Bridge Culvert Inspection

Bridge File Number	77273 -2 Bridge Culvert	Form Type	CULE
Year Built	2009	Lot No.	4
Bridge or Town Name		Inspector Name	Brian Pientsch
Located Over	TRIBUTARY TO WHITEMUD RIVER, 8.10.48.2, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Clem Guenette
Located On	743:02 C1 45.315	Assistant Class	BR CLS B
Water Body Cl./Year		Inspection Date	22-Mar-2013
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SE SEC 11 TWP 88 RGE 21 W5M	Data Entry Date	23-Apr-2013
Longitude, Latitude	-117:13:55, 56:36:48	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	03-Apr-2013
Contract Main. Area	CMA04	Dept. Reviewer Name	David Morrison
Clear Roadway/Skew	8.5 / -19 deg. (LHF)	Dept. Review Date	01-May-2013
AADT/Year	120 / 2012 (A)	Follow-Up By	
Road Classification	RCU-208G-90		
Detour Length (km)			

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2430	RP	112.82	152X51	4.2	ROUND
1	D/S	-	2700	MP	28.3	125X26	2.8	ROUND
Special Features		BARREL ELBOW						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		3	3	Sharp curves limiting spped to 50 km/hr.
Vertical Alignment		3	3	Crest curve 100m N of culvert cl. Crest curve 80m S of culvert cl.
Roadway Width (m)	6.700			
Embankment		8	8	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **7**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**3**	**3**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		9	8	
Collar		9	N	Snow covered
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		N	N	
Bevel End		9	N	Snow covered
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		9	N	Snow covered
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		9	N	Snow covered
Beavers (Y/N)	No			
Upstream End General Rating		**9**	**8**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2430, Type: RP**)				
Barrel Last Accessible Date	27-Mar-2013			1928mm ice to crown
Special Features				
Special Feature		9	8	6.75 deg. vertical elbow
(Type : **BARREL ELBOW**)				
Special Feature				
(Type :)				
Roof		9	8	Ice on floor - unable to measure
Measured Rise (mm)	2417			
Measured At Ring No.	10			
Sag (mm)	13			
Percent Sag	1			
Sidewall		9	8	
Measured Span (mm)	2423			
Measured At Ring No.	10			
Deflection (mm)	7			
Percent Deflection	0			Deflection inward.
Floor		9	N	Ice on floor
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		9	8	
Separation (mm)				
Longitudinal Seams		9	8	
Total No. of Cracked Rings				
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		9	8	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	POS			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2430, Type: RP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		9	6	
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**9**	**8**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: D/S, Span (mm): , Rise (mm): 2700, Type: MP**)				
Barrel Last Accessible Date	27-Mar-2013			1958mm ice to crown
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		9	8	Ice on floor
Measured Rise (mm)	2708			Measured 14.5m from d/s end.
Measured At Ring No.				
Sag (mm)	8			Deflection upward.
Percent Sag				
Sidewall		9	8	
Measured Span (mm)	2651			Measured 14.5m from d/s end.
Measured At Ring No.				
Deflection (mm)	49			Deflection inward.
Percent Deflection	2			
Floor		9	N	Ice on floor
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		9	8	
Separation (mm)	30			
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		9	8	
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: D/S, Span (mm): , Rise (mm): 2700, Type: MP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		9	9	
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension General Rating		**9**	**8**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		9	9	
Collar		9	N	Snow covered
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		9	8	Based on 40% visibility
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		9	N	Snow covered
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		9	N	Snow covered
Beavers (Y/N)	No			
Downstream End General Rating		**9**	**8**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		5	5	Slumping banks downstream.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**8**	**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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**100.0/88.9**	**Sufficiency Rating (Last/Now) (%)**	**86.3/69.6**	Est. Repl. Yr	2059	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	Brian Pientsch	Previous Assistant's Name	Lisbeth Medina		
Next Inspection Date	22-Jun-2016	Previous Inspection Date	13-Nov-2009		
Inspection Cycle (Default) (months)	39				
Comment					