

Bridge Inspection							
Bridge File Number	75332 S-2 Bridge			Form Type	SG		
Year Built/Year Supstr	1962/1962			Lot No.	2		
Bridge or Town Name	RED DEER			Inspector Name	Owen Salava		
Located Over	2A:16 L1 24.321;2A:16 R1 24.321			Inspector Class	BR CLS A		
Located On	2:24 L1 25.889			Assistant Name			
Water Body Cl./Year				Assistant Class			
Navigabil. Cl./Year				Inspection Date	18-Mar-2013		
Legal Land Location	SE SEC 5 TWP 38 RGE 27 W4M			Data Entry By	Marcia Chavez		
Longitude, Latitude	-113:49:22, 52:13:55			Data Entry Date	28-Mar-2013		
Road Authority	Alberta Transportation (AIT)			Reviewer Name	John O'Brien		
Contract Main. Area	CMA19			Review Date	23-Mar-2013		
Clear Roadway/Skew	12.2 / 20 deg. (RHF)			Dept. Reviewer Name	Chris Black		
AADT/Year	24,270 / 2011 (A)			Dept. Review Date	09-Apr-2013		
Road Classification	RFD-412.4-130			Follow-Up By			
Detour Length (km)	1						
Allowable Load (t):	Single	CS1 63 GIRDER	Semi	CS2 92 GIRDER	Train	CS3 131 GIRDER	----> On Critical Spans ---->Critical Member
Design Loading:	HS20						----> Primary Span

Posting Information												
Required Vert. Clearance Posting (m)		UNDER: 2A L1 6.2m, 2A R1 6.2m										
Posted Vertical Clearance (Y/N)		Yes										
Posted:	Lane	NB	On Bridge (m)	6.2	In Advance (Y/N)	Yes	Lane	SB	On Bridge (m)	6.2	In Advance (Y/N)	Yes
Remarks		NB sign minor damage - legible.										
Required Load Posting (t)		Single		Semi		Truck Train						
Posted Loading (t)		Single		Semi		Truck Train						
Posted:	Lane	SB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No				
Posted:	Lane	NB	At Junction (Y/N)		In Advance (Y/N)		At Bridge (Y/N)					
Remarks		Not required.										
Hazard Marker At Bridge (Y/N)		No										
Remarks												
Other Sign Types		Route										

Utilities (Located at)			
Utility Attachments			
Telephone			Gas
Power			Municipal
Others	TV cable N/S pier #3. Buried fibre optic cable under span 1.		Problem (Y/N)
Remarks	Conduit exposed SW corner curb spall - no problem.		

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Curve @ West. On crest curve.
Vertical Alignment		6	6	
Roadway Width (m)		12.000		None at NW corner.
Approach Bump		7	7	
Guardrail (Y/N)		Yes		
Guardrail		7	7	
Length (m)		99.000		
Current Standard (Y/N)		Yes		
Termination Type		Turn Down		
Drainage		5	5	
Approach Road General Rating		6	6	

Superstructure								
Bridge Component		Last	Now	Explanation of Condition				
(Primary Span : RB, 4 Spans, Lengths(m): 14.8-14.9-14.9-14.8, A-Ident Number: A0381-07;A0381-08;A0381-09;A0381-10)								
Special Features								
Special Feature			X					
(Type :)								
Special Feature			X					
(Type :)								
Wearing Surface/Deck Top Detail Ratings								
	N (%)	1 (%)	2 (%)	3 (%)				
Last	0	0	0	0				
Now	15.0	0.0	0.0	0.0				
Wearing Surface			6	6	Narrow longitudinal cracking over girder lines in deck.			
(Material Type : CONCRETE)								
(Thickness(mm) : 50)								
Deck Top			N	N				
Deck Rideability			6	6				
Deck Joints			3	3	A1-2 & p1-3 jnt missing sections of jnt extrusion & patched with asphalt. Jnt gaps could not be measured this inspection. Extrusion lying at SW guardrail. Gap at P1 & 3 dumping material on P1 & 3 caps - photos. (Gap btwn girder ends at abut jnt 1. 13Sep2011).			
Temperature (deg. C)		-10						
(Expansion Type : GLAND (WABO-MAUER, TRANSFLEX, ETC))								
(Fixed Type :)								
Gap Size (mm)		Gap Location						
		Abut 1						
		Pier 1						
		Pier 2						
		Pier 3						
		Abut 2						
Deck Drainage			4	4	No drains. Rust stains and debris below pier joint. Ice on abut seat with rusty bearings.			
Drains Clogged (Y/N)								
Curbs/Median			4	4	Cracked at SW corner of W abut exterior. Heavy scaling on S1 E curb top. Spalling S4 S curb & S1 S behind 3rd post from A1. Spall at post E curb at S parapet (photo).			
(Curb Type : Standard)								
Scaling (Percent Area)		1						
Bridge Rail			6	6	Retrofit rail installed. Some bolts do not leave enough thread for nuts. Approx 40% are 2 threads below top of nuts of original rail.			
(Type : GALVANIZED STEEL BRIDGE TUBE)								
Bridge Rail Posts			6	6				
(Type : GALVANIZED POST STEEL;GALVANIZED POST STEEL)								
Bridge Rail/Posts Coating			7	7				
(Type : GALVANIZED)								
Sidewalk			X	X				
Girder/Beam								
Cover Plate			7	7	Slight sag in bottom flange of S2-3, typical. Small nicks with corrosion in bottom flange of S1G1,4.			
Flange			5	5				
Web			7	7				
Stiffeners			7	7				
Splice			7	7				
Weld			7	7				
Diaphragms/Cross Frame			7	7				

