

## INDIVIDUAL INVENTORY FORM

NHDHR INVENTORY NUMBER: PET0028

**41. Historical Background and Role in the Town or City's Development:**

Main Street Bridge over the Contoocook River (No. 092/089) is located in the center of Peterborough in the Downtown Peterborough Commercial, Civic, and Residential Historic District. It carries the eastern terminus of Main Street over the Contoocook River. The river flows in a predominantly northerly direction from Pool Pond and Contoocook Lane on the Jaffrey/Rindge border to Penacook, where it empties into the Merrimack River. Nubanusit Brook enters the Contoocook River less than one-quarter mile south of the bridge. Immediately south of the bridge is the Transcript Dam (rebuilt 1925), the site of the ca. 1829 grist mill dam. From the 1870s through the 1950s the railroad crossed Main Street just west of the bridge, running in a southwest-northeast-direction and crossing over the river just north of, or downstream from, the bridge. The wood footings of the former railroad trestle remain extant slightly downstream from the bridge. Stone retaining walls line both sides of the river immediately adjacent to the bridge at all four quadrants. The east end of the bridge (and Main Street) terminates at the juncture of U.S. Route 202/N.H. Route 123 (Concord and Pine streets). The Peterborough Town Library (built 1893, with later additions) is located immediately northeast of the bridge and faces the bridge. The Brick Block (1-7 Concord Street, see PET0027), built 1830-1831, is located on the east side of Concord Street, opposite the bridge. Peterborough's historic nineteenth- and early twentieth-century commercial and civic district is located immediately west of the bridge, along Main and Grove streets and several side streets and Concord, Pine, and Granite streets are lined predominantly with nineteenth-century houses in addition to several churches.

Main Street is an early important east-west road that runs between the juncture of Concord and Pine streets on the east side of the Contoocook River and High and Union at the west end of the village center. Main, Pine, and High streets are some of the earliest roads in Peterborough, laid out by 1760. Concord Street largely dates to the 1830s though the southern end of it near the bridge crossing was likely present before then.

In the twentieth century, the highways that passed through the center of Peterborough strongly influenced the town's traffic patterns and the Main Street Bridge was part of those highways. In 1909 the New Hampshire Legislature had adopted plans to establish a trunk line highway system or three primary north-south routes, one up the west side of the state, one up the middle, and the third along the east side of the state. The routes oftentimes followed existing roadways but with improvements to accommodate increased automobile traffic. The completion of these primary north-south arteries by 1915 was soon followed by the establishment of a group of east-west cross roads, including the South Side Highway. By 1919 an additional three trunk line routes and eighteen cross state roads had been established, including the Contoocook Valley Road.<sup>1</sup>

By 1920 two of these highways ran through the center of Peterborough and crossed the Contoocook River via the Main Street Bridge. Meanwhile, in 1915 the state had passed a new law that all bridges constructed on the all the trunk line and cross state routes have a minimum ten-ton capacity. The "South Side Highway" (now N.H. Route 101) was the major east-west traffic corridor in southern New Hampshire. The highway ran from the Connecticut River at Bellows Falls to the East Side Road (now N.H. Route 1) in Portsmouth and passed through the center of Peterborough, crossing the Main Street Bridge. The Contoocook Valley Road ran southwest to northeast up the Contoocook River Valley from the Massachusetts border in Rindge to the Central Road (another

<sup>1</sup> James Garvin, "The Trunk Line Road System," *New Hampshire Highways* (January/February 2004): 28-29. James L. Garvin, "New Hampshire Good Roads Projects, 1904-2004," MS, New Hampshire Division of Historical Resources, (2004), 3. Frederic E. Everett, "The State and its Roads," *The Granite Monthly* LII, No. 4 (April 1920): 138-139.

