

Bridge Inspection							
Bridge File Number	09996 -1 Bridge			Form Type	PCS		
Year Built/Year Supstr	1966/1966			Lot No.	1		
Bridge or Town Name	GALAHAD			Inspector Name	Owen Salava		
Located Over	PAINTEARTH CREEK, 5.23, WATERCRS-ST			Inspector Class	BR CLS A		
Located On	861:02 C1 17.842			Assistant Name			
Water Body Cl./Year				Assistant Class			
Navigabil. Cl./Year				Inspection Date	13-Sep-2012		
Legal Land Location	NE SEC 22 TWP 39 RGE 14 W4M			Data Entry By	Marcia Chavez		
Longitude, Latitude	-111:55:28, 52:22:29			Data Entry Date	02-Oct-2012		
Road Authority	Alberta Transportation (AIT)			Reviewer Name	John O'Brien		
Contract Main. Area	CMA21			Review Date	27-Sep-2012		
Clear Roadway/Skew	8.2 / -15 deg. (LHF)			Dept. Reviewer Name	Andrew Smikles		
AADT/Year	60 / 2011 (A)			Dept. Review Date	22-Oct-2012		
Road Classification	RCU-209G-90			Follow-Up By			
Detour Length (km)	6						
Allowable Load (t):	Single	CS1 30 GIRDER	Semi	CS2 52 GIRDER	Train	CS3 75 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			Wrong location; too low, 500-830mm to bottom (photo); SE leaning.					
Other Sign Types			60 kph, Steep Hill.					

Utilities (Located at)			
Utility Attachments			
Telephone	West side of road.		Gas
Power	3 wires 15m East of c/l. 3 wires 100m South & North of bridge crossing.		Municipal Problem (Y/N) No
Others			
Remarks			

Approach Road				
		Last	Now	Explanation of Condition
Horizontal Alignment		7	7	Farm & field entrances both ends. Deep valley, good sight distance.
Vertical Alignment		6	6	
Roadway Width (m)	9.300			Insufficient length, posts. SW turn down end too high.
Approach Bump		7	7	
Guardrail (Y/N)	Yes			
Guardrail Length (m)	11.000	6	6	
Current Standard (Y/N)	No			
Termination Type	Turn Down			
Drainage		4	6	
<b>Approach Road General Rating</b>		<b>6</b>	<b>6</b>	

Superstructure					
Bridge Component		Last	Now	Explanation of Condition	
(Primary Span : <b>HC, 3 Spans, Lengths(m): 8.5-8.5-8.5, A-Ident Number: )</b>					
<b>Special Features</b>					
Special Feature			X		
(Type : )					
Special Feature			X		
(Type : )					
Wearing Surface/Deck Top Detail Ratings					
	N (%)	1 (%)	2 (%)	3 (%)	Gravel covered.
<b>Last</b>	40	0	0	0	
<b>Now</b>	90.0	0.0	0.0	0.0	
Wearing Surface			X	X	(Connector pockets failed on S2G5-7 & S3G6,7. 19Jun2012).
(Material Type : )					
(Thickness(mm) : )					
Lateral Connection Problem (Y/N)	Yes				
Deck Top			4	4	Worn girder edges and top abrasion (photo).
Deck Rideability			5	5	
Deck Joints			4	4	S1/2 upto 40mm gap. Damage to buffer angle; previous spall at buffer angle not seen.
Bump (Y/N)		No			
Deck Drainage			4	6	Girders separating. (Gravel along curbs impedes drainage. 19Jun2012).
Drains Clogged (Y/N)		No			
Curbs/Median			3	3	Numerous spalls on face & corners with exposed void on S2G10 - photo. Spalls backside of curbs behind post - photo.
(Curb Type : <b>Standard</b> )					
Scaling (Percent Area)		15			
Bridge Rail			4	5	Single layer; missing 5 splice bolts & 1 nut missing on bridgerail post connection along W on N (photo).  S1G1 post 5 nut not fully engaged - photo. (Damage to post anchorage at 2 locations along W & along E (photo). 19Jun2012). Concrete spall & scale at post anchors.
(Type : <b>GALVANIZED STEEL FLEX BEAM</b> )					
Bridge Rail Posts			3	4	
(Type : <b>GALVANIZED POST STEEL; GALVANIZED POST STEEL</b> )					
Bridge Rail/Posts Coating			6	6	
(Type : <b>GALVANIZED</b> )					
Sidewalk			X	X	
<b>Girder Detail Ratings</b>					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	0	0	0	5	
<b>Now</b>	0	0	0	2	
Girders			3	3	Wide longit. crack in AZ, 1 leg, with sound concrete on S1G7,9. S3G5 has narrow shear crack. S1G5 & S2G2 spall in AZ. 50mm bearing with spalling in AZ of S1G1 at pier (photo). Reduced bearing length, drift pins popping out side of cap at P1 (photo). 100mm x 100mm punchout on S3G7. Connector pockets failed at SG5-7 & S3G6,7. Non grouted pockets mean other girders have maximum 4 rating. Connector pockets filled with tar.
Last Complete Inspection Date		14-Sep-2012			
Cracking (Y/N)		Yes			
Spalling (Percent Area)		2			
Lift or Connector Pocket Grouted (Y/N)		No			
(Number Of Girders : <b>30</b> )					
<b>Span Alignment Problems</b>					
Vertical (Y/N)		No		(P1 shifting W ~100mm (photo). 19Jun2012). S1 190mm out of alignment at A1.	
Horizontal (Y/N)		Yes			
<b>Superstructure General Rating</b>			<b>3</b>	<b>3</b>	

