

Bridge Culvert Inspection				
Bridge File Number	00721 -1 Bridge Culvert		Form Type	CUL1
Year Built	1957		Lot No.	1
Bridge or Town Name	CARSTAIRS		Inspector Name	Owen Salava
Located Over	SHEEP COULEE, 3.33.22, WATERCRS-ST		Inspector Class	BR CLS A
Located On	581:02 C1 4.033		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	26-Oct-2011
Legal Land Location	SW SEC 14 TWP 30 RGE 1 W5M		Data Entry By	Marcia Chavez
Longitude, Latitude	-114:02:14, 51:33:43		Data Entry Date	22-Nov-2011
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA29		Review Date	10-Nov-2011
Clear Roadway/Skew	9.2 / 30 deg. (RHF)		Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,890 / 2010 (A)		Dept. Review Date	22-Nov-2011
Road Classification	RCU-209-110		Follow-Up By	
Detour Length (km)	3			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	2489	1753	RPP	33.5	152X51	4.0	PIPE ARCH
Special Features		VERT TIMBER STRUTS						
Special Features Comment								

Utilities (Located at)				
Utility Attachments				
Telephone	SOUTH DITCH		Gas	N DITCH-no marker
Power	4 WIRE NORTH FENCE		Municipal	
Others			Problem (Y/N)	No
Remarks				

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	HWY2 service roads intersection 60m E.
Vertical Alignment		7	7	
Roadway Width (m)	9.200			
Embankment		8	8	
Sideslope (__:1)	3.0			
(Height of Cover(m) : 1.8)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		7	7	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		6	6	CONCRETE POURED AT TOE OF BEVEL ONLY.

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		6	6	SUPERFICIAL RUST ON FLR
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	200			
Scour Protection		N	6	200mm deep rock liner.
(Type : NATURAL)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		N	6	Scour at end of culvert, minor.
Beavers (Y/N)	No			
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): 2489, Rise (mm): 1753, Type: RPP)				
Barrel Last Accessible Date	26-Oct-2011			
Special Features				
Special Feature		7	7	STRUTS INSTALLED APRIL 1997.
(Type : VERT TIMBER STRUTS)				
Special Feature				
(Type :)				
Roof		4	4	
Measured Rise (mm)	1620			
Measured At Ring No.	5			
Sag (mm)	133			7.6%
Percent Sag	8			
Sidewall		2	2	Long seams govern.
Measured Span (mm)	2600			
Measured At Ring No.	5			
Deflection (mm)	111			
Percent Deflection	4			
Floor		N	5	Scaling rust. WATER ENTERING AT LOWER BOLTS.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		2	2	crks in W long sidewall seam R1-9. R6-8 @ 25mm of steel left - photo.
Total No. of Cracked Rings	9			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	25			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		4	4	Corrosion with some pitting & scaling at floor.
Corrosion By Soil (Y/N)	No			
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): 2489, Rise (mm): 1753, Type: RPP)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	4	GR raised to 4 due to struts in good condition.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		8	8	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		8	8	
Beavers (Y/N)	No			
Downstream End General Rating		6	6	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		6	6	ENTERS AT 90 DEG.
Bank Stability		8	8	
HWM (m below Top of Culvert)	1.4			(970616)
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
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	2015	Replace pipe - 2011-2015.		2015						
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
Structural Condition Rating (Last/Now) (%)	33.3/44.4	Sufficiency Rating (Last/Now) (%)	56.1/60.9	Est. Repl. Yr	2015	Maint. Req. (Y/N)	Yes			
Special Comments for Next Inspection	Put on 3-5yr replacement schedule. LRA sent 15Nov2011 by email.		Department Comments							
Maintenance Reviewed By			Date			Estimated Total	0			
Proposed Long-Term Strategy	Culvert authorization, order and draft SP done in 2002. May need to re-design. See file. RS									
On 3-Year Program (Y/N)										
Proposed Action										
Previous Inspector's Name	Glen Mikesh		Previous Assistant's Name							
Next Inspection Date	26-Jan-2015		Previous Inspection Date	30-Jan-2006						
Inspection Cycle (Default) (months)	39									
Comment										

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	2015	Replace pipe - 2011-2015.	Programmed for replacement in 2017	2017		
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	33.3/44.4	Sufficiency Rating (Last/Now) (%)	56.1/60.9	Est. Repl. Yr	2015	Maint. Req. (Y/N)	Yes
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Special Comments for Next Inspection	Put on 3-5yr replacement schedule. LRA sent 15Nov2011 by email.	Department Comments	Currently programmed in PMA for replacement in 2017. DA
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Maintenance Reviewed By	Darron Ahlstedt	Date	29-Oct-2012	Estimated Total	0
Proposed Long-Term Strategy	Culvert authorization, order and draft SP done in 2002. May need to re-design. See file. RS				
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Glen Mikesh	Previous Assistant's Name			
Next Inspection Date	26-Jan-2015	Previous Inspection Date	30-Jan-2006		
Inspection Cycle (Default) (months)	39				
Comment					