Bridge Culvert Inspection

Bridge File Number	73971 -1 Bridge Culvert	Form Type	CUL1
Year Built	1979	Lot No.	2
Bridge or Town Name	COALSPUR	Inspector Name	Todd Warshawski
Located Over	TRIBUTARY TO EMBARRAS RIVER, 8.11.107.33.20, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	40:24 C1 34.293	Assistant Class	
Water Body Cl./Year		Inspection Date	31-Oct-2012
Navigabil. Cl./Year		Data Entry By	Lisa Fairhurst
Legal Land Location	SE SEC 28 TWP 48 RGE 21 W5M	Data Entry Date	21-Nov-2012
Longitude, Latitude	-117:00:21, 53:10:14	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	13-Nov-2012
Contract Main. Area	CMA13	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	14.5 / -32 deg. (LHF)	Dept. Review Date	22-Nov-2012
AADT/Year	300 / 2011 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2610	2877	SPE	111.6	152X51	3.5,4.3	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	SW r/w	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	BF tag on u/s bevel		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection with Hwy 40, 100 North. On grade 4% increasing to south.
Vertical Alignment		7	7	
Roadway Width (m)	14.500			
Embankment		6	6	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **11**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		6	6	
Heaving (mm)	300			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		3	4	Scour 1.5m back along E bevel.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **450**)				
Scour/Erosion		3	4	
Beavers (Y/N)	No			
Upstream End General Rating		**3**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2610, Rise (mm): 2877, Type: SPE**)				
Barrel Last Accessible Date	31-Oct-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	6	Rocks on floor-sag est. at less than 5%
Measured Rise (mm)				
Measured At Ring No.	16			
Sag (mm)				
Percent Sag	5			
Sidewall		6	6	Small dent from install R12
Measured Span (mm)	2666			
Measured At Ring No.	18			
Deflection (mm)	56			
Percent Deflection	2			
Floor		N	N	Floor covered with rocks
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		8	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		5	6	Superficial rust along floor. Soil side corrosion leaking along floor plate edges.
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): 2610, Rise (mm): 2877, Type: SPE**)				
Fish Passage Adequacy		4	4	300mm hanging outlet.
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**6**	

Downstream 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	
Bevel End		6	6	
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		4	4	Scour along bevel 1.5 x 3 x 1m
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Scour hole about 1.5m deep, 10 m across.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		4	6	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			Deg d/s.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**6**	

Maintenance Recommendations						
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2013	40m3 CL2 u/s and d/s.				
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/66.7**	**Sufficiency Rating (Last/Now) (%)**	**44.4/59.7**	Est. Repl. Yr	2035	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	Bryan Wai	Previous Assistant's Name	Brent Herrick
Next Inspection Date	31-Jul-2014	Previous Inspection Date	03-Oct-2012
Inspection Cycle (Default) (months)	21		
Comment			