

Bridge Inspection											
Bridge File Number	74342 -1 Bridge					Form Type	TH TT				
Year Built/Year Supstr	1926/1919					Lot No.	1				
Bridge or Town Name	NORDEGG					Inspector Name	Owen Salava				
Located Over	NORTH SASKATCHEWAN RIVER, 6, WATERCRS-ST					Inspector Class	BR CLS A				
Located On	734:18 C1 16.198					Assistant Name					
Water Body Cl./Year						Assistant Class					
Navigabil. Cl./Year						Inspection Date	03-Dec-2010				
Legal Land Location	SE SEC 34 TWP 39 RGE 15 W5M					Data Entry By	Marcia Chavez				
Longitude, Latitude	-116:04:33, 52:23:49					Data Entry Date	28-Feb-2011				
Road Authority	Alberta Transportation (AIT)					Reviewer Name	John O'Brien				
Contract Main. Area	CMA18					Review Date	22-Feb-2011				
Clear Roadway/Skew	4.9 / 0 deg.					Dept. Reviewer Name	Chris Black				
AADT/Year	90 / 2009 (A)					Dept. Review Date	01-Mar-2011				
Road Classification	RLU-208G-90					Follow-Up By					
Detour Length (km)	190										
Allowable Load (t):	Single	H 34 STRINGER			Semi	HS 61 L4L5		Train	CS3 65 L4L5		----> On Critical Spans ---->Critical Member
Design Loading:	HS20					----> Primary Span					

Posting Information													
Required Vert. Clearance Posting (m)													
Posted Vertical Clearance (Y/N)			Yes										
Posted:	Lane	NB	On Bridge (m)	4.7	In Advance (Y/N)	No	Lane	SB	On Bridge (m)	4.7	In Advance (Y/N)	Yes	
Remarks	Measured 4.83m both ends.												
Required Load Posting (t)			Single					Semi				Truck Train	
Posted Loading (t)			Single					Semi		40.0		Truck Train	54.0
Posted:	Lane	NB	At Junction (Y/N)	No	In Advance (Y/N)	No	At Bridge (Y/N)	No	At Bridge (Y/N)	No	At Bridge (Y/N)	No	
Posted:	Lane	SB	At Junction (Y/N)	Yes	In Advance (Y/N)	No	At Bridge (Y/N)	No	At Bridge (Y/N)	No	At Bridge (Y/N)	No	
Remarks	Weight restriction sign on SB 734 @ jct Hwy 11, not for this bridge.												
Hazard Marker At Bridge (Y/N)	Yes												
Remarks	NW sign damaged but functional.												
Other Sign Types	Narrow Bridge symbol, Steep Grades, Use Lower Gear, Curve												

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

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		4	4	Steep curving grade down to wide valley but are within 1.0 km zone at each end.
Vertical Alignment		4	4	
Roadway Width (m)	7.000			
Approach Bump		5	5	
Guardrail (Y/N)	No			
Guardrail		X	X	
Length (m)				
Current Standard (Y/N)	No			
Termination Type	None			
Drainage		7	7	
Approach Road General Rating		4	4	

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : TH, 4 Spans, Lengths(m): 6.1-61-61-6.1, A-Ident Number: A0075-15;A0105-04)					
Special Features					
Special Feature		8	8	Dywidag end to end on both bottom chords - photo. A bracket is broken along S2 (L6L7W).	
(Type : EXT LONGIT POST TENS)					
Special Feature			X		
(Type :)					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	Snow covered.
Last	0	0	0	0	
Now	100.0	0.0	0.0	0.0	
Wearing Surface/Deck Top					
(Material Type : UNTREATED TIMBER)		7	N		
(Plank Thickness(mm) : 75)					
(Plank Width(mm) : 300)					
Deck Rideability					
		7	7		
Deck Joints					
		X	X		
Temperature (deg. C)		-10			
(Expansion Type :)					
(Fixed Type :)					
Gap Size (mm)		Gap Location			
Curbs/Wheel Guards					
		4	4	Minor isolated scrapes / chips. Wheelguards have been pushed outwards slightly. 4 wheelguard blocking split / rotated. 150 x 300 x 450 blocking.	
(Curb Type : Standard)					
(Type : TREATED TIMBER)					
(Thickness(mm) : 100)					
(Width(mm) : 300)					
Bridge Rail					
		3	3	Triple layer. Truss rail not continuous with TT spans - typ both ends & both sides - photo.	
(Type : GALVANIZED STEEL FLEX BEAM;FLEX BEAM)					
Bridge Rail Posts/Blocking					
		3	3	Some timber blocks are rotten. Steel end posts missing at S2 (LOW, LOE). Nearby posts.	
(Type : TREATED TIMBER)					
Bridge Rail/Posts Coating					
		6	6	Galvanized rail only.	
(Type : GALVANIZED)					
Sidewalk					
		X	X		

