Bridge Inspection Report

NBI Structure Number: 011201090005400

Hancock 109/054

Date of Inspection: 08/06/2024
Date Report Sent: 10/30/2024
Owner: Municipality
Bridge Inspection Group: D-Team
Bridge Maintenance Crew: OTHER

MIDDLE ROAD
over
MCDOWELL RESERVOIR

Recommended Postings:

Weight: **E-2**

SIGNS IN PLACE, 8/6/24. SIGN TIPPED ON NORTHWEST.

☑ Weight Sign OK

Width: **Not Required**

☑ Width Sign OK

Primary Height Sign Recommendation: *None*
Optional Centerline Height Sign Rec: *None*

Clearances: (Feet)
Over: 99.99
Under: 0.00
Route: 99.99

☑ Height Sign OK

Condition:

Red List Status: Not on the Redlist
Deck: 7 Good
Superstructure: 7 Good
Substructure: 7 Good
Culvert: N N/A (NBI)
Sufficiency Rating: 61.8 %

Structure Type and Materials:

Number of Main Spans: 2
Number of Approach Spans: 0

Main Span Material and Design Type
Concrete/Slab

Bridge Rail: Substandard
Rail Transition: Substandard
Bridge Approach Rail: Substandard
Approach Rail Ends: Substandard

NH Bridge Type: CB (Concrete Box)
Deck Type: Concrete-Cast-in-Place
Wearing Surface: Bituminous
Membrane: Unknown
Deck Protection: Unknown
Curb Reveal: Not Measured
Plan Location: unknown
Total Bridge Length: 31.0 ft
Right Curb/Sidewalk Width: 0.5 ft
Total Bridge Width: 22.0 ft
Median: No median
Bridge Skew: 28.00 °
Year Built/Rebuilt: 1950

Bridge Dimensions:

Length Maximum Span: 12.0 ft
Left Curb/Sidewalk Width: 0.5 ft
Width Curb to Curb: 20.0 ft
Approach Roadway Width: (W/Shoulders) 18.0 ft

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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: 481 Percent Trucks: 4 % Year of AADT: 2022
Future AADT: 711 Year of Future AADT: 2042

Federal or State Definition Bridge: Fed-Definition Bridge
National Highway System: Bridge does not carry NHS
Roadway Functional Class: Rural, Local
New Hampshire Bridge Tier: 5
Eligibility for the National Register of Historic Places: Possibly eligible for
Traffic Direction: 2-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: 3 Intolerable - Correct
Underclearances: N Not applicable (NBI)
Approach Alignment: 6 Equal Min Criteria
Structural Evaluation: 5 Above Min Tolerable
Channel/Channel Protection: 6 Bank Slumping
Waterway Adequacy: 6 Equal Minimum
Bridge Scour Critical Status: 8 Stable Above Footing
Riprap Condition: Good Condition
Debris Present: Debris Present
Channel Notes: MINOR ROCK DEBRIS IN BOTH SPANS. SHOULD CUT BRUSH BACK AT INLET.

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Element Details

No.	Description	Material Notes and Condition Notes:
38	Reinforced Concrete Slab	CURBS- LIGHT SPALL AT BASE OF BRIDGE POST ON SOUTHEAST. UNDERSIDE OF SLAB- FEW LIGHT RUST SPOTS.
└ 510	Wearing Surfaces	ASPHALT- FEW CRACKS.
└1080	Delamination/Spall/Patched Area	CURB SPALLED ON SOUTHEAST.
210	Reinforced Concrete Pier Wall	PIER WALL- FINE VERTICAL CRACKS, MINOR ABRASION AT BASE ADJACENT TO CONCRETE INVERT.
215	Reinforced Concrete Abutment	ABUTMENTS- FEW FINE CRACKS. WINGS- HORIZONTAL SPALL ALONG COLD SEAM ON SOUTHEAST, MINOR EFFLORESCENCE NEAR ABUTMENT. HEADWALLS- FINE VERTICAL CRACK WITH EFFLORESCENCE ON WEST AT CENTER, TYPICAL OF EAST.
└1080	Delamination/Spall/Patched Area	HORIZONTAL SPALL ALONG COLD SEAM ON SOUTHEAST WING APPROXIMATELY 6' IN LENGTH.
└1120	Efflorescence/Rust Staining	FINE VERTICAL CRACK WITH EFFLORESCENCE ON EACH HEADWALL AT CENTER. MINOR EFFLORESCENCE ON SOUTHEAST WING.
330	Metal Bridge Railing	METAL RAIL- SURFACE RUST FORMING.
└1000	Corrosion	CORROSION OF THE STEEL HAS INITIATED.

