

Bridge Inspection Report

NBI Structure Number: 014400440010400

Lebanon 044/104

Date of Inspection: 06/12/2017

I-89 NB

Date Report Sent: 09/18/2017

over

Owner: NHDOT

CONNECTICUT RIVER, NECRR

Bridge Inspection Group: B-Team

Vietnam Veteran Memorial

Bridge Maintenance Crew: 04

Interstate Bridge Number: 071

Bridge also in: Hartford, Vermont

Recommended Postings:

Weight: **No Posting Required**

Weight Sign OK

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: 38.98

Route: 99.99

Condition: State Redlist

Deck: 4 Poor

Structure Type and Materials:

Superstructure: 5 Fair

Number of Main Spans: 6

Substructure: 5 Fair

Number of Approach Spans: 0

Culvert: N N/A (NBI)

Main Span Material and Design Type

Steel Continuous Multiple Beam

Bridge Rail: Substandard

NH Bridge Type: IB-C (I Beams w/ Concrete Deck)

Rail Transition: Substandard

Deck Type: Concrete, Cast in Place

Bridge Approach Rail: Substandard

Wearing Surface: Bituminous

Approach Rail Ends: Substandard

Membrane: Other

Deck Protection: None

Curb Reveal: 9 in

Plan Location: 17-4-1

Bridge Dimensions:

Length Maximum Span: 150.0 ft

Total Bridge Length: 847.0 ft

Left Curb/Sidewalk Width: 0.7 ft

Right Curb/Sidewalk Width: 0.7 ft

Width Curb to Curb: 30.0 ft

Total Bridge Width: 35.8 ft

Approach Roadway Width: 40.0 ft

Median: No median

(W/Shoulders)

Bridge Skew: 10.00 °

Year Built/Rebuilt: 1966

Detour Length: 1.0 mi

Bridge Inspection Report

NBI Structure Number: 014400440010400

Lebanon 044/104

Bridge Service:

Type of Service on Bridge: Highway

Type of Service Under: Railroad-waterway

Lanes on Bridge: 2

Lanes Under: Not Applicable

AADT: 20,433

Percent Trucks: 6%

Year of AADT: 2015

Future AADT: 30,240

Year of Future AADT: 2037

Federal or State Definition Bridge: Fed-Definition Bridge

National Highway System: NHS Roadway on Bridge

Roadway Functional Class: Urban Interstate

New Hampshire Highway System and Class: Interstate Highway

Eligibility for the National Register of Historic Places: Not Eligible

Traffic Direction: One-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: 4 - Minimum Tolerable

Underclearances: 5 - Above Min. Tolerable

Approach Alignment: 8 - Equal Desirable Criteria

Structural Evaluation: 5 - Above Min. Tolerable

Channel/Channel Protection: 6 - Bank Slumping

Waterway Adequacy: 9 - Above Desirable Criteria

Bridge Scour Critical Status: 3 - Critical during floods

Riprap Condition: G - Good Condition

Debris Present: Y - Debris Present

Channel Notes: HEAVY BANK EROSION UPSTREAM. MINOR SCOUR AND DRIFT. TREE DEBRIS AT PIERS #4 & 5.

Scour Critical by CHA study, possible pile study?

Bridge Inspection Report

NBI Structure Number: 014400440010400

Lebanon 044/104

Element Details (see disclaimer below)

