

Bridge Culvert Inspection				
Bridge File Number	08519 -1 Bridge Culvert		Form Type	CUL1
Year Built	1959		Lot No.	4
Bridge or Town Name	BUFFALO LAKE		Inspector Name	Brian Pientsch
Located Over	NIOBE CREEK, 8.10.58.18.2.8, WATERCRS-ST		Inspector Class	BR CLS A
Located On	59:02 C1 44.387		Assistant Name	Brian Cote
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	05-Jul-2011
Legal Land Location	SW SEC 6 TWP 74 RGE 7 W6M		Data Entry By	Lisa Fairhurst
Longitude, Latitude	-119:03:56, 55:22:27		Data Entry Date	12-Aug-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Arnold Assenheimer
Contract Main. Area	CMA05		Review Date	13-Jul-2011
Clear Roadway/Skew	11.8 /		Dept. Reviewer Name	Steve Pasquan
AADT/Year	930 / 2010 (A)		Dept. Review Date	16-Nov-2011
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	13			

**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	33.5	152X51	3.5	ELLIPSE
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments				
Telephone	South ditch.		Gas	
Power	2 wire o/h along North ditch.		Municipal	
Others			Problem (Y/N)	No
Remarks				

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Horizontal curve to W., with important intersection. Turning lane WBL.
Vertical Alignment		8	8	
Roadway Width (m)	12.300			
Embankment		4	4	Scour 1m deep x 1.2m wide x 7m long on NW side of the culvert invert. Gully 0.8m deep x 1.5 x 6m long - SE side of u.s culvert invert.
Sideslope (___:1)	2.0			
(Height of Cover(m) : 1.5)				
Guardrail (Y/N)	Yes			G-rail N. side only. NW of culvert.
<b>Approach Road / Embankment General Rating</b>		<b>6</b>	<b>6</b>	

**Upstream End**

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	150			
Scour Protection		4	4	Bevel extends 800mm from fill westside erosion on bevel sides. EDGES OF BEVEL HEAVILY VEGETATED WITH WILLOWS. Visible through snow.
(Type : <b>NONE</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		4	4	West side erosion 2m x 1.0m x 0.8m.
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>4</b>	
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	25-Nov-2009			could only inspect first half due to depth of water.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		6	6	Minor corrosion through bolts. D/s half appeared to be in good condition.
Measured Rise (mm)	2790			
Measured At Ring No.	5			
Sag (mm)	87			
Percent Sag	3			
Sidewall		6	6	
Measured Span (mm)	2746			
Measured At Ring No.	5			
Deflection (mm)	136			
Percent Deflection	5			
Floor		N	N	Pitting and scaling rust lower half.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		X	6	Could not inspect d/s half, no cracks for first 5 rings.
Separation (mm)	0			
Longitudinal Seams		6	N	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)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		4	4	Pitting, scaling rust lower half. Alkali deposits @ 3 & 9 o'clock seams indicate soil side corrosion.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

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)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type : )				
Waterway Adequacy		4	4	D/S scour.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			Branches on bevel.
<b>Barrel General Rating</b>		<b>6</b>	<b>6</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		S		
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)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	450			
Scour Protection		N	4	
(Type : <b>NONE</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		N	4	Scourhole approx. 15m long,10m wide
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>4</b>	<b>4</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		6	6	
Bank Stability		5	5	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>6</b>	<b>6</b>	

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							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>66.7/66.7</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>54.1/54.2</b>	Est. Repl. Yr	2019	Maint. Req'd. (Y/N)	No
Special Comments for Next Inspection	Monitor scour erosion @ N and S ditches.		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	05-Apr-2013		Previous Inspection Date	25-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							