

Bridge Culvert Inspection			
Bridge File Number	75907 -1 Bridge Culvert	Form Type	CULM
Year Built/Lined	1965/1988	Lot No.	1
Bridge or Town Name	FT MCMURRAY	Inspector Name	Wade Nanninga
Located Over	HANGINGSTONE RIVER, 8.11.39.1, WATERCRS-ST	Inspector Class	BR CLS A
Located On	63:10 C1 16.732	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	17-Nov-2011
Legal Land Location	NW SEC 33 TWP 85 RGE 9 W4M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-111:22:30, 56:25:07	Data Entry Date	23-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA07	Review Date	23-Nov-2011
Clear Roadway/Skew	13.2 /	Dept. Reviewer Name	Brent Herrick
AADT/Year	3,910 / 2010 (A)	Dept. Review Date	15-Dec-2011
Road Classification	RAU-213.4-120	Follow-Up By	
Detour Length (km)	250		

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
3	MAIN FULL LINER	-	3900	SP	62.2	152X51		ROUND
4	MAIN FULL LINER	-	3900	SP	62.2	152X51		ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	East & West r/w.	Gas	
Power	3 wires OH 75 m East.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	In bottom of long sag curve. Long uphill grade in both directions. Limited sight distance. No passing. Passing lane to both directions.
Vertical Alignment	6	6	
Roadway Width (m)	16.900		
Embankment	7	7	
Sideslope (__:1)	2.0		
(Height of Cover(m) : 5.4)			
Guardrail (Y/N)	Yes		Creased, still functional.
Approach Road / Embankment General Rating	6	6	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)			
Direction	E		North pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Collar		4	4	SE corner spalled exposing rebar. Void under NE collar.
Wingwalls (Shape :)		X	X	
Cutoff Wall		N	N	
Bevel End		6	6	
Heaving (mm)	200			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 300)		4	4	Scour along both NE/SE sides- next to collar.
Scour/Erosion		4	4	
Beavers (Y/N)	No			
Upstream End General Rating		4	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3900, Type: SP)				
Barrel Last Accessible Date	10-Mar-2010			Barrel 1/3 full with ice/water - viewed from ends-looks ok.
Special Features				
Special Feature (Type :)				
Special Feature (Type :)				
Roof		4	4	Dents/deformations from construction.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				Est 7% sag
Percent Sag	7			
Sidewall		5	N	@ cl
Measured Span (mm)	4141			
Measured At Ring No.				
Deflection (mm)	240			
Percent Deflection	7			
Floor		N	N	(Minor. 17/Aug/2006)
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		6	N	
Separation (mm)	0			
Longitudinal Seams		6	N	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				1N for half of barrel.-10-Mar-2010
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3900, Type: SP)				
Coating		6	N	Superficial corrosion. -10-Mar-2010
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		N	N	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	4	GR carried fwd from 10-Mar-2010
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Direction		W		North pipe.
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)	400			
Scour Protection		6	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		6	6	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 4, Span Type: Secondary Span)				
Direction		E		South pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		4	4	Scour next to collar (NE) exposing rebar.

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 4, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	X	
Bevel End		6	6	
Heaving (mm)	200			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		4	4	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		4	4	
Beavers (Y/N)	Yes			Dam 20m U/S .
Upstream End General Rating		4	4	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 4, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3900, Type: SP)				
Barrel Last Accessible Date	10-Mar-2010			Barrel 1/3 full with ice/water, viewed from ends - looks ok.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		3	N	200mm deformations - cusping of plates (photo). Possible construction damage from grouting pressure.-10-Mar-2010
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		5	N	@ cl
Measured Span (mm)	4168			
Measured At Ring No.				
Deflection (mm)	268			
Percent Deflection	7			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	N	
Separation (mm)	0			
Longitudinal Seams		6	N	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			1N stagger for 1/2 of barrel length.-10-Mar-2010

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 4, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3900, Type: SP)					
Coating		6	N	(Superficial on lower 1/4. 17/Aug/2006)	
Corrosion By Soil (Y/N)	Yes				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	NEG				
Ponding (Y/N)	Yes			Natural earth dam backs water into pipe .	
Fish Passage Adequacy		6	6		
Baffle		N	N		
(Type :)					
Waterway Adequacy		4	5	Earth dam ponding water.	
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	No				
Barrel General Rating		3	3	GR carried fwd from 10-Mar-2010	
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 4, Span Type: Secondary Span)					
Direction		W		South pipe.	
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					
Above/Below (mm)	0				
Scour Protection		5	5	Settlement approx 1m. Stabilized with rocks.	
(Type : RIP RAP)					
(Avg. Rock Size(mm) : 400)					
Scour/Erosion		5	5		
Beavers (Y/N)	No				
Downstream End General Rating		5	5		
Structure Usage					
		Last	Now	Explanation of Condition	
Channel (U/S and D/S)					
Alignment		7	7		
Bank Stability		4	4	Sloughing banks u/s and d/s.	
HWM (m below Top of Culvert)				HWM not visible caught on sheet piling d/s.	
Drift (Y/N)	Yes				

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	DEGRADING			u/s and d/s.
Beavers (Y/N)	Yes			
(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 #	
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) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	34.5/37.7	Est. Repl. Yr	2038	Maint. Req. (Y/N)	No
Special Comments for Next Inspection	Monitor deflections.		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	Wade Nanninga		Previous Assistant's Name				
Next Inspection Date	17-Aug-2013		Previous Inspection Date	10-Mar-2010			
Inspection Cycle (Default) (months)	21						
Comment							