

Bridge Culvert Inspection				
Bridge File Number	00525 -1 Bridge Culvert		Form Type	CUL1
Year Built	1961		Lot No.	1
Bridge or Town Name	BRUDERHEIM		Inspector Name	Jason Saly
Located Over	BEAVERHILL CREEK, 6.62, WATERCRS-ST		Inspector Class	BR CLS A
Located On	45:04 C1 8.230		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	23-Jan-2013
Legal Land Location	SW SEC 11 TWP 56 RGE 20 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-112:52:36, 53:49:13		Data Entry Date	22-Feb-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA14		Review Date	13-Feb-2013
Clear Roadway/Skew	10.5 /		Dept. Reviewer Name	Chris Black
AADT/Year	540 / 2011 (A)		Dept. Review Date	28-Mar-2013
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	3			

**Bridge Culvert Information**

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	7620	4496	AP	77.6			ARCH
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments				
Telephone	Plowed in West ditch.		Gas	
Power	7 wire OH 20m East c/l (high voltage).		Municipal	
Others			Problem (Y/N)	No
Remarks	"Beaverhill Creek" sign @ SE embankment only - NB.			

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Two farm approaches 70m South, 1 farm approach 150m North. Hill to North.
Vertical Alignment		7	7	
Roadway Width (m)	11.000			
Embankment		7	N	
Sideslope ( __:1)	3.0			
(Height of Cover(m) : <b>6.9</b> )				
Guardrail (Y/N)	Yes			Minor creasing.
<b>Approach Road / Embankment General Rating</b>		<b>7</b>	<b>7</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		5	5	Separation of 150mm between barrel and wingwall. Wings are cracking, minor.
(Shape : )				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				Ice covered, could not determine.
Above/Below (mm)				
Scour Protection		5	N	(Overgrown with vegetation. 06Jun2011) - Snow covered.
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		5	N	(Very minor erosion gully @ SE wingwall, no problem. No scouring behind wingwall gap. 06Jun2011) - Snow covered.
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 7620, Rise (mm): 4496, Type: AP)</b>				
Barrel Last Accessible Date	14-Dec-1997			Viewed barrel from each end, no major defects noticed. Ice within 900mm of roof at W end, 1.0m at E end.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	N	(The first & second const joints have spalls, none serious. 97/12/14).
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				(03/03/26)
Abrasion (Y/N)	No			
Circumferential Seams		N	N	(Settlement from increased fill at center has resulted in misalignment of construction sections. The East is misaligned 110mm and the West is pulled apart 60mm. 1999/10/20).
Separation (mm)	80			
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)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	NEG			(Negative camber of 640mm as calculated from measuring off of ice. 1999/10/20).

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 7620, Rise (mm): 4496, Type: AP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type : )				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	G.R. carried forward since 14Dec1997.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		5	5	160mm separation of wingwall from barrel similar to U/S end. Wings are cracking. Est 10mm cracks. Parging loose.
(Shape : )				
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				Could not determine, ice covered.
Above/Below (mm)				
Scour Protection		5	N	(Overgrown with vegetation. 06Jun2011).
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			(Drift along headwall height. 03/03/26).
Channel Bottom Degrading/Aggrading				Cannot determine.
Beavers (Y/N)	Yes			Beaver dam across channel, 60m U/S.
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>7</b>	<b>7</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	2013	Consider dewater to inspect floor.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>44.4/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>55.0/55.0</b>	Est. Repl. Yr	2031	Maint. Req. (Y/N)	No
Special Comments for Next Inspection	It has been 16yrs or about 9 cycles since the barrel was accessed.		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	Jason Saly		Previous Assistant's Name				
Next Inspection Date	23-Oct-2014		Previous Inspection Date	06-Jun-2011			
Inspection Cycle (Default) (months)	21						
Comment							