

Bridge Culvert Inspection				
Bridge File Number	77469 -1 Bridge Culvert		Form Type	CUL1
Year Built	1975		Lot No.	1
Bridge or Town Name	SLAVE LAKE		Inspector Name	Wade Nanninga
Located Over	LILY CREEK, 8.11.80.29, WATERCRS-ST		Inspector Class	BR CLS A
Located On	88:02 C1 19.302		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	27-Mar-2013
Legal Land Location	SW SEC 24 TWP 74 RGE 6 W5M		Data Entry By	Theresa Lacusta
Longitude, Latitude	-114:47:47, 55:25:11		Data Entry Date	16-Apr-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Eric Carcoux
Contract Main. Area	CMA06		Review Date	11-Apr-2013
Clear Roadway/Skew	9.4 /		Dept. Reviewer Name	Brent Herrick
AADT/Year	2,640 / 2012 (A)		Dept. Review Date	23-Apr-2013
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	15			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	4369	2870	RPP	42.7	152X51	2.8	PIPE ARCH
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	West r/w.		Gas
Power			Municipal
Others			Problem (Y/N) No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curve 300 m north.
Vertical Alignment		8	8	
Roadway Width (m)	9.400			
Embankment		7	7	
Sideslope ( _ :1)	3.0			
(Height of Cover(m) : 3)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>7</b>	<b>7</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		4	N	Wide cracks in collar approx every 1m.-Jun, 2011
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		N	N	Concrete apron poured onto bevel floor has now separated. -Jun-2011

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		6	6	
Heaving (mm)	150			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		6	5	Concrete slab in streambed in front of bevel is 300 mm higher than bevel floor. -Jun, 2011
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		6	5	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	GR carried fwd.
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 4369, Rise (mm): 2870, Type: RPP)				
Barrel Last Accessible Date	27-Mar-2013			0.6m ice on floor
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		5	5	(Nesting of plates at 7th ring is poor. Ring 4 rise measurement not possible due to rocks on floor.  est
Measured Rise (mm)				
Measured At Ring No.	6			
Sag (mm)				
Percent Sag	8			
Sidewall		3	2	Cracks in sidewall in rings 4,5,6,7,and 8 with only 48mm remaining steel.
Measured Span (mm)	4505			
Measured At Ring No.	4			
Deflection (mm)	136			
Percent Deflection	3			
Floor		5	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	
Separation (mm)	0			
Longitudinal Seams		3	2	Rings 4,5,6,7 and 8 are cracked @ 4.00 position.Rings 4 & 5 are cracked for full length of plate. Rings 6,7 and 8 are intermittently cracked. R4 with 48mm steel.-photo
Total No. of Cracked Rings	5			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	48			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		4	4	Pitting rust & severe scaling in bottom 1/4. Rust stains through seams & bolts in lower 1/2. Superficial corrosion above waterline.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 4369, Rise (mm): 2870, Type: RPP)				
Fish Passage Adequacy		4	4	OK during high water. No passage at upstream end during normal flows-Jun-2011
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	(Spring U/S. 17/Mar/2006) Not visible.
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>3</b>	<b>2</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		N	X	
Collar		X	X	
Wingwalls		N	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		5	5	Likely rock covered by dirt/vegetation
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>6</b>	<b>5</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		6	6	
Bank Stability		5	5	Typical forest creek with near vertical banks on outside bends.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>5</b>	<b>6</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Assessment, if not already done.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/22.2</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>43.7/37.7</b>	Est. Repl. Yr	2016	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor cracks and deflection. Low Rating Advisory sent to Jeff Zhang 05-Apr-2013. Reduce inspection cycle to 12 months.		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	27-Dec-2014		Previous Inspection Date	09-Jun-2011			
Inspection Cycle (Default) (months)	21						
Comment							