Bridge Culvert Inspection

Bridge File Number	02158 -1 Bridge Culvert	Form Type	CUL1
Year Built	1979	Lot No.	2
Bridge or Town Name	RED EARTH CR	Inspector Name	Brian Pientsch
Located Over	TRIBUTARY TO WABASCA RIVER, 8.10.18.7, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Clem Guenette
Located On	88:12 C1 33.973	Assistant Class	
Water Body Cl./Year		Inspection Date	12-Jun-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NW SEC 2 TWP 96 RGE 9 W5M	Data Entry Date	19-Nov-2012
Longitude, Latitude	-115:21:06, 57:18:05	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	04-Nov-2012
Contract Main. Area	CMA02	Dept. Reviewer Name	David Morrison
Clear Roadway/Skew	11.8 /	Dept. Review Date	11-Jan-2013
AADT/Year	180 / 2011 (A)	Follow-Up By	
Road Classification	RAU-210-110		
Detour Length (km)	300		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2430	SP	44.5	152X51	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	In gradual sag curve.
Vertical Alignment		7	7	
Roadway Width (m)	11.800			
Embankment		7	7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **3**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

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		3	3	Bevel damaged from beaver dam removal. Heaving approx. 1.0m(photo)
Heaving (mm)	1000			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		4	4	Eroding around pipe 2.0m long X 0.5 deep.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		4	4	Erosion around bevel.
Beavers (Y/N)	No			
Upstream End General Rating		**3**	**3**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2430, Type: SP**)				
Barrel Last Accessible Date	12-Jun-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	6	Top of u/s end of barrel damaged @ 12:00. Ring 11 installation damage @ 2:00.
Measured Rise (mm)	2344			
Measured At Ring No.	6			
Sag (mm)	86			
Percent Sag	4			
Sidewall		7	7	
Measured Span (mm)	2538			
Measured At Ring No.	6			
Deflection (mm)	108			
Percent Deflection	4			
Floor		N	N	Under water.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	1N Stagger
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		4	4	Pitting bottom 1/3
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
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): 2430, Type: SP**)				
Fish Passage Adequacy		3	3	U/S end heaved
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**6**	**6**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
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)	400			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	400			
Scour Protection		4	5	Scoured on South side 1m long, 0.5m wide,0.5m deep at end of bevel.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		4	5	
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
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	2012	Cut off U/S bevel.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**48.5/49.6**	Est. Repl. Yr	2021	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor d/s scour.	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	12-Mar-2014	Previous Inspection Date	05-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					