

Bridge Inspection									
Bridge File Number	00798 -1 Bridge				Form Type	PCS			
Year Built/Year Supstr	1962/1962				Lot No.	1			
Bridge or Town Name	CARSTAIRS				Inspector Name	Erin Zubot			
Located Over	TRIBUTARY TO BEAVERDAM CREEK, 3.89.8.11.1, WATERCRS-ST				Inspector Class	BR CLS B			
Located On	580:02 C1 15.241				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	01-Feb-2013			
Legal Land Location	SW SEC 6 TWP 30 RGE 2 W5M				Data Entry By	Marcia Chavez			
Longitude, Latitude	-114:16:58, 51:31:58				Data Entry Date	11-Feb-2013			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	John O'Brien			
Contract Main. Area	CMA29				Review Date	08-Feb-2013			
Clear Roadway/Skew	9.1 / 30 deg. (RHF)				Dept. Reviewer Name	Darron Ahlstedt			
AADT/Year	1,420 / 2011 (A)				Dept. Review Date	13-Feb-2013			
Road Classification	RCU-209-110				Follow-Up By				
Detour Length (km)	5								
Allowable Load (t):	Single	CS1 30 GIRDER	Semi	CS2 52 GIRDER	Train	CS3 75 GIRDER	----> On Critical Spans ---->Critical Member		
Design Loading:	HS20						----> Primary Span		
Posting Information									
Required Load Posting (t)	Single				Semi		Truck Train		
Posted Loading (t)	Single				Semi		Truck Train		
Posted:	Lane	EB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	
Posted:	Lane	WB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	
Remarks	Not required.								
Hazard Marker At Bridge (Y/N)	Yes								
Remarks	Double sided hazard @ NE & SW only.								
Other Sign Types									
Utilities (Located at)									
Utility Attachments	TELEPHONE UTILITIES-PHONE LINE								
Telephone	South r/w & South curb.				Gas				
Power	7 wires North r/w.				Municipal				
Others					Problem (Y/N)	No			
Remarks									
Approach Road									
			Last	Now	Explanation of Condition				
Horizontal Alignment			6	6	Intersection to local road @ SW & NE corners. Long gradual crest curve both ways. No passing.				
Vertical Alignment			7	7					
Roadway Width (m)	9.000				Bump at NW corner (photo) - ACP patching has been completed.				
Approach Bump			4	5					
Guardrail (Y/N)	Yes				SW corner accident damage - 2 post broken, 1 other broken post SE corner & 1 post split, 1 post in NE corner split.				
Guardrail			5	3					
Length (m)	11.400				Insufficient length and posts.				
Current Standard (Y/N)	No								
Termination Type	Turn Down								
Drainage			7	7					
Approach Road General Rating			6	6					

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : HC, 1 Spans, Lengths(m): 8.5, A-Ident Number:)					
Special Features					
Special Feature			X		
(Type :)					
Special Feature			X		
(Type :)					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	
Last	0	0	0	0	
Now	0.0	0.0	0.0	0.0	
Wearing Surface			8	7	Longitudinal cracks between girder lines. ACP patching NW corner rough where patched.
(Material Type : ACP)					
(Thickness(mm) : 50)					
Lateral Connection Problem (Y/N)		No			
Deck Top			N	N	
Deck Rideability			8	7	
Deck Joints			N	N	Buffer angles paved over.
Bump (Y/N)					
Deck Drainage			8	8	
Drains Clogged (Y/N)		No			
Curbs/Median			6	3	Longit. crack top of N curb. S curb 2 bridgerail post & anchors broken out of curb; anchorage totally gone, large hole with exposed rebar.
(Curb Type : Standard)					
Scaling (Percent Area)		0			
Bridge Rail			8	4	Single layer. 2 sections not supported due to broken posts. 2 bridgerail posts with broken anchor assemblies & not connected to bridge.
(Type : GALVANIZED STEEL FLEX BEAM)					
Bridge Rail Posts			8	2	
(Type : GALVANIZED POST STEEL; GALVANIZED POST STEEL)					
Bridge Rail/Posts Coating			8	8	
(Type : GALVANIZED)					
Sidewalk			X	X	
Girder Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
Last	0	0	0	1	
Now	0	0	0	4	
Girders			3	3	7 girders have wide longit. cracks in 1 leg in AZ, 2 with medium width longit. cracking in other leg; worst is G10 with spall leg - photo. End diaphragm breaks @ 2 girders - photo. G1,11 spalled inside legs almost full length with section loss on rebar (less than 20%). G1 spall in AZ both legs at A1, curb + 1. G10 spall formed at AZ. Percentage of spalling is estimated.
Last Complete Inspection Date		01-Feb-2013			
Cracking (Y/N)		Yes			
Spalling (Percent Area)		20			
Lift or Connector Pocket Grouted (Y/N)		Yes			
(Number Of Girders : 11)					
Span Alignment Problems					
Vertical (Y/N)		No			West end 250mm offline - photo; bridge twisting.
Horizontal (Y/N)		Yes			
Superstructure General Rating			3	2	GR governed by bridgerail posts (safety concern).

