Bridge Culvert Inspection

Bridge File Number	77481 -1 Bridge Culvert	Form Type	CUL1
Year Built	1973	Lot No.	4
Bridge or Town Name	KANANASKIS	Inspector Name	Garry Roberts
Located Over	LUSK CREEK, 2.13.56.1, WATERCRS-ST	Inspector Class	BR CLS A
Located On	40:12 C1 42.308	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	27-Mar-2013
Legal Land Location	SE SEC 15 TWP 24 RGE 8 W5M	Data Entry By	Lauren Korte
Longitude, Latitude	-115:01:45, 51:02:29	Data Entry Date	11-Apr-2013
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Tom Carey
Contract Main. Area	CMA28	Review Date	10-Apr-2013
Clear Roadway/Skew	11.2 /	Dept. Reviewer Name	Tim Davies
AADT/Year	2,630 / 2012 (A)	Dept. Review Date	06-May-2013
Road Classification	RAU-210-110	Follow-Up By	
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	3475	3841	SPE	79.2	152X51	4.0	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	Over culvert West end (buried).	Gas	
Power	400 m East of u/s end.	Municipal	
Others	Cable East ditch.	Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	On curve.
Vertical Alignment		7	7	
Roadway Width (m)	11.200			
Embankment		6	6	Minor erosion @ SW ditch approaching d/s bevel. 3.5:1 East side.
Sideslope (__:1)	2.5			
(Height of Cover(m) : **12**)				
Guardrail (Y/N)	Yes			West side only.
Approach Road / Embankment General Rating		**5**	**5**	

Upstream 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 :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Cutoff Wall		X	X	
Bevel End		6	6	Corrosion with some pitting.
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		7	6	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		7	6	
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): 3475, Rise (mm): 3841, Type: SPE**)				
Barrel Last Accessible Date	27-Mar-2013			
Special Features				
Special Feature				Rings are numbered incorrectly. Very fast flowing water.
(Type :)				
Special Feature				
(Type :)				
Roof		7	7	
Measured Rise (mm)	3810			
Measured At Ring No.	10			
Sag (mm)	31			
Percent Sag	1			
Sidewall		6	6	
Measured Span (mm)	3580			
Measured At Ring No.	10			
Deflection (mm)	105			
Percent Deflection	3			
Floor		6	6	Gravel covered at 5 D/S rings. Floor is very slippery. Use caution.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		6	7	
Separation (mm)	0			
Longitudinal Seams		5	6	Active leakage at rings #4,5,6,7 & 12 South sidewall. Marginal nesting of roof to sidewall seams with est. 10mm gap.
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)	No			
Coating		4	4	Rust stains coming through upper bolt holes Corrosion with some pitting @ Bevel at South side and u/s 6 rings.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 3475, Rise (mm): 3841, Type: SPE**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			At 5 D/S rings.
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel General Rating		**5**	**6**	

Downstream 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	
Bevel End		5	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		4	5	Minor erosion at bevel sides. Scattered rocks to 1000mm.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **450**)				
Scour/Erosion		4	5	
Beavers (Y/N)	No			
Downstream End General Rating		**4**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		5	5	Migrating stream - 45 degree bend @ D/S.
Bank Stability		5	5	Vertical banks u/s & d/s.
HWM (m below Top of Culvert)	2.5			No visible HWM. Minor drift in channel.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	AGGRADING			At D/S.
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						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**55.6/66.7**	**Sufficiency Rating (Last/Now) (%)**	**55.9/61.6**	Est. Repl. Yr	2025	Maint. Reqd. (Y/N)	No

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	27-Dec-2014	Previous Inspection Date	25-May-2011		
Inspection Cycle (Default) (months)	21				
Comment					