

Bridge Culvert Inspection			
Bridge File Number	78968 -1 Bridge Culvert	Form Type	CULM
Year Built	1979	Lot No.	1
Bridge or Town Name	HIGHWOOD HOU	Inspector Name	Garry Roberts
Located Over	STORM CREEK, 2.13.27.42, WATERCRS-ST	Inspector Class	BR CLS A
Located On	40:10 C1 32.304	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	24-Jun-2011
Legal Land Location	SE SEC 31 TWP 18 RGE 7 W5M	Data Entry By	Alyssa Boynton
Longitude, Latitude	-114:57:05, 50:33:34	Data Entry Date	13-Jul-2011
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Tom Carey
Contract Main. Area	CMA28	Review Date	28-Jun-2011
Clear Roadway/Skew	11 / -15 deg. (LHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	440 / 2010 (A)	Dept. Review Date	15-Jul-2011
Road Classification	RAU-209-110	Follow-Up By	
Detour Length (km)	50		

Bridge Culvert Information

Number of Culverts	2							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	4853	3125	RPE	39	152X51	5.0,4.0	ELLIPSE
2	MAIN	1660	1290	FP	44			ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	None visible.		

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	6	6	Curve 200 m to the north at bottom of long grade.
Vertical Alignment	6	6	
Roadway Width (m)	11.000		
Embankment	7	7	
Sideslope (__:1)	4.0		
(Height of Cover(m) : 3)			
Guardrail (Y/N)	Yes		
Approach Road / Embankment General Rating	6	6	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	7	7	
Collar	6	6	100mm settlement of outer collar Narrow cracking of slope protection
Wingwalls	X	X	
(Shape :)			

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Cutoff Wall		N	N	Buried.
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	7	Flows to SW bank with high water.
(Type : RIP RAP)				Class 2 rock @ SW corner. Erosion 3m Long x 1m Deep @ NW. w/ some 300mm rock
(Avg. Rock Size(mm) : 600)				
Scour/Erosion		7	7	
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): 4853, Rise (mm): 3125, Type: RPE)				
Barrel Last Accessible Date	05-Oct-2009			Not accessible - water too high and too fast.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	N	Large rock throughout barrel
Measured Rise (mm)	2802			P.R 4
Measured At Ring No.	7			
Sag (mm)	323			
Percent Sag	10			
Sidewall		3	N	
Measured Span (mm)	5020			P.R 3
Measured At Ring No.	6			
Deflection (mm)	167			
Percent Deflection	3			
Floor		6	N	(Pitting @ haunch area 50% of floor covered in rock) OCT 2009
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		6	N	
Separation (mm)	0			
Longitudinal Seams		3	N	(Worst is 85mm remaining steel @ ring # 2 Rings 2,3,4,5,6 & 7 are cracked north side only) OCT 2009
Total No. of Cracked Rings	6			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	85			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		4	N	(Corrosion with pitting @ floor haunches) OCT 2009
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 4853, Rise (mm): 3125, Type: RPE)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		5	N	
(Type : SPOILER)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		3	3	Carried forward.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		E		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 500)		7	7	New rock placed
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		6	6	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		W		Rock covered.
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Bevel End		X	X	Buried in rock
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	600			
Scour Protection		7	7	Rock covers 70% of invert, rock from crown to SB.
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 600)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		7	7	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1660, Rise (mm): 1290, Type: FP)				
Barrel Last Accessible Date	22-Jan-2004			Not accessible from either end
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		N	N	
Separation (mm)	0			
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)	No			
Longitudinal Stagger (Y/N)	No			
Coating		N	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1660, Rise (mm): 1290, Type: FP)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	Slotted steel plate at D/S
Baffle		N	N	
(Type : SPOILER)				
Waterway Adequacy		5	5	
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
(Pipe # : 2, Span Type: Secondary Span)				
Direction		E		
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		N	N	Rock covered Slotted baffles at exit
Heaving (mm)				
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection (Type : RIP RAP) (Avg. Rock Size(mm) : 500)		7	7	
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		7	7	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	Curves at both ends. Channel hits the SW corner.
Bank Stability		7	7	
HWM (m below Top of Culvert)	1.0			No visible HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		5	5	

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	SHOTCRETE BEAMS @ SIDEWALL					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	33.3/33.3	Sufficiency Rating (Last/Now) (%)	44.9/44.2	Est. Repl. Yr	2025	Maint. Req. (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	Garry Roberts		Previous Assistant's Name				
Next Inspection Date	24-Mar-2013		Previous Inspection Date	05-Oct-2009			
Inspection Cycle (Default) (months)	21						
Comment							