

Bridge Inspection Report

NBI Structure Number: 007400970008800

Effingham 097/088

Date of Inspection: 08/16/2019
Date Report Sent: 01/17/2020
Owner: Municipality
Bridge Inspection Group: C-Team
Bridge Maintenance Crew: OTHER

DRAKE ROAD
over
WILKINSON BROOK

Recommended Postings:

Weight: **Weight Limit 6 Tons**
SIGNS IN PLACE 8/16/2019.

Weight Sign OK

Width: **One Lane Bridge**
SIGNS IN PLACE 8/16/2019.

Width Sign OK

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

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

Height Sign OK

Condition:

Red List Status: Not on the Redlist
Deck: 7 Good
Superstructure: 7 Good
Substructure: 5 Fair
Culvert: N N/A (NBI)
Sufficiency Rating: 32%

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
Steel/Stringer/Girder

NH Bridge Type: Jack (Jack Arch)
Deck Type: Concrete-Cast-in-Place
Wearing Surface: Gravel
Membrane: None
Deck Protection: None
Curb Reveal: Not Measured
Plan Location: N-O-F
Total Bridge Length: 22.0 ft
Right Curb/Sidewalk Width: 0.0 ft
Total Bridge Width: 17.6 ft
Median: No median
Bridge Skew: 20.00°
Year Built/Rebuilt: 1930

Bridge Dimensions:

Length Maximum Span: 20.0 ft
Left Curb/Sidewalk Width: 0.0 ft
Width Curb to Curb: 15.8 ft
Approach Roadway Width: 14.0 ft
(W/Shoulders)

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Bridge Service:

Type of Service on Bridge: Highway

Type of Service Under: Waterway

Lanes on Bridge: 1

Lanes Under: 0

AADT: 92

Percent Trucks: 0%

Year of AADT: 2017

Future AADT: 136

Year of Future AADT: 2040

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: One lane bridge for 2-way traffic

National Bridge Inventory (NBI) Appraisal Ratings:

Deck Geometry: 7 Above Min Criteria

Underclearances: N Not applicable (NBI)

Approach Alignment: 6 Equal Min Criteria

Structural Evaluation: 2 Intolerable - Replace

Channel/Channel Protection: 5 Bank Prot Eroded

Waterway Adequacy: 7 Above Minimum

Bridge Scour Critical Status: 8 Stable Above Footing

Riprap Condition: Fair Condition

Debris Present: No Debris Present

Channel Notes: SEVERAL TREES DOWNSTREAM. DAM UPSTREAM. LIGHT SCOUR AT NORTHEAST.

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Element Details (see disclaimer below)

No.	Description	Material Notes and Condition Notes:
12	Reinforced Concrete Deck	** Jack Arch ** CONCRETE JACK-ARCH HAS FINE CRACKS, MINOR SPALLS AND LEAKING. 6" + OF GRAVEL OVERBURDEN. VEGETATION GROWING AT CURBS. SOFFIT HAS FINE CRACKS, MINOR SPALLS AND MINOR LEAKING; LIGHT CRACK AT NORTHEAST.
L 1130	Cracking (RC and Other)	
107	Steel Open Girder/Beam	BEAMS HAVE FRECKLE RUST AND MINOR SECTION LOSS AT ENDS. I-BEAM AT MIDSPAN FOR BRACING WELDED TO BEAMS AND HELD UP BY STEEL RODS.
L 515	Steel Protective Coating	
L 1000	Corrosion	
217	Masonry Abutment	MASONRY HAS A FEW VOIDS AND CRACKED AND SETTLED STONES. LIGHT CRACK 3/8 in. AT NORTHEAST CORNER OF NORTH ABUTMENT, SETTLED SLIGHTLY. VOIDS IN STONE WORK WITH UP TO 5' PENETRATION AT NORTHEAST. CONCRETE BACKWALLS HAVE FINE CRACKS. STONE WINGS- VOIDS, BULGING, LOOSE AND SETTLED.
L 1610	Mortar Breakdown (Masonry)	
L 1640	Masonry Displacement	
L 4000	Settlement	
330	Metal Bridge Railing	** W-Beam ** STEEL POSTS. MODERATE DAMAGE.

