Bridge Culvert Inspection

Bridge File Number	75762 -1 Bridge Culvert	Form Type	CUL1
Year Built	1963	Lot No.	4
Bridge or Town Name	GREEN COURT	Inspector Name	Kris Bosters
Located Over	LITTLE PADDLE RIVER, 8.11.84.30.19, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Brian Cote
Located On	751:04 C1 13.380	Assistant Class	BR CLS B
Water Body Cl./Year		Inspection Date	18-Apr-2013
Navigabil. Cl./Year		Data Entry By	Lisa Fairhurst
Legal Land Location	SW SEC 15 TWP 58 RGE 10 W5M	Data Entry Date	23-Apr-2013
Longitude, Latitude	-115:24:49, 54:00:38	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	21-Apr-2013
Contract Main. Area	CMA12	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	9.5 / 20 deg. (RHF)	Dept. Review Date	01-May-2013
AADT/Year	400 / 2012 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	15		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2014	2226	SPE	63.4	152X51	2.8	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	1 wire 20m East of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	At bottom of hill to the South limiting sight distance, no passing SB.
Vertical Alignment		5	5	
Roadway Width (m)	9.500			
Embankment		4	4	Erosion gully at SW corner, 1.5m deep x 15m long.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **7.5**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
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		4	N	(Protruding from fill 300mm. Nov 10/2009)
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		4	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		4	N	
Beavers (Y/N)	Yes			Dams have been removed and channelization
Upstream End General Rating		**4**	**4**	GR carried forward Nov 10/2009

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2014, Rise (mm): 2226, Type: SPE**)				
Barrel Last Accessible Date	10-Nov-2009			Ice to midpoint barrel water flowing Viewed from ends shape looks good
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	N	
Measured Rise (mm)	2165			Damaged by debris at u/s end
Measured At Ring No.	9			
Sag (mm)	61			2.7%
Percent Sag	3			
Sidewall		7	N	
Measured Span (mm)	2090			
Measured At Ring No.	9			
Deflection (mm)	76			
Percent Deflection	4			3.8%
Floor		6	N	
Bulge (mm)	0			Minor.
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	N	
Separation (mm)	0			
Longitudinal Seams		7	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				iN
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	N	
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): 2014, Rise (mm): 2226, Type: SPE**)				
Fish Passage Adequacy		4	4	(300mm outfall at outlet. Nov 10/2009)
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	Large scour hole D/S shows undersized and bent crown shows unable to handle drift. Ice builtup at d/s end approx 0.3m
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**4**	**4**	GR carried forward from Nov 10/2009

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		Snow and ice covered
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	N	(Bevel unsupported for 1.0m. Superficial rust on floor. Nov 10/2009)
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		4	N	(10m x 10m basin off outlet. All rock has been washed D/S to form wall. Nov 10/2009)
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		4	N	
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	GR carried forward from Nov 10/2009

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		5	5	D/S end slumping.5
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**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						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**38.9/40.1**	Est. Repl. Yr	2030	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	Wade Nanninga	Previous Assistant's Name			
Next Inspection Date	18-Jul-2016	Previous Inspection Date	10-Nov-2009		
Inspection Cycle (Default) (months)	39				
Comment					