Alberta Transportation Bridge inspection											72000 T BIIC		
Bridge File Number 72356 -1 Bridge Culvert						ridge Culvert Inspection							
Bridge File Number 72356 -1 Bridge Culvert Year Built 1953							Form Type CULM			CULM			
Year Built		1953					Lot No.			1			
Bridge or Town	Name	BENAL	ТО				Inspecto	or Name		Owen Salava			
Located Over		GILPAT	RICK CK, 3.88	.9, WATE	WATERCRS-ST			or Class		BR CLS A			
Located On		11:12 C	1 3.311				Assistar	nt Name		Chris Black			
Water Body Cl.	./Year						Assistar	nt Class		BR CLS B			
Navigabil. Cl./Y	⁄ear						Inspecti	on Date		30-Mar-2010			
Legal Land Loc	cation	SW SE	C 1 TWP 39 RC	3E 3 W5N	1		Data En	try By		Jill Potts			
Longitude, Lati	tude	-114:18	:46, 52:19:09				Data En	try Date	!	20-Apr-2010			
Road Authority	,	Alberta	Transportation	(AIT)			Reviewer Name			John O'Brien			
Contract Main.	Area	CMA19					Review	Date		12-Apr-2010			
Clear Roadway	//Skew	10.9 / -3	30 deg. (LHF)		Dept. Revi			eviewer	Name	Chris Black			
AADT/Year		5,600 /	2009 (A)				Dept. Re	eview Da	ate	26-Apr-2010			
Road Classifica	ation	RCU-21	11-110				Follow-Up By						
Detour Length	(km)	6											
Bridge Culvert Information													
Number of Culverts 3													
Pipe #	Barrel		Span	Rise (or l			Length		Corr. Profile	PI./Slab Thickness	Shape		
1	MAIN		-	1200		MP		28		68X13	2.8	ROUND	
2	MAIN		-	1200 MP		MP		28		68X13	2.8	ROUND	
3	MAIN	- 1200				MP		28		68X13	2.8	ROUND	
Special Features													
Special Features Comment													
Utility Attachme	onte				Ut	ilities (L	Located a	at)					
Telephone	South	r/\u00e4					Gas						
Power	South	r/w.					Municipal						
Others	Fibre	optic North r/w.				Problem (Y/N) No							
Remarks	1 IDIE	optic No	1 (11 1/ VV.				1 TODICIT	1 (1/14)	110				
Remarks				Ar	pproach Road / Embankm				nt				
				ì		Last Now Explanation of Condition							
Horizontal Alig	nment				7	7	-			ad 10m NW & 3	0m SE.		
Horizontal Alignment Vertical Alignment					8								
Roadway Widtl			10.900										
Embankment						5	Steep 2:1 slope over pipe, North side.						
Sideslope (	:1)		3.0	5 5		·							
(Height of Co	_ /	2.1)											
Guardrail (Y/N)			No										
Approach Roa	ad / Emb	oankme	nt General Rat	ing	5	7							
						Unstre	am End						
Culvert Comp	onent				Last		Explana	ation of	Condi	tion			
(Pipe # : <b>1</b> , <b>Sp</b>		e: Prima	ry Span)						, ,				
Direction	712				N		West pi	oe.					
End Treatment Others, None)	(Concre	ete, Stee	el, NONE										
Headwall					Х	X							
Collar					Х	X							
Wingwalls					Х	X							
(Shape: )													
						_							

			Heater	
Culvert Component				eam End
Culvert Component	· Cnan\	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary	<i>i</i> Span)		V	
Cutoff Wall		X	X	
Bevel End		Х	Х	No bevel.
Heaving (mm)	50			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		5	5	
(Type: NATURAL)				
(Avg. Rock Size(mm):)				
Scour/Erosion		5	5	
	I			
Beavers (Y/N)	Yes			Beaver grates @ end, dam U/S.
Upstream End General Rating		5	5	
Openicam Ena Conoral Rating				
				lvert Barrel
Culvert Component		Last		•
(Pipe # : 1, Primary Span, Loca	tion Code: MAIN, Sp	an (mm	n):	, Rise (mm): 1200, Type: MP)
Barrel Last Accessible Date	03-Jul-2007			West pipe. 1/2 full of ice, viewed from ends, looks ok.
Special Features				
Special Features Special Feature				
(Type:)				
Special Feature				
(Type:)				
Roof		6	N	
Measured Rise (mm)	1150	0	IN	
Measured At Ring No.	3			- (4.2%. 03/July/2007)
Sag (mm)	50			_
Percent Sag	4			-
Sidewall	4	4	N	
Measured Span (mm)	1285	4	IN	
Measured At Ring No.	3			(03/July/2007)
Deflection (mm)	85			_
Percent Deflection	7			_
Floor	,	N	N	Under water.
Bulge (mm)		IN	IN	Onuel water.
Measured At Ring No.				
Abrasion (Y/N)				
			N.I	(A+ B4_02/ hib/2007)
Circumferential Seams	110	5	N	(At R1. 03/July/2007)
Separation (mm)	110	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		Dr. v. I
Longitudinal Seams		X	N	Riveted seams.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				-
Longitudinal Stagger (Y/N)				
Coating		5	N	(Superficial rust along floor. 03/July/2007)
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

