Bridge Inspection

Bridge File Number	13742 -1 Bridge	Form Type	SG
Year Built/Year Supstr	1963/1963	Lot No.	2
		Inspector Name	Ed Kowal
Bridge or Town Name	WASKATENAU	Inspector Class	BR CLS A
Located Over	NORTH SASKATCHEWAN RIVER, 6, WATERCRS-ST	Assistant Name	
		Assistant Class	
Located On	831:06 C1 18.745	Inspection Date	05-Dec-2012
Water Body Cl./Year		Data Entry By	Theresa Lacusta
Navigabil. Cl./Year		Data Entry Date	01-Apr-2013
Legal Land Location	NE SEC 32 TWP 58 RGE 19 W4M	Reviewer Name	Eric Carcoux
Longitude, Latitude	-112:46:51, 54:03:29	Review Date	26-Mar-2013
Road Authority	Alberta Transportation (AIT)	Dept. Reviewer Name	Brent Herrick
Contract Main. Area	CMA07	Dept. Review Date	02-Apr-2013
Clear Roadway/Skew	8.5 /	Follow-Up By	
AADT/Year	2,740 / 2011 (A)		
Road Classification	RCU-209-110		
Detour Length (km)	42		

Allowable Load (t):	Single	CS1 60 GIRDER	Semi	CS2 67 GIRDER	Train	CS3 74 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	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 Req'd							

Hazard Marker At Bridge (Y/N)	No
Remarks	2 marker boards are down.
Other Sign Types	North Sask. River signs. 80km, Icy Bridge Deck.

Utilities (Located at)

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

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		5	5	Curves at both ends for over 1 km. Significant grades in both directions. Road winds down into river valley. Posted for 80 km-hr
Vertical Alignment		6	6	
Roadway Width (m)	8.900			
Approach Bump		7	7	
Guardrail (Y/N)	Yes			
Guardrail		7	7	
Length (m)	45.600			
Current Standard (Y/N)	Yes			
Termination Type	Turned Down			
Drainage		7	7	Curbs below flexbeam for 10m at North end forces all flow to headslope drains. South approach drains to lateral drains. North approach drains off road.
Approach Road General Rating		**5**	**5**	

Superstructure

Bridge Component		Last	Now	Explanation of Condition
(Primary Span : **WG, 5 Spans, Lengths(m): 49.7-62.5-62.5-62.5-49.7, A-Ident Number: A0412-01**)				
Special Features				
Special Feature			X	
(Type :)				
Special Feature			X	
(Type :)				
Wearing Surface/Deck Top Detail Ratings				
	N (%)	1 (%)	2 (%)	3 (%)
Last	5	0	0	0
Now				
Wearing Surface		4	4	ACP ravelling @ c/l and gutterline. Random transverse cracks, random pothole formation.
(Material Type : **ACP - CONVENTIONAL CHIP SEAL COAT**)				
(Thickness(mm) : **50**)				
Deck Top		N	N	
Deck Rideability		7	7	
Deck Joints		4	4	Fingers raised -~ 5-6mm. @ both Abutments
Temperature (deg. C)	-10			
(Expansion Type : **FINGER PLATES**)				
(Fixed Type :)				
Gap Size (mm)	Gap Location			
57	South abutment			
46	North abutment			
Deck Drainage		4	4	All water flows to expansion assembly drain systems. Deck drains South to North. North headslope drain leaks with scour along underside. Weeping tubes broken off - staining underside.
Drains Clogged (Y/N)	No			
Curbs/Median		6	5	Minor scaling/isolated spalls on overhang.
(Curb Type : **Standard**)				
Scaling (Percent Area)	2			
Bridge Rail		5	2	Collision damage -NE corner. Missing bolts @ SE lattive, typical beam laps over lattice-adequate. Posts, collsion damage at WE, Insufficient threads, loose nuts, & missing nuts. 25-30% of post grout pads are failing.
(Type : **GALVANIZED STEEL VERTICAL BAR**)				
Bridge Rail Posts		3	3	
(Type : **GALVANIZED POST STEEL;GALVANIZED POST STEEL**)				
Bridge Rail/Posts Coating		7	7	
(Type : **GALVANIZED**)				
Sidewalk		X	X	
Girder/Beam				
Cover Plate		X	X	Post corrosion dmage at bolted splices has been arrested. Cracks in stiff welded and gusset welds repaired.-2012
Flange		5	6	
Web		6	6	
Stiffeners		3	6	
Splice		6	6	
Weld		3	7	
Diaphragms/Cross Frame		3	7	Cracks in bottom lat gusset and Dia stiffeners.

