

Bridge Culvert Inspection			
Bridge File Number	72273 -2 Bridge Culvert	Form Type	CUL1
Year Built	2009	Lot No.	1
Bridge or Town Name	BLUE RIDGE	Inspector Name	Wade Nanninga
Located Over	BULL CREEK, 8.11.100, WATERCRS-ST	Inspector Class	BR CLS A
Located On	658:02 C1 7.446	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	30-Nov-2012
Legal Land Location	SW SEC 25 TWP 59 RGE 10 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-115:22:35, 54:07:43	Data Entry Date	16-Apr-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA12	Review Date	19-Dec-2012
Clear Roadway/Skew	100 / 35 deg. (RHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	1,150 / 2012 (A)	Dept. Review Date	23-Apr-2013
Road Classification	RAU-210-110	Follow-Up By	
Detour Length (km)	40		

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	-	3990	SP	95.1	152X51	4.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	West r/w.	Gas	
Power	3 wire 20m East of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Sag curve over pipe, limited site distance to the North. Posted for 50 km/hr due to town.
Vertical Alignment		6	6	
Roadway Width (m)	10.000			
Embankment		4	3	NW embankment sliding.-photo Affecting d/s end. Approx 60% of embankment has no topsoil/vegetation. Appears recently hydroseeded.-photo27-Oct-2011
Sideslope (_ :1)	3.0			
(Height of Cover(m) : 9)				Erosion gully in NE ditch - 2mx1mz0.5m
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		6	6	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	Medium cracks forming
Collar		8	8	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

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)	500			
Scour Protection		7	7	
(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): , Rise (mm): 3990 , Type: SP)				
Barrel Last Accessible Date	30-Nov-2012			Rise measurements not possible due to approx. 1.0m rock/gravel on floor.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		3	3	Rise measurements not possible due to rock on floor.-photo Negative sag is approx 10% in ring 24.
Measured Rise (mm)				
Measured At Ring No.	24			R15 has est neg sag of 7%. Cracked seam in roof R24.-photo
Sag (mm)				
Percent Sag	10			
Sidewall		3	3	Ring 23-25 pushed in from 12:00 - 4:00 position due to embankment slide on NW corner.-photo.
Measured Span (mm)	3500			
Measured At Ring No.	25			Sidewall pushing in at 7:00- 8:00 position in rings 24-25. Worst in rings 24-25. Measured neg deflection is 12%.
Deflection (mm)	490			
Percent Deflection	12			
Floor		N	N	Covered with silt/water.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	4	R24/25 seam cracked in midspan bolt (North side) crack 100mm long.
Separation (mm)	0			
Longitudinal Seams		3	3	5mm crack in 1 bolt of R15. Roof seam in R24 cracked est 70mm steel remaining.-photo
Total No. of Cracked Rings	1			
Total No. of Rings with Two Cracked Seams	1			Vertical crack in R24 N sidewall of 2 bolts.-photo
Min. Remaining Steel Between Cracks (mm)	70			2N
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		7	7	Rusting through bolt holes in ring 25 and d/s bevel.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3990, Type: SP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		4	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	3	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	4	Edges pushed in from embankment slide 300mm.
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	700			
Scour Protection		8	7	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		8	7	
Beavers (Y/N)	No			
Downstream End General Rating		4	4	

Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			In channel d/s.
Channel Bottom Degrading/Aggrading				None 40m upstream.
Beavers (Y/N)	Yes			
(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	2013	Repair embankment slide at NW corner. Consider extending culvert and flattening sideslope to stabilize slope.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	49.5/55.7	Est. Repl. Yr	2060	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor culvert deflections and cracked rings.		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	Wade Nanninga		Previous Assistant's Name				
Next Inspection Date	29-Feb-2016		Previous Inspection Date	15-Mar-2012			
Inspection Cycle (Default) (months)	39						
Comment							