		Brid	dge Cu	llvert Barrel				
Culvert Component		Last	Now	Explanation of Condition				
(Pipe #: 1, Primary Span, Loca	tion Code: MAIN, Sp	an (mm	):	, Rise (mm): 1200, Type: MP)				
Camber POS/ZERO/NEG	NEG							
Ponding (Y/N)	No							
Fish Passage Adequacy		7	7					
Baffle		Х	Х					
(Type:)								
Waterway Adequacy		5	4	Appears to accumulate ice over winter.				
Icing (Y/N)	Yes							
Silting (Y/N)	No							
Drift (Y/N)	No							
Barrel General Rating		4	4	Sidewall deflection govered. G.R. carried forward from 03/July/2007.				
				ream End				
Culvert Component	. 0	Last	Now	Explanation of Condition				
(Pipe # : 1, Span Type: Primary	/ Span)			Turk et al.				
Direction	NONE	S		West barrel.				
End Treatment (Concrete, Steel, Others, None)	NONE		l					
Headwall		X	X					
Collar		X	X					
Wingwalls		X	X	-				
(Shape: )								
Cutoff Wall		Х	Х					
Bevel End		X	X	No bevel.				
Heaving (mm)	200							
Invert Above/Below Stream Bed				At S.B.				
Above/Below (mm)	0							
Scour Protection		5	5	_				
(Type : <b>NATURAL</b> )								
(Avg. Rock Size(mm):)								
Scour/Erosion		5	5					
Beavers (Y/N)	Yes			Upstream.				
Downstream End General Ratio	ng	5	5					
			Upstre	eam End				
Culvert Component		Last	Now	Explanation of Condition				
(Pipe # : 2, Span Type: Second	lary Span)							
Direction		N		Middle span.				
End Treatment (Concrete, Steel, Others, None)	NONE							
Headwall		Х	Х					
Collar		Х	Х					
Wingwalls		X	Х					
(Shape: )								
Cutoff Wall		X	X					

			Linetro	eam End
Culvert Component		Last		Explanation of Condition
(Pipe # : 2, Span Type: Second	lary Snan)	Lasi	INOW	Explanation of Condition
	lary Spari)	5	X	
Bevel End	200	5		
Heaving (mm)	300			
Invert Above/Below Stream Bed				
Above/Below (mm)	300		Τ_	
Scour Protection		5	5	
(Type : NATURAL)				
(Avg. Rock Size(mm):)		1		
Scour/Erosion		5	5	
Beavers (Y/N)	Yes			Dam U/S, beaver grate.
Upstream End General Rating		5	5	
		Bri	dae Cu	lvert Barrel
Culvert Component		_		Explanation of Condition
(Pipe # : 2, Secondary Span, Lo	cation Code: MAIN			, Rise (mm): 1200, Type: MP)
Barrel Last Accessible Date	03-Jul-2007	(I	,.	Middle pipe. 1/2 to 2/3 full of ice. Viewed from ends, no problem
Darrer Last Accessible Date	00-001-2007			seen.
Special Features				
Special Feature				
(Type:)				
Special Feature				
(Type:)				
Roof		3	N	
Measured Rise (mm)	1070			
Measured At Ring No.	4			
Sag (mm)	130			
Percent Sag	10			
Sidewall	1.0	3	N	
Measured Span (mm)	1320	3	14	
Measured At Ring No.	4			
	120			-
Deflection (mm)				
Percent Deflection	10			
Floor	100	5	N	
Bulge (mm)	100			
Measured At Ring No.	2			
Abrasion (Y/N)	No			
Circumferential Seams		5	N	
Separation (mm)	150			
Longitudinal Seams		N	N	Riveted seams.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		5	N	(Superficial rust along floor. 03/July/2007)
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
03.11001 1 00/2210/1420				