Element States

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
38	Reinforced Concrete Slab	682	sq.ft	100%	0%	0%	0%
└ 510	Wearing Surfaces	---	---	95%	5%	0%	0%
└1080	Delamination/Spall/Patched Area	1	sq.ft	0%	100%	0%	0%
210	Reinforced Concrete Pier Wall	25	ft	100%	0%	0%	0%
215	Reinforced Concrete Abutment	165	ft	95%	2%	4%	0%
└1080	Delamination/Spall/Patched Area	6	ft	0%	0%	100%	0%
└1120	Efflorescence/Rust Staining	3	ft	0%	100%	0%	0%
330	Metal Bridge Railing	62	ft	0%	100%	0%	0%
└1000	Corrosion	62	ft	0%	100%	0%	0%

Bridge Notes:

8/10/09- ROAD NAME CHANGED FROM MIDDLE HANCOCK ROAD TO MIDDLE ROAD.

8/15/13- BRUSH AND TREES REMOVED, UPSTREAM.

7/10/15- CHANGED FROM CULVERT TO BRIDGE. #2 SPAN CONCRETE BOXES (CAST IN PLACE). SLAB- 16" WITH TWO FEET OF COVER, CHECK PLANS.

Inspection Notes: 08/06/2024

NJL inspection comments -

DECK / SUPERSTRUCTURE: ASPHALT- FEW CRACKS. CURBS- LIGHT SPALL AT BASE OF BRIDGE POST ON SOUTHEAST. UNDERSIDE OF SLAB- FEW LIGHT RUST SPOTS. METAL RAIL- SURFACE RUST FORMING.

SUBSTRUCTURE: ABUTMENTS- FEW FINE CRACKS. PIER WALL- FINE VERTICAL CRACKS, MINOR ABRASION AT BASE ADJACENT TO CONCRETE INVERT. WINGS- HORIZONTAL SPALL ALONG COLD SEAM ON SOUTHEAST, MINOR EFFLORESCENCE NEAR ABUTMENT. HEADWALLS- FINE VERTICAL CRACK WITH EFFLORESCENCE ON WEST AT CENTER, TYPICAL OF EAST.

PICTURES: D309-
41. SOUTH APPROACH.
42. EAST ELEVATION.
43. VIEW OF INTERIOR IN SPAN #1.
44. VIEW OF INTERIOR IN SPAN #2.

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Previous Inspection Notes: 08/10/2022

BTB inspection comments -
DECK / SUPERSTRUCTURE: ASPHALT- NO DAMAGE. CURBS- LIGHT SPALLS AT BASE OF BRIDGE POST. UNDERSIDE OF SLAB- FEW LIGHT RUST SPOTS. METAL RAIL- SURFACE RUST FORMING.
SUBSTRUCTURE: ABUTMENTS- FEW FINE CRACKS. PIER WALL- FINE VERTICAL CRACKS, MINOR ABRASION AT BASE ADJACENT TO CONCRETE INVERT. WINGS- HORIZONTAL SPALL ALONG COLD SEAM ON SOUTHEAST, MINOR EFFLORESCENCE NEAR ABUTMENT. HEADWALLS- FINE VERTICAL CRACK WITH EFFLORESCENCE ON WEST AT CENTER, TYPICAL OF EAST.

Approach and Roadway Notes:

APPROACH ASPHALT- MINOR CRACKS. NO APPROACH RAIL.

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		
08/06/2024	NJL	☑	☑	☐	☐	7	7	7	N	☐	E-2
08/10/2022	BTB	☑	☑	☐	☐	7	7	7	N	☐	E-2
08/10/2020	NJL	☑	☑	☐	☐	7	7	7	N	☐	E-2
08/06/2018	NJL	☑	☑	☐	☐	7	7	7	N	☐	E-2
08/05/2016	KLM	☑	☑	☐	☐	7	7	7	N	☐	E-2
07/10/2015	NJL	☑	☑	☐	☐	7	7	7	N	☐	E-2
08/15/2013	NJL	☑	☑	☐	☐	N	N	N	7	☐	E-2
08/09/2011	KLM	☑	☑	☐	☐	N	N	N	7	☐	E-2
08/10/2009	KLM	☑	☑	☐	☐	N	N	N	7	☐	E-2
03/01/2007	FNM	☑	☑	☐	☐	N	N	N	7	☐	E-2
07/28/2005	JEL	☑	☑	☐	☐	N	N	N	7	☐	E-2
06/24/2003	FNM	☑	☑	☐	☐	N	N	N	7	☐	E-2
12/16/1999	FNM	☑	☑	☐	☐	N	N	N	7	☐	E-2
02/01/1997		☑	☑	☐	☐	N	N	N	7	☐	E-2
01/01/1995		☑	☑	☐	☐	N	N	N	7	☐	E-2
01/01/1993		☑	☑	☐	☐	N	N	N	7	☐	E-2

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