Bridge Culvert Inspection

Bridge File Number	77877 -1 Bridge Culvert	Form Type	CULM
Year Built	1974	Lot No.	2
Bridge or Town Name	EDSON	Inspector Name	Todd Warshawski
Located Over	TRIBUTARY TO WOLF CREEK, 8.11.107.26.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	16:06 L1 22.272	Assistant Class	
Water Body Cl./Year		Inspection Date	10-Aug-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NW SEC 14 TWP 53 RGE 16 W5M	Data Entry Date	04-Sep-2012
Longitude, Latitude	-116:15:31, 53:34:46	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	27-Aug-2012
Contract Main. Area	CMA13	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	16.5 /	Dept. Review Date	18-Sep-2012
AADT/Year	8,250 / 2011 (A)	Follow-Up By	
Road Classification	RAD-412.4-120		
Detour Length (km)	1		

Bridge Culvert Information

Number of Culverts		2						
Pipe #	Barrel	Span	Rise (or Dia.)	Type	Length	Corr. Profile	Pl./Slab Thickness	Shape
1	MAIN	1724	1901	SPE	67.1	152X51	2.8	ELLIPSE
2	MAIN	-	1200	MP	60	68X13	2.8	ROUND
Special Features								
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	North r/w.	Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks	File tag attached on South bevel end.		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Intersection 100m West. Crest to east.
Vertical Alignment		6	6	
Roadway Width (m)	12.500			WB lane.
Embankment		5	6	
Sideslope (__:1)	2.5			
(Height of Cover(m) : **8**)				
Guardrail (Y/N)	Yes			North side only. 13 sections with minor strike damage, still functional.
Approach Road / Embankment General Rating		**6**	**6**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Direction		S		East pipe.
End Treatment (Concrete, Steel, Others, None)	STEEL			
Headwall		X	X	
Collar		X	X	
Wingwalls		X	X	
(Shape :)				

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
Cutoff Wall		X	X	
Bevel End		4	4	Bevel has been damaged from a backhoe.
Heaving (mm)	200			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	100			
Scour Protection		5	5	Loss of fill on bevel sides 200mm wide 200mm deep, 800mm long. Grassed in.
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		5	5	
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): 1724, Rise (mm): 1901, Type: SPE**)				
Barrel Last Accessible Date	10-Aug-2012			
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		6	6	
Measured Rise (mm)	1815			
Measured At Ring No.	9			
Sag (mm)	86			
Percent Sag	4			
Sidewall		6	6	Small tear at Ring 7 - construction.
Measured Span (mm)	1821			
Measured At Ring No.	8			
Deflection (mm)	97			
Percent Deflection	5			
Floor		6	5	Heavy corrosion with pitting.
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		6	6	
Separation (mm)	0			
Longitudinal Seams		6	6	
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			
Coating		5	5	(Pitting and scaling lower 1/3.
Corrosion By Soil (Y/N)	Yes			
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1724, Rise (mm): 1901, Type: SPE**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	5	Drop at outlet.
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**6**	**6**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Span Type: Primary Span**)				
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		6	6	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	300			
Scour Protection		5	5	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		5	5	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

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	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		X	X	

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Span Type: Secondary Span**)				
Bevel End		N	N	Clogged with debris.
Heaving (mm)	0			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	1500			
Scour Protection		6	6	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) :)				
Scour/Erosion		6	6	
Beavers (Y/N)	Yes			
Upstream End General Rating		**6**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Barrel Last Accessible Date	15-Oct-2003			Not accessible
Special Features				
Special Feature				
(Type :)				
Special Feature				
(Type :)				
Roof		N	N	
Measured Rise (mm)	1120			
Measured At Ring No.				
Sag (mm)	80			
Percent Sag	7			
Sidewall		N	N	
Measured Span (mm)	1320			
Measured At Ring No.				
Deflection (mm)	120			
Percent Deflection	10			
Floor		N	N	
Bulge (mm)				
Measured At Ring No.				
Abrasion (Y/N)	No			
Circumferential Seams		4	N	(First ring from D/S, soil infiltration at bottom. Dimple coupler visible. - Oct/2003
Separation (mm)	160			
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)				
Coating		5	N	Minor superficial rust lower third. As viewed from d/s end.-Sep/2010
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			
Camber POS/ZERO/NEG	ZERO			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **2, Secondary Span, Location Code: MAIN, Span (mm): , Rise (mm): 1200, Type: MP**)				
Ponding (Y/N)	No			
Fish Passage Adequacy		X	X	Inlet above s.b./overflow pipe.
Baffle		X	X	
(Type :)				
Waterway Adequacy		5	5	Blocked at inlet.
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	Yes			
Barrel General Rating		**4**	**4**	(G.R. carried over since 20/July/2005.)

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		N	X	
Collar		N	X	
Wingwalls		N	X	
(Shape :)				
Cutoff Wall		N	X	
Bevel End		5	5	
Heaving (mm)	100			
Invert Above/Below Stream Bed	ABOVE			
Above/Below (mm)	800			
Scour Protection		6	6	
(Type : **NATURAL**)				
(Avg. Rock Size(mm) : **200**)				
Scour/Erosion		6	6	
Beavers (Y/N)	No			
Downstream End General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		7	7	
Bank Stability		6	7	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading	DEGRADING			
Beavers (Y/N)	Yes			
(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	2012	Remove debris from 1200 inlet				
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) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**48.9/48.9**	Est. Repl. Yr	2025	Maint. Reqd. (Y/N)	Yes

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	Todd Warshawski	Previous Assistant's Name			
Next Inspection Date	10-May-2014	Previous Inspection Date	27-Sep-2010		
Inspection Cycle (Default) (months)	21				
Comment					