

Bridge Culvert Inspection			
Bridge File Number	73041 -1 Bridge Culvert	Form Type	CUL1
Year Built	1999	Lot No.	1
Bridge or Town Name	ROLLING HILL	Inspector Name	Jon Davies
Located Over	TWELVE MILE COULEE, 2.13.3, WATERCRS-ST	Inspector Class	BR CLS B
Located On	525:02 C1 15.394	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	07-Mar-2012
Legal Land Location	NW SEC 1 TWP 14 RGE 13 W4M	Data Entry By	Anne Roberts
Longitude, Latitude	-111:39:54, 50:08:58	Data Entry Date	08-Apr-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA23	Review Date	24-Mar-2012
Clear Roadway/Skew	9.8 /	Dept. Reviewer Name	Tim Davies
AADT/Year	190 / 2011 (A)	Dept. Review Date	17-Apr-2012
Road Classification	RCU-208-110	Follow-Up By	
Detour Length (km)	5		

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2700	MP	33	125X26	2.8,2.8,2.8	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

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

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		8	7	Road rises to S then curves 150m from pipe
Vertical Alignment		7	6	
Roadway Width (m)	11.000			
Embankment		N	6	U/S height of cover 800 mm
Sideslope ( :1)	4.0			
(Height of Cover(m) : 1.3)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>8</b>	<b>6</b>	

**Upstream End**

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		5	3	3 m of bevel invert has been folded back. Bevel walls severely deformed inwards.
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			Heave estimate refers to remaining bevel ring section not able to estimate height above stream bed.
Above/Below (mm)	200			
Scour Protection (Type : <b>RIP RAP</b> ) (Avg. Rock Size(mm) : <b>500</b> )		N	3	500mm pipe entrance into canal from S road ditch Displaced at sides of bevel.
Scour/Erosion		N	3	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>N</b>	<b>3</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2700, Type: MP)				
Barrel Last Accessible Date	07-Mar-2012			
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		8	7	
Measured Rise (mm)	2690			
Measured At Ring No.	1			
Sag (mm)	10			
Percent Sag	0			
Sidewall		8	7	Inward
Measured Span (mm)	2653			
Measured At Ring No.	1			
Deflection (mm)	47			
Percent Deflection	1			
Floor		N	N	ice covered
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	N	U/S bevel and R1 seam ice covered at floor where worst separation is suspected.
Separation (mm)	10			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		N	5	Superficial rust below waterline with light scaling.
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: MAIN, Span (mm): , Rise (mm): 2700, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		6	5	
Baffle		X	X	
(Type : )				
Waterway Adequacy		9	3	Reduced capacity due U/S bevel deformation. Bevel edges at sidewall project inward approx. 900 mm both sides.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>8</b>	<b>3</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction				West
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		N	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 500)				
Scour/Erosion		N	6	
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		6	6	Turns at a 90 degree angle 15m d/s Water flow measuring building downstream 15,
Bank Stability		N	5	
HWM (m below Top of Culvert)	0.3			At U/S grass on fencing
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>6</b>	<b>6</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2012	At U/S bevel 15 m3 of Cl. 2					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2012	Replace U/S bevel section					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>88.9/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>84.2/38.8</b>	Est. Repl. Yr	2035	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	Tim Davies		Previous Assistant's Name				
Next Inspection Date	07-Jun-2015		Previous Inspection Date	03-Mar-2009			
Inspection Cycle (Default) (months)	39						
Comment							