

Bridge Culvert Inspection				
Bridge File Number	74328 -1 Bridge Culvert		Form Type	CUL1
Year Built	1955		Lot No.	1
Bridge or Town Name	HARTELL		Inspector Name	Jon Davies
Located Over	TRIBUTARY TO TONGUE CREEK, 2.13.27.5.5, WATERCRS-ST		Inspector Class	BR CLS B
Located On	543:02 C1 10.039		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	02-Mar-2013
Legal Land Location	SW SEC 16 TWP 19 RGE 1 W5M		Data Entry By	Lauren Korte
Longitude, Latitude	-114:05:25, 50:36:04		Data Entry Date	29-Mar-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA27		Review Date	17-Mar-2013
Clear Roadway/Skew	7.9 /		Dept. Reviewer Name	Tim Davies
AADT/Year	1,360 / 2011 (A)		Dept. Review Date	08-Apr-2013
Road Classification	RCU-209-110		Follow-Up By	
Detour Length (km)	7			

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1737	1920	SPE	58	152X51	2.8	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments							
Telephone	South ROW.			Gas	South ROW.		
Power	North ROW.			Municipal			
Others				Problem (Y/N)	No		
Remarks							

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Int 150m West.
Vertical Alignment		6	6	In vertical sag curve.
Roadway Width (m)	8.100			
Embankment		7	6	3:1 at road side slopes.
Sideslope (__:1)	2.0			
(Height of Cover(m) : 5)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		6	6	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		South.
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		7	7	
Heaving (mm)	150			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		8	7	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		7	7	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1737, Rise (mm): 1920, Type: SPE)				
Barrel Last Accessible Date	02-Mar-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	SPE rise at Ring 3 1813mm=107mm or 6% of sag. General roof shape of SP barrel is adequate.
Measured Rise (mm)	1813			
Measured At Ring No.	3			
Sag (mm)	107			
Percent Sag	6			
Sidewall		3	3	SPE span at Ring 3 is 1805mm. 68mm or 4% deflection. Sidewall rated 3 due to cracks in Ring 11 longitudinal seam in S.P.
Measured Span (mm)	1905			
Measured At Ring No.	8			
Deflection (mm)	15			
Percent Deflection	4			
Floor		5	N	P.R 5. Up to 500mm ice and water.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	4	Bolts missing on circumferential seams #3 and 12. Many other bolts tipped at barrel extension seams. 3 Cracked bolt holes at roof in circumferential seam 8,9, and 10.
Separation (mm)	15			
Longitudinal Seams		3	3	84mm steel remaining @ cracked long seam @ ring 11. 1N stagger.
Total No. of Cracked Rings	1			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	85			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Superficial corrosion at bolt holes and below waterline. & soil
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			superficial rust
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1737, Rise (mm): 1920, Type: SPE)				
Fish Passage Adequacy		X	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	6	Fencing across inverts.
Icing (Y/N)	No			
Siltting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	3	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		North.
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)	200			
Invert Above/Below Stream Bed	ABOVE			Bevel end undermined 2m.
Above/Below (mm)	700			
Scour Protection		4	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 350)				
Scour/Erosion		4	5	8m x 0.7m deep scour hole. Rock lined.
Beavers (Y/N)	No			
Downstream End General Rating		4	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		6	6	
HWM (m below Top of Culvert)				No HWM visible. (Grass in fence and on bolts in barrel) Nov 13/06
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		7	7	

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	2014	Consider steel liner if adequate capacity exists or replace in 2018.					
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	45.6/49.9	Est. Repl. Yr	2018	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	Rex Davidson		Previous Assistant's Name				
Next Inspection Date	02-Jun-2016		Previous Inspection Date	16-Dec-2009			
Inspection Cycle (Default) (months)	39						
Comment							