems							
Vertical (Y/N)		No					
Horizontal (Y/N)		No					
Superstructure General Rating		3	2				
Substructure							
Bridge Component		Last	Now	Explanation of Condition			
Abutments							
(Extended Backwall Piles (Y/N) : N)							
(Extended Backwall Piles Spacing(mm) : )							
(Total Number of Caps/Corbels : : )							
Bearing Seats/Caps Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)	Severe scaling all surfaces, spalled edges under HC girders @ A1.-photo		
Last							
Now							
Bearing Seats/Caps		5	4				
(Type : CONCRETE)							
(Depth(mm) : )							
(Width(mm) : )							
Backwalls/Breastwalls		5	5				
Greatest Height (m)		3.60					
Wingwalls		6	4	Spall @ SW corner with exposed rebar.-photo			
(Total Number of Bearing Piles : 0:0)							
Piles Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)	Corroded H-pile where visible, est. 20% section loss at SW pile. Est 40% section loss at exposed piles at P10.-photo Exposed pile @ SW corner of A1 rated 4 due to corrosion and section loss.		
Last	100	0	0	0			
Now	100						
Piles		N	N				
Paint/Coating		3	3	Bitumen coating faded @ abutments.			

Substructure								
Bridge Component				Last	Now	Explanation of Condition		
Abutment Stability				6	5			
Scour/Erosion				3	3	400mm deep exposed corner @ A1 due to SW scour. -photo Erosion gully along NW wingwall & undermining cap - photos.		
<b>Piers/Bents</b>								
(Type : <b>PIER-SOLID</b> )				P4 medium longitudinal & vertical crack across top & nosing.  P1, P2, P8-P10, steel bent on concrete pedestals, 8 total. P3 to P7 massive concrete, 5 total. P3 - 400mm dp concrete loss @ nosing & shaft; exposed rebar @ W.L. no concrete @ bottom nosing. P5 - est 300mm dp concrete loss @ North & South faces & D/S, exposed rebar @ W.L. Too high to measure. Several spalls/delams at base of P7.  P1-West Concrete pedestal undermined due to headslope erosion.- photo Erosion around base of pedestal @ P10.-photo Estimate 40% section loss of 2 exposed piles @ P10.-photo P2- East pedestal has wide vertical crack full height.-photo				
(Total Number of Caps/Corbels : <b>1:1:1:1:1:1:1:1</b> )								
Bearing Seats/Caps Detail Ratings								
	N (count)	1 (count)	2 (count)				3 (count)	
<b>Last</b>								
<b>Now</b>								
Bearing Seats/Caps							4	4
(Type : <b>CONCRETE</b> )								
(Depth(mm) : )								
(Width(mm) : )								
(Total Number of Bearing Piles : <b>2:2:2:2:2:2:2:2</b> )				P1, P2, P8-P10, steel bent on concrete pedestals, 8 total. P3 to P7 massive concrete, 5 total. P3 - 400mm dp concrete loss @ nosing & shaft; exposed rebar @ W.L. no concrete @ bottom nosing. P5 - est 300mm dp concrete loss @ North & South faces & D/S, exposed rebar @ W.L. Too high to measure. Several spalls/delams at base of P7.				
Piles Detail Ratings								
	N (count)	1 (count)	2 (count)				3 (count)	
<b>Last</b>	0	0	0				1	
<b>Now</b>				2				
Pier Shaft/Piles				3	3	P1-West Concrete pedestal undermined due to headslope erosion.- photo Erosion around base of pedestal @ P10.-photo Estimate 40% section loss of 2 exposed piles @ P10.-photo P2- East pedestal has wide vertical crack full height.-photo		
Greatest Height (m)								
Bracing/Struts/Sheathing				X	X			
Nose Plate				6	4	1/2 nose plate paint removed due to scour. Lower half nose plates not painted, superficial rust. Corner plates on P2 corroded and torn off.-photo		
Paint/Coating				4	4	Severe scale rust @ several locations.		
(Colour Description : )								
(Colour Code : )								
Pier Stability				3	3	P1 & P10 undermined. 20/Apr/2009		
Scour				3	3	Exposed concrete pile @ P1 & P10 due to scour.		
Debris (Y/N)	No							
<b>Substructure General Rating</b>				<b>3</b>	<b>3</b>			

Structure Usage						
				Last	Now	Explanation of Condition
<b>Channel</b>						
(U/S Direction : <b>E</b> )						
(D/S Direction : <b>W</b> )						
Alignment						
Bank Stability				3	3	Steep banks with no protection is eroding/weathering with erosion gullies @ all corners.  Headslope sediment/erosion @ S abut exposing piles.-photo
HWM (m below Top of Curb)						HWM not visible. (Water to base of bottom chord 5.17m. 95/02/02) Old concrete abutment & pier timber piling, no concern.
Drift (Y/N)	No					
Slope Protection				5	4	Shale rock. Erosion gullies at both headslopes.
(Type : )						
Guidebank/Spurs				X	X	

Structure Usage				
		Last	Now	Explanation of Condition
Adequacy of Opening		8	8	
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>3</b>	<b>3</b>	

Maintenance Recommendations						
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
REPAIR/REPLACE BRIDGE RAIL						
GALVANIZE/PAINT BRIDGE RAIL						
RETROFIT BRIDGE RAIL						
SEAL CURBS						
PATCH DECK	2013	Patch deck where spalled.				
SEAL DECK						
OVERLAY DECK						
REPAIR/REPLACE DECK JOINTS	2013	Replace missing sheared deck joint cover plate bolts x 14.				
RESET/ PAINT BEARINGS						
REPAINT SUPERSTRUCTURE						
STRAIGHTEN/REPLACE MEMBERS						
WASHING						
SHOTCRETE REPAIRS						
CORE TIMBER CAPS/CORBELS						
REPAIR/REPLACE TIMBER CAPS						
REPAIR ABUTMENT SCOUR/EROSION	2013	Redirect flow away from piers and repair erosion at abutments.				
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
INSTALL STRUTS						
OTHER ACTION	2013	Install/repair concrete drain troughs at all 4 corners to direct drainage away from headslopes.				
OTHER ACTION	2013	Re-erect NW & NE hazard marker.				
OTHER ACTION	2013	Patch ACP at approaches.				
OTHER ACTION	2013	Level 2 assessment.				
OTHER ACTION	2013	Allowable loading not noted on form.				
OTHER ACTION	2013	Precast girders should be completed ASAP to confirm condition. Also assess condition of exposed H-piles with section loss at A1 P10.				
OTHER ACTION	2013	Repair/provide proper access to underside of bridge for Inspectors.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/27.8</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>41.9/38.9</b>	Est. Repl. Yr	2013	Maint. Req. (Y/N) Yes

Special Comments for Next Inspection	Recommend annual inspection of HC girder condition. Will need snooper truck and traffic accom for proper inspection. Hold all repairs except re-erect NW and NE hazard markers if bridge is being replaced in 2011. LRA - issued Nov 21, 2012.		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	Shane Hall	Previous Assistant's Name			
Next Inspection Date	17-Jul-2014	Previous Inspection Date	24-Nov-2010		
Inspection Cycle (Default) (months)	21				
Comment					