Bridge Culvert Inspection

Bridge File Number	70903 -1 Bridge Culvert	Form Type	CUL1
Year Built	1981	Lot No.	1
Bridge or Town Name	WETASKIWIN	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO WEILLER CREEK, 5.47.2.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	13:10 C1 1.137	Assistant Class	
Water Body Cl./Year		Inspection Date	27-Jun-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SE SEC 30 TWP 46 RGE 23 W4M	Data Entry Date	15-Jul-2012
Longitude, Latitude	-113:19:32, 52:59:30	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	05-Jul-2012
Contract Main. Area	CMA17	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	14.4 / 40 deg. (RHF)	Dept. Review Date	19-Jul-2012
AADT/Year	3,820 / 2011 (A)	Follow-Up By	
Road Classification	RAU-213.4-120		
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2314	SP	57.9	152X51		ROUND

Special Features	VERT STEEL STRUTS
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 wire o/h, S r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	In tangent between two curves.
Vertical Alignment		9	9	
Roadway Width (m)	14.400			
Embankment		7	7	Goes to 2:1 at pipe at south
Sideslope (__:1)	3.0			
(Height of Cover(m) : **3**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
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**
Bevel End		7	7	
Heaving (mm)	150			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		5	5	Concrete filled sand bags.
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	Minor erosion starting beside bevel.
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): , Rise (mm): 2314, Type: SP**)				
Barrel Last Accessible Date	30-Aug-2010			Viewed from ends; flow rate high; depth >0.6m at both ends, deepening at middle.
Special Features				
Special Feature		7	N	HSS steel, strut at cracked seam rings only.
(Type : **VERT STEEL STRUTS**)				
Special Feature				
(Type :)				
Roof		N	X	(Isolated perforations forming in R8 - photo. 12Feb2009).
Measured Rise (mm)	2410			
Measured At Ring No.	8			
Sag (mm)	142			
Percent Sag	6			
Sidewall		3	X	(150mm hole in R5 at 2 o'clock. Construction dents east S/W R4. 30Aug2010).
Measured Span (mm)	2611			
Measured At Ring No.	8			
Deflection (mm)	297			
Percent Deflection	13			
Floor		N	N	Water.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	(R8 at E, has 64 mm of steel and cracks both sides - 20 holes at E. R9 is cracked at E side - 16 hole. R8 has 2 cracks at W sidewall, 100 mm below bolts 60mm steel remaining at 6 corrugations. 12Feb2009).
Total No. of Cracked Rings	2			
Total No. of Rings with Two Cracked Seams	1			
Min. Remaining Steel Between Cracks (mm)	60			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		3	N	(White stains through roof seams under sideslopes. Corrosion with extensive pitting at D/S longitudinal seams. - photo Isolated perforations in sidewall (photo). 30Aug2010).
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): 2314, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**3**	**2**	Based on previous comments with cracks on both sides; sidewall & longit. seams rate 2.

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	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		6	6	Concrete sand bags.
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	Train bridge 15m D/S
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Unknown
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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/22.2**	**Sufficiency Rating (Last/Now) (%)**	**44.6/39.6**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor corrosion & roof perforations - getting worse. Check struts in fall for R=2 sidewall & seam rating. Emailed LRA toDonald Saunders 05Jul2012.	Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy	2004.04.09 Monitor normal BIM. Estimated replacement year 2020.				
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Owen Salava	Previous Assistant's Name			
Next Inspection Date	27-Mar-2014	Previous Inspection Date	30-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					

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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/22.2**	**Sufficiency Rating (Last/Now) (%)**	**44.6/39.6**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Monitor corrosion & roof perforations - getting worse. Check struts in fall for R=2 sidewall & seam rating. Emailed LRA toDonald Saunders 05Jul2012.	Department Comments	Tentatively programmed to be replaced in 2022. AS

Maintenance Reviewed By	Andrew Smikles	Date	23-Aug-2012	Estimated Total	0
Proposed Long-Term Strategy	2004.04.09 Monitor normal BIM. Estimated replacement year 2020.				
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Owen Salava	Previous Assistant's Name			
Next Inspection Date	27-Mar-2014	Previous Inspection Date	30-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					