Bridge Culvert Inspection

Bridge File Number	72877 -1 Bridge Culvert	Form Type	CUL1
Year Built	1978	Lot No.	2
Bridge or Town Name	GORDONDALE	Inspector Name	Brian Pientsch
Located Over	TRIBUTARY TO HENDERSON CREEK, 8.10.97.8.9, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Brian Cote
Located On	49:02 C1 28.269	Assistant Class	
Water Body Cl./Year		Inspection Date	06-Jul-2011
Navigabil. Cl./Year		Data Entry By	Lisa Fairhurst
Legal Land Location	SW SEC 13 TWP 79 RGE 11 W6M	Data Entry Date	12-Aug-2011
Longitude, Latitude	-119:35:28, 55:50:25	Reviewer Name	Arnold Assenheimer
Road Authority	Alberta Transportation (AIT)	Review Date	13-Jul-2011
Contract Main. Area	CMA05	Dept. Reviewer Name	Steve Pasquan
Clear Roadway/Skew	10.2 / 30 deg. (RHF)	Dept. Review Date	18-Nov-2011
AADT/Year	1,140 / 2010 (A)	Follow-Up By	
Road Classification	RAU-210-110		
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	-	1500	MP	50.6	68X13	2.8	ROUND
Special Features		VERT STEEL STRUTS						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	North and South r/w 21m S and 21m N.	Gas	80m East 150m West
Power	21m South of cl-3 wire	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Distant curve (400 m to the west). Farm approach 100m E. N Side.
Vertical Alignment		8	8	
Roadway Width (m)	10.200			
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **3.5**)				
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		5	4	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	50			
Scour Protection		3	3	Erosion around bevel and undermined for 1m length.(photo)
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		4	3	Bevel undermined.
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**3**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP**)				
Barrel Last Accessible Date	06-Jul-2011			
Special Features				
Special Feature		6	6	CSP EXTENSIONS AT BOTH ENDS. Steel struts installed
(Type : **VERT STEEL STRUTS**)				
Special Feature				
(Type :)				
Roof		3	3	Measured approx. 12m from U/S end.
Measured Rise (mm)	1290			
Measured At Ring No.	1			Culvert strutted.
Sag (mm)	210			
Percent Sag	14			
Sidewall		3	3	Measured approx. 12m from U/S end.
Measured Span (mm)	1715			
Measured At Ring No.	1			
Deflection (mm)	215			
Percent Deflection	14			
Floor		5	5	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		3	3	Bottom of u/s coupler is completely rusted out. (photo)
Separation (mm)	200			
Longitudinal Seams		X	X	(CULVERT HAS A HORIZONTAL CRACK ALONG WELD, JUST N. OF 4th JOINT 20011012)
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	4	Pitting and scaling along bottom 1/3 of floor.
Corrosion By Soil (Y/N)	No			
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): 1500, Type: MP**)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	G.R raised by 1pts due to struts.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	N	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		8	8	
HWM (m below Top of Culvert)				(Drift on top of struts indicates pipe flow full.. Oct 27 2009)
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						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2011	Install internal coupler to prevent loss of fill @ rusted out coupler.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**49.6/48.6**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor horizontal crack, East side, near cl. 2001-01-12 Monitor barrel shape	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	Shane Hall	Previous Assistant's Name			
Next Inspection Date	06-Apr-2013	Previous Inspection Date	27-Oct-2009		
Inspection Cycle (Default) (months)	21				
Comment					