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **WG, 5 Spans, Lengths(m): 49.7-62.5-62.5-62.5-49.7, A-Ident Number: A0412-01**)				
Paint Condition		9	9	TR 2100, Therma-Rust.
(Colour Description : **BLUE**)				Minor touchups for scafdid scrapes - to be completed June 2013.
(Colour Code : **502-105**)				
Touchup Required (Y/N)	Yes			
Bearings		6	6	
Temperature (deg. C)	-10			
(Expansion Type : **ROCKER BEARING**)				
(Fixed Type : **ROCKER BEARING**)				
Coating Adequate (Y/N)	Yes			
Functioning (Y/N)	Yes			
Deck Underside		5	5	Transverse cracks est every 2-3m, with effloresence staining. No catwalk.
Stains (Percent Area)	1			
Span Alignment Problems				
Vertical (Y/N)	No			
Horizontal (Y/N)	No			
Superstructure General Rating		**3**	**2**	Rail damage governs; hazardous conditons

Substructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
Abutments				
Bearing Seats/Caps		5	5	
(Type : **CONCRETE**)				
Backwalls/Breastwalls		6	6	
Wingwalls		5	5	type 3 sealer
Piles		N	N	
Paint/Coating		9	9	
Abutment Stability		6	6	
Scour/Erosion		4	4	Scour along and below North headslope drain.
Piers/Bents				
(Type : **PIER-SOLID**)				
Bearing Seats/Caps		7	7	
(Type : **CONCRETE**)				
(Total Number of Bearing Piles : **0:0:0:0**)				
Pier Shaft/Piles		7	7	
Bracing/Struts/Sheathing		X	X	
Nose Plate		7	7	
Paint/Coating		5	5	Coating sonsumed, no corrosion.
(Colour Description :)				
(Colour Code :)				
Pier Stability		7	7	
Scour		N	N	Stream Frozen.
Debris (Y/N)	No			
Substructure General Rating		**5**	**5**	

Structure Usage				
		Last	**Now**	**Explanation of Condition**
Channel				
(U/S Direction : **W**)				(21.3m as measured north of pier #2. Approx 20m @ P3.-23-May-06)CARRIED
(D/S Direction : **E**)				
Alignment		8	8	
Bank Stability		7	7	
HWM (m below Top of Curb)	20.0			(Deck to water level.) 93/10/15 HWM (21.3m as measured north of pier #2. Approx 20m @ P3.-23-May-06)CARRIED
Drift (Y/N)	No			
Slope Protection		7	7	
(Type : **NATURAL; NATURAL**)				
Guidebank/Spurs		X	X	
Adequacy of Opening		8	8	
(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 #
REPAIR/REPLACE BRIDGE RAIL	2013	Repair collision damage, Replace missing nuts and tighten loose nuts.				
GALVANIZE/PAINT BRIDGE RAIL						
RETROFIT BRIDGE RAIL						
SEAL CURBS						
PATCH DECK						
SEAL DECK						
OVERLAY DECK	2015					
REPAIR/REPLACE DECK JOINTS						
RESET/ PAINT BEARINGS						
REPAINT SUPERSTRUCTURE						
STRAIGHTEN/REPLACE MEMBERS						
WASHING						
SHOTCRETE REPAIRS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
OTHER ACTION						
OTHER ACTION	2013	Repair N headslope drain and erosion.				
OTHER ACTION	2015	Replace deteriorated grout pad @ bridge rail posts.				
OTHER ACTION	2013	Patch deck pot holes.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/38.9**	**Sufficiency Rating (Last/Now) (%)**	**55.2/52.2**	Est. Repl. Yr	2043	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection	Monitor crack @ P2 Brg stiff. G1 @ top flanges, web relief hole next Level 2 inspection. Spans 1 & 2-G1 & Spans 4-5-G2 have UIT on BF details @ bracing; next Level 2 inspection compare details with other flanges.	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	Ed Kowal	Previous Assistant's Name			

Next Inspection Date	05-Mar-2016	Previous Inspection Date	18-Feb-2012
Inspection Cycle (Default) (months)	39		
Comment			