

Bridge Culvert Inspection			
Bridge File Number	77927 -1 Bridge Culvert	Form Type	CULE
Year Built	1978	Lot No.	4
Bridge or Town Name	RAINBOW LAKE	Inspector Name	Brian Pientsch
Located Over	2ND ORDER TRIBUTARY TO SOUSA CREEK, 9.21.1.3, WATERCRS-ST	Inspector Class	BR CLS A
Located On	58:04 C1 13.477	Assistant Name	Clem Guenette
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	11-Jan-2012
Legal Land Location	NW SEC 35 TWP 109 RGE 8 W6M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-119:13:37, 58:30:29	Data Entry Date	04-Mar-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA01	Review Date	26-Feb-2012
Clear Roadway/Skew	15 / 30 deg. (RHF)	Dept. Reviewer Name	David Morrison
AADT/Year	740 / 2011 (A)	Dept. Review Date	30-Mar-2012
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	999		

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	U/S	-	2400	MP	8	125X26	2.8	ROUND
1	MAIN	-	2134	MP	40.8	68X13	4.3	ROUND
1	D/S	-	2700	MP	16	125X26	2.8	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	North r/w.	Gas	
Power	North r/w - 3 line	Municipal	
Others	Temporary cable crossing.	Problem (Y/N)	Yes
Remarks	Telephone cable crossing u/s channel-15m u/s of bevel.		

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Intersection 400m East.
Vertical Alignment		8	8	
Roadway Width (m)	15.000			
Embankment		7	7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : 2.5)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>8</b>	<b>8</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		8	N	Covered in snow
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		8	N	Covered in snow
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>8</b>	<b>8</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 2400, Type: MP)				
Barrel Last Accessible Date	11-Jan-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		9	9	
Measured Rise (mm)	2420			@ cl - 27-May-2010
Measured At Ring No.				Deflection upward
Sag (mm)	20			Ice on floor
Percent Sag	1			
Sidewall		8	8	
Measured Span (mm)	2362			@ cl
Measured At Ring No.				Deflection inward
Deflection (mm)	38			
Percent Deflection	2			
Floor		N	N	Under water/ice Crown to ice is 1.339m
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		9	9	
Separation (mm)				
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		8	8	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 2400, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel Extension General Rating</b>		<b>8</b>	<b>8</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2134, Type: MP)				
Barrel Last Accessible Date	11-Jan-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		4	4	Crease along roofline from original installation.
Measured Rise (mm)	2223			at cl -27-Mar-2010
Measured At Ring No.				1.019 ice to crown
Sag (mm)	89			
Percent Sag	4			
Sidewall		6	6	at cl
Measured Span (mm)	2068			Deflection inward.
Measured At Ring No.				
Deflection (mm)	66			
Percent Deflection	3			
Floor		N	N	Under water/ice.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	4	Seam connecting to u/s bevel 120mm space at bottom tight on top due to u/s.
Separation (mm)				
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	N	Rust on lower 1/3, where visible.-27-Mar-2010
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	POS			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2134, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: D/S, Span (mm): , Rise (mm): 2700, Type: MP)				
Barrel Last Accessible Date	11-Jan-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		8	8	
Measured Rise (mm)	2694			@ cl measrued 26-Aug-2008 1.444m ice to crown
Measured At Ring No.				
Sag (mm)	6			
Percent Sag	1			
Sidewall		9	8	
Measured Span (mm)	2671			@ cl
Measured At Ring No.				Deflection inward.
Deflection (mm)	29			
Percent Deflection	1			
Floor		N	N	Under water/ice
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	
Separation (mm)	40			
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		8	8	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: D/S, Span (mm): , Rise (mm): 2700, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel Extension General Rating</b>		<b>8</b>	<b>8</b>	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		8	N	Snow covered
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		8	N	Snow covered
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>8</b>	<b>8</b>	

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>7</b>	<b>7</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							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>63.9/64.4</b>	Est. Repl. Yr	2020	Maint. Req. (Y/N)	No
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	Lisbeth Medina			
Next Inspection Date	11-Oct-2013		Previous Inspection Date	27-May-2010			
Inspection Cycle (Default) (months)	21						
Comment							