Bridge Culvert Inspection

Bridge File Number	77397 -1 Bridge Culvert	Form Type	CUL1
Year Built	1971	Lot No.	4
Bridge or Town Name	CAMROSE	Inspector Name	Owen Salava
Located Over	TRAIL-ANIMAL, OVER SP	Inspector Class	BR CLS A
Located On	13:10 C1 28.777	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	27-Jun-2012
Legal Land Location	SE SEC 1 TWP 47 RGE 21 W4M	Data Entry By	Marcia Chavez
Longitude, Latitude	-112:56:04, 53:01:04	Data Entry Date	15-Jul-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA16	Review Date	05-Jul-2012
Clear Roadway/Skew	15 /	Dept. Reviewer Name	Andrew Smikles
AADT/Year	9,330 / 2011 (A)	Dept. Review Date	19-Jul-2012
Road Classification	RAU-213.4-120	Follow-Up By	
Detour Length (km)	6		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2400	MP	29.3	68X13	4.0	ROUND
Special Features								
Special Features Comment								

Posting Information

Required Vert. Clearance Posting (m)											
Posted Vertical Clearance (Y/N)											
Posted:	Lane	NB	On Bridge (m)		In Advance (Y/N)		Lane	SB	On Bridge (m)		In Advance (Y/N)
Remarks	Not required.										

Utilities (Located at)

Utility Attachments			
Telephone	Attached to West side of pipe.	Gas	
Power	5 wires 30m North of c/l.	Municipal	
Others		Problem (Y/N)	Yes
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Access road 50m West. Curve to West. Lane merges over pipe.
Vertical Alignment		9	9	
Roadway Width (m)	14.000			
Embankment		7	7	North end measured.
Sideslope (__:1)	3.5			
(Height of Cover(m) : **0.8**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	N	(Heavy corrosion with pitting. 12Feb2009). Bevel sides under water.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		6	6	Well grassed.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	6	No erosion due to no flow.
Beavers (Y/N)	No			
Upstream End General Rating		**4**	**4**	GR carried forward from 12Feb2009.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP**)				
Barrel Last Accessible Date	12-Feb-2009			Viewed from ends. water to 0.7m from roof, shape OK.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	(80mm roof sag estimated. 95/05/08). (Roof seam separates @ 2/3 length from South end but fill does not leak through - photo. 12Feb2009).
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	80			
Percent Sag				
Sidewall		N	N	(Can only see top half of sidewall. Heavy corrosion with pitting to midpoint of sidewall. 12Feb2009).
Measured Span (mm)	2370			
Measured At Ring No.	2			
Deflection (mm)	30			
Percent Deflection	1			
Floor		N	N	Under water.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	N	(Rusting at 2nd seam from South & East side. 12Feb2009).
Separation (mm)	70			
Longitudinal Seams		X	X	
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		N	N	(Heavy corrosion with pitting to midpoint of sidewall. 30Aug2010).
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2400, Type: MP**)				
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			0.7m water to roof
Fish Passage Adequacy		X	X	Not a watercourse.
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Not built for drainage.
Icing (Y/N)	Yes			(Silt 400 mm. 12Feb2009).
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	GR carried forward from 12Feb2009.

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		N	N	Bevel cut under water.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		6	6	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**4**	GR carried forward from 12Feb2009.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Grade Separation				
Road Alignment		5	5	
Roadway Surface		N	N	
(Type :)				
Icing (Y/N)	Yes			
Traffic Safety Features		X	X	
Type				
Lighting		X	X	
Barrel Leakage (Y/N)	No			

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Drainage		3	3	Poor drainage - pipe is set too low.
Structure In Use (Y/N)	No			Pipe is below surrounding land. Cattlepass has been abandoned as water ponding in barrel & at both ends up to 1.7m deep.
Grade Separation General Rating		**3**	**3**	

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) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**41.3/41.3**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	No action for drainage unless pipe is needed for stockpass.	Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0

Proposed Long-Term Strategy	2004.09.24 Culvert appears to handle some drainage. Monitor at next BIM. Estimated Replacement year 2020. Remove with next road work & install culvert for drainage as required assuming no longer used.		
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			