

GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR
Department of Transportation and Infrastructure

## BRIDGE INSPECTION REPORT B11252021-1

Date: 10/26/2021 Inspected By: Mike Button Category: Office - Bridge Office

**BRIDGE INFORMATION** 

Site: 5-056 - TROUT RIVER BRIDGE

Route:

Year Built: 1967 Est: No
Year Last Rehab.: Est: No

Region: LABRADOR

Jurisdiction: Provincial

Type of Structure: 03 - Reinforced Concrete Beam/Slab

Purpose of Structure: 04 - Over Non-Navigable Waters

Type of Handrail: 02 - Concrete Rail

Roadway Surface: 01 - Concrete

Alignment Vertical: 03 - Poor

Alignment Horizontal: 03 - Poor

Restrictions: No

Overall Length:

21 **m** 

Overall Width:

8.5 **m** 

Roadway Width: Sidewalk Width: 7.3 **m** 0 **m** 

Clearance to R.D. or N.W.L.:

3.2 **m** 

Max Depth of N.W.L.:

0.7 **m** 

Spans:

Span No.:	<u>Length</u>	Span No.:	<u>Length</u>
1	13	4	0
2	0	5	0
3	0	6	0

## **BRIDGE PHOTOS**





## SUBSTRUCTURE

Condition: F1 - Fair Bearings: U - Uninspectable

Bearing Seat: P3 - Poor

Comments: - South abutment face is in fair condition with light map cracking, F1. Scour confirmed on the southwest corner of

the footing but the extent is unknown. Hydraulic jump occurring directly adjacent to the footing, P3. Southwest bearing seat corner patch cracked, delaminated and has a relatively large spall under the patch. No impact to the girder, F1. - North abutment face has mild weathering throughout with light concrete deterioration/spalling to the abutment/footing construction joint. No scour suspected as the area is heavily protected by rip-rap and the bedrock is visible is most locations. However, there is most mild erosion of footing concrete around the jagged bedrock, F1. - Northeast bearing seat corner is cracked and likely to spall. Cracked area is to the exterior plane of the outside girder, P3. Northeast back wall has moderate to severe disintegration exposing reinforcement, P3. - Northwest exterior bearing seat/back wall area was previously patched and the patch is disintegrated/spalled to

original concrete, P3.

## SUPERSTRUCTURE

Condition: F2 - Fair F2 - Fair **Expansion Joints:** Comments: - Expansion joints across the deck are asphaltic plug joints and are in good condition. - All expansion joint gaps through curbs except the northeast have no chaulking/sealant. Northeast curb area has extreme disintegration and has severely deteriorated elements below, P1. Bottom of deck and girders are in good condition, F2. Suspect damage to the back side of the end block on the northeast girder due to the damage in the area. **DECK** F1 - Fair P1 - Poor Condition: Curbs: Hand Rail: F1 - Fair **Roadway Condition:** P1 - Poor Approach Rail: F1 - Fair - Approach asphalt in poor condition, subgrade is heaved and settled. - Asphalt on deck has several raised Comments: patches and various potholes, P1. - Approach guiderail on the southeast side has numerous dents. Guiderail overgrown by vegetation on the east side but in the process of being cleared, west was finished a couple days prior to inspection. Guiderail is connected to end blocks, complete with hazard markers and extra energy dampening posts prior to approach end blocks. Southwest end block is tipped towards the upstream due to an impact. - Handrails missing most end caps but otherwise in fair condition. - Roadway curbs have small spalls throughout. The expansion joint concrete in northeast curb has extreme disintegration to exposed reinforcement. Area has a visible hole and is causing the disintegration to the abutment back wall and bearing seat below. Area assigned P1 due to the damage it is causing to other elements. - The fascia/exterior curb on the southwest corner has moderate spalling/disintegration exposing both upstream anchor bolts on one handrail post, P3. The fascia/exterior curb over the southwest bearing seat has light map cracking with delamination. There is a wide horizontal crack with disintegration linking the anchor bolt area to the area over the bearing seat. - The main section of the west fascia/exterior curb has two areas around mid-span with light to moderate surface disintegration exposing curb stirrups. The northwest fascia/exterior curb has severe delamination/spalling of an old patch to exposed reinforcement. East fascia in fair condition overall with moderate spalling on the northeast fascia/exterior curb around the expansion joint. **HYDROLOGY** N - No Problem 1.5 m/s Water Velocity: Ice Problem: K - Known Problem Water Depth: Deep m Scour Problem: N - No Problem Waterway: 01 - Adequate **Debris Problem:** - Heavy erosion along the southeast wingwall from roadway runoff. Scour confirmed on the southwest corner of Comments: the footing but the extent is unknown. Hydraulic jump occurring directly adjacent to the footing. Southwest corner needs rip-rap. REPLACEMENT/REHABILITATION 2022 2035 Next Rehab. Date: Replacement Year: \$1,200,000 Antic. Rehab. Cost: \$100,000 **Replacement Cost:** - General roadway and approaches needs to be regraded and then resurfaced. Resurface deck. Repair/replace Recommendations: southwest end block. Reseal northwest, southwest and southeast curbs and repair all concrete defects to the exterior curb and abutments below. Replace northeast curb and reseal. Repair northeast abutment seat, back wall and back side of the girder's end block. Repair southwest footing scour and install rip-rap. **OBSERVATIONS** F1 - Fair Requires Further Nο **Overall Condition:** Inspection: Additional Observations: - Deck has excessive hogging and easily visible. - Traffic control needed for inspection. Hazards, moderate traffic, fast move deep water and mild slopes. FGFND: Condition Definitions:

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

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

F1 - Fair. P3 - Poor. P1 - Poor.

G - Good. PHOTO GUIDELINES: Inspection Photos:

Category Definitions: Maint. - Maintenance. Eng. - Engineering. Office - Bridge Office.

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

Please provide photos using guidelines below:

Any item wnich inspector reels snould be accumented by photograph

All items noted above as being P3, P1, P1, or C

Any evidence of known ice, scour, debris, waterway problems

**INSPECTION PHOTOS** 

Department of Transportation and Infrastructure, Government of Newfoundland and Labrador 2021.