

Bridge Culvert Inspection				
Bridge File Number	74094 -1 Bridge Culvert		Form Type	CUL1
Year Built	1988		Lot No.	3
Bridge or Town Name	SUNDRE		Inspector Name	Owen Salava
Located Over	SMITH CREEK, 3.98.2.2, WATERCRS-ST		Inspector Class	BR CLS A
Located On	584:02 C1 25.074		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	27-Oct-2011
Legal Land Location	SW SEC 2 TWP 33 RGE 7 W5M		Data Entry By	Marcia Chavez
Longitude, Latitude	-114:53:51, 51:47:42		Data Entry Date	29-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA29		Review Date	14-Nov-2011
Clear Roadway/Skew	12.3 / -41 deg. (LHF)		Dept. Reviewer Name	Andrew Smikles
AADT/Year	470 / 2010 (A)		Dept. Review Date	02-Dec-2011
Road Classification	RCU-211-110		Follow-Up By	
Detour Length (km)	5			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	-	3658	SP	53.7	152X51	3.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)				
Utility Attachments				
Telephone	South ditch.		Gas	20m S-marker @ SW.
Power	1 wire south fence line.		Municipal	
Others			Problem (Y/N)	No
Remarks				

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		4	4	Hwy turns 90 degree 100m west & intersection with local road.
Vertical Alignment		7	7	
Roadway Width (m)	9.500			12.3m road to West. 9.5m road to East.
Embankment		4	4	Cracks in roadway over pipe - photo. North embankment eroding from roadway runoff, under guardrail - photo.
Sideslope ( _ :1)	3.0			
(Height of Cover(m) : 2.7)				
Guardrail (Y/N)	Yes			Missing proper termination @ SE - photo.
<b>Approach Road / Embankment General Rating</b>		<b>4</b>	<b>4</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		8	8	Minor cracks.
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		N	N	Buried.

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		8	8	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		8	8	
(Type : <b>RIP RAP</b> )				
(Avg. Rock Size(mm) : <b>350</b> )				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>8</b>	<b>8</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : <b>1</b> , Primary Span, Location Code: <b>MAIN</b> , Span (mm): , Rise (mm): <b>3658</b> , Type: <b>SP</b> )				
Barrel Last Accessible Date	27-Oct-2011			
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		7	7	Estimate roof.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	42			
Percent Sag	1			
Sidewall		7	7	
Measured Span (mm)	3700			
Measured At Ring No.	11			
Deflection (mm)	42			
Percent Deflection	1			
Floor		N	N	Floor covered in avg 200mm deep silt, deeper in sag.
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		8	8	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			
Longitudinal Stagger (Y/N)	Yes			
Coating		5	5	Storage stains superficial corrosion @ white rust storage stain areas. Corrosion spots showing through rings 10 & 11 in roof. No perforations yet.
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): 3658, Type: SP)				
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type : )				
Waterway Adequacy		4	4	Based on HWM comment. Scour hole D/S.
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>7</b>	<b>7</b>	
Downstream 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	
Bevel End		6	6	Pushed in 200mm @ NW. Bevel projects from fill 300mm.
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		3	3	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 350)				
Scour/Erosion		3	3	15m x 15m scour hole into embankment @ NE - photos.
Beavers (Y/N)		No		
<b>Downstream End General Rating</b>		<b>3</b>	<b>3</b>	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	
Bank Stability		4	4	Cut banks D/S & sloughing @ NE. 2 channel @ U/S, 1 from East 90 degree. Main channel @ 90 & 1 from West 90 degree to East, water was over road in 1991.
HWM (m below Top of Culvert)	0.6			(@ this inspection. 15/Mar/2006) (HWM 6.3m in 1991) HWM not visible this inspection.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading		DEGRADING		
Beavers (Y/N)		No		
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
<b>Channel General Rating</b>		<b>4</b>	<b>4</b>	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS							
PLACE ADDITIONAL RIP RAP	2012	Est. 30m3 @ D/S.					
REMOVE DRIFT ACCUMULATION							
INSTALL CONCRETE/STEEL LINING							
INSTALL STRUTS							
INSTALL CONCRETE COLLAR/CUTOFF							
REPAIR SEAMS							
OTHER ACTION	2012	Install proper termination end @ SE guardrail end.					
OTHER ACTION	2012	Seal cracks in ACP over pipe.					
OTHER ACTION	2012	Repair North embankment erosion under guardrail.					
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>77.8/77.8</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>53.4/53.4</b>	Est. Repl. Yr	2042	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection			Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2006.07.28 With normal maintenance culvert should be good until 2050. Monitor d/s scour holes.						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Dave Lam		Previous Assistant's Name				
Next Inspection Date	27-Jan-2015		Previous Inspection Date	24-Sep-2009			
Inspection Cycle (Default) (months)	39						
Comment							