

Bridge Culvert Inspection				
Bridge File Number	76610 -1 Bridge Culvert		Form Type	CUL1
Year Built	1971		Lot No.	2
Bridge or Town Name	NEERLANDIA		Inspector Name	Todd Warshawski
Located Over	TRIBUTARY TO ATHABASCA RIVER, 8.11.88, WATERCRS-ST		Inspector Class	BR CLS B
Located On	661:02 C1 37.692		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	27-May-2010
Legal Land Location	NW SEC 31 TWP 62 RGE 3 W5M		Data Entry By	Theresa Lacusta
Longitude, Latitude	-114:27:06, 54:24:44		Data Entry Date	18-Jun-2010
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Arnold Assenheimer
Contract Main. Area	CMA10		Review Date	03-Jun-2010
Clear Roadway/Skew	8.9 / -20 deg. (LHF)		Dept. Reviewer Name	Brent Herrick
AADT/Year	220 / 2009 (A)		Dept. Review Date	21-Jun-2010
Road Classification	RCU-209-110		Follow-Up By	
Detour Length (km)	3			

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1425	1575	SPE	58.5	152X51	3.0	ELLIPSE
Special Features		VERT TIMBER STRUTS						
Special Features Comment		Ring 24 & 25 only.						

Utilities (Located at)

Utility Attachments				
Telephone	South r/w.		Gas	
Power	1 line north r/w. 2 line crossed over pipe.		Municipal	
Others			Problem (Y/N)	No
Remarks				

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Crosses intersection SE to NW. Winding road to East. Gravel road West of jct.
Vertical Alignment		8	8	
Roadway Width (m)	8.900			
Embankment		N	5	
Sideslope (:1)		2.5		
(Height of Cover(m) : 5)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		5	5	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		Tag on top of bevel.
End Treatment (Concrete, Steel, Others, None)		STEEL		
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Cutoff Wall		X	X	
Bevel End		N	5	
Heaving (mm)	400			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		N	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		N	5	
Beavers (Y/N)	No			
Upstream End General Rating		4	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1425, Rise (mm): 1575, Type: SPE)				
Barrel Last Accessible Date	27-Mar-2010			Horizontal bend @ R17.
Special Features				
Special Feature		6	6	Struts in R24 & R25. Debris pile u/s end of struts.
(Type : VERT TIMBER STRUTS)				
Special Feature				
(Type :)				
Roof		2	2	Deflection @ R23 estimated.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	350			
Percent Sag				
Sidewall		2	2	No change since last inspection.
Measured Span (mm)	1776			
Measured At Ring No.	24			
Deflection (mm)	347			
Percent Deflection	24			
Floor		N	5	Small amounts of rock in barrel floor. Large rock at ring 13.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	4	Insufficient thread extensions on several bolts near C/S end.-02-Mar-2007 4 bolts missing ring 16.
Separation (mm)	0			
Longitudinal Seams		4	4	Insufficient thread extensions.-02-Mar-2007 5 bolts missing ring 16.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		5	5	Some rust on floor, soil side as well.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1425, Rise (mm): 1575, Type: SPE)					
Ponding (Y/N)	No				
Fish Passage Adequacy		6	6		
Baffle		X	X		
(Type :)					
Waterway Adequacy		6	5	Drift/debris on struts.	
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	Yes				
Barrel General Rating		3	3	G.R. increased by 1 because of struts.	
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
Direction		N		North	
End Treatment (Concrete, Steel, Others, None)	STEEL				
Headwall		X	X		
Collar		X	X		
Wingwalls		X	X		
(Shape :)					
Cutoff Wall		X	X		
Bevel End		5	4	Bevel pushing in on both sides.	
Heaving (mm)	0				
Invert Above/Below Stream Bed	ABOVE				
Above/Below (mm)	200				
Scour Protection		N	5		
(Type : RIP RAP)					
(Avg. Rock Size(mm) : 300)					
Scour/Erosion		N	5		
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		5	5		
HWM (m below Top of Culvert)				HWM not visible. Large rocks in pipe. Ring 12. Drift on struts.	
Drift (Y/N)	Yes				
Channel Bottom Degrading/Aggrading					
Beavers (Y/N)	No				
(Fish Compensation Measure 1 : NONE)					
(Fish Compensation Measure 2 : NONE)					
Channel General Rating		5	5		

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION	2010	Remove drift from struts.					
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS	2010	Install struts at Ring 1 to limit debris in pipe.					
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	48.2/45.4	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	Yes
Special Comments for Next Inspection	Monitor buckling in R23, consider extending strutting if condition worsens, No action required since strut is functioning, continue to inspect on regular cycle.		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	27-Aug-2013		Previous Inspection Date	02-Mar-2007			
Inspection Cycle (Default) (months)	39						
Comment							