

Bridge Culvert Inspection				
Bridge File Number	09231 -1 Bridge Culvert		Form Type	CUL1
Year Built	1953		Lot No.	4
Bridge or Town Name	RICHDALÉ		Inspector Name	Owen Salava
Located Over	TRIBUTARY TO BERRY CREEK, 3.14.11, WATERCRS-ST		Inspector Class	BR CLS A
Located On	9:10 C1 12.462		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	03-Nov-2011
Legal Land Location	SE SEC 5 TWP 31 RGE 12 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-111:40:04, 51:37:12		Data Entry Date	25-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA21		Review Date	13-Nov-2011
Clear Roadway/Skew	9.6 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	2,030 / 2010 (A)		Dept. Review Date	28-Nov-2011
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	67			

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1524	MP	26.2	68X13	2.8	ROUND
Special Features	CONC FLOOR							
Special Features Comment								

**Utilities (Located at)**

Utility Attachments							
Telephone	South r/w.			Gas	60m South. (Invert H20 L. 94/11/23)		
Power				Municipal			
Others	Fibre optics North r/w.			Problem (Y/N)	No		
Remarks							

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Grade to the North, "T" intersection 50m West.
Vertical Alignment		7	7	
Roadway Width (m)	9.600			
Embankment		7	7	
Sideslope ( :1)	3.0			
(Height of Cover(m) : 1.6)				
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		N		
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		6	6	
Heaving (mm)	50			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		N	5	Bevel protruding 200mm from fill. Sparce rock riprap.
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		N	5	Minor erosion @ sides of bevel.
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</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>1524</b> , Type: <b>MP</b> )				
Barrel Last Accessible Date	03-Nov-2011			
Special Features				
Special Feature		5	5	Transverse cracks along concrete.
(Type : <b>CONC FLOOR</b> )				
Special Feature				
(Type : )				
Roof		4	4	Roof seams flattening at every 2nd riveted seam. Rise measurements taken on concrete. S end = 1395mm, 129mm. Mid point = 1385mm, 139mm, 7.7%. N end = 1400mm, 124mm. Assuming 30mm concrete on floor calc dimension would be 1415, 5.7%.
Measured Rise (mm)	1390			
Measured At Ring No.				
Sag (mm)	109			
Percent Sag	7			7.2%
Sidewall		5	5	Span measured @ S end = 1595mm, 71mm. Mid point = 1605mm, 81mm. N end = 1619mm, 95mm, 7.9%.
Measured Span (mm)	1619			
Measured At Ring No.				
Deflection (mm)	95			
Percent Deflection	6			6.2%
Floor		N	N	Concrete along floor approx 30mm.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		5	5	20-80mm gaps but within coupler.
Separation (mm)	80			
Longitudinal Seams		5	5	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				Rivet seam staggered.
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	5	Corrosion lower 1/3.
Corrosion By Soil (Y/N)	Yes			
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): 1524, 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>	
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		6	6	
Heaving (mm)	75			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	5	2.5m wide x 5.0m long x 0.5m deep scour hole @ D/S end, covered in 150mm rock.
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		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							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>56.9/56.9</b>	Est. Repl. Yr	2020	Maint. Req'd. (Y/N)	No
Special Comments for Next Inspection			Department Comments				
Maintenance Reviewed By			Date		Estimated Total	0	
Proposed Long-Term Strategy	Suggested replacement 2014. Monitor BIM per original schedule. JU						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Jason Saly		Previous Assistant's Name				
Next Inspection Date	03-Aug-2013		Previous Inspection Date	12-Mar-2010			
Inspection Cycle (Default) (months)	21						
Comment							