Bridge Culvert Inspection

Bridge File Number	79448 -1 Bridge Culvert	Form Type	CUL1
Year Built	1981	Lot No.	4
Bridge or Town Name	INNISFREE	Inspector Name	Owen Salava
Located Over	TRAIL-ANIMAL, OVER SP	Inspector Class	BR CLS A
Located On	16:26 R1 14.376;16:26 L1 14.392	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	18-Dec-2012
Legal Land Location	NE SEC 7 TWP 51 RGE 11 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-111:36:23, 53:23:27	Data Entry Date	03-Jan-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA14	Review Date	20-Dec-2012
Clear Roadway/Skew	25 /	Dept. Reviewer Name	Andrew Smikles
AADT/Year	6,330 / 2011 (A)	Dept. Review Date	04-Jan-2013
Road Classification	RFD-412.4-130	Follow-Up By	
Detour Length (km)	49		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2000	MP	74	125X26	2.8	ROUND

Special Features	CONC FLOOR
Special Features Comment	

Posting Information

Required Vert. Clearance Posting (m)											
Posted Vertical Clearance (Y/N)											
Posted:	Lane	NB	On Bridge (m)		In Advance (Y/N)		Lane	SB	On Bridge (m)		In Advance (Y/N)
Remarks											

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	1 wire OH crossed Hwy 120m East.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	At curve to tangent point West of curve.
Vertical Alignment		7	7	Crest curve through horizontal curve 250m to East.
Roadway Width (m)	25.000			
Embankment		7	7	
Sideslope (__:1)	3.0			Slope is 4:1 on South side.
(Height of Cover(m) : **1.5**)				3.4m on South side.
Guardrail (Y/N)	Yes			Only on outside shoulders - max length 38m.
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		Some water flows to South.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	350			
Scour Protection		N	N	Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2000, Type: MP**)				
Barrel Last Accessible Date	18-Dec-2012			
Special Features				
Special Feature		X	N	
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		4	4	Roof sag estimated. Ice on floor.
Measured Rise (mm)	1814			
Measured At Ring No.				
Sag (mm)	186			(9.3%. Unknown date).
Percent Sag	9			
Sidewall		4	4	Most of barrel flattened to horizontal ellipse shape.
Measured Span (mm)	2186			
Measured At Ring No.	3			
Deflection (mm)	186			9.3%.
Percent Deflection	9			
Floor		N	N	(Concrete cast in place on North end. South 1/2 is OK. 17Mar2006). Snow covered. Dirt on 1/4, remainder snow/ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	Barrel shape has smooth curves & good arching capabilities.
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		5	5	Alkaline soil in area.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2000, Type: MP**)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			Est. 200mm ice at d/s half.
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	

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		7	7	
Heaving (mm)	75			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		N	N	Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Grade Separation				
Road Alignment		7	7	Estimate concrete floor to be 200mm thick; ice/dirt covered.
Roadway Surface		N	N	
(Type : **CONCRETE**)				
Icing (Y/N)	No			
Traffic Safety Features		X	X	
Type	None			
Lighting		X	X	
Barrel Leakage (Y/N)	No			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Drainage		4	4	Water ponds up to 200mm in S half but it is easily fixed if it was to be used again.
Structure In Use (Y/N)	No			Fenced across S fenceline.
Grade Separation General Rating		**4**	**4**	

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) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**55.9/52.0**	Est. Repl. Yr	2029	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor deflections. Cattlepass also acts as a watercourse. No action for minor ponding.	Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy					
On 3-Year Program (Y/N)	Y				
Proposed Action	2008.02.28 Contact landowner in two years time to determine continued usage. Brownlee & Associates				
Previous Inspector's Name	Owen Salava	Previous Assistant's Name			
Next Inspection Date	18-Sep-2014	Previous Inspection Date	17-Dec-2010		
Inspection Cycle (Default) (months)	21				
Comment					