		Brio	dge Cu	Ivert Barrel				
Culvert Component		Last	Now	Explanation of Condition				
(Pipe # : 2, Secondary Span, Lo	ocation Code: MAIN, S	Span (n	nm):	, Rise (mm): 1200, Type: MP)				
Ponding (Y/N)	No							
Fish Passage Adequacy		7	7					
Baffle		Х	X					
(Type:)								
Waterway Adequacy		5	4	Ice to 2/3 full.				
Icing (Y/N)	Yes							
Silting (Y/N)	No							
Drift (Y/N)	No							
Barrel General Rating		3	3	Roof & sidewall deflections govern. G.R. carried over from 03/July/2007.				
		D	ownstr	ream End				
Culvert Component			Now	Explanation of Condition				
(Pipe # : 2, Span Type: Second	lary Span)							
Direction		S		Center pipe.				
End Treatment (Concrete, Steel, Others, None)	STEEL							
Headwall		X	X					
Collar		Х	Х					
Wingwalls		Х	Х					
(Shape: )								
Cutoff Wall			Х					
Bevel End		4	4	Bent bevel @ West.				
Heaving (mm)	0							
Invert Above/Below Stream Bed ABOVE								
Above/Below (mm)	200		1					
Scour Protection		5	5					
(Type : <b>NATURAL</b> )								
(Avg. Rock Size(mm):)			1					
Scour/Erosion		5	5	Scour around bevel is minor.				
Beavers (Y/N)	Yes							
Downstream End General Ratio	ng	4	4					
			Upstre	am End				
Culvert Component			Now	Explanation of Condition				
(Pipe #: 3, Span Type: Second	lary Span)							
Direction		N		East pipe.				
End Treatment (Concrete, Steel, Others, None)	STEEL							
Headwall		Х	Х					
Collar		Х	Х					
Wingwalls		Х	Х					
(Shape: )								
Cutoff Wall		Х	Х					
Bevel End		5	5					
Heaving (mm)	0							

			am End Explanation of Condition
arv Span)	= 401	11011	
200	1	N	(Some undermining under bevel end. 03/July/2007)
		111	Coome undermining under bever end. 00/3diy/2007)
	1	N	(Minor erosion. 03/July/2007)
	4	IN .	(Willion erosion: 03/3dig/2007)
Yes			Dam U/S, beaver grate.
	5	5	
	Brid	dge Cu	Ivert Barrel
	Last	Now	Explanation of Condition
cation Code: MAIN	I, Span (r	nm):	, Rise (mm): 1200, Type: MP)
03-Jul-2007			East pipe. Ice to 0.1m of roof. Roof has round shape.
		l N	
1000	3	N	
14			
ı	3	N	
1325			
125			
10			
	5	N	
0			
No			
	3	N	(150mm deep void @ R3 due to infiltration - photo. 03/July/2007)
50			
	Х	N	Riveted seams.
			1
			1
	5	N	
No			
ZERO			
No			
	1020 2 170 14 1325 2 125 10 0 No No No ZERO	### Span   BELOW   250   4   4   4   4   4   4   4   4   5   5	BELOW   250

