Bridge Culvert Inspection

Bridge File Number	00355 -2 Bridge Culvert	Form Type	CUL1
Year Built	2001	Lot No.	4
Bridge or Town Name	RED DEER	Inspector Name	Jason Saly
Located Over	TRIBUTARY TO RED DEER RIVER, 3.82, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	LOCAL ROAD	Assistant Class	
Water Body Cl./Year		Inspection Date	21-Nov-2011
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 24 TWP 38 RGE 28 W4M	Data Entry Date	03-Jan-2012
Longitude, Latitude	-113:52:37, 52:16:32	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	15-Dec-2011
Contract Main. Area	UNDEFINED CMA	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	14.6 /	Dept. Review Date	09-Jan-2012
AADT/Year		Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	4		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1810	SP	52.43	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	North of c/l.	Gas	
Power	5 wire North of c/l, 1 wire South of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	6	Farm approach both sides. Local road access NW corner.
Vertical Alignment		7	7	
Roadway Width (m)	8.100			
Embankment		7	7	
Sideslope (__:1)	2.0			
(Height of Cover(m) : **6.4**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		
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		8	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		8	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		8	N	Snow covered.
Beavers (Y/N)	Yes			Beaver dam in front of N bevel.
Upstream End General Rating		**8**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1810, Type: SP**)				
Barrel Last Accessible Date	18-Apr-2002			Only accessed first 3 rings from N. Transcribed dimensions from 28May2005; the culvert looks adequate.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	N	(Span 1820 x rise 1780 c/l. 02/04/18). (1760 x 1760 at R7 where roof seam is slightly cusping. 28May2005).
Measured Rise (mm)	1760			
Measured At Ring No.				
Sag (mm)	50			(2.2% roof sag. 28May2005).
Percent Sag	2			
Sidewall		8	N	Span at R3=1812=2mm.
Measured Span (mm)	1760			
Measured At Ring No.				
Deflection (mm)	50			(Inwards. 28May2005).
Percent Deflection	2			
Floor		8	N	(Water and silt at D/S 1/3 L, at 2nd coupler. 28May2005).
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	N	
Separation (mm)	0			
Longitudinal Seams		8	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			2N
Coating		8	7	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1810, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	Yes			(D/S 1/3 L. 28May2005).
Drift (Y/N)	Yes			
Barrel General Rating		**7**	**N**	GR was 7 based on roof rating on 28May2005).

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		
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	Snow covered.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		8	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		8	N	
Beavers (Y/N)	Yes			Beaver dam S of pipe.
Downstream End General Rating		**8**	**8**	GR carried forward from 28May2005.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		8	8	
Bank Stability		8	8	
HWM (m below Top of Culvert)				HWM not visible. Heavy deadfall in S channel.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				Unknown.
Beavers (Y/N)	Yes			Beaver dam S of pipe.
(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) (%)	**77.8/55.6**	**Sufficiency Rating (Last/Now) (%)**	**81.8/72.8**	Est. Repl. Yr	2050	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	Dave Lam	Previous Assistant's Name			
Next Inspection Date	21-Aug-2016	Previous Inspection Date	28-May-2005		
Inspection Cycle (Default) (months)	57				
Comment					