

Bridge Culvert Inspection			
Bridge File Number	76751 -2 Bridge Culvert	Form Type	CUL1
Year Built	2005	Lot No.	2
Bridge or Town Name	GRANDE CACHE	Inspector Name	Russel Vanderschaaf
Located Over	TRIBUTARY TO MUSKEG RIVER, 8.10.58.31.4, WATERCRS-ST	Inspector Class	BR CLS B
Located On	40:34 C1 16.356	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	22-Aug-2012
Legal Land Location	SW SEC 13 TWP 57 RGE 7 W6M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-118:54:47, 53:55:33	Data Entry Date	25-Sep-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA05	Review Date	24-Sep-2012
Clear Roadway/Skew	10 / -52 deg. (LHF)	Dept. Reviewer Name	David Morrison
AADT/Year	1,590 / 2011 (A)	Dept. Review Date	18-Dec-2012
Road Classification	RAU-210-110	Follow-Up By	
Detour Length (km)	60		

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3050	SP	341.986	152X51	7.0,7.0,7.0	ROUND
Special Features	BARREL ELBOW							
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	S r/w	Gas	
Power	4 w o/h N r/w	Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Poor sight distance-on a curve. No passing northbound.
Vertical Alignment		6	6	
Roadway Width (m)	10.000			
Embankment		4	3	NE ditch scoured 1.0mWx1.0mDx50mL.-photo Rivulets on D/S slope. Rock drains failed near outlet. NW ditch scoured 1.3m W x 1mD x 65mL.-photo Heavy erosion on North bank.-photo Heavy erosion around u/s bevel.
Sideslope (___:1) (Height of Cover(m) : 29)	3.0			
Guardrail (Y/N)	Yes			
<b>Approach Road / Embankment General Rating</b>		<b>4</b>	<b>3</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	
Collar		N	N	Med tranverse cracks @ 300.May 24, 2007
Wingwalls		X	X	
(Shape : )				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1500			
Scour Protection		7	3	Concrete jacks damaged due to erosion.-photo
(Type : <b>CONCRETE, RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>600</b> )				
Scour/Erosion		7	3	Concrete jacks damaged due to erosion.-photo
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>7</b>	<b>3</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : <b>1</b> , Primary Span, Location Code: <b>MAIN</b> , Span (mm): , Rise (mm): <b>3050</b> , Type: <b>SP</b> )				
Barrel Last Accessible Date	22-Aug-2012			
Special Features				
Special Feature		5	5	Elbow #1 deformed by construction. Elbow 1 at R9, elbow 2 at ring 64
(Type : <b>BARREL ELBOW</b> )				
Special Feature				
(Type : )				
Roof		5	5	
Measured Rise (mm)	2890			
Measured At Ring No.	8			
Sag (mm)	160			
Percent Sag	5			
Sidewall		7	7	
Measured Span (mm)	3171			
Measured At Ring No.	8			
Deflection (mm)	121			
Percent Deflection	4			
Floor		7	7	
Bulge (mm)				
Measured At Ring No.	9			
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)				
Longitudinal Seams		7	7	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				2N
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		7	4	Heavy effloresence & rust rings 1-3, 5
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	No			
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): 3050, Type: SP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	Water cascading over boulder buildup behind baffles.
Baffle		7	7	Last section only. (R89-96)
(Type : <b>SPOILER</b> )				
Waterway Adequacy		4	4	Buildup of boulders behind baffles.(R89-96)
Icing (Y/N)	Yes			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>5</b>	<b>5</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		N	7	Med. hairline cracks @ 300.
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		N	N	
Bevel End		N	6	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		N	6	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>500</b> )				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>6</b>	<b>6</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	Pipe through CN grade 40m u/s. D/S end of CN pipe is not visible.
Bank Stability		5	5	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Degrading D/S. Extensive degraation u/s channel.-photo
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				

<b>Structure Usage</b>				
		<b>Last</b>	<b>Now</b>	<b>Explanation of Condition</b>
<b>Channel General Rating</b>		<b>5</b>	<b>7</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2013	Place 150m3 Class 3 riprap u/s end.					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Repiar erosion gullies in NE & NW ditch with 200m3 class 2 rock rip rap					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>55.6/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>40.5/36.1</b>	Est. Repl. Yr	2055	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Rubber membrane placed in fill instead of clau-u/s end only.-24-May-2007 Monitor N bank.		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	Russel Vanderschaaf		Previous Assistant's Name				
Next Inspection Date	22-May-2014		Previous Inspection Date	17-Nov-2010			
Inspection Cycle (Default) (months)	21						
Comment							