

Bridge Culvert Inspection				
Bridge File Number	70921 -1 Bridge Culvert		Form Type	CULE
Year Built	1972		Lot No.	4
Bridge or Town Name	COCHRANE		Inspector Name	Garry Roberts
Located Over	TRIBUTARY TO BIGHILL CREEK, 2.13.37.1, WATERCRS-ST		Inspector Class	BR CLS A
Located On	22:16 C1 13.716		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	22-May-2012
Legal Land Location	SW SEC 10 TWP 26 RGE 4 W5M		Data Entry By	Kelsey Roberts
Longitude, Latitude	-114:28:46, 51:12:18		Data Entry Date	20-Jun-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Tom Carey
Contract Main. Area	CMA28		Review Date	07-Jun-2012
Clear Roadway/Skew	34 / -42 deg. (LHF)		Dept. Reviewer Name	Tim Davies
AADT/Year	7,730 / 2011 (A)		Dept. Review Date	29-Jun-2012
Road Classification	RAU-211.8-110		Follow-Up By	
Detour Length (km)	3			

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1448	1600	SP	165.7	152X51	4.2,4.0	ROUND
1	D/S	-	1800	MP	80.7			ROUND
Special Features	STORM WATER DRAIN, BARREL ELBOW							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	70 m South.
Power	3 wire crosses road 200m S. 3 wire 80m E.	Municipal	
Others	Lighting & 1 wire @ West.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	18m @ 22 & 2-8m roads over pipe @ E. Extra climb lane North bound.
Vertical Alignment		5	5	Extension @ D/S under access road to Western Heritage Center
Roadway Width (m)	34.000			
Embankment		5	5	Erosion control in ditch @ E side & @ ditch to NW - 3:1 @ W @ lower E. Gullying down West sideslope - 200mm to 300mm deep.
Sideslope (:1)	3.0			
(Height of Cover(m) : 17.7)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		5	5	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		West end. SP
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	50			
Scour Protection		7	7	Ingrown
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
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): 1448, Rise (mm): 1600, Type: SP)				
Barrel Last Accessible Date	22-May-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	S- sweep through barrel
Measured Rise (mm)	1540			
Measured At Ring No.	16			
Sag (mm)	60			
Percent Sag	4			
Sidewall		7	6	
Measured Span (mm)	1460			
Measured At Ring No.	16			
Deflection (mm)	12			
Percent Deflection	1			
Floor		6	6	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	Retrofit seam R4@
Separation (mm)	0			
Longitudinal Seams		7	6	Correct lap in R42-50. Isolated bolt tipping, loose and/or missing nuts.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		6	6	Minor superficial corrosion @ floor
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1448, Rise (mm): 1600, Type: SP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		7	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: D/S, Span (mm): , Rise (mm): 1800, Type: MP)				
Barrel Last Accessible Date	22-May-2012			
Special Features				
Special Feature			6	Elbow at R1- R2 not fully welded but functional
(Type : STORM WATER DRAIN)				
Special Feature			6	Storm drain, ring 2 500mm.
(Type : BARREL ELBOW)				
Roof		6	6	30mm separation in factory seam ring 2 near storm drain.
Measured Rise (mm)	1740			
Measured At Ring No.	1			
Sag (mm)	60			
Percent Sag	3			
Sidewall		5	5	Majority of pipe is 1820 x 1780. Localized deformations where CSP meets SP due to construction. Measurements should not be taken at these localized areas
Measured Span (mm)	1855			
Measured At Ring No.	1			
Deflection (mm)	55			
Percent Deflection	3			
Floor		6	6	
Bulge (mm)	60			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	Sections #1 to elbow have bolts on coupler with rubber seal, elbow has separation 55 mm. Where extension meets SP section is deformed. Seam separation of 70mm @ R1
Separation (mm)	70			
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)				
Coating		5	5	Minor superficial corrosion @ floor
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: D/S, Span (mm): , Rise (mm): 1800, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	300mm of silt, last 50m of D/S end.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel Extension General Rating		5	5	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		CSP East
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	BELOW			
Above/Below (mm)	200			
Scour Protection		8	8	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 600)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		8	8	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	6	D/S has narrow, defined channel. Curve D/S
Bank Stability		7	7	
HWM (m below Top of Culvert)				No Visible HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			At D/S
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		7	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) (%)	62.4/61.9	Est. Repl. Yr	2032	Maint. Reqd. (Y/N)	No
Special Comments for Next Inspection	Previous span and rise measurements taken at localized deformation areas of transition from CSP to SPCSP resulting in poor ratings. Future measurements should not be taken at these construction deformations. (G. Roberts Sept. 28/10)		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							