

Bridge Culvert Inspection				
Bridge File Number	77268 -1 Bridge Culvert		Form Type	CUL1
Year Built	1971		Lot No.	4
Bridge or Town Name	WRENTHAM		Inspector Name	Jon Davies
Located Over	ETZIKOM COULEE, 11.9, WATERCRS-ST		Inspector Class	BR CLS B
Located On	36:02 C1 21.229		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	06-Dec-2011
Legal Land Location	SE SEC 15 TWP 6 RGE 17 W4M		Data Entry By	Anne Roberts
Longitude, Latitude	-112:12:25, 49:28:13		Data Entry Date	15-Jan-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA24		Review Date	18-Dec-2011
Clear Roadway/Skew	11 / -10 deg. (LHF)		Dept. Reviewer Name	Tim Davies
AADT/Year	540 / 2010 (A)		Dept. Review Date	18-Jan-2012
Road Classification	RAU-210-110		Follow-Up By	
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	-	4877	SP	50	152X51	4.0,5.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments							
Telephone	West ROW			Gas	West ROW 200 m		
Power	Crossing North 200 m			Municipal			
Others				Problem (Y/N)	No		
Remarks							

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Long gradual curve, gradual sag, good sight distance.
Vertical Alignment	7	7	
Roadway Width (m)	11.000		
Embankment	7	7	
Sideslope (_ :1)	3.0		
(Height of Cover(m) : 2.6)			
Guardrail (Y/N)	Yes		
Approach Road / Embankment General Rating	7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
Direction	W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	X	X	
Collar	7	6	
Wingwalls	X	X	
(Shape :)			
Cutoff Wall	N	6	CUTOFF WALL POURED WHICH NOW SUPPORTS COLLAR Large crack and movement at SW where collar is supported.

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		7	6	Superficial corrosion some pitting
Heaving (mm)	300			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 400)		N	6	Rock is good at sides of bevel
Scour/Erosion		N	6	
Beavers (Y/N)	No			
Upstream End General Rating		6	6	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 4877, Type: SP)				
Barrel Last Accessible Date	25-Jun-2004			
Special Features				
Special Feature (Type :)				Able to enter pipe from u/s to 1/2 length. General shape of roof and side wall is good.
Special Feature (Type :)				
Roof		N	N	
Measured Rise (mm)	4850			
Measured At Ring No.				
Sag (mm)	27			
Percent Sag	1			
Sidewall		N	N	[(Cracked seams, 73 mm-ring 2&3) 2004/06/25 (SWALL 0 DEFL BASED ON LAST insp-meas]2004/06/25 Based on past info [(Span meas ring from d/s end) (1-4.56m]2004/06/25 ring#4-inward 317mm 6.5% @ ring 1) 2004/06/25 Ring 5 span = 4816 mm, Ring 6 span = 4824 mm
Measured Span (mm)	4560			
Measured At Ring No.				
Deflection (mm)	317			
Percent Deflection	7			
Floor		N	N	Floor avg 500mm deep water
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	South wall-ring #3-5 valleys cracked (#4-3 valleys, #8-east 6 valleys, #9-)2004/06/25 (east 14 valleys - 83 mm min steel)2004/06/25 (crest 7 from d/s. #10-16 valleys) 2004/06/25 1-7 too heavily corroded to see crks.) 2004/06/25 (@ ring 3 - 70mm remaining lower long sidewall seam)2004/06/25
Total No. of Cracked Rings	6			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)	70			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		N	N	(Alkali stains through seams. Long seam)2004/06/25 (Corrosion pitting - moisture comes in from all lower longit seams.) 2004/06/25
Corrosion By Soil (Y/N)				
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): , Rise (mm): 4877, Type: SP)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	3	General rating carried forward
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	5	
Heaving (mm)	200			
Invert Above/Below Stream Bed	ABOVE			Bevel projects above fill 800mm avg.
Above/Below (mm)	300			
Scour Protection		N	4	
(Type : RIP RAP)				Rip rap incomplete and displaced at North side lower bevel.
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		N	4	Unable to confirm depth of large scour hole d/s- 20m diameter
Beavers (Y/N)	No			
Downstream End General Rating		5	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	Steep cut bank @ SW Meanders thru valley.
Bank Stability		N	5	Erosion at SE bank - minor.
HWM (m below Top of Culvert)	1.7			No HWM visible
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		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) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	57.3/56.3	Est. Repl. Yr	2020	Maint. Req. (Y/N)	No
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	Tom Carey		Previous Assistant's Name				
Next Inspection Date	06-Sep-2013		Previous Inspection Date	24-Jun-2010			
Inspection Cycle (Default) (months)	21						
Comment							