Bridge Culvert Inspection

Bridge File Number	77050 -1 Bridge Culvert	Form Type	CUL1
Year Built	1992	Lot No.	2
Bridge or Town Name	HINTON	Inspector Name	Todd Warshawski
Located Over	COLD CREEK, 8.11.141.2, WATERCRS-ST	Inspector Class	BR CLS B
Located On	40:28 C1 44.074	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	30-Oct-2012
Legal Land Location	SW SEC 28 TWP 50 RGE 25 W5M	Data Entry By	Theresa Lacusta
Longitude, Latitude	-117:36:30, 53:20:32	Data Entry Date	19-Nov-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Eric Carcoux
Contract Main. Area	CMA13	Review Date	13-Nov-2012
Clear Roadway/Skew	12.9 / -10 deg. (LHF)	Dept. Reviewer Name	Brent Herrick
AADT/Year	490 / 2011 (A)	Dept. Review Date	20-Nov-2012
Road Classification	RAU-211.8-110	Follow-Up By	
Detour Length (km)	20		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	3990	SP	71.3	152X51	4.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	West r/w.	Gas	
Power	4 wire East r/w.	Municipal	
Others		Problem (Y/N)	No
Remarks	File tag in place.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Gradual curves & grades.
Vertical Alignment		8	8	
Roadway Width (m)	12.900			
Embankment		4	N	Ditch erosion, SE ditch 500mm deep x 1000mm width. Partially filled in from clearing operation.-Sept/2010.
Sideslope (__:1)	3.0			
(Height of Cover(m) : **5.6**)				
Guardrail (Y/N)	Yes			Minor strike damage, still functional.
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	
Collar		6	6	Wide tranverse cracks in collar. 3 per side.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		7	N	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Bevel End		8	7	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			(05/Oct/2007)
Above/Below (mm)	500			
Scour Protection		7	N	Settlement of riprap along sides of bevel upto 300mm. -Sep, 2010
(Type : **RIP RAP**)				Under snow
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Upstream End General Rating		**6**	**7**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 3990, Type: SP**)				
Barrel Last Accessible Date	30-Oct-2012			Level 2 completed 10-Sep-2010 Rings 1-10 appear to be vertically ellipsed.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		4	4	
Measured Rise (mm)				Estimated from survey. 10-Sep-2010
Measured At Ring No.	13			
Sag (mm)	300			
Percent Sag	8			
Sidewall		5	5	
Measured Span (mm)	4260			
Measured At Ring No.	13			
Deflection (mm)	270			
Percent Deflection	1			
Floor		N	N	Floor covered in rock wash.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		8	8	
Separation (mm)	0			
Longitudinal Seams		5	5	Poorly nested in places at ring 13 due to distortion from deflections & sagging.
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				Inward deflection on several seams in rhings 2-10.
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	Yes			2N
Longitudinal Stagger (Y/N)	Yes			
Coating		6	6	White rust on pieces from improper storage. Stains at both holes.
Corrosion By Soil (Y/N)	Yes			
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): 3990, Type: SP**)				
Fish Passage Adequacy		8	8	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**4**	**4**	

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		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	1000			
Scour Protection		7	N	Under snow.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **400**)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**5**	GR carried fwd from 10-Sep-2010

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		5	5	Upstream banks are eroded near vertical.
HWM (m below Top of Culvert)				HWM not visible. Large trees across channel at inlet.-photo
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**5**	**6**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION	2013	Remove debris at inlet.				
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) (%)**	**61.7/61.2**	Est. Repl. Yr	2030	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor seam distortation.	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	Arnold Assenheimer	Previous Assistant's Name	Melanie Johnson		
Next Inspection Date	30-Jul-2014	Previous Inspection Date	10-Sep-2010		
Inspection Cycle (Default) (months)	21				
Comment					