

Bridge Culvert Inspection			
Bridge File Number	70410 -1 Bridge Culvert	Form Type	CUL1
Year Built	1953	Lot No.	2
Bridge or Town Name	TWIN BUTTE	Inspector Name	Jason Rusu
Located Over	TRIBUTARY TO YARROW CREEK, 2.12.22.5.14.2.1, WATERCRS-ST	Inspector Class	BR CLS A
Located On	6:04 C1 18.788	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	30-Oct-2011
Legal Land Location	NE SEC 8 TWP 4 RGE 29 W4M	Data Entry By	Erin Roberts
Longitude, Latitude	-113:51:36, 49:17:13	Data Entry Date	29-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA26	Review Date	12-Nov-2011
Clear Roadway/Skew	10.8 /	Dept. Reviewer Name	Tim Davies
AADT/Year	1,010 / 2010 (A)	Dept. Review Date	01-Dec-2011
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	8		

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1980	1980	BP	42.2			RECTANGLE
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments					
Telephone	West ditch and East			Gas	
Power				Municipal	
Others				Problem (Y/N)	No
Remarks					

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		4	4	Winding steep grade.
Vertical Alignment		4	4	Vertical grade is approx 9% to the North.
Roadway Width (m)	10.800			
Embankment		5	6	Minor damage @ West from ditch drainage from North
Sideslope ( __:1)	2.5			
(Height of Cover(m) : 6)				
Guardrail (Y/N)	Yes			
<b>Approach Road / Embankment General Rating</b>		<b>4</b>	<b>4</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction				West
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	Tree directly above headwall.
Collar		6	6	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		6	6	Typical cracks.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		5	4	concrete blocks
(Type : <b>CONCRETE</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		5	4	Scour behind concrete slope protection. Stream alignment has shifted South
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>4</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1980, Rise (mm): 1980, Type: BP)				
Barrel Last Accessible Date	30-Oct-2011			2000mm span and rise as built
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		6	6	Typical cracks.
Measured Rise (mm)	2002			
Measured At Ring No.	1			
Sag (mm)				
Percent Sag				
Sidewall		6	6	Leaching through cracks lower sidewalls. Rust stains.
Measured Span (mm)	2010			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection				
Floor		6	6	Exposed aggregate on floor
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		5	5	
Separation (mm)	20			
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		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	POS			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1980, Rise (mm): 1980, Type: BP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	Streambed is 1.0m below bevel end.) at the d/s end
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>6</b>	<b>6</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction				East.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	
Collar		X	X	Trees @ headwall
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			Waterfall @ outlet. Drops 1.0m in to large rocks.
Above/Below (mm)	1500			
Scour Protection		5	5	Concrete blocks
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 600)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		4	4	(Stream aligns to SW bevel-45 deg turn
Bank Stability		4	4	D/S-banks sloughing 5m D/S of bevel for 10m along bank.)
HWM (m below Top of Culvert)				
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>4</b>	<b>4</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2012	4m3 Class 2 U/S					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2012	Re-align U/S channel to meet inlet					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>66.7/66.7</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>49.2/48.2</b>	Est. Repl. Yr	2023	Maint. Req. (Y/N)	Yes
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	Jason Rusu		Previous Assistant's Name				
Next Inspection Date	30-Jul-2013		Previous Inspection Date	29-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							