Bridge Culvert Inspection

Bridge File Number	73823 W-2 Bridge Culvert	Form Type	CULM
Year Built	1986	Lot No.	4
Bridge or Town Name	ROSEMARY	Inspector Name	Jon Davies
Located Over	EID - IRRIGATION C, WATERCRS-IC	Inspector Class	BR CLS B
Located On	1:16 L1 39.836	Assistant Name	
Water Body Cl./Year		Assistant Class	
Navigabil. Cl./Year		Inspection Date	05-Feb-2012
Legal Land Location	NE SEC 8 TWP 20 RGE 16 W4M	Data Entry By	Anne Roberts
Longitude, Latitude	-112:11:01, 50:41:11	Data Entry Date	11-Mar-2012
Road Authority	Alberta Transportation (AIT)	Reviewer Name	Garry Roberts
Contract Main. Area	CMA23	Review Date	12-Feb-2012
Clear Roadway/Skew	13.1 / -25 deg. (LHF)	Dept. Reviewer Name	Tim Davies
AADT/Year	6,860 / 2010 (A)	Dept. Review Date	22-Mar-2012
Road Classification	RFD-412.4-130	Follow-Up By	
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts	1

Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	10800	4100	BP	51.2			RECTANGLE

Special Features	
Special Features Comment	

Utilities (Located at)

Utility Attachments			
Telephone	South & north r/w.	Gas	
Power	1 wire S r/w. 30m FROM C.L.	Municipal	
Others		Problem (Y/N)	No
Remarks	Fibre optic in North R/W		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		9	8	On grade, rise to West and East
Vertical Alignment		7	6	
Roadway Width (m)	13.100			
Embankment		7	7	6:1 OVER BOX @ SOUTHSIDE.
Sideslope (__:1)	4.0			
(Height of Cover(m) : **2**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**7**	**6**	

Upstream End

Culvert Component		Last	Now	Explanation of Condition
Direction		S		South END Hand rail at headwall and bevel slope
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	7	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

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)	900			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **250**)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
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): 3600, Rise (mm): 4100, Type: BP, Cell Sequence: 1**)				
Barrel Last Accessible Date	05-Feb-2012			West cell
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	7	
Measured Rise (mm)				
Measured At Ring No.				Estimate
Sag (mm)	0			
Percent Sag	0			
Sidewall		N	6	
Measured Span (mm)	3600			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	N	Ice covered
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	X	
Separation (mm)	0			
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		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
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): 3600, Rise (mm): 4100, Type: BP, Cell Sequence: 1**)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 3600, Rise (mm): 4100, Type: BP, Cell Sequence: 2**)				
Barrel Last Accessible Date	05-Feb-2012			Center cell
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	7	
Measured Rise (mm)				Estimate
Measured At Ring No.				
Sag (mm)	0			
Percent Sag	0			
Sidewall		N	6	VERT CRACKS H.L. TO 1mm
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	Ice covered
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	X	
Separation (mm)	0			
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		X	X	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
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): 3600, Rise (mm): 4100, Type: BP, Cell Sequence: 2**)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 3600, Rise (mm): 4100, Type: BP, Cell Sequence: 3**)				
Barrel Last Accessible Date	05-Feb-2012			East Cell
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	7	
Measured Rise (mm)				Estimate
Measured At Ring No.				
Sag (mm)	0			
Percent Sag	0			
Sidewall		N	6	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	N	Ice covered
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	X	
Separation (mm)				
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		X	X	
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	No			
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): 3600, Rise (mm): 4100, Type: BP, Cell Sequence: 3**)				
Fish Passage Adequacy		7	7	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**N**	**6**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		North END Steel-railing over roof and bevel wall
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		8	8	Rust stains from railing above.
Collar		X	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	
Bevel End		7	7	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			WATER TOO DEEP TO DETERMINE
Above/Below (mm)	900			
Scour Protection		7	5	Rock displaced at toe of bevel at East and West
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	5	Minor scour at East and West
Beavers (Y/N)	No			
Downstream End General Rating		**7**	**5**	

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)	1.8			No visible HWM
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	NONE			
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) (%)	**55.6/66.7**	**Sufficiency Rating (Last/Now) (%)**	**64.5/67.9**	Est. Repl. Yr	2045	Maint. Reqd. (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	Garry Roberts	Previous Assistant's Name			
Next Inspection Date	05-Nov-2013	Previous Inspection Date	16-Jul-2010		
Inspection Cycle (Default) (months)	21				
Comment					