

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	<b>BRIDGE INSPECTION REPORT</b> <b>B08202021-1</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>	1-249 - BLACKDUCK POND BRIDGE		
<b>Route:</b>	72	<b>Overall Length:</b>	8.7 m
<b>Year Built:</b>	1970	<b>Est: Yes</b>	<b>Overall Width:</b> 8.8 m
<b>Year Last Rehab.:</b>		<b>Est: No</b>	<b>Roadway Width:</b> 7.9 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 m
<b>Purpose of Structure:</b>	04 - Over Non-Navigable Waters	<b>Spans:</b>	
<b>Type of Handrail:</b>	02 - Concrete Rail	<b>Span No.:</b>	<b>Length</b>
<b>Roadway Surface:</b>	02 - Asphalt	<b>Span No.:</b>	<b>Length</b>
<b>Alignment Vertical:</b>	01 - Good	1	5.7
<b>Alignment Horizontal:</b>	01 - Good	2	0
<b>Restrictions:</b>	No	3	0
		4	0
		5	0
		6	0
<b>BRIDGE PHOTOS</b>			
			
<b>SUBSTRUCTURE</b>			
<b>Condition:</b>	P1 - Poor	<b>Bearings:</b>	I - Inapplicable
		<b>Bearing Seat:</b>	I - Inapplicable
<b>Comments:</b>	- ~3m extension to upstream side. - Frame leg faces under structure have mild cracking with efflorescence. Erosion of concrete is mild but looking abrasive. - Medium cracking with efflorescence at frame leg connection to deck. - Entire downstream face of structure has severe disintegration from the west frame leg across the fascia to the east frame leg. - Northeast wingwall has light weathering with a large-wide crack propagating from a frame leg spall to top of concrete (P3). - Northwest wingwall has a large horizontal crack with efflorescence. Rest in good condition (P3). - Southwest wingwall has heavy cracking with efflorescence and AAR near top of concrete. Large cold joint visible and opening up near bottom. Joint continues on an angle through the west frame leg face under the structure (P3). - Southeast wingwall has two horizontal joints opening up (possible construction joints?). Large-wide crack extending from top to bottom of the wall with discontinuities. Appears the wingwall is cracking off from the main structure. The wingwall should have been poured with a construction joint and not poured monolithically with the main frame (P1).		
<b>SUPERSTRUCTURE</b>			

<b>Condition:</b>	P3 - Poor	<b>Expansion Joints:</b>	I - Inapplicable
<b>Comments:</b>	- Expansion joints not inspectable. - Medium cracking at frame leg connection to underside of deck with efflorescence (P3). - AAR evident on underside of deck with limited spalling.		
<b>DECK</b>			
<b>Condition:</b>	P1 - Poor	<b>Curbs:</b>	P1 - Poor
<b>Hand Rail:</b>	P1 - Poor	<b>Roadway Condition:</b>	P1 - Poor
<b>Approach Rail:</b>	I - Inapplicable		
<b>Comments:</b>	- South fascia has construction joints opening up with large cracks, likely AAR. Large spall to fascia and underside of deck transition. - North fascia is ~50% disintegrated with extremely large spalls extending from the west frame leg across the fascia to the east frame leg. Ends of transverse reinforcement bars all exposed with no hooks (not rebar). Full length of helical bar exposed with severe corrosion and looks to be a form of twisted round stock instead of rebar (P). - Curb disintegrated on roadway but better on exterior of structure. - Concrete handrail has severe spalling with exposed helical steel. Northwest post bent. All handrails have large cracks exposing helical steel (not rebar). - No approach/exit rail or hazard markers. - Asphalt ok on west side (F1), east side has potholes and medium cracking (P3).		
<b>HYDROLOGY</b>			
<b>Water Velocity:</b>	0.1 m/s	<b>Ice Problem:</b>	N - No Problem
<b>Water Depth:</b>	1 m	<b>Scour Problem:</b>	N - No Problem
<b>Waterway:</b>	01 - Adequate	<b>Debris Problem:</b>	N - No Problem
<b>Comments:</b>	- Water slow moving. Trickle running toward ocean from pond. Downstream side shallow, upstream side deep (pond).		
<b>REPLACEMENT/REHABILITATION</b>			
<b>Next Rehab. Date:</b>		<b>Replacement Year:</b>	2025
<b>Antic. Rehab. Cost:</b>	\$0	<b>Replacement Cost:</b>	\$400000
<b>Recommendations:</b>	- Replace structure with a box culvert or smaller depending on flows. Almost no flow out when inspection carried out.		
<b>OBSERVATIONS</b>			
<b>Overall Condition:</b>	P1 - Poor	<b>Requires Further Inspection:</b>	Yes
<b>Additional Observations:</b>	- Rebar helical round stock. - Aggregate is beach rock. - Temp diversion likely not possible due to site boundary conditions. However, roadway is a loop route. - Recommend inspections every year until replacement. - Hazards: medium traffic, deep water upstream.		
<b>LEGEND:</b>			
<b>Condition Definitions:</b>		<b>Problem Definitions:</b>	
1 - *Good - [discontinued code].	F2 - Fair.	C - Unsafe (Closed to Public).	N - No Problem.
2 - *Fair - [discontinued code].	F1 - Fair.	U - Uninspectable.	P - Possible Problem.
3 - *Poor - [discontinued code].	P3 - Poor.	I - Inapplicable.	K - Known Problem.
4 - *Unsafe - [discontinued code].	P1 - Poor.		NA - Not Applicable.
G - Good.	P - Poor.		
<b>Category Definitions:</b>			
Maint. - Maintenance.			
Eng. - Engineering.			
Office - Bridge Office.			
<b>PHOTO GUIDELINES:</b>			
<b>Inspection Photos:</b>			
Please provide photos using guidelines below:			
<ul style="list-style-type: none"> <li>● Any item which inspector feels should be documented by photograph</li> <li>● All items noted above as being P3, P1, P, or C</li> <li>● Any evidence of known ice, scour, debris, waterway problems</li> </ul>			
<b>INSPECTION PHOTOS</b>			