

Bridge Inspection												
Bridge File Number	75187 -1 Bridge					Form Type	TH					
Year Built/Year Supstr	1961/1960					Lot No.	3					
Bridge or Town Name	EMPRESS					Inspector Name	Owen Salava					
Located Over	SOUTH SASKATCHEWAN RIVER, 2, WATERCRS-ST					Inspector Class	BR CLS A					
Located On	41:08 C1 47.934					Assistant Name						
Water Body Cl./Year						Assistant Class						
Navigabil. Cl./Year						Inspection Date	18-Jul-2012					
Legal Land Location	NW SEC 27 TWP 20 RGE 1 W4M					Data Entry By	Marcia Chavez					
Longitude, Latitude	-110:04:13, 50:43:51					Data Entry Date	02-Aug-2012					
Road Authority	Alberta Transportation (AIT)					Reviewer Name	John O'Brien					
Contract Main. Area	CMA22					Review Date	31-Jul-2012					
Clear Roadway/Skew	9.1 / 29 deg. (RHF)					Dept. Reviewer Name	Andrew Smikles					
AADT/Year	570 / 2011 (A)					Dept. Review Date	07-Aug-2012					
Road Classification	RAU-210-110					Follow-Up By						
Detour Length (km)	100											
Allowable Load (t):	Single	H 27 STRINGER			Semi	HS 50 STRINGER			Train	CS3 74 STRINGER		----> On Critical Spans
Design Loading:	HS20										---->Critical Member	
----> Primary Span												

Posting Information												
Required Vert. Clearance Posting (m)												
Posted Vertical Clearance (Y/N) Yes												
Posted:	Lane	NB	On Bridge (m)	5.4	In Advance (Y/N)	Yes	Lane	SB	On Bridge (m)	5.4	In Advance (Y/N)	Yes
Remarks AB2 - 5.610, AB1 - 5.623.												

Required Load Posting (t)			Single	28	Semi		Truck Train	
Posted Loading (t)			Single		Semi		Truck Train	
Posted:	Lane	NB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No
Posted:	Lane	SB	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 SW not at std height.		
Other Sign Types 75km sign, No Passing, Sharp Curve WB.		

Utilities (Located at)			
Utility Attachments			
Telephone		Gas	
Power		Municipal	
Others		Problem (Y/N)	No
Remarks			

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		6	6	Curves both ends, 75 km/hr curve sign. Hills both sides.
Vertical Alignment		6	6	
Roadway Width (m)	10.200			
Approach Bump		7	7	
Guardrail (Y/N)		Yes		Impact damage at SW; 11 damaged posts.
Guardrail		5	4	
Length (m)		60.000		
Current Standard (Y/N)		Yes		
Termination Type		Turn Down		
Drainage		4	4	Headslope gullies. Erosion gully at NE corner (photo).
<b>Approach Road General Rating</b>		<b>6</b>	<b>6</b>	

Superstructure							
Bridge Component		Last	Now	Explanation of Condition			
(Primary Span : TH, 4 Spans, Lengths(m): 76.2-76.2-76.2-76.2, A-Ident Number: A0342-01;A0342-02;A0342-03;A0342-04)							
<b>Special Features</b>							
Special Feature			X				
(Type : )							
Special Feature			X				
(Type : )							
Wearing Surface/Deck Top Detail Ratings							
	N (%)	1 (%)	2 (%)	3 (%)			
<b>Last</b>	0	0	0	0			
<b>Now</b>	0.0	0.0	0.0	0.0			
Wearing Surface/Deck Top			6	6	(Numerous patches. 30/July/2008). Chipseal coat on FRSF o/l. 2009 L2 deck insepction found 23m2 debonded o/l, primarily along the c/l cold jnt.		
(Material Type : <b>CONCRETE - CONVENTIONAL CHIP SEAL COAT</b> )							
(Plank Thickness(mm) : <b>50</b> )							
(Plank Width(mm) : )							
Deck Rideability			7	7			
Deck Joints			4	4	New rubber troughs installed @ P1 & P3. 2009 L2 deck inspection indicated water leaks past plumbing at S pier jnt. Both abut jnts leak.		
Temperature (deg. C)		27					
(Expansion Type : <b>FINGER PLATES;GLAND (WABO-MAUER, TRANSFLEX, ETC))</b> )							
(Fixed Type : <b>COMPRESSION SEAL (ACME SEALS)</b> )							
Gap Size (mm)		Gap Location					
24			Pier 1				
25			Pier 3				
Curbs/Wheel Guards			6	6	Minor cracking in curb face.		
(Curb Type : <b>Standard</b> )							
(Type : <b>CONCRETE</b> )							
(Curb Height(mm) : <b>300</b> )							
(Width(mm) : <b>800</b> )							
Bridge Rail			6	6	5% of anchor nuts have insufficient thread.  5% corrosion.		
(Type : <b>STEEL BOX BEAM TYPE 1</b> )							
Bridge Rail Posts/Blocking			4	4			
(Type : <b>POST STEEL;POST STEEL</b> )							
Bridge Rail/Posts Coating			4	4			
(Type : <b>PAINT</b> )							
Sidewalk			X	X			

