Bridge Inspection

Bridge File Number	02235 -1 Bridge	Form Type	PSR
Year Built/Year Supstr	1957/1957	Lot No.	2
		Inspector Name	Jason Saly
Bridge or Town Name	ECKVILLE	Inspector Class	BR CLS A
Located Over	LASTHILL CREEK, 3.88.12, WATERCRS-ST	Assistant Name	
Located On	766:12 C1 3.264	Assistant Class	
Water Body Cl./Year		Inspection Date	16-Feb-2012
Navigabil. Cl./Year		Data Entry By	Marcia Chavez
Legal Land Location	SW SEC 15 TWP 39 RGE 3 W5M	Data Entry Date	09-Mar-2012
Longitude, Latitude	-114:21:41, 52:20:55	Reviewer Name	John O'Brien
Road Authority	Alberta Transportation (AIT)	Review Date	29-Feb-2012
Contract Main. Area	CMA18	Dept. Reviewer Name	Andrew Smikles
Clear Roadway/Skew	7.9 / 0 deg.	Dept. Review Date	14-Mar-2012
AADT/Year	2,550 / 2010 (A)	Follow-Up By	
Road Classification	RCU-209-110		
Detour Length (km)	6		

Allowable Load (t):	Single	H 39 GIRDER	Semi	HS 51 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								

Hazard Marker At Bridge (Y/N)	Yes
Remarks	At varying heights & locations (0.7m o/s).
Other Sign Types	

Utilities (Located at)

Utility Attachments			
Telephone		Gas	
Power	4 wires across road @ North end & 3 wires 20m off c/l.	Municipal	
		Problem (Y/N)	No
Others			
Remarks			

Approach Road

		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	'T' intersection at SW corner.
Vertical Alignment		8	8	
Roadway Width (m)	8.600			Bump markers installed both approaches, settled.
Approach Bump		4	4	
Guardrail (Y/N)	Yes			19m @ SW, 34.2m @ SE & NW, 22.8m @ NE. Not standard spacing, posts off end of bridge - 1 required all corners.
Guardrail		7	6	
Length (m)	19.000			
Current Standard (Y/N)	No			
Termination Type	TURNED DOWN			
Drainage		8	N	Snow covered.
Approach Road General Rating		**7**	**7**	

Superstructure					
Bridge Component			**Last**	**Now**	**Explanation of Condition**
(Primary Span : **PO, 3 Spans, Lengths(m): 18.3-18.3-18.3, 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	Gutters snow covered.
Now	10.0	0.0	0.0	0.0	
Wearing Surface			4	6	(Delam adjacent joints - photos. 13Sep2005). Chip seal coat on HDOL.
(Material Type : **CONCRETE - CONVENTIONAL CHIP SEAL COAT**)					
(Thickness(mm) : **100**)					
Lateral Connection Problem (Y/N)	No				
Deck Top			N	N	
Deck Rideability			6	6	
Deck Joints			3	4	Open joint at N/S abut causing slope erosion. Fibre board missing at both abut joints. Jnt leakage causing deterioration fo concrete end diaphragms at pier locations.
Temperature (deg. C)	-5				
(Expansion Type : **SLIDING PLATES**)					
(Fixed Type : **BUFFER ANGLES**)					
Gap Size (mm)	Gap Location				
46	1 pier (South pier)				
45	2 pier (North pier)				
30	Abut 1 (South abutment)				
14	Abut 2 (North abutment)				
Deck Drainage			5	4	No deck drains. See deck jnt diaphragm; underside deck & bearing damage from leakage. Som hslp erosion.
Drains Clogged (Y/N)					
Curbs/Median			3	3	Wide longit. crack full length of E curb. Various delam/spall W curb due to low cover.
(Curb Type : **Standard**)					
Scaling (Percent Area)	20				
Bridge Rail			6	5	Single layer; minor accident damage @ W rail, N span - no problem. Some nuts only 50% threaded. NW end post missing nut on one A/B.
(Type : **GALVANIZED STEEL FLEX BEAM**)					
Bridge Rail Posts			3	3	
(Type : **GALVANIZED POST STEEL;GALVANIZED POST STEEL**)					
Bridge Rail/Posts Coating			6	6	
(Type : **GALVANIZED**)					
Sidewalk			X	X	
Girder Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
Last					
Now	0	0	0	0	

