					Brida	e Culve	ert Inspe	ection					
Bridge File Number 78759 -1 Bridge Culvert						Form Type			CULM				
Year Built		1980					Lot No.		3				
	Bridge or Town Name MORLEY						Inspector Name		Jon Davies				
Located Over				3.43.4. W	ATERO	CRS-	Inspector Class		BR CLS B				
		ST						nt Name					
Located On	Vater Body CI./Year lavigabil. CI./Year egal Land Location SW SEC 16 TWP 24 RGE 6 Value ongitude, Latitude ongitude, Latitude of CMA28 Clear Roadway/Skew 12.4 / 15 deg. (RHF) ADT/Year 310 / 2011 (A) Road Classification RAU-211.8-110 Detour Length (km) 16 Cridge Culvert Information Jumber of Culverts 3 Elear Roadway/Skew 12.4 / 15 deg. (RHF) Span Rise (elear Roadway/Skew) 16 Contract Main. Area CMA28 12.4 / 15 deg. (RHF) 13.6 detour Length (km) 16 Contract Main. Area CMA28 13.7 deg. (RHF) 14.7 deg. (RHF) 15.7 deg. (RHF) 16.7 deg. (RHF) 17.7 deg. (RHF) 18.7 deg. (RHF) 19.7 de							nt Class					
Water Body Cl./	/Year									18-Sep-2012			
Navigabil. Cl./Y	ear						Inspection Date Data Entry By			Lauren Korte			
Legal Land Loc	ation	SW SE	C 16 TWP 24 R	RGE 6 W5	М			ntry Date		10-Oct-2012			
Longitude, Latit	ude	-114:46	5:57, 51:02:37					er Name		Garry Roberts			
Road Authority		Alberta	Transportation	(AIT)			Review			21-Sep-2012	<u> </u>		
Contract Main.	Area	CMA28						eviewer I	Name	Tim Davies			
Clear Roadway	/Skew	12.4 / 1	5 deg. (RHF)					eview Da		11-Oct-2012			
AADT/Year 310 / 2011 (A)					Follow-		110	11 000 2012					
Road Classifica	Road Classification RAU-211.8-110						I GIIOW-	OP Dy					
Detour Length ((km)	16											
Bridge Culvert	Inform	ation											
Number of Culv	erts		3										
Pipe #	Barrel					Туре		Length		Corr. Profile	PI./Slab Thickness	Shape	
1	MAIN		2236	1626	26 RPP			39		152X51	4.0	PIPE ARCH	
2	MAIN		- 1219 MP			MP		27		68X13	2.8	ROUND	
3	MAIN	- 1219 MP				MP	27		68X13	2.8	ROUND		
Special Feature	Special Features BEAVR CTRL DEV					'							
Utility Attachme	ents				Uti	lities (L	Gas	at)					
Power							Municipal Problem (V/N) No.						
Others Remarks	None	observe	.d				Problem (Y/N) No						
Remarks	INOTIE	observe	u.	۸۰	oprood	sh Book	d / Emba	nkmont					
				A	Last	Now	/ Embankment						
Horizontal Align	ment				5	5	Explanation of Condition Located in curve.						
Vertical Alignme					7	7	Locato	a iii cai ve	•				
Roadway Width			12.400		,	'							
	,												
Embankment					7	6							
Sideslope (:1)		4.0										
(Height of Cov	ver(m)	0.7)											
Guardrail (V/NI)			NI-										
Guardrail (Y/N)			No										
Approach Roa	d / Eml	bankme		ing	5	5							
	d / Eml	bankme		ing			am End						
		bankme		ing		Upstre		ation of (Condi	tion			
Approach Roa	onent		nt General Rat	ing		Upstre		ation of (Condi	tion			
Approach Roa	onent		nt General Rat	ing		Upstre		ation of (Condi	tion			
Approach Roa Culvert Compo (Pipe # : 1, Spa	onent an Type	e: Prima	nt General Rat	ing	Last	Upstre	Explan	ation of (Condi	tion			
Approach Roa Culvert Compo (Pipe # : 1, Spa Direction End Treatment	onent an Type	e: Prima	nt General Rat	ing	Last	Upstre	Explan	ation of (Condi	tion			

