Bridge Culvert Inspection

Bridge File Number	71717 -1 Bridge Culvert	Form Type	CUL1
Year Built	1973	Lot No.	3
Bridge or Town Name	MEDICINE HAT	Inspector Name	Tom Carey
Located Over	TRIBUTARY TO SEVEN PERSONS CREEK, 2.7.1.1, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	3:16 C1 20.715	Assistant Class	
Water Body Cl./Year		Inspection Date	11-Nov-2011
Navigabil. Cl./Year		Data Entry By	Alyssa Boynton
Legal Land Location	NW SEC 4 TWP 12 RGE 6 W4M	Data Entry Date	07-Dec-2011
Longitude, Latitude	-110:46:31, 49:58:12	Reviewer Name	Garry Roberts
Road Authority	Alberta Transportation (AIT)	Review Date	21-Nov-2011
Contract Main. Area	CMA23	Dept. Reviewer Name	Tim Davies
Clear Roadway/Skew	13 /	Dept. Review Date	15-Dec-2011
AADT/Year	4,040 / 2010 (A)	Follow-Up By	
Road Classification	RAU-213-130		
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	2465	1730	RPP	36	152X51	3.5,3.5,3.5	PIPE ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	East r/w	Gas	200m north
Power		Municipal	
Others	Fibre optics in West R/W	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	15mm wide crack in ACP, 5m south of pipe
Vertical Alignment		7	7	
Roadway Width (m)	13.000			
Embankment		7	7	
Sideslope (__:1)	5.0			
(Height of Cover(m) : **2.4**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		W		West.
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	(Some pitted rust - 951018).
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		5	5	300mm erosion behind NW bevel side- minor
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**5**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2465, Rise (mm): 1730, Type: RPP**)				
Barrel Last Accessible Date	19-Apr-2006			
Special Features				
Special Feature				Average 800mm water and silt in pipe. To 1/3 of the pipe. Shape adequate.
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)	1690			
Measured At Ring No.	5			
Sag (mm)	40			
Percent Sag	2			
Sidewall		N	N	
Measured Span (mm)	2470			
Measured At Ring No.	5			
Deflection (mm)	5			
Percent Deflection				
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		N	N	(Superficial corrosion on the lower Half) 2006/04/19 Corrosion stains and alkali seen at sidewall. Pitting at sidewall.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2465, Rise (mm): 1730, Type: RPP**)				
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**N**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		East.
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	Ice to 0.8m of roof.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			Unable to see
Above/Below (mm)	300			
Scour Protection		6	6	Heavily ingrown
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **150**)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		**6**	**6**	GR carried forward

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	Some minor erosion at SW. ((FULL U/S /94 - 940331)) 45 degree bend at U/S end.
Bank Stability		6	6	
HWM (m below Top of Culvert)	0.6			
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	2012	Seal ACP				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**57.9/56.9**	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	Tom Carey	Previous Assistant's Name	
Next Inspection Date	11-Aug-2013	Previous Inspection Date	25-Jun-2010
Inspection Cycle (Default) (months)	21		
Comment			