Substructure							
Bridge Component		Last	Now	Explanation of Condition			
Abutments							
(Extended Backwall Piles (Y/N) : Y)							
(Extended Backwall Piles Spacing(mm) : 1500)							
(Total Number of Caps/Corbels : 7:7)							
Bearing Seats/Caps/Corbels Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last	0	0	0	2			
Now	0	0	0	2			
Bearing Seats/Caps/Corbels				3	3	300 x 300 cap. W cap rotated back. Rot in S end of 90 x 300 cap @ E abut & suspect rot @ N of E abut. Sag in mid of W wall also 90 x 300mm plank on top of cap. Some crushing into cap at split @ SW pile. Wide radial crack in N end of W cap - photo. Suspect rot.	
(Type : TREATED TIMBER)							
(Depth(mm) : 300)							
(Width(mm) : 300)							
Backwalls/Breastwalls			4	4	NW extension pile leaning, separated from backwall - photo - cable tied to A1P7,8. SW extension pile broken at ground from accident. Estimated 2.0m to ice level.		
Greatest Height (m)		2.50					
Wingwalls			5	3	SW wingwall cleat broken at top & SW wingwall pile broken at groundline from accident, top 2-3 wingwall planks broken too		
(Total Number of Bearing Piles : 8:8)							
Piles Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last	0	0	0	1			
Now	0	0	1	1			
Piles				3	2	SW corner pile split - photo. A1P7-8 steel jacket repairs. A1P1 leaning, only bearing ~100mm. A2P7,8 full length splits, P7 wide split with void, suspect rot at waterline.	
Paint/Coating				X	X		
Abutment Stability			4	3	Cap rolling & cracked pile, extended pile broken at SW corner & backwall bulging. Extended pile at NW leaning, cable tied to bearing piles.		
Scour/Erosion			4	N	(Erosion behind NW wingwall - photo. 27Oct2011) - Snow covered.		
Piers/Bents							
(Type :)							
(Total Number of Caps/Corbels :)							
Bearing Seats/Caps/Corbels Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last							
Now							
Bearing Seats/Caps/Corbels				X	X		
(Type :)							
(Depth(mm) :)							
(Width(mm) :)							
(Total Number of Bearing Piles :)							
Piles Detail Ratings							
	N (count)	1 (count)	2 (count)	3 (count)			
Last							
Now							
Pier Shaft/Piles				X	X		
Greatest Height (m)							
Bracing/Struts/Sheathing			4	3	Struts are rotating due to skew, missing cleat under some struts; end of cleat broken due to accident SE side - still functioning. Cleats on A2P5,6 are split/twisted & falling off (photo).		

Substructure				
Bridge Component		Last	Now	Explanation of Condition
Nose Plate		X	X	
Paint/Coating		X	X	
(Colour Description :)				
(Colour Code :)				
Pier Stability		X	X	
Scour		X	X	
Debris (Y/N)	No			
Substructure General Rating		3	2	
Structure Usage				
		Last	Now	Explanation of Condition
Channel				
(U/S Direction : S)				Fair alignment; wide, flat channel.
(D/S Direction : N)				
Alignment		4	5	
Bank Stability		7	7	
HWM (m below Top of Curb)	0.4			(1997/03/06) - Not visible.
Drift (Y/N)	No			
Slope Protection		5	5	
(Type : NATURAL; NATURAL)				
Guidebank/Spurs		X	X	
Adequacy of Opening		7	7	
(Fish Compensation Measure 1 : NONE)				
(Fish Compensation Measure 2 : NONE)				
Channel General Rating		4	5	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2013	Replace 2 broken anchors & recast.					
SEAL CURBS	2013	Patch curb at post anchors.					
PATCH DECK							
OVERLAY DECK							
STRAIGHTEN/REPLACE MEMBERS							
WASHING							
SHOTCRETE REPAIRS							
CORE TIMBER CAPS/CORBELS							
REPAIR/REPLACE TIMBER CAPS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
INSTALL STRUTS							
OTHER ACTION	2013	Reinstall hazard markers to meet standard.					
OTHER ACTION	2013	Replace broken guardrail posts.					
OTHER ACTION	2013	Replace bridge.					
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	33.3/22.2	Sufficiency Rating (Last/Now) (%)	57.0/52.8	Est. Repl. Yr	2013	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Bridge scheduled to be replaced; however, bridgerail & guardrail should be fixed in the meantime. Monitor stability of SW wingwall at W abut until replaced (on 6mth cycle). LRA sent to Donald Saunders & Chris Black of AT on 01Feb2013.		Department Comments				
Maintenance Reviewed By			Date			Estimated Total	0
Proposed Long-Term Strategy	2007.10.10 Part of regional consultant for Spot program. Scheduled for 2012.						
On 3-Year Program (Y/N)							
Proposed Action							
Previous Inspector's Name	Owen Salava	Previous Assistant's Name					
Next Inspection Date	01-May-2016	Previous Inspection Date	27-Oct-2011				
Inspection Cycle (Default) (months)	39						
Comment							