Bridge Culvert Inspection

Bridge File Number	00285 -1 Bridge Culvert	Form Type	CUL1
Year Built	1979	Lot No.	2
Bridge or Town Name	GLEICHEN	Inspector Name	Jon Davies
Located Over	TRIBUTARY TO CROWFOOT CREEK, 2.13.14.9, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	1:14 R1 15.526;1:14 L1 15.561	Assistant Class	
Water Body Cl./Year		Inspection Date	16-Feb-2012
Navigabil. Cl./Year		Data Entry By	Lauren Korte
Legal Land Location	SW SEC 6 TWP 24 RGE 22 W4M	Data Entry Date	18-Mar-2012
Longitude, Latitude	-113:04:28, 51:00:44	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	27-Feb-2012
Contract Main. Area	CMA30	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	24.8 / 3 deg. (RHF)	Dept. Review Date	22-Mar-2012
AADT/Year	5,940 / 2010 (A)	Follow-Up By	
Road Classification	RAD-412.4-120		
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	6500	3500	RPE	67.1	152X51	3.0,5.0,4.0	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	In West ditch and West ROW.	Gas	150m South crossing.
Power		Municipal	
Others	H2O station @ SW.	Problem (Y/N)	No
Remarks	Fibre optics East RW.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	7	Sag curve with 150m sight distance. Intersection 300m South. EBL to N.
Vertical Alignment		6	6	400 mm CSP 15 m North @ W/B lanes.
Roadway Width (m)	24.800			
Embankment		7	6	
Sideslope (__:1)	4.5			
(Height of Cover(m) :)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**6**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		West end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		4	4	Cracking with 200 mm spalls at top corners.
Collar		4	4	Cracks in collar.
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		N	N	Buried.
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1800			
Scour Protection		7	7	Heavily ingrown.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 6500, Rise (mm): 3500, Type: RPE**)				
Barrel Last Accessible Date	16-Feb-2012			1800mm of silt w/. Ice cover. Approximately.
Special Features				
Special Feature				Ears at Ring 8. Previous roof paint spot used. Rise to roof from string line chord established 948 mm. Problem with South bolt ear. Not anchored well.
(Type :)				
Special Feature				
(Type :)				
Roof		N	4	Roof seam @ Rings 7, 9, & 11 cusping 50mm. 15mm gap in between plates. Grout nipples U/S 1/2. Roof sag Est 7%. Roof shape worst R1-7. Adequate R8 to R17.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	250			
Percent Sag	7			
Sidewall		N	4	Sidewall cusping inward 50mm @ North @ Ring #7. Estimate. No span measurement possible due to silt at estimated worst location.
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	200			
Percent Deflection	7			
Floor		N	N	Silt and ice covered throughout.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	5	
Separation (mm)	0			
Longitudinal Seams		N	4	Cusping 50mm @ roof seam @ Ring 7,9 & 11. Some undulations of roof from plate to plate.
Total No. of Cracked Rings	0			
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	Alkaline stains through seams. Corrosion at waterline.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 6500, Rise (mm): 3500, Type: RPE**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	5	1.7m Deep silt average.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		East end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		7	7	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1500			
Scour Protection		7	7	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	Steep cut @ SE and SW. (The channel has built up 1.0 m of silt since culvert was installed) - 940322
Bank Stability		5	5	
HWM (m below Top of Culvert)				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	Consider installing chord @ roof to record roof sag.				
OTHER ACTION	2012	Dewater and/or Level 2 inspection to get actual rise and span measurement.				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**53.1/49.9**	Est. Repl. Yr	2024	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	No record of previous measurement using string line @ ears seen on tims.	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	16-Nov-2013	Previous Inspection Date	08-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					