

Bridge Culvert Inspection				
Bridge File Number	08919 -1 Bridge Culvert		Form Type	CULM
Year Built	1969		Lot No.	3
Bridge or Town Name	TWIN BUTTE		Inspector Name	Jon Davies
Located Over	GALWEY BROOK, 2.12.22.5.17.1, WATERCRS-ST		Inspector Class	BR CLS B
Located On	6:04 C1 0.575		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	30-Oct-2011
Legal Land Location	SE SEC 19 TWP 2 RGE 29 W4M		Data Entry By	Alyssa Boynton
Longitude, Latitude	-113:51:11, 49:08:15		Data Entry Date	28-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA26		Review Date	08-Nov-2011
Clear Roadway/Skew	10 /		Dept. Reviewer Name	Tim Davies
AADT/Year	1,010 / 2010 (A)		Dept. Review Date	01-Dec-2011
Road Classification	RAU-210-110		Follow-Up By	
Detour Length (km)	30			

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3960	2480	BP	27.7			RECTANGLE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments				
Telephone	West ditch & East ditch		Gas	
Power	Underground conduit west row		Municipal	
Others			Problem (Y/N)	No
Remarks				

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curve to North. (300 m). Rises to South.
Vertical Alignment		7	7	
Roadway Width (m)		10.000		New guardrail installed.
Embankment		8	8	
Sideslope (__:1)		2.5		
(Height of Cover(m) : 3.1)				
Guardrail (Y/N)		Yes		
Approach Road / Embankment General Rating		7	7	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		West end.
End Treatment (Concrete, Steel, Others, None)		CONCRETE		
Headwall		6	6	
Collar		X	5	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Wingwalls (Shape : FLARE)		6	6	Several typical diagonal cracks.
Cutoff Wall		X	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection (Type : CONCRETE, RIP RAP) (Avg. Rock Size(mm) : 450)		6	6	
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Upstream End General Rating		6	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1980, Rise (mm): 2480, Type: BP, Cell Sequence: 1)				
Barrel Last Accessible Date	30-Oct-2011			South Cell
Special Features				
Special Feature (Type :)				
Special Feature (Type :)				
Roof		6	5	Typical settlement cracks (not structurally serious) up sidewall and across roof. These cracks allow some leaching.
Measured Rise (mm)	2480			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag				
Sidewall		6	5	
Measured Span (mm)	1980			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection				0.1m concrete floor cast on original floor. Minor throughout.
Floor		6	6	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		6	6	
Separation (mm)	10			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1980, Rise (mm): 2480, Type: BP, Cell Sequence: 1)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	Poor due to D/S invert 600m above S.B.
Baffle		X	X	
(Type :)				
Waterway Adequacy		2	3	Drift removal recommended Large drift accumulation @ u/s.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		2	5	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1980, Rise (mm): 2480, Type: BP, Cell Sequence: 2)				
Barrel Last Accessible Date	30-Oct-2011			North cell.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	5	Typical settlement cracks (not structurally serious) up sidewall and across roof. Cracks allow some leaching.
Measured Rise (mm)	2480			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag	0			
Sidewall		6	5	
Measured Span (mm)	1980			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		4	4	1 area @ floor @ 1/3L with exposed rebar for 1m. 25 to 50mm deep abrasion @ 30% of floor. At CJ #1 75mm settlement causing hydraulic effect on floor.
Bulge (mm)	0			
Measured At Ring No.	1			
Abrasion (Y/N)	Yes			
Circumferential Seams		6	5	Seams allow some leaching.
Separation (mm)	10			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1980, Rise (mm): 2480, Type: BP, Cell Sequence: 2)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	600 mm drop off at outlet.
Baffle		X	X	
(Type :)				
Waterway Adequacy		2	3	major drift accumulation @ u/s removal recommended
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		2	5	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		East end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	5	Abrasion 25mm deep @ apron.
Collar		6	5	
Wingwalls		6	5	Vertical 2 mm wide cracks, leaching.
(Shape : FLARE)				
Cutoff Wall		5	5	Steel @ end of apron. Some reinforcing mesh exposed.
Bevel End		6	X	
Heaving (mm)				
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	600			
Scour Protection		6	6	Concrete apron. Riprap transitions to streambed.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 500)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		6	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	Stream makes bend at U/S end. Downstream is lined up to hit a bank which is now vertically eroded. Erosion does not affect structure.
Bank Stability		5	5	
HWM (m below Top of Culvert)				HWM Not Visible
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				

Structure Usage				
		Last	Now	Explanation of Condition
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							
REMOVE DRIFT ACCUMULATION	2012						
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) (%)	22.2/55.6	Sufficiency Rating (Last/Now) (%)	21.7/38.1	Est. Repl. Yr	2030	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 Rusu		Previous Assistant's Name				
Next Inspection Date	30-Jul-2013		Previous Inspection Date	29-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							