Bridge Inspection

Bridge File Number	70513 -1 Bridge	Form Type	TH
Year Built/Year Supstr	1906/1906	Lot No.	2
		Inspector Name	Jason Saly
Bridge or Town Name	ROSEDALE	Inspector Class	BR CLS A
Located Over	ROSEBUD RIVER, 3.33, WATERCRS-ST	Assistant Name	
Located On	10X:02 C1 1.667	Assistant Class	
Water Body Cl./Year		Inspection Date	06-Mar-2013
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	NW SEC 18 TWP 28 RGE 19 W4M	Data Entry Date	27-Mar-2013
Longitude, Latitude	-112:40:10, 51:23:53	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	21-Mar-2013
Contract Main. Area	CMA21	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	5.1 /	Dept. Review Date	28-Mar-2013
AADT/Year	580 / 2011 (A)	Follow-Up By	
Road Classification	RLU-208-100		
Detour Length (km)	15		

Allowable Load (t):	Single	H 31 STRINGER	Semi	HS 53 U3L4	Train	CS3 69 U3L4	---> 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)	5.1	In Advance (Y/N)	No	Lane	SB	On Bridge (m)	5.1	In Advance (Y/N)	No
Remarks	(Bridge #6) Measured 5.30 both portals.											

Required Load Posting (t)			Single		Semi		Truck Train	
Posted Loading (t)			Single	24.0	Semi	34.0	Truck Train	40.0
Posted:	Lane	NB	At Junction (Y/N)	No	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	Loading dictated by file 70514.							

Hazard Marker At Bridge (Y/N)	Yes
Remarks	
Other Sign Types	Stop if oncoming traffic on bridge, 35 km/hr curve. Missing truss ID plaque.

Utilities (Located at)

Utility Attachments	TELEPHONE UTILITIES-PHONE LINE		
Telephone	10m West r/w.	Gas	15.0m West.
Power	3 wire 10.0m West.	Municipal	
Others		Problem (Y/N)	No
Remarks	Truss ID missing @ LOU1E.		

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Curves 500m on both ends.
Vertical Alignment		7	7	
Roadway Width (m)	9.000			
Approach Bump		6	6	
Guardrail (Y/N)	Yes			(Incorrect connection to bridgerail at NW & SE. 07Jun2011).
Guardrail		4	5	
Length (m)	11.600			Not thriebeam; insufficient posts.
Current Standard (Y/N)	No			
Termination Type	Turn Down			
Drainage		6	6	
Approach Road General Rating		**6**	**6**	

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **TH, 1 Spans, Lengths(m): 41.1, A-Ident Number: A0092-05**)				
Special Features				
Special Feature			X	Truss ID missing @ L0U1E.
(Type :)				
Special Feature			X	
(Type :)				
Wearing Surface/Deck Top Detail Ratings				
	N (%)	1 (%)	2 (%)	3 (%)
Last	0	0	0	0
Now	10.0	0.0	0.0	0.0
				Dirt/snow covered.
Wearing Surface/Deck Top		7	7	
(Material Type : **EKKI WOOD**)				
(Plank Thickness(mm) : **60**)				
(Plank Width(mm) : **180**)				
Deck Rideability		7	7	
Deck Joints		X	X	
Temperature (deg. C)	-12			
(Expansion Type :)				
(Fixed Type :)				
Gap Size (mm)	Gap Location			
Curbs/Wheel Guards		7	7	490 x 245 x 150 TT blocking. Notched @ batter posts.
(Curb Type : **Standard**)				
(Type : **EKKI WOOD**)				
(Thickness(mm) : **150**)				
(Width(mm) : **245**)				
Bridge Rail		7	7	Double layer.
(Type : **GALVANIZED STEEL FLEX BEAM**)				
Bridge Rail Posts/Blocking		7	7	75mm HSS blocking.
(Type : **GALVANIZED POST STEEL;GALVANIZED POST STEEL**)				Blocking painted over galvanizing.
Bridge Rail/Posts Coating		7	6	
(Type : **GALVANIZED**)				
Sidewalk		X	X	

