

Bridge Culvert Inspection			
Bridge File Number	00911 -1 Bridge Culvert	Form Type	CULE
Year Built	1977	Lot No.	3
Bridge or Town Name	WESTWARD HO	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO LITTLE RED DEER RIVER, 3.89.9, WATERCRS-ST	Inspector Class	BR CLS A
Located On	27:06 C1 15.918	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	22-Oct-2012
Legal Land Location	SE SEC 36 TWP 32 RGE 4 W5M	Data Entry By	Marcia Chavez
Longitude, Latitude	-114:26:12, 51:47:15	Data Entry Date	08-Nov-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA29	Review Date	29-Oct-2012
Clear Roadway/Skew	11.8 /	Dept. Reviewer Name	Andrew Smikles
AADT/Year	3,470 / 2011 (A)	Dept. Review Date	13-Nov-2012
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	U/S	-	1800	MP	22	125X26	3.8	ROUND
1	MAIN	-	1829	MP	44.7	75X25	4.2	ROUND
1	D/S	-	1800	MP	22	125X26	3.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	At upstream end, south side.	Gas	120 & 150m West; crossing 200m East.
Power	3 lines at north end.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	In sag curve with good sight distance.
Vertical Alignment		7	7	
Roadway Width (m)	11.800			
Embankment		5	5	Minor erosion @ NW, rock filled.
Sideslope (__:1)	3.0			
(Height of Cover(m) : 13.5)				
Guardrail (Y/N)	Yes			1 damaged TT post, S rail.
Approach Road / Embankment General Rating		7	7	

Upstream 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 :)				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		N	4	Bevel heaved 200mm, piping evident under bevel.
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	4	Insufficient due to bevel heaving.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		N	4	Scour along SE bevel.
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: U/S, Span (mm): , Rise (mm): 1800, Type: MP)				
Barrel Last Accessible Date	22-Oct-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	6	
Measured Rise (mm)	1800			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag	0			
Sidewall		N	6	
Measured Span (mm)	1820			
Measured At Ring No.	1			
Deflection (mm)	20			
Percent Deflection	1			
Floor		N	6	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	6	No infiltration.
Separation (mm)	180			
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		N	6	
Corrosion By Soil (Y/N)	No			
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: U/S, Span (mm): , Rise (mm): 1800, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	(Ice to 0.4m of roof. 07Feb2011).
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension General Rating		N	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1829, Type: MP)				
Barrel Last Accessible Date	22-Oct-2012			42.7m with 76 x 25 corr profile & 22m each end length.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	5	
Measured Rise (mm)	1720			
Measured At Ring No.	2			
Sag (mm)	109			
Percent Sag	6			
Sidewall		N	5	
Measured Span (mm)	1930			
Measured At Ring No.	2			
Deflection (mm)	101			5.5%.
Percent Deflection	6			
Floor		N	5	D/S circumferential seam 220mm separation.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	5	1st circum. seam measured - photo. Poor alignment of new sections. U/S section is 100mm below existing, d/s is 60mm below existing. Coupler tilted to circ seam floor section near S end. No infiltration.
Separation (mm)	180			
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		N	5	Minor superficial corrosion.
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: MAIN, Span (mm): , Rise (mm): 1829, Type: MP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	D/S end 0.5m above streambed.
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	4	(Culvert iced completely off U/S and D/S. Water may be flowing underneath. 07/Feb/2008). (Iced to 0.4m of roof. 07Feb2011).
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	5	
Downstream 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 :)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		N	4	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		N	4	Scour hole forming D/S of culvert. Sloughing @ 90 degree bend 5m D/S.
Beavers (Y/N)	No			
Downstream End General Rating		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	Bends at both ends.
Bank Stability		5	5	D/S channel eroding, riprap washed D/S, minor. SE/SW ditches lined with gabions.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			Fallen trees U/S & D/S.
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		5	5	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2012	Both ends.					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2012	Retrim slope slong u/s bevel & restore clay seal.					
OTHER ACTION	2012	Replace guardrail post.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	44.4/55.6	Sufficiency Rating (Last/Now) (%)	34.9/40.3	Est. Repl. Yr	2025	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Icing may be a problem.		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	22-Jul-2014		Previous Inspection Date	07-Feb-2011			
Inspection Cycle (Default) (months)	21						
Comment							