Bridge Culvert Inspection

Bridge File Number	73652 -1 Bridge Culvert	Form Type	CUL1
Year Built	1963	Lot No.	4
Bridge or Town Name	BRUDERHEIM	Inspector Name	Jason Saly
Located Over	TRIBUTARY TO BEAVERHILL CREEK, 6.62.2, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	45:04 C1 2.868	Assistant Class	
Water Body Cl./Year		Inspection Date	23-Jan-2013
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	NW SEC 33 TWP 55 RGE 20 W4M	Data Entry Date	28-Feb-2013
Longitude, Latitude	-112:55:34, 53:48:00	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	13-Feb-2013
Contract Main. Area	CMA14	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	11.1 / -45 deg. (LHF)	Dept. Review Date	14-Mar-2013
AADT/Year	540 / 2011 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
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	-	1829	CP	45.1			ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	Plowed in West ditch.	Gas	
Power	5 wire OH 7m West of c/l.	Municipal	Street lights along East shoulder.
Others	"49 Ave" sign West side.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Within town boundary, speed limit 50 km/hr. Residence and business approaches along West side of Hwy 45 ave intersection 20m South.
Vertical Alignment		6	6	
Roadway Width (m)	11.100			
Embankment		7	N	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1.6**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		4	4	Bevelled end separating, gap 165 at bottom, 65 at top. Bell pulled out of spigot & misaligned 40mm vertically. No adverse effects noted at this time.
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		5	N	(Abundance of grasses and willows along watercourse. 06Jun2011) - Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1829, Type: CP**)				
Barrel Last Accessible Date	23-Jan-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	Ice, not measured.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		5	5	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	(Silt in W half of pipe. 06Jun2011) - Ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	4	4 seams where spigot end has not been properly seated into bell end. No grout ever installed. D/S seam has a gap. No action required at this time.
Separation (mm)	160			
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	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1829, Type: CP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	(Upto 200mm silt in the W half of the pipe. 06Jun2011).
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	Minor abrasion.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		5	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		5	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Curves U/S and D/S.
Bank Stability		7	N	(Well vegetated. 06Jun2011) - Snow covered.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**5**	

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) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**57.8/57.8**	Est. Repl. Yr	2029	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Currently no problems with dislodged bevel. Continue regular inspection & repair when conditions change.	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					