78759 -1 Bridge Culvert

Cutvert Component Span Type: Primary Span				Unetre	oom End
Wingwalls	Culvert Component				
Wingwalls	•	(Snan)	Lasi	INOW	Explanation of Condition
Cutoff Wall		у Эрап)	V	V	
Some minor damage along bavel.			X		
Bevel End				V	
Heaving (mm)	Cuton wan		_ ^	_ ^	
Heaving (mm)	Bevel End		6	6	Some minor damage along bevel.
Invert Above/Below (mm)		0			Grate welded across bevel - dislodged.
Above/Below (mm) 200	<u> </u>	BELOW			
Scour Protection 6 6 6					
Crype : RIP RAP Caya, Rock Size(mm) : 200) Scour/Erosion 6 6 Beavers (Y/N) No	` '		6	6	
CAVG. Rock Size(mm) : 200 Scour/Erosion 6 6 6					
Scour/Erosion 6 6 6					
Beavers (Y/N)			6	6	
Culvert Component					
Bridge Culvert Barre	Beavers (Y/N)	No			
Culvert Component Circums Circ	Upstream End General Rating		6	6	
Culvert Component Cast Now Explanation of Condition			- Dri	dao Cu	Nyort Barrol
Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2236, Rise (mm): 1626, Type: RPP	Culvert Component			T	
Barrel Last Accessible Date 18-Sep-2012		tion Code: MAIN, Sp			· ·
Special Features 4 4 Dislodged and plugged with drift @ u/s. (Type : BEAVR CTRL DEV) Special Feature Dislodged and plugged with drift @ u/s. (Type :) Special Feature Dislodged and plugged with drift @ u/s. (Type :) Special Feature Dislodged and plugged with drift @ u/s. (Type :) Special Feature Dislodged and plugged with drift @ u/s. (Type :) Special Feature Dislodged and plugged with drift @ u/s. (Type :) Special Feature Dislodged and plugged with drift @ u/s. (Type :) Special Feature Dislodged and plugged with drift @ u/s. (Type :) Special Feature Special Feature (Type :) Special Feature Special Feature Special Feature (Type :) Special Feature Special Feature Special Featu				.,	
Special Feature	Barrer East / todessible Bate	10 OCP 2012			
(Type : BEAVR CTRL DEV) Special Feature (Type :) Roof	Special Features				
Special Feature (Type :) Roof	Special Feature		4	4	Dislodged and plugged with drift @ u/s.
Roof	(Type : BEAVR CTRL DEV)				
Roof	Special Feature				
Measured Rise (mm) 1865 Measured At Ring No. 6 Sag (mm) 57 Percent Sag 4 Sidewall 6 6 Measured Span (mm) 2270 Measured At Ring No. 5 Deflection (mm) 34 Percent Deflection 2 Floor N N Bulge (mm) N Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams 0 Min. Remaining Steel 0 Total No. of Rings with Two Cracked Seams 0	(Type:)				
Measured At Ring No. 6 Sag (mm) 57 Percent Sag 4 Sidewall 6 6 Measured Span (mm) 2270 Measured At Ring No. 5 Deflection (mm) 34 Percent Deflection 2 Floor N N Bulge (mm) Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 & Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams 0 Rings 4, 5, 6, 7 & Roof seams cusping - worst @ring #6 - 6mm. Min. Remaining Steel 0 Roof seams 0 Roof seams	Roof		5	5	
Sag (mm) 57 Percent Sag 4 Sidewall 6 6 Measured Span (mm) 2270 Amount of the state o	Measured Rise (mm)	1865			
Percent Sag	Measured At Ring No.	6			
Sidewall 6 6 Measured Span (mm) 2270 Measured At Ring No. 5 Deflection (mm) 34 Percent Deflection 2 Floor N N Bulge (mm) N Measured At Ring No. No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams 0 Min. Remaining Steel 0 Total No. of Rings with Two Cracked Seams 0	Sag (mm)	57			
Measured Span (mm) 2270 Measured At Ring No. 5 Deflection (mm) 34 Percent Deflection 2 Floor N N N Bulge (mm) 300mm water. Measured At Ring No. Abrasion (Y/N) Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams 0 Min. Remaining Steel 0	Percent Sag	4			
Measured At Ring No. 5 Deflection (mm) 34 Percent Deflection 2 Floor N N N Bulge (mm) Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0	Sidewall		6	6	
Measured At Ring No. 5 Deflection (mm) 34 Percent Deflection 2 Floor N N N Bulge (mm) Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0	Measured Span (mm)	2270			
Deflection (mm) 34 Percent Deflection 2 Floor N N S 300mm water. Bulge (mm) Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 5 Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0					
Percent Deflection 2 Floor N N N Bulge (mm) Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two 0 Cracked Seams Min. Remaining Steel 0					
Floor Bulge (mm) Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0	` '				
Bulge (mm) Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0			N	N	300mm water.
Measured At Ring No. Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0				1	1
Abrasion (Y/N) No Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0					
Circumferential Seams 6 6 Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0		No			
Separation (mm) 6 Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0			6	6	
Longitudinal Seams 5 5 Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm. Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0		6			1
Total No. of Cracked Rings 0 Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0	· · · · · · · · · · · · · · · · · · ·		5	5	Rings 4, 5, 6, 7 &8 Roof seams cusping - worst @ring #6 - 6mm
Total No. of Rings with Two Cracked Seams Min. Remaining Steel 0		0			The state of the s
Min. Remaining Steel 0	Total No. of Rings with Two				
Detuce on One of the formal	Min. Remaining Steel	0			1N stagger at roof seam only
Proper Lap (Y/N) No 1N stagger at roof seam only.	` '	No			in stagger at 1001 seam only.
Longitudinal Stagger (Y/N) No					

