Bridge Culvert Inspection

Bridge File Number	79136 -1 Bridge Culvert	Form Type	CUL1
Year Built	1985	Lot No.	2
Bridge or Town Name	DARWELL	Inspector Name	Kris Bosters
Located Over	2ND ORDER TRIBUTARY TO STURGEON RIVER, 6.65.23.2, WATERCRS-ST	Inspector Class	BR CLS A
		Assistant Name	
Located On	633:02 C1 32.954	Assistant Class	
Water Body Cl./Year		Inspection Date	20-Jul-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	SW SEC 20 TWP 54 RGE 3 W5M	Data Entry Date	13-Aug-2012
Longitude, Latitude	-114:25:06, 53:40:22	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	31-Jul-2012
Contract Main. Area	CMA12	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	10.4 / 15 deg. (RHF)	Dept. Review Date	16-Aug-2012
AADT/Year	870 / 2011 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	3		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	2400	SP	32.8	152X51	3.5	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	File tag U/S.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Local road intersection 100 m to west. Field access 100m East, horizontal curve ~250m east, good sight distance both directions.
Vertical Alignment		9	9	
Roadway Width (m)	10.200			
Embankment		N	7	
Sideslope (__:1)	3.0			
(Height of Cover(m) : **1.8**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction				S
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		N	7	Snow covered.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		N	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		N	7	
Beavers (Y/N)	Yes			
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): , Rise (mm): 2400, Type: SP**)				
Barrel Last Accessible Date	30-Jan-2009			Water too deep to access, viewed from ends.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	(Measured 2320 span near c/l design is 2314 x 2552. 02/10/02) (Dirt on floor, could not measure.-30-Jan-2009) Roof appears to be in good condition.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	6			
Percent Sag				
Sidewall		5	N	2248, D/S 2265.-30-Jan-2009 Appears to be in good condition.
Measured Span (mm)	2223			
Measured At Ring No.	4			
Deflection (mm)	177			
Percent Deflection	7			
Floor		N	N	Covered with silt.-30-Jan-2009
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		7	N	
Separation (mm)				
Longitudinal Seams		7	N	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		6	N	Roof & sidewall rated. Floor covered with silt.-30-Jan-2009
Corrosion By Soil (Y/N)	No			
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): , Rise (mm): 2400, Type: SP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		4	7	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
Barrel General Rating		**5**	**N**	Last rated 5 in Jan 2009

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction				N
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		N	6	
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	800			
Scour Protection		N	4	Settlement along bevel ~.25m x 1.5m x .3m deep. 10x20x1m deep scour pool d/s, bevel undermining as well ~0.5m.- photo
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		N	4	Large scour pool and bevel undermining.
Beavers (Y/N)	No			
Downstream End General Rating		**3**	**4**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		4	4	Outlet is directed towards bank and then takes 80 degree corner. D/S the channel meanders.
Bank Stability		N	4	(Banks eroding @ U/S.
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**4**	**4**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
SHOTCRETE REPAIRS						
PLACE ADDITIONAL RIP RAP	2012	20m3 class 1 at d/s end.				
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) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**51.4/61.7**	Est. Repl. Yr	2032	Maint. Reqd. (Y/N)	Yes

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	Jacob Oresile	Previous Assistant's Name			
Next Inspection Date	20-Oct-2015	Previous Inspection Date	30-Jan-2009		
Inspection Cycle (Default) (months)	39				
Comment					