Superstructure				
Bridge Component		**Last**	**Now**	**Explanation of Condition**
(Primary Span : **PO, 3 Spans, Lengths(m): 18.3-18.3-18.3, A-Ident Number:**)				
Girders		5	5	Typical spalls around shoe plates.
Cracking (Y/N)	Yes			
Spalling (Percent Area)	1			
(Number Of Girders : **12**)				
Diaphragms/Cross Frame		6	4	Minor scaling at abut diaphragms due to leaky joints. Spalling of end diaphragms at the S pier.
Bearings		5	5	Bearings not set on proper alignment on South pier East side.
Temperature (deg. C)	-11			
(Expansion Type :)				
(Fixed Type :)				
Coating Adequate (Y/N)	No			
Functioning (Y/N)	Yes			
Deck Underside		4	4	Staining & slight spalling of concrete at joint locations under the gutter.
Stains (Percent Area)	1			
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				
Bearing Seats/Caps		7	5	Horiz. crack in N abut, minor. Gravel, dirt & debris on seats.
(Type : **CONCRETE**)				
Backwalls/Breastwalls		7	6	
Wingwalls		7	7	
Piles		N	N	
Paint/Coating		X	X	
Abutment Stability		7	7	
Scour/Erosion		3	4	Minor erosion channels start at N abut seat.
Piers/Bents				
(Type : **PIER-SOLID**)				Cracked & scaling under P1G1 & P1G4 bearings. Staining from joints; vertical cracks extending from under P1G1/P1G4 bearings.
Bearing Seats/Caps		4	4	
(Type : **CONCRETE**)				
(Total Number of Bearing Piles : **0:0**)				
Pier Shaft/Piles		5	5	
Bracing/Struts/Sheathing		X	X	
Nose Plate		7	7	
Paint/Coating		5	5	Nose plate has surface corrosion.
(Colour Description :)				
(Colour Code :)				
Pier Stability		8	8	
Scour		N	5	Minor scour aroud S pier.
Debris (Y/N)	Yes			Debris against S pier on S bank.

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**)				
(D/S Direction : **E**)				
Alignment		8	8	
Bank Stability		8	7	
HWM (m below Top of Curb)				HWM not visible but drift accummulation on top of pier caps indicates level of high water.
Drift (Y/N)	No			
Slope Protection		3	4	Insufficient at hslps.
(Type : **NATURAL; NATURAL**)				
Guidebank/Spurs		X	X	
Adequacy of Opening		7	5	
(Fish Compensation Measure 1 : **NONE**)				
(Fish Compensation Measure 2 : **NONE**)				
Channel General Rating		**3**	**4**	

Maintenance Recommendations

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
REPAIR/REPLACE BRIDGE RAIL	2012	Replace missing nut on NW end post anchor bolt.				
GALVANIZE/PAINT BRIDGE RAIL						
SEAL CURBS	2020	Rehab curbs.				
PATCH DECK						
SEAL DECK						
OVERLAY DECK						
REPAIR/REPLACE DECK JOINTS						
RESET/ PAINT BEARINGS	2020	At major rehab.				
WASHING	2012	Annually.				
SHOTCRETE REPAIRS						
REPAIR ABUTMENT SCOUR/EROSION	2012	Repair headslopes & armour.				
PLACE ADDITIONAL RIP RAP	2012	100m3 - Class I/II.				
REMOVE DRIFT ACCUMULATION						
OTHER ACTION	2012	Remove gravel from abutment seats.				
OTHER ACTION	2012	Patch pier caps cracked under bearings.				
OTHER ACTION	2012	Reinstall hazard markers to meet standard.				
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						
OTHER ACTION						

Structural Condition Rating (Last/Now) (%)	**44.4/44.4**	**Sufficiency Rating (Last/Now) (%)**	**52.6/54.3**	Est. Repl. Yr	2020	Maint. Reqd. (Y/N)	Yes

Special Comments for Next Inspection		Department Comments	

Maintenance Reviewed By		Date		Estimated Total	0

Proposed Long-Term Strategy	2005.03.10 Bridges should be good until 2020 when rehab is required.
On 3-Year Program (Y/N)	
Proposed Action	

Previous Inspector's Name	Dave Lam	Previous Assistant's Name	
Next Inspection Date	16-May-2015	Previous Inspection Date	13-Sep-2005
Inspection Cycle (Default) (months)	39		

Comment	