Bridge Culvert Inspection

Bridge File Number	13439 -1 Bridge Culvert	Form Type	CUL1
Year Built	1975	Lot No.	2
Bridge or Town Name		Inspector Name	Owen Salava
Located Over	3RD ORDER TRIBUTARY TO BATTLE RIVER, 5.60.3.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	792:02 C1 19.601	Assistant Class	
Water Body Cl./Year		Inspection Date	04-Feb-2013
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 25 TWP 42 RGE 28 W4M	Data Entry Date	22-Feb-2013
Longitude, Latitude	-113:54:54, 52:38:23	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	13-Feb-2013
Contract Main. Area	CMA17	Dept. Reviewer Name	Chris Black
Clear Roadway/Skew	8.2 /	Dept. Review Date	14-Mar-2013
AADT/Year	680 / 2011 (A)	Follow-Up By	
Road Classification	RCU-208-110		
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	1800		MP	21.2	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	3 wires 15m East of centerline.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 100m South.
Vertical Alignment		8	8	
Roadway Width (m)	8.200			Transverse crack at culvert.
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1.1**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

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)	200			
Scour Protection		6	N	(Well vegetated. 04Mar2010) - Snow covered.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	N	Snow covered.
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**6**	GR carried forward from 04Mar2010.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1800, Rise (mm): , Type: MP**)				
Barrel Last Accessible Date	04-Feb-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	4	Unable to measure due to ice.
Measured Rise (mm)	1660			
Measured At Ring No.				
Sag (mm)	140			(7.8%. 29/Jan/2007)
Percent Sag	8			
Sidewall		3	3	Shape has smooth curves and lots of arching ability. No change in shape since 29Jan2007; continue to monitor.
Measured Span (mm)	1995			
Measured At Ring No.				10.8%.
Deflection (mm)	195			
Percent Deflection	11			
Floor		N	N	Ice.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	4	West circ. seam sounds hollow @ sidewall to 600mm E of seam. Caused by poor alignment of pipe sections. Located @ point of worst def.
Separation (mm)	200			
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		5	5	
Corrosion By Soil (Y/N)	No			
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): 1800, Rise (mm): , Type: MP**)				
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		**3**	**3**	

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		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		4	N	Snow covered.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		4	N	(Scour hole 500mm x 5m x 10m. Scour under pipe 600mm from end. 04Mar2010) - Snow covered.
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**N**	GR was 4 from 04Mar2010.

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		5	5	Cut banks downstream, minor.
HWM (m below Top of Culvert)				HWM not 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		**6**	**6**	

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	2013	Seal transverse crack in ACP.				
OTHER ACTION	2013	Fill void at coupler with grout.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**33.3/33.3**	**Sufficiency Rating (Last/Now) (%)**	**52.3/53.2**	Est. Repl. Yr	2023	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	No action for deflection at this time; monitor shape.	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	Owen Salava	Previous Assistant's Name	
Next Inspection Date	04-May-2016	Previous Inspection Date	04-Mar-2010
Inspection Cycle (Default) (months)	39		
Comment			