Bridge Inspection Report

NBI Structure Number: 010201280007800

Greenland 128/078

Date of Inspection: 06/24/2024
Date Report Sent: 08/30/2024
Owner: Tpk Bureau, NHDOT
Bridge Inspection Group: C-Team
Bridge Maintenance Crew: 11

BREAKFAST HILL RD
over
I-95
J. Weeks & C. Blakeny Mem.

Interstate Bridge Number: 013

Recommended Postings:

Weight: **No Posting Required** ☑ 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: 16.40, Route: 99.99

☑ Height Sign OK

Condition:

Red List Status:	Not on the Redlist
Deck:	5 Fair
Superstructure:	7 Good
Substructure:	7 Good
Culvert:	N N/A (NBI)
Sufficiency Rating:	88 %

Structure Type and Materials:

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

Main Span Material and Design Type
Steel Continuous/Stringer/Girder

Bridge Rail:	Substandard
Rail Transition:	Substandard
Bridge Approach Rail:	Meets Standards
Approach Rail Ends:	Substandard

NH Bridge Type:	IB-C (I Beams w/ Concrete Deck)
Deck Type:	Concrete-Cast-in-Place
Wearing Surface:	Bituminous
Membrane:	Other
Deck Protection:	None
Curb Reveal:	8 in
Plan Location:	29-2-1
Total Bridge Length:	253.0 ft
Right Curb/Sidewalk Width:	0.7 ft
Total Bridge Width:	51.6 ft
Median:	No median
Bridge Skew:	0.00 °
Year Built/Rebuilt:	1972/2012

Bridge Dimensions:

Length Maximum Span:	124.5 ft
Left Curb/Sidewalk Width:	5.0 ft
Width Curb to Curb:	43.3 ft
Approach Roadway Width: (W/Shoulders)	24.0 ft

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Bridge Service:

Type of Service on Bridge: Highway and Pedestrian
Type of Service Under: Highway, with or without ped
Lanes on Bridge: 2
Lanes Under: 8
AADT: 3,003 Percent Trucks: 10 % Year of AADT: 2022
Future AADT: 4,444 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: 4
Eligibility for the National Register of Historic Places: Not eligible for NRHP
Traffic Direction: 2-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: 6 Equal Min Criteria
Underclearances: 5 Above Tolerable
Approach Alignment: 8 Equal Desirable Crit
Structural Evaluation: 6 Equal Min Criteria
Channel/Channel Protection: N N/A (NBI)
Waterway Adequacy: N Not applicable
Bridge Scour Critical Status: N Not Over Waterway
Riprap Condition: unknown
Debris Present: unknown
Channel Notes:

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Element Details

No.	Description	Material Notes and Condition Notes:
12	Reinforced Concrete Deck	7.5 in. C.I.P. DECK, UNCOATED CRANK BARS, MEMBRANE AND 2 in. PAVEMENT. ASPHALT IS NEW WITH SEVERAL CRACKED AREAS WITH CONCRETE DUST EMERGING. CURB AND SIDEWALK HAVE PATCHES AND FINE CRACKS. SOFFIT HAS SEVERAL FULL-DEPTH PATCHES. FINE CRACKS WITH EFFLORESCENCE AND RUST STAINS IN SEVERAL AREAS. SEVERAL SMALL SPALLED AREAS IN BOTH SPANS. FEW AREAS WITH LARGE SPALLS AND REBAR EXPOSED IN SPAN #1, BAYS #2 AND #3.
└ 510	Wearing Surfaces	NEW 2024 INSPECTION.
└1080	Delamination/Spall/Patched Area	
└1090	Exposed Rebar	
└1120	Efflorescence/Rust Staining	
└1130	Cracking (RC and Other)	
107	Steel Open Girder/Beam	Painted A588 weathering steel welded plate girders BEAMS HAVE NEW PAINT AND OLD SECTION LOSS (SCALE REMOVED). SEVERAL NOTCHES AT FLANGE TAPERS. PAINT IS IN NEW CONDITION.
└ 515	Steel Protective Coating	NEW 2024 INSPECTION.
└ 517	Weathering Steel Protective Coating	OLD SECTION LOSS, SCALE REMOVED WHEN PAINTED.
└1000	Corrosion	
└7000	Damage	
205	Reinforced Concrete Column	3.5'x3.5'x14.4' tall columns on combined spread footing at pier. FINE CRACKS.
215	Reinforced Concrete Abutment	C.I.P. cantilever abutments and battered U-back wingwalls on spread footings. REPAIRED BRIDGE SEATS AT WEST. FINE CRACKS WITH MINOR EFFLORESCENCE AND FEW RUST STAINS, MINOR SPALLS AND LIGHT DELAMINATIONS AT EAST AND WEST.
└1080	Delamination/Spall/Patched Area	
└1120	Efflorescence/Rust Staining	
└1130	Cracking (RC and Other)	
234	Reinforced Concrete Pier Cap	51' long x 3.5' wide variable depth C.I.P. pier cap on three concrete columns. FINE CRACKS. MINOR SPALL.
└1080	Delamination/Spall/Patched Area	
300	Strip Seal Expansion Joint	AT WEST DECK END. DEBRIS FILLED.
└2350	Debris Impaction	
301	Pourable Joint Seal	6" ASPHALTIC MINI-PLUG JOINT AT EAST DECK END. NEW CONDITION.

