

Conclusion

The following summary statements regarding structural characteristics for timber bridges, key periods of significance for timber bridges in Maryland, and the earliest known documented examples of timber bridges in the state are based solely on documentary research.

Timber beam bridges (see Plate 2) consist of timber beams supported by a timber or masonry structure. Intermediate supports may be timber pile bents, and abutments may be timber, masonry, or concrete. Railings and floor system are usually wood (as in Plate 2).

Timber trestle bridges (see Plate 3) consist of timber beams supported by a system of high timber piers or pile bents. High timber trestles were frequently utilized as railroad bridges.

Timber covered bridges (see Figures 5 and 6 and Plate 1) consist of a structural timber truss covered by timber roofing and siding which serves to protect the structural components from the weather. A variety of truss types were used, including king-post, queen-post, Town, and Burr. The truss systems include vertical and diagonal elements, between horizontal upper and lower elements called top and bottom chords. In the Burr arch-truss variant, a timber arch is added to provide further structural support (see Figure 6). In the Town truss variant, also called a lattice truss, the truss consists of timber members crossing at 45- to -60-degree angles, connected with wooden pins or trunnels. Timber covered bridges often feature wood plank decking supported on a system of timber stringers and floorbeams; wheel guards and plank runners are sometimes installed on the decking. Typically, timber covered bridges are supported on masonry abutments and (if more than one span) piers.

Timber-and-concrete composite bridges include a superstructure consisting of a composite timber and concrete slab. The timber and concrete materials work integrally to carry the deck loads. These composite decks are typically supported on timber piers or piles. Railings may be of wood or concrete.

Key periods of significance for timber bridges in Maryland, as indicated by documentary research include *1724 to ca. 1900*, during which simple wooden beam bridges continued to be constructed by local and county authorities, in single-span and multiple-span variants; *ca. 1800 to ca. 1900*, the heyday of covered bridge construction in the state, including major long-span river crossings by significant bridge builders Theodore Burr and Lewis Wernwag, as well as a large number of smaller timber covered bridges built with different truss configurations (simple king-post and Burr arch-truss are known to have been utilized); *ca. 1840 to 1900*, the period when large timber trestles for railroad use predominated; and *ca. 1935 to*

1960, the era of development and use of timber-concrete composite bridges by the State Roads Commission in the Tidewater or Coastal Plains region of Maryland.

The earliest known documented examples of timber bridges in Maryland are those referenced in the 1724 Act of the General Assembly concerning the cutting of timber for bridge construction. The earliest known documented covered timber bridges built in Maryland are the Susquehanna River long-span covered bridges constructed in 1818 by significant bridge builders Theodore Burr and Lewis Wernwag. Dating of the earliest timber trestles built in the state cannot be exactly stated, but documentary sources indicate that during the 1840s Maryland railroads such as the Baltimore and Ohio and the Northern Central erected trestles. The earliest known documented timber-and-concrete composite bridges in the state were eight such structures erected by the State Roads Commission in Tidewater (Coastal Plain) locations in 1937-1938. (According to the 1993 State Highway *Bridge Inventory*, seven of these structures are extant.