



**Lebanon, NH – Hartford, VT
A000(627)
14957**

The Lebanon-Hartford High Pratt Truss Bridge

The three-span, 1936 truss bridge between Lebanon, New Hampshire and Hartford, Vermont represents one of a diminishing number of bridges of truss construction. The spans represent two high-Pratt trusses and a single low Warren truss. Their connections are secured with riveted gusset plates. These spans sit on piers erected for the earlier 1897 truss bridge. The severe flooding of 1936 removed the 1897 bridge and many others, and the new truss was erected with Depression Era emergency relief funds. This truss's repetitive design permitted the rapid replacement of the many flood-damaged bridges. The bridge was rehabilitated in 1976.

Metal truss bridges revolutionized American transportation because they were the first category of bridge that enabled their designers to conduct structural analyses and loading and to employ the use of wrought iron and then steel in bridges in large quantities. Thomas Pratt designed the first Pratt truss in 1842. With Caleb Pratt, he patented this bridge type in 1844. The English patent for the low Warren truss at the east end of the bridge is attributed to James Warren and Willoughby Monzani in 1848, and is easily recognizable through its series of diagonal members. The Pratt truss became a popular bridge form in the late 19th century and with the Warren truss became an especially popular design after the introduction of riveting technology in the early 20th century.

Truss bridges are fast disappearing from the state's landscape. The Lebanon-Hartford bridge is one of fifteen remaining high Pratt truss bridges in New Hampshire. There are no known high Pratt truss bridges in the vicinity of the project area. The bridge gains historical significance as an intact representative of its type, a type that was widely accepted within bridge engineering practice of its construction period, and as a product of Depression Era construction.