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311	Movable Bearing	Steel expansion brgs at west abutment and pier. NEW PAINT.
└ 515	Steel Protective Coating	NEW PAINT 2024 INSPECTION.
313	Fixed Bearing	Fixed steel shoes (rockers) at east abutment. NEW PAINT.
└ 515	Steel Protective Coating	NEW PAINT 2024 INSPECTION.
330	Metal Bridge Railing	** 3-Bar Aluminum w/ chain link snow fence. FEW SCRAPES AND GOUGES. TRANSITION RAIL DAMAGED AND TORN AT SOUTHEAST.

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Element States

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
12	Reinforced Concrete Deck	13,057	sq.ft	91%	8%	1%	0%
└ 510	Wearing Surfaces	---	---	90%	10%	0%	0%
└1080	Delamination/Spall/Patched Area	500	sq.ft	0%	95%	5%	0%
└1090	Exposed Rebar	25	sq.ft	0%	100%	0%	0%
└1120	Efflorescence/Rust Staining	100	sq.ft	0%	60%	40%	0%
└1130	Cracking (RC and Other)	500	sq.ft	0%	100%	0%	0%
107	Steel Open Girder/Beam	1,772	ft	0%	86%	14%	0%
└ 515	Steel Protective Coating	---	---	100%	0%	0%	0%
└ 517	Weathering Steel Protective Coating	---	---	0%	50%	50%	0%
└1000	Corrosion	1,771	ft	0%	86%	14%	0%
└7000	Damage	2	ft	0%	100%	0%	0%
205	Reinforced Concrete Column	3	each	100%	0%	0%	0%
215	Reinforced Concrete Abutment	219	ft	79%	19%	1%	0%
└1080	Delamination/Spall/Patched Area	15	ft	0%	100%	0%	0%
└1120	Efflorescence/Rust Staining	10	ft	0%	70%	30%	0%
└1130	Cracking (RC and Other)	20	ft	0%	100%	0%	0%
234	Reinforced Concrete Pier Cap	51	ft	98%	2%	0%	0%
└1080	Delamination/Spall/Patched Area	1	ft	0%	100%	0%	0%
300	Strip Seal Expansion Joint	52	ft	52%	48%	0%	0%
└2350	Debris Impaction	25	ft	100%	0%	0%	0%
301	Pourable Joint Seal	43	ft	100%	0%	0%	0%
311	Movable Bearing	14	each	100%	0%	0%	0%
└ 515	Steel Protective Coating	---	---	100%	0%	0%	0%
313	Fixed Bearing	7	each	100%	0%	0%	0%
└ 515	Steel Protective Coating	---	---	100%	0%	0%	0%
330	Metal Bridge Railing	781	ft	62%	38%	0%	0%

Bridge Notes:

John W. Weeks and Charles S Blakeney Memorial Bridge (1953, Chapter 33)
VERSA-LIFT INSPECTION DONE 6/12/12.
REHAB WORK DONE BY BOBM 6/12/12.

Inspection Notes: 06/24/2024

MAS - inspection comments -
DECK: ASPHALT - NEW WITH SEVERAL AREAS CRACKED WITH CONCRETE DUST EMERGING. CURB / SIDEWALK - FINE CRACKS, REPAIRED AREAS. JOINTS - STRIP SEAL TYPE IS PARTIALLY DEBRIS FILLED. PLUG TYPE IS IN NEW CONDITION. RAIL - FEW SCRAPES AND GOUGES; TRANSITION RAIL AT SOUTHEAST IS DAMAGED AND TORN. SOFFIT - FINE CRACKS WITH EFFLORESCENCE AND RUST STAINS IN SEVERAL AREAS. FEW SMALL AND LIGHT SPALLS IN AREAS. FEW LARGE SPALLS WITH REBAR EXPOSED IN SPAN #1, BAYS #2 AND #3. SEVERAL FULL-DEPTH PATCHES.
SUPERSTRUCTURE: PAINT - NEW CONDITION. BEAMS - OLD SECTION LOSS, SCALE IS REMOVED. BEARINGS - NEW PAINT.
SUBSTRUCTURE: ABUTMENTS - FINE AND LIGHT CRACKS WITH EFFLORESCENCE AND FEW RUST STAINS, MINOR SPALLS AND DELAMINATIONS; BRIDGE SEATS REPAIRED AT WEST. PIER - GOOD CONDITION, FINE CRACKS, MINOR SPALL.

