

Bridge Culvert Inspection				
Bridge File Number	13813 -1 Bridge Culvert		Form Type	CUL1
Year Built	1960		Lot No.	4
Bridge or Town Name	SUNDRE		Inspector Name	Owen Salava
Located Over	TRIBUTARY TO SMITH CREEK, 3.98.2.2.1, WATERCRS-ST		Inspector Class	BR CLS A
Located On	584:02 C1 26.395		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	09-Aug-2011
Legal Land Location	SE SEC 2 TWP 33 RGE 7 W5M		Data Entry By	Marcia Chavez
Longitude, Latitude	-114:52:42, 51:47:42		Data Entry Date	16-Sep-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA29		Review Date	15-Aug-2011
Clear Roadway/Skew	10.5 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	470 / 2010 (A)		Dept. Review Date	19-Sep-2011
Road Classification	RLU-209-110		Follow-Up By	
Detour Length (km)	6			

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2027	2241	SPE	29.3	152X51	3.0	ELLIPSE
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments				
Telephone	In South r/w.		Gas	
Power			Municipal	
Others			Problem (Y/N)	No
Remarks				

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 200m East. In sag curve.
Vertical Alignment		7	7	
Roadway Width (m)	9.000			
Embankment		5	5	Transverse crack in roadway over pipe - photo.
Sideslope ( __:1)	4.0			
(Height of Cover(m) : 1.2)				
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		S		
End Treatment (Concrete, Steel, Others, None)		NONE		
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		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	50			
Scour Protection		5	5	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		5	5	
Beavers (Y/N)	No			Drift @ U/S.
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2027, Rise (mm): 2241, Type: SPE)				
Barrel Last Accessible Date	09-Aug-2011			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		5	5	Due to crack @ circumferential seam, rate 5.
Measured Rise (mm)	2200			
Measured At Ring No.	6			
Sag (mm)	41			
Percent Sag	1			
Sidewall		7	7	0.8%
Measured Span (mm)	2045			
Measured At Ring No.	6			
Deflection (mm)	18			
Percent Deflection	1			
Floor		6	6	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		4	4	Crack @ roof @ 2nd circumferential seam - photo.
Separation (mm)	0			
Longitudinal Seams		7	7	Rust and scaling at joints of floor and wall plates.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	5	Corrosion with some pitting @ floor. Corrosion @ roof with efflorescence stain @ D/S.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2027, Rise (mm): 2241, Type: SPE)				
Fish Passage Adequacy		X	X	
Baffle (Type : )		X	X	
Waterway Adequacy		4	4	(Due to water 1.1m above road July 1992. 15/Mar/2006)
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>5</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)		NONE		
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection (Type : <b>RIP RAP</b> ) (Avg. Rock Size(mm) : <b>300</b> )		6	6	Rock adequate @ sides. Sideslope has recently been rebuilt.
Scour/Erosion		6	6	Large scour hole at outlet.
Beavers (Y/N)		No		
<b>Downstream End General Rating</b>		<b>6</b>	<b>6</b>	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		4	4	Vertical cut banks in D/S channel.
HWM (m below Top of Culvert)				File history shows 1.1m above crown of road. HWM of -0.1 @ 2006 inspection.
Drift (Y/N)		Yes		
Channel Bottom Degrading/Aggrading		AGGRADING		Immediately D/S of opening.
Beavers (Y/N)		No		
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<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							
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>44.4/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>47.7/52.7</b>	Est. Repl. Yr	2020	Maint. Req. (Y/N)	No
Special Comments for Next Inspection	Condition OK for age; nearing expected replacement.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2006.07.28 With normal maintenance culvert should be good until 2020.						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Dave Lam		Previous Assistant's Name				
Next Inspection Date	09-Nov-2014		Previous Inspection Date	24-Sep-2009			
Inspection Cycle (Default) (months)	39						
Comment							