Bridge Culvert Inspection

Bridge File Number	72290 -1 Bridge Culvert	Form Type	CUL1
Year Built	1971	Lot No.	2
Bridge or Town Name	STANDARD	Inspector Name	Garry Roberts
Located Over	SEVERN CREEK, 3.33.8, WATERCRS-ST	Inspector Class	BR CLS A
Located On	840:02 C1 17.739	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	10-Jan-2012
Legal Land Location	NW SEC 2 TWP 26 RGE 22 W4M	Data Entry By	Anne Roberts
Longitude, Latitude	-112:58:54, 51:11:46	Data Entry Date	07-Feb-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Joel Wozney
Contract Main. Area	CMA29	Review Date	18-Jan-2012
Clear Roadway/Skew	8.8 / 11 deg. (RHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	620 / 2010 (A)	Dept. Review Date	09-Feb-2012
Road Classification	RCU-211-110	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	1981	2286	SPE	62.8	152X51	3.0	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

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

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	7	
Vertical Alignment		8	7	
Roadway Width (m)	8.800			
Embankment		4	5	Ditch erosion @ NW not affecting culvert
Sideslope (__:1)	2.0			
(Height of Cover(m) : **7.3**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**4**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		
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		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	50			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1981, Rise (mm): 2286, Type: SPE**)				
Barrel Last Accessible Date	10-Jan-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	4	Could not confirm rise due to ice in R8
Measured Rise (mm)	2090			
Measured At Ring No.	8			
Sag (mm)	196			
Percent Sag	8			
Sidewall		3	4	Small construction tear in North sidewall R3. Isolated construction dents.
Measured Span (mm)	2165			
Measured At Ring No.	8			
Deflection (mm)	184			
Percent Deflection	9			
Floor		5	5	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		5	4	
Total No. of Cracked Rings	0			1 seam at North sidewall not properly lapped with several loose bolts and gaps to 10 mm
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		5	5	Superficial corrosion @ u/s bevel & floor and soil, corrosion stains through bolt holes
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1981, Rise (mm): 2286, Type: SPE**)				
Fish Passage Adequacy		X	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	4	Grass on roof and upper sidewall bolts indicate pipe has run full
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**3**	**4**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	50			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	100			
Scour Protection		4	4	Bevel undermined & 2m diameter deep rock lined scour hole
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		4	4	
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	6	
Bank Stability		6	7	
HWM (m below Top of Culvert)	0.0			Grass on roof bolts
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**6**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2013	10 m 3 Cl. 1 at D/S				
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) (%)	**33.3/44.4**	**Sufficiency Rating (Last/Now) (%)**	**39.6/47.7**	Est. Repl. Yr	2025	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	10-Apr-2015	Previous Inspection Date	21-Oct-2008		
Inspection Cycle (Default) (months)	39				
Comment					