Bridge Culvert Inspection

Bridge File Number	13581 -1 Bridge Culvert	Form Type	CUL1
Year Built	1990	Lot No.	2
Bridge or Town Name	WESTLOCK	Inspector Name	Todd Warshawski
Located Over	TRIBUTARY TO WABASH CREEK, 8.11.84.17.4, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	44:02 C1 4.752	Assistant Class	
Water Body Cl./Year		Inspection Date	16-Apr-2013
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NW SEC 16 TWP 60 RGE 26 W4M	Data Entry Date	22-Apr-2013
Longitude, Latitude	-113:50:59, 54:11:41	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	11.8 / -15 deg. (LHF)	Dept. Review Date	23-Apr-2013
AADT/Year	3,650 / 2012 (A)	Follow-Up By	
Road Classification	RAU-211.8-110		
Detour Length (km)	8		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	6097	4144	RPA	29.3	152X51	5.0,4.0,5.0	ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	2 wires East r/w.	Municipal	
Others	Telegraph west r/w & railway.	Problem (Y/N)	No
Remarks	BF plaque on SW headwall.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Curve starts over pipe. Field entrance 20m NE.
Vertical Alignment		8	8	
Roadway Width (m)	11.800			Random ACP cracking over pipe.
Embankment		8	8	At culvert. 3.5:1 away from culvert.
Sideslope (__:1)	5.0			
(Height of Cover(m) : **0.5**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		E		Narrow cracks visible in headwall, collar, slope protection and wingwalls.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		7	5	Wide cracks along lower NE.
Wingwalls		7	7	
(Shape : **FLARE**)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		7	7	Lower 1/2 not rated.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1200			
Scour Protection		8	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 6097, Rise (mm): 4144, Type: RPA**)				
Barrel Last Accessible Date	16-Apr-2013			
Special Features				
Special Feature				"N" - Composite concrete roof/wing arms.
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	Sag est at less than 5% as measured off ice.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	85			
Percent Sag				
Sidewall		7	7	
Measured Span (mm)	6098			
Measured At Ring No.	3			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	N	Covered in water/ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	7	Lower 1/3 not rated.
Separation (mm)	0			
Longitudinal Seams		N	7	Lower 1/3 not rated.
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		N	5	Bottom 1/3 not visible.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 6097, Rise (mm): 4144, Type: RPA**)				
Fish Passage Adequacy		8	8	
Baffle		N	N	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**7**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	6	Medium shrinkage cracks.
Collar		7	7	
Wingwalls		7	7	Tapered.
(Shape :)				
Cutoff Wall		N	N	
Bevel End		8	8	Lower 1/2 not rated.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1200			
Scour Protection		8	8	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **600**)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		8	8	
HWM (m below Top of Culvert)	1.0			Drift on banks.-Jul, 2011
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		**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	2013	Patch ACP over pipe.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/77.8**	**Sufficiency Rating (Last/Now) (%)**	**66.3/74.9**	Est. Repl. Yr	2046	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			