

Bridge Culvert Inspection				
Bridge File Number	80529 -1 Bridge Culvert		Form Type	CULM
Year Built/Lined	1983/1990		Lot No.	1
Bridge or Town Name	DEWBERRY		Inspector Name	Jason Saly
Located Over	TRIBUTARY TO VERMILION RIVER, 6.5.3, WATERCRS-ST		Inspector Class	BR CLS A
Located On	45:12 C1 1.901		Assistant Name	
Water Body Cl./Year			Assistant Class	
Navigabil. Cl./Year			Inspection Date	21-Jan-2013
Legal Land Location	SW SEC 26 TWP 53 RGE 4 W4M		Data Entry By	Marcia Chavez
Longitude, Latitude	-110:29:36, 53:35:57		Data Entry Date	08-Mar-2013
Road Authority	Alberta Transportation (AIT)		Reviewer Name	John O'Brien
Contract Main. Area	CMA15		Review Date	13-Feb-2013
Clear Roadway/Skew	12.5 / 0 deg.		Dept. Reviewer Name	Chris Black
AADT/Year	840 / 2011 (A)		Dept. Review Date	28-Mar-2013
Road Classification	RAU-212.0-110		Follow-Up By	
Detour Length (km)	52			

Bridge Culvert Information								
Number of Culverts	3							
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	-	1200	MP	59	65X13	2.8	ROUND
2	MAIN Partially Lined	-	1200	MP	59	65X13	2.8	ROUND
3	MAIN PARTIAL LINER	-	900	SSP	47		9.0	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)			
Utility Attachments			
Telephone		Gas	
Power	2 wires 30m North.	Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road / Embankment				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Local road into farm 500m.
Vertical Alignment		7	7	
Roadway Width (m)	12.500			
Embankment		7	N	Snow covered, but no signs of problems.
Sideslope ( __:1)	2.5			
(Height of Cover(m) : 5.6)				
Guardrail (Y/N)	No			
<b>Approach Road / Embankment General Rating</b>		<b>7</b>	<b>7</b>	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Direction		S		East pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Span Type: Primary Span)</b>				
Collar		X	X	
Wingwalls (Shape : )		X	X	
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection (Type : <b>NATURAL</b> ) (Avg. Rock Size(mm) : )		7	N	Snow covered.
Scour/Erosion		7	N	Snow covered.
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>6</b>	
Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)</b>				
Barrel Last Accessible Date	25-Mar-2003			East pipe. Viewed from S end due to water & confined space.
<b>Special Features</b>				
Special Feature (Type : )				
Special Feature (Type : )				
Roof		N	N	Rating could be 2 based on past sag.
Measured Rise (mm)	1000			
Measured At Ring No.	2			
Sag (mm)	200			(16.7%. 25/Mar/2003)
Percent Sag	17			
Sidewall		N	N	As per previous measurement, unable to get far enough to find 1500mm measurement. Measured R2, 1355 span. Past measurement of 1500mm not found since 2003. Should dewater & measure since 25% deflection is excessive. (Previous measurement.) (12.5% found on 16/Aug/2009)
Measured Span (mm)	1350			
Measured At Ring No.	2			
Deflection (mm)	300			
Percent Deflection	25			
Floor		N	N	(03/03/25)
Bulge (mm)	50			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		N	N	
Separation (mm)	50			
Longitudinal Seams		X	N	Riveted seams.
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Primary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)				
Coating		3	3	Pitting/scaling on floor. No clear photo due to snow/ice on floor.
Corrosion By Soil (Y/N)	No			
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	NEG			
Ponding (Y/N)	No			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type : )				
Waterway Adequacy		5	5	1/2 full @ D/S.
Icing (Y/N)	No			Minor.
Silting (Y/N)	Yes			
Drift (Y/N)	Yes			
<b>Barrel General Rating</b>		<b>2</b>	<b>2</b>	G.R. from 14/Apr/2007 but based on earlier span deflection. G.R. & sidewall could be rated "1".
Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 1, Span Type: Primary Span)				
Direction		N		East pipe.
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/Below (mm)	0			
Scour Protection		7	N	
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		7	N	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	
Upstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 2, Span Type: Secondary Span)				
Direction		S		West pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		6	6	
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	200			
Scour Protection		7	N	Snow covered.
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		7	N	Snow covered.
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>6</b>	<b>6</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)</b>				
Barrel Last Accessible Date	25-Mar-2003			Viewed from ends.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	N	(1m S of liner. 25Mar2003).
Measured Rise (mm)	1040			
Measured At Ring No.	2			
Sag (mm)	160			(13.3%. 25Mar2003).
Percent Sag	13			
Sidewall		N	N	(1m South of liner. 16Aug2009).
Measured Span (mm)	1320			
Measured At Ring No.	2			
Deflection (mm)	120			(25Mar2003)
Percent Deflection	10			
Floor		N	N	Dirt/ice covered.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	N	
Separation (mm)				
Longitudinal Seams		X	N	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				

Bridge Culvert Barrel					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP)					
Coating		3	3	(Pitting @ haunches. 25Mar2003) - Rating carried forward.	
Corrosion By Soil (Y/N)					
Corrosion By Water (Y/N)	Yes				
Camber POS/ZERO/NEG	NEG				
Ponding (Y/N)	Yes				
Fish Passage Adequacy		5	5		
Baffle		X	X		
(Type : )					
Waterway Adequacy		5	5		
Icing (Y/N)	No				
Silting (Y/N)	Yes				
Drift (Y/N)	No				
<b>Barrel General Rating</b>		<b>2</b>	<b>3</b>	Adjusted GR to 3 due to old deflection.	
Downstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 2, Span Type: Secondary Span)					
Direction		N		West pipe.	
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/Below (mm)	0				
Scour Protection		7	N	Snow covered.	
(Type : NATURAL)					
(Avg. Rock Size(mm) : )					
Scour/Erosion		7	N	Snow covered.	
Beavers (Y/N)	No				
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>		
Upstream End					
Culvert Component		Last	Now	Explanation of Condition	
(Pipe # : 3, Span Type: Secondary Span)					
Direction		S		West pipe. Liner stops 6m short of original pipe bevel end.	
End Treatment (Concrete, Steel, Others, None)	NONE				
Headwall		X	X		
Collar		X	X		

