

Bridge Culvert Inspection				
Bridge File Number	13935 -1 Bridge Culvert		Form Type	CUL1
Year Built	1965		Lot No.	3
Bridge or Town Name	CASTOR		Inspector Name	Owen Salava
Located Over	CASTOR CREEK, 5.20, WATERCRS-ST		Inspector Class	BR CLS A
Located On	36:14 C1 13.784		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	16-Jul-2012
Legal Land Location	NW SEC 32 TWP 38 RGE 13 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-111:50:17, 52:18:38		Data Entry Date	02-Aug-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA21		Review Date	31-Jul-2012
Clear Roadway/Skew	10.9 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	950 / 2011 (A)		Dept. Review Date	07-Aug-2012
Road Classification	RAU-211.8-110		Follow-Up By	
Detour Length (km)	10			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	4674	5169	SPE	41.5	152X51	5.3,5.3,4.3	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)				
Utility Attachments				
Telephone			Gas	
Power	8 wire high voltage 45m East of c/l.		Municipal	
Others			Problem (Y/N)	No
Remarks				

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	In sag curve. Road grade slightly increases to the North.
Vertical Alignment		7	7	
Roadway Width (m)	10.900			
Embankment		N	7	
Sideslope ( _ :1)	3.0			
(Height of Cover(m) : 1)				
Guardrail (Y/N)	Yes			There are 6 broken guardrail posts along the E rail.
<b>Approach Road / Embankment General Rating</b>		<b>7</b>	<b>7</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		N	5	Cracked @ both ends due to settlement yet still largely functional.
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		N	N	Buried.

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	6	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>N</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 4674, Rise (mm): 5169, Type: SPE)</b>				
Barrel Last Accessible Date	09-Mar-2011			Pipe diameter is too large to take measurements. Flow too high to enter; viewed from ends, shape looks OK.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		5	N	(Shape looks good. No major deflection/buckling seam. 09Mar2011).
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	70			
Percent Sag				
Sidewall		5	N	(Possible sidewall deflection at waterline R7-9. 09Mar2011).
Measured Span (mm)	4725			
Measured At Ring No.				
Deflection (mm)	51			(1.1%. 09Mar2011
Percent Deflection	1			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	N	
Separation (mm)	0			
Longitudinal Seams		7	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		4	N	(Alkaline stains through seams at waterline. Also rust at inlet crown outside surface. Scaling and small perforation at ice level. 26Mar2008). 09Mar2011).
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	POS			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 4674, Rise (mm): 5169, Type: SPE)				
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>5</b>	<b>N</b>	GR was 5 from 09Mar2011.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
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	Minor erosion on SE corner.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	5	Large scour hole on D/S 10m x 10m. Approx 15m D/S.
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	
Bank Stability		4	4	Failing D/S at scour location.
HWM (m below Top of Culvert)				(Minor woody debris to top of inlet collar & possibly to shoulder seam of crown. 7N below crown. 31May2006).
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>4</b>	<b>4</b>	

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	2012	Replace 6 broken timber guardrail posts on E rail.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>55.6/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>59.6/59.6</b>	Est. Repl. Yr	2024	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 Saly		Previous Assistant's Name				
Next Inspection Date	16-Apr-2014		Previous Inspection Date	09-Mar-2011			
Inspection Cycle (Default) (months)	21						
Comment							