

Bridge Culvert Inspection			
Bridge File Number	09172 -1 Bridge Culvert	Form Type	CUL1
Year Built	1955	Lot No.	1
Bridge or Town Name	BULWARK	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO NELSON CREEK, 5.18.2, WATERCRS-ST	Inspector Class	BR CLS A
Located On	599:04 C1 25.378	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	17-Sep-2012
Legal Land Location	SW SEC 2 TWP 38 RGE 11 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-111:28:26, 52:13:49	Data Entry Date	22-Oct-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA21	Review Date	27-Sep-2012
Clear Roadway/Skew	8.6 /	Dept. Reviewer Name	Andrew Smikles
AADT/Year	730 / 2011 (A)	Dept. Review Date	22-Oct-2012
Road Classification	RCU-208-110	Follow-Up By	
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	U/S	1810	1118	FP	13.2	65X13		ARCH
1	MAIN	1810	1118	FP	20.7	68X13		ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 wire North r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Field entrance 70m E; 5th pipe from W; 0.75 km from Range Rd. 11-2.
Vertical Alignment		8	8	
Roadway Width (m)	8.600			
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : 0.8)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		7	7	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		
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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		6	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Upstream End General Rating		6	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: U/S, Span (mm): 1810, Rise (mm): 1118, Type: FP)				
Barrel Last Accessible Date	17-Sep-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		3	3	
Measured Rise (mm)	1005			
Measured At Ring No.	2			
Sag (mm)	113			10.1%
Percent Sag	10			
Sidewall		4	4	
Measured Span (mm)	1905			
Measured At Ring No.	2			
Deflection (mm)	95			5.2 %
Percent Deflection	5			
Floor		5	5	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	
Separation (mm)	40			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	4	Pitting in floor & haunches.
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: U/S, Span (mm): 1810, Rise (mm): 1118, Type: FP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension General Rating		5	3	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	150			
Scour Protection		7	7	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		4	6	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		8	8	Large slough area. No defined banks.
Bank Stability		8	8	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Unknown.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		8	8	

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) (%)	55.6/33.3	Sufficiency Rating (Last/Now) (%)	63.2/55.0	Est. Repl. Yr	2018	Maint. Reqd. (Y/N)	No
Special Comments for Next Inspection	No action on roof; monitor deflection. Revise to CUL1 form per 17Sep2012 inspection; confirm rings measured next inspection.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2009.07.10 Continue inspections on regular BIM Cycle. Culverts should be ok until 2020.CB						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Owen Salava		Previous Assistant's Name				
Next Inspection Date	17-Dec-2015		Previous Inspection Date	06-Oct-2009			
Inspection Cycle (Default) (months)	39						
Comment							