Superstructure						
Bridge Component		Last	Now	Explanation of Condition		
(Primary Span : TH, 4 Spans, Lengths(m): 76.2-76.2-76.2-76.2, A-Ident Number: A0342-01;A0342-02;A0342-03;A0342-04)						
Wide Load Damage (Y/N)	No			Minor scrapes @ most portals.		
High Load Damage (Y/N)	Yes					
Top Chord		7	7	(U1L0E has a 50mm crack @ U1, span 2 and 15mm crack at U11E, hidden when viewed from deck. Minor cracks on several gussets, hidden from deck view. 03/01/07)		
Batter Posts		4	4			
Sway Bracings		5	5			
Diagonals		7	7			
Verticals		7	7			
Portals		6	6			
Connections		6	6			Connections starting to get buildup of rust between plates @ bottom chord @ tie plates.
Floor Beams		6	6			
Bottom Chord		7	7			
(No. of Stringers : 432;432;432;432)						
Stringer Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
<b>Last</b>						
<b>Now</b>				Ext stringers have loss of section on top of flange. Rust accumulation has bowed stringers downward. Spacing between stringers 2-3, 7-8, spacing is 1020mm. Snow slot has been concreted shut but still leaks and rusting plates.		
Stringers		4	4			
(Type : STEEL)						
(Width(mm) : 180)						
(Depth(mm) : 400)						
(Spacing(mm) : 1475)						
Paint Condition		4	4	Corrosion on stringer line below snow slots, bearings and end floor beams. Light green.		
(Colour Description : )						
(Colour Code : )						
Touchup Required (Y/N)	Yes					
Bearings		5	5	Expansion bearings are dragging the skirt plates.		
Temperature (deg. C)	27					
(Expansion Type : ROLLER NEST BEARING)						
(Fixed Type : DISC & DOME BEARING)						
Functioning (Y/N)	Yes					
Sub Deck/Deck Underside		5	5	Span 1 SE corner has minor spalls.		
(Material Type : CONCRETE)						
(Plank Thickness(mm) : 150)						
(Plank Width(mm) : )						
Defects (Percent Area)	1					
<b>Span Alignment Problems</b>						
Vertical (Y/N)	No					
Horizontal (Y/N)	No					
<b>Superstructure General Rating</b>		<b>4</b>	<b>4</b>	Due to crack comments & stringer corrosion.		
Substructure						
Bridge Component		Last	Now	Explanation of Condition		
<b>Abutments</b>						
(Extended Backwall Piles (Y/N) : N)						
(Extended Backwall Piles Spacing(mm) : )						

Substructure									
Bridge Component		Last	Now	Explanation of Condition					
(Total Number of Caps/Corbels : 1:1)				Abut seats are wet from leaking jnts but no scaling. Abuts stained, no deterioration of abuts from leaking deck jnts - no action.					
Bearing Seats/Caps/Corbels Detail Ratings									
	N (count)	1 (count)	2 (count)				3 (count)		
Last	0	0	0				0		
Now	0	0	0				0		
Bearing Seats/Caps/Corbels			7				7		
(Type : <b>CONCRETE</b> )									
(Depth(mm) : )									
(Width(mm) : )									
Backwalls/Breastwalls			6				6		
Greatest Height (m)		2.50							
Wingwalls			7	7					
(Total Number of Bearing Piles : 0:0)				Unknown.					
Piles Detail Ratings									
	N (count)	1 (count)	2 (count)				3 (count)		
Last	100	0	0				0		
Now	100	0	0				0		
Piles			N				N		
Paint/Coating			X				X		
Abutment Stability			8				8		
Scour/Erosion			6				6		
							Minor growth in hslp above CIP concrete apron. Erosion gully SE corner of hslp.		
<b>Piers/Bents</b>									
(Type : <b>PIER-SOLID</b> )				Staining from road spray.					
(Total Number of Caps/Corbels : 1:1:1)									
Bearing Seats/Caps/Corbels Detail Ratings									
	N (count)	1 (count)	2 (count)				3 (count)		
Last	0	0	0				0		
Now	0	0	0				0		
Bearing Seats/Caps/Corbels			7				7		
(Type : <b>CONCRETE</b> )									
(Total Number of Bearing Piles : 0:0:0)							Unknown.		
Piles Detail Ratings									
	N (count)	1 (count)	2 (count)	3 (count)					
Last	100	0	0	0					
Now	100	0	0	0					
Pier Shaft/Piles			7	7					
Greatest Height (m)		14.20							
Bracing/Struts/Sheathing			X	X					
Nose Plate			7	X					
Paint/Coating			4	4					
(Colour Description : )				Nose plates 90% corrosion.					
(Colour Code : )									
Pier Stability			8	8					
Scour			N	N					
				Not visible.					
Debris (Y/N)		No							

Substructure				
Bridge Component		Last	Now	Explanation of Condition
<b>Substructure General Rating</b>		<b>7</b>	<b>7</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel</b>				
(U/S Direction : <b>W</b> )				
(D/S Direction : <b>E</b> )				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	No			
Slope Protection		7	7	CIP concrete apron.
(Type : <b>CONCRETE; CONCRETE</b> )				
Guidebank/Spurs		X	X	
Adequacy of Opening		8	8	
(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 #	
REPAIR/REPLACE BRIDGE RAIL							
RETROFIT BRIDGE RAIL							
SEAL CURBS							
PATCH DECK							
SEAL DECK							
OVERLAY DECK							
REPLACE STRIP DECK							
REPLACE SUB DECK							
RESET/ PAINT BEARINGS							
REPAINT SUPERSTRUCTURE							
STRAIGHTEN/REPLACE MEMBERS							
WASHING							
SHOTCRETE REPAIRS							
CORE TIMBER CAPS/CORBELS							
REPAIR/REPLACE TIMBER CAPS							
REPAIR ABUTMENT SCOUR/EROSION	2012	AT NE corner & hslp, 5m3 pitrun.					
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2012	Replace 11 guardrail posts at SW.					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>61.1/61.1</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>57.1/58.3</b>	Est. Repl. Yr	2044	Maint. Req. (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	Jason Saly		Previous Assistant's Name				
Next Inspection Date	18-Apr-2014		Previous Inspection Date	30-Mar-2011			
Inspection Cycle (Default) (months)	21						
Comment							