

	GOVERNMENT OF NEWFOUNDLAND AND LABRADOR Department of Transportation and Infrastructure	BRIDGE INSPECTION REPORT B08162023-1	
Date: 11/1/2022	Inspected By: M Button	Category: Office - Bridge Office	
BRIDGE INFORMATION			
Site:	4-038 - CASTOR RIVER BRIDGE		
Route:		Overall Length:	80.8 m
Year Built:	1966	Est: No	Overall Width: 8.9 m
Year Last Rehab.:	2006	Est: No	Roadway Width: 7.3 m
Region:	WEST COAST/NORTHERN		Sidewalk Width: 0 m
Jurisdiction:	Provincial	Clearance to R.D. or N.W.L.:	3.8 m
Type of Structure:	01 - AASH to Girder	Max Depth of N.W.L.:	0 m
Purpose of Structure:	03 - Over Navigable Waters	Spans:	
Type of Handrail:	02 - Concrete Rail	<u>Span No.:</u>	<u>Length</u>
Roadway Surface:	02 - Asphalt	<u>Span No.:</u>	<u>Length</u>
Alignment Vertical:	01 - Good	1	23.7
Alignment Horizontal:	01 - Good	2	23.5
Restrictions:	No	3	23.7
		4	0
		5	0
		6	0
BRIDGE PHOTOS			
SUBSTRUCTURE			
Condition:	P3 - Poor	Bearings:	U - Uninspectable
		Bearing Seat:	U - Uninspectable
Comments:	- North abutment is in fair condition. The east end of the abutment wall has several narrow cracks with efflorescence. There is a medium spall on the east end of the abutment wall, F1. - South abutment has a wide vertical crack at the center of the abutment wall. The west end of the abutment wall has several cracks with efflorescence. The east corner of the abutment wall has rust staining, F1 to P3. - North pier has light to medium map cracking throughout the both ends of the pier with small spalls. There is efflorescence leaching from some of the cracks. There is light erosion along the waterline, P3. - South pier has severe map cracking on both noses. There are large spalls on the noses with delaminating concrete surrounding them. The spalls are extending up to the bearing seats. There is severe efflorescence in local areas. There is a number of wide vertical cracks and medium map cracks on the faces of the pier. There is severe disintegration close to the exterior bearing seat. There is medium erosion along the base of the pier, P3. - Wingwalls have light to medium map cracking with efflorescence throughout. Concrete is delaminated and spalling around the corner of the bearing seats, F1 to P3. - Bearings – Uninspectable - Bearing seats are in poor condition, limited inspection, P3.		
SUPERSTRUCTURE			
Condition:	P3 - Poor	Expansion Joints:	P3 - Poor
Comments:	- Girders are in poor condition. There are a number of medium to large spalls on the underside of girders. The spalls have exposed a large amount of rebar with severe corrosion. There are wide cracks propagating out of a spall on the West exterior girder. There is a long, medium crack running along the center girder on the South span. The exterior girders have light map cracks spanning the outside surfaces, P3. - Diaphragms have light to medium disintegration throughout. There are medium spalls on the undersides of some diaphragms. The spalls are exposing severely corroded rebar, P3. - Deck underside has light cracking in local areas with efflorescence. There is a large spall near the North abutment, exposed rebar with medium corrosion, F1 to P3. - Deck soffit has		

wide cracks along the span of the exterior surface. There are large spalls throughout. There is severe efflorescence leaking. The concrete surface is stained from corroded steel in local areas, P3 to P1. - Drainage pipes are in fair condition. There is light corrosion on the top ends of the East side pipes. The old drainage pipes are severely corroded, F1. - Expansion joints are filled with gravel, P3.

DECK

Condition:	F1 - Fair	Curbs:	P3 - Poor
Hand Rail:	F1 - Fair	Roadway Condition:	F2 - Fair
Approach Rail:	F1 - Fair		
Comments:	- Deck and approach asphalt are in fair condition, F2. - Curbs – There are narrow cracks in local areas. There is cracked concrete delaminating around the base of one handrail post. There is a large spall on the exterior of the East curb, exposing corroded rebar and the anchor bolts of a handrail post, F1 to P3. - End blocks are in fair condition. There is light scragging along the end blocks, F1. - Handrails are in fair condition. The top east section of the handrail is disconnected from posts and is severely bent, F1. - Guiderails are in overall fair condition. Three of the guiderails have minor damage to the rails and posts at the buried ends. Guiderails have regulation hazard markers and post spacing. Rails are connected to end blocks, F1.		

HYDROLOGY

Water Velocity:	0 m/s	Ice Problem:	P - Possible Problem
Water Depth:	0 m	Scour Problem:	P - Possible Problem
Waterway:	01 - Adequate	Debris Problem:	N - No Problem
Comments:			

REPLACEMENT/REHABILITATION

Next Rehab. Date:	2028	Replacement Year:	2041
Antic. Rehab. Cost:	\$500000	Replacement Cost:	\$0
Recommendations:	- Recommended to replace expansion joints. Recommended to rehab piers, girders, diaphragms, and South abutment. Consider replacement		

OBSERVATIONS

Overall Condition:	P3 - Poor	Requires Further Inspection:	No
Additional Observations:	- Bridge is in overall poor condition, P3 with F1 and P1 areas. Piers have large area of deterioration, the underside of the girders deteriorated in some areas with exposed stirrups, abutment walls have medium to large vertical cracks.		

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 F3, P4, P, or C
 • Any evidence of known ice, scour, debris, waterway problems

INSPECTION PHOTOS