Substructure					
Bridge Component		Last	Now	Explanation of Condition	
<b>Abutments</b>					
(Extended Backwall Piles (Y/N) : <b>Y</b> )					
(Extended Backwall Piles Spacing(mm) : <b>1600</b> )					
(Total Number of Caps/Corbels : <b>3:3</b> )				A1 subcap hidden by gravel from roadway.	
Bearing Seats/Caps/Corbels Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	1	0	0	0	
<b>Now</b>	1	0	0	0	
Bearing Seats/Caps/Corbels				5	5
(Type : <b>TREATED TIMBER</b> )					
(Depth(mm) : <b>350</b> )					
(Width(mm) : <b>300</b> )					
Backwalls/Breastwalls			5	5	A1
Greatest Height (m)		1.20			
Wingwalls			4	4	NE top plank cracked, functional. Missing SE tin top, pile rotting (photo).
(Total Number of Bearing Piles : <b>7:7</b> )				Assume North abutment has 7 piles. Abutment 2 headslope above bottom of cap.	
Piles Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	8	0	0	0	
<b>Now</b>	8	0	0	0	
Piles				6	6
Paint/Coating				X	X
Abutment Stability				5	5
Scour/Erosion				4	5
Surface erosion @ SW headslope - photo. (Large amount of gravel accumulation on hspls. 19Jun2012).					
<b>Piers/Bents</b>					
(Type : <b>PIER-COLUMN</b> )					
(Total Number of Caps/Corbels : <b>3:3</b> )					
Bearing Seats/Caps/Corbels Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	0	0	0	0	
<b>Now</b>	0	0	0	1	
Bearing Seats/Caps/Corbels				6	3
(Type : <b>TREATED TIMBER</b> )					
(Depth(mm) : <b>300</b> )					
(Width(mm) : <b>350</b> )					
(Total Number of Bearing Piles : <b>8:8</b> )					
Piles Detail Ratings					
	N (count)	1 (count)	2 (count)	3 (count)	
<b>Last</b>	0	0	0	0	
<b>Now</b>	0	0	0	0	
Pier Shaft/Piles				4	4
Greatest Height (m)		5.50			
Bracing/Struts/Sheathing				4	4
Nose Plate				5	5
Small section of cap on pier 1 nose only.					
Paint/Coating				X	X
(Colour Description : )					
(Colour Code : )					
Several piles with wide checking. Pier 1 pile 6 steel jacket, base poor - photo. (Beginning rot in top of P1p4. 19Jun2012).					
Pier 2, two cracked planks - functional (photo).					

Substructure				
Bridge Component		Last	Now	Explanation of Condition
Pier Stability		3	3	Pier 1 leaning West approx 100mm.
Scour		4	4	Minor, both piers.
Debris (Y/N)	No			
<b>Substructure General Rating</b>		<b>3</b>	<b>3</b>	
Structure Usage				
		Last	Now	Explanation of Condition
<b>Channel</b>				
(U/S Direction : <b>W</b> )				
(D/S Direction : <b>E</b> )				
Alignment		7	7	
Bank Stability		7	7	
HWM (m below Top of Curb)				HWM not visible.
Drift (Y/N)	No			Beaver dam d/s of bridge.
Slope Protection		4	5	South headslope.
(Type : <b>RIP RAP; NONE</b> )				
Guidebank/Spurs		X	X	
Adequacy of Opening		7	7	
(Fish Compensation Measure 1 : <b>NONE</b> )				
(Fish Compensation Measure 2 : <b>NONE</b> )				
<b>Channel General Rating</b>		<b>4</b>	<b>5</b>	

