CE-1550

Thomas J. Hatem Memorial Bridge

Architectural Survey File

This is the architectural survey file for this MIHP record. The survey file is organized reverse-chronological (that is, with the latest material on top). It contains all MIHP inventory forms, National Register nomination forms, determinations of eligibility (DOE) forms, and accompanying documentation such as photographs and maps.

Users should be aware that additional undigitized material about this property may be found in on-site architectural reports, copies of HABS/HAER or other documentation, drawings, and the "vertical files" at the MHT Library in Crownsville. The vertical files may include newspaper clippings, field notes, draft versions of forms and architectural reports, photographs, maps, and drawings. Researchers who need a thorough understanding of this property should plan to visit the MHT Library as part of their research project; look at the MHT web site (mht.maryland.gov) for details about how to make an appointment.

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Last Updated: 02-04-2016

MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: yes X
no

Property Name: Thomas J. Hatem Memorial Bridge

Inventory Number: HA-2182 CE-1550

Address: US 40 over Susquehanna River between Havre de Grace, MD and Perryville, MD

Historic district: yes X no

City: Zip Code: County: Cecil/Harford

USGS Quadrangle(s): Havre De Grace

Property Owner: Maryland Transportation Authority Tax Account ID Number:

Tax Map Parcel Number(s): Tax Map Number:

Project: Replace the existing deck and repairs to substructure Agency: Maryland Transportation Authority

Agency Prepared By: Straughan Environmental Services, Inc

Preparer's Name: Paula Landy Date Prepared: 4/4/2007

Documentation is presented in: Archives of MD. Maryland Manual. Vol.0159.1940-41; Archives of MD. Maryland Manual. Vol.0165. 1953-54; Archives of MD. Maryland Manual. Vol. 0409; MD SHA. Historic Highway Bridges in MD 1631-1960: Historic Context Report, 1995.

Preparer's Eligibility Recommendation: X Eligibility recommended Eligibility not recommended

Criteria: X A B X C D Considerations: A B C D E F G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property:

Inventory Number: Eligible: yes Listed: yes

Site visit by MHT Staff yes X no Name: Date:

Description of Property and Justification: *(Please attach map and photo)*

Description of Property

The Thomas J. Hatem Memorial Bridge carries US Route 40 (Pulaski Highway) over the Susquehanna River between Havre de Grace, Harford County, Maryland and Perryville, Cecil County, Maryland. Garrett Island lies in the river below the bridge. This multiple span truss bridge, constructed of steel and concrete, features a number of Wichert truss spans; the bridge possesses a high degree of integrity and retains its character-defining elements--original truss members, connections, and piers. In Historic Highway Bridges in Maryland 1631-1960: Historic Context Report: it is noted that

□[t]he Wichert truss is a significant type of continuous truss. Continuous trusses have a chord and web configuration that continues uninterrupted over one or more intermediate supports, compared with simply supported trusses which are supported only at each end. Due to concerns over potential stresses caused by intermediate pier settlement, continuous trusses were not generally employed until the early twentieth century. In 1930, E. M. Wichert of Pittsburgh addressed the problem with his Wichert truss, a

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended X **Eligibility not recommended**

Criteria: X A B X C D **Considerations:** A B C D E F G

MHT Comments:

Jim Gallagher — 5/9/2007
Reviewer, Office of Preservation Services **Date**

[signature] — 5/9/07
Reviewer, National Register Program **Date**

200701154

continuous truss in which hinged quadrilateral sections were included over the intermediate piers. Wichert's first major truss bridge constructed to this design was the 1937 Homestead High Level Bridge over the Monongahela River at Pittsburgh. (Maryland State Highway Administration. July 1995)

The Maryland State Roads Commission chose the Wichert truss design for several long-span bridges from 1937-1940.

The J. E. Greiner Company designed and performed engineering support for construction of the bridge. From the west (Havre de Grace), Spans 1-9 are simply supported steel girder spans. Spans 10-15 are characterized as continuous Wichert girder spans. Spans 16-18 exemplify continuous Wichert deck truss spans. Spans 19-21 are comprised of Wichert main through truss spans. Over Garrett Island, Spans 22-35 are continuous Wickert girder spans. Over the river's eastern channel, Spans 36-38 are characterized as Wichert main through truss spans, followed by Spans 39-42, continuous Wichert deck truss spans. Spans 43-47 are continuous Wichert girder spans. To the opposite shore, Spans 48-53, are simply supported steel beam spans.

