Bridge Culvert Inspection

Bridge File Number	01863 -1 Bridge Culvert	Form Type	CUL1
Year Built	1950	Lot No.	3
Bridge or Town Name	BENTLEY	Inspector Name	Owen Salava
Located Over	TRIBUTARY TO RAINY CREEK, 3.78.6.2, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	12:06 C1 17.580	Assistant Class	
Water Body Cl./Year		Inspection Date	29-Aug-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	NE SEC 20 TWP 40 RGE 2 W5M	Data Entry Date	17-Sep-2012
Longitude, Latitude	-114:14:51, 52:27:41	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	06-Sep-2012
Contract Main. Area	CMA18	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	9 /	Dept. Review Date	18-Sep-2012
AADT/Year	1,230 / 2011 (A)	Follow-Up By	
Road Classification	RAU-209-110		
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	-	2100	SP	45.7	152X51		ROUND
Special Features		CONC FLOOR						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	South r/w.	Gas	
Power	3 wires 23 m North of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks	Cable runs through barrel, detached.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	In middle of gradual curve.
Vertical Alignment		7	7	In sag of long gradual curve. On superelevation.
Roadway Width (m)	9.000			
Embankment		7	7	S end measured - high side of superelevation.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **4.7**)				
Guardrail (Y/N)	Yes			S side only.
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	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		6	6	Some rock - Class I. Sparce.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		6	6	
Beavers (Y/N)	Yes			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2100, Type: SP**)				
Barrel Last Accessible Date	29-Aug-2012			
Special Features				
Special Feature		X	N	
(Type : **CONC FLOOR**)				
Special Feature				
(Type :)				
Roof		N	6	Estimate roof sag at less then 5%. Unable to measure due to silt on floor.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	80			
Percent Sag	4			
Sidewall		N	6	
Measured Span (mm)	2130			
Measured At Ring No.	6			
Deflection (mm)	30			
Percent Deflection	1			
Floor		N	N	Concrete floor under water.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	6	
Separation (mm)	0			
Longitudinal Seams		N	6	Lower seams not visible.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			1N.
Coating		N	6	Minor superficial rust.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 2100, Type: SP**)				
Fish Passage Adequacy		4	4	Beaver dam in barrel.
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**6**	**6**	

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		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		5	5	Some rock & Class I.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		5	5	
Beavers (Y/N)	Yes			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		7	7	
HWM (m below Top of Culvert)	0.5			-0.5m - grass on fence over inlet.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				Unknown
Beavers (Y/N)	Yes			
(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	2012	Remove beaver dam.				
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) (%)	**66.7/66.7**	**Sufficiency Rating (Last/Now) (%)**	**60.7/60.7**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection		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	29-May-2014	Previous Inspection Date	25-Aug-2010		
Inspection Cycle (Default) (months)	21				
Comment					