Bridge Culvert Inspection

Bridge File Number	07024 -1 Bridge Culvert	Form Type	CUL1
Year Built	1986	Lot No.	4
Bridge or Town Name	GRAINGER	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO KNEEHILLS CREEK, 3.46.14, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	575:02 C1 33.208	Assistant Class	
Water Body Cl./Year		Inspection Date	25-Jan-2011
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	NW SEC 20 TWP 29 RGE 24 W4M	Data Entry Date	03-Mar-2011
Longitude, Latitude	-113:20:52, 51:30:09	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	03-Feb-2011
Contract Main. Area	CMA20	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	10.2 /	Dept. Review Date	04-Mar-2011
AADT/Year	1,090 / 2009 (A)	Follow-Up By	
Road Classification	RCU-209-110		
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	-	3360	SP	76.2	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South side.	Gas	
Power	South side 1 wire O/H.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Culvert in middle of long. S-curve. Limited visibility both directions.
Vertical Alignment		7	7	
Roadway Width (m)	10.200			
Embankment		7	7	
Sideslope (__:1)	3.5			
(Height of Cover(m) : **7.5**)				
Guardrail (Y/N)	Yes			45 sections @ N, 32 sections @ S.
Approach Road / Embankment General Rating		**7**	**7**	

Upstream 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	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	7	
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
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): , Rise (mm): 3360, Type: SP**)				
Barrel Last Accessible Date	25-Jan-2011			Plate layout from invert is 9N, 9N, 6N,5N,6N,9N = 44N.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	Minor construction dents, last ring D/S, and ring #17 on East sidewall. (Avg rise @ ends 3340mm. Rise @ mid culvert 3325mm. 04-Oct-2004). Not able to measure rise due to ice on floor.
Measured Rise (mm)	3325			
Measured At Ring No.				
Sag (mm)	35			
Percent Sag	1			
Sidewall		7	6	Hole in plate #2 from D/S end (E), small. Avg span @ ends 3385mm.
Measured Span (mm)	3400			
Measured At Ring No.	11			1.2%
Deflection (mm)	40			
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)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	
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): , Rise (mm): 3360, Type: SP**)				
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	(500mm flat rock D/S end. 04-Oct-2004).
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**7**	**6**	

Downstream 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	
Bevel End		N	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	160			
Scour Protection		N	N	Snow covered.
(Type :)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	(Slight erosion on embankment E side D/S end-appears stable now. 04-Oct-2004). Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	Meandering channel.
Bank Stability		6	6	
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		**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) (%)	**77.8/66.7**	**Sufficiency Rating (Last/Now) (%)**	**78.5/73.1**	Est. Repl. Yr	2029	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	Bryan Wai	Previous Assistant's Name	
Next Inspection Date	25-Apr-2014	Previous Inspection Date	20-Feb-2008
Inspection Cycle (Default) (months)	39		
Comment			