Bridge Culvert Inspection

Bridge File Number	75426 -1 Bridge Culvert	Form Type	CUL1
Year Built	1961	Lot No.	4
Bridge or Town Name	HIGHRIDGE	Inspector Name	Melanie Johnson
Located Over	TRIBUTARY TO NEWTON CREEK, 8.11.84.33.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	777:03 C1 8.719	Assistant Class	
Water Body Cl./Year		Inspection Date	23-Aug-2011
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 19 TWP 58 RGE 1 W5M	Data Entry Date	13-Sep-2011
Longitude, Latitude	-114:09:03, 54:01:37	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	07-Sep-2011
Contract Main. Area	CMA10	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	7.8 / 30 deg. (RHF)	Dept. Review Date	15-Sep-2011
AADT/Year	130 / 2010 (A)	Follow-Up By	
Road Classification	RCU-209G-90		
Detour Length (km)	32		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1829	1118	FP	23.2	68X13	3.5	ARCH
Special Features		VERT STEEL STRUTS						
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	2 wires east r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks	BF tag installed @ East end roof.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	
Vertical Alignment		7	7	
Roadway Width (m)	7.800			
Embankment		8	8	
Sideslope (__:1)	4.0			
(Height of Cover(m) : **0.3**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		E		
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		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
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 # : **1, Primary Span, Location Code: MAIN, Span (mm): 1829, Rise (mm): 1118, Type: FP**)				
Barrel Last Accessible Date	23-Aug-2011			
Special Features				
Special Feature		7	7	
(Type : **VERT STEEL STRUTS**)				
Special Feature				
(Type :)				
Roof		3	3	
Measured Rise (mm)	990			At mid span.
Measured At Ring No.				
Sag (mm)	128			
Percent Sag	11			
Sidewall		6	6	
Measured Span (mm)	1890			
Measured At Ring No.				
Deflection (mm)	61			
Percent Deflection	3			
Floor		4	4	
Bulge (mm)	90			Mid span.
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	5	
Separation (mm)	90			
Longitudinal Seams		6	6	Riveted.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	4	Minor pitting rust on floor.
Corrosion By Soil (Y/N)				
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): 1829, Rise (mm): 1118, Type: FP**)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	(250mm. 22/Feb/2005)
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	G.R. increased due to struts.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		W		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	50			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	0			
Scour Protection		5	5	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	

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) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**54.5/54.1**	Est. Repl. Yr	2014	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	Program replacement with upgrading of Hwy 777. Inspect after each high water event, no need to reduce regular inspection freq.	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	Dave Lam	Previous Assistant's Name			
Next Inspection Date	23-Nov-2014	Previous Inspection Date	05-May-2008		
Inspection Cycle (Default) (months)	39				
Comment					