Bridge Culvert Inspection

Bridge File Number	70876 E-1 Bridge Culvert	Form Type	CUL1
Year Built	1954	Lot No.	2
Bridge or Town Name	OBED	Inspector Name	Shane Hall
Located Over	TRIBUTARY TO ATHABASCA RIVER, 8.11.128, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	16:02 R1 46.974	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Aug-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 21 TWP 52 RGE 23 W5M	Data Entry Date	10-Sep-2012
Longitude, Latitude	-117:19:55, 53:30:08	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	31-Aug-2012
Contract Main. Area	CMA13	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	17.3 /	Dept. Review Date	18-Sep-2012
AADT/Year	5,630 / 2011 (A)	Follow-Up By	
Road Classification	RAD-412.4-120		
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1724	1901	SPE	55	152X51		ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	North r/w	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	File tag on South (U/S).		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Obed Mountain road. Entrance 100m West. Long sag curve.
Vertical Alignment		7	7	
Roadway Width (m)	12.500			
Embankment		7	7	
Sideslope (__:1)	2.5			
(Height of Cover(m) : **6**)				
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	5	Seam in bevel cusping.
Heaving (mm)	300			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	7	
Beavers (Y/N)	Yes			Large beaver dam 5 m U/S approx 2.5m high.
Upstream End General Rating		**6**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1724, Rise (mm): 1901, Type: SPE**)				
Barrel Last Accessible Date	11-Aug-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	Est rocks on floor
Measured Rise (mm)				
Measured At Ring No.	11			
Sag (mm)	130			
Percent Sag	7			
Sidewall		5	4	
Measured Span (mm)	1862			
Measured At Ring No.	11			
Deflection (mm)	138			
Percent Deflection	8			
Floor		N	N	Rock covered (up to 500 mm deep).
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		6	6	3 U/S sections have poor nesting, up to 18mm gap.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				1N stagger.
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Superficial rust lower half.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			Ponding due to negative camber. Uplift at D/S end holding water.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1724, Rise (mm): 1901, Type: SPE**)				
Fish Passage Adequacy		4	4	Hanging outlet. (However fish were seen in the culvert. 12/July/2005)
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			Rock throughout barrel. Silt @ d.s end.
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
Barrel General Rating		**5**	**4**	

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		6	6	Bevel twisting to the West. Scouring bevel projectiong from fill.
Heaving (mm)	300			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		3	3	Bevel undermined for 1m.-photo
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		3	3	
Beavers (Y/N)	No			
Downstream End General Rating		**3**	**3**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			Deg d/s. Dam u/s.
Beavers (Y/N)	Yes			
(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	2013	Additional riprap D/S 5m3.				
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) (%)	**55.6/44.4**	**Sufficiency Rating (Last/Now) (%)**	**51.4/45.4**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	Yes

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	Eric Carcoux	Previous Assistant's Name			
Next Inspection Date	11-May-2014	Previous Inspection Date	16-Sep-2010		
Inspection Cycle (Default) (months)	21				
Comment					