

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	BRIDGE INSPECTION REPORT B11172021-2	
Date: 10/19/2021	Inspected By: Mike Button	Category: Office - Bridge Office	
BRIDGE INFORMATION			
Site:	1-244 - HEART'S DELIGHT BRIDGE (SOUTH)		
Route:		Overall Length:	7 m
Year Built:	1960	Est: No	Overall Width: 10.4 m
Year Last Rehab.:	1975	Est: Yes	Roadway Width: 9.2 m
Region:	AVALON PENINSULA		Sidewalk Width: 0 m
Jurisdiction:	Provincial	Clearance to R.D. or N.W.L.:	1.6 m
Type of Structure:	02 - Double Tee	Max Depth of N.W.L.:	0.3 m
Purpose of Structure:	04 - Over Non-Navigable Waters		Spans:
Type of Handrail:	01 - Aluminum Rail		<u>Span No.:</u> <u>Length</u> <u>Span No.:</u> <u>Length</u>
Roadway Surface:	02 - Asphalt	1	3.4 4 0
Alignment Vertical:	01 - Good	2	0 5 0
Alignment Horizontal:	01 - Good	3	0 6 0
Restrictions:	No		
BRIDGE PHOTOS			
			
SUBSTRUCTURE			
Condition:	P3 - Poor	Bearings:	U - Uninspectable
		Bearing Seat:	P3 - Poor
Comments:	- Medium- severe disintegration to all abutment corners except the southwest from the waterline to the double tee end block/abutment back wall joint. The northeast exterior bearing seat also has medium severe disintegration, and has undermined the exterior double tee, P3. - All wingwalls except the southwest have medium spalling/disintegration along their faces in several locations, P3. - No access under structure due to deep water to properly inspect the abutment faces but the faces look in fair condition with light horizontal/vertical cracks and mild weathering throughout. Flow is very slow, no reason to suspect scour, F1.		
SUPERSTRUCTURE			
Condition:	F1 - Fair	Expansion Joints:	P3 - Poor
Comments:	- Medium severe disintegration to both exterior double tee end blocks. - The east expansion joint is leaking and depositing efflorescent material on the face of the east abutment, P3. West joint has no visible leakage below on the west abutment. - No access under structure due to deep water to properly inspect the double tees and joints.		

However, looking from the outside, no stirrups visible nor any efflorescent stalactite deposits seen between double tee precast joints, F2.

DECK

Condition:	F1 - Fair	Curbs:	F1 - Fair
Hand Rail:	F1 - Fair	Roadway Condition:	F1 - Fair
Approach Rail:	F1 - Fair		
Comments:	- Asphalt in fair condition, mild settlement over the each approach with a wide transverse crack, F1. - No end blocks, or energy dampening posts. - Hazard markers in place. - Curbs on the roadway are covered in sand/gravel with mild vegetation growth. - Approach/exit rails in fair condition. A lot of over growth behind rails. - Handrails in fair condition. The southwest corner was likely impacted by the flyer and bent the top rail, removing it from its support post. - The north fascia/curb has mild horizontal and vertical cracking throughout with mild efflorescence. - The north side deck/double tee construction joint is starting to leach efflorescent materials. Water/chlorides have found a path through this area, P3. - The south fascia/curb has mild horizontal cracks with efflorescence on the southwest side, mild spalling/disintegration to exposed reinforcement at the fascia/soffit transition and small spalls under the handrail posts.		

HYDROLOGY

Water Velocity:	0.1 m/s	Ice Problem:	N - No Problem
Water Depth:	1 m	Scour Problem:	N - No Problem
Waterway:	01 - Adequate	Debris Problem:	N - No Problem
Comments:	- Gabions bulging on the downstream side but still in good condition.		

REPLACEMENT/REHABILITATION

Next Rehab. Date:	2025	Replacement Year:	2035
Antic. Rehab. Cost:	\$50,000	Replacement Cost:	\$800,000
Recommendations:	- Trim back alders behind approach/exit rails and remove sand from the curbs. Seal the asphalt/curb joint on the north side to stop leakage through the north deck/double tee construction joint. - Replace the east expansion joint. - Repair all concrete defects on the exterior 4 corners of the structure + wingwalls. Replace portions of handrail.		

OBSERVATIONS

Overall Condition:	F1 - Fair	Requires Further Inspection:	No
Additional Observations:	- Hazards, mild traffic, moderate slopes and traversing gabions.		

LEGEND:

Condition Definitions:			Problem Definitions:	Category Definitions:
1 - *Good - [discontinued code].	F2 - Fair.	C - Unsafe (Closed to Public).	N - No Problem.	Maint. - Maintenance.
2 - *Fair - [discontinued code].	F1 - Fair.	U - Uninspectable.	P - Possible Problem.	Eng. - Engineering.
3 - *Poor - [discontinued code].	P3 - Poor.	I - Inapplicable.	K - Known Problem.	Office - Bridge Office.
4 - *Unsafe - [discontinued code].	P1 - Poor.		NA - Not Applicable.	
G - Good.	P - Poor.			

PHOTO GUIDELINES:

Inspection Photos:

- Please provide photos using guidelines below:
- Any item which inspector sees 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