

Bridge Culvert Inspection				
Bridge File Number	00800 -1 Bridge Culvert		Form Type	CUL1
Year Built	1969		Lot No.	1
Bridge or Town Name	CARDSTON		Inspector Name	Jason Rusu
Located Over	REEDER COULEE, 2.12.20.8.4, WATERCRS-ST		Inspector Class	BR CLS A
Located On	501:00 C1 10.340		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	10-Jun-2012
Legal Land Location	SW SEC 16 TWP 2 RGE 26 W4M		Data Entry By	Erin Roberts
Longitude, Latitude	-113:25:47, 49:07:14		Data Entry Date	19-Jul-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA25		Review Date	10-Jul-2012
Clear Roadway/Skew	7.9 / -35 deg. (LHF)		Dept. Reviewer Name	Tim Davies
AADT/Year	190 / 2011 (A)		Dept. Review Date	30-Jul-2012
Road Classification	RLU-208-100		Follow-Up By	
Detour Length (km)	13			

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2035	2240	SPE	70.1	152X51	3.5	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments							
Telephone	South ROW			Gas			
Power				Municipal			
Others				Problem (Y/N)	No		
Remarks							

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Curves 60m East Road rises to the East
Vertical Alignment		6	6	
Roadway Width (m)	11.100			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : 7)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		6	6	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction				S-Spring 30 m southeast of u/s invert being used by farmer.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		5	5	Bevel twisted 1/4 turn - still functional
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		6	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Upstream End General Rating		5	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2035, Rise (mm): 2240, Type: SPE)				
Barrel Last Accessible Date	10-Jun-2012			Pipe rolled during installation
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		3	3	14% sag.
Measured Rise (mm)	1906			
Measured At Ring No.	13			
Sag (mm)	334			
Percent Sag	14			
Sidewall		2	2	13% deflection and less than 50mm steel remaining at cracked seams.
Measured Span (mm)	2290			
Measured At Ring No.	12			
Deflection (mm)	255			
Percent Deflection	13			
Floor		5	5	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		3	3	Crack at top bolt of R8-R16
Separation (mm)	10			
Longitudinal Seams		2	2	Ring 13 has 37mm remaining steel 7 rings with less than 50mm steel
Total No. of Cracked Rings	16			
Total No. of Rings with Two Cracked Seams	8			R3,9,11,14,15,16,17,18 all cracked at 1 side. R4,5,6,7,8,10,12,13 cracked at both sides.
Min. Remaining Steel Between Cracks (mm)	37			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		4	4	Alkali corrosion at seams Water corrosion at floor - light pitting
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2035, Rise (mm): 2240, Type: SPE)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Superficial rusting on this floor Some driftwood in the pipe and part of a fence at u/s.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		2	2	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction				North-Old bridge backwalls and pier piles 15 m North of d/s invert.
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 superficial rust on floor.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		5	5	
Beavers (Y/N)		No		
Downstream End General Rating		5	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		6	6	(Farmer said this pipe does run full sometimes) 2002/09/14
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM not visible
Drift (Y/N)		No		
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)		No		
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		6	6	

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	2012	Line Pipe or replace.					
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	22.2/22.2	Sufficiency Rating (Last/Now) (%)	41.6/41.7	Est. Repl. Yr	2012	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	2 Notification sent to AT June 10,2012		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	Garry Roberts		Previous Assistant's Name				
Next Inspection Date	10-Sep-2015		Previous Inspection Date	18-Jun-2009			
Inspection Cycle (Default) (months)	39						
Comment							