Bridge Inspection

Bridge File Number	76986 -1 Bridge	Form Type	SG
Year Built/Year Supstr	1970/1970	Lot No.	1
		Inspector Name	Colin Roy
Bridge or Town Name	PINE CREEK	Inspector Class	BR CLS A
Located Over	ATHABASCA RIVER, 8.11, WATERCRS-ST	Assistant Name	
Located On	947:12 C1 0.001	Assistant Class	
Water Body Cl./Year		Inspection Date	13-May-2011
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NW SEC 35 TWP 59 RGE 18 W5M	Data Entry Date	09-Nov-2011
Longitude, Latitude	-116:35:44, 54:09:07	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	27-Oct-2011
Contract Main. Area	CMA03	Dept. Reviewer Name	Steve Pasquan
Clear Roadway/Skew	8.5 /	Dept. Review Date	06-Dec-2011
AADT/Year	1,070 / 2010 (A)	Follow-Up By	
Road Classification	RCU-210-110		
Detour Length (km)	250		

Allowable Load (t):	Single	H 40 FLOOR BEAM	Semi	HS 48 FLOOR BEAM	Train	CS3 87 FLOOR BEAM	---> On Critical Spans --->Critical Member
Design Loading:		HS20					---> Primary Span

Posting Information

Required Load Posting (t)			Single		Semi	49	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.							

Hazard Marker At Bridge (Y/N)	Yes
Remarks	
Other Sign Types	"Athabasca River", Narrow Bridge, Log Trucks Turning.

Utilities (Located at)

Utility Attachments	TELEPHONE UTILITIES-PHONE LINE; POWER UTILITIES-POWER LINE		
Telephone	On cross bracings. West r/w.	Gas	
Power	5 wire OH West r/w & 3 wire OH. Power inside of West girder.	Municipal	
		Problem (Y/N)	No
Others			
Remarks			

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		7	6	Horizontal curves 300m each direction, approaches 150m N and S.
Vertical Alignment		7	6	
Roadway Width (m)	10.000			ACP potholes and crack at approach slab.
Approach Bump		5	4	
Guardrail (Y/N)	Yes			East approach only. Should be considered - steep, high. Bridge fills on West approach. At South end, 72.2 North end
Guardrail		7	7	
Length (m)	72.200			
Current Standard (Y/N)	No			
Termination Type	Turn Down			
Drainage		5	5	
Approach Road General Rating		**7**	**6**	

Superstructure

Bridge Component	Last	Now	Explanation of Condition
(Primary Span : **WG, 3 Spans, Lengths(m): 52.4-65.8-52.4, A-Ident Number: A0868-01**)			
Special Features			
Special Feature		X	
(Type :)			
Special Feature		X	
(Type :)			
Wearing Surface/Deck Top Detail Ratings			
	N (%)	1 (%)	2 (%)	3 (%)
Last				
Now				
Wearing Surface	X	X	
(Material Type :)			
(Thickness(mm) :)			
Deck Top	4	4	Wide lateral cracks every 1-2m extending across deck. 1-4 box 300mm x 40mm spall center span 2.
Deck Rideability	7	7	
Deck Joints	3	3	No joint plumbing. Both abutment 1 curb cover plates broke out of concrete. Previously patched.
Temperature (deg. C) 7			
(Expansion Type : **FINGER PLATES**)			
(Fixed Type :)			
Gap Size (mm)	Gap Location		
60	North		
26	South		
Deck Drainage	5	3	Deck drains onto substructure.-photo
Drains Clogged (Y/N) No			
Curbs/Median	5	3	CJ's no longer sealed, many with adjacent spalls. Curbs completely spalled next to deck joints.-photo
(Curb Type : **LOW PROFILE**)			
Scaling (Percent Area) 5			
Bridge Rail	7	4	Large tear not completely welded at the Northeast corner, 170mm long on the underside.
(Type : **GALVANIZED STEEL BRIDGE TUBE**)			
Bridge Rail Posts	7	7	
(Type : **GALVANIZED POST STEEL;GALVANIZED POST STEEL**)			
Bridge Rail/Posts Coating	7	7	
(Type : **GALVANIZED**)			
Sidewalk	X	X	
Girder/Beam			
Cover Plate	X	X	
Flange	7	7	
Web	7	7	
Stiffeners	7	7	
Splice	7	7	
Weld	7	7	
Diaphragms/Cross Frame	6	6	

