

Bridge Culvert Inspection				
Bridge File Number	73866 -1 Bridge Culvert		Form Type	CUL1
Year Built	1952		Lot No.	1
Bridge or Town Name	MUNSON		Inspector Name	Owen Salava
Located Over	TRIBUTARY TO WEST MICHICHI CREEK, 3.35.2.2, WATERCRS-ST		Inspector Class	BR CLS A
Located On	9:06 C1 16.108		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	02-Nov-2011
Legal Land Location	SW SEC 26 TWP 30 RGE 20 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-112:43:26, 51:35:41		Data Entry Date	29-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA21		Review Date	14-Nov-2011
Clear Roadway/Skew	9.6 / -29 deg. (LHF)		Dept. Reviewer Name	Chris Black
AADT/Year	2,350 / 2010 (A)		Dept. Review Date	25-Jan-2012
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	5			

Bridge Culvert Information								
Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	-	1500	SP	73.8	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	West ditch.	Gas	
Power	2 wire OH East ditch (F1).	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	On grade North.
Vertical Alignment		7	7	
Roadway Width (m)	9.600			Cracks both sides of pipe in ACP, sealed.
Embankment		5	5	Small erosion channel over both ends, not affecting sideslopes, ingrown. At East.
Sideslope (__:1) (Height of Cover(m) : 4.8)	3.0			
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		7	7	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		18.8 new extension.
End Treatment (Concrete, Steel, Others, None)	STEEL			
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		5	5	Bevel projects from fill 400mm & undermined @ both sides. Dented @ North side.
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		4	3	(Water allowed to run along outside South edge of bevel, could cause piping. Void on North side 1.8m deep. 15/Apr/2007). Unable to confirm, no flow.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		3	3	Fines washed out from South edge of bevel, just riprap showing, undermining South edge & under bevel.
Beavers (Y/N)	No			
Upstream End General Rating		3	3	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: SP)				
Barrel Last Accessible Date	02-Nov-2011			U/S 1412 x 1610.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	(Piping along barrel to ring 3. 2 nuts missing @ 2 loose @ R6 & 16 @ 11:00. 15/Apr/2007) Large hole @ R16, 11:00. Several nuts were not fully engaged.
Measured Rise (mm)	1450			
Measured At Ring No.	16			
Sag (mm)	50			
Percent Sag	3			
Sidewall		5	5	3.3%
Measured Span (mm)	1590			
Measured At Ring No.	14			
Deflection (mm)	90			
Percent Deflection	6			
Floor		4	4	Corrosion pitting @ floor.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		5	5	Improper lap in original pipe. Proper lap in extensions. 1N stagger in original pipe. No stagger in extensions.
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)	No			
Coating		4	4	Some pitting. Rust coming through bolt holes, sounds solid.
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): , Rise (mm): 1500, Type: SP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	X	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		5	5	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
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)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	900			
Scour Protection		3	3	Perched outlet. Minimal riprap.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	3	Scour hole 1m deep x 8m x 4m.
Beavers (Y/N)	No			
Downstream End General Rating		3	3	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		4	4	Sharp curve at U/S, enters at 90 degree.
Bank Stability		6	6	Well vegetated, stable banks.
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		4	4	

Maintenance Recommendations													
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	Structural Condition Rating (Last/Now) (%)	Sufficiency Rating (Last/Now) (%)	54.7/61.0	Est. Repl. Yr	2020	Maint. Req'd. (Y/N)	Yes
SHOTCRETE REPAIRS													
PLACE ADDITIONAL RIP RAP	2012	Place additional 20m3 Class 1 U/S & D/S.											
REMOVE DRIFT ACCUMULATION													
INSTALL CONCRETE/STEEL LINING													
INSTALL STRUTS													
INSTALL CONCRETE COLLAR/CUTOFF													
REPAIR SEAMS													
OTHER ACTION	2012	Clay seal - 25m3 @ U/S & D/S ends.											
OTHER ACTION													
OTHER ACTION													
OTHER ACTION													
Special Comments for Next Inspection							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			02-Aug-2013			Previous Inspection Date			10-Mar-2010				
Inspection Cycle (Default) (months)			21										
Comment													

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2012	Place additional 20m3 Class 1 U/S & D/S.	Programmed	2013		
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2012	Clay seal - 25m3 @ U/S & D/S ends.	Programmed	2012		
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
Structural Condition Rating (Last/Now) (%)	55.6/55.6	Sufficiency Rating (Last/Now) (%)	54.7/61.0	Est. Repl. Yr	2020	Maint. Req. (Y/N) Yes
Special Comments for Next Inspection			Department Comments	Programmed for replacement in PMA in 2027. DA		
Maintenance Reviewed By	Darron Ahlstedt		Date	29-Oct-2012	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	02-Aug-2013		Previous Inspection Date	10-Mar-2010		
Inspection Cycle (Default) (months)	21					
Comment						