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **TH, 1 Spans, Lengths(m): 41.1, A-Ident Number: A0092-05**)				
Wide Load Damage (Y/N)	Yes			Minor dents.
High Load Damage (Y/N)	No			
Top Chord		7	7	Top bracing bowed. (Lower bracing perforated. 07Jun2011).
Batter Posts		7	7	
Sway Bracings		4	4	(Due to post modifications to the truss some components are redundant. Old bracing has left verticals with stretched holes on webs. 07Jun2011).
Diagonals		5	5	Corrosion buildup in plates.
Verticals		6	6	Pack rust between connections. Lower horizontal gussets are thin due to corrosion.
Portals		7	7	(Top of SW BP has 4 tilted bolts. 07Jun2011).
Connections		4	4	Flaking rust on S floor beam at bottom flanges.
Floor Beams		5	5	
Bottom Chord		5	5	
(No. of Stringers : **120**)				Both exterior bay 8 twisted 70mm.
Stringer Detail Ratings				New stringers measure 265mm x 145mm, all @ 360. Four different types of stringers, 2 @ 400 x 140.
	N (count) / 1 (count) / 2 (count) / 3 (count)			(For details see 2011 UT report. 07Jun2011).
Last				Corrosion along edges of lower flanges.
Now				
Stringers		4	4	
(Type : **STEEL**)				
(Width(mm) :)				
(Depth(mm) :)				
(Spacing(mm) : **749**)				
Paint Condition		3	3	Paint coating is generally good but allows corrosion to continue at some connection and horizontal gussets. Brown. Edges of some stringers & floor beam flanges have flaking rust.
(Colour Description :)				
(Colour Code :)				
Touchup Required (Y/N)	Yes			
Bearings		4	4	Eccessively corroded. No skirts at rotten bearings. (L0E & L0W extended 14mm & 9mm beyond design. 07Jun2011). A1 A2
Temperature (deg. C)	-12			
(Expansion Type : **ROLLER NEST BEARING**)				
(Fixed Type : **PINNED BEARING**)				
Functioning (Y/N)	No			
Sub Deck/Deck Underside		6	6	5% of timber clips are loose.
(Material Type : **TREATED TIMBER**)				
(Plank Thickness(mm) : **100**)				
(Plank Width(mm) : **305**)				
Defects (Percent Area)	0			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			
Superstructure General Rating		**4**	**4**	

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Abutments				
(Extended Backwall Piles (Y/N) : **Y**)				
(Extended Backwall Piles Spacing(mm) : **1200**)				

Substructure						
Bridge Component					**Last**	**Now**	**Explanation of Condition**
(Total Number of Caps/Corbels : **9:9**)							3 HP 310 corbel & 2 HP 310 caps, 16 total. 1 - 300 x 300 TT BW cap, 2 total.
Bearing Seats/Caps/Corbels Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last	0	0	0	0			
Now	0	0	0	0			
Bearing Seats/Caps/Corbels					8	7	
(Type : **STEEL**)							
(Depth(mm) : **310**)							
(Width(mm) : **305**)							
Backwalls/Breastwalls					8	7	
Greatest Height (m)	1.80						
Wingwalls					6	6	
(Total Number of Bearing Piles : **12:12**)							
Piles Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last	0	0	0	0			
Now	0	0	0	0			
Piles					8	7	
Paint/Coating					5	5	Painted yellow.
Abutment Stability					6	6	
Scour/Erosion					6	6	
Piers/Bents							
(Type :)							
(Total Number of Caps/Corbels :)							
Bearing Seats/Caps/Corbels Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last							
Now							
Bearing Seats/Caps/Corbels					X	X	
(Type :)							
(Total Number of Bearing Piles :)							
Piles Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last							
Now							
Pier Shaft/Piles					X	X	
Greatest Height (m)							
Bracing/Struts/Sheathing					X	X	
Nose Plate					X	X	
Paint/Coating					X	X	
(Colour Description :)							
(Colour Code :)							
Pier Stability					X	X	
Scour					X	X	
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 : **E**)				Channel is at 25 degree angle to bridge. Rail bridge 20m U/S. (Water to subdeck 5.6, S.B. to subdeck 6.3. 1996/08/14)
(D/S Direction : **W**)				
Alignment		5	5	
Bank Stability		7	7	
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	No			
Slope Protection		5	5	Only a little rock on North.
(Type : **NATURAL; NATURAL**)				
Guidebank/Spurs		X	X	
Adequacy of Opening		7	7	
(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						
RETROFIT BRIDGE RAIL						
SEAL CURBS						
PATCH DECK						
SEAL DECK						
OVERLAY DECK						
REPLACE STRIP DECK						
REPLACE SUB DECK						
RESET/ PAINT BEARINGS	2018	Replace roller nests with teflon/neoprene bearings.				
REPAINT SUPERSTRUCTURE	2018	Paint touchup as needed until bridge reaches upcoming service life 7 - 10 yrs. Add rust inhibitor at plates.				
STRAIGHTEN/REPLACE MEMBERS	2013	LOU1W - replace 4 bolts at U1W, if not yet done.				
WASHING						
SHOTCRETE REPAIRS						
CORE TIMBER CAPS/CORBELS						
REPAIR/REPLACE TIMBER CAPS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
OTHER ACTION						
OTHER ACTION	2013	Attach ID plaques.				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**51.1/49.2**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor corrosion at bottom chord & bottom chord gussets.	Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy	2006.12.29 Sub good for 30 years (steel). Issue with corrosion of super (joints). With normal maintenance bridge should be good until 2030.				
On 3-Year Program (Y/N)					
Proposed Action					

Previous Inspector's Name	Owen Salava	Previous Assistant's Name	Bryce Clayton
Next Inspection Date	06-Dec-2014	Previous Inspection Date	07-Jun-2011
Inspection Cycle (Default) (months)	21		

Comment	