Bridge Culvert Inspection

Bridge File Number	78510 -1 Bridge Culvert	Form Type	CUL1
Year Built	1979	Lot No.	1
Bridge or Town Name	MORLEY	Inspector Name	Jon Davies
Located Over	TRIBUTARY TO LITTLE JUMPINGPOUND CREEK, 2.13.43.3.2, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	68:04 C1 35.812	Assistant Class	
Water Body Cl./Year		Inspection Date	12-Sep-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	NW SEC 7 TWP 25 RGE 5 W5M	Data Entry Date	10-Oct-2012
Longitude, Latitude	-114:41:55, 51:07:14	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	21-Sep-2012
Contract Main. Area	CMA28	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	12.3 /	Dept. Review Date	11-Oct-2012
AADT/Year	310 / 2011 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	16		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2317	2561	SPE	42.1	152X51	3.0	ELLIPSE
Special Features		BEAVR CTRL DEV						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	East ditch.	Gas	x-ing 100m South.
Power	West row.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Located in curve.
Vertical Alignment		7	7	
Roadway Width (m)	12.300			
Embankment		7	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **3.3**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**6**	**6**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		7	7	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		7	7	
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): 2317, Rise (mm): 2561, Type: SPE**)				
Barrel Last Accessible Date	12-Sep-2012			
Special Features				
Special Feature		6	4	Removed at U/S East bevel.
(Type : **BEAVR CTRL DEV**)				
Special Feature				
(Type :)				
Roof		5	5	
Measured Rise (mm)	2495			
Measured At Ring No.	7			
Sag (mm)	66			
Percent Sag	2			
Sidewall		3	3	Rated 3 due to cracked seam.
Measured Span (mm)	2430			
Measured At Ring No.	7			
Deflection (mm)	113			
Percent Deflection	4			
Floor		N	N	Water up to 400mm.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	Roof bolt pulling through 2nd seam @ u/s end.
Separation (mm)	0			
Longitudinal Seams		3	3	3,4,5,6,7,8 & 9 from U/S end cracked on North side - 58 mm steel @ ring #7 Ends of all cracks marked in R7 for future monitoring
Total No. of Cracked Rings	7			
Total No. of Rings with Two Cracked Seams	0			Bolts pulling through.
Min. Remaining Steel Between Cracks (mm)	58			In stagger.
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	6	Superficial corrosion @ lower sidewalls.
Corrosion By Soil (Y/N)	No			
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): 2317, Rise (mm): 2561, Type: SPE**)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**3**	**3**	

Downstream 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	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		5	4	Displaced rip rap and fill at SW.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		5	4	Minor scour at SW bevel scope.
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	Curves to the North on the d/s end.
Bank Stability		7	7	Shallow banks.
HWM (m below Top of Culvert)	0.2			No visible HWM.
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		**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	2012	2200 diameter lining.				
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**54.9/53.8**	Est. Repl. Yr	2020	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	Garry Roberts	Previous Assistant's Name			
Next Inspection Date	12-Jun-2014	Previous Inspection Date	07-Jan-2011		
Inspection Cycle (Default) (months)	21				
Comment					