

SECTION I: INTRODUCTION

Since the seventeenth century, bridge building in Maryland has proceeded in direct association with the expansion of the region's transportation network. The history of Maryland's significant bridges is in large part a narrative of successive, or sometimes concurrent, engineering solutions to the problem of effectively carrying a valued transport route (usually a road, but during the nineteenth century, often a canal or railroad) across a valley, body of water, or another transport route. In Maryland, a state characterized by varied topography ranging from the Tidewater inlets of the Eastern Shore through the hilly Piedmont terrain to the Appalachian mountains, the development of an adequate transportation system involved meeting the challenges of geography (Mitchell and Muller 1979). Consideration of Maryland's transportation history, in light of the varying topographic conditions prevalent in each region, thus aids understanding of the state's historic bridges and bridge building traditions.

Besides topography and geography, an equally important factor affecting the bridges built in Maryland has been the governmental role in transportation policy, generally constant despite many changes of government. During the early seventeenth century, the European settlement of the area was fostered by the Calvert proprietors and their appointive governors, but the earliest laws concerning transportation were passed by the General Assembly (first convened in 1635 at St. Mary's City) and put into effect by county officials. Initial administration of road work by counties occurred as early as 1642, when the legislature formed Kent County (Brugger 1988:13-14, 799). Although transportation policy goals have changed considerably from the 1630s to the twentieth century, the basic role of both the state government and local officials with regard to roadmaking and bridge building has persisted down to the present day.

A third important influence on the kinds and numbers of historic bridges seen in the state has been the extraordinary series of technological changes affecting the building of roads, canals, railroads, and their attendant structures such as bridges. With the development of cast iron, wrought iron, and finally concrete and steel, the traditional preindustrial bridge construction materials--timber and stone--came to be simply two options available to professional engineers, rather than the only possible choices in constructing durable spans. The coming of improved roads, lock canals, and long railroads in Maryland spurred the popular demand for similarly improved transportation facilities, and this demand in turn, fostered the rise of the American civil engineering profession. Many of Maryland's historic bridges display a deliberately engineered "intermodal" aspect, allowing combinations of water navigation and highway and rail traffic. Historically significant bridge engineers active in Maryland have included Theodore Burr, Lewis Wernwag, James Finlay, Benjamin H.B. Latrobe, Wendel Bollman, C. Shaler Smith, J.E. Greiner, and Daniel B. Luten.

A careful, chronological consideration of these three historic forces--the impact of topography and geography on the development of Maryland's transportation network, the shaping of that network by legislative and county actions, and the revolutionary technological and engineering advance--provides an overall background context which serves to introduce and place within history the variety of historic bridge types found in Maryland. The following narrative section of this report summarizes Maryland's transportation history, placing emphasis on major events and trends that significantly affected bridge design and construction in the state. The seven subsequent sections describe the historical development and appearance in Maryland of significant historic bridge types. Appendix A offers historical timetables relating to Maryland history and the development of bridge technology while Appendix B presents a descriptive listing of bridge builders known to have been active in the state. Appendix C presents guidelines for the identification and evaluation of Maryland's historic bridges.