Bridge Culvert Inspection

Bridge File Number	77420 -1 Bridge Culvert	Form Type	CULM
Year Built	1971	Lot No.	2
Bridge or Town Name	WESTLOCK	Inspector Name	Todd Warshawski
Located Over	TRIBUTARY TO WABASH CREEK, 8.11.84.17.7, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	44:00 C1 62.628	Assistant Class	
Water Body Cl./Year		Inspection Date	16-Apr-2013
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NW SEC 21 TWP 59 RGE 26 W4M	Data Entry Date	22-Apr-2013
Longitude, Latitude	-113:51:03, 54:07:13	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	21-Apr-2013
Contract Main. Area	CMA10	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	11.5 /	Dept. Review Date	23-Apr-2013
AADT/Year	3,890 / 2012 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	8		

Bridge Culvert Information

Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1600	MP	30	125X26	2.8	ROUND
2	MAIN	-	1600	MP	30	125X26	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	East r/w.	Gas	West r/w.
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	S pipe tagged on u/s crown		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curve to the south. Field entrance 20m SE.
Vertical Alignment		9	9	
Roadway Width (m)	11.500			Wide crack in ACP over North pipe.
Embankment		8	8	
Sideslope (__:1)	6.0			
(Height of Cover(m) : **0.8**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Secondary Span**)				
Direction		E		South pipe.
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**
(Pipe # : **1, Span Type: Secondary Span**)				
Cutoff Wall		X	X	
Bevel End		7	N	Snow covered
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		5	N	Fillcrete lined inlet channel. Cracked. Bevel end detached from fillcrete by 75mm. Snow covered
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		6	N	
Beavers (Y/N)	No			
Upstream End General Rating		**5**	**5**	GR carried fwd from July, 2011

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1600, Type: MP**)				
Barrel Last Accessible Date	06-Jul-2011			Unstable ice. Viewed from ends, shape and condition appear ok.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	At c/l.
Measured Rise (mm)	1580			
Measured At Ring No.				
Sag (mm)	20			
Percent Sag	1			
Sidewall		8	N	At c/l. Inward deflection.-July,2011
Measured Span (mm)	1589			
Measured At Ring No.				
Deflection (mm)	11			
Percent Deflection				
Floor		8	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	N	
Separation (mm)	30			
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		5	N	0.5m under strip along invert.-July, 2011
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1600, Type: MP**)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**N**	GR was 8 from July, 2011

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Secondary Span**)				
Direction		W		South pipe. Snow covered
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	N	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		8	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		8	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**7**	GR carried fwd from July, 2011

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Primary Span**)				
Direction		E		North pipe. SNow covered
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**
(Pipe # : **2, Span Type: Primary Span**)				
Bevel End		5	N	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		4	N	Fillcrete lined inlet channel. Fillcrete cracked. Bevel end detached from fillcrete. Approx 200mm gap under bevel. This is potential scour problem.-Jul-2011
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	GR carried fwd from Jul, 2011

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1600, Type: MP**)				
Barrel Last Accessible Date	06-Jul-2011			Unstable ice Viewed from ends, shape and vondition appear ok.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		8	N	At c/l.
Measured Rise (mm)	1584			
Measured At Ring No.				
Sag (mm)	16			
Percent Sag	0			
Sidewall		8	N	At c/l.
Measured Span (mm)	1600			
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection	0			
Floor		8	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	N	
Separation (mm)	30			
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		7	N	
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 # : **2, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1600, Type: MP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**8**	**N**	GR was 8 from July, 2011.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Primary Span**)				
Direction		W		North pipe. Snow covered
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	N	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		8	N	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		8	N	
Beavers (Y/N)	No			
Downstream End General Rating		**8**	**8**	GR carried fwd from July, 2011

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	U/S end @ 90 degree angle to ditch.
Bank Stability		8	8	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Stable.
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**5**	

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	Seal cracks in ACP				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**88.9/55.6**	**Sufficiency Rating (Last/Now) (%)**	**79.4/61.4**	Est. Repl. Yr	2056	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	Kris Bosters	Previous Assistant's Name	
Next Inspection Date	16-Jan-2015	Previous Inspection Date	06-Jul-2011
Inspection Cycle (Default) (months)	21		
Comment			