

Bridge Culvert Inspection				
Bridge File Number	79251 -1 Bridge Culvert		Form Type	CUL1
Year Built	1979		Lot No.	1
Bridge or Town Name	CAMBRIA		Inspector Name	Jason Saly
Located Over	TRAIL-ANIMAL, OVER SP		Inspector Class	BR CLS A
Located On	56:08 C1 24.166		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	05-Mar-2013
Legal Land Location	NW SEC 16 TWP 28 RGE 19 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-112:37:27, 51:23:55		Data Entry Date	28-Mar-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA21		Review Date	21-Mar-2013
Clear Roadway/Skew	13.2 /		Dept. Reviewer Name	Chris Black
AADT/Year	990 / 2011 (A)		Dept. Review Date	09-Apr-2013
Road Classification	RAU-211.8-110		Follow-Up By	
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	MAIN	-	2200	MP	29.9	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Posting Information												
Required Vert. Clearance Posting (m)												
Posted Vertical Clearance (Y/N)			No									
Posted:	Lane	NB	On Bridge (m)		In Advance (Y/N)	No	Lane	SB	On Bridge (m)		In Advance (Y/N)	No
Remarks		Not required; cattle crossing.										

Utilities (Located at)			
Utility Attachments			
Telephone	In West ditch.		Gas
Power			Municipal
Others			Problem (Y/N) No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Curves located 600 M N. as it winds down hill. Located in the crest for S/B lanes 2km, 7% grade. 75km/hr. advisory and trucks use lower gears.
Vertical Alignment		4	4	
Roadway Width (m)	12.200			Transverse cracks along asphalt roadway.
Embankment		5	4	Isolated erosion on W. emankment, especially @ W. end of culvert.
Sideslope (__:1)	3.0			
(Height of Cover(m) :)				
Guardrail (Y/N)	Yes			East side only.
Approach Road / Embankment General Rating		4	4	

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	Squared end.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	250			
Scour Protection		6	4	Surface drainage through pipe. Erosion around W end of pipe.
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	4	See comment above.
Beavers (Y/N)	No			
Upstream End General Rating		6	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2200, Type: MP)				
Barrel Last Accessible Date	05-Mar-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		3	3	Could not measure rise due to dirt & snow. Several perforations up to 20mm dia. near both ends of pipe. Perforations are outside the roadway. (8.1%. 28Sep2011).
Measured Rise (mm)	2022			
Measured At Ring No.	2			
Sag (mm)	178			
Percent Sag	8			
Sidewall		5	5	Span at W end=2267=67mm Span at 1/4pt=2333=133mm=6% Span at 1/2pt=2228=28mm Span at 3/4pt=2182=18mm Span at E end=2129=81mm
Measured Span (mm)	2333			
Measured At Ring No.				
Deflection (mm)	133			
Percent Deflection	6			
Floor		N	N	Covered with dirt (330mm depth).
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		3	3	Infiltration at every seam near floor, minor. (R3/R4 = 15mm, R4/R5 = 30mm, R5/R6 = 50mm gap/openings) in S. sidewall.
Separation (mm)	50			
Longitudinal Seams		X	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)				

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2200, Type: MP)					
Coating		3	3	Light to medium corrosion & severe pitting along 0.4M up along both sidewalls and floor. Severe corrosion on outside face in roof at E. W. ends.	
Corrosion By Soil (Y/N)	Yes				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	NEG				
Ponding (Y/N)	Yes			Negative camber of barrel.	
Fish Passage Adequacy		X	X		
Baffle		X	X		
(Type :)					
Waterway Adequacy		7	7		
Icing (Y/N)	No				
Silting (Y/N)	Yes				
Drift (Y/N)	No				
Barrel General Rating		3	3		
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
Direction		E			
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	Roof perforated at outlet end. Squared end.	
Heaving (mm)	0				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	150				
Scour Protection		7	7	Surface drainage through pipe.	
(Type : NATURAL)					
(Avg. Rock Size(mm) :)					
Scour/Erosion		7	7		
Beavers (Y/N)	No				
Downstream End General Rating		7	7		
Structure Usage					
		Last	Now	Explanation of Condition	
Grade Separation					
Road Alignment		7	7	330mm depth	
Roadway Surface		5	5		
(Type : GRAVEL)					
Icing (Y/N)	No				
Traffic Safety Features		X	X		
Type	None				

Structure Usage				
		Last	Now	Explanation of Condition
Lighting		X	X	
Barrel Leakage (Y/N)	No			
Drainage		4	4	(Minor ponding @ East end. 28Sep2011) - Rating carried forward.
Structure In Use (Y/N)	No			Cultivated to West. Fences in poor repair.
Grade Separation General Rating		4	4	

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	2013	Repair/seal gaps/openings in circumferential seams with expandable foam.					
OTHER ACTION	2013	Place 2-3m3 of fill material around W end of pipe.					
OTHER ACTION	2013	Seal cracks in asphalt.					
OTHER ACTION	2013	Consider Cathodic Protection and concrete floor if pipe to be maintained long term.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	43.7/41.9	Est. Repl. Yr	2020	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Could blast clean steel in perforated areas and recoat with zinc rich paint.		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	Wayne Cappellani		Previous Assistant's Name	Chris Black			
Next Inspection Date	05-Dec-2014		Previous Inspection Date	28-Sep-2011			
Inspection Cycle (Default) (months)	21						
Comment							