

Bridge Culvert Inspection			
Bridge File Number	71738 -1 Bridge Culvert	Form Type	CUL1
Year Built	1964	Lot No.	4
Bridge or Town Name	GRAINGER	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO KNEEHILLS CREEK, 3.46.10, WATERCRS-ST	Inspector Class	BR CLS A
Located On	575:02 C1 38.169	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	25-Jan-2011
Legal Land Location	SW SEC 26 TWP 29 RGE 24 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-113:16:37, 51:30:12	Data Entry Date	04-Mar-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA20	Review Date	03-Feb-2011
Clear Roadway/Skew	9.9 / 8 deg. (RHF)	Dept. Reviewer Name	Chris Black
AADT/Year	1,090 / 2009 (A)	Dept. Review Date	06-Mar-2011
Road Classification	RCU-209-110	Follow-Up By	
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2019	2226	SPE	43.3	152X51	3.0	ELLIPSE
Special Features								
Special Features Comment	5% vertical ellipse.							

Utilities (Located at)

Utility Attachments			
Telephone	S side.	Gas	
Power	N side 3 wire O/H 25m from C/L	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Hills both sides. Farm approach 100m E.
Vertical Alignment	6	6	
Roadway Width (m)	9.900		
Embankment	7	7	
Sideslope (__:1)	4.0		
(Height of Cover(m) : 3.5)			
Guardrail (Y/N)	No		
Approach Road / Embankment General Rating	6	6	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
Direction	N		
End Treatment (Concrete, Steel, Others, None)	STEEL		
Headwall	X	X	
Collar	X	X	
Wingwalls	X	X	
(Shape :)			
Cutoff Wall	X	X	

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)	300			
Scour Protection		N	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	Snow covered.
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): 2019, Rise (mm): 2226, Type: SPE)				
Barrel Last Accessible Date	25-Jan-2011			4-7N plates/ring.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	(Avg rise @ ends 2238mm Rise mid span 2200mm. 04Oct2004). Ice over, not able to measure rise.
Measured Rise (mm)	2200			
Measured At Ring No.				
Sag (mm)	26			(1.2%. 04Oct2004).
Percent Sag	1			
Sidewall		7	7	Avg span @ ends. Indentation by const equip E side. 125mm, 2nd ring from D/S end-rusting.
Measured Span (mm)	2050			
Measured At Ring No.	8			
Deflection (mm)	31			1.5%
Percent Deflection	1			
Floor		N	N	Iced over.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		8	8	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Minor damage during installation.
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): 2019, Rise (mm): 2226, Type: SPE)					
Fish Passage Adequacy		7	7		
Baffle		X	X		
(Type :)					
Waterway Adequacy		8	8	(From grass on bolts water was 1.4m deep in barrel. 04Oct2004).	
Icing (Y/N)	No				
Silting (Y/N)	No				
Drift (Y/N)	No				
Barrel General Rating		7	7		
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)	50				
Invert Above/Below Stream Bed	BELOW				
Above/Below (mm)	200				
Scour Protection		N	N	(Scour hole but stable with rock @ perimeter. 04Oct2004). Vegetation in stream bed. Snow covered.	
(Type :)					
(Avg. Rock Size(mm) :)					
Scour/Erosion		N	N	Snow covered.	
Beavers (Y/N)	No			(Minor backwall @ SW corner of bevel. 04Oct2004).	
Downstream End General Rating		7	7	G.R. carried forward.	
Structure Usage					
		Last	Now	Explanation of Condition	
Channel (U/S and D/S)					
Alignment		6	6	Curves at inlet.	
Bank Stability		8	8		
HWM (m below Top of Culvert)				(1.4m above invert at centre of barrel. 04Oct2004).	
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		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) (%)	77.8/77.8	Sufficiency Rating (Last/Now) (%)	78.5/78.3	Est. Repl. Yr	2029	Maint. Req'd. (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	Bryan Wai		Previous Assistant's Name				
Next Inspection Date	25-Apr-2014		Previous Inspection Date	20-Feb-2008			
Inspection Cycle (Default) (months)	39						
Comment							