

Bridge Culvert Inspection			
Bridge File Number	74271 -1 Bridge Culvert	Form Type	CULM
Year Built	1953	Lot No.	1
Bridge or Town Name	PINCHER CREEK	Inspector Name	Jason Rusu
Located Over	INDIANFARM CREEK, 2.12.31.2, WATERCRS-ST	Inspector Class	BR CLS A
Located On	6:04 C1 30.198	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	30-Oct-2011
Legal Land Location	SW SEC 12 TWP 5 RGE 30 W4M	Data Entry By	Erin Roberts
Longitude, Latitude	-113:55:13, 49:22:06	Data Entry Date	29-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA26	Review Date	12-Nov-2011
Clear Roadway/Skew	10.4 / -15 deg. (LHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	1,170 / 2010 (A)	Dept. Review Date	01-Dec-2011
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts	3							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1200	MP	29.7	68X13	3.0	ROUND
2	MAIN	-	1200	MP	29.7	68X13		ROUND
3	MAIN	1829	1118	FP	22	68X13	3.5	ARCH
Special Features	VERT TIMBER STRUTS							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West ditch and East ditch	Gas	
Power	2 line crossing road between FP-MP's.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	8	8	Rises to NW.
Vertical Alignment	7	7	
Roadway Width (m)	10.400		
Embankment	6	6	
Sideslope (__:1)	3.0		
(Height of Cover(m) : 1)			
Guardrail (Y/N)	No		
Approach Road / Embankment General Rating	7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Secondary Span)			
Direction	W		North 1200mm pipe takes most of flow
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		4	4	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		4	4	Loss of material under bevel - 1500 mm void for 1m under bevel @ South pipe.
Beavers (Y/N)	No			
Upstream End General Rating		4	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Barrel Last Accessible Date	30-Oct-2011			North Pipe
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		2	2	
Measured Rise (mm)	1011			
Measured At Ring No.	2			
Sag (mm)	189			
Percent Sag	16			
Sidewall		3	3	Measured span @ East end of ring - 1340mm No change
Measured Span (mm)	1340			
Measured At Ring No.	2			
Deflection (mm)	140			
Percent Deflection	12			
Floor		N	N	500mm deep water
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	4	At ring 3
Separation (mm)	150			
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Coating		4	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	(HWM .6m above pipes)
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		2	2	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Secondary Span)				
Direction		E		North pipe
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	5	Bevel coupler exposed with embankment fill loss @ bevel top
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		4	5	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		W		West end- South pipe
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		4	4	Rock missing around bevel
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		4	4	Bevel undercut by 300mm (D) x 1.5 m (l)
Beavers (Y/N)	No			
Upstream End General Rating		4	4	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Barrel Last Accessible Date	30-Oct-2011			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	2	Rating deflection
Measured Rise (mm)	1010			
Measured At Ring No.	3			
Sag (mm)	190			
Percent Sag	16			
Sidewall		3	3	Rating deflection
Measured Span (mm)	1335			
Measured At Ring No.	3			
Deflection (mm)	135			
Percent Deflection	1			
Floor		N	N	Water 300mm
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	4	Pipe has fill exposed with voids in fill due to 170mm gap. 2 other seams @ D/S with 120mm gap
Separation (mm)	150			Ring 5
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Coating		4	4	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	2	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		E		South pipe
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	4	Loss of rock around bevel
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	4	5m x10m x0.4m scour
Beavers (Y/N)	No			
Downstream End General Rating		5	4	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Primary Span)				
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Primary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		4	4	Mower damage at bevel top
Heaving (mm)	150			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		6	6	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Upstream End General Rating		4	4	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)				
Barrel Last Accessible Date	30-Oct-2011			located 75m East of twin Mp's
Special Features				
Special Feature		7	7	4 columns with top and bottom plate @ ring 1 and 2 only. rise: 928 span: 1910 permanent ref. pt. by inspector @ ring 2- between 3rd and 4th strut form upstream end
(Type : VERT TIMBER STRUTS)				
Special Feature				
(Type :)				
Roof		2	2	Measured at rise at reference point is 928mm No change
Measured Rise (mm)	928			
Measured At Ring No.	2			
Sag (mm)	190			
Percent Sag	17			
Sidewall		5	5	Measured span at reference point is 928mm
Measured Span (mm)	1910			
Measured At Ring No.	2			
Deflection (mm)	81			
Percent Deflection	4			
Floor		4	4	D/s half of pipe has settled approx 40mm relative to u/s half
Bulge (mm)	40			
Measured At Ring No.	3			
Abrasion (Y/N)	No			
Circumferential Seams		4	4	In by ring 4- loss of fill at ring 5
Separation (mm)	90			
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)				
Coating		5	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	(70m south of running stream)
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		4	4	Rating increase due to struts in good condition
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Primary Span)				
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		5	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	Dugout 20m D/S of MP's. 90 degree bend @ U/S & D/S. Larger pipe is set 70m South of stream flow.
Bank Stability		6	6	
HWM (m below Top of Culvert)				None visible
Drift (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
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							
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS	2012	Install struts at North 1200 mp- or consider replacing pipes instead of repairs					
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	22.2/22.2	Sufficiency Rating (Last/Now) (%)	37.9/37.9	Est. Repl. Yr	2015	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							