Bridge Culvert Inspection

Bridge File Number	08752 -1 Bridge Culvert	Form Type	CUL1
Year Built	1955	Lot No.	4
Bridge or Town Name	HARTELL	Inspector Name	Jon Davies
Located Over	TRIBUTARY TO TONGUE CREEK, 2.13.27.5.4, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	543:02 C1 13.745	Assistant Class	
Water Body Cl./Year		Inspection Date	02-Mar-2013
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	SW SEC 14 TWP 19 RGE 1 W5M	Data Entry Date	29-Mar-2013
Longitude, Latitude	-114:02:17, 50:36:04	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	17-Mar-2013
Contract Main. Area	CMA27	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	8 /	Dept. Review Date	08-Apr-2013
AADT/Year	1,360 / 2011 (A)	Follow-Up By	
Road Classification	RCU-208-110		
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	-	2019	SP	63	152X51	3.0	ROUND
Special Features								
Special Features Comment		Barrel has been extended with same type and diameter.						

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	7	Intersection 700m West.
Vertical Alignment		7	7	
Roadway Width (m)	8.000			
Embankment		7	7	3:1 at road side slope.
Sideslope (__:1)	2.0			
(Height of Cover(m) : **4**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		6	6	
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			Fence attached to bevel.
Above/Below (mm)	100			
Scour Protection		8	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		8	7	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2019, Type: SP**)				
Barrel Last Accessible Date	02-Mar-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	Estimate roof sag. General roof shape is adequate. R13 circumferential seam damage at roof. Up to 200mm torn steel. R14 isolated moderate cusping at West roof longitudinal seam.
Measured Rise (mm)	2130			
Measured At Ring No.	10			
Sag (mm)	111			
Percent Sag	5			
Sidewall		5	5	(Water piping through 2 bolt holes in ring # 1 along floor seam - bolts are missing) 27-Nov-2009.
Measured Span (mm)	2120			
Measured At Ring No.	9			
Deflection (mm)	101			
Percent Deflection	5			
Floor		7	N	P.R 7. Ice and water up to 500mm deep.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		5	5	Bolts missing at U/S bevel. Vertical separation at R13 roof. No infiltration.
Separation (mm)	200			
Longitudinal Seams		6	5	
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	Superficial corrosion at bolt holes and below water line.
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): , Rise (mm): 2019, Type: SP**)				
Fish Passage Adequacy		X	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	Chainlink fence across d/s end, barbed wire fence across bevels.
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		N		
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)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		4	5	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		4	5	1 m deep x 4.4 m wide x 8.5 m long - scour. 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		8	8	
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**)				
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) (%)**	**62.0/63.2**	Est. Repl. Yr	2023	Maint. Reqd. (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	02-Jun-2016	Previous Inspection Date	27-Nov-2009		
Inspection Cycle (Default) (months)	39				
Comment					