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east-west route) in Hopkinton, also passing through the center of Peterborough and across the Main Street Bridge.<sup>2</sup>

In the 1930s both of these state highways became numbered routes. The South Side Road became the numbered route N.H. Route 101. In Peterborough, N.H. Route 101 entered the town from the east, ran along Wilton Road, turned north to run along Granite Street, the north end of Pine Street, and then turned west, crossing over the bridge and running along Main Street before continuing west out of the town center along Union Street through West Peterborough and then to the Old Dublin Road. In 1937 a pre-mix pavement was laid down on the north end of Pine Street (see Plans, Sheet 1). In 1958-1959, stretches of N.H. Route 101 were rebuilt along sections of Wilton and Dublin roads, creating a bypass along the southern edge of the village center. In 1934 the Contoocook Valley Road became part of the newly designated U.S. Route 202, a 600-plus mile federal highway running between Delaware and Maine. Historically U.S. Route 202 ran north along Grove and Main Streets, crossed over the Main Street Bridge and continued north along Concord Street. In 1958 the highway was rerouted from Grove and Main streets in Peterborough to run along Granite Street, which remains the current route.<sup>3</sup>

The Main Street crossing is one of the earliest crossings in the town of Peterborough, with a bridge in this vicinity by 1755.<sup>4</sup> The earliest types of bridges in this location are unknown though in the early nineteenth century the crossing was known variously as "Smith Bridge" and "Great Bridge," the latter a name used for much of the nineteenth century.<sup>5</sup> In 1842 a stone double-arch bridge was erected at the crossing, possibly replacing an earlier stone arch bridge.<sup>6</sup> Being known as the "Great Bridge" by 1836 suggests a stone arch bridge may have been in use at this location before the 1842 one. Such bridge types, though expensive to build, were favored on heavily traveled roads or in locations of importance and considerable visibility, which was the case with the Main Street Bridge.<sup>7</sup> The 1842 old dry-stone double-arch bridge sat on dry stone masonry abutments. Each arch had a span of 38'-0", a width of 25'-0", and a clear height of about 11'.<sup>8</sup> The bridge may have been damaged (but not destroyed) in the flooding during the 1938 Hurricane, as the area around the bridge was fully submerged.<sup>9</sup> This event likely provided one of the reasons for replacing the bridge, as the bridge design plans date to 1939. The other likely reason for replacement was a need to upgrade the bridge as it was part of the state and federal highway system (U.S. Route 202 and N.H. Route 101). In the 1930s there was a concerted effort to upgrade those roadways with state and federal legislation and funding provided by both the state and federal government for the trunk line highways in particular.<sup>10</sup> The new bridge would be wider and have a longer clear span and higher clearance.

<sup>2</sup> Everett, 138-139.

<sup>3</sup> George Abbot Morison and Etta M. Smith, *History of Peterborough, New Hampshire* (Rindge, N.H.: R.R. Smith, 1954), 289. The route was built with state and federal aid. Ibid.

<sup>4</sup> It was one of four bridges built across the town's two major waterways by 1770. Morison and Smith, Albert Smith and John Hopkins Morison, *History of the Town of Peterborough, Hillsborough County, New Hampshire, With the Report of the Proceedings at the Centennial Celebration in 1839* (Boston: Press of G.H. Ellis, 1876), 266.

<sup>5</sup> Daniel Searle, "Map of Peterborough, N.H.," 1819, reprinted in Morison and Smith, 148. John Lund, "Plan of the Establishment of the Phoenix Manufacturing Company and Lower Main and Grove Streets in Peterborough, N.H.," 1836 reprinted in Morison and Smith, 925.

<sup>6</sup> Smith and Morison, 213.

<sup>7</sup> Parsons Brinckerhoff and Engineering and Industrial Heritage, "A Context for Common Historic Bridge Types," NCHRP Project 25-25, Task 15. Prepared for the National Cooperative Highway Research Program, Transportation Research Council, National Research Council (October 2005), 3-49.

<sup>8</sup> New Hampshire Department of Transportation, Bridge Design, Design Card, Bridge No. 092/089.

<sup>9</sup> Historic photos show that the bridge was still intact and in use after the flood waters had receded.

<sup>10</sup> Garvin, "New Hampshire Good Roads Projects, 1904-2004," 13.

