

Bridge Culvert Inspection			
Bridge File Number	76911 -1 Bridge Culvert	Form Type	CULE
Year Built	1968	Lot No.	4
Bridge or Town Name	EMPRESS	Inspector Name	Jason Saly
Located Over	TRIBUTARY TO RED DEER RIVER, 3.2, WATERCRS-ST	Inspector Class	BR CLS A
Located On	562:02 C1 4.977	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	22-Nov-2010
Legal Land Location	SE SEC 30 TWP 23 RGE 1 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-110:07:30, 50:58:46	Data Entry Date	07-Jan-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA22	Review Date	11-Dec-2010
Clear Roadway/Skew	9.1 / 50 deg. (RHF)	Dept. Reviewer Name	Chris Black
AADT/Year	140 / 2009 (A)	Dept. Review Date	11-Jan-2011
Road Classification	RCU-209-110	Follow-Up By	
Detour Length (km)	20		

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	U/S	1420	1570	RP	46	152X51	3.0,3.0,3.0	ARCH
1	MAIN	1420	1570	RP	61.6	152X51	3.0,3.0,3.0	ARCH
2	MAIN	-	800	MP	50	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 line N R/W.	Municipal	
Others	Fibre Optic North Row	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	8	7	Grade rises both directions.
Vertical Alignment	6	6	
Roadway Width (m)	9.100		
Embankment	7	N	Snow covered.
Sideslope (__:1)	2.0		
(Height of Cover(m) : 8.9)			
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	N		West pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	0			
Scour Protection		7	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		7	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		7	7	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): 1420, Rise (mm): 1570, Type: RP)				
Barrel Last Accessible Date	22-Nov-2010			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	Rise at R1=1577 - 7mm; R5=1584 - 14mm=0.9%; R10=1575 - 5mm; R15=1564 - 6mm; R20=1573 - 3mm.
Measured Rise (mm)	1584			
Measured At Ring No.	14			
Sag (mm)	5			
Percent Sag	1			
Sidewall		8	7	Span at R1=1428 - 8mm; R5=1411 - 9mm; R10=1435 - 15mm; R15=1432 - 12mm; R20=1441 - 21mm=1.4%; R25=1427 - 7mm.
Measured Span (mm)	1441			
Measured At Ring No.	20			
Deflection (mm)	21			
Percent Deflection	1			
Floor		7	7	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	7	
Separation (mm)				
Longitudinal Seams		7	7	
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			

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): 1420, Rise (mm): 1570, Type: RP)					
Coating		7	6	Alkali stains at bolts Light corrosion along floor	
Corrosion By Soil (Y/N)	Yes				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	NEG				
Ponding (Y/N)	No				
Fish Passage Adequacy		5	5		
Baffle		X	X		
(Type :)					
Waterway Adequacy		7	7		
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	No				
Barrel Extension General Rating		7	7		
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Span Type: Primary Span)					
Direction		S			
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape :)					
Cutoff Wall		X	X		
Bevel End		7	7		
Heaving (mm)	0				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	300				
Scour Protection		7	N	Snow covered.	
(Type :)					
(Avg. Rock Size(mm) :)					
Scour/Erosion		7	N	Snow covered.	
Beavers (Y/N)	No				
Downstream End General Rating		7	7		
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary Span)					
Direction		N			
End Treatment (Concrete, Steel, Others, None)	NONE				
Headwall		X	X		
Collar		X	X		

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	0			
Scour Protection		7	N	Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		7	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		7	N	GR was 7 from 29Jan2009.

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 800, Type: MP)				
Barrel Last Accessible Date				800mm pipe not accessible - 150m East
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)				
Longitudinal Seams		N	N	
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 800, Type: MP)				
Coating		N	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG				
Ponding (Y/N)				
Fish Passage Adequacy		N	N	
Baffle		N	N	
(Type :)				
Waterway Adequacy		N	N	
Icing (Y/N)	No			
Siltting (Y/N)				
Drift (Y/N)				
Barrel General Rating		N	N	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	0			
Scour Protection		7	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		7	N	Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		7	N	GR was 7 from 29Jan2009.

Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	2 valleys merge into one at outlet.
Bank Stability		8	N	Snow covered.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/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							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	77.8/77.8	Sufficiency Rating (Last/Now) (%)	77.4/77.4	Est. Repl. Yr	2044	Maint. Req. (Y/N)	No
Special Comments for Next Inspection			Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2003.08.19 Replace/liner in 2020.						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Garry Roberts		Previous Assistant's Name				
Next Inspection Date	22-Feb-2014		Previous Inspection Date	29-Jan-2009			
Inspection Cycle (Default) (months)	39						
Comment							