

Bridge Culvert Inspection			
Bridge File Number	76642 -1 Bridge Culvert	Form Type	CULM
Year Built/Lined	1973/2003	Lot No.	4
Bridge or Town Name	KINUSO	Inspector Name	Russel Vanderschaaf
Located Over	STONEY CREEK, 8.11.80.39.10, WATERCRS-ST	Inspector Class	BR CLS B
Located On	33:14 C1 15.920	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	12-Feb-2013
Legal Land Location	SE SEC 21 TWP 70 RGE 9 W5M	Data Entry By	Lisa Fairhurst
Longitude, Latitude	-115:18:07, 55:04:33	Data Entry Date	08-Apr-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA06	Review Date	07-Apr-2013
Clear Roadway/Skew	10.7 / -25 deg. (LHF)	Dept. Reviewer Name	
AADT/Year	770 / 2012 (A)	Dept. Review Date	
Road Classification	RAU-210-110	Follow-Up By	
Detour Length (km)	99		

Bridge Culvert Information

Number of Culverts	3							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN Partially Lined	4095	4515	SPE	85.3	152X51	4.0	ELLIPSE
2	MAIN	-	800	MP	87.7	125X26	2.8	ROUND
3	MAIN PARTIAL LINER	-	3600	MP	60	125X26	4.2	ROUND
Special Features	SHOTCRETE BEAM							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 wires 30m East r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curve to the South, direction of passing changes over bottom of sag.
Vertical Alignment		7	7	
Roadway Width (m)	10.700			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : 8.3)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		7	7	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type:)				
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type:)				
Collar		6	6	Minor spalling in SE corner
Wingwalls (Shape :)		X	X	
Cutoff Wall		N	N	
Bevel End		7	7	Concrete on floor of bevel.-24-Jul-2009
Heaving (mm)	300			Ice covered Rate based on 60% visibility
Invert Above/Below Stream Bed	BELOW			Couldn't tell due to snow cover.
Above/Below (mm)	200			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 600)		N	N	Under snow
Scour/Erosion		N	N	Under snow.
Beavers (Y/N)	No			
Upstream End General Rating		6	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 4095, Rise (mm): 4515, Type: SPE)				
Barrel Last Accessible Date	12-Feb-2013			Unlined Section after liner S=4054, R=4511 - 24 Jul 2009
Special Features				
Special Feature (Type : SHOTCRETE BEAM)		N	7	
Special Feature (Type :)				
Roof		5	N	
Measured Rise (mm)	4401			ice 3.2m from crown
Measured At Ring No.	8			no measurement
Sag (mm)	114			
Percent Sag	3			
Sidewall		N	4	(Sidewall is dimpled at bolts at 5:00 across from shotcrete. 29 Jul 2009)
Measured Span (mm)	4128			
Measured At Ring No.				approx 200mm shotcrete 17.6m from end of liner
Deflection (mm)	167			
Percent Deflection	4			
Floor		N	N	ice covered
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	5	
Separation (mm)	0			
Longitudinal Seams		N	N	Poor nesting of plates, bolts appear tilted on 10:00 and 2:00 o'clock position. 5:00 o'clock seam across from shotcrete is dimpled at bolts. Ring 8 has cracks at 5:00 - photo. -24-Jul-2009 cracked seams under ice - due to water height
Total No. of Cracked Rings	1			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	110			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 4095, Rise (mm): 4515, Type: SPE)				
Coating		6	6	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	Yes			
Fish Passage Adequacy		3	X	D/S wiers.
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	D/S drop off caused by high outlet velocities.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	4	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 800, Type: MP)				
Barrel Last Accessible Date				Could not view due to snow
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)				
Longitudinal Seams		N	N	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 800, Type: MP)				
Coating		N	N	(Minor superficial rust. 2002/08/01)
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	3m drop off at end of pipe.
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	(Acts as overflow for ditch line. 2002/08/01)
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	4	G.R. was "7" from 14/Mar/2006.

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3600, Type: MP)				
Barrel Last Accessible Date	12-Feb-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	Ice 2.8m from crown
Measured Rise (mm)	3700			no measurement - est.
Measured At Ring No.				
Sag (mm)	100			
Percent Sag	3			
Sidewall		7	7	19m from u/s end
Measured Span (mm)	3493			
Measured At Ring No.	2			
Deflection (mm)	107			
Percent Deflection	3			
Floor		N	N	Ice covered
Bulge (mm)	0			
Measured At Ring No.	2			
Abrasion (Y/N)	No			
Circumferential Seams		N	7	
Separation (mm)	0			
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3600, Type: MP)				
Coating		5	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		3	3	Drop off at outlet, high stream velocity.
Baffle		X	X	(Type :)
Waterway Adequacy		4	4	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		7	7	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type:)				
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		4	4	Bevel hanging.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	2000			
Scour Protection (Type : RIP RAP)		6	N	Snow covered
(Avg. Rock Size(mm) : 1000)				
Scour/Erosion		6	N	
Beavers (Y/N)	No			
Downstream End General Rating		4	4	

Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		4	4	Vertical banks D/S, approx 5.7m high on outside of meander.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	DEGRADING			D/S only.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		4	4	

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) (%)	44.4/44.4	Sufficiency Rating (Last/Now) (%)	34.5/34.4	Est. Repl. Yr	2018	Maint. Req. (Y/N)	No
Special Comments for Next Inspection	Monitor seams at ring 8 - 24 Jul 2009 - could not confirm due to ice height		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-Nov-2014		Previous Inspection Date	05-Apr-2011			
Inspection Cycle (Default) (months)	21						
Comment							