

Bridge Culvert Inspection				
Bridge File Number	01279 -1 Bridge Culvert		Form Type	CUL1
Year Built	2001		Lot No.	1
Bridge or Town Name	TROCHU		Inspector Name	Owen Salava
Located Over	GHOSTPINE CREEK, 3.50, WATERCRS-ST		Inspector Class	BR CLS A
Located On	21:16 C1 11.265		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	18-Sep-2012
Legal Land Location	NW SEC 5 TWP 34 RGE 23 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-113:14:28, 51:53:44		Data Entry Date	02-Oct-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA20		Review Date	27-Sep-2012
Clear Roadway/Skew	12.1 / 6 deg. (RHF)		Dept. Reviewer Name	Andrew Smikles
AADT/Year	2,540 / 2011 (A)		Dept. Review Date	18-Oct-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	PI./Slab Thickness	Shape
1	MAIN	9480	4732	RPA	30.5	152X51	4.0,5.0,5.0	ARCH
Special Features								
Special Features Comment		Water monitoring station at NE.						

Utilities (Located at)				
Utility Attachments				
Telephone	East r/w.		Gas	Crossing 100m South.
Power			Municipal	
Others	Fibre optic - East r/w.		Problem (Y/N)	No
Remarks				

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Hill to the North, limited sight distance.
Vertical Alignment		6	6	
Roadway Width (m)	12.100			
Embankment		7	7	Wide transverse crack both sides of structure @ construction limit.
Sideslope ( __:1)	3.0			
(Height of Cover(m) : 0.6)				
Guardrail (Y/N)	Yes			Too low ~450mm high - typical both sides (photo).
<b>Approach Road / Embankment General Rating</b>		<b>6</b>	<b>6</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		9	9	
Collar		8	8	
Wingwalls		9	9	
(Shape : )				
Cutoff Wall		N	N	Under water.

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		9	9	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1100			
Scour Protection		8	8	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>500</b> )				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>8</b>	<b>8</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 9480, Rise (mm): 4732, Type: RPA)				
Barrel Last Accessible Date	18-Sep-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		8	5	est. 1% deflection - same as sidewall. Roof flattened somewhat in R4 on N side.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag	1			
Sidewall		8	8	
Measured Span (mm)	9423			
Measured At Ring No.	3			
Deflection (mm)	57			
Percent Deflection	1			
Floor		N	N	1.7m water/silt.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		8	8	
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)	Yes			
Longitudinal Stagger (Y/N)	No			No stagger at upper sidewall seam. 2N stagger lower sidewall - 3N stagger at roof.
Coating		8	8	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			~1.7m standing water/silt.

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 9480, Rise (mm): 4732, Type: RPA)				
Fish Passage Adequacy		7	7	
Baffle		N	N	Water
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>8</b>	<b>5</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		9	9	
Collar		9	9	
Wingwalls		9	9	
(Shape : )				
Cutoff Wall		N	N	Under water.
Bevel End		9	9	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1100			
Scour Protection		8	8	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 500)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>8</b>	<b>8</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Not visible.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>8</b>	<b>8</b>	

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	2012	Measure & document chord offset & radius of R4 flattened roof plates.								
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>88.9/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>83.5/67.2</b>	<b>Est. Repl. Yr</b>	<b>2054</b>	<b>Maint. Req'd. (Y/N)</b>	<b>Yes</b>			
Special Comments for Next Inspection	Flattened roof noted for first time on 18Sep2012; Lvl 2 inspection to document curvature of R4 plates recommended.		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	Dave Lam	Previous Assistant's Name								
Next Inspection Date	18-Jun-2014	Previous Inspection Date		09-Nov-2010						
Inspection Cycle (Default) (months)	21									
Comment										

**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	2012	Measure & document chord offset & radius of R4 flattened roof plates.	Monitor on regular BIM cycle			
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>88.9/55.6</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>83.5/67.2</b>	Est. Repl. Yr	2054	Maint. Req. (Y/N) Yes
Special Comments for Next Inspection	Flattened roof noted for first time on 18Sep2012; Lvl 2 inspection to document curvature of R4 plates recommended.		Department Comments	Continue to monitor radius at ring 4 on regular BIM cycle.		
Maintenance Reviewed By	Andrew Smikles		Date	03-Dec-2012	Estimated Total	0
Proposed Long-Term Strategy						
On 3-Year Program (Y/N)						
Proposed Action						
Previous Inspector's Name	Dave Lam		Previous Assistant's Name			
Next Inspection Date	18-Jun-2014		Previous Inspection Date	09-Nov-2010		
Inspection Cycle (Default) (months)	21					
Comment						