72356 -1 Bridge Culvert

		Brid	dge Cu	vert Barrel				
Culvert Component			Now	Explanation of Condition				
(Pipe #: 3, Secondary Span, Lo	cation Code: MAIN,	Span (r	nm):	, Rise (mm): 1200, Type: MP)				
Fish Passage Adequacy		7	7					
Baffle		Х	Х					
(Type:)								
Waterway Adequacy		5	4	(100mm gravel on floor. 03/July/2007) Ice within 0.1m of roof.				
Icing (Y/N)	Yes							
Silting (Y/N)	No							
Drift (Y/N)	No							
Barrel General Rating		3	3	Roof & sidewall deflections governed. G.R. carried over from 03/July/2007.				
		D	ownst	ream End				
Culvert Component		Last	Now	Explanation of Condition				
(Pipe # : 3, Span Type: Second	lary Span)							
Direction		S		East pipe.				
End Treatment (Concrete, Steel, Others, None)	STEEL							
Headwall		X	X					
Collar		X	X					
Wingwalls		X	X					
(Shape: )								
Cutoff Wall			X					
Bevel End		4	4	Damaged by mower, top dented.				
Heaving (mm) 100								
Invert Above/Below Stream Bed								
Above/Below (mm)	0							
Scour Protection		4	N	(Some undermining around bevel. 03/July/2007)				
(Type : <b>NATURAL</b> )								
(Avg. Rock Size(mm):)								
Scour/Erosion		4	N	(Minor erosion. 03/July/2007)				
Beavers (Y/N)	Yes							
Downstream End General Ratio	ng	4	4					
		5	Structu	re Usage				
		Last	Now	Explanation of Condition				
Channel (U/S and D/S)								
Alignment		4	4	Turns East U/S, East D/S.				
Bank Stability		5	5					
HWM (m below Top of Culvert)				HWM not visible.				
Drift (Y/N)	No							
Channel Bottom Degrading/Aggrading	AGGRADING							
Beavers (Y/N)	No							
(Fish Compensation Measure 1 :	·							
(Fish Compensation Measure 2 :	NONE)							
<b>Channel General Rating</b>		4	4					

Alberta Transportation

		Maintenance Recommendations	ecommenda	ıtions					
Inspector Recommendations	Year	Inspector Comments		Department Comments	nents		Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS									
PLACE ADDITIONAL RIP RAP									
REMOVE DRIFT ACCUMULATION									
INSTALL CONCRETE/STEEL LINING	g								
INSTALL STRUTS									
INSTALL CONCRETE COLLAR/CUTOFF	LOFF								
REPAIR SEAMS									
OTHER ACTION	2010	Pipe #3. Install reverse coupler @ separated circumferential seam & expandable foam.	eparated foam.						
OTHER ACTION	2010	Consider removal from active inspection list.	ction list.						
OTHER ACTION									
OTHER ACTION									
Structural Condition Rating (Last/Now) (%)	Now) 33.3/33.3	Sufficiency Rating (Last/Now) (%)		37.3/34.2	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)		Yes
Special No action on pipe Comments for deflection at low ellower lispection	#2 and pipe #3 rand for rating of "3	No action on pipe #2 and pipe #3 ratings of "3" for roof and sidewalls. 10% sag and deflection at low end for rating of "3" so measure next time.		Department Comments					
Maintenance Reviewed By				Date		Ü	Estimated Total	0	
Proposed Long-Term Strategy									
On 3-Year Program (Y/N)									
Proposed Action									
Previous Inspector's Name	Jason Rusu		Previous A	Previous Assistant's Name					
Next Inspection Date	30-Dec-2011		Previous Ir	Previous Inspection Date	03-Jul-2007				
Inspection Cycle (Default) (months)	21								
Comment									

			Maintenance Rec	ommend	lations					
Inspector Recommendations	Ye	ear	Inspector Comments		Department C	omments		Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS										
PLACE ADDITIONAL RIP RAP										
REMOVE DRIFT ACCUMULATION										
INSTALL CONCRETE/STEEL LININ	G									
INSTALL STRUTS										
INSTALL CONCRETE COLLAR/CUT	OFF									
REPAIR SEAMS										
OTHER ACTION	20	010	Pipe #3. Install reverse coupler @ se circumferential seam & expandable for	parated oam.	Defer					
OTHER ACTION		010	Consider removal from active inspec	tion list.	Replace in 10 concrete box?	years or less (twin (				
OTHER ACTION										
OTHER ACTION										
Structural Condition Rating (Last/I (%)	Now) 33	ow) 33.3/33.3 Sufficiency Rating (Last/			<b>37.3/34.2</b> Est. Repl. Yr 2015			Maint. Re	qd. (Y/N)	Yes
Special Comments for Next Inspection Next Insp			tings of "3" for roof and sidewalls. 10° of "3" so measure next time.	% sag	Department Comments	Excellent candidate	for twin o	cell concrete cu	vert	
Maintenance Reviewed By	Paul Carı	rier			Date	23-Feb-2011		Estimated Tota	1 0	
Proposed Long-Term Strategy										
On 3-Year Program (Y/N)										
Proposed Action										
Previous Inspector's Name	Jason Ru	usu	1	Previous	Assistant's Nan	ne				
Next Inspection Date	30-Dec-2	2011		Previous	Inspection Date	e 03-Jul-2007				
Inspection Cycle (Default) (months)	21				,					
Comment										