Bridge Culvert Inspection

Bridge File Number	74092 -1 Bridge Culvert	Form Type	CULE
Year Built	1953	Lot No.	4
Bridge or Town Name	NITON JUNCTI	Inspector Name	Todd Warshawski
Located Over	TRIBUTARY TO BRULE CREEK, 8.11.84.51.23.1, WATERCRS-ST	Inspector Class	BR CLS B
		Assistant Name	
Located On	16:08 R1 20.981;16:08 L1 21.000	Assistant Class	
Water Body Cl./Year		Inspection Date	10-Aug-2012
Navigabil. Cl./Year		Data Entry By	Theresa Lacusta
Legal Land Location	NE SEC 26 TWP 53 RGE 12 W5M	Data Entry Date	27-Aug-2012
Longitude, Latitude	-115:39:25, 53:36:35	Reviewer Name	Eric Carcoux
Road Authority	Alberta Transportation (AIT)	Review Date	27-Aug-2012
Contract Main. Area	CMA12	Dept. Reviewer Name	Brent Herrick
Clear Roadway/Skew	25 /	Dept. Review Date	30-Aug-2012
AADT/Year	6,840 / 2011 (A)	Follow-Up By	
Road Classification	RAD-412.4-120		
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	U/S	-	3050	SP	46.9	152X51	3.0	ROUND
1	MAIN	1980	1980	BP	37.8			RECTANGLE
Special Features	STORM WATER DRAIN							
Special Features Comment								

Utilities (Located at)

Utility Attachments			
Telephone	North r/w	Gas	40 m north - pipeline.
Power		Municipal	
Others	Fibre optics 30m South of road c/l.	Problem (Y/N)	No
Remarks	BF tag on top of u/s headwall		

Approach Road / Embankment

		Last	Now	Explanation of Condition
Horizontal Alignment		8	8	Local road intersection 700mm East.
Vertical Alignment		8	8	
Roadway Width (m)	25.000			WBL 11.6m, EBL 12.4m
Embankment		7	7	4:1 on south side.
Sideslope (__:1)	2.5			
(Height of Cover(m) : **6**)				
Guardrail (Y/N)	Yes			
Approach Road / Embankment General Rating		**8**	**8**	

Upstream End

Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		S		SPCSP
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		7	7	
Collar		7	7	Spall on East shoulder due to riprap placement.

Upstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	Under water
Bevel End		N	6	
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	900			
Scour Protection		7	7	
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **500**)				
Scour/Erosion		7	7	
Beavers (Y/N)	Yes			Small beaverdam u/s.
Upstream End General Rating		**7**	**6**	

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 3050, Type: SP**)				
Barrel Last Accessible Date	12-Jan-1993			Viewed from ends, shape and condition appear ok.
Special Features				
Special Feature				Poorly patched concrete at storm drain inlet.
(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		N	N	
Separation (mm)				
Longitudinal Seams		N	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)				
Coating		N	N	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)	Yes			

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: U/S, Span (mm): , Rise (mm): 3050, Type: SP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	
Baffle		N	N	
(Type : **LARGE BOULDER**)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	Yes			
Drift (Y/N)	No			
Barrel Extension General Rating		**N**	**N**	G.R. was "6" from 10/Aug/2005.

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1980, Rise (mm): 1980, Type: BP**)				
Barrel Last Accessible Date	10-Aug-2012			
Special Features				
Special Feature		5	X	
(Type : **STORM WATER DRAIN**)				
Special Feature				
(Type :)				
Roof		5	5	Poorly patch section at storm drain inlet. Several cracks with stains.
Measured Rise (mm)	1995			
Measured At Ring No.				
Sag (mm)	0			
Percent Sag				
Sidewall		5	5	Wide cracks in sidewalls with rust stains. Poorly patched section.-photo
Measured Span (mm)	2000			
Measured At Ring No.				
Deflection (mm)	0			
Percent Deflection				
Floor		N	N	(2 last panels wide cracking - photo corrosion. 10/Aug/2005)
Bulge (mm)	0			
Measured At Ring No.				
Abrasion (Y/N)	Yes			
Circumferential Seams		4	4	80mm gap at 5th seam. Steel gasket/water stop in place. Corrosion on gasket with 300mm void behind.
Separation (mm)	80			
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		X	X	
Corrosion By Soil (Y/N)				
Corrosion By Water (Y/N)				

Bridge Culvert Barrel				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
(Pipe # : **1, Primary Span, Location Code: MAIN, Span (mm): 1980, Rise (mm): 1980, Type: BP**)				
Camber POS/ZERO/NEG	ZERO			
Ponding (Y/N)	No			
Fish Passage Adequacy		6	6	Class II rock riprap staggered in box sections.
Baffle		X	X	
(Type :)				
Waterway Adequacy		6	6	
Icing (Y/N)	No			
Silting (Y/N)	No			
Drift (Y/N)	No			
Barrel General Rating		**5**	**5**	

Downstream End				
Culvert Component		**Last**	**Now**	**Explanation of Condition**
Direction		N		Concrete box.
End Treatment (Concrete, Steel, Others, None)	CONCRETE			
Headwall		6	6	East corner spall 200mm dia.
Collar		7	X	
Wingwalls		X	X	
(Shape :)				
Cutoff Wall		N	N	
Bevel End		6	6	One diagonal crack in each side.
Heaving (mm)	0			
Invert Above/Below Stream Bed	BELOW			
Above/Below (mm)	300			
Scour Protection		7	7	Gabion baskets.
(Type : **RIP RAP**)				
(Avg. Rock Size(mm) : **300**)				
Scour/Erosion		7	7	
Beavers (Y/N)	Yes			
Downstream End General Rating		**6**	**6**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel (U/S and D/S)				
Alignment		6	6	
Bank Stability		6	6	
HWM (m below Top of Culvert)				HWM not visible.
Drift (Y/N)	Yes			
Channel Bottom Degrading/Aggrading				
Beavers (Y/N)	Yes			
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**6**	**6**	

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) (%)	**55.6/55.6**	**Sufficiency Rating (Last/Now) (%)**	**61.2/60.1**	Est. Repl. Yr	2045	Maint. Reqd. (Y/N)	No

Special Comments for Next Inspection	As this structure has not been accessed for 2 or more cycles, a Level 2 inspection is required as per Bim Manual Section 13.9.1.5 Based on observed site evaluations we are recommending that his be deferred to a later date.	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	16-Sep-2010		
Inspection Cycle (Default) (months)	21				
Comment					