Bridge Culvert Inspection

Bridge File Number	09172 -4 Bridge Culvert	Form Type	CUL1
Year Built	1955	Lot No.	4
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
		Assistant Name	
Located On	599:04 C1 25.665	Assistant Class	
Water Body Cl./Year		Inspection Date	17-Sep-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 2 TWP 38 RGE 11 W4M	Data Entry Date	22-Oct-2012
Longitude, Latitude	-111:28:10, 52:13:49	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	27-Sep-2012
Contract Main. Area	CMA21	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	8.6 /	Dept. Review Date	22-Oct-2012
AADT/Year	730 / 2011 (A)	Follow-Up By	
Road Classification	RCU-208-110		
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	68X13		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		8	8	4th pipe from W; 0.43m 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) : **0.9**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**8**	**8**	

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)	200			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		7	7	
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		6	6	Unable to measure due to silt, looks ok.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		6	6	
Measured Span (mm)	1880			
Measured At Ring No.	2			
Deflection (mm)	70			3.7%
Percent Deflection	4			
Floor		N	N	Silt covered.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		6	6	
Separation (mm)	0			
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		4	4	Floor pitting, visible at lower corners.
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		6	6	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel Extension General Rating		**6**	**6**	

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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		6	6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	8	Large slough, no defined channel.
Bank Stability		8	8	
HWM (m below Top of Culvert)				HWM not visible.
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		**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) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**67.0/66.9**	Est. Repl. Yr	2019	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Revise to CUL1 form per 17Sep2012 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	Owen Salava	Previous Assistant's Name			
Next Inspection Date	17-Dec-2015	Previous Inspection Date	02-Nov-2009		
Inspection Cycle (Default) (months)	39				
Comment					