

Bridge Culvert Inspection				
Bridge File Number	78500 -1 Bridge Culvert		Form Type	CUL1
Year Built	1982		Lot No.	2
Bridge or Town Name	MONARCH		Inspector Name	Tom Carey
Located Over	LNI - IRRIGATION C, WATERCRS-IC		Inspector Class	BR CLS A
Located On	23:04 C1 6.499		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	18-Feb-2013
Legal Land Location	NW SEC 20 TWP 10 RGE 23 W4M		Data Entry By	Anne Roberts
Longitude, Latitude	-113:05:01, 49:50:16		Data Entry Date	17-Mar-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA25		Review Date	03-Mar-2013
Clear Roadway/Skew	13.1 /		Dept. Reviewer Name	Tim Davies
AADT/Year	6,120 / 2011 (A)		Dept. Review Date	25-Mar-2013
Road Classification	RAU-213-130		Follow-Up By	
Detour Length (km)	3			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	2745	1720	RPE	32.3	152X51	3.0	ELLIPSE
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	East row		Gas
Power			Municipal
Others			Problem (Y/N) No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		9	9	
Vertical Alignment		8	8	
Roadway Width (m)	12.700			
Embankment		8	8	
Sideslope (_ :1)	6.0			
(Height of Cover(m) : 1.2)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		8	8	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		W		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		5	5	10 mm wide cracks, partially foam filled.
Collar		5	5	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	500			
Scour Protection		7	7	
(Type : CONCRETE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		5	5	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 2745, Rise (mm): 1720, Type: RPE)				
Barrel Last Accessible Date	18-Feb-2013			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		5	5	AVG 300mm rock and silt on floor - has adequate arch. 150mm diagonal hole in roof at ring #6 - rock filled. Ice
Measured Rise (mm)	1660			
Measured At Ring No.	3			
Sag (mm)	60			
Percent Sag	3			
Sidewall		7	7	
Measured Span (mm)	2810			
Measured At Ring No.	3			
Deflection (mm)	65			
Percent Deflection	2			
Floor		N	N	AVG 300mm ice
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		7	7	
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)	No			
Longitudinal Stagger (Y/N)	No			
Coating		6	6	Minor
Corrosion By Soil (Y/N)				
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): 2745, Rise (mm): 1720, Type: RPE)				
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		8	8	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		5	5	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		E		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		6	5	Joints foam filled. 6 mm wide cracks - partially foam filled.
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		6	6	
(Type : CONCRETE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		6	5	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		8	8	90 degree bends @ both ends. Concrete lined canal.
Bank Stability		7	7	SE concrete at channel breaking with 25 mm wide cracks
HWM (m below Top of Culvert)	0.4			
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading				Irrigation canal - stable channel bottom
Beavers (Y/N)	No			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		8	4	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
SHOTCRETE REPAIRS	2014	Patch SE channel concrete 0.1 m 3 OHV grout.					
PLACE ADDITIONAL RIP RAP							
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) (%)	63.7/59.8	Est. Repl. Yr	2031	Maint. Req. (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	Tom Carey		Previous Assistant's Name				
Next Inspection Date	18-Nov-2014		Previous Inspection Date	18-May-2011			
Inspection Cycle (Default) (months)	21						
Comment							