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **WG, 3 Spans, Lengths(m): 52.4-65.8-52.4, A-Ident Number: A0868-01**)				
Paint Condition		5	4	Topcoat peeling on outside bottom flanges and under DJ's.
(Colour Description : **YELLOW**)				
(Colour Code : **505-101**)				
Touchup Required (Y/N)	No			
Bearings		3	3	South abutment bearings overexpanded 70mm. South pier bearing also overexpanded. NW rocker bearing tipped over. Reinforced steel grillage installed under girder. No web stiffeners at this location. Rusting.
Temperature (deg. C)	7			
(Expansion Type : **ROCKER BEARING**)				
(Fixed Type : **PINNED BEARING**)				
Coating Adequate (Y/N)	No			
Functioning (Y/N)	No			
Deck Underside		4	4	Leaching through deck cracks.
Stains (Percent Area)	1			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			
Superstructure General Rating		**3**	**3**	

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Abutments				
Bearing Seats/Caps		6	6	Both abutment seats covered in mud & gravel from open finger plate joints.
(Type : **CONCRETE**)				
Backwalls/Breastwalls		4	3	Spall 1.4 x 1.0m abutment 1 backwall 50mm deep.-with exposed rebar-photo
Wingwalls		7	7	
Piles		N	N	
Paint/Coating		X	X	
Abutment Stability		7	7	
Scour/Erosion		7	7	
Piers/Bents				
(Type : **PIER-SOLID**)				
Bearing Seats/Caps		7	7	
(Type : **CONCRETE**)				
(Total Number of Bearing Piles : **1:1**)				
Pier Shaft/Piles		7	7	
Bracing/Struts/Sheathing		X	X	
Nose Plate		7	7	
Paint/Coating		X	X	
(Colour Description :)				
(Colour Code :)				
Pier Stability		6	6	
Scour		7	7	
Debris (Y/N)	No			

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Substructure General Rating		**6**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel				
(U/S Direction : **W**)				Flow attacking north headslope. Natural pitrun exposed at toe.
(D/S Direction : **E**)				
Alignment		7	7	
Bank Stability		5	5	
HWM (m below Top of Curb)				No HWM visible.
Drift (Y/N)	Yes			
Slope Protection		5	5	Concrete protection and guidebank on North headslope, class 2 rock riprap on South headslope.
(Type : **CONCRETE; RIP RAP**)				
Guidebank/Spurs		7	7	
Adequacy of Opening		8	8	
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**5**	

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	2012	Control Joints				
PATCH DECK						
SEAL DECK						
OVERLAY DECK						
REPAIR/REPLACE DECK JOINTS	2012	Both abutment 1 curb cover plates.				
RESET/ PAINT BEARINGS	2012	Reset both abutment rocker bearings & ensure abutment 2 bearing repair was properly engineered.				
REPAINT SUPERSTRUCTURE						
STRAIGHTEN/REPLACE MEMBERS						
WASHING						
SHOTCRETE REPAIRS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
OTHER ACTION	2012	Clean off abutment seats.				
OTHER ACTION	2012	Install drainage gutters under finger joints.				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**50.0/50.0**	**Sufficiency Rating (Last/Now) (%)**	**58.5/57.2**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection		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	Brian Pientsch	Previous Assistant's Name	
Next Inspection Date	13-Aug-2014	Previous Inspection Date	21-Sep-2010
Inspection Cycle (Default) (months)	39		
Comment			