		lvert Barrel		
Culvert Component				Explanation of Condition
(Pipe # : 1, Primary Span, Locat	tion Code: MAIN, Spa	ın (mm): 2236	, Rise (mm): 1626, Type: RPP)
Coating		5	6	Superficial corrosion @ lower half.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		Х	Х	
(Type:)				
Waterway Adequacy		4	4	Restricted by drift across U/S bevel.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		5	5	
		D	ownstr	ream End
Culvert Component			Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary	Span)			
Direction		s		South.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	Х	
Collar		Х	Х	
Wingwalls		X	X	
(Shape:)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		5	5	10m wide x 6m long x 0.5 deep scour hole with incomplete rock
(Type : RIP RAP)				lining.
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Ratin	ng	5	5	
			Unstre	am End
Culvert Component		1		Explanation of Condition
(Pipe # : 2, Span Type: Second	ary Span)			
Direction		N		West pipe - North end.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		Х	Х	
Collar		Х	X	

78759 -1 Bridge Culvert

			Upstre	am End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Second	ary Span)			
Wingwalls		Х	X	
(Shape:)				
Cutoff Wall		Х	Х	
Bevel End		7	7	
Heaving (mm)	30	/		
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection	0	5	5	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		5	5	
Occum E103ioi1				
Beavers (Y/N)	No			
Upstream End General Rating		5	5	
·				
Culvent Commonent				Ivert Barrel
Culvert Component	estion Code: MAIN 6		Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Lo		span (r	nin):	, Rise (mm): 1219, Type: MP)
Barrel Last Accessible Date	18-Sep-2012			West Pipe.
Special Features				
Special Feature				
(Type:)				
Special Feature				
(Type:)				
Roof		7	7	Midspan.
Measured Rise (mm)	1182			
Measured At Ring No.				
Sag (mm)	37			
Percent Sag	3			
Sidewall		7	7	Midspan.
Measured Span (mm)	1223			
Measured At Ring No.				
Deflection (mm)	4			
Percent Deflection	1			
Floor		7	7	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	40			
Longitudinal Seams		7	7	Riveted seams.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			

		Bridge Culvert Barrel							
Culvert Component		Last	Now	Explanation of Condition					
(Pipe #: 2, Secondary Span, Lo	cation Code: MAIN, S	span (n	nm):	, Rise (mm): 1219, Type: MP)					
Coating		5	6						
Corrosion By Soil (Y/N)	No			Minor corrosion at floor.					
Corrosion By Water (Y/N)	Yes								
Camber POS/ZERO/NEG	ZERO								
Ponding (Y/N)	No								
Fish Passage Adequacy		5	5						
Baffle		Х	Х						
(Type:)									
Waterway Adequacy		7	7						
Icing (Y/N)	No								
Silting (Y/N)	No								
Drift (Y/N)	No								
Barrel General Rating		7	7						
Darrer Conoral Rading		•							
		D	ownstr	eam End					
Culvert Component		Last	Now	Explanation of Condition					
(Pipe # : 2, Span Type: Second	ary Span)								
Direction		S		South end - West pipe.					
End Treatment (Concrete, Steel, Others, None)	STEEL								
Headwall		Х	X						
Collar		X	X						
Wingwalls		X	X						
(Shape:)									
Cutoff Wall		X	X						
Bevel End		7	7						
Heaving (mm)	0								
Invert Above/Below Stream Bed									
Above/Below (mm)	0								
Scour Protection		7	7	Grassed over rip rap.					
(Type : RIP RAP)									
(Avg. Rock Size(mm) : 200)									
Scour/Erosion		7	7						
Beavers (Y/N)	No								
Downstream End General Ratio	ng	7	7						
			U <u>pstre</u>	am End					
Culvert Component		Last		Explanation of Condition					
(Pipe # : 3, Span Type: Second	ary Span)								
Direction		N		East pipe North End.					
End Treatment (Concrete, Steel, Others, None)	STEEL								
Headwall		Х	Х						
Collar		Х	X						

