

Bridge Inspection Report

NBI Structure Number: 011400980005300

Hanover 098/053

Date of Inspection: 08/16/2023

GREAT HOLLOW ROAD

Date Report Sent: 11/16/2023

over

Owner: Municipality

MINK BROOK

Bridge Inspection Group: B-Team

Great Hollow Stone Arch

Bridge Maintenance Crew: OTHER

Recommended Postings:

Weight: **E-2**

Weight Sign OK

NEW SIGNS INSTALLED.

Width: **Not Required**

Width Sign OK

Primary Height Sign Recommendation: *None*

Clearances: Over: 99.99

Height Sign OK

Optional Centerline Height Sign Rec: *None*

(Feet) Under: 0.00

Route: 99.99

Condition:

Red List Status: Not on the Redlist

Deck: 5 Fair

Superstructure: 5 Fair

Substructure: 5 Fair

Culvert: N N/A (NBI)

Sufficiency Rating: 61 %

Bridge Rail: Substandard

Rail Transition: Substandard

Bridge Approach Rail: Substandard

Approach Rail Ends: Substandard

Structure Type and Materials:

Number of Main Spans: 1

Number of Approach Spans: 0

Main Span Material and Design Type

Masonry/Arch-Deck

NH Bridge Type: MA (Masonry Arch)

Deck Type: N/A (NBI)

Wearing Surface: None

Membrane: N/A (no deck (NBI))

Deck Protection: N/A (no deck (NBI))

Curb Reveal: Not Measured

Plan Location: N-O-F/CARD

Total Bridge Length: 27.0 ft

Right Curb/Sidewalk Width: 0.0 ft

Total Bridge Width: 25.1 ft

Median: No median

Bridge Skew: 2.00°

Year Built/Rebuilt: 1901

Bridge Dimensions:

Length Maximum Span: 27.0 ft

Left Curb/Sidewalk Width: 0.0 ft

Width Curb to Curb: 21.3 ft

Approach Roadway Width: 22.0 ft

(W/Shoulders)

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Bridge Service:

Type of Service on Bridge: Highway

Type of Service Under: Waterway

Lanes on Bridge: 2

Lanes Under: 0

AADT: 2,125

Percent Trucks: 4%

Year of AADT: 2022

Future AADT: 3,145

Year of Future AADT: 2042

Federal or State Definition Bridge: Fed-Definition Bridge

National Highway System: Bridge does not carry NHS

Roadway Functional Class: Urban, Collector

New Hampshire Bridge Tier: 5

Eligibility for the National Register of Historic Places: Br on Natl Reg Hist Pl

Traffic Direction: 2-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: 2 Intolerable - Replace

Underclearances: N Not applicable (NBI)

Approach Alignment: 8 Equal Desirable Crit

Structural Evaluation: 5 Above Min Tolerable

Channel/Channel Protection: 6 Bank Slumping

Waterway Adequacy: 8 Equal Desirable

Bridge Scour Critical Status: 8 Stable Above Footing

Riprap Condition: Fair Condition

Debris Present: Debris Present

Channel Notes: MODERATE SCOUR AT SOUTH, LARGE BEDLOAD AT NORTH. BANK EROSION AT NORTHWEST.

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Element Details

No.	Description	Material Notes and Condition Notes:
145	Masonry Arch	STONE ARCH. LEAKING AND HEAVY EFFLORESCENCE IN ARCH, ESPECIALLY UNDER EXTERIORS. LOOSE AND MISSING MORTAR, REMOVED AND MORTARED.
└ 1120	Efflorescence/Rust Staining	LEAKING AND HEAVY EFFLORESCENCE IN ARCH, ESPECIALLY UNDER EXTERIORS.
└ 1610	Mortar Breakdown (Masonry)	LOOSE AND MISSING MORTAR, REMOVED AND MORTARED.
217	Masonry Abutment	STONE MASONRY. SMALL VOIDS, AREAS OF MORTAR DETERIORATION, MORTARED. SOUTHWEST WING CRACKED, BULGING, AND SETTLED. FOOTING EXPOSED AT NORTHEAST CORNER.
└ 1610	Mortar Breakdown (Masonry)	SMALL VOIDS, AREAS OF MORTAR DETERIORATION, MORTARED.
└ 4000	Settlement	SOUTHWEST WING CRACKED, BULGING, AND SETTLED.
└ 6000	Scour	FOOTING EXPOSED AT NORTHEAST CORNER.
333	Other Bridge Railing	STONE MASONRY WITH CONCRETE CAP. CRACKS AND DETERIORATION IN MORTAR HAS BEEN MORTARED. CAP SECTIONS CRACKED AT NORTHWEST..
└ 1010	Cracking	FEW LIGHT CRACKS.
└ 1080	Delamination/Spall/Patched Area	CRACKS AND DETERIORATION IN MORTAR HAS BEEN MORTARED. BROKEN CAP SECTIONS HAVE BEEN REPAIRED.