PICTURES: C651-
58. NEW ASPHALT IS CRACKED WITH CONCRETE DUST RISING AT SOUTHWEST. TYPICAL OF SEVERAL AREAS.
59. NEW PLUG JOINT AT EAST.
60. TRANSITION RAIL IS DAMAGED AND TORN AT SOUTHEAST.
61. VIEW OF SOFFIT AND SUPERSTRUCTURE IN SPAN #2, NEW PAINT.
62. SMALL SPALL WITH REBAR EXPOSED IN SPAN #2, BAY #4. TYPICAL OF FEW AREAS.
63. SOFFIT IS CRACKED WITH EFFLORESCENCE AND RUST STAINS IN SPAN #2, BAYS #1 AND #2. TYPICAL OF FEW AREAS.
64. WEST ABUTMENT IS CRACKED WITH RUST STAINS AND DELAMINATION. TYPICAL OF EAST ABUTMENT.
65. SOFFIT HAS LARGE SPALLS WITH REBAR EXPOSED IN SPAN #1, BAY #2.
66. SOFFIT HAS LARGE SPALL WITH REBAR EXPOSED IN SPAN #1, BAY #3.
67. STRIP SEAL JOINT AT WEST.

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Previous Inspection Notes: 06/28/2022

MAS - inspection comments -
DECK: ASPHALT - SEVERAL AREAS ARE CRACKED AND DEPRESSED; CRACKED AT EAST DECK END. CURB / SIDEWALK - FINE CRACKS, REPAIRED AREAS. JOINT - DEBRIS FILLED. RAIL - FEW SCRAPES. SOFFIT - FINE CRACKS WITH EFFLORESCENCE AND FEW RUST STAINS IN SEVERAL AREAS. FEW AREAS ARE SPALLED WITH REBAR EXPOSED. SEVERAL FULL-DEPTH PATCHES. FEW SMALL SPALLS.
SUPERSTRUCTURE: PAINT - POOR CONDITION. BEAMS - RUSTED WITH SCALE, MOST HEAVY SCALE HAS BEEN REMOVED OVER TRAFFIC. BEARINGS - RUSTED.
SUBSTRUCTURE: ABUTMENTS - FINE CRACKS WITH EFFLORESCENCE AND FEW RUST STAINS, MINOR SPALLS; BRIDGE SEATS REPAIRED AT WEST. PIER - GOOD CONDITION, FINE CRACKS, MINOR SPALL.

PICTURE: C626-
48. ASPHALT IS CRACKED AND DEPRESSED. TYPICAL OF SEVERAL AREAS.

Approach and Roadway Notes:

ASPHALT - (7) GOOD CONDITION, FEW CRACKS.
ALUMINUM RAIL - SCRAPED AND GOUGED, DAMAGED AND TORN AT SOUTHEAST.
W- BEAM RAIL - HEAVILY DAMAGED WITH SEVERAL BROKEN POSTS AND DECAY.
HEAVY VEGETATION.

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		
06/24/2024	MAS	☑	☑	☐	☐	5	7	7	N	☐	No Posting Req'd
06/28/2022	MAS	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
06/24/2020	KJT	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
06/08/2018	MAS	☑	☑	☐	☐	7	7	7	N	☐	No Posting Req'd
06/06/2016	KJT	☑	☑	☐	☐	7	7	7	N	☐	No Posting Req'd
06/19/2014	MAS	☑	☑	☐	☐	7	7	7	N	☐	No Posting Req'd
06/12/2012	KJT	☑	☑	☐	☐	8	7	7	N	☐	No Posting Req'd
06/22/2010	DPC	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
08/05/2008	DPC	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
04/17/2006	DPC	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
05/06/2004	RLM	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
07/17/2003	RLM	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
06/17/2002	DPC	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
06/12/2000	RLM	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
06/10/1998	FNM	☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
04/01/1997		☑	☑	☐	☐	6	7	7	N	☐	No Posting Req'd
04/01/1995		☑	☑	☐	☐	7	7	7	N	☐	No Posting Req'd

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