

Bridge Culvert Inspection				
Bridge File Number	02268 -1 Bridge Culvert		Form Type	CULM
Year Built	1991		Lot No.	4
Bridge or Town Name	STIRLING		Inspector Name	Jon Davies
Located Over	KIPP COULEE, 11.9.6, WATERCRS-ST		Inspector Class	BR CLS B
Located On	61:02 C1 0.170		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	28-Mar-2013
Legal Land Location	SE SEC 4 TWP 7 RGE 19 W4M		Data Entry By	Lauren Korte
Longitude, Latitude	-112:31:11, 49:31:25		Data Entry Date	08-Apr-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA24		Review Date	07-Apr-2013
Clear Roadway/Skew	9.1 /		Dept. Reviewer Name	Tim Davies
AADT/Year	540 / 2012 (A)		Dept. Review Date	22-Apr-2013
Road Classification	RAU-209-110		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	-	3000	MPB	10	125X26	3.5	ROUND
2	MAIN	-	3000	MPB	10	125X26	3.5	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments	TELEPHONE UTILITIES-PHONE LINE		
Telephone	Conduit along South side.	Gas	40m U/S - no marker.
Power	1 wire 20m North.	Municipal	
Others		Problem (Y/N)	No
Remarks	Fibre optic cable North ditch.		

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Curve to West and intersection with Hwy. 4 (200m West). Concrete curbs are repaired at corners. The curb height is only 150mm. 30% corrosion of posts.
Vertical Alignment		9	9	
Roadway Width (m)	8.500			
Embankment		7	6	
Sideslope ( _ :1)	3.0			
(Height of Cover(m) : <b>0.9</b> )				
Guardrail (Y/N)	Yes			
<b>Approach Road / Embankment General Rating</b>		<b>6</b>	<b>6</b>	

**Upstream End**

Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Direction		S		West barrel - South end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	5	3- Medium cracks at crown of culvert.
Collar		X	X	
Wingwalls		6	6	
(Shape : <b>FLARE</b> )				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		7	7	In grown.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3000, Type: MPB)</b>				
Barrel Last Accessible Date	28-Mar-2013			West barrel.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	8	Shape good
Measured Rise (mm)	3020			Est.
Measured At Ring No.	1			
Sag (mm)	20			
Percent Sag	1			
Sidewall		N	8	Inward
Measured Span (mm)	2980			
Measured At Ring No.	1			
Deflection (mm)	20			
Percent Deflection	1			
Floor		N	N	150mm of silt & 200mm of water.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	X	
Separation (mm)	0			
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		N	7	Minor corrosion below waterline
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3000, Type: MPB)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type : )				
Waterway Adequacy		N	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>N</b>	<b>8</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		N		West barrel - North end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	6	2mm wide vertical crack @ barrel top.
Collar		X	X	
Wingwalls		7	7	
(Shape : FLARE)				
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	6	Ingrown
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 450)				
Scour/Erosion		7	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>6</b>	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		East barrel, South end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	5	2 - 1mm wide cracks @ barrel top.
Collar		X	X	
Wingwalls		5	5	Wide width crack & leaching @ wingwall.
(Shape : FLARE)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Bevel End		X	X	
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		7	7	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3000, Type: MPB)				
Barrel Last Accessible Date	28-Mar-2013			East barrel.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	8	
Measured Rise (mm)	3010			Est.
Measured At Ring No.	1			
Sag (mm)	10			
Percent Sag	0			
Sidewall		N	8	
Measured Span (mm)	2985			Inward
Measured At Ring No.	1			
Deflection (mm)	15			
Percent Deflection	1			
Floor		N	N	150mm of silt & 200mm of water.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	X	
Separation (mm)	0			
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		N	7	Minor corrosion below waterline
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3000, Type: MPB)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type : )				
Waterway Adequacy		N	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>N</b>	<b>8</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		N		East barrel, North end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	6	2mm wide vertical & horizontal cracks @ barrel top & East.
Collar		X	X	
Wingwalls		6	6	
(Shape : FLARE)				
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	7	In grown.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 450)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>6</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		5	5	D/S banks cut to 90 degree.
Bank Stability		5	5	NE sloughing. NW bank slumping at toe of slope.
HWM (m below Top of Culvert)				HWM not visible
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			Rock @ D/S.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>5</b>	<b>5</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							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>55.6/88.9</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>68.2/77.8</b>	Est. Repl. Yr	2050	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	Jon Davies		Previous Assistant's Name				
Next Inspection Date	28-Dec-2014		Previous Inspection Date	15-Jun-2011			
Inspection Cycle (Default) (months)	21						
Comment							