

Bridge Culvert Inspection				
Bridge File Number	09455 -1 Bridge Culvert		Form Type	CUL1
Year Built	1956		Lot No.	4
Bridge or Town Name	HARTELL		Inspector Name	Jon Davies
Located Over	TRIBUTARY TO TONGUE CREEK, 2.13.27.5.7, WATERCRS-ST		Inspector Class	BR CLS B
Located On	543:02 C1 1.596		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	09-Mar-2013
Legal Land Location	SW SEC 15 TWP 19 RGE 2 W5M		Data Entry By	Lauren Korte
Longitude, Latitude	-114:12:35, 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	7.7 / 5 deg. (RHF)		Dept. Reviewer Name	Tim Davies
AADT/Year	1,360 / 2011 (A)		Dept. Review Date	08-Apr-2013
Road Classification	RLU-209G-90		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	1738	1920	SPE	69.5	152X51	2.8	ELLIPSE
Special Features	VERT TIMBER STRUTS							
Special Features Comment								

Utilities (Located at)

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

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	8	Minor ditch erosion - 4m West of d/s bevel.
Vertical Alignment		6	6	
Roadway Width (m)	7.700			
Embankment		6	6	
Sideslope (:1)	3.0			
(Height of Cover(m) : 6)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		6	6	

Upstream End

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	50			
Scour Protection		5	5	Bevel heaving and twisting-minor. Bevel, R1 and R2 installed on moderate sloped grade.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		5	5	From bevel to ring 2 drops 650mm.
Beavers (Y/N)	No			
Upstream End General Rating		5	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1738, Rise (mm): 1920, Type: SPE)				
Barrel Last Accessible Date	08-Mar-2013			
Special Features				
Special Feature		3	4	Missing 7 - 10 struts, only 3 remain. Not functional or required.
(Type : VERT TIMBER STRUTS)				
Special Feature				
(Type :)				
Roof		5	5	(Seepage thru bolt holes from 2.5 m to 10 m from upstream). 16-Dec-2009
Measured Rise (mm)	1800			
Measured At Ring No.	8			
Sag (mm)	120			Estimate. General roof shape is adequate.
Percent Sag	6			
Sidewall		6	6	Three holes made with blow torch up to 200mm in R1 and 2 minor loss of fill.
Measured Span (mm)	1830			
Measured At Ring No.	7			
Deflection (mm)	92			
Percent Deflection	5			
Floor		N	N	Water and silt covered. 300mm ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	Circ. seam @ 6.2: plate broken off and (welded/'91). Bolts missing where ext. meets at U/S and D/S.
Separation (mm)	10			
Longitudinal Seams		7	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			1N stagger.
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	5	Minor corrosion at bolt holes and below water line.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1738, Rise (mm): 1920, Type: SPE)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		5	5	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction				South.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	5	Minor hole in floor of bevel.
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		4	5	Cavity under bevel - undermined 2m, but mostly rock rilled.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		4	5	Pool formed @ d/s end (7.0 m x 10.0) x 0.8m deep - 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		8	8	
Bank Stability		7	7	
HWM (m below Top of Culvert)				No HWM visible.
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		8	8	

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							
Structural Condition Rating (Last/Now) (%)	55.6/55.6	Sufficiency Rating (Last/Now) (%)	54.3/55.5	Est. Repl. Yr	2020	Maint. Req. (Y/N)	No
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	09-Jun-2016		Previous Inspection Date	16-Dec-2009			
Inspection Cycle (Default) (months)	39						
Comment							