

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	<b>BRIDGE INSPECTION REPORT</b> <b>B08082024-1</b>	
<b>Date:</b> 8/2/2024	<b>Inspected By:</b> D. Burns/B. Grandy	<b>Category:</b> Eng. - Engineering	
<b>BRIDGE INFORMATION</b>			
<b>Site:</b>	2-058 - TIDES BROOK BRIDGE		
<b>Route:</b>	222	<b>Overall Length:</b>	36 m
<b>Year Built:</b>	1975	<b>Est:</b> No	<b>Overall Width:</b> 10.5 m
<b>Year Last Rehab.:</b>		<b>Est:</b> No	<b>Roadway Width:</b> 9.5 m
<b>Region:</b>	CENTRAL EAST		<b>Sidewalk Width:</b> 0 m
<b>Jurisdiction:</b>	Provincial		<b>Clearance to R.D. or N.W.L.:</b> 2 m
<b>Type of Structure:</b>	01 - AASH to Girder		<b>Max Depth of N.W.L.:</b> 1.5 m
<b>Purpose of Structure:</b>	04 - Over Non-Navigable Waters	<b>Spans:</b>	
<b>Type of Handrail:</b>	01 - Aluminum Rail	<b>Span No.:</b>	<b>Length</b>
<b>Roadway Surface:</b>	01 - Concrete	1	25
<b>Alignment Vertical:</b>	01 - Good	2	0
<b>Alignment Horizontal:</b>	01 - Good	3	0
<b>Restrictions:</b>	No	4	0
		5	0
		6	0
<b>BRIDGE PHOTOS</b>			
			
<b>SUBSTRUCTURE</b>			
<b>Condition:</b>	P3 - Poor	<b>Bearings:</b>	P1 - Poor
		<b>Bearing Seat:</b>	P3 - Poor
<b>Comments:</b>	Previous Inspection - East abutment face has wide cracking. The northeast corner has severe disintegration while		

the southeast has wide cracking. - West abutment generally in fair condition. - Wingwalls generally in fair condition. - East bearing seat disintegrated on the northeast corner and has wide cracks on the southeast corner. - East bearings have severe cracks with expulsion of material, P3. West bearing too high for inspection. - All condition ratings for substructure based off east side. New inspection - All previous concerns persist. Wingwalls have visible cold joints.

**SUPERSTRUCTURE**

<b>Condition:</b>	P3 - Poor	<b>Expansion Joints:</b>	P - Poor
<b>Comments:</b>	Previous inspection - Girders have isolated spalls to reinforcement, F1. - Deck soffit leaching efflorescence under and around the east side with large/severe spalls. Deck soffit also leaching efflorescence on the west side but has not visible spalling. Deck soffit otherwise in fair condition. - Expansion joints have broken seals and very severe damage to the armor plating. Several areas of the joint has been paved over. Joint no longer functioning as intended, Poor, P. Superstructure condition rating based on worst areas. New inspection - All previous concerns persist. Northeast girder ends are now spalling likely due to expansion joint condition.		

**DECK**

<b>Condition:</b>	P1 - Poor	<b>Curbs:</b>	F1 - Fair
<b>Hand Rail:</b>	F1 - Fair	<b>Roadway Condition:</b>	P1 - Poor
<b>Approach Rail:</b>	F1 - Fair		
<b>Comments:</b>	Previous inspection - Approach asphalt has isolated severe alligator cracking with some small potholes near the expansion joints. - Exposed concrete deck has numerous wide cracks. On the east end, the deck is fractured into several loose square pieces, P1. - Curbs have severe disinsertion on the exteriors near the expansion joints. Roadway top and sides in fair condition. -Structure rail in fair condition. - Guiderail has several rotten posts. Rail is salvageable, connected to end blocks, but does not have regulation post spacing and is complete with hazard markers. - End blocks have moderate width map cracks throughout, P3. New inspection - All previous concerns persist. Approach potholes are now quite large and concrete wearing surface is cracking on west end as well. Expansion joints almost completely deteriorated.		

**HYDROLOGY**

<b>Water Velocity:</b>	0.5 m/s	<b>Ice Problem:</b>	N - No Problem
<b>Water Depth:</b>	0.5 m	<b>Scour Problem:</b>	N - No Problem
<b>Waterway:</b>	01 - Adequate	<b>Debris Problem:</b>	N - No Problem
<b>Comments:</b>			

**REPLACEMENT/REHABILITATION**

<b>Next Rehab. Date:</b>	2024	<b>Replacement Year:</b>	2040
<b>Antic. Rehab. Cost:</b>	\$250,000	<b>Replacement Cost:</b>	\$2,500,000
<b>Recommendations:</b>	- Seal all concrete cracks in the bridge deck and replace the east side (possibly full depth). - Consider end block replacement. - Repair curbs around the expansion joints. - Seal cracks in the abutments. - Repair spalls to girders. - Repair corners of abutments. - Remove overgrowth from guiderail area. Replace guiderail and install with new standards. - Replace expansion joints. - Waterproof and pave structure if capacity exists. - Remove all gravels from the bridge deck. - Consider bearing replacement.		

**OBSERVATIONS**

<b>Overall Condition:</b>	P3 - Poor	<b>Requires Further Inspection:</b>	No
<b>Additional Observations:</b>	Bridge is in need of rehabilitation. Not much is new from previous inspection, although some concerns have become worse.		