Bridge Culvert Inspection

Bridge File Number	70064 S-1 Bridge Culvert	Form Type	CUL1
Year Built/Lined	1968/2005	Lot No.	2
Bridge or Town Name	ELLERSLIE	Inspector Name	Todd Warshawski
Located Over	BLACKMUD CREEK, 6.95.2, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	2:32 L1 13.499	Assistant Class	
Water Body Cl./Year		Inspection Date	19-Apr-2013
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NE SEC 6 TWP 51 RGE 24 W4M	Data Entry Date	30-Apr-2013
Longitude, Latitude	-113:31:17, 53:22:49	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	29-Apr-2013
Contract Main. Area	CMA11	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	18 /	Dept. Review Date	01-May-2013
AADT/Year	84,430 / 2012 (A)	Follow-Up By	
Road Classification	RAD-616.6-130		
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
2	MAIN FULL LINER	9810	4520	RPE	47.5	160X50	4.0	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	Street lights along W r/w.
Others	32" waterline 35 west of outlet.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	
Vertical Alignment		8	8	
Roadway Width (m)	18.000			
Embankment		7	7	
Sideslope (__:1)	6.0			
(Height of Cover(m) : **1**)				
Guardrail (Y/N)	Yes			FLEAT ends at NW & NE damaged. 2 damaged W-beam sections on W rail.
Approach Road / Embankment General Rating		**8**	**8**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	Narrow crack with efflorencence.
Collar		7	N	Narrow trans. crack S & N side.-July-2011
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		9	N	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1100			
Scour Protection		6	6	5% sandstone/shale riprap.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **800**)				
Scour/Erosion		8	6	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Primary Span, Location Code: MAIN, Span (mm): 9810, Rise (mm): 4520, Type: RPE**)				
Barrel Last Accessible Date	17-Jun-2010			Water to deep, viewed from ends.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		9	N	
Measured Rise (mm)	4543			
Measured At Ring No.	24			
Sag (mm)				
Percent Sag				
Sidewall		9	N	
Measured Span (mm)	9772			
Measured At Ring No.	83			
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		9	N	
Separation (mm)	0			
Longitudinal Seams		9	N	
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		5	N	Rusting and effloresence at a few joints-photo-03-Sep-2004
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Primary Span, Location Code: MAIN, Span (mm): 9810, Rise (mm): 4520, Type: RPE**)				
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		9	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**9**	**N**	GR was 9 from July, 2011

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		5	N	South collar has 3 wide cracks near bottom.-Jul-2011
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		6	N	
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	700			
Scour Protection		6	6	5% shale/sandstone
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **800**)				
Scour/Erosion		8	7	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	GR carried fwd from July, 2011

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	5	Sharp bend off D/S end (man made).
Bank Stability		4	4	Bank erosion along west bank. Sloughing bank U/S & d/s. Vertical banks.
HWM (m below Top of Culvert)	1.7			Water level, April 19-2013
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**4**	

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	2013	Repair guardrail terminal ends and 2 sections.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**100.0/55.6**	**Sufficiency Rating (Last/Now) (%)**	**88.4/60.6**	Est. Repl. Yr	2055	Maint. Reqd. (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	Shane Hall	Previous Assistant's Name	
Next Inspection Date	19-Jan-2015	Previous Inspection Date	15-Jul-2011
Inspection Cycle (Default) (months)	21		
Comment			