19.5 m

18.4 m

16.2 m

 $0 \, \mathbf{m}$ 

3.5 m

1 m



GOVERNMENT OF
NEWFOUNDLAND
AND LABRADOR
Department of Transportation and Works

## BRIDGE INSPECTION REPORT B10082021-3

Printed: Friday, October 8, 2021

**Overall Length:** 

**Overall Width:** 

Roadway Width:

Sidewalk Width:

N.W.L.:

Spans:

Clearance to R.D. or

Max Depth of N.W.L.:

Date: 10/5/2021 Inspected By: Mike Button Category: Office - Bridge Office

**BRIDGE INFORMATION** 

Site: TCH-016 - DARK HOLE BROOK BRIDGE

Route: 1

 Year Built:
 1965
 Est: No

 Year Last Rehab.:
 1997
 Est: No

Region: CENTRAL EAST

Jurisdiction: Provincial

Type of Structure: 02 - Double Tee

Purpose of Structure: 04 - Over Non-Navigable Waters

01 - Aluminum Rail Type of Handrail: Span No.: Length Span No.: Length 02 - Asphalt Roadway Surface: 1 10.5 4 01 - Good 2 0 5 0 Alignment Vertical: 3 0 6 0 01 - Good Alignment Horizontal:

Restrictions: No

## **BRIDGE PHOTOS**





## SUBSTRUCTURE

Condition: F1 - Fair (Inspection within 1 Year) Bearings: U - Uninspectable

Bearing Seat: U - Uninspectable

Comments: - South abutment footing construction joint starting to open. Face has medium staining throughout, F1. Southwest

abutment corner has a vertical crack propagating from the bearing seat to the footing construction joint. Monitor corner for future spalls that could undermine the exterior double tee. East extension face in fair condition. Southeast corner has medium efflorescence around exterior creep block construction joint. - North abutment footing construction joint starting to open. Face has medium staining throughout. Area of mild scour around the mid-transverse point. East extension face in fair condition. Northeast corner has medium efflorescence around exterior creep block construction joint. - West wingwalls have medium-heavy cracking with efflorescence throughout. Corners to abutment faces rehabbed in the past and poured back. Patched construction joints have

medium cracking with efflorescence. - East wingwalls in fair condition.

SUPERSTRUCTURE

Condition: P3 - Poor (Repair within 3 Years) Expansion Joints: P3 - Poor (Repair within 3 Years)

