

Bridge Culvert Inspection				
Bridge File Number	77652 -1 Bridge Culvert		Form Type	CUL1
Year Built	1965		Lot No.	1
Bridge or Town Name	WINFIELD		Inspector Name	Owen Salava
Located Over	MODESTE CREEK, 6.132.11, WATERCRS-ST		Inspector Class	BR CLS A
Located On	13:04 C1 35.156		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	26-Jun-2012
Legal Land Location	SW SEC 14 TWP 46 RGE 4 W5M		Data Entry By	Marcia Chavez
Longitude, Latitude	-114:29:01, 52:57:36		Data Entry Date	15-Jul-2012
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA17		Review Date	05-Jul-2012
Clear Roadway/Skew	9 /		Dept. Reviewer Name	Andrew Smikles
AADT/Year	1,000 / 2011 (A)		Dept. Review Date	19-Jul-2012
Road Classification	RAU-209-110		Follow-Up By	
Detour Length (km)	4			

Bridge Culvert Information								
Number of Culverts		1						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	2482	1752	RPP	27	152X51	2.8	PIPE ARCH
Special Features		VERT STEEL STRUTS						
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone	South r/w.	Gas	25 m West of pipe.
Power	3 wires 25m North of c/l.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Rge Rd 42 intersection 80m West.
Vertical Alignment		8	8	
Roadway Width (m)	9.300			
Embankment		4	4	Sluffing over South end. 1:1 over pipe at South. Culvert is too short for road and fill.
Sideslope (: :1)	3.0			
(Height of Cover(m) : 3.3)				
Guardrail (Y/N)	Yes			Guardrail creased but functional.
Approach Road / Embankment General Rating		7	7	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		S		
End Treatment (Concrete, Steel, Others, None)	STEEL			
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		5	5	Minor damage to crown edge.
Heaving (mm)	0			
Invert Above/Below Stream Bed				At streambed.
Above/Below (mm)	0			
Scour Protection		4	4	
(Type : RIP RAP)				
(Avg. Rock Size(mm) : 400)				
Scour/Erosion		4	4	Eroding above South end. Vertical bank.
Beavers (Y/N)	Yes			
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): 2482, Rise (mm): 1752, Type: RPP)				
Barrel Last Accessible Date	26-Jun-2012			
Special Features				
Special Feature		N	6	100mm HSS struts installed. Top bracing is wavy South end.
(Type : VERT STEEL STRUTS)				
Special Feature				
(Type :)				
Roof		N	4	Installation damage plus 2 missing bolts.
Measured Rise (mm)	1580			
Measured At Ring No.	2			9.8%
Sag (mm)	172			
Percent Sag	10			
Sidewall		N	2	Cusping at 11:00 West side plate #9. Some pitting & bulging near inlet. 32mm steel btwn sidewall cracks.
Measured Span (mm)	2580			
Measured At Ring No.	6			
Deflection (mm)	98			3.9%
Percent Deflection	4			
Floor		N	N	Silt covered.
Bulge (mm)	25			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	4	Missing 1 nut @ circ seam #7.
Separation (mm)	0			
Longitudinal Seams		N	2	Cracks 4:00 o'clock East side R2, 3, 5, 6 & 8. R3 - 32mm of steel left, 2, 5 & 6 - 52mm of steel left.
Total No. of Cracked Rings	5			
Total No. of Rings with Two Cracked Seams	0			
Min. Remaining Steel Between Cracks (mm)	32			
Proper Lap (Y/N)	No			
Longitudinal Stagger (Y/N)	No			
Coating		N	5	Some pitting rust.
Corrosion By Soil (Y/N)	Yes			
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): 2482, Rise (mm): 1752, Type: RPP)				
Fish Passage Adequacy		4	5	
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
Barrel General Rating		2	3	GR +1 - struts in good condition, but remaining steel close to 25mm limit for GR adjustment.
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
Direction		N		
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)	100			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		5	4	Trees growing at West side of bevel.
(Type : NONE)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	4	2m x 5m erosion to slope above outlet.
Beavers (Y/N)	No			
Downstream End General Rating		5	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel (U/S and D/S)				
Alignment		5	5	
Bank Stability		4	4	Vertical banks D/S.
HWM (m below Top of Culvert)				(HWM over road 1985.) 93/01/14 Not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		4	4	

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	2018	Program to replace pipe prior to next road improvement.		2018						
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
Structural Condition Rating (Last/Now) (%)	22.2/33.3	Sufficiency Rating (Last/Now) (%)	32.0/42.3	Est. Repl. Yr	2018	Maint. Req. (Y/N)	Yes			
Special Comments for Next Inspection	Monitor cracks at bolt lines. 21mth inspection cycle is adequate. LRA emailed to Donald Saunders on 04Jul2012.		Department Comments							
Maintenance Reviewed By			Date		Estimated Total	0				
Proposed Long-Term Strategy	2004.04.24 Estimated replacement year 2015. Culvert strutted, monitor normal BIM.									
On 3-Year Program (Y/N)										
Proposed Action										
Previous Inspector's Name	Owen Salava	Previous Assistant's Name								
Next Inspection Date	26-Mar-2014	Previous Inspection Date	23-Aug-2010							
Inspection Cycle (Default) (months)	21									
Comment										

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	2018	Program to replace pipe prior to next road improvement.	Programmed for replacement	2022			
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	22.2/33.3	Sufficiency Rating (Last/Now) (%)	32.0/42.3	Est. Repl. Yr	2018	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor cracks at bolt lines. 21mth inspection cycle is adequate. LRA emailed to Donald Saunders on 04Jul2012.		Department Comments	Tentatively programmed to be replaced in 2022. AS			
Maintenance Reviewed By	Andrew Smikles		Date	23-Aug-2012	Estimated Total	0	
Proposed Long-Term Strategy	2004.04.24 Estimated replacement year 2015. Culvert strutted, monitor normal BIM.						
On 3-Year Program (Y/N)							
Proposed Action							
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