Bridge Culvert Inspection

Bridge File Number	74070 -1 Bridge Culvert	Form Type	CUL1
Year Built	1994	Lot No.	2
Bridge or Town Name	RIMBEY	Inspector Name	Owen Salava
Located Over	OPEN CREEK, 3.88.22, WATERCRS-ST	Inspector Class	BR CLS A
Located On	53:04 C1 12.819	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	27-Nov-2012
Legal Land Location	SE SEC 31 TWP 42 RGE 5 W5M	Data Entry By	Marcia Chavez
Longitude, Latitude	-114:42:11, 52:39:17	Data Entry Date	06-Dec-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA18	Review Date	04-Dec-2012
Clear Roadway/Skew	12 / -15 deg. (LHF)	Dept. Reviewer Name	Andrew Smikles
AADT/Year	410 / 2011 (A)	Dept. Review Date	10-Dec-2012
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	40		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3965	SP	63.4	152X51	3.0	ROUND

Special Features	
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	South r/w.	Gas	
Power		Municipal	
Others	No ID tag.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Gradual sag curve with good sight distance. LR intersection 300m West. No passing.
Vertical Alignment		7	7	
Roadway Width (m)	11.400			Unsealed transverse crack at pipe location.
Embankment		7	7	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **6**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	Several vertical flexural cracks.
Collar		5	N	(Cracked both sides and spall West side only. 11Apr2011) - Snow covered.
Wingwalls		X	X	
(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)	1300			
Scour Protection		5	5	Rock undersized and round slope.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		6	5	
Beavers (Y/N)	No			
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): , Rise (mm): 3965, Type: SP**)				
Barrel Last Accessible Date	11-Apr-2011			Open water 1m deep, heavy silt; viewed from ends, shape OK.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	(Unable to measure due to 200-400mm silt. 11Apr2011).
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		8	N	
Measured Span (mm)	3980			
Measured At Ring No.	6			
Deflection (mm)	15			(0.4%. 11Apr2011).
Percent Deflection	0			
Floor		N	N	Under water/silt.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	N	Leaking seam at 3/4 length; unable to get close view.
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			
Coating		7	7	Surface staining.
Corrosion By Soil (Y/N)	Yes			
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): , Rise (mm): 3965, Type: SP**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			Heavy silt.
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**8**	**N**	GR was 8 from 11Apr2011.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	Several vertical flexural cracks.
Collar		5	4	Wide cracks both sides with voids under collar. NE has spalled & broken concrete at join with headwall.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1300			
Scour Protection		6	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	N	Snow covered.
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	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	Yes			
(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	2013	Seal transverse crack.				
OTHER ACTION	2013	Patch NE collar, 0.2m3 OH-V.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**88.9/55.6**	**Sufficiency Rating (Last/Now) (%)**	**80.0/63.0**	Est. Repl. Yr	2050	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	Owen Salava	Previous Assistant's Name			
Next Inspection Date	27-Aug-2014	Previous Inspection Date	11-Apr-2011		
Inspection Cycle (Default) (months)	21				
Comment					