

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	BRIDGE INSPECTION REPORT B11152021-2	
Date: 10/19/2021	Inspected By: Mike Button	Category: Office - Bridge Office	
BRIDGE INFORMATION			
Site:	1-305 - WESTERN BAY BROOK BRIDGE NO.2		
Route:		Overall Length:	11.7 m
Year Built:	1970	Est: No	Overall Width: 10.8 m
Year Last Rehab.:		Est: No	Roadway Width: 6.7 m
Region:	AVALON PENINSULA	Sidewalk Width:	0 m
Jurisdiction:	Provincial	Clearance to R.D. or N.W.L.:	2.7 m
Type of Structure:	02 - Double Tee	Max Depth of N.W.L.:	0.5 m
Purpose of Structure:	04 - Over Non-Navigable Waters	Spans:	
Type of Handrail:	04 - Steel Rail	<u>Span No.:</u>	<u>Length</u>
Roadway Surface:	02 - Asphalt	<u>Span No.:</u>	<u>Length</u>
Alignment Vertical:	02 - Adequate	1	6.4
Alignment Horizontal:	02 - Adequate	2	0
Restrictions:	No	3	0
		4	0
		5	0
		6	0
BRIDGE PHOTOS			
			
SUBSTRUCTURE			
Condition:	F1 - Fair	Bearings:	U - Uninspectable
		Bearing Seat:	P3 - Poor
Comments:	- Southeast wingwall has surface spalling throughout from previous delamination. Remaining wingwalls in fair condition. - North abutment has some mild spalling near the waterline, especially on the northeast corner. South abutment has a small scour hole/concrete erosion near the midpoint of the footing. Water slamming into the exposed upstream face of the footing and scour is suspected. - The northwest bearing seat has a medium spall to reinforcement. Remaining exterior bearing seats have small spalls, growing vegetation in the same location all of which are caused by water leaking through the curbs/expansion joint, P3.		
SUPERSTRUCTURE			
Condition:	P1 - Poor	Expansion Joints:	P3 - Poor
Comments:	- South side of bridge is fixed, and the north is the expansion end. No chalking through curbs over bearing seats. North abutment is visibly leaking from the bearing seat, P3. - Concrete has totally disintegrated and has exposed reinforcement and stressing cables. Area is located beneath a deck drain, P3. Double tees otherwise in fair		

condition. No access under deck due to deep water and flow rate but no visible efflorescence/leakage on bottoms of double tees.

DECK

Condition:	F1 - Fair	Curbs:	P3 - Poor
Hand Rail:	P3 - Poor	Roadway Condition:	F1 - Fair
Approach Rail:	F1 - Fair		

Comments: - Asphalt has minor rutting and settlement cracks over approaches, F1. - Guiderail has some split posts, rails are not connected to end blocks and all hazard markers are in place. No additional energy dampening posts at end blocks, F1. - Curbs have medium spalling/disintegration throughout on the roadway. Southeast exterior curb/fascia over the wingwall has heavy disintegration exposing one set of handrail post anchor bolts, P3. Northeast curb/fascia has mild cracking with efflorescence. Remainder of curb/fascia in fair condition, F1 - Handrails have medium to severe corrosion throughout. Ends of rails are encased in end block concrete with heavy staining on the ends of all end blocks. Corrosion of the rail has severally spalled and cracked the faces of southeast and southwest end blocks respectively.

HYDROLOGY

Water Velocity:	1 m/s	Ice Problem:	N - No Problem
Water Depth:	1 m	Scour Problem:	P - Possible Problem
Waterway:	02 - InAdequate	Debris Problem:	N - No Problem

Comments: - Water is slamming into southwest corner of the south footing, scour is suspected. Structure is misaligned to river and seems narrow for the flow rate.

REPLACEMENT/REHABILITATION

Next Rehab. Date:	2024	Replacement Year:	2030
Antic. Rehab. Cost:	\$100,000	Replacement Cost:	\$1,200,000

Recommendations: - Repair southeast curb. Replace handrail and pour back areas where handrails are to be removed from end blocks. Patch bearing seat exteriors. Place rip-rap on southwest corner, river slamming into area. Remove road sand/gravel from curbs. Reseal curbs over bearing seats and replace the north expansion joint seal. Northwest second interior double tee needs repair if possible, concrete missing and cables are exposed over a large area. Consider a full structural replacement of bridge as structure is towards end of design life.

OBSERVATIONS

Overall Condition:	P3 - Poor	Requires Further Inspection:	No
---------------------------	-----------	-------------------------------------	----

Additional Observations: - Hazards, medium traffic and slopes. No access under bridge, high flow rate and deep water.

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