

Bridge Culvert Inspection			
Bridge File Number	09585 -1 Bridge Culvert	Form Type	CULM
Year Built	1968	Lot No.	2
Bridge or Town Name	RIFE	Inspector Name	Wade Nanninga
Located Over	TRIBUTARY TO KEHIWIN CREEK, 7.12.4.2.2, WATERCRS-ST	Inspector Class	BR CLS A
Located On	41:23 C1 9.852	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	10-Apr-2012
Legal Land Location	NW SEC 31 TWP 58 RGE 6 W4M	Data Entry By	Lisa Fairhurst
Longitude, Latitude	-110:53:08, 54:03:37	Data Entry Date	24-Apr-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA08	Review Date	17-Apr-2012
Clear Roadway/Skew	8.4 /	Dept. Reviewer Name	Brent Herrick
AADT/Year	1,500 / 2011 (A)	Dept. Review Date	04-May-2012
Road Classification	RAU-209-110	Follow-Up By	
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2019	2226	SPE	33.5	152X51	2.8	ELLIPSE
2	MAIN	-	1200	MP	33.5	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	3 wires OH 150 m West of c/l. Power also crosses hwy 100m to South.	Municipal	
Others		Problem (Y/N)	No
Remarks	BF tag on top of SPE pipe roof @ East end.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Approaches each way.
Vertical Alignment		7	7	
Roadway Width (m)	8.400			
Embankment		5	3	Sloughing E embankment over 1200mm pipe - photo. Offset 2.0m
Sideslope (_ :1)	2.5			
(Height of Cover(m) : 2.7)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		5	7	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		E		
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: Primary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	Partially covered by beaver dam.-
Heaving (mm)	400			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		5	5	
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
Beavers (Y/N)	Yes			2 Large dam around U/S end
Upstream End General Rating		5	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2019, Rise (mm): 2226, Type: SPE)				
Barrel Last Accessible Date	09-Apr-2012			400mm water/ice in barrel
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	6	
Measured Rise (mm)	2190			
Measured At Ring No.	8			
Sag (mm)	36			
Percent Sag	2			
Sidewall		6	6	
Measured Span (mm)	2080			
Measured At Ring No.	8			
Deflection (mm)	61			
Percent Deflection	3			
Floor		6	N	Covered in ice
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		4	4	Not well nested. Rings 1-7 & 10-12. 5mm gap @ R7. 20mm gap @ ring 210mm gap @ ring 4.
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			1N stagger.
Longitudinal Stagger (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2019, Rise (mm): 2226, Type: SPE)				
Coating		6	6	Minor superficial rust on floor.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		3	3	Large berm around U/S ends holding back water - photo.
Baffle		X	X	(Type :)
Waterway Adequacy		3	3	
Icing (Y/N)	No			
Silting (Y/N)	No			Large berm around U/S ends holding back water - photo.
Drift (Y/N)	Yes			
Barrel General Rating		4	4	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
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		7	7	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		4	4	
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	
Beavers (Y/N)	No			Scour hole 3.0m across about 1.2m deep. Stable around edges with heavy grass. Bevel undermined 0.5m back 0.1m deep
Downstream End General Rating		4	4	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		E		
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		N	N	(Bent & distorted, still functional.-08-Aug-2008)
Heaving (mm)	100			Completely covered by beaver dam.-& sliding embankment
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	Loss of fill (0.3m) around sides of bevel.-08-Aug-2008
Beavers (Y/N)	Yes			Large dam u/s
Upstream End General Rating		4	4	GR carried over.

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	08-Jul-2003			Viewed from ends - not accessible.-08-Aug-2008 Not accessible - water to crown
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)	2190			(08/July/2003)
Measured At Ring No.				
Sag (mm)	36			
Percent Sag	2			
Sidewall		N	N	(08/July/2003)
Measured Span (mm)	2080			
Measured At Ring No.				
Deflection (mm)	51			
Percent Deflection	3			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	Riveted.
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)	Yes			

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		N	N	Pitted/corroding.-08-Aug-2008
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		3	3	West end has wire fence, blocked by drift - photo.-08-Aug-2008
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		5	5	GR carried over.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		W		Beaver cage over end.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	N	
Heaving (mm)	150			
Invert Above/Below Stream Bed	BELOW			Buried by drift and water to 150mm of crown-photo (08/July/2003)
Above/Below (mm)	300			
Scour Protection		5	5	Well grassed & shrub. No evident problems.
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
Beavers (Y/N)	Yes			
Downstream End General Rating		5	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		4	4	D/S aligns with secondary pipe. Flow impinging on East embankment.
Bank Stability		4	4	

Structure Usage				
		Last	Now	Explanation of Condition
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			Large dam U/S of both pipes - photo.
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		4	4	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION	2012	Remove beaver dam.					
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2012	Repair E embankment over 1200mm - add 10m3 f riprap to stabilize					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	44.4/44.4	Sufficiency Rating (Last/Now) (%)	32.7/32.7	Est. Repl. Yr	2018	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor cusping of plates		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	Shane Hall		Previous Assistant's Name				
Next Inspection Date	10-Jan-2014		Previous Inspection Date	15-Jul-2010			
Inspection Cycle (Default) (months)	21						
Comment							