Upstream End				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Span Type: Secondary Span)</b>				
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	150			
Scour Protection		X	X	
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		X	X	
Beavers (Y/N)	No			
<b>Upstream End General Rating</b>		<b>5</b>	<b>5</b>	

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
<b>(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: SSP)</b>				
Barrel Last Accessible Date				Not accessible due to size; viewed from both ends, shape appears adequate.
<b>Special Features</b>				
Special Feature				
(Type : )				
Special Feature				
(Type : )				
Roof		N	N	
Measured Rise (mm)				
Measured At Ring No.				
Sag (mm)				
Percent Sag				
Sidewall		N	N	
Measured Span (mm)				
Measured At Ring No.				
Deflection (mm)				
Percent Deflection				
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)				
Circumferential Seams		X	N	
Separation (mm)				
Longitudinal Seams		X	X	
Total No. of Cracked Rings				
Total No. of Rings with Two Cracked Seams				
Min. Remaining Steel Between Cracks (mm)				
Proper Lap (Y/N)				
Longitudinal Stagger (Y/N)				

Bridge Culvert Barrel				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 900, Type: SSP)				
Coating		N	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	Yes			
Fish Passage Adequacy		5	5	
Baffle		X	X	
(Type : )				
Waterway Adequacy		5	5	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
<b>Barrel General Rating</b>		<b>5</b>	<b>N</b>	GR was 5 from 16Aug2009.

Downstream End				
Culvert Component		Last	Now	Explanation of Condition
(Pipe # : 3, Span Type: Secondary Span)				
Direction		N		West pipe.
End Treatment (Concrete, Steel, Others, None)	NONE			Liner stops 6m short of bevel end.
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape : )				
Cutoff Wall		X	X	
Bevel End		X	X	
Heaving (mm)	0			
Invert Above/Below Stream Bed				
Above/Below (mm)	0			
Scour Protection		X	X	
(Type : <b>NATURAL</b> )				
(Avg. Rock Size(mm) : )				
Scour/Erosion		X	X	
Beavers (Y/N)	No			
<b>Downstream End General Rating</b>		<b>5</b>	<b>5</b>	

Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel (U/S and D/S)</b>				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Culvert)	0.0			Grass in bush @ top of culvert U/S & D/S. HWM not visible.
Drift (Y/N)	Yes			

Structure Usage				
		Last	Now	Explanation of Condition
Channel Bottom Degrading/Aggrading	AGGRADING			
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>7</b>	<b>7</b>	



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	2013	Full length primary span.								
INSTALL STRUTS										
INSTALL CONCRETE COLLAR/CUTOFF										
REPAIR SEAMS										
OTHER ACTION	2013	Inspect @ 12 month cycles.								
OTHER ACTION	2013	Dewater with Lvl 2 inspection.								
OTHER ACTION										
OTHER ACTION										
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>22.2/22.2</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>41.7/36.9</b>	<b>Est. Repl. Yr</b>	<b>2015</b>	<b>Maint. Req. (Y/N)</b>	<b>Yes</b>			
Special Comments for Next Inspection	Deflection makes prime span hard to access. Liner in secondary span hard to access. Emailed LRA to AT on 08Mar2013 based on previous measurements.		Department Comments							
Maintenance Reviewed By			Date			Estimated Total	0			
Proposed Long-Term Strategy	CB to investigate: Road strategy-guardrail may be warranted. Hazard is small. RS									
On 3-Year Program (Y/N)	Y									
Proposed Action	Programmed maintenance in 2008. Excavate silt at D/S and clean out bevel, remove dam and investigate liner. CB									
Previous Inspector's Name	Jason Saly	Previous Assistant's Name								
Next Inspection Date	21-Jan-2014	Previous Inspection Date	07-Jun-2011							
Inspection Cycle (Modified) (months)	12									
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	2013	Full length primary span.				
INSTALL STRUTS						
INSTALL CONCRETE COLLAR/CUTOFF						
REPAIR SEAMS						
OTHER ACTION	2013	Inspect @ 12 month cycles.				
OTHER ACTION	2013	Dewater with Lvl 2 inspection.				
OTHER ACTION						
OTHER ACTION						

<b>Structural Condition Rating (Last/Now) (%)</b>	<b>22.2/22.2</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>41.7/36.9</b>	Est. Repl. Yr	2015	Maint. Req. (Y/N)	Yes
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Special Comments for Next Inspection	Deflection makes prime span hard to access. Liner in secondary span hard to access. Emailed LRA to AT on 08Mar2013 based on previous measurements.	Department Comments
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Maintenance Reviewed By		Date		Estimated Total	0
Proposed Long-Term Strategy	CB to investigate: Road strategy-guardrail may be warranted. Hazard is small. RS				
On 3-Year Program (Y/N)	Y				
Proposed Action	Programmed maintenance in 2008. Excavate silt at D/S and clean out bevel, remove dam and investigate liner. CB				
Previous Inspector's Name	Jason Saly	Previous Assistant's Name			
Next Inspection Date	21-Jan-2014	Previous Inspection Date	07-Jun-2011		
Inspection Cycle (Modified) (months)	12				
Comment					