

Bridge Culvert Inspection			
Bridge File Number	78164 -1 Bridge Culvert	Form Type	CULM
Year Built	1976	Lot No.	2
Bridge or Town Name	DONNELLY	Inspector Name	Brian Pientsch
Located Over	WINAGAMI/GIROUXVILLE CANAL, 8.10.58.3.5, WATERCRS-ST	Inspector Class	BR CLS A
Located On	2:58 C1 1.606	Assistant Name	Clem Guenette
Water Body Cl./Year		Assistant Class	BR CLS B
Navigabil. Cl./Year		Inspection Date	14-Dec-2012
Legal Land Location	NW SEC 1 TWP 78 RGE 21 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-117:07:53, 55:44:16	Data Entry Date	24-Jan-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA03	Review Date	09-Jan-2013
Clear Roadway/Skew	12.7 /	Dept. Reviewer Name	David Morrison
AADT/Year	2,150 / 2011 (A)	Dept. Review Date	19-Mar-2013
Road Classification	RAU-213.4-120	Follow-Up By	
Detour Length (km)	300		

**Bridge Culvert Information**

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2134	SP	28	152X51	3.5	ROUND
2	MAIN	-	2134	SP	28	152X51	3.5	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone		Gas	
Power	4 wire O/H along west ditch	Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Farm entrance 50m North 55 km/h signs (BUMP)
Vertical Alignment	8	3	
Roadway Width (m)	12.700		
Embankment	8	8	
Sideslope (__:1)	4.0		
(Height of Cover(m) : 2)			
Guardrail (Y/N)	Yes		
<b>Approach Road / Embankment General Rating</b>	<b>7</b>	<b>7</b>	

**Upstream End**

Culvert Component	Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>			
Direction	E		North Pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	6	6	Gabion headwall.
Collar	N	N	Under snow.
Wingwalls	X	X	
(Shape : )			

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Cutoff Wall		N	N	
Bevel End		5	N	(Scaling & pitting rust on floor. May 5, 2009. Snow Covered)
Heaving (mm)	200			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	Overgrown with grass.-05-May-2009 Snow covered
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		N	N	Snow covered
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	GR carried forward.
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2134, Type: SP)</b>				
Barrel Last Accessible Date	14-Dec-2012			North pipe. 1968mm ice to crown
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		6	6	(Deflection is upward. May 5, 2009) Measurements not taken due to ice on floor.
Measured Rise (mm)	2185			
Measured At Ring No.	4			
Sag (mm)	51			
Percent Sag	2			
Sidewall		6	6	Deflection inward.
Measured Span (mm)	2056			
Measured At Ring No.	5			
Deflection (mm)	78			
Percent Deflection	0			
Floor		N	N	Ice on floor.
Bulge (mm)	0			
Measured At Ring No.	4			
Abrasion (Y/N)	No			
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				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			1N stagger
Coating		4	4	Scaling & pitting rust above ice level.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2134, Type: SP)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>6</b>	<b>6</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		W		(North pipe)
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	N	(Scaling and pitting rust. May 9, 2009) Snow Covered.
Heaving (mm)	250			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		N	N	Riprap and gabions.-09-May-2009 Snow covered
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		N	N	600 mm deep scour @ end of pipe. (Bevel end not supported for 2 meters. 05 May 2009) Snow Covered.
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>3</b>	<b>3</b>	GR Carried forward.
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		E		(South pipe)
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	Gabion headwall.
Collar		N	N	Under snow.
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Bevel End		5	N	(Pitting & scaling rust on floor. May 5, 2009) Snow covered
Heaving (mm)	200			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	Couldn't tell - under snow.
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>200</b> )				
Scour/Erosion		N	N	(Overgrown with grass. May 5, 2009) Snow covered.
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	GR carried fwd.
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2134, Type: SP)</b>				
Barrel Last Accessible Date	14-Dec-2012			South pipe. 1857mm ice to crown
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		6	6	End of barrel bent down slightly. (Deflection upward. May 5, 2009) Est due to ice.
Measured Rise (mm)	2175			
Measured At Ring No.	4			
Sag (mm)	41			
Percent Sag	2			
Sidewall		6	6	Deflection inward.
Measured Span (mm)	2081			
Measured At Ring No.	5			
Deflection (mm)	53			
Percent Deflection	0			
Floor		N	N	Covered with ice.
Bulge (mm)	0			
Measured At Ring No.	4			
Abrasion (Y/N)	No			
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				
Min. Remaining Steel Between Cracks (mm)				1N stagger.
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		4	4	Pitting above ice level.
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 # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2134, Type: SP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	6	
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>6</b>	<b>6</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		W		South pipe
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	5	800 mm x 120 mm dent at 12 o'clock.
Heaving (mm)	250			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		N	N	Riprap and gabions.-05-May-2009 Snow covered
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	N	(600 mm deep scour @ end of pipe. Bevel end not supported for 2m. May 5, 2009) Snow covered.
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>3</b>	<b>3</b>	GR carried forward.
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		8	8	
Bank Stability		8	8	
HWM (m below Top of Culvert)				No HWM visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>8</b>	<b>8</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2013	(Fill in scour hole & beneath bevels @ D/S end. May 5, 2009)					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2013	Repair bump on road (possibly unsuitable material used above pipe.)					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>66.7/66.7</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>63.1/63.0</b>	Est. Repl. Yr	2020	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor erosion and rust. Unable to determine if maintenance was done due to snow.		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	14-Sep-2014		Previous Inspection Date	26-Jan-2011			
Inspection Cycle (Default) (months)	21						
Comment							