

Bridge Culvert Inspection			
Bridge File Number	78484 -1 Bridge Culvert	Form Type	CULM
Year Built	1984	Lot No.	4
Bridge or Town Name	ENCHANT	Inspector Name	Jason Rusu
Located Over	BRP - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS B
Located On	526:02 C1 5.868	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	27-Feb-2010
Legal Land Location	SE SEC 17 TWP 14 RGE 19 W4M	Data Entry By	Kelsey Roberts
Longitude, Latitude	-112:33:40, 50:09:52	Data Entry Date	24-Mar-2010
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA25	Review Date	11-Mar-2010
Clear Roadway/Skew	9.4 /	Dept. Reviewer Name	Lorenz Bohnert
AADT/Year	590 / 2008 (A)	Dept. Review Date	26-Mar-2010
Road Classification	RCU-209-110	Follow-Up By	
Detour Length (km)	6		

**Bridge Culvert Information**

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	9700	4700	RPA	22.6	152X51	4.0,5.0	ARCH
2	MAIN	9700	4700	RPA	22.6	152X51	4.0,5.0	ARCH
Special Features								
Special Features Comment								

**Utilities (Located at)**

Utility Attachments			
Telephone	Along north fence.	Gas	
Power	3 line along S. ditch.	Municipal	
Others		Problem (Y/N)	No
Remarks			

**Approach Road / Embankment**

	Last	Now	Explanation of Condition
Horizontal Alignment	9	8	Rises then drops 150 m east.
Vertical Alignment	5	5	
Roadway Width (m)	9.600		
Embankment	9	7	flat 12:1
Sideslope ( :1)	12.1		Some minor erosion due to highway drainage.
(Height of Cover (m) : <b>0.3</b> )			
Guardrail (Y/N)	Yes		
<b>Approach Road / Embankment General Rating</b>	<b>5</b>	<b>5</b>	

**Upstream End**

Culvert Component	Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>			
Direction	E		East cell, north end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	7	7	H.L. CRACK BTWN HEADWALL & WINGWALL
Collar	6	6	Some spalling by bevel end
Wingwalls	8	8	
(Shape : )			

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		8	7	Ingrown
(Type : RIP RAP)				
(Avg. Rock Size (mm) : 250)				
Scour/Erosion		8	7	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>6</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 9700, Rise (mm): 4700, Type: RPA)</b>				
Barrel Last Accessible Date	27-Feb-2010			E pipe- Viewed from ends. Shape looks good.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		4	4	(Built this way. This is an ABC structure so it should be stable because of the concrete structures over the top of it.) 28-Feb-2007
Measured Rise (mm)	4355			
Measured At Ring No.	7			Est
Sag (mm)	345			Unable to confirm 7% sag.
Percent Sag	7			
Sidewall		7	7	
Measured Span (mm)	9764			
Measured At Ring No.	3			
Deflection (mm)	0			
Percent Deflection	1			
Floor		N	N	ice covered
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	Staggered.
Separation (mm)	0			
Longitudinal Seams		8	8	1 bolt missing-lower sidewall SE
Total No. of Cracked Rings	0			TOP & BOT OF SIDEWALLS NO STAGGER
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		4	4	Alkali staining
Corrosion By Soil (Y/N)	No			Some minor corrosion with some pitting in the lower half
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 9700, Rise (mm): 4700, Type: RPA)</b>				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	5	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Direction		W		East pipe
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	H.L. CRACK BTWN HEADWALL & WINGWALL
Collar		5	5	Large cracks between units.
Wingwalls (Shape : )		7	7	Some cracks.
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection (Type : <b>RIP RAP</b> ) (Avg. Rock Size (mm) : <b>250</b> )		7	7	ingrown
Scour/Erosion		7	7	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Direction		E		West pipe - north end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		5	5	
Wingwalls (Shape : )		7	7	
Cutoff Wall		N	N	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Bevel End		7	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	700			
Scour Protection		7	6	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size (mm) : <b>250</b> )				
Scour/Erosion		7	6	
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
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 9700, Rise (mm): 4700, Type: RPA)</b>				
Barrel Last Accessible Date	27-Feb-2010			West cell- Shapes look good
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		4	4	Unable to confirm 7% sag.
Measured Rise (mm)	4355			
Measured At Ring No.	1			
Sag (mm)	345			
Percent Sag	7			
Sidewall		7	7	
Measured Span (mm)	9768			
Measured At Ring No.	3			
Deflection (mm)	0			
Percent Deflection	1			
Floor		N	N	Ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	Staggered
Separation (mm)	0			
Longitudinal Seams		8	7	Top & Bottom of sidewalls no stagger
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)	No			
Longitudinal Stagger (Y/N)	No			
Coating		4	5	
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
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 9700, Rise (mm): 4700, Type: RPA)</b>				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	5	
Baffle		X	X	
(Type : )				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>4</b>	<b>4</b>	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Direction		W		South west end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	6	
Collar		7	6	
Wingwalls		7	6	
(Shape : )				
Cutoff Wall		N	N	
Bevel End		7	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		7	6	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size (mm) : <b>250</b> )				
Scour/Erosion		7	6	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>7</b>	<b>6</b>	
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)				No visible HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				

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

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>44.4/44.4</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>61.0/60.9</b>	Est. Repl. Yr	2028	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	Tim Davies		Previous Assistant's Name				
Next Inspection Date	27-May-2013		Previous Inspection Date	28-Feb-2007			
Inspection Cycle (Default) (months)	39						
Comment							