Bridge Culvert Inspection

Bridge File Number	80835 -1 Bridge Culvert	Form Type	CUL1
Year Built	1985	Lot No.	4
Bridge or Town Name	RED DEER	Inspector Name	Owen Salava
Located Over	WASKASOO CREEK, 3.81, WATERCRS-ST	Inspector Class	BR CLS A
Located On	2A:16 C1 22.950	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	24-Oct-2011
Legal Land Location	SW SEC 32 TWP 37 RGE 27 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-113:49:56, 52:13:17	Data Entry Date	30-Nov-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA19	Review Date	14-Nov-2011
Clear Roadway/Skew	11.1 /	Dept. Reviewer Name	Andrew Smikles
AADT/Year	8,130 / 2010 (A)	Dept. Review Date	02-Dec-2011
Road Classification	RAU-211.8-110	Follow-Up By	
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	6832	4897	RPA	26.2	152X51	4.0,5.0	ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	In West ditch.	Gas	
Power		Municipal	
Others	Fibre optics in West ditch.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 150m North. Curve 200m North.
Vertical Alignment		8	8	
Roadway Width (m)	11.100			
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **0.6**)				
Guardrail (Y/N)	Yes			Some guardrail blocks rotated, minor.
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		9	9	
Collar		5	5	Wide crack on NW lower. Wide crack @ SE.
Wingwalls		6	6	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	2000			
Scour Protection		N	5	Bank indented at SE but functioning well.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		N	5	
Beavers (Y/N)	Yes			Beaver dam 10m U/S.
Upstream End General Rating		**5**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 6832, Rise (mm): 4897, Type: RPA**)				
Barrel Last Accessible Date	10-Feb-2010			File tag at SE. Water >1.2m deep; viewed from ends, shape OK.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	N	(Unable to measure, ice. 10Feb2010).
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		7	N	
Measured Span (mm)	6735			
Measured At Ring No.	3			(-97mm. 10Feb2010).
Deflection (mm)	97			
Percent Deflection	1			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		6	N	
Separation (mm)	0			
Longitudinal Seams		6	6	
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)	No			
Coating		5	5	Superficial corrosion on lower sidewall throughout.
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): 6832, Rise (mm): 4897, Type: RPA**)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	(2.2m silt on floor. 03/09/04) Under water.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**6**	**N**	GR was 6 from 10Feb2010.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		6	6	Medium crack at NW.
Wingwalls		6	6	Rust staining.
(Shape :)				
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	2000			
Scour Protection		N	5	Vegetation growing in S.B.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	Creek meanders U/S of inlet.
Bank Stability		6	6	Vertical banks of 1.0m upstream.
HWM (m below Top of Culvert)				No HWM visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	Yes			
(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						
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) (%)	**66.7/55.6**	**Sufficiency Rating (Last/Now) (%)**	**63.3/57.3**	Est. Repl. Yr	2043	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	Owen Salava	Previous Assistant's Name			
Next Inspection Date	24-Jul-2013	Previous Inspection Date	10-Feb-2010		
Inspection Cycle (Default) (months)	21				
Comment					