

Bridge Culvert Inspection				
Bridge File Number	02177 -1 Bridge Culvert		Form Type	CULM
Year Built	1953		Lot No.	3
Bridge or Town Name	BRUCE		Inspector Name	Owen Salava
Located Over	2ND ORDER TRIBUTARY TO VERMILION RIVER, 6.5.44.1, WATERCRS-ST		Inspector Class	BR CLS A
Located On	14:10 C1 13.628		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	10-Jan-2012
Legal Land Location	SE SEC 36 TWP 48 RGE 15 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-112:03:45, 53:10:41		Data Entry Date	14-Feb-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Jason Saly
Contract Main. Area	CMA16		Review Date	27-Jan-2012
Clear Roadway/Skew	12.8 / 25 deg. (RHF)		Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,800 / 2010 (A)		Dept. Review Date	23-Feb-2012
Road Classification	RAU-213.4-120		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	3352	1676	BP	23.8			RECTANGLE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	Exposed conduits over North headwalls. Telus both r/w buried cable.	Gas	
Power	3 lines South r/w.	Municipal	
Others	Railway 4.0m North.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Farm field access at SW 20 m.
Vertical Alignment		7	7	
Roadway Width (m)	12.800			
Embankment		7	7	
Sideslope (_ :1)	3.0			
(Height of Cover(m) : 2.2)				
Guardrail (Y/N)	Yes			38m.
Approach Road / Embankment General Rating		7	7	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	5	Medium scaled. Delaminated concrete @ top of headwall.
Collar		X	X	
Wingwalls		6	6	
(Shape : FLARE)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				At streambed.
Above/Below (mm)	0			
Scour Protection		5	4	Well grassed in.
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Scour @ S.W. wingwall.
Beavers (Y/N)	No			
Upstream End General Rating		4	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1676, Rise (mm): 1676, Type: BP, Cell Sequence: 1)				
Barrel Last Accessible Date	10-Jan-2012			West barrel.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	(Rise at S end 1677=1mm Rise at N end 1683=7mm=0.4%. 23Jun2010). Unable to measure due to ice.
Measured Rise (mm)	1683			
Measured At Ring No.				
Sag (mm)	7			
Percent Sag	0			
Sidewall		6	6	Longitudinal crack (0.9 mm) above 200 from top on north end. Some random vertical narrow cracks. Span at S end 1683=7mm=0.4%. Span at N end 1679=3mm.
Measured Span (mm)	1683			
Measured At Ring No.				
Deflection (mm)	7			
Percent Deflection	0			
Floor		N	N	Ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		6	6	Gap has been filled with grout. 35 mm shift @ joint. Minor horizontal shift at some of the joints.
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		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1676, Rise (mm): 1676, Type: BP, Cell Sequence: 1)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		6	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1676, Rise (mm): 1676, Type: BP, Cell Sequence: 2)				
Barrel Last Accessible Date	10-Jan-2012			East barrel.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	Longitudinal crack on south end of east sidewall. Some random vertical cracks. (Rise at S end 1672=4mm=0.2%. Rise at midpipe 1673=3mm. Rise at N end 1675=1mm. 23Jun2010). Unable to measure due to ice.
Measured Rise (mm)	1672			
Measured At Ring No.				
Sag (mm)	4			
Percent Sag	0			
Sidewall		7	7	Span at S end 1681=5mm. Span at midpipe 1691=15mm=0.9%. Span at N end 1677=1mm.
Measured Span (mm)	1691			
Measured At Ring No.				
Deflection (mm)	15			
Percent Deflection	1			
Floor		N	N	Ice.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		6	6	Minor horizontal shift at some of the joints. Joint has been filled with grout. Cracked 7mm.
Separation (mm)	60			
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		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1676, Rise (mm): 1676, Type: BP, Cell Sequence: 2)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		7	7	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	
Collar		X	X	
Wingwalls		6	6	
(Shape : FLARE)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	50			
Scour Protection		4	4	Well grassed in with some rock.
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Scour at NW wingwall - minor.
Beavers (Y/N)	No			
Downstream End General Rating		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)	0.8			
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		7	7	

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	Fill scour @ S.W. wingwall - 1m3 pitrun.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	66.7/66.7	Sufficiency Rating (Last/Now) (%)	64.7/67.5	Est. Repl. Yr	2022	Maint. Req. (Y/N)	Yes
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	Jason Saly		Previous Assistant's Name				
Next Inspection Date	10-Oct-2013		Previous Inspection Date	23-Jun-2010			
Inspection Cycle (Default) (months)	21						
Comment							