Superstructure				
Bridge Component		Last	Now	Explanation of Condition
(Primary Span : RB, 4 Spans, Lengths(m): 14.8-14.9-14.9-14.8, A-Ident Number: A0381-07;A0381-08;A0381-09;A0381-10)				
Paint Condition		4	4	Superficial corrosion @ girder ends on bottom flanges, 5% of all girders.
(Colour Description : RED)				
(Colour Code : 21310)				
Touchup Required (Y/N)	No			
Bearings		4	4	Broken anchor bolt at NE corner.
Temperature (deg. C)	-10			All bearings appear to be rusted.
(Expansion Type :)				
(Fixed Type : NEOPRENE STRIP BEARING)				
Coating Adequate (Y/N)	No			
Functioning (Y/N)	Yes			
Deck Underside		5	5	Numerous repair patches and jackhammer spall.
Stains (Percent Area)	1			
Span Alignment Problems				
Vertical (Y/N)	No			(Bearing deflect not in load path. 13Sep2011).
Horizontal (Y/N)	No			
Superstructure General Rating		4	4	
Substructure				
Bridge Component		Last	Now	Explanation of Condition
Abutments				
Bearing Seats/Caps		5	4	Cracks to W bearing cap at G2,3.
(Type : CONCRETE)				
Backwalls/Breastwalls		5	5	Corrosion stains at SW corner.
Wingwalls		6	6	
Piles		N	N	
Paint/Coating		5	5	
Abutment Stability		5	5	
Scour/Erosion		5	4	W hslp patched but still eroding.
Piers/Bents				
(Type : PIER-COLUMN)				Debris on piers from leaky jnts.
Bearing Seats/Caps		6	6	
(Type : CONCRETE)				
(Total Number of Bearing Piles : 2:2:2)				
Pier Shaft/Piles		6	6	
Bracing/Struts/Sheathing		X	X	
Nose Plate		X	X	
Paint/Coating		X	3	Rust stains on face of piers below joint. Peeling on all piers.
(Colour Description :)				
(Colour Code :)				
Pier Stability		7	7	
Scour		X	X	
Debris (Y/N)	Yes			Debris on P1 & 3 caps.
Substructure General Rating		5	4	

Structure Usage				
		Last	Now	Explanation of Condition
Grade Separation				
Road Alignment		6	6	
Traffic Safety Features		6	6	
Type	Concrete parapet			
Slope Protection		5	5	Slope protection on S hslp only separating from breastwall.
(Type : NONE; CONCRETE)				
Bank Stability		5	4	Erosion at NW has exposed underside of seat.
Drainage		5	5	
Grade Separation General Rating		5	4	

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	2013	Patch spalled S curb, 0.5m3 OH-V.					
PATCH DECK							
SEAL DECK							
OVERLAY DECK							
REPAIR/REPLACE DECK JOINTS	2015	Replace 5 joints - damage too extensive.					
RESET/ PAINT BEARINGS	2015	Replace broken anchor bolt; paint bearings.					
REPAINT SUPERSTRUCTURE	2015	Touch-up girder ends & diaphragms.					
STRAIGHTEN/REPLACE MEMBERS							
WASHING	2013	Clean pier tops.					
SHOTCRETE REPAIRS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2013	Seal gap at S slope & breastwall.					
OTHER ACTION	2013	Epoxy W abut seat cracks.					
OTHER ACTION	2013	Scrape off loose sealer & recoat piers.					
OTHER ACTION	2013	Fill under seat & against breastwall at NW.					
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	50.0/44.4	Sufficiency Rating (Last/Now) (%)	58.9/54.8	Est. Repl. Yr	2030	Maint. Req'd. (Y/N)	Yes
Special Comments for Next Inspection	No repair required for nicked bottom flange at this time.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2014-Rehab						
On 3-Year Program (Y/N)	Y						
Proposed Action	2009.12.14 Seal Cracks and Decks in 2010. RS						
Previous Inspector's Name	Owen Salava		Previous Assistant's Name				
Next Inspection Date	18-Dec-2014		Previous Inspection Date	13-Sep-2011			
Inspection Cycle (Default) (months)	21						
Comment							