

Bridge Culvert Inspection				
Bridge File Number	75838 -1 Bridge Culvert		Form Type	CUL1
Year Built	1963		Lot No.	3
Bridge or Town Name	TROCHU		Inspector Name	Dave Lam
Located Over	TRAIL-ANIMAL, OVER SP		Inspector Class	BR CLS A
Located On	585:02 C1 17.033		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	14-Jul-2011
Legal Land Location	NW SEC 23 TWP 33 RGE 22 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-113:01:42, 51:50:46		Data Entry Date	16-Aug-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA20		Review Date	28-Jul-2011
Clear Roadway/Skew	8.1 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	440 / 2010 (A)		Dept. Review Date	29-Aug-2011
Road Classification	RCU-208-110		Follow-Up By	
Detour Length (km)	39			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1724	1901	MPE	18.3	68X13	2.8,2.8,2.8	ELLIPSE
Special Features		CONC FLOOR						
Special Features Comment		5% VE. Annular type CSP.						

Posting Information											
Required Vert. Clearance Posting (m)											
Posted Vertical Clearance (Y/N)											
Posted:	Lane	NB	On Bridge (m)		In Advance (Y/N)		Lane	SB	On Bridge (m)		In Advance (Y/N)
Remarks		Not required.									

Utilities (Located at)			
Utility Attachments			
Telephone	South side.		Gas
Power			Municipal
Others			Problem (Y/N) No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	In curve. No passing EB.
Vertical Alignment		6	6	
Roadway Width (m)	8.100			
Embankment		4	4	Erosion channel at SE sideslope, minor. Wide trans. crack in ACP over pipe (photo).
Sideslope (___:1)	2.9			
(Height of Cover(m) : 0.7)				
Guardrail (Y/N)	Yes			N side only.
<b>Approach Road / Embankment General Rating</b>		<b>5</b>	<b>5</b>	

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	2000			
Scour Protection (Type : ) (Avg. Rock Size(mm) : )		X	X	
Scour/Erosion		X	X	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>7</b>	<b>7</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1724, Rise (mm): 1901, Type: MPE)				
Barrel Last Accessible Date	14-Jul-2011			
<b>Special Features</b>				
Special Feature (Type : <b>CONC FLOOR</b> )		N	N	Silt covered.
Special Feature (Type : )				
Roof		4	4	Min. rise from concrete 1705mm. Small holes/perforations in roof near S end - photo. Roof damaged by mower; large tear (photo) at S end.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		5	5	Max. span 1760mm 2.9%. Midspan. 2.1%
Measured Span (mm)	1760			
Measured At Ring No.				
Deflection (mm)	36			
Percent Deflection	2			
Floor		N	5	Concrete floor. Rust corrosion alkaline deposits, heavy rust 400mm from concrete up the sides. No soft spots. Culvert squeezed up when installed. Corroded steel rated as part of the floor.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	As installed.
Separation (mm)	50			
Longitudinal Seams		X	5	Anular type CSP with rivets.
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)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		3	3	Heavy rust @ concrete floor area. Extensive flaking. There is considerable rusting from road sanding & salt. Where culvert extends from the cover of the slopes.
Corrosion By Soil (Y/N)	Yes			
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): 1724, Rise (mm): 1901, Type: MPE)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	(Outsides of culvert both ends. Minor. 16Mar2005).
Icing (Y/N)				
Silting (Y/N)	Yes			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>3</b>	<b>4</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
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			Ground slopes away from pipe.
Above/Below (mm)	3000			
Scour Protection		X	X	Minor erosion channel at SE.
(Type : )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		X	X	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Grade Separation</b>				
Road Alignment		8	8	For livestock.
Roadway Surface		5	5	
(Type : ACP)				
Icing (Y/N)	No			
Traffic Safety Features		6	6	
Type	WIRE FENCES			
Lighting		8	8	Signs of leakage at seams of culvert, minor.
Barrel Leakage (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Drainage		7	7	
Structure In Use (Y/N)	Yes			
<b>Grade Separation General Rating</b>		<b>7</b>	<b>5</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	2011	Seal ACP transverse crack.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>56.1/59.4</b>	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	Yes
Special Comments for Next Inspection	Corrosion on soil side due to soil conditions which may not be related to road maintenance. If metal softens or perforated, repair or replace culvert. No action at this time. (AT to set inspection cycle due to coating condition. 19Dec2001. AT comment).		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2004.05.30 Monitor on normal BIM. Culvert should be okay until 2018. Monitor cattlepass useage.						
On 3-Year Program (Y/N)	N						
Proposed Action	2006.10.25 Check usage in two years.						
Previous Inspector's Name	Dave Lam		Previous Assistant's Name				
Next Inspection Date	14-Oct-2014		Previous Inspection Date	16-Mar-2005			
Inspection Cycle (Default) (months)	39						
Comment							