

Bridge Culvert Inspection			
Bridge File Number	73495 -1 Bridge Culvert	Form Type	CULM
Year Built	1971	Lot No.	4
Bridge or Town Name	NORDEGG	Inspector Name	Owen Salava
Located Over	ALLSTONES CREEK, 6.174, WATERCRS-ST	Inspector Class	BR CLS A
Located On	11:04 C1 16.820	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	07-Feb-2012
Legal Land Location	SW SEC 28 TWP 38 RGE 17 W5M	Data Entry By	Marcia Chavez
Longitude, Latitude	-116:22:32, 52:17:25	Data Entry Date	06-Mar-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	John O'Brien
Contract Main. Area	CMA18	Review Date	22-Feb-2012
Clear Roadway/Skew	13.1 / 10 deg. (RHF)	Dept. Reviewer Name	Andrew Smikles
AADT/Year	840 / 2010 (A)	Dept. Review Date	09-Mar-2012
Road Classification	RAU-213.4-120	Follow-Up By	
Detour Length (km)	300		

Bridge Culvert Information

Number of Culverts	3							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1737	1920	SPE	100	152X51		ELLIPSE
2	MAIN	1737	1920	SPE	88.1	152X51		ELLIPSE
3	MAIN	-	900	MP	90	68X13		ROUND
Special Features	BARREL ELBOW							
Special Features Comment	Lower 1800 has elbow ~75m from u/s end.							

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	Campground entrance 100m East.
Vertical Alignment	7	7	Sag 300m East.
Roadway Width (m)	13.100		
Embankment	7	7	
Sideslope (__:1)	2.0		
(Height of Cover(m) : 20)			
Guardrail (Y/N)	Yes		
Approach Road / Embankment General Rating	7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)			
Direction	N		East pipe. Lower one of the 1800's.
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	4	4	Concrete separating from crown.
Collar	5	5	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	Buried.
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	400			
Scour Protection		5	N	Snow covered.
(Type : CONCRETE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	N	
Beavers (Y/N)	No			
Upstream End General Rating		4	4	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1737, Rise (mm): 1920, Type: SPE)				
Barrel Last Accessible Date	07-Feb-2012			Barrel takes a bend to the left 3/5 of the way from U/S end.
Special Features				
Special Feature		5	5	Rocks on bottom near elbow.
(Type : BARREL ELBOW)				
Special Feature				
(Type :)				
Roof		5	5	Unable to measure due to ice
Measured Rise (mm)	1860			
Measured At Ring No.	12			
Sag (mm)	60			(3.1%. 04May2010).
Percent Sag	3			
Sidewall		5	5	
Measured Span (mm)	1770			
Measured At Ring No.	12			
Deflection (mm)	33			1.9%
Percent Deflection	2			
Floor		5	N	(Abrasion up to 1/3 diameter. 1995/03/07) - Ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		5	5	
Separation (mm)	0			
Longitudinal Seams		5	5	Loose and missing bolts. Lower seam.
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			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): 1737, Rise (mm): 1920, Type: SPE)				
Coating		5	5	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	2m perched end.
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	Yes			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		5	5	
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		S		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	2000			
Scour Protection		4	4	2m drop to streambed. Bevel undermined 0.7m. S.B. is very steep. Concrete poured on slope around outlet.
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	
Beavers (Y/N)	No			
Downstream End General Rating		4	4	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		N		West 1800 dia pipe. 16m cover.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		5	5	Rough poured concrete.

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	Buried.
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	3900			
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 # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1737, Rise (mm): 1920, Type: SPE)				
Barrel Last Accessible Date	07-Feb-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	6	
Measured Rise (mm)	1895			
Measured At Ring No.	7			
Sag (mm)	25			
Percent Sag	1			
Sidewall		5	5	
Measured Span (mm)	1732			
Measured At Ring No.	7			
Deflection (mm)	0			
Percent Deflection	0			
Floor		7	7	Minor.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		7	7	
Separation (mm)	0			
Longitudinal Seams		5	5	Loose and missing bolts @ upper 10:00 seam. Scattered throughout pipe.
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			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): 1737, Rise (mm): 1920, Type: SPE)				
Coating		6	6	Superficial.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Takes flow only under high water for reservoir.
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
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		West 1800 dia pipe.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	X	
Collar		5	5	Rough concrete poured.
Wingwalls (Shape :)		X	X	
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			Estimate.
Above/Below (mm)	4900			
Scour Protection (Type : NONE) (Avg. Rock Size(mm) :)		7	7	Rough concrete poured under bevel.
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		5	5	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Direction		N		900 dia pipe. Pipe is located approx 60m East of pipe 1. The 900mm culvert is just for ditch drainage.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		7	7	
(Type : CONCRETE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Upstream End General Rating		6	6	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: MP)				
Barrel Last Accessible Date	22-Dec-2003			Confined space; viewed from ends, ok.
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	Appears to have sag under roadway, still functional.
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)	60			
Percent Sag	3			
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	60			
Percent Deflection	3			
Floor		N	N	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		N	N	
Separation (mm)	0			
Longitudinal Seams		N	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)	Yes			

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: MP)				
Coating		N	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Siltting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		N	N	

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Direction		S		
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		5	5	
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1500			
Scour Protection		4	4	1m perched.
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		4	4	Erosion under bevel, well rocked.
Beavers (Y/N)	No			
Downstream End General Rating		4	4	

Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	DEGRADING			
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							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	55.6/55.6	Sufficiency Rating (Last/Now) (%)	50.7/50.7	Est. Repl. Yr	2024	Maint. Req. (Y/N)	No
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	Owen Salava		Previous Assistant's Name				
Next Inspection Date	07-Nov-2013		Previous Inspection Date	04-May-2010			
Inspection Cycle (Default) (months)	21						
Comment							