Bridge Culvert Inspection

Bridge File Number	00482 -1 Bridge Culvert	Form Type	CULM
Year Built	1961	Lot No.	2
Bridge or Town Name	LEDUC	Inspector Name	Todd Warshawski
Located Over	2ND ORDER TRIBUTARY TO BLACKMUD CREEK, 6.95.2.6.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	814:02 C1 12.301	Assistant Class	
Water Body Cl./Year		Inspection Date	15-Mar-2012
Navigabil. Cl./Year		Data Entry By	Lisa Fairhurst
Legal Land Location	NW SEC 23 TWP 49 RGE 24 W4M	Data Entry Date	19-Apr-2012
Longitude, Latitude	-113:24:55, 53:14:42	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	09-Apr-2012
Contract Main. Area	CMA11	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	12 / -15 deg. (LHF)	Dept. Review Date	04-May-2012
AADT/Year	1,670 / 2011 (A)	Follow-Up By	
Road Classification	RCU-210-110		
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3660	1830	BP	78.6			RECTANGLE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West ditch.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	No tag visible.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	SH int. 200m North. Located @ base of North hill. No passing NB.
Vertical Alignment		6	6	
Roadway Width (m)	9.400			3.0m berm on both sides.
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **10**)				
Guardrail (Y/N)	Yes			Guardrail both sides. Incorrect lap @ SW end. Accident damage at SE, 6 posts, 6 sections, and turn down end
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		5	5	Wide crack in both wingwalls. Large spall on SE wingwall. Still functional.
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **450**)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Upstream End General Rating		**5**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1830, Rise (mm): 1830, Type: BP, Cell Sequence: 1**)				
Barrel Last Accessible Date	12-Dec-2008			Water/ice too high to enter. Viewed from ends, shape and condition appears ok.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	N	(Wide crack 1/3 length from West.) - Dec/08
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		4	N	(Wide crack 1/3 length from West.) - Dec/08
Measured Span (mm)	1828			
Measured At Ring No.				At mid pipe.
Deflection (mm)	2			
Percent Deflection	0			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	N	
Separation (mm)				
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	(Staining on sidewalls.) - Dec/08
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1830, Rise (mm): 1830, Type: BP, Cell Sequence: 1**)				
Fish Passage Adequacy		7	7	
Baffle		N	N	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	GR carried forward from Dec/08

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1830, Rise (mm): 1830, Type: BP, Cell Sequence: 2**)				
Barrel Last Accessible Date	12-Dec-2008			Viewed from ends, shape and condition appear ok
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	N	See cell 1.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		4	N	See cell 1.
Measured Span (mm)	1824			
Measured At Ring No.				
Deflection (mm)	6			
Percent Deflection	0			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	N	
Separation (mm)				
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		X	X	(Staining from water, not corrosion.) - Dec/08
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1830, Rise (mm): 1830, Type: BP, Cell Sequence: 2**)				
Fish Passage Adequacy		7	7	
Baffle		N	N	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	GR carried forward from Dec/08

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		X	X	
Wingwalls		5	5	Wide crack with 0.1m2 delam @ NW corner by headwall.
(Shape :)				
Cutoff Wall		N	N	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		N	6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	

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	2012	Seal crack in pipe.Seal crack in pipe if not done already				
OTHER ACTION	2012	Re-lap West guardrail.				
OTHER ACTION	2012	Repair guardrail 6 posts, 6 scetions, 1 turndown end				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**53.1/53.1**	Est. Repl. Yr	2035	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	Jason Saly	Previous Assistant's Name	Bryce Clayton		
Next Inspection Date	15-Jun-2015	Previous Inspection Date	12-Dec-2008		
Inspection Cycle (Default) (months)	39				
Comment					