No.	Description	Material Notes and Condition Notes:
12	Reinforced Concrete Deck	ASPHALT CRACKED, POTHOLED AND PATCHED AT APPROACHES. POTHOLED AND PATCHED AT RELIEF JOINTS. CRACKED OVER RELIEF JOINTS AND LIFTED NEAR CURBS AT EAST. CURBS - CRACKS AND LIGHT TO MODERATE SPALLS WITH SEVERAL GRANITE SECTIONS LOOSE. MODERATE SPALLS AT WEST FASCIA. EAST FASCIA CRACKED WITH RUST STAINS. CURB STONES LOOSE AND ONE MISSING AT NORTHEAST, LOOSE AND TIPPED AT NORTHWEST. SOFFIT CRACKED, DELAMINATION AND SPALLED.
L 510	Wearing Surfaces	
L 1080	Delamination/Spall/Patched Area	
L 1120	Efflorescence/Rust Staining	
L 1130	Cracking (RC and Other)	
107	Steel Open Girder/Beam	<i>WELDED PLATE GIRDERS WITH LONGITUDINAL AND TRANSVERSE WEB STIFFENERS, HAUNCHED AT PIERS</i> MINOR TO LIGHT RUST. SOME HEAVY RUST UNDER EXPANSION JOINTS, RELIEF JOINTS, AND ON EXTERIOR GIRDERS IN SPAN # 6. PAINT CRACKED AND PEELING. SMALL HOLE, 1/2 in. x 1/4 in. IN GIRDER #4 UNDER RELIEF JOINT, SPAN 3.
L 515	Steel Protective Coating	
L 1000	Corrosion	LIGHT TO MODERATE SECTION LOSS UNDER RELIEF JOINTS IN SPANS # 3 & 4 TO ANGLE BRACING, STIFFENERS, GUSSET PLATES AND BOTTOMS OF WEB. FEW CROSS BRACES HOLED. MINOR SECTION LOSS TO UPPER AND LOWER FLANGES. SPAN # 3, GIRDER # 4, PITTED FULL LENGTH ALONG STIFFENER UNDER RELIEF JOINT. RUST AND SCALE BLEEDING THROUGH PAINT AT INTERIOR BAYS, MODERATE AT EXTERIORS. SMALL HOLE IN WEB, 1/2 in. X 1/4 in., IN GIRDER # 4 UNDER RELIEF JOINT. LOWER LATERAL BRACING RUSTED OFF AT X BRACING ON GIRDER # 5 UNDER RELIEF JOINT.
210	Reinforced Concrete Pier Wall	FEW FINE CRACKS. MINOR SPALLS.
L 1080	Delamination/Spall/Patched Area	
L 1130	Cracking (RC and Other)	
215	Reinforced Concrete Abutment	LIGHT TO MODERATE CRACKS, DELAMINATIONS AND SPALLS. MODERATE SPALLS IN NORTHWEST WING. LARGE SPALLS IN NORTH BACKWALL, MODERATE SPALL AT SOUTH BACKWALL. MODERATE SPALLS IN SOUTH FOOTING WITH REBAR EXPOSED.
L 1080	Delamination/Spall/Patched Area	
L 1090	Exposed Rebar	
L 1130	Cracking (RC and Other)	
234	Reinforced Concrete Pier Cap	<i>HAMMERHEADS</i> LIGHT CRACK IN WEST END OF PIER CAP #5. MINOR SPALLS IN TOP AT PIER #4. MINOR SPALL AT EAST END OF PIER #3.
L 1080	Delamination/Spall/Patched Area	
L 1130	Cracking (RC and Other)	

Bridge Inspection Report

NBI Structure Number: 014400440010400

Lebanon 044/104

304	Open Expansion Joint	** Finger Joint ** 16 MISSING OR BROKEN FINGERS ON NORTH JOINT, FEW CRACKED. BROKEN WELDS IN PASSING LANE CAUSING PLATE TO SLAP.
L 7000	Damage	
311	Movable Bearing	ROCKERS SECTION LOSS ON ANCHOR BOLTS AT ABUTMENTS. INTERIOR ROCKERS AT NORTH LIFTED SLIGHTLY DUE TO PACK RUST AND DEBRIS. ROCKERS TIPPED BACK TO NEAR FULL EXPANSION AT NORTH AND TIPPED SLIGHTLY TO SOUTH AT PIERS #4 & 5, TO THE NORTH AT PIERS #1 & 2.
L 515	Steel Protective Coating	
L 1000	Corrosion	
L 2220	Alignment	
313	Fixed Bearing	AT PIER #3 PAINT PEELING AND LIGHT RUST ON EXTERIORS.
L 515	Steel Protective Coating	
L 1000	Corrosion	
330	Metal Bridge Railing	** Steel Angle Rail** TRANSITION RAILS GALVANIZED RUSTED, PAINT FLAKED AND PEELED. MINOR SECTION LOSS. LIGHT TRANSITION RAIL DAMAGE. BOTTOM RAIL ANGLE BRACE BROKEN AT SOUTHEAST.
L 1000	Corrosion	
L 7000	Damage	

Bridge Inspection Report

NBI Structure Number: 014400440010400

Lebanon 044/104

Element States (see disclaimer below)

