Bridge Culvert Inspection

Bridge File Number	72350 -1 Bridge Culvert	Form Type	CUL1
Year Built	1995	Lot No.	2
Bridge or Town Name	IRON SPRINGS	Inspector Name	Jason Rusu
Located Over	LNI - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS A
Located On	25:02 C1 35.944	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	09-Dec-2011
Legal Land Location	SW SEC 29 TWP 11 RGE 20 W4M	Data Entry By	Anne Roberts
Longitude, Latitude	-112:42:16, 49:55:53	Data Entry Date	17-Jan-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA25	Review Date	26-Dec-2011
Clear Roadway/Skew	11 / -30 deg. (LHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	830 / 2010 (A)	Dept. Review Date	18-Jan-2012
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3000	2400	PCB	34.2			RECTANGLE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	SOUTH ROW	Gas	
Power	3 WIRE NORTH ROW	Municipal	
Others	Supernet fibre North ditch	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	
Vertical Alignment		8	8	
Roadway Width (m)	11.000			
Embankment		8	8	
Sideslope (__:1)	2.0			
(Height of Cover(m) : **0.9**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**8**	**8**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		X	X	Because of skew and length of barrel the box extends into the channel reducing entrance efficiencies
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		7	N	Snow covered
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **350**)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 3000, Rise (mm): 2400, Type: PCB**)				
Barrel Last Accessible Date	09-Dec-2011			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	7	
Measured Rise (mm)	2400			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag				
Sidewall		N	7	
Measured Span (mm)	3000			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	6	Foam added to all circumferential seams
Separation (mm)	25			
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		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 3000, Rise (mm): 2400, Type: PCB**)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		9	9	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**7**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	Because of the skew and length of barrel, the box extends into the channel reducing exit efficiencies and contributing to corner eddy currents.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		7	N	Snow covered
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		7	N	Snow covered
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**N**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		9	9	
Bank Stability		5	3	SW ditch drainage erosion contributing to bank instability
HWM (m below Top of Culvert)				(HWM 1.4) 27-may-2008
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**9**	**3**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2012	Place 2.5 m 3 class 2 rip rap at SW ditch drainage outlet.				
REMOVE DRIFT ACCUMULATION						
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/77.8**	**Sufficiency Rating (Last/Now) (%)**	**74.0/78.3**	Est. Repl. Yr	2046	Maint. Reqd. (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	09-Sep-2013	Previous Inspection Date	06-Jun-2010
Inspection Cycle (Default) (months)	21		
Comment			