Element States (see disclaimer below)

No.	Description	Quantity	Units	State 1	State 2	State 3	State 4
12	Reinforced Concrete Deck	388	sq.ft	94%	6%	0%	0%
L 1130	Cracking (RC and Other)	23	sq.ft	0%	100%	0%	0%
107	Steel Open Girder/Beam	154	ft	0%	90%	10%	0%
L 515	Steel Protective Coating	---	---	0%	100%	0%	0%
L 1000	Corrosion	154	ft	0%	90%	10%	0%
217	Masonry Abutment	56	ft	0%	82%	18%	0%
L 1610	Mortar Breakdown (Masonry)	45	ft	0%	100%	0%	0%
L 1640	Masonry Displacement	1	ft	0%	0%	100%	0%
L 4000	Settlement	9	ft	0%	0%	100%	0%
330	Metal Bridge Railing	151	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:

**REMOVED FROM MUNICIPAL RED LIST IN 2017 DUE TO REDEFINED RED LIST IN RSA 234:25-a.
LOAD POSTED BRIDGES WITH ELEMENTS IN FAIR OR BETTER CONDITION ARE NOW EXCLUDED FROM THE RED LIST.**

Inspection Notes: 08/16/2019

MAS - inspection comments -
DECK: GRAVEL - GOOD CONDITION, 6"+ OVERBURDEN. VEGETATION GROWING AT CURBS. RAIL - MINOR DAMAGE. SOFFIT - FINE CRACKS, MINOR SPALLS AND MINOR LEAKING; LIGHT CRACK AT NORTHEAST.
SUPERSTRUCTURE: PAINT - FAIR TO GOOD CONDITION. BEAMS - FRECKLE RUST WITH MINOR SECTION LOSS AT ABUTMENTS.
SUBSTRUCTURE: FEW CRACKED STONE, MORTAR MISSING. 3/8" CRACK AT NORTH WITH STONEMWORK SETTLED AT NORTHEAST, VOIDS WITH UP TO 5' PENETRATION (NO CHANGE NOTED 8/16/2019).

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Previous Inspection Notes: 08/31/2017

MAS - inspection comments -

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SUPERSTRUCTURE: PAINT - FAIR TO GOOD CONDITION. BEAMS - FRECKLE RUST WITH MINOR SECTION LOSS AT ABUTMENTS.
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PICTURES: C574-

48. NORTH ABUTMENT IS CRACKED AND SETTLED SLIGHTLY AT NORTHEAST.

49. SMALL VOID AND SETTLED STONE AT NORTHEAST, 60" OF PENETRATION.

Approach and Roadway Notes:

GRAVEL - (7) GOOD CONDITION.

W- BEAM RAIL - MODERATE DAMAGE.

LIGHT VEGETATION.

EMBANKMENT WASHED.

Unusual or experimental features:

Not visible

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		
08/16/2019	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input type="checkbox"/>	6 Tons
08/31/2017	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input type="checkbox"/>	6 Tons
12/01/2016	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input checked="" type="checkbox"/>	6 Tons
08/24/2015	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input checked="" type="checkbox"/>	6 Tons
12/08/2014	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input checked="" type="checkbox"/>	6 Tons
08/16/2013	TDC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input checked="" type="checkbox"/>	6 Tons
10/12/2012	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
12/09/2011	MAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
10/28/2010	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
12/11/2009	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
08/27/2008	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
12/13/2007	KJT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
09/27/2006	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
12/15/2005	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
08/26/2004	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
02/05/2004	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
04/17/2003	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
10/04/2002	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
11/29/2001	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
10/20/2000	RLM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
12/09/1999	DPC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
10/02/1998	FNM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
10/01/1997		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	6	N	<input checked="" type="checkbox"/>	6 Tons
02/01/1996		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input checked="" type="checkbox"/>	6 Tons
02/01/1994		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input checked="" type="checkbox"/>	6 Tons
09/01/1992		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7	7	5	N	<input checked="" type="checkbox"/>	6 Tons

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

N.H. D.O.T.

TOWN Effingham

BRIDGE CAPACITY SUMMARY

BRIDGE NUMBER 097/088

RATED BY DEP DATE 1-89

DESIGN METHOD Unknown

CHECKED BY MS DATE 1-89

DESIGN LOAD Unknown

RATING METHOD WSD

RATED MEMBER	EFFECTIVE SPAN LENGTH	REQUIRED CAPACITY			AVAILABLE CAPACITY						
		CURRENT LEGAL LOADS	CERTIFIED VEHICLES		MULTIPLE LANES LOADED		SINGLE LANE LOADED		INVENTORY	OPERATING	POSTING
			SINGLE UNIT	MULTIPLE UNIT	INVENTORY	OPERATING	INVENTORY	OPERATING			
Deck	1'-0"	H14.0	-	-	-	-	-	-	H21.5	H30.2	-
Stringers + Rods	21.5'	H25.4	-	-	-	-	-	-	H3.6	H6.0	-

RECOMMENDED POSTING: post weight limit 6 tons

64. (Op.) 106

66. (Inv.) 104