Maintenance Recommendations										
Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #				
REPAIR/REPLACE BRIDGE RAIL	2012	Tighten post bolt; add 5 splice bolts.								
SEAL CURBS	2012	Patch spalls approx 0.5m2.								
PATCH DECK	2012	Patch spall @ buffer angle, if not yet done.								
OVERLAY DECK										
STRAIGHTEN/REPLACE MEMBERS										
WASHING	2012	Remove gravel.								
SHOTCRETE REPAIRS										
CORE TIMBER CAPS/CORBELS										
REPAIR/REPLACE TIMBER CAPS										
REPAIR ABUTMENT SCOUR/EROSION										
PLACE ADDITIONAL RIP RAP										
REMOVE DRIFT ACCUMULATION										
INSTALL STRUTS										
OTHER ACTION	2012	Repair punchout.								
OTHER ACTION	2012	Stub P1p4.								
OTHER ACTION	2012	Bolt 150mm x 300mm plank to P1 cap along S side.								
OTHER ACTION	2012	Remove tar from lift & connectors fill with 0.5m(cubed) NH grout; repair connections where failed.								
OTHER ACTION	2012	Install hazard markers @ standard location/height.								
OTHER ACTION	2012	Fill erosion gully 3m3 pitrun.								
OTHER ACTION	2012	Consider reset girders to improve bearing & pull pier in line.								
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
OTHER ACTION										
<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>56.6/58.9</b>	<b>Est. Repl. Yr</b>	<b>2016</b>	<b>Maint. Req. (Y/N)</b>	<b>Yes</b>			
Special Comments for Next Inspection	Monitor P1 stability. Monitor shear crack & exposed rebar areas.		Department Comments							
Maintenance Reviewed By		Date	Estimated Total	0						
Proposed Long-Term Strategy	2003.08.18 Replace bridge by 2015 or when road is paved/upgraded.									
On 3-Year Program (Y/N)										

Proposed Action			
Previous Inspector's Name	Kris Bosters	Previous Assistant's Name	
Next Inspection Date	13-Dec-2015	Previous Inspection Date	19-Jun-2012
Inspection Cycle (Default) (months)	39		
Comment			

**Maintenance Recommendations**

Inspector Recommendations	Year	Inspector Comments	Department Comments	Target Year	Est. Cost	Cat #
REPAIR/REPLACE BRIDGE RAIL	2012	Tighten post bolt; add 5 splice bolts.	Programmed	2013		
SEAL CURBS	2012	Patch spalls approx 0.5m2.	Programmed	2013		
PATCH DECK	2012	Patch spall @ buffer angle, if not yet done.	Programmed	2013		
OVERLAY DECK						
STRAIGHTEN/REPLACE MEMBERS						
WASHING	2012	Remove gravel.	Operations	2013		
SHOTCRETE REPAIRS						
CORE TIMBER CAPS/CORBELS						
REPAIR/REPLACE TIMBER CAPS						
REPAIR ABUTMENT SCOUR/EROSION						
PLACE ADDITIONAL RIP RAP						
REMOVE DRIFT ACCUMULATION						
INSTALL STRUTS						
OTHER ACTION	2012	Repair punchout.	Programmed	2013		
OTHER ACTION	2012	Stub P1p4.	Programmed	2013		
OTHER ACTION	2012	Bolt 150mm x 300mm plank to P1 cap along S side.	Programmed	2013		
OTHER ACTION	2012	Remove tar from lift & connectors fill with 0.5m(cubed) NH grout; repair connections where failed.	Programmed	2013		
OTHER ACTION	2012	Install hazard markers @ standard location/height.	Operations	2013		
OTHER ACTION	2012	Fill erosion gully 3m3 pitrun.	defer until next rehab			
OTHER ACTION	2012	Consider reset girders to improve bearing & pull pier in line.	defer until next rehab			
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<b>Structural Condition Rating (Last/Now) (%)</b>	<b>33.3/33.3</b>	<b>Sufficiency Rating (Last/Now) (%)</b>	<b>56.6/58.9</b>	Est. Repl. Yr	2016	Maint. Req. (Y/N)	Yes
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Special Comments for Next Inspection	Monitor P1 stability. Monitor shear crack & exposed rebar areas.	Department Comments	Scheduled for replacement in PMA in 2016. DA		
Maintenance Reviewed By	Darron Ahlstedt	Date	11-Dec-2012	Estimated Total	0
Proposed Long-Term Strategy	2003.08.18 Replace bridge by 2015 or when road is paved/upgraded.				
On 3-Year Program (Y/N)					
Proposed Action					
Previous Inspector's Name	Kris Bosters	Previous Assistant's Name			
Next Inspection Date	13-Dec-2015	Previous Inspection Date	19-Jun-2012		
Inspection Cycle (Default) (months)	39				
Comment					