Bridge Culvert Inspection

Bridge File Number	71628 -1 Bridge Culvert	Form Type	CUL1
Year Built	1989	Lot No.	4
Bridge or Town Name	TILLEY	Inspector Name	Tom Carey
Located Over	EID - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS A
Located On	876:02 C1 6.292	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	16-Feb-2010
Legal Land Location	NW SEC 19 TWP 17 RGE 12 W4M	Data Entry By	Kelsey Roberts
Longitude, Latitude	-111:39:00, 50:27:11	Data Entry Date	23-Mar-2010
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA23	Review Date	24-Feb-2010
Clear Roadway/Skew	8.5 /	Dept. Reviewer Name	Lorenz Bohnert
AADT/Year	670 / 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		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3920	2150	RPE	21.3	152X51	4.0,4.0,4.0	ELLIPSE
Special Features								
Special Features Comment		Concrete slab over pipe. Hazards @ all corners.						

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	1 wire, crosses road over pipe	Municipal	Light to N.W.
Others	Fibre optics in east R/W	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		4	4	Sharp curve to north, reduced speed 55 km/hr. 50 km @ Tilley directly south
Vertical Alignment		8	8	
Roadway Width (m)	8.500			
Embankment		7	N	Snow
Sideslope (__:1)	4.0			
(Height of Cover (m) : **0.4**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**4**	**4**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		West
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**
Bevel End		N	N	Snow covered
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	700			
Scour Protection		N	N	(Mostly gravel) Snow covered
(Type :)				
(Avg. Rock Size (mm) :)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**N**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 3920, Rise (mm): 2150, Type: RPE**)				
Barrel Last Accessible Date	16-Feb-2010			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	Estimate
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		8	8	INWARD 3900 throughout
Measured Span (mm)	3900			
Measured At Ring No.	4			
Deflection (mm)	20			
Percent Deflection	0			
Floor		N	N	Ice Covered
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	8	
Separation (mm)	0			
Longitudinal Seams		7	8	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			Roof is staggered
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	No			
Coating		6	5	SURFACE RUST @ sidewalls.
Corrosion By Soil (Y/N)				
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): 3920, Rise (mm): 2150, Type: RPE**)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	(Flows above inlet 911212).
Icing (Y/N)	No			(AT ENDS -700mm deep)-ice
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**7**	**8**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		East
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	N	snow covered
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	700			
Scour Protection		N	N	Snow covered (Little riprap, nostly gravel)
(Type :)				
(Avg. Rock Size (mm) :)				
Scour/Erosion		N	N	
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	(200 mm above inlet 911212).
Bank Stability		7	N	Snow
HWM (m below Top of Culvert)				
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	G.R. carried forward

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						

Structural Condition Rating (Last/Now) (%)	**77.8/88.9**	**Sufficiency Rating (Last/Now) (%)**	**60.7/62.0**	Est. Repl. Yr	2028	Maint. Reqd. (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	16-May-2013	Previous Inspection Date	20-Feb-2007
Inspection Cycle (Default) (months)	39		
Comment			