

Bridge Culvert Inspection			
Bridge File Number	74367 -1 Bridge Culvert	Form Type	CULM
Year Built	1955	Lot No.	1
Bridge or Town Name	ROCKY RAPIDS	Inspector Name	Wade Nanninga
Located Over	TRIBUTARY TO NORTH SASKATCHEWAN RIVER, 6.137, WATERCRS-ST	Inspector Class	BR CLS A
Located On	22:30 C1 23.386	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	18-Oct-2011
Legal Land Location	NW SEC 9 TWP 50 RGE 7 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-114:58:35, 53:18:12	Data Entry Date	26-Oct-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA11	Review Date	25-Oct-2011
Clear Roadway/Skew	11.2 / -27 deg. (LHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	4,450 / 2010 (A)	Dept. Review Date	14-Nov-2011
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	3		

**Bridge Culvert Information**

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2314	2552	SPE	41.5	152X51	3.0	ELLIPSE
2	MAIN	-	1200	MP	41.5	68X13	2.8	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	West r/w.	Gas	Pipeline crossing 100m South.
Power	6 wires East r/w 30m from c/l & 2 wires OH crossing 100m South.	Municipal	
Others	File tag @ West end.	Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Access roads to SW & NE.
Vertical Alignment	6	6	No passing to South limited sight distance.
Roadway Width (m)	11.200		
Embankment	5	5	Sloughed over U/S end of 1200 pipe but stable.
Sideslope ( _:1)	2.0		5:1 at top half of embankment.
(Height of Cover(m) : 3)			
Guardrail (Y/N)	No		
<b>Approach Road / Embankment General Rating</b>	<b>6</b>	<b>6</b>	

**Upstream End**

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	W		South pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	
Bevel End		5	5	Pitting rust on floor.
Heaving (mm)	400			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection (Type : <b>RIP RAP</b> ) (Avg. Rock Size(mm) : <b>200</b> )		5	4	Fill settled next to pipe 500mm.
Scour/Erosion		5	4	
Beavers (Y/N)	Yes			30m upstream. Old beaver dam in front of inlet.
<b>Upstream End General Rating</b>		<b>5</b>	<b>4</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2314, Rise (mm): 2552, Type: SPE)</b>				
Barrel Last Accessible Date	18-Oct-2011			600mm water in pipe
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		N	6	Minor dent @ D/S crown.
Measured Rise (mm)	2455			
Measured At Ring No.	11			
Sag (mm)	97			
Percent Sag	4			
Sidewall		3	3	2 rings cracked.
Measured Span (mm)	2430			
Measured At Ring No.	11			
Deflection (mm)	116			
Percent Deflection	5			
Floor		N	4	Pitting rust on floor where visible.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	6	
Separation (mm)	0			
Longitudinal Seams		3	3	R10 at 9:00 and R11 at 3:00 with R11 having 81mm of steel between cracks.
Total No. of Cracked Rings	2			
Total No. of Rings with Two Cracked Seams				1N
Min. Remaining Steel Between Cracks (mm)	81			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2314, Rise (mm): 2552, Type: SPE)				
Coating		N	4	Pitting rust lower half.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		4	4	Heaved bevel. Drift caught on bevel and beaver dam blocking inlet.
Baffle		X	X	
(Type : )				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>3</b>	<b>3</b>	Error on previous inspection. G.R. corrected.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary 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	Pitting rust on lower half. Fill settled along bevel, 500mm.
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		5	4	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		5	4	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>4</b>	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		W		North pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	5	Minor bend on South side.
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		5	5	
Beavers (Y/N)	Yes			Beaver dam at inlet.
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)</b>				
Barrel Last Accessible Date				Pipe inaccessible, running half full. Viewed from ends, shape looks poor shape.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	4	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				est
Percent Sag	8			
Sidewall		N	4	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				est
Percent Deflection	8			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	4	
Separation (mm)	100			est
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)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)</b>				
Coating		4	4	Pitting rust along 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		5	5	
Baffle		X	X	
<b>(Type : )</b>				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>N</b>	<b>4</b>	

Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
<b>(Pipe # : 2, Span Type: Secondary Span)</b>					
Direction		E		North pipe.	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
<b>(Shape : )</b>					
Cutoff Wall		X	X		
Bevel End		5	4	Perforation in sidewall	
Heaving (mm)	150				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	100				
Scour Protection		5	5		
<b>(Type : RIP RAP)</b>					
<b>(Avg. Rock Size(mm) : 200)</b>					
Scour/Erosion		5	5		
Beavers (Y/N)	No				
<b>Downstream End General Rating</b>		<b>5</b>	<b>4</b>		

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		6	6	Bend D/S of the pipes.
Bank Stability		7	7	
HWM (m below Top of Culvert)				No HWM visible.
Drift (Y/N)	Yes			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>6</b>	<b>6</b>	

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	2011	Assess for repair or replacement					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>39.4/37.6</b>	Est. Repl. Yr	2017	Maint. Req. (Y/N)	No
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	Kris Bosters		Previous Assistant's Name	Sara Wadlow			
Next Inspection Date	18-Jul-2013		Previous Inspection Date	05-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							