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
12	Reinforced Concrete Deck	30,107	sq.ft	46%	17%	37%	0%
L 510	Wearing Surfaces	---	---	83%	17%	0%	0%
L 1080	Delamination/Spall/Patched Area	10	sq.ft	100%	0%	0%	0%
L 1120	Efflorescence/Rust Staining	10	sq.ft	100%	0%	0%	0%
L 1130	Cracking (RC and Other)	10	sq.ft	100%	0%	0%	0%
107	Steel Open Girder/Beam	4,209	ft	0%	90%	10%	0%
L 515	Steel Protective Coating	---	---	100%	0%	0%	0%
L 1000	Corrosion	10	each	0%	100%	0%	0%
210	Reinforced Concrete Pier Wall	131	ft	95%	5%	0%	0%
L 1080	Delamination/Spall/Patched Area	10	ft	100%	0%	0%	0%
L 1130	Cracking (RC and Other)	10	ft	100%	0%	0%	0%
215	Reinforced Concrete Abutment	180	ft	8%	80%	7%	5%
L 1080	Delamination/Spall/Patched Area	10	ft	0%	100%	0%	0%
L 1090	Exposed Rebar	10	ft	0%	100%	0%	0%
L 1130	Cracking (RC and Other)	10	ft	0%	100%	0%	0%
234	Reinforced Concrete Pier Cap	171	ft	89%	11%	0%	0%
L 1080	Delamination/Spall/Patched Area	10	ft	100%	0%	0%	0%
L 1130	Cracking (RC and Other)	10	ft	100%	0%	0%	0%
304	Open Expansion Joint	69	ft	55%	25%	0%	20%
L 7000	Damage	10	ft	100%	0%	0%	0%
311	Movable Bearing	30	each	60%	40%	0%	0%
L 515	Steel Protective Coating	---	---	100%	0%	0%	0%
L 1000	Corrosion	4	each	100%	0%	0%	0%
L 2220	Alignment	4	each	100%	0%	0%	0%
313	Fixed Bearing	5	each	60%	40%	0%	0%
L 515	Steel Protective Coating	---	---	100%	0%	0%	0%
L 1000	Corrosion	4	each	50%	50%	0%	0%
330	Metal Bridge Railing	1,873	ft	0%	100%	0%	0%
L 1000	Corrosion	10	each	0%	100%	0%	0%
L 7000	Damage	10	ft	0%	100%	0%	0%

Element Disclaimer: NHDOT is transitioning from CoRe elements to AASHTO elements. The AASHTO element data shown above is the product of the automated element migration routine from the AASHTOWare BrM software. This migrated data has undergone limited field verification. Adequate quality control of this element data is not expected to be achieved until the conclusion of the 2020 inspection season. Please utilize element data with caution.

Bridge Notes:

Vietnam Veterans Memorial Bridge (1983, Chapter 362)
LIFT INSPECTION 5/07, 12/11,12/29/2011, 6/13/2013, 6/17,2014. 5/27/2015, 6/2/2016. 6/12/2017
REPAIRS TO RELIEF JOINTS, RUST REMOVED PRIMED AND PAINTED IN JUNE 2012.

Inspection Notes: 06/12/2017

MTC - inspection comments -
LIFT INSPECTION.

DECK: ASPHALT- CRACKED IN AREAS. POTHOLED, PATCHED AT RELIEF JOINTS AND APPROACHES. CURBS- CRACKS AND LIGHT TO MODERATE SPALLS WITH SEVERAL STONES LOOSE. JOINT- 16 MISSING FINGERS AT NORTH EXPANSION JOINT. MODERATE CRACKS, DELAMINATIONS, AND SPALLS IN ALL BAYS AND IN ALL SPANS. MINOR LEAKING IN AREAS, MODERATE AT RELIEF JOINTS. SUPERSTRUCTURE: MINOR TO LIGHT RUST. SOME HEAVY RUST UNDER EXPANSION JOINTS, RELIEF JOINTS, AND ON EXTERIOR GIRDERS IN NORTH SPAN. HEAVY SECTION LOSS IN ANGLE BRACING AND LATERAL BRACING CONNECTION PLATES TO GIRDERS UNDER RELIEF JOINT IN SPAN #3 AND SPAN #4. REPAIRS MADE TO RELIEF JOINT, RUST REMOVED PRIMED AND PAINTED, RUST AND SCALE STARTING TO BLEED THROUGH. SMALL HOLE IN GIRDER #4 NEAR BOTTOM FLANGE UNDER RELIEF JOINT. LOWER LATERAL BRACING RUSTED OFF AT GIRDER #5 IN SPAN 3.
SUBSTRUCTURE: FINE AND LIGHT CRACKS. LIGHT DELAMINATIONS. SPALLS IN TOP OF BACKWALLS. PIERS - FEW FINE CRACKS. LIGHT CRACK IN DOWNSTREAM END OF CAP #5. MINOR SPALLS IN TOP OF #3 AND 4.

