

Bridge Culvert Inspection				
Bridge File Number	73681 -1 Bridge Culvert		Form Type	CUL1
Year Built	1954		Lot No.	4
Bridge or Town Name	TWO HILLS		Inspector Name	Jason Saly
Located Over	TRIBUTARY TO NORTH SASKATCHEWAN RIVER, 6.26, WATERCRS-ST		Inspector Class	BR CLS A
Located On	29:08 C1 8.316		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	10-Jan-2013
Legal Land Location	SW SEC 23 TWP 56 RGE 12 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-111:41:17, 53:50:53		Data Entry Date	12-Feb-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA14		Review Date	19-Jan-2013
Clear Roadway/Skew	10.5 /		Dept. Reviewer Name	Darron Ahlstedt
AADT/Year	1,300 / 2011 (A)		Dept. Review Date	13-Feb-2013
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	10			

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1429	1575	SPE	87.8	152X51	3.0	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments				
Telephone	Plowed in West ditch.		Gas	
Power	1 wire OH 60m East of c/l.		Municipal	
Others			Problem (Y/N)	No
Remarks				

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Hills both sides. Located under a pronounced sag curve, no passing.
Vertical Alignment		6	6	
Roadway Width (m)	10.500			
Embankment		4	N	(Minor ditch erosion from SW, no problem. Void developing approx halfway up embankment, E side (photo). 08Dec2010).
Sideslope (__:1)	3.0			
(Height of Cover(m) : 17)				
Guardrail (Y/N)	Yes			Minor damage @ East. Ext. length flexbeam on both shoulders.
Approach Road / Embankment General Rating		6	6	

Upstream 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	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		6	6	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	350			
Scour Protection		6	N	(Approx 0.25 cu.m. rock in bevelled end. 08Dec2010) - Snow covered, but no signs of problems.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		6	N	
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: MAIN, Span (mm): 1429, Rise (mm): 1575, Type: SPE)				
Barrel Last Accessible Date	10-Jan-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	4	Rise at R5=1590=15mm Rise at R10=1466=109mm Rise at R15=1494=81mm=7% Rise at R19=1462=113mm Rise at R25=1491=84mm No action.
Measured Rise (mm)	1462			
Measured At Ring No.	19			
Sag (mm)	113			
Percent Sag	7			
Sidewall		4	4	Span at R5=1420=9mm Span at R10=1529=100mm Span at R15=1508=79mm Span at R17=1544=115mm Span at R19=1545=116mm=8.1% Span at R25=1533=104mm No action.
Measured Span (mm)	1545			
Measured At Ring No.	19			
Deflection (mm)	116			
Percent Deflection	8			
Floor		6	5	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	Few loose bolts in circumferential seam R4, 5. Grade changes 15m from D/S end, new holes cut where extended. 1st 5 rings and last 4 rings only, rest good.
Separation (mm)	10			
Longitudinal Seams		6	6	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		6	6	Minor superficial rust on floor. Rust coming through bolt holes.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1429, Rise (mm): 1575, Type: SPE)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			Minor rock in pipe.
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	4	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)		STEEL		
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		5	5	Bevelled section bolted on, misaligned by one bolt hole. (Hanging bevel end. 15Aug2009). Snow covered.
Heaving (mm)	50			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	900			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 250)		N	N	(Well riprapped along bevelled edges but very little in streambed. Grass and willows established throughout entire streambed. 15Aug2009). Snow covered.
Scour/Erosion		N	N	
Beavers (Y/N)		No		
Downstream End General Rating		4	4	GR carried forward from 15Aug2009.
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		6	6	Stream enters pipe from 20 degree to NW.
Bank Stability		6	6	(All S/B is dry most of year and well grassed. 08Dec2010).
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)		No		
Channel Bottom Degrading/Aggrading		DEGRADING		(D/S only. 15Aug2009). Snow covered.
Beavers (Y/N)		No		
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		6	6	

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) (%)	44.4/44.4	Sufficiency Rating (Last/Now) (%)	48.7/48.8	Est. Repl. Yr	2034	Maint. Req. (Y/N)	No
Special Comments for Next Inspection	(Monitor void developing halfway up embankment, E side. 08Dec2010). Check d/s scour 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	Dave Lam		Previous Assistant's Name				
Next Inspection Date	10-Oct-2014		Previous Inspection Date	08-Dec-2010			
Inspection Cycle (Default) (months)	21						
Comment							