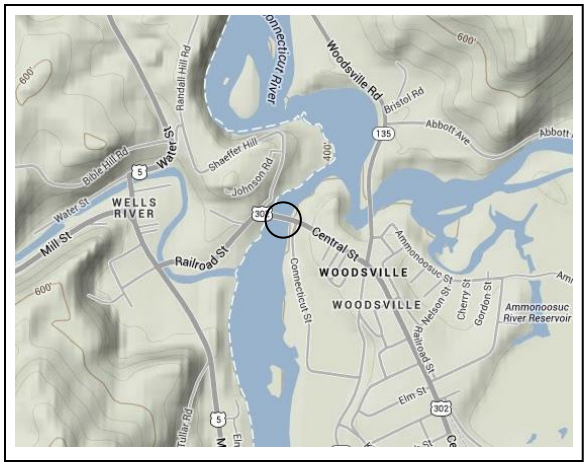
CONNECTICUT RIVER BRIDGE
017 HAVERHILL – NEWBURY **NH Bridge ID:** Haverhill 219/178

CARRYING: US 302
PRESENT NAME: Woodville-Wells River Bridge
COMMEMORATIVE NAME: NH-VT Veterans Memorial Bridge
DATE BUILT: 1923
LAT/LONG: 44.153976,-72.040915



CROSSING CHRONOLOGY

1805	First toll bridge at this location
1808	Second bridge built following flood
1812	2nd bridge destroyed by flood, ferry instated
1820	Third bridge built
1853	Fourth bridge, wood double deck with railroad carried over highway
1904	Fifth bridge completed, steel double deck
1917	Ranger Bridge, a separate road bridge, built
1923	Flood destroys Ranger Bridge, present steel arch bridge erected
2001	Steel arch rehabilitated

FIGURE 1: Woodville-Wells River Bridge, built 1923. Downstream side from New Hampshire shore (Historic Documentation Company, Inc. 2012).

CROSSING HISTORY

First, Second & Third Crossings: The first bridge at this location was chartered as a toll bridge to the Wells River Bridge Company in 1803. It was a wood trestle erected in 1805 by Avery Sanders for the sum of $2700. The early years of this crossing saw repeated damage by floods: the bridge destroyed in 1907 and replaced in 1808, ruined again in 1812 with ferry service substituted and then built again in 1820 with the site shifted southward somewhat. In 1850 another flood caused severe damage and the bridge was repaired.

Fourth Crossing: The Boston, Concord & Montreal Railroad came into Woodsville in 1853. It was desired to connect this line with that of the Connecticut & Passumpsic Rivers line in Wells River, VT, necessitating a rail bridge over the Connecticut. The agreement arrived at between the two railroads and local authorities required that the bridge accommodate both highway and railroad traffic. It was decided that the bridge would be a double-decker wooden span, i.e., a covered bridge with a flat roof so that the rail line could extend over the wagon road covered bridge. The existing wagon roadway bridge was taken down. According to local historian Katherine Blaisdell, the 239-foot double-decker was called "the longest single-span bridge" in the U.S. when it was built (1853).

Extensive repairs were made in 1887 and again in 1891. On the latter occasion the top of the bridge (the rail line and deck) was rebuilt. This was probably when new arches were built, to meet the demands of increased weight and frequency of rail traffic, although the doubled arches resulted in a restrictive narrowing of the lower roadway.

Fifth Crossing: During 1903-1904, the Boston & Maine Railroad replaced the wooden double-decker with one constructed of riveted steel. In subsequent years, local inhabitants kept up requests for a separate and toll-free bridge for the regular roadway, and as a result the Ranger Bridge was constructed during 1916-1917. The three-span steel truss bridge was named in commemoration of the Rogers' Rangers of French and Indian War fame. The bridge was designed by the B&M Railroad engineering department, Hezakiah Bissell, chief engineer, J. P. Snow, bridge engineer. John W. Storrs, assistant engineer, was in charge of construction and inspection. Although touted as being constructed so as to be "equal to almost any loads that could possibly be brought upon it," the bridge went down in 1922 due to pressure from impacted ice on the supporting piers. The collapse resulted in a protracted lawsuit by the towns against the contractor, United Construction Company of Albany, New York, in which the towns successfully proved in 1927 that the contractor had misrepresented the quality of the construction. United had asserted when the bridge was built that the piers rested on solid bedrock, but in truth the bottoms of the piers were set well above bedrock, on the New Hampshire side 30 feet above the ledge.