PICTURES- B585 20 - 25

Bridge Inspection Report

Lebanon 044/104

NBI Structure Number: 014400440010400

Previous Inspection Notes: 11/15/2016

MHC - inspection comments -

DECK: ASPHALT- CRACKED IN AREAS. POTHOLED, PATCHED AT RELIEF JOINTS AND APPROACHES. CURBS- CRACKS AND LIGHT TO MODERATE SPALLS WITH SEVERAL STONES LOOSE. JOINT- 16 MISSING FINGERS AT NORTH EXPANSION JOINT. CRACKS, DELAMINATIONS, AND SPALLS IN ALL BAYS AND IN ALL SPANS. MINOR LEAKING IN AREAS, MODERATE AT RELIEF JOINTS. SUPERSTRUCTURE: MINOR TO LIGHT RUST. SOME HEAVY RUST UNDER EXPANSION JOINTS, RELIEF JOINTS, AND ON EXTERIOR GIRDERS IN NORTH SPAN. HEAVY SECTION LOSS IN ANGLE BRACING AND LATERAL BRACING CONNECTION PLATES TO GIRDERS UNDER RELIEF JOINT IN SPAN #3 AND SPAN #4. REPAIRS MADE TO RELIEF JOINT, RUST REMOVED PRIMED AND PAINTED, RUST AND SCALE STARTING TO BLEED THROUGH. SMALL HOLE IN GIRDER #4 NEAR BOTTOM FLANGE UNDER RELIEF JOINT. LOWER LATERAL BRACING RUSTED OFF AT GIRDER #5 IN SPAN 3. SUBSTRUCTURE: FINE AND LIGHT CRACKS. LIGHT DELAMINATIONS. SPALLS IN TOP OF BACKWALLS. PIERS - FEW FINE CRACKS. LIGHT CRACK IN DOWNSTREAM END OF CAP #5. MINOR SPALLS IN TOP OF #3 AND 4.

PICTURES- B572

36. 16 TEETH MISSING AT NORTH JOINT. APPROACH PATCHED.

Approach and Roadway Notes:

PAVEMENT CRACKED, RUTTED, SETTLED, POTHOLED AND PATCHED AT NORTH APPROACH. CURBS STONES SETTLED LOOSE AND MISSING. W-BEAM APPROACH RAIL.

Unusual or experimental features:

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		
06/12/2017	MTC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/15/2016	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
06/02/2016	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/23/2016	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/18/2015	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
05/27/2015	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	5	N	<input checked="" type="checkbox"/>	No Posting Req'd
12/12/2014	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	6	N	<input checked="" type="checkbox"/>	No Posting Req'd
06/17/2014	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	6	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/18/2013	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	6	N	<input checked="" type="checkbox"/>	No Posting Req'd
07/31/2013	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	6	N	<input checked="" type="checkbox"/>	No Posting Req'd
06/13/2013	MHC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	6	N	<input checked="" type="checkbox"/>	No Posting Req'd
03/18/2013	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	6	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/27/2012	JEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4	5	6	N	<input checked="" type="checkbox"/>	No Posting Req'd
11/16/2012	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	6	N	<input type="checkbox"/>	No Posting Req'd
05/21/2012	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4	5	6	N	<input checked="" type="checkbox"/>	No Posting Req'd
12/29/2011	NJL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	5	6	N	<input type="checkbox"/>	No Posting Req'd
12/12/2011	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	6	N	<input type="checkbox"/>	No Posting Req'd
08/29/2011	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	6	N	<input type="checkbox"/>	No Posting Req'd
06/13/2011	MTC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	6	N	<input type="checkbox"/>	No Posting Req'd
03/19/2009	FNM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	6	N	<input type="checkbox"/>	No Posting Req'd
05/08/2007	BEP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	6	N	<input type="checkbox"/>	No Posting Req'd
09/17/2003	BEP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	6	N	<input type="checkbox"/>	No Posting Req'd
06/12/2001	BEP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	6	N	<input type="checkbox"/>	No Posting Req'd
08/09/1999	WBL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5	7	6	N	<input type="checkbox"/>	No Posting Req'd
05/01/1997		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	5	7	7	N	<input type="checkbox"/>	No Posting Req'd
04/01/1995		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	8	7	N	<input type="checkbox"/>	No Posting Req'd
07/01/1993		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	6	8	7	N	<input type="checkbox"/>	No Posting Req'd

Inspection Frequency (mo.)			
NBI	Elem	FCM	U/W
8	8	N/A	60