

Bridge Culvert Inspection				
Bridge File Number	72133 -1 Bridge Culvert		Form Type	CULM
Year Built	1955		Lot No.	4
Bridge or Town Name	STRATHMORE		Inspector Name	Jon Davies
Located Over	WID - IRRIGATION C, WATERCRS-IC		Inspector Class	BR CLS B
Located On	1:12 R1 17.979;1:12 L1 17.978		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	23-Feb-2012
Legal Land Location	NW SEC 10 TWP 24 RGE 25 W4M		Data Entry By	Anne Roberts
Longitude, Latitude	-113:25:23, 51:02:15		Data Entry Date	20-Mar-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	Garry Roberts
Contract Main. Area	CMA30		Review Date	01-Mar-2012
Clear Roadway/Skew	25 /		Dept. Reviewer Name	Tim Davies
AADT/Year	14,030 / 2010 (A)		Dept. Review Date	22-Mar-2012
Road Classification	RAD-412.4-120		Follow-Up By	
Detour Length (km)	1			

Bridge Culvert Information

Number of Culverts	1							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	PI./Slab Thickness	Shape
1	MAIN	7200	1800	BP	92.7			RECTANGLE
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments							
Telephone	Crosses E in S & N ditch			Gas	20 m West		
Power	N and S Ditch			Municipal			
Others				Problem (Y/N)	No		
Remarks	Fibre optics @ N R/W and S R/W						

Approach Road / Embankment

	Last	Now	Explanation of Condition
Horizontal Alignment	7	7	Hill 150m West, intersection East and West
Vertical Alignment	7	7	
Roadway Width (m)	26.000		
Embankment	7	7	
Sideslope (_ :1)	4.0		
(Height of Cover(m) : 2)			
Guardrail (Y/N)	Yes		
Approach Road / Embankment General Rating	7	7	

Upstream End

Culvert Component	Last	Now	Explanation of Condition
Direction	S		CSP South end.
End Treatment (Concrete, Steel, Others, None)	CONCRETE		
Headwall	X	X	
Collar	5	5	CONCRETE CAST BETWEEN BEVELS OF PIPES
Wingwalls	5	5	CATHODIC ATTACHED. Concrete 2m beyond bevel acts as wing
(Shape :)			
Cutoff Wall	X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Bevel End		5	5	East pipe #4 bevel. Void under bevel. Not able to confirm due to concrete.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			& 300mm riprap
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): 1800, Rise (mm): 1800, Type: BP, Cell Sequence: 1)				
Barrel Last Accessible Date	23-Feb-2012			CONCRETE BOXES- West pipe
Special Features				
Special Feature				CSP extends 2/3 length from U/S (1829 design) 22 Jan 2003
(Type :)				
Special Feature				
(Type :)				
Roof		N	6	CSP: Rise 1793 mm at ring 2. 2% sag
Measured Rise (mm)	1800			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag	0			
Sidewall		N	6	CSP Span. 1858 mm at Ring 2 . 2 % deflection
Measured Span (mm)	1800			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	5	Bp floor silt covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		N	4	CSP U/S bevel to Ring 1 .75 mm separation. Minor void at NW
Separation (mm)	7515			
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	5	Moderate corrosion with pitting. From water line at Mid-sidewall through out floor in CSP.
Corrosion By Soil (Y/N)	No			
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): 1800, Rise (mm): 1800, Type: BP, Cell Sequence: 1)				
Fish Passage Adequacy		5	5	
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): 1800, Rise (mm): 1800, Type: BP, Cell Sequence: 2)				
Barrel Last Accessible Date	23-Feb-2012			West Pipe 2nd pipe from West
Special Features				
Special Feature				1829 DESIGN- 22 January 2003
(Type :)				CSP 2/3 length
Special Feature				
(Type :)				
Roof		N	6	CS{P rise at R2 1800 mm 2%sag
Measured Rise (mm)	1800			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag	0			
Sidewall		N	6	CSP span at R2 1840 mm 1% deflection
Measured Span (mm)	1800			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	6	Minor at BP transition from CSP
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		N	5	At CSP
Separation (mm)	40			
Longitudinal Seams		N	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		N	4	Corrosion & scaling with pitting from waterline and below in CSP. Loss of steel at edge of R1 at U/S at floor
Corrosion By Soil (Y/N)	No			
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): 1800, Rise (mm): 1800, Type: BP, Cell Sequence: 2)				
Fish Passage Adequacy		5	5	
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): 1800, Rise (mm): 1800, Type: BP, Cell Sequence: 3)				
Barrel Last Accessible Date	23-Feb-2012			3rd Pipe from W
Special Features				
Special Feature				CSP Extends 2/3 length (1829 design) 22 Jan 2003
(Type :)				
Special Feature				
(Type :)				
Roof		N	6	CSP rise 1807 mm at R2 1% sag
Measured Rise (mm)	1800			
Measured At Ring No.	1			
Sag (mm)	0			
Percent Sag	0			
Sidewall		N	6	CSP span 1848 mm at R2 1% deflection
Measured Span (mm)	1800			
Measured At Ring No.	1			
Deflection (mm)	0			
Percent Deflection	0			
Floor		N	5	
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	5	At CSP
Separation (mm)	30			
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		N	5	Moderate corrosion with pitting at mid sidewall at waterline and below in CSP.
Corrosion By Soil (Y/N)	No			
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): 1800, Rise (mm): 1800, Type: BP, Cell Sequence: 3)				
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		7	7	
Icing (Y/N)		No		
Siltting (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): 1800, Rise (mm): 1800, Type: BP, Cell Sequence: 4)				
Barrel Last Accessible Date		23-Feb-2012		4th pipe from W @ U/S
Special Features				
Special Feature				CSP 2/3 length (1829 design) 22 Jan 2003
(Type :)				
Special Feature				
(Type :)				
Roof		N	6	CSP rise 1815 mm at R2 1% sag
Measured Rise (mm)		1800		
Measured At Ring No.		1		
Sag (mm)		0		
Percent Sag		0		
Sidewall		N	6	CSP span 1860 mm at R2 2% deflection
Measured Span (mm)		1800		
Measured At Ring No.		1		
Deflection (mm)		0		
Percent Deflection		0		
Floor		N	5	Minor loss of grout at repairs in BP
Bulge (mm)		0		
Measured At Ring No.				
Abrasion (Y/N)		Yes		
Circumferential Seams		N	5	In CSP at R1
Separation (mm)		75		
Longitudinal Seams		N	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		N	4	Moderate corrosion with pitting from waterline at mid sidewall and below in CSP Loss of steel at R1 U/S floor edge.
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): 1800, Rise (mm): 1800, Type: BP, Cell Sequence: 4)				
Fish Passage Adequacy		5	5	
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		
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		X	6	
Collar		X	X	
Wingwalls		7	6	
(Shape :)				
Cutoff Wall		N	N	Ice covered
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			unable to determine
Above/Below (mm)	300			
Scour Protection		7	7	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 300)				
Scour/Erosion		7	7	
Beavers (Y/N)	No			
Downstream End General Rating		7	7	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		7	7	Standard Bridge Structures at service roads to S and N.
Bank Stability		7	7	
HWM (m below Top of Culvert)	1.2			No HWM visible
Drift (Y/N)	No			
Channel Bottom Degrading/Aggrading	AGGRADING			
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) (%)	62.8/68.3	Est. Repl. Yr	2020	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	Garry Roberts		Previous Assistant's Name				
Next Inspection Date	23-Nov-2013		Previous Inspection Date	24-Aug-2010			
Inspection Cycle (Default) (months)	21						
Comment							