Bridge Culvert Inspection

Bridge File Number	09742 -1 Bridge Culvert	Form Type	CUL1
Year Built	1991	Lot No.	4
Bridge or Town Name	VIOLET GROVE	Inspector Name	Wade Nanninga
Located Over	2ND ORDER TRIBUTARY TO NORTH SASKATCHEWAN RIVER, 6.143.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	620:04 C1 21.407	Assistant Class	
Water Body Cl./Year		Inspection Date	24-Jan-2011
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NW SEC 24 TWP 48 RGE 8 W5M	Data Entry Date	15-Feb-2011
Longitude, Latitude	-115:02:18, 53:09:22	Reviewer Name	Arnold Assenheimer
Road Authority	Alberta Transportation (AIT)	Review Date	14-Feb-2011
Contract Main. Area	CMA11	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	17 / 22 deg. (RHF)	Dept. Review Date	22-Feb-2011
AADT/Year	1,630 / 2009 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
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	-	2430	SP	68.3	152X51	3.0	ROUND

Special Features	
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	South r/w.	Gas	
Power	6 wires north r/w & 45 m west.	Municipal	
Others		Problem (Y/N)	No
Remarks	BF installed on top of North bevel roof.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 45 m east.
Vertical Alignment		6	6	Sag curve, no passing either direction. Turning lanes both sides.
Roadway Width (m)	11.800			
Embankment		N	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **5.4**)				
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 :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		X	X	
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	N	Iced over. No sign of problem but bevel projecting from fill.
Beavers (Y/N)	No			
Upstream End General Rating		**5**	**5**	GR carried forward.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2430, Type: SP**)				
Barrel Last Accessible Date	24-Jan-2011			0.5m ice along floor.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	4	(Rise 2335 at c/l, 4%. 03/Sept/2004) Poor nesting. Flattening of roof near midspan. est
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag	7			
Sidewall		5	5	
Measured Span (mm)	2585			
Measured At Ring No.	10			
Deflection (mm)	155			
Percent Deflection	6			
Floor		N	N	(Some floor seams are flattened out. 2001/04/18)
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		4	4	(Floor seams, some have flattened out. 99/04/19) Flattening of roof seams.
Total No. of Cracked Rings	0			
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		6	6	Superficial rust @ lower half.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2430, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
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		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		N	N	Snow/ice covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	N	Iced over, no sign of problem.
Beavers (Y/N)	No			
Downstream End General Rating		**8**	**8**	G.R. carried forward from 03/Sept/2004.

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

Structure Usage				
		Last	Now	Explanation of Condition

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) (%)**	**64.1/64.3**	Est. Repl. Yr	2041	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor roof seam flattening.	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	24-Apr-2014	Previous Inspection Date	18-Dec-2007		
Inspection Cycle (Default) (months)	39				
Comment					