Superstructure								
Bridge Component		Last		Now		Explanation of Condition		
(Primary Span : TH, 4 Spans, Lengths(m): 6.1-61-61-6.1, A-Ident Number: A0075-15;A0105-04)								
Wide Load Damage (Y/N)	Yes							
High Load Damage (Y/N)	Yes							
Top Chord			4	4	Rivets missing at top splice plates. Sparce minor nicks. All wind bracing have past damage & repairs have left minor distortions. Minor distortion on wind bracing. S2(m4m5W) has cracked in 4. S2(U3L4W), S3(U2L3W, m2L4W) have bends & bows. S3(U2L2W, U5L5E, U8L8E) have bends. S3(U1U1, U9U9) have HLD. S3(U1L1W) has a scrape with 2 slivers. Minor nicks along bottom chord. Various open holes & headless rivets that need bolts. Lattice strapping removed to accomodate rail/blocking. 13/bay at S2, 15/bay at S3 = 130+150=280.			
Batter Posts			7	7				
Sway Bracings			4	4				
Diagonals			3	3				
Verticals			4	4				
Portals			4	4				
Connections			4	4				
Floor Beams			7	7				
Bottom Chord			4	4				
(No. of Stringers : 130;150)								
Stringer Detail Ratings								
	N (count)	1 (count)	2 (count)	3 (count)				
Last								
Now								
Stringers			7	7				
(Type : STEEL)								
(Width(mm) : 125)								
(Depth(mm) : 300)								
(Spacing(mm) : 360)								
Paint Condition			5	5	Minor superficial rusting at bearings. Yellow.			
(Colour Description :)								
(Colour Code :)								
Touchup Required (Y/N)	No							
Bearings			4	4	Expansion bearings twisted slightly - photo. Pier 1 & 3. Pier 2. The SE bearing is overextended 25mm - photo.. (Notch cut @ anchor pins still overextended - photo. 29Jun2010).			
Temperature (deg. C)	-10							
(Expansion Type : ROLLER NEST BEARING)								
(Fixed Type : PINNED BEARING)								
Functioning (Y/N)	Yes							
Sub Deck/Deck Underside			5	5	Some ends with vert. split/cracked.			
(Material Type : TREATED TIMBER)								
(Plank Thickness(mm) : 100)								
(Plank Width(mm) : 300)								
Defects (Percent Area)	2							
Span Alignment Problems								
Vertical (Y/N)	No							
Horizontal (Y/N)	No							
Superstructure General Rating			3	3				
Superstructure								
Bridge Component		Last		Now		Explanation of Condition		
(Secondary Span : TT)								
Special Features								
Special Feature				X				
(Type :)								
Special Feature				X				
(Type :)								