Sixth Crossing: The present bridge is a steel-arch structure on concrete abutments with a suspended floor that was completed in 1923, with the noted bridge design firm of J.R. Worcester & Co. of Boston as consulting engineer. As of 2000, according to local historian Blaisdell, it was one of just four of its type still standing in New Hampshire. NHDOT considered replacement in the late 1990s but determined to preserve the bridge due to its historic importance, carrying out a rehabilitation in 2001.

FIGURE 2: Woodville-Wells River Bridge, built 1923, showing Boston & Maine Railroad deck truss bridge in background (Historic Documentation Company, Inc. 2012).

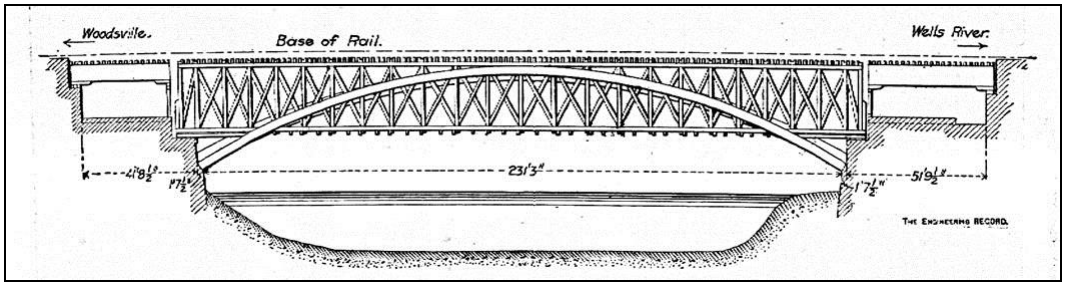


FIGURE 3: Concord and Montreal Railroad double-deck bridge, railroad over highway, built 1853, called longest single span bridge in the US at the time (*Engineering Record*, 1904).

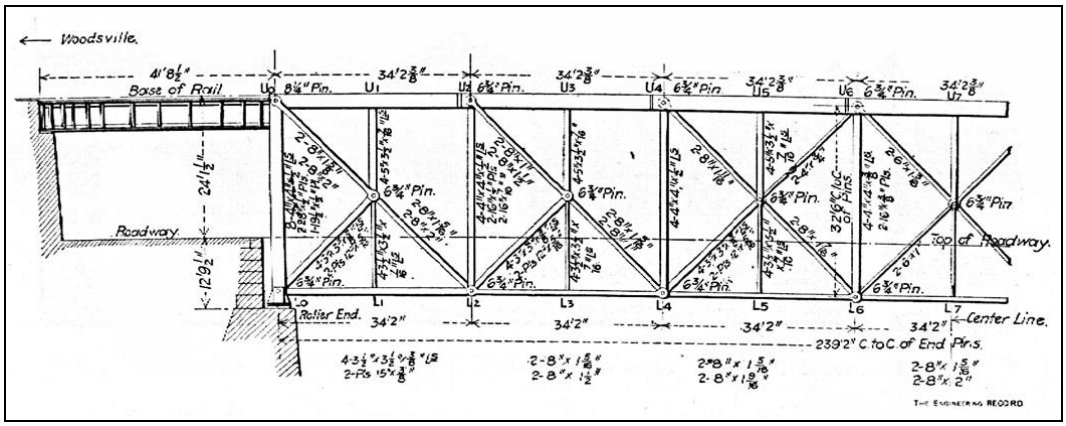


FIGURE 4: Boston & Maine Railroad double-deck bridge, railroad over highway, built 1904, destroyed by ice jam, 1922, due to faulty foundations (*Engineering Record*, 1904).

FIGURE 5: Woodville-Wells River Bridge, built 1923. Vermont end in 1940 (NHDOT 1940).

BIBLIOGRAPHY

Blaisdell, Katherine. *Haverhill, New Hampshire, in the Twentieth Century.* Published privately, 2000.

Engineering Record. "The Woodville Railroad & Highway Bridge" *Engineering Record* June 25, 1904, pp. 793-796.

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