Bridge Culvert Inspection

Bridge File Number	77516 -1 Bridge Culvert	Form Type	CULM
Year Built	1985	Lot No.	4
Bridge or Town Name	RED EARTH CR	Inspector Name	Brian Pientsch
Located Over	TRIBUTARY TO LOON RIVER, 8.10.18.12.14, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Clem Guenette
Located On	88:06 C1 25.521	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Jun-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NE SEC 16 TWP 84 RGE 9 W5M	Data Entry Date	16-Oct-2012
Longitude, Latitude	-115:21:25, 56:17:07	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	08-Oct-2012
Contract Main. Area	CMA02	Dept. Reviewer Name	Steve Pasquan
Clear Roadway/Skew	12 /	Dept. Review Date	07-Jan-2013
AADT/Year	760 / 2011 (A)	Follow-Up By	
Road Classification	RAU-212.0-110		
Detour Length (km)	15		

Bridge Culvert Information

Number of Culverts		3						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1200	MP	22	68X13	2.8	ROUND
2	MAIN	-	1200	MP	22	68X13	2.8	ROUND
3	MAIN	-	1200	MP	22	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	7 wire 30m west	Municipal	
Others		Problem (Y/N)	No
Remarks	Sign C.P. D271 @ W side.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Approach 100m north on curve east. Superelevated.
Vertical Alignment		8	8	
Roadway Width (m)	10.200			
Embankment		6	6	
Sideslope (__:1)	6.0			
(Height of Cover(m) : **1.7**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type:**)				
Direction		E		South culvert
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type:**)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		4	4	1.5m x 0.2 x 0.2 on either side of the culvert behind the bevel.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		4	4	Scoured 500mm below invert
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Barrel Last Accessible Date				Culvert appears full 7m from the u/s end. Viewed from ends, shape and condition appear adequate. 500mm from crown. Approx 7m from u/s end.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)				
Longitudinal Seams		X	X	
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)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Coating		4	4	Pitting rust lower 1/2-viewed from ends.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	Almost full at the center
Icing (Y/N)	No			
Silting (Y/N)	No			05/05/15
Drift (Y/N)	No			
Barrel General Rating		**N**	**N**	GR 5 - date unknown

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Barrel Last Accessible Date				Culvert looks full 7m from the U/S end. Viewed from ends, shape and condition appear adequate
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)				
Longitudinal Seams		X	X	
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)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Coating		N	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	Full at the center
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**N**	GR 5 date unknown.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Barrel Last Accessible Date				Culvert almost full at centrer of barrel. Viewed from ends, shape and condition appears adequate
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)				
Longitudinal Seams		X	X	
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)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Coating		N	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	Full at the center
Icing (Y/N)	No			
Silting (Y/N)	No			05/05/15
Drift (Y/N)	No			
Barrel General Rating		**N**	**N**	GR 5 date unknown.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type:**)				
Direction		W		South culvert
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	Unsupported for 1.5m Bevel end under water.
Heaving (mm)	50			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	420			
Scour Protection		4	4	Scour 400mm wide by 1.5m long beside bevels
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		4	4	Scoured 420mm below invert
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	90 degree bend d/s.
Bank Stability		8	8	
HWM (m below Top of Culvert)				HWM not visible
Drift (Y/N)	No			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel Bottom Degrading/Aggrading	DEGRADING			At u/s channel
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**5**	

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) (%)**	**49.5/48.8**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor scour along u/s and d/s bevel ends.	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	Brian Pientsch	Previous Assistant's Name	Lisbeth Medina		
Next Inspection Date	11-Mar-2014	Previous Inspection Date	04-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					