

Bridge Culvert Inspection				
Bridge File Number	00241 -1 Bridge Culvert		Form Type	CULM
Year Built	1910		Lot No.	1
Bridge or Town Name	CARDSTON		Inspector Name	Jason Rusu
Located Over	TRIBUTARY TO ST MARY RIVER, 2.12.20.6, WATERCRS-ST		Inspector Class	BR CLS A
Located On	5:04 C1 6.669		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	11-Oct-2011
Legal Land Location	NW SEC 30 TWP 3 RGE 24 W4M		Data Entry By	Alyssa Boynton
Longitude, Latitude	-113:13:44, 49:14:49		Data Entry Date	21-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA25		Review Date	09-Nov-2011
Clear Roadway/Skew	12 /		Dept. Reviewer Name	Tim Davies
AADT/Year	2,090 / 2010 (A)		Dept. Review Date	25-Nov-2011
Road Classification			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	-	1200	MP	56			ROUND
2	MAIN	-	1200	MP	56			ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments				
Telephone	North & South Row		Gas	Crossing 50m west
Power	South Row crossing 50m west		Municipal	
Others			Problem (Y/N)	No
Remarks	Power to Cathodic protection @ N.W.			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Local road int. 100m west
Vertical Alignment		7	7	
Roadway Width (m)	13.400			
Embankment		6	6	
Sideslope (__:1)	4.0			
(Height of Cover(m) :)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction			South
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		N	6	
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Upstream End General Rating		N	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Barrel Last Accessible Date	11-Oct-2011			West pipe.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	2	26% sag at ring 4.
Measured Rise (mm)	890			
Measured At Ring No.	4			
Sag (mm)	310			
Percent Sag	26			
Sidewall		N	2	20% deflection at ring 4.
Measured Span (mm)	1445			
Measured At Ring No.	4			
Deflection (mm)	245			
Percent Deflection	20			
Floor		N	N	Under 300-500mm of water.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	4	At R3
Separation (mm)	80			
Longitudinal Seams		N	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		N	4	Small isolated perfs at roof at rings 3 and 4.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Camber POS/ZERO/NEG	POS			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	5	
Baffle		N	N	
(Type :)				
Waterway Adequacy		N	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	2	2 notifications issued.

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction				
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		N	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		N	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Downstream End General Rating		N	5	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction				
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Bevel End		N	5	Snow covered
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Upstream End General Rating		N	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Barrel Last Accessible Date	16-Oct-2011			Unable to enter- not bridge size. Elbow three sections from end.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	2	26% sag.
Measured Rise (mm)	885			
Measured At Ring No.	4			
Sag (mm)	315			
Percent Sag	26			
Sidewall		N	2	20% deflection.
Measured Span (mm)	1440			
Measured At Ring No.	4			
Deflection (mm)	240			
Percent Deflection	20			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	5	
Separation (mm)	40			
Longitudinal Seams		N	X	Riveted pipe.
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		N	5	Light corrosion in barrel at waterline.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	POS			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	5	
Baffle		N	N	
(Type :)				
Waterway Adequacy		N	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	2	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction				
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		N	4	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	4	4m x 5m x 1m Scour hole.
Beavers (Y/N)	No			
Downstream End General Rating		N	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		N	7	
HWM (m below Top of Culvert)				None visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		7	7	

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	2012	Install lining - both pipes or replace.					
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	55.6/22.2	Sufficiency Rating (Last/Now) (%)	67.7/39.2	Est. Repl. Yr	2016	Maint. Req. (Y/N)	Yes
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 Rusu		Previous Assistant's Name				
Next Inspection Date	11-Jul-2013		Previous Inspection Date	28-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							