Bridge Culvert Inspection

Bridge File Number	70884 -1 Bridge Culvert	Form Type	CUL1
Year Built	1955	Lot No.	1
Bridge or Town Name	HINTON	Inspector Name	Shane Hall
Located Over	HAPPY CREEK, 8.11.140, WATERCRS-ST	Inspector Class	BR CLS A
Located On	16:02 R1 25.082;16:02 L1 25.092	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	06-Jul-2012
Legal Land Location	NW SEC 10 TWP 51 RGE 25 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-117:36:06, 53:23:44	Data Entry Date	10-Sep-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA13	Review Date	20-Aug-2012
Clear Roadway/Skew	15.2 /	Dept. Reviewer Name	Brent Herrick
AADT/Year	8,730 / 2011 (A)	Dept. Review Date	18-Sep-2012
Road Classification	RAD-412.4-120	Follow-Up By	
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1800	SP	45.7			ROUND

Special Features	DROP STRUCTURE, BARREL ELBOW
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	North & South r/w	Gas	
Power	Street light.	Municipal	Yes
Others		Problem (Y/N)	No
Remarks	All types of utilities cross pipe.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	22m Hwy 16, East S.R. 8.7 Est - pipe crosses 4 lanes of hwy 16 and 2 service roads.
Vertical Alignment		8	8	
Roadway Width (m)	30.700			
Embankment		5	5	(Ditch gully down North sideslope (photo). North end Towns responsibility.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **8**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		Grizzly - grating was installed at culvert entrance. Grating mostly destroyed/removed.-photo Located West of Integra Tire.
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	N	Bevel not connected for part of floor.-15-Sep-2010
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			Small logs & garbage has collected against grate and above pipe. Pipe not safely accessible due to steel/sharp edges and partial blockage.
Above/Below (mm)	500			
Scour Protection		6	6	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	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): , Rise (mm): 1800, Type: SP**)				
Barrel Last Accessible Date	15-Sep-2010			D/S of drop structure insp. July 6, 2012. U/S of drop not accessible due to unsafe access.
Special Features				
Special Feature		3	N	Floor buckling.
(Type : **DROP STRUCTURE**)				Too much water-not accessible.
Special Feature		5	N	Large log caught in drop structure.-photo
(Type : **BARREL ELBOW**)				
Roof		2	N	10m d/s of drop structure.
Measured Rise (mm)	1415			Span measurement confirmed at same location.
Measured At Ring No.				
Sag (mm)	255			
Percent Sag	14			
Sidewall		3	N	10m d/s of drop structure.
Measured Span (mm)	2055			Span measurement confirmed at same location.
Measured At Ring No.				
Deflection (mm)	255			
Percent Deflection	14			
Floor		3	N	Floor buckling.
Bulge (mm)	400			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		5	N	
Separation (mm)	25			
Longitudinal Seams		5	N	Few missing bolts in long S. circum. seams.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				1N stagger.
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	Yes			
Coating		6	N	Minor superficial rust on floor of SPCSP and some spots of CSP.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1800, Type: SP**)				
Fish Passage Adequacy		X	3	Drop structure
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Debris at inlet.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**2**	**2**	GR carried over.

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		Located W of Petro Canada.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		5	5	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	5	& riprap
(Type : **CONCRETE**)				
(Avg. Rock Size(mm) : **300**)				
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)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
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	2013	From u/s end.				
INSTALL CONCRETE/STEEL LINING						
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Complete Assessment incl. Level 2 barrel inspection. Use 2 inspectors.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**22.2/22.2**	**Sufficiency Rating (Last/Now) (%)**	**40.7/33.1**	Est. Repl. Yr	2015	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Tranp. (Mike Botros) advised of low rating.-04-Oct-2010 300m length is approximate and is for the entire structure. Rizwan advised of low rating-29-Aug-2012	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	Eric Carcoux	Previous Assistant's Name			
Next Inspection Date	06-Apr-2014	Previous Inspection Date	15-Sep-2010		
Inspection Cycle (Default) (months)	21				
Comment					