Bridge Culvert Inspection

Bridge File Number	78432 -1 Bridge Culvert	Form Type	CUL1
Year Built	1980	Lot No.	1
Bridge or Town Name	DUCHESS	Inspector Name	Tom Carey
Located Over	EID - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS A
Located On	544:02 C1 0.875	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	15-Feb-2010
Legal Land Location	SW SEC 13 TWP 20 RGE 15 W4M	Data Entry By	Kelsey Roberts
Longitude, Latitude	-111:57:30, 50:41:19	Data Entry Date	03-Mar-2010
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA23	Review Date	23-Feb-2010
Clear Roadway/Skew	9.8 /	Dept. Reviewer Name	Lorenz Bohnert
AADT/Year	400 / 2008 (A)	Dept. Review Date	08-Mar-2010
Road Classification	RCU-210-110	Follow-Up By	
Detour Length (km)	5		

Bridge Culvert Information

Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2160	1370	FP	23.1	68X13		ARCH
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	south	Gas	30 m south
Power	1-wire, north	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Hwy 36 800 M west School ent 50m W
Vertical Alignment		8	8	
Roadway Width (m)	9.500			
Embankment		7	N	Snow
Sideslope (__:1)	3.0			
(Height of Cover (m) : **1.2**)				
Guardrail (Y/N)	No			
Approach Road / Embankment General Rating		**7**	**7**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		SOUTH
End Treatment (Concrete, Steel, Others, None)	NONE			
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		X	X	(981103)
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	50			
Scour Protection		7	N	Snow
(Type : **RIP RAP**)				
(Avg. Rock Size (mm) : **250**)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Upstream End General Rating		**7**	**N**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 2160, Rise (mm): 1370, Type: FP**)				
Barrel Last Accessible Date	21-Feb-2007			
Special Features				
Special Feature				Ice 700mm from roof and unstable. Unable to measure to enter.
(Type :)				
Special Feature				
(Type :)				
Roof		2	N	Unable to confirm measurement due to ice. Measurement from past inspection Deflection appears stable and no worse than past inspection.
Measured Rise (mm)	1060			
Measured At Ring No.	3			
Sag (mm)	310			
Percent Sag	22			
Sidewall		5	N	No distortion of road surface due to roof sag.
Measured Span (mm)	2284			
Measured At Ring No.	3			
Deflection (mm)	124			
Percent Deflection	5			
Floor		N	N	(COULD NOT FEEL ANY FLOOR BULGE)981103 Ice covered
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		5	N	
Separation (mm)	100			
Longitudinal Seams		X	X	
Total No. of Cracked Rings	0			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	0			
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				
Coating		4	N	(pitted rust)
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): 2160, Rise (mm): 1370, Type: FP**)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**2**	**5**	Gen rating carried forward

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		
End Treatment (Concrete, Steel, Others, None)	NONE			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		X	X	(981103)
Heaving (mm)	100			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	N	Snow
(Type : **RIP RAP**)				
(Avg. Rock Size (mm) : **250**)				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**N**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		8	N	Snow
HWM (m below Top of Culvert)				
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**7**	**7**	G.R. carried

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	2013	Replace pipe				
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**22.2/55.6**	**Sufficiency Rating (Last/Now) (%)**	**52.0/63.2**	Est. Repl. Yr	2013	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Informed A.T. Feb.18/10- scheduled for replacement in 2013.	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	Tim Davies	Previous Assistant's Name			
Next Inspection Date	15-May-2013	Previous Inspection Date	21-Feb-2007		
Inspection Cycle (Default) (months)	39				
Comment					