## INDIVIDUAL INVENTORY FORM

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Survey work and borings were done, respectively, in July and November 1939. Construction of the Main Street Bridge began in 1940 by the state, as Federal Aid Project No. 18-B (1) U.S. Route 202 and N.H. Route 101 (1). The project was estimated to cost \$59,271.19 and it was completed the following year.<sup>11</sup> As previously noted, at the time of the new bridge construction Main Street between Grove Street and Concord Street was part of U.S. Route 202 and N.H. Route 101. Because of its importance as a major crossing on federal and state routes, and because of its central location in Peterborough, a temporary bridge was erected immediately south of the construction site (see Plans). The new bridge was wider and extended further south than the older bridge. Consequently it spanned a small recessed area between the abutments of the old bridge and the projecting concrete platform of the grist mill/Transcript Building site (see Sheet 4 and historic photos). John H. Wells, a civil engineer employed with the New Hampshire Highway Department since the early 1930s designed the new bridge, with two other bridge design engineers assisting with some aspects of the setting design (see plans). D'Ambrosio Construction Company built the bridge.<sup>12</sup>

The bridge designer John H. Wells had a lengthy career with the New Hampshire Highway Department and is known to have designed a number of notable bridges. He had joined the State Highway Department soon after graduating from Worcester Polytechnic Institute (Class of 1930). He remained with the department for at least twenty-five years. He is known to have designed at least two other concrete rigid-frame bridges, the pair of bridges in the center of Exeter, over the Squamscott River (Nos. 102/074 and 103/074). Each is shorter than the Main Street Bridge (clear spans of 50'-0") and neither has stone facing. The reinforced concrete balustrade railings have a flat rectangular cap rail over closely spaced 6" x 6" square posts set 1' on center and separated by arched spandrels.<sup>13</sup> A versatile designer comfortable working with a variety bridge types, some of Wells' better known designs from the 1930s and early 1940s include concrete arches, steel through arches, skewed Pratt trusses, and continuous girder bridges. Wells designed the Edna Dean Proctor Bridge in Henniker (No. 120/112, built 1939, rehabilitated 2001) also over the Contoocook River. This double concrete arch bridge also has stone facing and like the Peterborough Bridge replaced an earlier stone arch bridge destroyed by the flooding associated with the Hurricane of 1938.<sup>14</sup> His well-known steel through-arch bridge designs from this period include the Chesterfield-Brattleboro Bridge (No. 040/095, built 1937, bypassed 2003), the Orford-Fairlee Bridge (No. 062/124, built 1937), and the NH Route 175 Bridge over the Pemigewasset River in Woodstock (No. 177/149, built 1939). He designed a Skewed Pratt truss bridge (designed with Henry B. Pratt) over Rocky Branch River (No. 191/139) in Bartlett (built 1936, bypassed 1990). In 1941 he designed a continuous girder bridge over the Connecticut River between Stratford, New Hampshire, and Bloomfield, Vermont, that was finally constructed in 1947 (No. 029/206, rebuilt 2000).<sup>15</sup> By 1970 he had left the State Highway Department and was the chief structural engineer at Jackson & Moreland, Boston.<sup>16</sup>

<sup>11</sup> "Bridges Started But Not Completed in 1940," State Department of Highways, Annual Report, 106. Partial photocopy in author's possession.

<sup>12</sup> Bridge Design, Design Card, No. 092/089. Plans, 1940, Sheet 12a. No information has been located on this firm to date.

<sup>13</sup> Preservation Company (Laura B. Driemeyer), "Crawley Falls Road Exeter River Bridge," NH State No. 643, forthcoming.

<sup>14</sup> Lisa Mausolf, "Edna Dean Proctor Bridge (Bridge No. 120/112)," HAER No. NH-31 (1997) <<http://hdl.loc.gov/loc.pnp/hhh.nh0265>> (accessed December 2009).

<sup>15</sup> James L. Garvin, "Engineers Known To Have Worked in Bridge Design at the New Hampshire Highway Department from the 1920s to the 1940s, with Notes on Jobs with Which They were Associated," 3, Revised 7/2000, 10/2006, copy at New Hampshire Division of Historical Resources. New Hampshire Department of Transportation, Bridge Summary (30 March 2010) <<http://www.nh.gov/dot/bureaus/bridgedesign/BridgeInspection.htm>>.

<sup>16</sup> Garvin, "Engineers Known to Have Worked in Bridge Design," 3.