Superstructure								
Bridge Component		Last	Now	Explanation of Condition				
(Secondary Span : TT)								
Wearing Surface/Deck Top Detail Ratings								
	N (%)	1 (%)	2 (%)	3 (%)				
Last	50	0	0	0	Snow covered.			
Now	100.0	0.0	0.0	0.0				
Wearing Surface/Deck Top			4	N	(Well worn. 29Jun2010).			
(Material Type : UNTREATED TIMBER)								
(Plank Thickness(mm) : 100)								
(Plank Width(mm) : 300)								
Deck Rideability			5	5				
Wheel Guards			5	N	(Plow scrapes. 29Jun2010). Snow covered.			
(Curb Type : Standard)								
(Type : TREATED TIMBER)								
(Thickness(mm) : 100)								
(Width(mm) : 300)								
Bridge Rail			3	3	Single layer not continuous with main span rail over piers 1 & 3, typical - photo. Rails are not aligned either.			
(Type : GALVANIZED STEEL FLEX BEAM;FLEX BEAM)								
Bridge Rail Posts			6	6	Rail only.			
(Type : TREATED TIMBER)								
Bridge Rail/Posts Coating			6	6				
(Type : GALVANIZED)								
(No. of Stringers : 28;28)								
Stringer Detail Ratings								
	N (count)	1 (count)	2 (count)	3 (count)				
Last	0	0	0	0	S4 North exterior stringer split short section.			
Now	0	0	0	0				
Stringers			4	4				
(Type : TREATED TIMBER)								
(Width(mm) : 150)								
(Depth(mm) : 400)								
(Spacing(mm) : 360)								
Sub Deck/Deck Underside			5	5	Some ends vertical split / crack.			
(Material Type : TREATED TIMBER)								
(Plank Thickness(mm) : 100)								
(Plank Width(mm) : 300)								
Defects (Percent Area)		2						
Span Alignment Problems								
Vertical (Y/N)		No						
Horizontal (Y/N)		No						
Superstructure General Rating			4	4				
Substructure								
Bridge Component		Last	Now	Explanation of Condition				
Abutments								
(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)					
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 : TREATED TIMBER)					
(Depth(mm) : 356)					
(Width(mm) : 305)					
Backwalls/Breastwalls			6	6	
Greatest Height (m)		1.75			
Wingwalls			6	6	
(Total Number of Bearing Piles : 5:5)					
Piles Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
Last	0	0	0	0	
Now	0	0	0	0	
Piles			4	4	
Paint/Coating			X	X	
Abutment Stability			5	5	
Scour/Erosion			7	7	
Piers/Bents					
(Type : PIER-SOLID)					
(Total Number of Caps/Corbels : 7:1:7)					
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	4	
(Type : CONCRETE)					
(Total Number of Bearing Piles : 11:0:11)					
Piles Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
Last	0	0	0	0	
Now	0	0	0	0	
Pier Shaft/Piles			5	5	
Greatest Height (m)		4.10			
Bracing/Struts/Sheathing			7	7	
Nose Plate			6	6	
Paint/Coating			X	X	
(Colour Description :)					
(Colour Code :)					
Pier Stability			5	5	
Scour			7	7	
Debris (Y/N)		No			

2nd pile from East @ South abutment is split.

TT end piers with steel corbels.
 TT pier caps with steel corbels, main.
 1 row = 15 piles / pier (1 & 3), including nose pile.
 Pier 1 & 3 buried in ground.

Substructure				
Bridge Component		Last	Now	Explanation of Condition
Substructure General Rating		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
Channel				
(U/S Direction : W)				Meandering/braided river.
(D/S Direction : E)				
Alignment		6	6	
Bank Stability		6	6	
HWM (m below Top of Curb)				HWM not visible. (Water to deck 5.74m).
Drift (Y/N)	No			
Slope Protection		7	7	Halfway up both slopes.
(Type : RIP RAP; RIP RAP)				
Guidebank/Spurs		7	7	
Adequacy of Opening		7	7	
(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 #	
REPAIR/REPLACE BRIDGE RAIL	2011	Make rail continuous & double-up flexbeam on approach spans, new expansion sleeve/detail, replace rotten blocks, add steel end posts at S2 L0 panel points.					
RETROFIT BRIDGE RAIL							
SEAL CURBS	2011	Replace 4 wheelguard blocking & 2 sections.					
PATCH DECK							
REPLACE STRIP DECK							
REPLACE SUB DECK							
RESET/ PAINT BEARINGS							
REPAINT SUPERSTRUCTURE							
STRAIGHTEN/REPLACE MEMBERS	2011	Heat straighten S2(U3L4W), S3(U2L2W, U2L3W, m2L4W, U1U1, U9U9, U5L5E & U8L8E).					
WASHING							
SHOTCRETE REPAIRS							
CORE TIMBER CAPS/CORBELS							
REPAIR/REPLACE TIMBER CAPS							
REPAIR ABUTMENT SCOUR/EROSION							
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2011	Band split A1 pile.					
OTHER ACTION	2011	Replace dywidag bracket at S2 L6L7W.					
OTHER ACTION	2011	Install approach rails to meet standards.					
OTHER ACTION	2011	Add bolts, see 2010 UT report.					
OTHER ACTION	2011	Grind slivers smooth at S3(U1L1W).					
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	38.9/38.9	Sufficiency Rating (Last/Now) (%)	33.7/33.7	Est. Repl. Yr	2020	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	UT inspection 2010. Monitor cracks at S2 m4m5W at m4 & U2L3E at U2. Photos from June 2010 UT included as additional attachment.		Department Comments				
Maintenance Reviewed By		Date		Estimated Total	0		
Proposed Long-Term Strategy	With normal maintenance bridge should be good until 2034. RS						
On 3-Year Program (Y/N)							

Proposed Action			
Previous Inspector's Name	Owen Salava	Previous Assistant's Name	Bryce Clayton
Next Inspection Date	03-Mar-2014	Previous Inspection Date	29-Jun-2010
Inspection Cycle (Default) (months)	39		
Comment			