Bridge Culvert Inspection

Bridge File Number	08952 -1 Bridge Culvert	Form Type	CUL1
Year Built	1989	Lot No.	4
Bridge or Town Name	ETZIKOM	Inspector Name	Tom Carey
Located Over	FORTY MILE COULEE, 2.7.1.12.2, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	885:04 C1 9.534	Assistant Class	
Water Body Cl./Year		Inspection Date	13-Mar-2012
Navigabil. Cl./Year		Data Entry By	Anne Roberts
Legal Land Location	NE SEC 14 TWP 7 RGE 9 W4M	Data Entry Date	10-Apr-2012
Longitude, Latitude	-111:06:44, 49:33:52	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	25-Mar-2012
Contract Main. Area	CMA24	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	10.8 /	Dept. Review Date	17-Apr-2012
AADT/Year	230 / 2011 (A)	Follow-Up By	
Road Classification	RCU-210-110		
Detour Length (km)	26		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1800	MP	48	125X26	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	Along West fence.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	In curve, super elevated. In bottom of sag
Vertical Alignment		6	6	
Roadway Width (m)	10.800			
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **4.3**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**6**	**6**	

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		5	N	(Start of pitted rust on floor.) Submerged
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Upstream End General Rating		**5**	**N**	PR 5

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP**)				
Barrel Last Accessible Date	09-Feb-2009			
Special Features				
Special Feature				Average 1000 mm deep water - viewed from ends - shape good.
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	(Est)
Measured Rise (mm)	1790			
Measured At Ring No.	4			
Sag (mm)	10			
Percent Sag				
Sidewall		8	N	(Inward)
Measured Span (mm)	1793			
Measured At Ring No.	4			
Deflection (mm)	7			
Percent Deflection				
Floor		N	N	(Ice covered)
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	N	
Separation (mm)	35			
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		4	4	(Some superficial rust @ barrel floor. Pitted corrosion @ bevel floors.) Pitted corrosion at top of roof at ends.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			(200mm of water in the pipe.) 2005/10/17

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: MP**)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**N**	

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		8	N	Submerged
Heaving (mm)	125			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	250			
Scour Protection		N	5	Doesn't have too much rock at sides
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		8	5	
Beavers (Y/N)	No			
Downstream End General Rating		**8**	**N**	PR 8

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	8	Pipe is an equalizer between 2 large ponds
Bank Stability		8	8	
HWM (m below Top of Culvert)				(HWM .6m) 02/05/31 HWM not visible.
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		**8**	**8**	

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) (%)	**88.9/55.6**	**Sufficiency Rating (Last/Now) (%)**	**84.4/66.6**	Est. Repl. Yr	2032	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	13-Jun-2015	Previous Inspection Date	09-Feb-2009		
Inspection Cycle (Default) (months)	39				
Comment					