Bridge Culvert Inspection

Bridge File Number	80702 -1 Bridge Culvert	Form Type	CUL1
Year Built	1986	Lot No.	4
Bridge or Town Name	GRANDE CACHE	Inspector Name	Russel Vanderschaaf
Located Over	TRIBUTARY TO SMOKY RIVER, 8.10.58.25, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	40:36 C1 35.724	Assistant Class	
Water Body Cl./Year		Inspection Date	23-Aug-2012
Navigabil. Cl./Year		Data Entry By	Lisa Fairhurst
Legal Land Location	NE SEC 8 TWP 59 RGE 6 W6M	Data Entry Date	28-Sep-2012
Longitude, Latitude	-118:51:08, 54:05:34	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	24-Sep-2012
Contract Main. Area	CMA05	Dept. Reviewer Name	Steve Pasquan
Clear Roadway/Skew	10.2 / 10 deg. (RHF)	Dept. Review Date	07-Jan-2013
AADT/Year	1,220 / 2011 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	60		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2134	SP	121.3	152X51	5.0	ROUND
Special Features		FLOOR ABR PLATES, BARREL ELBOW						
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		6	6	On a gentle curve and a grade (est 4%). No passing SB due to a crest curve. 7% Grade to the west.
Vertical Alignment		4	4	
Roadway Width (m)	10.200			
Embankment		7	7	D/S has 1:1 and > 5:1 slopes 21m D/S.
Sideslope (__:1)	1.0			
(Height of Cover(m) : **9**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**4**	**4**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		7	7	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		N	7	80% Sandstone
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2134, Type: SP**)				
Barrel Last Accessible Date	23-Aug-2012			
Special Features				
Special Feature		7	7	Heavy abrasion. No perforations. Plates at 2 and 4 bent. AT ring 25
(Type : **FLOOR ABR PLATES**)				
Special Feature		7	7	
(Type : **BARREL ELBOW**)				
Roof		7	7	Assume 50mm for plates
Measured Rise (mm)	2139			
Measured At Ring No.	23			
Sag (mm)	5			
Percent Sag	1			
Sidewall		7	7	
Measured Span (mm)	2014			
Measured At Ring No.	23			
Deflection (mm)	40			
Percent Deflection	2			
Floor		7	N	Abrasion plates
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				3N Stagger
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Minor superficial on abrasion plates.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2134, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	Too steep
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	
Icing (Y/N)	No			Minor rock and drift buildup at inlet
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
Barrel General Rating		**7**	**7**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		7	7	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **600**)				
Scour/Erosion		N	7	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Culvert)	2.1			Minor rock and drift buildup at inlet.-photo
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			DEG D/S
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**8**	

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) (%)	**77.8/77.8**	**Sufficiency Rating (Last/Now) (%)**	**47.7/48.3**	Est. Repl. Yr	2031	Maint. Reqd. (Y/N)	No

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	Russel Vanderschaaf	Previous Assistant's Name	
Next Inspection Date	23-May-2014	Previous Inspection Date	19-Nov-2010
Inspection Cycle (Default) (months)	21		
Comment			