

Bridge Inspection									
Bridge File Number	76102 S-2 Bridge				Form Type	PSR			
Year Built/Year Supstr	1985/1985				Lot No.	2			
Bridge or Town Name	MORINVILLE				Inspector Name	Shane Hall			
Located Over	642:04 C1 12.004				Inspector Class	BR CLS A			
Located On	2:36 L1 9.952				Assistant Name				
Water Body Cl./Year					Assistant Class				
Navigabil. Cl./Year					Inspection Date	22-Apr-2013			
Legal Land Location	NW SEC 33 TWP 55 RGE 25 W4M				Data Entry By	Theresa Lacusta			
Longitude, Latitude	-113:39:41, 53:48:06				Data Entry Date	01-May-2013			
Road Authority	Alberta Transportation (AIT)				Reviewer Name	Eric Carcoux			
Contract Main. Area	CMA09				Review Date	30-Apr-2013			
Clear Roadway/Skew	13.1 /				Dept. Reviewer Name	Brent Herrick			
AADT/Year	11,540 / 2012 (A)				Dept. Review Date	01-May-2013			
Road Classification	RAD-412.4-120				Follow-Up By				
Detour Length (km)	1								
Allowable Load (t):	Single	CS1 28	Semi	CS2 49	Train	CS3 62	----> On Critical Spans ---->Critical Member		
Design Loading:	MS300						----> Primary Span		

Posting Information												
Required Vert. Clearance Posting (m)		UNDER: 642 C1 5.3m										
Posted Vertical Clearance (Y/N)		Yes										
Posted:	Lane	EB	On Bridge (m)	5.3	In Advance (Y/N)	Yes	Lane	WB	On Bridge (m)	5.3	In Advance (Y/N)	Yes
Remarks		WB posted on east structure.										
Required Load Posting (t)		Single		Semi		Truck Train						
Posted Loading (t)		Single		Semi		Truck Train						
Posted:	Lane	NB	At Junction (Y/N)	In Advance (Y/N)		At Bridge (Y/N)						
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)		No										
Remarks		Not required.										
Other Sign Types		Warning, Information.										

Utilities (Located at)									
Utility Attachments									
Telephone					Gas				
Power	Street lights, GS lighting.				Municipal				
Others					Problem (Y/N)	No			
Remarks		Power conduit in girder U/S in S3 between G1/G2 up to P2.							

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Top of crest, typical G/S.
Vertical Alignment		7	7	
Roadway Width (m)	13.400			ACP patch beginning to ravel S. approach (photo).
Approach Bump		4	3	ACP ravelling and pot holes forming N & S approach.-photo Large 2mx1.5mx75mm deep potholes @ SE approach.-photo
Guardrail (Y/N)	Yes			Not thrie beam type.
Guardrail		4	3	Insufficient post spacing/blocking.
Length (m)	99.000			3 broken posts & 3 W-beam sections damaged.-photo
Current Standard (Y/N)	No			Missing all 8 splice bolts at one connection at NW corner.-photo
Termination Type	Turned Down			

Approach Road					
		Last	Now	Explanation of Condition	
Drainage		3	3	Drain troughs spalled. Approach curbs settled & approach drainage running past down drain and under headslope @ SW corner.-photo Erosion hole @ NW under abut due to poor approach drainage.-photo	
Approach Road General Rating		7	3		
Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : DBT, 3 Spans, Lengths(m): 10-20-10, A-Ident Number:)					
Special Features					
Special Feature			X		
(Type :)					
Special Feature			X		
(Type :)					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	
Last					
Now					
Wearing Surface		5	4	Construction joint @ centre seems to be cause of stains between girders 5 & 6 at deck underside.	
(Material Type : CONCRETE)					
(Thickness(mm) : 50)		Several narrow to med long cracks running along girder lines suggests lat. connection problem.-photo			
Lateral Connection Problem (Y/N)	Yes				
Deck Top		N	N		
Deck Rideability		7	7		
Deck Joints		6	6	North cover plate sounds loose under traffic.	
Temperature (deg. C)		2			
(Expansion Type : ARMoured GLAND (WABO UNDER FINGER OR SLIDING PLATES))					
(Fixed Type :)					
Gap Size (mm)		Gap Location			
60		N. abut			
45		S. abut			
Deck Drainage		5	5	Bird bath along West curb near NW corner and at SW and SE exp. joints. -photo -06-Jul-2011	
Drains Clogged (Y/N)		No			
Curbs/Median		4	4	Minor scrapes from grader. Heavy scaling @ SW & SE corners. Vertical cracks & rust staining on exterior fascia below bridgerail posts.	
(Curb Type : Standard)					
Scaling (Percent Area)		30			
		100mm dia. spalls at a few locations on both curbs.			
Bridge Rail		8	4	8 missing splice bolts in W rail, 2 missing in E rail.-photo	
(Type : GALVANIZED STEEL BRIDGE TUBE)		Approx. 2 dozen A/B with insufficient thread.			
Bridge Rail Posts		4	4		
(Type : GALVANIZED POST STEEL;GALVANIZED POST STEEL)					
Bridge Rail/Posts Coating		7	6		
(Type : GALVANIZED)					
Sidewalk		X	X		

