

Bridge Culvert Inspection			
Bridge File Number	77827 -1 Bridge Culvert	Form Type	CULM
Year Built	1973	Lot No.	1
Bridge or Town Name	MAYERTHORPE	Inspector Name	Wade Nanninga
Located Over	TRIBUTARY TO PADDLE RIVER, 8.11.84.30.28, WATERCRS-ST	Inspector Class	BR CLS A
Located On	22:32 C1 22.991	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	07-Oct-2011
Legal Land Location	NW SEC 33 TWP 55 RGE 8 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-115:08:32, 53:47:49	Data Entry Date	25-Oct-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA12	Review Date	25-Oct-2011
Clear Roadway/Skew	8.3 / 0 deg.	Dept. Reviewer Name	Brent Herrick
AADT/Year	1,420 / 2010 (A)	Dept. Review Date	26-Oct-2011
Road Classification	RAU-209-110	Follow-Up By	
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1829	1118	FP	18.3	68X13	2.8	ARCH
2	MAIN	-	1500	MP	20.1	75X25	2.8	ROUND
Special Features	VERT TIMBER STRUTS, VERT STEEL STRUTS							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	2 wires OH crossing 200m North.	Municipal	
Others	File tag @ East end of South pipe.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Local intersection 200 m north.
Vertical Alignment		6	6	No passing NB due to crest curve 300m North limiting sight distance.
Roadway Width (m)	8.300			No shoulders.
Embankment		7	4	2.5:1 at culverts, elsewhere is 4:1.
Sideslope (__:1)	2.5			Vertical embankment over N pipe East side.-photo
(Height of Cover(m) : 1.5)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		6	6	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		E		North pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Cutoff Wall		X	X	
Bevel End		5	N	Some pitting rust on floor and bevel side. Overgrown by vegetation. Under water
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		5	5	
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Upstream End General Rating		5	5	GR carried fwd.
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)				
Barrel Last Accessible Date	19-Nov-2009			Water 400mm from crown-not much visible from ends.
Special Features				
Special Feature		5	N	Vertical timber struts installed in 1995. Headers sag in the middle of the culvert.
(Type : VERT TIMBER STRUTS)				
Special Feature				
(Type :)				
Roof		2	N	
Measured Rise (mm)	802			
Measured At Ring No.	8			
Sag (mm)	316			
Percent Sag	28			
Sidewall		5	N	
Measured Span (mm)	1956			
Measured At Ring No.	8			
Deflection (mm)	127			
Percent Deflection	7			
Floor		4	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		5	N	
Separation (mm)	105			
Longitudinal Seams		6	N	Riveted seams.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		4	N	Severe rust up to 3/4 pipe.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)					
Camber POS/ZERO/NEG	NEG			19-Nov-2009	
Ponding (Y/N)	Yes				
Fish Passage Adequacy		7	7		
Baffle		N	N		
(Type :)					
Waterway Adequacy		6	6	19-Nov-2009	
Icing (Y/N)	Yes				
Silting (Y/N)	Yes				
Drift (Y/N)	Yes				
Barrel General Rating		3	3	Rating increased to account for timber struts. Carried fwd from 19-Nov-2009	
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Span Type: Primary 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		5	N	Covered by vegetation. Under water	
Heaving (mm)	100				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	200				
Scour Protection		4	N		
(Type : NONE)					
(Avg. Rock Size(mm) :)					
Scour/Erosion		4	N	1m high vertical eroding banks downstream.-19-Nov-2009	
Beavers (Y/N)	No				
Downstream End General Rating		4	4	GR carried fwd	
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary Span)					
Direction		E		South pipe.	
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
(Pipe # : 2, Span Type: Secondary Span)				
Bevel End		5	8	
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		5	5	
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Upstream End General Rating		5	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP)				
Barrel Last Accessible Date	03-Oct-2011			600mm water along floor
Special Features				
Special Feature		6	6	Vertical steel struts installed in 1997.
(Type : VERT STEEL STRUTS)				
Special Feature				
(Type :)				
Roof		2	2	7m from outlet.
Measured Rise (mm)	1250			
Measured At Ring No.				
Sag (mm)	250			
Percent Sag	17			
Sidewall		2	2	7m from outlet.
Measured Span (mm)	1790			
Measured At Ring No.				
Deflection (mm)	290			
Percent Deflection	19			
Floor		4	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	4	Fill exposed in 1st seam from d/s.
Separation (mm)	65			
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		5	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1500, Type: MP)				
Ponding (Y/N)	Yes			
Fish Passage Adequacy		7	7	
Baffle		N	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	3	Rating increased to account for steel struts.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, 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	X	
Heaving (mm)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		4	4	
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Scour hole 1m deep x 5m wide x 5m long.
Beavers (Y/N)	No			
Downstream End General Rating		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	Meandering stream.
Bank Stability		7	7	
HWM (m below Top of Culvert)	0.2			Grass on fence d/s.
Drift (Y/N)	Yes			
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	2013	Schedule for replacement					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	46.7/46.7	Est. Repl. Yr	2016	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor downstream scour, barrel deflections @ embankment. Deflections increasing ~ steel struts.		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	Kris Bosters		Previous Assistant's Name	Sara Wadlow			
Next Inspection Date	07-Jul-2013		Previous Inspection Date	19-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							