Bridge Culvert Inspection

Bridge File Number	73423 -1 Bridge Culvert	Form Type	CULE
Year Built	1959	Lot No.	2
Bridge or Town Name	HIGH PRAIRIE	Inspector Name	Brian Pientsch
Located Over	GUNNS CREEK, 8.10.58.7.10, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	Clem Guenette
Located On	2A:54 C1 18.271	Assistant Class	BR CLS B
Water Body Cl./Year		Inspection Date	12-Dec-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 2 TWP 75 RGE 20 W5M	Data Entry Date	13-Jan-2013
Longitude, Latitude	-116:59:37, 55:27:42	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	09-Jan-2013
Contract Main. Area	CMA06	Dept. Reviewer Name	David Morrison
Clear Roadway/Skew	10.8 / -15 deg. (LHF)	Dept. Review Date	18-Mar-2013
AADT/Year	730 / 2011 (A)	Follow-Up By	
Road Classification	RAU-210-110		
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	-	2552	SP	120.14	152X51	4.8	ROUND
1	D/S	-	2743	SP	21.6	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 wire O/H along North ditch.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	
Vertical Alignment		6	6	Sag curve.
Roadway Width (m)	10.800			
Embankment		3	3	Slumped (30m wide x 25 m long) 3m from guardrail. North embankment.
Sideslope (__:1)	4.0			
(Height of Cover(m) : **20**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**3**	**3**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	
Collar		N	N	Snow covered.
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		N	N	
Bevel End		5	N	Couldn't tell due to snow cover.
Heaving (mm)	200			
Invert Above/Below Stream Bed				
Above/Below (mm)				
Scour Protection		N	N	(Inadequate protection. May 5, 2009) Under snow.
(Type : **NONE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	N	(Slumping on E. side. May 5, 2009) Under snow.
Beavers (Y/N)	Yes			Dam on bevel.
Upstream End General Rating		**4**	**4**	GR carried forward.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2552, Type: SP**)				
Barrel Last Accessible Date	12-Dec-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	6	
Measured Rise (mm)	2473			
Measured At Ring No.	16			
Sag (mm)	79			
Percent Sag	3			
Sidewall		5	5	Minor construction damage at 3 o'clock - ring 16.
Measured Span (mm)	2421			
Measured At Ring No.	16			
Deflection (mm)	131			
Percent Deflection	5			
Floor		5	5	
Bulge (mm)	0			
Measured At Ring No.	16			
Abrasion (Y/N)	Yes			
Circumferential Seams		6	6	
Separation (mm)	0			
Longitudinal Seams		5	5	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				1N Stagger
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		4	4	Pitting rust lower 1/3 Alkaline deposits through roof bolts.
Corrosion By Soil (Y/N)	Yes			
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): 2552, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	N	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: D/S, Span (mm): , Rise (mm): 2743, Type: SP**)				
Barrel Last Accessible Date	12-Dec-2012			2238mm ice to roof
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	8	
Measured Rise (mm)	2742			Est, unable to measure due to ice.
Measured At Ring No.	3			
Sag (mm)	1			
Percent Sag	0			
Sidewall		7	7	
Measured Span (mm)	2754			
Measured At Ring No.	3			
Deflection (mm)	11			
Percent Deflection	0			
Floor		7	N	Ice on floor
Bulge (mm)	0			
Measured At Ring No.	3			
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				1N Stagger
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	Superficial corrosion lower 1/3.
Corrosion By Soil (Y/N)	No			
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: D/S, Span (mm): , Rise (mm): 2743, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel Extension 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	Rating based on 50% visibility.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	150			
Scour Protection		N	N	Under snow.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		N	N	Under snow.
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	GR carried forward.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		4	4	u/s channel enters inlet from the west side approx 45 deg.
Bank Stability		4	4	Cut bank on west side of outlet, D/S. Banks sloughing d/s. Evident through snow.
HWM (m below Top of Culvert)				4.5m above top of culvert. Debris @ u/s end.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**4**	

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	2013	Beaver dam u/s bevel.				
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Repair North embankment.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**49.5/49.4**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor erosion d/s.	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	Brian Pientsch	Previous Assistant's Name	Lisbeth Medina		
Next Inspection Date	12-Sep-2014	Previous Inspection Date	26-Jan-2011		
Inspection Cycle (Default) (months)	21				
Comment					