

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	<b>BRIDGE INSPECTION REPORT</b> <b>B08242021-1</b>	
<b>Date:</b> 8/12/2021	<b>Inspected By:</b> Mike Button	<b>Category:</b> Office - Bridge Office	
<b>BRIDGE INFORMATION</b>			
<b>Site:</b>	1-304 - CONCEPTION HARBOUR BRIDGE		
<b>Route:</b>		<b>Overall Length:</b>	4.4 m
<b>Year Built:</b>	1926	<b>Est:</b> No	<b>Overall Width:</b> 10.9 m
<b>Year Last Rehab.:</b>	1975	<b>Est:</b> Yes	<b>Roadway Width:</b> 10.3 m
<b>Region:</b>	AVALON PENINSULA		<b>Sidewalk Width:</b> 0 m
<b>Jurisdiction:</b>	Provincial		<b>Clearance to R.D. or N.W.L.:</b> 1.1 m
<b>Type of Structure:</b>	04 - Rigid Frame		<b>Max Depth of N.W.L.:</b> 0.2 m
<b>Purpose of Structure:</b>	04 - Over Non-Navigable Waters		<b>Spans:</b>
<b>Type of Handrail:</b>	01 - Aluminum Rail		<u>Span No.:</u> <u>Length</u> <u>Span No.:</u> <u>Length</u>
<b>Roadway Surface:</b>	02 - Asphalt		1            3.6            4            0
<b>Alignment Vertical:</b>	01 - Good		2            0            5            0
<b>Alignment Horizontal:</b>	01 - Good		3            0            6            0
<b>Restrictions:</b>	No		
<b>BRIDGE PHOTOS</b>			
<div style="display: flex; justify-content: space-around;">   </div>			
<b>SUBSTRUCTURE</b>			
<b>Condition:</b>	P1 - Poor	<b>Bearings:</b>	I - Inapplicable
		<b>Bearing Seat:</b>	I - Inapplicable
<b>Comments:</b>	- Appears to be a 1m extension upstream, 2-3m extension downstream and a northeast extension to accommodate a driveway. All extension construction joints opening up along abutment river side face with visible leakage. - Heavy erosion, holes and large boulders exposed in all abutment/wingwall footing construction joint intersections and ~0.3m up from the location (water damage). Footing has medium undermining along its length. Still good contact on what can be seen. - Medium-heavy longitudinal/transverse cracks in abutment faces with efflorescent deposits.		
<b>SUPERSTRUCTURE</b>			
<b>Condition:</b>	P1 - Poor	<b>Expansion Joints:</b>	I - Inapplicable
<b>Comments:</b>	- Northeast extension construction joint on the underside of deck looks suspicious. Looks to have poor construction as this joint is jagged, has overlay concrete & is opening up. Plywood still in place in some locations. - Downstream extension construction joint has a large spall full length of structure on the underside of the deck.		

Longitudinal "embedded" deck beam is fully exposed with heavy-severe corrosion. - Suspect joint not sealed from above. - Rest of underside of deck has med-heavy narrow cracks in longitudinal & transverse directions with efflorescence, especially at the abutment/underside of deck connection.

**DECK**

<b>Condition:</b>	F1 - Fair	<b>Curbs:</b>	P3 - Poor
<b>Hand Rail:</b>	P1 - Poor	<b>Roadway Condition:</b>	P3 - Poor
<b>Approach Rail:</b>	I - Inapplicable		
<b>Comments:</b>	- No end blocks, approach/exit rails, no hazard markers, and end caps on handrails. Curb on the upstream side has a large spall the length of the structure, exposing the first layer of reinforcement (P3). Downstream curb ok (F1). - Downstream handrail has no transition support post (at change of curvature). Upstream handrail is heavily damaged, all posts bent with top rail missing. - Fascias on both sides have mild cracking with efflorescence.		

**HYDROLOGY**

<b>Water Velocity:</b>	0.3 m/s	<b>Ice Problem:</b>	N - No Problem
<b>Water Depth:</b>	0.2 m	<b>Scour Problem:</b>	K - Known Problem
<b>Waterway:</b>	01 - Adequate	<b>Debris Problem:</b>	N - No Problem
<b>Comments:</b>	- Heavy erosion to footings. Water too deep further under structure.		

**REPLACEMENT/REHABILITATION**

<b>Next Rehab. Date:</b>	2022	<b>Replacement Year:</b>	2030
<b>Antic. Rehab. Cost:</b>	\$100000	<b>Replacement Cost:</b>	\$1000000
<b>Recommendations:</b>	- Replace with box culvert at time of replacement. - In the meantime, repair all construction joints & concrete defects, especially downstream construction on the underside of deck. - Install new handrails and approach/exit rails where possible complete with hazard markers.		

**OBSERVATIONS**

<b>Overall Condition:</b>	P1 - Poor	<b>Requires Further Inspection:</b>	No
<b>Additional Observations:</b>	- Deck F1, Rest P1. - CSP 300mm culverts penetrating the northeast wingwall and through the east abutment footing on the upstream side. - Part of structure (northeast extension) provides access for a driveway. Hazards: heavy traffic.		

**LEGEND:**

**Condition Definitions:**

1 - \*Good - [discontinued code].  
 2 - \*Fair - [discontinued code].  
 3 - \*Poor - [discontinued code].  
 4 - \*Unsafe - [discontinued code].  
 G - Good.

F2 - Fair.  
 F1 - Fair.  
 P3 - Poor.  
 P1 - Poor.  
 P - Poor.

C - Unsafe (Closed to Public).  
 U - Uninspectable.  
 I - Inapplicable.

**Problem Definitions:**

N - No Problem.  
 P - Possible Problem.  
 K - Known Problem.  
 NA - Not Applicable.

**Category Definitions:**

Maint. - Maintenance.  
 Eng. - Engineering.  
 Office - Bridge Office.

**PHOTO GUIDELINES:**

**Inspection Photos:**

Please provide photos using guidelines below:

- Any item which inspector feels should be documented by photograph
- All items noted above as being P3, P1, P, or C
- Any evidence of known ice, scour, debris, waterway problems

**INSPECTION PHOTOS**