

Bridge Culvert Inspection			
Bridge File Number	77848 -1 Bridge Culvert	Form Type	CULM
Year Built	1974	Lot No.	3
Bridge or Town Name	SPRING COULE	Inspector Name	Jason Rusu
Located Over	MID - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS A
Located On	5:04 C1 28.553	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	04-Oct-2011
Legal Land Location	SW SEC 11 TWP 5 RGE 23 W4M	Data Entry By	Erin Roberts
Longitude, Latitude	-112:59:56, 49:22:03	Data Entry Date	17-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA25	Review Date	10-Nov-2011
Clear Roadway/Skew	13.5 / 30 deg. (RHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	2,480 / 2010 (A)	Dept. Review Date	21-Nov-2011
Road Classification	RAU-213-130	Follow-Up By	
Detour Length (km)	2		

**Bridge Culvert Information**

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1829	1118	FP	40.2	68X13	3.5,3.5,3.5	ARCH
2	MAIN	1473	914	FP	40.2	68X13		ARCH
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	South ditch	Gas	X road 75 m East, x canal 25 m North
Power	3 wire South, 3 wire North.	Municipal	
Others	Steel .35 m pipe x canal 5m North.	Problem (Y/N)	No
Remarks	3 W CROSSES ROAD 50 m East Fibre optics @ South R/W		

**Approach Road / Embankment**

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	No passing EB Hill crests 200 m East.
Vertical Alignment		6	6	
Roadway Width (m)	13.500			
Embankment		7	7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : <b>0.7</b> )				
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
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Direction		N		East pipe-NORTH END
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	Headgate and electric irrigation pump 15 m u/s.
Collar		X	X	
Wingwalls		X	X	
(Shape : )				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Cutoff Wall		X	X	
Bevel End		5	N	(Surface rust, with some pitting) 03/03/2006 Not visible due to high water level PR 5
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection (Type : <b>RIP RAP</b> ) (Avg. Rock Size(mm) : <b>300</b> )		5	N	PR 5
Scour/Erosion		5	N	PR 5
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	G.R. carried forward
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP)</b>				
Barrel Last Accessible Date	28-Nov-2009			Not accessible due to high water
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		3	N	(Due to Sag Wavy, one section 1/3L from u/s is dentied, minor) Nov-28-2009 PR 3
Measured Rise (mm)	968			
Measured At Ring No.	2			
Sag (mm)	150			
Percent Sag	13			
Sidewall		5	N	PR 5
Measured Span (mm)	1915			
Measured At Ring No.	2			
Deflection (mm)	86			
Percent Deflection	5			
Floor		5	N	PR 5
Bulge (mm)	100			
Measured At Ring No.	3			
Abrasion (Y/N)	No			
Circumferential Seams		5	N	PR 5
Separation (mm)	30			
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)				
Coating		5	N	PR 5 (SOME MINOR PITTED CORROSION @ FLOOR & SIDEWALL) Nov-28-2009
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): 1829, Rise (mm): 1118, Type: FP)				
Camber POS/ZERO/NEG	ZERO			No sight line
Ponding (Y/N)	No			
Fish Passage Adequacy		3	N	(Dead fish @ D/S scour hole ) Nov-28-2009
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>	G.R. carried forward
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		S		EAST CULVERT - SOUTH END
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		5	N	PR 5 not visible due to high water level
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			Not visible (BEVEL HANGING IN AIR.) Nov-28-2009
Above/Below (mm)	600			
Scour Protection		3	N	(Voided 500mm under bevel 0.6m from bevel to bot streambed) Nov-28-2009 PR 3
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		3	N	(3mx5mx0.3m scour hole) Nov-28-2009 PR 3
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>3</b>	<b>3</b>	G.R. Carried forward
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		N		WEST CULVERT - NORTH END.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Bevel End		5	N	Not visible due to high water level PR 5
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			Not visible
Above/Below (mm)	0			
Scour Protection		5	N	PR 5
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		5	N	PR 5
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	G.R. carried forward
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1473, Rise (mm): 914, Type: FP)</b>				
Barrel Last Accessible Date	24-Apr-2004			Not accessible due to high water level
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	N	(Viewed from ends Estimate 3-5% deformation @ middle of barrel.) Nov-28-2009
Measured Rise (mm)	1925			
Measured At Ring No.				
Sag (mm)	93			
Percent Sag	8			
Sidewall		N	N	
Measured Span (mm)	925			
Measured At Ring No.				
Deflection (mm)	96			
Percent Deflection	5			
Floor		N	N	
Bulge (mm)	100			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	30			
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)				
Coating		N	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			No sight line possible

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1473, Rise (mm): 914, Type: FP)</b>				
Ponding (Y/N)	No			
Fish Passage Adequacy		3	X	(100's of small fish caught @ U/S end.) Nov-28-2009 PR 3
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>4</b>	<b>4</b>	general rating carried forward

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Direction		S		SOUTH END WEST 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	N	Not visible due to high water PR 5
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	500			
Scour Protection		3	N	(BEVEL HANGING IN AIR.) Nov-28-2009 (Scour protection ingrown)Nov-28-2009
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>300</b> )				
Scour/Erosion		3	N	(SOUR GOES BACK UNDER PIPE 1.0 m. 0.4m from bevel to bot streambed) 2004-04-24 PR 3
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>3</b>	<b>3</b>	GR Carried Forward

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				

<b>Structure Usage</b>				
		<b>Last</b>	<b>Now</b>	<b>Explanation of Condition</b>
<b>Channel General Rating</b>		<b>7</b>	<b>7</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2012	Place 3m <sup>3</sup> clay and 5m <sup>3</sup> Cl. 1 @ D/S Maintenance completed- no photo's possible					
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>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>42.0/49.5</b>	Est. Repl. Yr	2016	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	04-Jul-2013		Previous Inspection Date	28-Nov-2009			
Inspection Cycle (Default) (months)	21						
Comment							