Bridge Culvert Inspection

Bridge File Number	02381 -1 Bridge Culvert	Form Type	CUL1
Year Built	1959	Lot No.	4
Bridge or Town Name	COCHRANE	Inspector Name	Garry Roberts
Located Over	BEAVERDAM CREEK, 3.89.8.11, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	22:16 C1 29.649	Assistant Class	
Water Body Cl./Year		Inspection Date	22-May-2012
Navigabil. Cl./Year		Data Entry By	Kelsey Roberts
Legal Land Location	SE SEC 34 TWP 27 RGE 4 W5M	Data Entry Date	20-Jun-2012
Longitude, Latitude	-114:28:32, 51:20:43	Reviewer Name	Tom Carey
Road Authority	Alberta Transportation (AIT)	Review Date	07-Jun-2012
Contract Main. Area	CMA28	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	9.9 / -15 deg. (LHF)	Dept. Review Date	29-Jun-2012
AADT/Year	4,220 / 2011 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	12		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2027	2240	SPE	75	152X51	4.0	ELLIPSE
Special Features		CONC FLOOR						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West end.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	6	Farm entrance 80m N. On grade, hills N & S. Poor sight distance.
Vertical Alignment		5	5	
Roadway Width (m)	9.900			
Embankment		7	7	
Sideslope (__:1)	2.5			
(Height of Cover(m) : **8.2**)				
Guardrail (Y/N)	Yes			Still functions- minor damage
Approach Road / Embankment General Rating		**5**	**5**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		West end.
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		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		7	7	3m concrete slab
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2027, Rise (mm): 2240, Type: SPE**)				
Barrel Last Accessible Date	22-May-2012			
Special Features				
Special Feature			5	Some spalling @ U/S 1/4. Still sound for cattle to walk on. Heavy scaling on 35%. Medium spalling at U/S end.
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		5	5	Est
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	120			
Percent Sag	6			
Sidewall		5	5	
Measured Span (mm)	2150			
Measured At Ring No.	12			
Deflection (mm)	123			
Percent Deflection	6			
Floor		N	N	Floor has 100mm concrete with 25mm to 30mm silt on top.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	7	Retrofit holes at R16
Separation (mm)	0			
Longitudinal Seams		7	7	
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		6	6	Minor soil corrosion at upper seams
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): 2027, Rise (mm): 2240, Type: SPE**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	Culvert in use as cattlepass.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		East
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		7	7	Concrete slab extended over streambed for 14m
(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**
Channel (U/S and D/S)				
Alignment		6	6	Curves 70 degree @ D/S Primarily cattlepass usage
Bank Stability		7	7	
HWM (m below Top of Culvert)	1.2			No visible HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	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						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**61.8/61.8**	Est. Repl. Yr	2026	Maint. Reqd. (Y/N)	No

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	Garry Roberts	Previous Assistant's Name			
Next Inspection Date	22-Feb-2014	Previous Inspection Date	28-Sep-2010		
Inspection Cycle (Default) (months)	21				
Comment					