Superstructure						
Bridge Component				Last	Now	Explanation of Condition
(Primary Span : DBT, 3 Spans, Lengths(m): 10-20-10, A-Ident Number:)						
Girder Detail Ratings						
	N (count)	1 (count)	2 (count)	3 (count)		
Last						
Now						
Girders				4	4	One chip near north end at c/l not serious. Diagonal narrow cracking @ end block on the abutments extending into bottom of deck and narrow web, typical DBT. S1G8/G9 cracked at South abutment bearing with corrosion staining - photo.
Cracking (Y/N)		Yes				
Spalling (Percent Area)		3				
(Number Of Girders : 10)						
				Spalling & delam cracks @ girder undersides @ CL.-photo		
Diaphragms/Cross Frame				7	7	
Bearings				7	7	Note: Exp. type - SS/Teflon A1/A2 Fixed type - Pad pearing P1/P2
Temperature (deg. C)		2				
(Expansion Type : REINFORCED NEOPRENE BEARING WITH TEFLON AND STAINLESS STEEL)						
(Fixed Type : REINFORCED PAD BEARING)						
Coating Adequate (Y/N)		Yes				
Functioning (Y/N)		Yes				
Deck Underside				3	3	Delam & rust staining between girder 5 & 6 from west, Span 1-3.-photo
Stains (Percent Area)		4				
Span Alignment Problems						
Vertical (Y/N)		No				
Horizontal (Y/N)		No				
Superstructure General Rating				3	3	
Substructure						
Bridge Component				Last	Now	Explanation of Condition
Abutments						
Bearing Seats/Caps				4	4	Delam. crack with rust staining SE (photo).
(Type : CONCRETE)						
Backwalls/Breastwalls				7	7	
Wingwalls				7	7	
Piles				N	N	
Paint/Coating				4	4	Peeling SE & NW.
Abutment Stability				8	8	
Scour/Erosion				N	4	Erosion hole at NW corner under wingwall due to poor approach drainage.-photo
Piers/Bents						
(Type : PIER-COLUMN)						
Bearing Seats/Caps				8	8	Rust at base of columns & spot rusting on columns in splash zone. Grey, columns only.
(Type : CONCRETE)						
(Total Number of Bearing Piles : 7:7)						
Pier Shaft/Piles				8	8	
Bracing/Struts/Sheathing				X	X	

Substructure				
Bridge Component		Last	Now	Explanation of Condition
Nose Plate		X	X	
Paint/Coating		4	4	
(Colour Description :)				
(Colour Code :)				
Pier Stability		8	8	
Scour		7	7	
Debris (Y/N)	No			
Substructure General Rating		4	4	
Structure Usage				
		Last	Now	Explanation of Condition
Grade Separation				
Road Alignment		7	7	Limited sight distance due to horizontal curve heading West.
Traffic Safety Features		6	6	
Type	Guardrail			
Slope Protection		4	4	North - 300mm down, 0mm out; South - 220mm down, 55mm out. Undermined from approach drainage running under slab @ NW & SW.
(Type : CONCRETE; CONCRETE)				
Bank Stability		7	7	
Drainage		6	6	
Grade Separation General Rating		4	4	

Maintenance Recommendations							
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #	
REPAIR/REPLACE BRIDGE RAIL	2015	Install 10 missing splice bolts.					
GALVANIZE/PAINT BRIDGE RAIL							
SEAL CURBS							
PATCH DECK	2013	Repair c/l joint & seal. Cracks Patch delam concrete between G5/G6 full length.					
SEAL DECK							
OVERLAY DECK							
REPAIR/REPLACE DECK JOINTS							
RESET/ PAINT BEARINGS							
WASHING							
SHOTCRETE REPAIRS							
REPAIR ABUTMENT SCOUR/EROSION	2013	Repair NW & SW drainage.					
PLACE ADDITIONAL RIP RAP							
REMOVE DRIFT ACCUMULATION							
OTHER ACTION	2013	Assess cause of spalling and delam cracks at bridge CL and potential lateral connection problem.					
OTHER ACTION	2013	Replace damaged GR posts and rail. Install 8 missing splice bolts.					
OTHER ACTION	2013	Patch ACP at approaches.					
OTHER ACTION							
Structural Condition Rating (Last/Now) (%)	38.9/38.9	Sufficiency Rating (Last/Now) (%)	49.2/38.0	Est. Repl. Yr	2042	Maint. Req. (Y/N)	Yes
Special Comments for Next Inspection	Monitor delam cracks at South abutment.		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	Kris Bosters		Previous Assistant's Name				
Next Inspection Date	22-Jan-2015		Previous Inspection Date	06-Jul-2011			
Inspection Cycle (Default) (months)	21						
Comment							