

Bridge Culvert Inspection				
Bridge File Number	76884 -1 Bridge Culvert		Form Type	CUL1
Year Built	1977		Lot No.	4
Bridge or Town Name	DUFFIELD		Inspector Name	Kris Bosters
Located Over	WABAMUN CREEK, 6.120, WATERCRS-ST		Inspector Class	BR CLS A
Located On	627:02 C1 26.058		Assistant Name	Brian Cote
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	25-Oct-2012
Legal Land Location	NE SEC 34 TWP 51 RGE 3 W5M		Data Entry By	Theresa Lacusta
Longitude, Latitude	-114:21:03, 53:27:14		Data Entry Date	13-Nov-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Eric Carcoux
Contract Main. Area	CMA11		Review Date	04-Nov-2012
Clear Roadway/Skew	9 / 20 deg. (RHF)		Dept. Reviewer Name	Brent Herrick
AADT/Year	1,430 / 2011 (A)		Dept. Review Date	20-Nov-2012
Road Classification	RCU-209-110		Follow-Up By	
Detour Length (km)	25			

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	3495	3854	SPE	140.2	152X51	3.0	ELLIPSE
Special Features								
Special Features Comment	u/s 3 rings round, d/s 3 rigs round.							

Utilities (Located at)

Utility Attachments			
Telephone	30m South	Gas	
Power		Municipal	
Others	N. r/w Alberta Supernet fibre optic	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Curve in both directions Sag- poorsight dist. both directions. No passing.
Vertical Alignment		5	5	
Roadway Width (m)	9.000			
Embankment		7	7	
Sideslope (___:1)	2.0			
(Height of Cover(m) : 18)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		5	5	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	5	Wide cracks at top.
Collar		4	4	Wide cracks - both sides-breaking up likely from movement in fill.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		8	8	Riprap pushed into barrel.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			Drift piled up.
Upstream End General Rating		4	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3495, Rise (mm): 3854, Type: SPE)				
Barrel Last Accessible Date	25-Oct-2012			Could not confirm measurements due to ice along sidewalls and visibility.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	A bulge about 14m from inlet, 100mm deep (damaged during construction) - (ring 4)
Measured Rise (mm)	3725			
Measured At Ring No.	17			
Sag (mm)	129			
Percent Sag	3			
Sidewall		7	7	
Measured Span (mm)	3605			
Measured At Ring No.	17			
Deflection (mm)	110			
Percent Deflection	3			
Floor		7	7	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			Only 3 ring u/s end staggered.
Coating		5	5	Water seeping through bolt holes. Superficial corrosion.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 3495, Rise (mm): 3854, Type: SPE)				
Ponding (Y/N)	Yes			0.3 caused by pushed in riprap.
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		7	7	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		8	8	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		8	8	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		8	8	
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)				u/s.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	Yes			

Structure Usage				
		Last	Now	Explanation of Condition
(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) (%)	77.8/77.8	Sufficiency Rating (Last/Now) (%)	72.3/72.3	Est. Repl. Yr	2030	Maint. Req. (Y/N)	No
Special Comments for Next Inspection	Monitor collar cracking		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	Arnold Assenheimer		Previous Assistant's Name				
Next Inspection Date	25-Jan-2016		Previous Inspection Date	10-Jul-2009			
Inspection Cycle (Default) (months)	39						
Comment							