

Bridge Culvert Inspection			
Bridge File Number	01748 -1 Bridge Culvert	Form Type	CULE
Year Built	1954	Lot No.	2
Bridge or Town Name	CALMAR	Inspector Name	Todd Warshawski
Located Over	2ND ORDER TRIBUTARY TO STRAWBERRY CREEK, 6.112.4.2, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	622:02 C1 15.511	Assistant Class	
Water Body Cl./Year		Inspection Date	16-Mar-2012
Navigabil. Cl./Year		Data Entry By	Lisa Fairhurst
Legal Land Location	NW SEC 29 TWP 49 RGE 1 W5M	Data Entry Date	20-Apr-2012
Longitude, Latitude	-114:07:06, 53:15:54	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	09-Apr-2012
Contract Main. Area	CMA11	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	9.1 /	Dept. Review Date	04-May-2012
AADT/Year	650 / 2011 (A)	Follow-Up By	
Road Classification	RAU-209-110		
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	U/S	1724	1901	SPE	38.4	152X51	3.0	ELLIPSE
1	MAIN	2000	2000	BP	49			SQUARE
1	D/S	-	1800	MP	20	125X26	2.8	ROUND
Special Features	BARREL ELBOW, VERT TIMBER STRUTS							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South ditch	Gas	
Power	1 wire 25m North.	Municipal	
Others		Problem (Y/N)	No
Remarks	BF tag on south bevel		

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Intersecting road to the west.
Vertical Alignment	8	8	
Roadway Width (m)	9.100		
Embankment	N	7	Gullys are wel vegetated and treed.
Sideslope (__:1)	3.0		
(Height of Cover(m) : 20)			
Guardrail (Y/N)	Yes		
Approach Road / Embankment General Rating	7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
Direction	S		
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		N	N	(Grassed in, not much rock visible. 22/Sept/2005) Snow covered.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		6	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): 1724, Rise (mm): 1901, Type: SPE)				
Barrel Last Accessible Date	16-Mar-2012			
Special Features				
Special Feature			7	
(Type : BARREL ELBOW)				
Special Feature				
(Type :)				
Roof		N	X	
Measured Rise (mm)	1882			
Measured At Ring No.	5			
Sag (mm)	19			
Percent Sag	0			
Sidewall		N	8	
Measured Span (mm)	1777			
Measured At Ring No.	11			
Deflection (mm)	53			
Percent Deflection	3			
Floor		N	7	
Bulge (mm)	0			
Measured At Ring No.	5			
Abrasion (Y/N)	No			
Circumferential Seams		N	7	
Separation (mm)	0			
Longitudinal Seams		X	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	No			
Coating		N	6	
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: U/S, Span (mm): 1724, Rise (mm): 1901, Type: SPE)					
Camber POS/ZERO/NEG	ZERO				
Ponding (Y/N)	No				
Fish Passage Adequacy		5	5		
Baffle		X	X		
(Type :)					
Waterway Adequacy		5	5	Rocks in barrel	
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	Yes				
Barrel Extension General Rating		4	7		
Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2000, Rise (mm): 2000, Type: BP)					
Barrel Last Accessible Date	16-Mar-2012				
Special Features					
Special Feature			4	Wide vertical crack at elbow #3 - photo	
(Type : BARREL ELBOW)					
Special Feature					
(Type :)					
Roof		N	7		
Measured Rise (mm)	2000				
Measured At Ring No.					
Sag (mm)	0				
Percent Sag					
Sidewall		N	7		
Measured Span (mm)	2000				
Measured At Ring No.					
Deflection (mm)	0				
Percent Deflection					
Floor		N	N	Ice /silt covered.	
Bulge (mm)	0				
Measured At Ring No.					
Abrasion (Y/N)	No				
Circumferential Seams		N	5	Upper seam at elbow #3 not seated. Does not appear to be any infiltration.	
Separation (mm)	50				
Longitudinal Seams		X	X		
Total No. of Cracked Rings	0				
Total No. of Rings with Two Cracked Seams					
Min. Remaining Steel Between Cracks (mm)					
Proper Lap (Y/N)					
Longitudinal Stagger (Y/N)					
Coating		N	X		
Corrosion By Soil (Y/N)	No				
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): 2000, Rise (mm): 2000, Type: BP)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Silt in box sections. Debris/drift caught at box/csp connection.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
Barrel General Rating		4	7	

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: D/S, Span (mm): , Rise (mm): 1800, Type: MP)					
Barrel Last Accessible Date	16-Mar-2012				
Special Features					
Special Feature		N	6	(Struts not standard dimension. 3" x 12" struts & caps-sills.	
(Type : VERT TIMBER STRUTS)					
Special Feature					
(Type :)					
Roof		N	N		
Measured Rise (mm)					
Measured At Ring No.					
Sag (mm)					
Percent Sag					
Sidewall		N	3	10m from d/s	
Measured Span (mm)	2007				
Measured At Ring No.	20				
Deflection (mm)					
Percent Deflection	11				
Floor		N	N	Ice covered.	
Bulge (mm)	0				
Measured At Ring No.					
Abrasion (Y/N)	No				
Circumferential Seams		N	5		
Separation (mm)	130				
Longitudinal Seams		X	X		
Total No. of Cracked Rings	0				
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	(Superficial rust throughout. 22/Sept/2005)	
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: D/S, Span (mm): , Rise (mm): 1800, Type: MP)					
Camber POS/ZERO/NEG	ZERO				
Ponding (Y/N)	No				
Fish Passage Adequacy		5	5		
Baffle		X	X		
(Type :)					
Waterway Adequacy		5	5	(Drift collecting at first strut.	
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	Yes				
Barrel Extension General Rating		4	4	G.R. increased by 1 due to struts.	
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
Direction		N			
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	Erosion under bevel end for 0.5m. Bevel protruding 1.0m from fill.	
Heaving (mm)	0				
Invert Above/Below Stream Bed	ABOVE				
Above/Below (mm)	600				
Scour Protection		3	4	Most of riprap gone.	
(Type : RIP RAP)					
(Avg. Rock Size(mm) : 450)					
Scour/Erosion		3	4	Large scour hole 10 x 10 x 1.0m.	
Beavers (Y/N)	No				
Downstream End General Rating		3	4		
Structure Usage					
		Last	Now	Explanation of Condition	
Channel (U/S and D/S)					
Alignment		6	5		
Bank Stability		N	5	Under snow.	
HWM (m below Top of Culvert)				HWM not visible.	
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		6	5		

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION	2012	Remove drift from box/csp connection.					
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) (%)	44.4/44.4	Sufficiency Rating (Last/Now) (%)	50.4/50.2	Est. Repl. Yr	2035	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor cracks in concrete box section. Monitor d/s erosion		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	Jacob Oresile		Previous Assistant's Name				
Next Inspection Date	16-Jun-2015		Previous Inspection Date	03-Feb-2009			
Inspection Cycle (Default) (months)	39						
Comment							