Bridge Culvert Inspection

Bridge File Number	73639 -1 Bridge Culvert	Form Type	CUL1
Year Built/Lined	1972/2012	Lot No.	2
Bridge or Town Name	HORBURG	Inspector Name	Garry Roberts
Located Over	JACKFISH CREEK, 6.165, WATERCRS-ST	Inspector Class	BR CLS A
Located On	11:08 C1 7.851	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	14-Feb-2012
Legal Land Location	SW SEC 6 TWP 41 RGE 11 W5M	Data Entry By	Marcia Chavez
Longitude, Latitude	-115:34:37, 52:29:59	Data Entry Date	05-Apr-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA18	Review Date	23-Mar-2012
Clear Roadway/Skew	15.8 / 45 deg. (RHF)	Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,350 / 2011 (A)	Dept. Review Date	10-Apr-2012
Road Classification	RAU-213.4-120	Follow-Up By	
Detour Length (km)	80		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
2	MAIN FULL LINER	-	1200	SSP	92.7		10.0	ROUND

Special Features	
Special Features Comment	1200mm smooth wall steel pipe liner - full length.

Utilities (Located at)

Utility Attachments			
Telephone	South r/w.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Passing lane WB. Crest to W. Intersection 60m E.
Vertical Alignment		7	7	
Roadway Width (m)	15.800			
Embankment		8	8	South side measured.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **5.7**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		N		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall			8	Steel plate & form for liner.
Collar			X	
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End			6	Minor bends & dents.
Heaving (mm)	100			
Invert Above/Below Stream Bed				At streambed.
Above/Below (mm)				
Scour Protection			6	Some rocks.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion			6	
Beavers (Y/N)	No			
Upstream End General Rating			**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: SSP**)				
Barrel Last Accessible Date	14-Feb-2012			SWP liner is no longer bridge-sized.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof			9	1200mm round, smooth wall steel pipe liner grouted in original 1429x1575 SPE.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall			9	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor			9	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams			8	Welded seams.
Separation (mm)	0			
Longitudinal Seams			X	
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			X	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: SSP**)				
Fish Passage Adequacy			5	Requires high water to accomodate fish.
Baffle			X	
(Type :)				
Waterway Adequacy			7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating			**9**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall			9	Steel plate form for liner.
Collar			X	
Wingwalls			X	
(Shape :)				
Cutoff Wall			X	
Bevel End			6	Minor tear in bevel corner.
Heaving (mm)	0			
Invert Above/Below Stream Bed				At streambed.
Above/Below (mm)	0			
Scour Protection			7	Mix of CL1 & 2 placed Feb 2012.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion			7	
Beavers (Y/N)	No			
Downstream End General Rating			**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	Silt fence at u/s & from liner installation.
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	2012	Remove silt fence, seeding & site clean-up in early summer.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/100.0**	**Sufficiency Rating (Last/Now) (%)**	**35.8/84.3**	Est. Repl. Yr	2065	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	1200mm SWP liner installed & grouted in Feb 2012. Liner is no longer bridge-sized; turn-off inspection flag.	Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0

Proposed Long-Term Strategy	Liner of this pipe is feasible, adequate capacity with modest (2m/s) velocity at design Q. Suggest pipe be lined when condition warrants. DH		
On 3-Year Program (Y/N)			
Proposed Action			
Previous Inspector's Name	Owen Salava	Previous Assistant's Name	
Next Inspection Date	14-Nov-2013	Previous Inspection Date	03-May-2010
Inspection Cycle (Default) (months)	21		
Comment			