

Bridge Culvert Inspection			
Bridge File Number	86210 -1 Bridge Culvert	Form Type	CUL1
Year Built	1970	Lot No.	1
Bridge or Town Name	WATERCOURSE CULVERT ON HWY 686 NEAR TROUT LAKE	Inspector Name	Brian Pientsch
Located Over	WATERCOURSE, WATERCRS-NI	Inspector Class	BR CLS A
Located On	686:12 C1 31.630	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	10-Jan-2013
Legal Land Location	NE SEC 9 TWP 87 RGE 4 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-114:33:60, 56:31:50	Data Entry Date	04-Feb-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA02	Review Date	23-Jan-2013
Clear Roadway/Skew	9 / 35 deg. (RHF)	Dept. Reviewer Name	David Morrison
AADT/Year	360 / 2011 (A)	Dept. Review Date	21-Mar-2013
Road Classification	RCU-208G-90	Follow-Up By	
Detour Length (km)	999		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1500	MP	35.9	68X13		ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments				
Telephone	W. ROW	Gas		
Power	3 line .0.4 in W. ROW	Municipal		
Others		Problem (Y/N)	No	
Remarks				

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Limited Sight Distance to North approx. 150m :1N bottom of sag curve.
Vertical Alignment		5	5	
Roadway Width (m)	8.000			
Embankment		3	3	Vertical embankment 2m from road shoulder due to erosion at d/s end (photo)
Sideslope (__:1)	2.0			
(Height of Cover(m) : 3.5)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		3	3	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	NONE			
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	N	Minor damage from beaver dam removal.-12-Nov-2008 Snow covered
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	0			
Scour Protection		3	N	No scour protection.-12-Nov-2008 Snow covered
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		3	N	Erosion around both sides of bevel. Hole in embankment on N. side due to erosion (photo).-12-Nov-2008
Beavers (Y/N)	Yes			
Upstream End General Rating		3	3	GR carried fwd.
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP)				
Barrel Last Accessible Date	12-Nov-2008			Icing to 600mm to top of u/s crown.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	N	(Localized roof flattening @ 11:00 position @ stn. 25.3m. @ Stn. 22.9m)12-Nov-2008 Some arching capabilities remain.-12-Nov-2008
Measured Rise (mm)	1380			
Measured At Ring No.				
Sag (mm)	144			
Percent Sag	9			
Sidewall		4	N	@ stn. 22.9m
Measured Span (mm)	1640			
Measured At Ring No.				
Deflection (mm)	116			
Percent Deflection	8			
Floor		2	N	Extensive Perforations in floor due to corrosion. Pitting rust in majority of couplers (photo).-12-Nov-2008
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		4	N	
Separation (mm)	0			
Longitudinal Seams		5	N	Riveted Pipe.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		2	N	Perforations in floor @ d/s end (photo). 40mm diameter & max. hole size.-12-Nov-2008
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: MP)					
Ponding (Y/N)	No				
Fish Passage Adequacy		3	3	Perched invert at d/s end.	
Baffle		X	X		
(Type :)					
Waterway Adequacy		4	4	Appears too small for anticipated flows. At u/s due to drift blockage in pipe. Drift in pipe (photo).-12-Nov-2008	
Icing (Y/N)	No				
Silting (Y/N)	Yes				
Drift (Y/N)	Yes				
Barrel General Rating		2	2	GR carried forward.	
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
Direction		E			
End Treatment (Concrete, Steel, Others, None)	NONE				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape :)					
Cutoff Wall		X	X		
Bevel End		2	2	Bevel end torn off and rests d/s (photo). End of pipe undermined approx. 3m from existing end.	
Heaving (mm)	0				
Invert Above/Below Stream Bed	ABOVE				
Above/Below (mm)	800				
Scour Protection		2	2	No scour protection . Significant channel and road embankment erosion.	
(Type :)					
(Avg. Rock Size(mm) :)					
Scour/Erosion		2	2	Large scour hole 10m x 10m x 0.5m deep at d/s end (photo).	
Beavers (Y/N)	No				
Downstream End General Rating		2	2		
Structure Usage					
		Last	Now	Explanation of Condition	
Channel (U/S and D/S)					
Alignment		4	4	Good alignment u/s Channel bends 90 degrees from outlet.	
Bank Stability		3	3	Bank slumping at d/s end due to erosion caused by culvert alignment and high velocities. Natural banks appear stable.	
HWM (m below Top of Culvert)	-1.5			HWM (1.5m above top of culvert) likely due to blockage caused by drift/Beavers.-12-Nov-2008	
Drift (Y/N)	Yes				
Channel Bottom Degrading/Aggrading	DEGRADING				
Beavers (Y/N)	Yes				
(Fish Compensation Measure 1 : NONE)					
(Fish Compensation Measure 2 : NONE)					
Channel General Rating		4	3		

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	Replace					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	22.2/22.2	Sufficiency Rating (Last/Now) (%)	9.1/8.3	Est. Repl. Yr	2013	Maint. Reqd. (Y/N)	Yes
Special Comments for Next Inspection	Monitor d/s scour and embankment erosion until replaced. Tender documents for replacement have been prepared.-EDC-23-Jan-2012		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	Shane Hall		Previous Assistant's Name				
Next Inspection Date	10-Apr-2016		Previous Inspection Date	12-Nov-2008			
Inspection Cycle (Default) (months)	39						
Comment							