Bridge Culvert Inspection

Bridge File Number	73754 -1 Bridge Culvert	Form Type	CUL1
Year Built	1985	Lot No.	3
Bridge or Town Name	IRRICANA	Inspector Name	Jon Davies
Located Over	CROSSFIELD CREEK, 3.33.20, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	9:02 C1 37.198	Assistant Class	
Water Body Cl./Year		Inspection Date	26-Nov-2011
Navigabil. Cl./Year		Data Entry By	Anne Roberts
Legal Land Location	NW SEC 27 TWP 27 RGE 26 W4M	Data Entry Date	20-Dec-2011
Longitude, Latitude	-113:35:17, 51:20:22	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	05-Dec-2011
Contract Main. Area	CMA29	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	11 /	Dept. Review Date	10-Jan-2012
AADT/Year	2,820 / 2010 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	10759	5165	RPA	25	152X51	5.0	ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West ditch	Gas	100m north
Power	3 wire O.H. @ E. fenceline	Municipal	
Others	200m from C.L. - 3 wire west	Problem (Y/N)	No
Remarks	Fibre optic cable at East ROW		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	
Vertical Alignment		8	8	
Roadway Width (m)	11.000			
Embankment		8	8	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **0.6**)				
Guardrail (Y/N)	Yes			Collision damage at East guardrail.
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		West.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			Conduit through headwall
Headwall		8	7	
Collar		8	7	Shrinkage cracks-minor @ bottom
Wingwalls		8	7	
(Shape : **FLARE**)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		8	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		8	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		8	7	Well ingrown
Beavers (Y/N)	No			
Upstream End General Rating		**8**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 10759, Rise (mm): 5165, Type: RPA**)				
Barrel Last Accessible Date	26-Nov-2011			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	7	Appears to have original shape
Measured Rise (mm)				Approx 50mm sag @ South roof @ center - estimated
Measured At Ring No.				
Sag (mm)	50			
Percent Sag				
Sidewall		8	6	Rating due to longitudinal seam rating.
Measured Span (mm)	1075			
Measured At Ring No.	3			Inward
Deflection (mm)	9			
Percent Deflection	0			
Floor		N	N	1000mm silt
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		6	6	Up to 15mm gap at ring #3 at upper sidewall at south. Roof sidewall & floor to sidewall seams not staggered. 4N stagger at sidewall
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Alkali stains @ rings 3 & 4 @ S upper sidewall. Minor water corrosion at North floor.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
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): 10759, Rise (mm): 5165, Type: RPA**)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		9	7	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**6**	**6**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	7	Conduit through headwall
Collar		8	7	Few shrink crks-minor @ bot
Wingwalls		8	7	
(Shape : **FLARE**)				
Cutoff Wall		N	N	
Bevel End		8	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		7	7	Well Ingrown
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		5	5	Erosion 30m u/s @ North bank.
HWM (m below Top of Culvert)	3.0			No HWM visible
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		**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	2012	Replace 3 T.T. posts at East guardrail.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**77.1/68.8**	Est. Repl. Yr	2040	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	Rex Davidson	Previous Assistant's Name	
Next Inspection Date	26-Aug-2013	Previous Inspection Date	25-May-2010
Inspection Cycle (Default) (months)	21		
Comment			