

Bridge Culvert Inspection			
Bridge File Number	82142 -1 Bridge Culvert	Form Type	CULM
Year Built	1996	Lot No.	2
Bridge or Town Name	SPIRIT RIVER	Inspector Name	Russel Vanderschaaf
Located Over	2ND ORDER TRIBUTARY TO KSITUAN RIVER, 8.10.82.1.2, WATERCRS-ST	Inspector Class	BR CLS B
Located On	727:02 C1 14.737	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	20-Mar-2012
Legal Land Location	NW SEC 36 TWP 79 RGE 7 W6M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-118:57:58, 55:53:39	Data Entry Date	28-Mar-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA05	Review Date	27-Mar-2012
Clear Roadway/Skew	12 /	Dept. Reviewer Name	David Morrison
AADT/Year	240 / 2011 (A)	Dept. Review Date	18-Oct-2012
Road Classification	RCU-209-110	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	-	2400	MP	32	125X26	2.8	ROUND
2	MAIN	-	2400	MP	32	125X26	2.8	ROUND
3	MAIN	-	2400	MP	32	125X26	2.8	ROUND
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	9	9	
Vertical Alignment	9	9	
Roadway Width (m)	12.000		
Embankment	6	6	
Sideslope (__:1)	4.0		
(Height of Cover(m) : 1.2)			
Guardrail (Y/N)	No		
<b>Approach Road / Embankment General Rating</b>	<b>9</b>	<b>9</b>	

**Upstream End**

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	W		(NORTH CULVERT)
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		N	3	Unsupported for approx. 2m. photo
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	3	Scour along sides of bevel. Bevel unsupported for approx. 2m.-photo
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 250)				
Scour/Erosion		N	3	Scour along S. side of bevel. Bevel unsupported for approx. 2 m.-photo
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>3</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP)				
Barrel Last Accessible Date	20-Mar-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		9	7	est. due to ice. @ c/l
Measured Rise (mm)	2362			
Measured At Ring No.				
Sag (mm)	38			
Percent Sag	2			
Sidewall		9	7	@ c/l
Measured Span (mm)	2422			
Measured At Ring No.				
Deflection (mm)	22			
Percent Deflection	1			
Floor		7	7	@ cl
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	AT 3RD SEAM FROM U/S - GAP OF 25MM IN VERTICAL DIRECTION AT 11 OCLOCK -FACING U/S
Separation (mm)	15			
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	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP)					
Coating		6	6	Minor superficial rust on floor.	
Corrosion By Soil (Y/N)	No				
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	ZERO				
Ponding (Y/N)	No				
Fish Passage Adequacy		7	7		
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>8</b>	<b>7</b>		
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Span Type: Primary Span)					
Direction		E		(NORTH CULVERT)	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape : )					
Cutoff Wall		X	X		
Bevel End		8	7	Bevel silted on floor & overgrown with grass.	
Heaving (mm)	0				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	200				
Scour Protection		N	N	Snow covered.	
(Type : RIP RAP)					
(Avg. Rock Size(mm) : 250)					
Scour/Erosion		N	N	Snow covered	
Beavers (Y/N)	No				
<b>Downstream End General Rating</b>		<b>7</b>	<b>7</b>		
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary Span)					
Direction		W		(Center Culverts)	
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		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	3	Scour along sides of bevel.-photo
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>250</b> )				
Scour/Erosion		N	3	Scour along side of bevel.-photo
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>4</b>	<b>3</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP)</b>				
Barrel Last Accessible Date	20-Mar-2012			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		8	7	
Measured Rise (mm)	2390			est. due to ice. @ c/l
Measured At Ring No.				
Sag (mm)	10			
Percent Sag	1			
Sidewall		9	7	
Measured Span (mm)	2366			@ c/l
Measured At Ring No.				Inward deflection
Deflection (mm)	34			
Percent Deflection	1			
Floor		7	N	Ice covered
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	15			
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
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP)				
Coating		4	4	Some pitting rust on floor.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
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>8</b>	<b>7</b>	

Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary Span)					
Direction		E		(Center culvert).	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape : )					
Cutoff Wall		X	X		
Bevel End		8	8		
Heaving (mm)	0				
Invert Above/Below Stream Bed	ABOVE				
Above/Below (mm)	0				
Scour Protection		N	N	Snow covered.	
(Type : RIP RAP)					
(Avg. Rock Size(mm) : 250)					
Scour/Erosion		N	N	Snow covered	
Beavers (Y/N)	No				
<b>Downstream End General Rating</b>		<b>7</b>	<b>8</b>		

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

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		N	3	Scour along sides of bevel. -photo
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>250</b> )				
Scour/Erosion		N	3	Scour along sides of bevel.-photo
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>3</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP)</b>				
Barrel Last Accessible Date	09-Jan-2009			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		8	7	est. due to ice and silt.
Measured Rise (mm)	2390			@ c/l
Measured At Ring No.				
Sag (mm)	10			
Percent Sag	1			
Sidewall		9	7	
Measured Span (mm)	2381			@ c/l
Measured At Ring No.				Inward deflection
Deflection (mm)				
Percent Deflection				
Floor		7	N	Silt/ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	15			
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 # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP)</b>				
Coating		4	4	Pitting rust on floor
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
<b>(Type : )</b>				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>8</b>	<b>7</b>	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Span Type: Secondary Span)</b>				
Direction		E		South culvert.
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		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	Snow covered.
<b>(Type : RIP RAP)</b>				
<b>(Avg. Rock Size(mm) : 250)</b>				
Scour/Erosion		N	N	Snow covered.
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>7</b>	<b>7</b>	GR carried forward.

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		8	8	
Bank Stability		8	8	Stable
HWM (m below Top of Culvert)				HWM NOT VISIBLE
Drift (Y/N)	No			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>6</b>	<b>8</b>	



Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2012	Place 40m3 class 1 riprap on u/s end.					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2012	Repair undermined bevel.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>88.9/77.8</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>79.1/74.4</b>	Est. Repl. Yr	2046	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	Brian Pientsch		Previous Assistant's Name	Tim Miskiman			
Next Inspection Date	20-Jun-2015		Previous Inspection Date	09-Jan-2009			
Inspection Cycle (Default) (months)	39						
Comment							