Hand Rail:  F1 - Fair (Inspection within 1 Year)  Approach Rail:  F1 - Fair (Inspection within 1 Year)  Comments:  - Asphalt in fair condition, wide transverse cracks in center lane & shoulder area Structural handrail in condition Curbs have mild-medium cracking throughout on the roadway side Approach/exit rail dam the northwest corner of structure, P3. Remainder of guiderail in fair condition, connected to end blocks with hazard markers Deck likely heavily cracked due to leakage between pre-cast sections, P3.  HYDROLOGY  Water Velocity:  0.4 m/s  Ice Problem:  N - No Problem  Waterway:  01 - Adequate  Debris Problem:  Comments:  - Old washed out beaver dam located under structure. New beaver dam built upstream and has at least head built up behind it.  REPLACEMENT/REHABILITATION  Next Rehab. Date:  2024  Replacement Year:  2030  Antic. Rehab. Cost:  \$100,000.00  Recommendations:  - Complete superficial rehab of concrete defects, replace expansion joints and some sections of guiders 5 years. Replace structure within the next 10 years.  OBSERVATIONS  Overall Condition:  P3 - Poor (Repair within 3 Years)  Requires Further  No  Inspection:  Additional Observations:  - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection:  LEGEND:  Conditional Condition:  F2 - Fair (Inspection within 2 Years)  F3 - Fair (Inspection within 1 Years)  T3 - Possible Problem.  Category Da.  Cat		- West fascia/curb has mild alligator cracking throughout. Chaulking cracked at south expansion joint. At approximately mid-span, wide oval shaped crack under handrail post, likely about to spall. Curb at north expansion joint has a large wide crack with mild efflorescence possibly no expansion joint here East fascia/curb has mild alligator cracking throughout. Chaulking cracked at south expansion joint. Curb at north expansion joint has a large wide crack with mild efflorescence, possibly no expansion joint here Bottom of deck has heavy efflorescence and rust staining between all double tee pre-cast panel sections. Rebar grid can be seen due to low cover or is exposed across most of the sections. One double tee is severely vertically split up through the web over 50% of its length, P1, superstructure P3.			
Hand Rail: F1 - Fair (Inspection within 1 Year) Roadway Condition: F1 - Fair (Inspection within 1 Year)  Approach Rail: F1 - Fair (Inspection within 1 Year)  Comments: - Asphalt in fair condition, wide transverse cracks in center lane & shoulder area Structural handrail in condition Curbs have mild-medium cracking throughout on the roadway side Approach/exit rail dam the northwest corner of structure, P3. Remainder of guiderail in fair condition, connected to end blocks with hazard markers Deck likely heavily cracked due to leakage between pre-cast sections, P3.  HYDROLOGY  Water Velocity: 0.4 m/s Ice Problem: N - No Problem  Water Depth: 0.3 m Scour Problem: P - Possible Problem  Waterway: 01 - Adequate Debris Problem: K - Known Problem  Comments: - Old washed out beaver dam located under structure. New beaver dam built upstream and has at least head built up behind it.  REPLACEMENT/REHABILITATION  Next Rehab. Date: 2024 Replacement Year: 2030  Antic. Rehab. Cost: \$100,000.00 Replacement Cost: \$1,500,000.00  Recommendations: - Complete superficial rehab of concrete defects, replace expansion joints and some sections of guiders 5 years. Replace structure within the next 10 years.  DesERVATIONS  Overall Condition: P3 - Poor (Repair within 3 Years) Requires Further No Inspection:  Additional Observations: - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection in the problem. In the Possible Problem. F2 - Fair (Inspection within 1 Years) It - Universication. P- Possible Problem. En - Enail Enail. En	DECK				
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Antic. Rehab. Cost: \$100,000.00 Replacement Cost: \$1,500,000.00  Recommendations: - Complete superficial rehab of concrete defects, replace expansion joints and some sections of guidera 5 years. Replace structure within the next 10 years.  OBSERVATIONS  Overall Condition: P3 - Poor (Repair within 3 Years) Requires Further Inspection:  Additional Observations: - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection of guidera 5 years.  P3 - Poor (Repair within 3 Years) Requires Further Inspection:  - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection of guidera 5 years.  - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection of guidera 5 years.  - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection of guidera 5 years.  - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection of guidera 5 years.  - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection within 2 Years).  - F2 - F3 ir (Inspection within 2 Years).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).  - F3 - F3 ir (Inspection within 1 Year).	REPLACEMENT/REHABILITATION				
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Inspection:  Additional Observations: - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection.  LEGEND: Condition Definitions: 1-*Good - [discontinued code]. 2-*Fair (Inspection within 2 Years). 1-*Equipment of the problem	OBSERVATIONS				
LEGEND: Condition Definitions:	Overall Condition:	P3 - Poor (Repair within 3 Years)	•	No	
Condition Definitions:    T - Good - [discontinued code]   F2 - Fair (Inspection within 2 Years)   C - Unsafe (Closed to Public)   N - No Problem.   N - No Problem.   F1 - Fair (Inspection within 1 Year)   U - Uninspectable   P - Possible Problem.   Eng Eng.	Additional Observations:	rations: - F1 = substructure. P3 = superstructure & deck. Hazards, high speed traffic. Use rubber boots for inspection.			
A * *Unsafe - [discontinued code]. P1 - Poor (Repair within 1 Years). P1 - Poor (Repair within 1 Years). P2 - Poor (Repair within 1 Years). P3 - Poor (Repair within 1 Years). P3 - Poor (Repair within 1 Years). P4 - Not Applicable. P4 - Von P1 - Poor (Repair within 1 Years). P4 - Poor (Immediate Repair). PHOTO GUIDELINES:    Inspection Photos:	Condition Definitions:  1 - *Good - [discontinued code].  2 - *Fair - [discontinued code].  3 - *Poor - [discontinued code].  4 - *Unsafe - [discontinued code].  G - Good (Inspection within 2 Years).  PHOTO GUIDELINES:  Inspection Photos:	F1 - Fair (Inspection within 1 Year). P3 - Poor (Repair within 3 Years). P1 - Poor (Repair within 1 Year). P - Poor (Immediate Repair).	C - Unsafe (Closed to Public). U - Uninspectable. I - Inapplicable.	N - No Problem. P - Possible Problem. K - Known Problem. Maint Maintenance. Eng Engineering. Office - Bridge Office.	

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

**INSPECTION PHOTOS**