Element States

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
145	Masonry Arch	26	ft	23%	65%	12%	0%
└ 1120	Efflorescence/Rust Staining	12	ft	0%	75%	25%	0%
└ 1610	Mortar Breakdown (Masonry)	10	ft	20%	80%	0%	0%
217	Masonry Abutment	164	ft	60%	30%	10%	0%
└ 1610	Mortar Breakdown (Masonry)	10	ft	0%	50%	50%	0%
└ 4000	Settlement	10	ft	0%	100%	0%	0%
└ 6000	Scour	5	ft	0%	100%	0%	0%
333	Other Bridge Railing	59	ft	83%	17%	0%	0%
└ 1010	Cracking	5	ft	0%	100%	0%	0%
└ 1080	Delamination/Spall/Patched Area	10	ft	80%	20%	0%	0%

Bridge Notes:

Inspection Notes: 08/16/2023

MHC - inspection comments -

STONE MASONRY RAIL: RAIL CAPS HAVE BEEN REPAIRED, JOINTS HAVE BEEN MORTARED, LOOSE STONES HAVE BEEN REPAIRED. CRACKED AT NORTHWEST.

DECK/SUPERSTRUCTURE: ASPHALT - FEW CRACKS, POTHOLED AT WEST SIDE. LEAKING AND HEAVY EFFLORESCENCE IN ARCH, ESPECIALLY AT EXTERIORS. SUBSTRUCTURE: JOINTS HAVE BEEN MORTARED. SOUTHWEST WING CRACKED, BULGED, AND SETTLED. FOOTING EXPOSED AT SOUTHEAST CORNER.

PICTURES: B676

16. SOUTH APPROACH

17. POTHOLES AT WEST SIDE.

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Previous Inspection Notes: 08/09/2021

MTC - inspection comments -
 STONE MASONRY RAIL: RAIL CAPS HAVE BEEN REPAIRED, JOINTS HAVE BEEN MORTARED, LOOSE STONES HAVE BEEN REPAIRED. CRACKED AT NORTHWEST.
 DECK/SUPERSTRUCTURE: LEAKING AND HEAVY EFFLORESCENCE IN ARCH, ESPECIALLY AT EXTERIORS. FEW CRACKS IN PAVEMENT.
 SUBSTRUCTURE: JOINTS HAVE BEEN MORTARED. SOUTHWEST WING CRACKED, BULGED, AND SETTLED. FOOTING EXPOSED AT SOUTHEAST CORNER.

PICTURES: B648
 1. WEST ELEVATION.

Approach and Roadway Notes:

PAVEMENT CRACKED.
 W-BEAM APPROACH RAIL: CONCRETE BARRIERS INSTALLED AT NORTHWEST AND SOUTHEAST APPROACHES.

Inspection History

Inspection Date	Inspector Initials	Inspection Type(s) Performed				Major Element Ratings				Red list	Posting
		NBI	Elem	FCM	U/W	Deck	Super	Sub	Culvert		
08/16/2023	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	5	N	<input type="checkbox"/>	E-2
08/09/2021	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	5	N	<input type="checkbox"/>	E-2
08/16/2019	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	5	N	<input type="checkbox"/>	E-2
08/21/2017	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	5	N	<input type="checkbox"/>	E-2
08/20/2015	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	5	N	<input type="checkbox"/>	E-2
08/27/2013	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	5	N	<input type="checkbox"/>	E-2
08/24/2011	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	5	N	<input type="checkbox"/>	E-2
09/15/2009	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	6	N	<input type="checkbox"/>	E-2
09/26/2007	BEP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	6	N	<input type="checkbox"/>	E-2
07/11/2005	BEP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	6	N	<input type="checkbox"/>	E-2
01/06/2004	BEP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	6	N	<input type="checkbox"/>	E-2
09/05/2001	WBL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	7	N	<input type="checkbox"/>	E-2
12/20/1999	WBL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	7	N	<input type="checkbox"/>	E-2
12/01/1997		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	7	N	<input type="checkbox"/>	E-2
08/01/1995		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	7	N	<input type="checkbox"/>	E-2
12/01/1993		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	7	N	<input type="checkbox"/>	E-2
06/01/1991		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6	6	7	N	<input type="checkbox"/>	E-2

Inspection Frequency (mo.)			
NBI	Elem	FCM	U/W
24	24	N/A	N/A