Bridge Culvert Inspection

Bridge File Number	76042 -1 Bridge Culvert	Form Type	CUL1
Year Built	1965	Lot No.	4
Bridge or Town Name	SWAN HILLS	Inspector Name	Russel Vanderschaaf
Located Over	TRIBUTARY TO CHALMERS CK, 8.11.80.39.15.2, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	33:14 C1 3.519	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Feb-2013
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 14 TWP 69 RGE 9 W5M	Data Entry Date	13-Apr-2013
Longitude, Latitude	-115:15:40, 54:58:08	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	07-Apr-2013
Contract Main. Area	CMA06	Dept. Reviewer Name	
Clear Roadway/Skew	10.7 /	Dept. Review Date	
AADT/Year	770 / 2012 (A)	Follow-Up By	
Road Classification	RAU-210-110		
Detour Length (km)	99		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3050	SP	82.9	152X51	4.2	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 wire East r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curve north end.
Vertical Alignment		7	7	Sag curve south end with intersection. No passing.
Roadway Width (m)	10.700			
Embankment		6	6	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **10.5**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	Hairline crack on face.
Collar		N	N	Under snow
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		N	N	Under ice/snow
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			Couldn't tell due to snow.
Above/Below (mm)	500			
Scour Protection		N	N	Under snow
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	Scour 1mx1mx0.8 deep at cut off wall.-24-Jul-2009 Under ice.
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	GR carried fwd.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3050, Type: SP**)				
Barrel Last Accessible Date	24-Jul-2009			Ice 2.1m to culvert crown and 1.5m @ CL.
Special Features				
Special Feature				Only measured to R14 due to ice height.
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	estimated due to ice.
Measured Rise (mm)	3020			
Measured At Ring No.	14			
Sag (mm)	30			
Percent Sag	1			
Sidewall		N	7	
Measured Span (mm)	3102			
Measured At Ring No.	14			
Deflection (mm)	52			
Percent Deflection	2			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.	14			
Abrasion (Y/N)	Yes			
Circumferential Seams		N	6	
Separation (mm)	0			
Longitudinal Seams		N	6	1N stagger.-24-Jul-2009
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		N	4	Pitting rust 1m strip of floor (along floor).-24-Jul-2009
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): , Rise (mm): 3050, Type: SP**)				
Fish Passage Adequacy		3	3	d/s end above S.B. -photo
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	(Icing-Scour d/s.-24-Jul-2009
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**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		N	N	Bolts pulled through top edge of bevel. Bevel pulled downwards and unsupported for 1.5 m. (photo)-24-Jul-2009 Snow covered.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1500			
Scour Protection		N	N	Scoured d/s -filled with rock.-24-Jul-2009 Couldn't tell due to snow.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		N	N	Under snow.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	GR carried fwd.

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. d/s channel
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			(Downstream is degraded only - 1.0m.
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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/66.7**	**Sufficiency Rating (Last/Now) (%)**	**39.9/45.3**	Est. Repl. Yr	2022	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor d/s end.	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-Nov-2014	Previous Inspection Date	05-Apr-2011		
Inspection Cycle (Default) (months)	21				
Comment					