78759 -1 Bridge Culvert

			Upstre	am End
Culvert Component		Last	Now	Explanation of Condition
(Pipe #: 3, Span Type: Second	lary Span)			
Wingwalls		Х	X	
(Shape:)				
Cutoff Wall		Х	Х	
Bevel End		7	7	
Heaving (mm)	50			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		6	6	
(Type: RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Upstream End General Rating		6	6	
		D.:	dae Gr	lvort Porrol
Culvert Component			Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Lo	cation Code: MAIN 9			, Rise (mm): 1219, Type: MP)
Barrel Last Accessible Date		paii (i		
	18-Sep-2012			East pipe.
Special Features		1		
Special Feature				
(Type:)		1	I	
Special Feature				
(Type:)		1	1	
Roof	I	6	6	Minor dents at seams.
Measured Rise (mm)	1180			
Measured At Ring No.	4			
Sag (mm)	39			
Percent Sag	4			
Sidewall	1	7	7	
Measured Span (mm)	1245			
Measured At Ring No.	4			
Deflection (mm)	26			
Percent Deflection	2			
Floor		7	7	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	7	
Separation (mm)	50			
Longitudinal Seams		Х	7	Riveted seams.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			

		Brio	dge Cu	Ivert Barrel
Culvert Component			Now	Explanation of Condition
(Pipe #: 3, Secondary Span, Lo	cation Code: MAIN, S	Span (r	nm):	, Rise (mm): 1219, Type: MP)
Coating		5	6	
Corrosion By Soil (Y/N)	No			Minor corrosion on floor.
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		Х	Х	
(Type:)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		6	6	
				ream End
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Second	ary Span)	l -		
Direction		S		East pipe - South End.
End Treatment (Concrete, Steel, Others, None)	STEEL		1	
Headwall		Х	X	
Collar		Х	X	
Wingwalls		Х	Х	
(Shape:)				
Cutoff Wall		Х	Х	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		7	7	Grassed over rip rap.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 200)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Ratio	ng	7	7	
		\$	tructu	re Usage
			Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	Channel u/s is a ditch-sharp bend into pipe-sharp bend @ d/s end @ RPP.
Bank Stability		7	6	Numerous dams further u/s.
HWM (m below Top of Culvert)	0.4			No visible HWM.
Drift (Y/N)	No			

Structure Usage								
		Last	Now	Explanation of Condition				
Channel Bottom Degrading/Aggrading	DEGRADING							
Beavers (Y/N)	Yes							
(Fish Compensation Measure 1 :	NONE)							
(Fish Compensation Measure 2 :	NONE)							
Channel General Rating			5					

			Maintenance R	ecommen	dations					
Inspector Recommendations	Year	Inspecto	or Comments	COOMMON	Department Com	ments		Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS								J		
PLACE ADDITIONAL RIP RAP										
REMOVE DRIFT ACCUMULATION	2013	From u/s	s & d/s grates.							
INSTALL CONCRETE/STEEL LINING	3									
INSTALL STRUTS										
INSTALL CONCRETE COLLAR/CUT	OFF									
REPAIR SEAMS										
OTHER ACTION	2013	Re attac	h u/s beaver gratings.							
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
Structural Condition Rating (Last/N (%)	low) 55.6/5	5.6	Sufficiency Rating (Last	ufficiency Rating (Last/Now) %)		Est. Repl. Yr	2025	Maint. Re	qd. (Y/N)	Yes
Special Comments for Next Inspection					Department Comments					
Maintenance Reviewed By					Date		E	Estimated Tota	1 0	
Proposed Long-Term Strategy										
On 3-Year Program (Y/N)										
Proposed Action										
Previous Inspector's Name	Garry Roberts			Previous	Assistant's Name					
Next Inspection Date	18-Jun-2014			Previous	Inspection Date	06-Jan-2011				
Inspection Cycle (Default) (months)	21									
Comment										