Its superstructure, at its highest point, soars 177 feet above the Susquehanna River. The concrete piers, some of which extend as much as 117 feet below the surface, support the structure. The bridge's span (abutment to abutment) of 7,613 feet (1.44 miles) includes approximately 2,169 feet over the western channel of the Susquehanna River; 1,509 feet over Garrett Island; and 1,646 feet over the eastern channel. The western approach is 1,039 feet and the eastern approach is 1,248 feet. Between curbs, the road's width is 46 feet and it accommodates four lanes of traffic. The bridge was designed as part of a planned highway for national defense. The first vehicles crossed the bridge on August 28, 1940.

As of early 2007, the bridge is in continuous use; however, the Maryland Transportation Authority is designing needed repairs to the deck and substructure.

Eligibility Determination

Based on Criterion A and Criterion C, we believe the Thomas J. Hatem Bridge is eligible for the National Register of Historic Places.

Criterion A:

For more than 200 years, ferry boats crossed the Susquehanna River between Havre de Grace, Harford County, Maryland and Perryville, Cecil County, Maryland. Subsequently, several railroad bridges were constructed. A vehicular toll bridge was constructed in 1910 (actually converted from a former railroad bridge). It was privately owned and operated between 1910 and 1923 when the State Roads Commission (the forerunner of the Maryland Transportation Authority) acquired it. Locally, this original toll bridge was known as the Gold Mine Bridge, in reference to the revenue it generated for its owners. It was extremely narrow for vehicles. With just 13 feet of road width, trucks crept past one another; even so, there were numerous accidents. In 1926, in an effort to resolve the problem, the State Roads Commission constructed a deck over the existing bridge, each level accommodating one-way traffic. Although this solution was considered to be one of the most ingenious bridge engineering feats of the time, new problems arose, as the vertical clearance between the decks, just 12.5 feet, was inadequate. The need for a newer, more modern structure to accommodate the larger commercial vehicles and loads of the times was obvious by the mid-1930s.

Concurrently, in 1937, the Maryland General Assembly authorized the State Roads Commission to formulate a comprehensive plan for the construction of bridges and tunnels across major water bodies in Maryland. John E. Greiner's firm drafted the report, Maryland's Primary Bridge Program. This comprehensive plan for bridges over Maryland's important waterways was developed after years of study and planning. "The necessity for constructing adequate bridges in Maryland, has a national significance, as

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended ____ **Eligibility not recommended** ____

Criteria: ___A ___B ___C ___D **Considerations:** ___A ___B ___C ___D ___E ___F ___G

MHT Comments:

_____ _____

Reviewer, Office of Preservation Services **Date**

_____ _____

Reviewer, National Register Program **Date**

well as being vital to the State...for those bridges included in the original program...are a necessity to the National Defense."(Maryland Manual. Vol.0159. p.87.)

The following year, 1938, the US Congress (by virtue of its regulatory powers over navigable waterways) ratified the program and provided for the construction of a bridge across the Susquehanna River, parallel to the double-decker bridge. Construction of the Susquehanna River Bridge began on December 5, 1938 and was completed in 1940. The cost of the bridge was approximately 4.5 million.

In 1986, it was later renamed the Thomas J. Hatem Memorial Bridge after a Harford County public servant.

Criterion C:

John E. Greiner and the company he founded in 1908 "matched the best in America, in large part due to its founder's well-established reputation within bridge design circles." J. E. Greiner Company's "growth closely paralleled the expansion of America's surface transportation network, in particular the interstate highway system." (Weingardt, 2005). In February 1937, coinciding with the 25th anniversary of the founding of the Johns Hopkins' School of Engineering, John E. Greiner was recognized as one of the nation's outstanding engineers and awarded an honorary doctor of engineering degree for his innovative work in conjunction with the "practices, methods and standards of bridge building." (www.jhu.edu/~gazette/2007/19feb07/19comm.html)

In May, 1941, shortly after the opening of the Susquehanna River Bridge, the American Institute of Steel Construction, Inc. awarded the J. E. Greiner Company "First Place in Class A Structures, this bridge being recognized as the most beautiful steel bridge to be constructed in America during 1940." (Maryland Manual.Vol. 0159. p. 89). The bridge employs the "relatively new Wichert Truss which needs less steel and spreads to take up extra stress when its piers settle in soft river bottoms. It was built at a cost of 4,085,000 by Baltimore's J. E. Greiner Co., winners of an honorable mention last year."(www.time.com/time/magazine/article/0,9171,790117,00.html

The J. E. Greiner Company is associated with numerous designs and supervision of major construction projects in Maryland and throughout the country. Notable examples include: Hanover Street Bridge, now the Viet Nam Veteran's Memorial Bridge, (1916); the magnificent Governor Harry W. Nice Memorial Bridge (1940); the first span of the Chesapeake Bay Bridge Bay Bridge, renamed in 1976, William Preston Lane, Jr. Memorial Bridge (1952), followed by the second span (1973).

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended _____ **Eligibility not recommended** _____

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Reviewer, Office of Preservation Services **Date**

_____ _____

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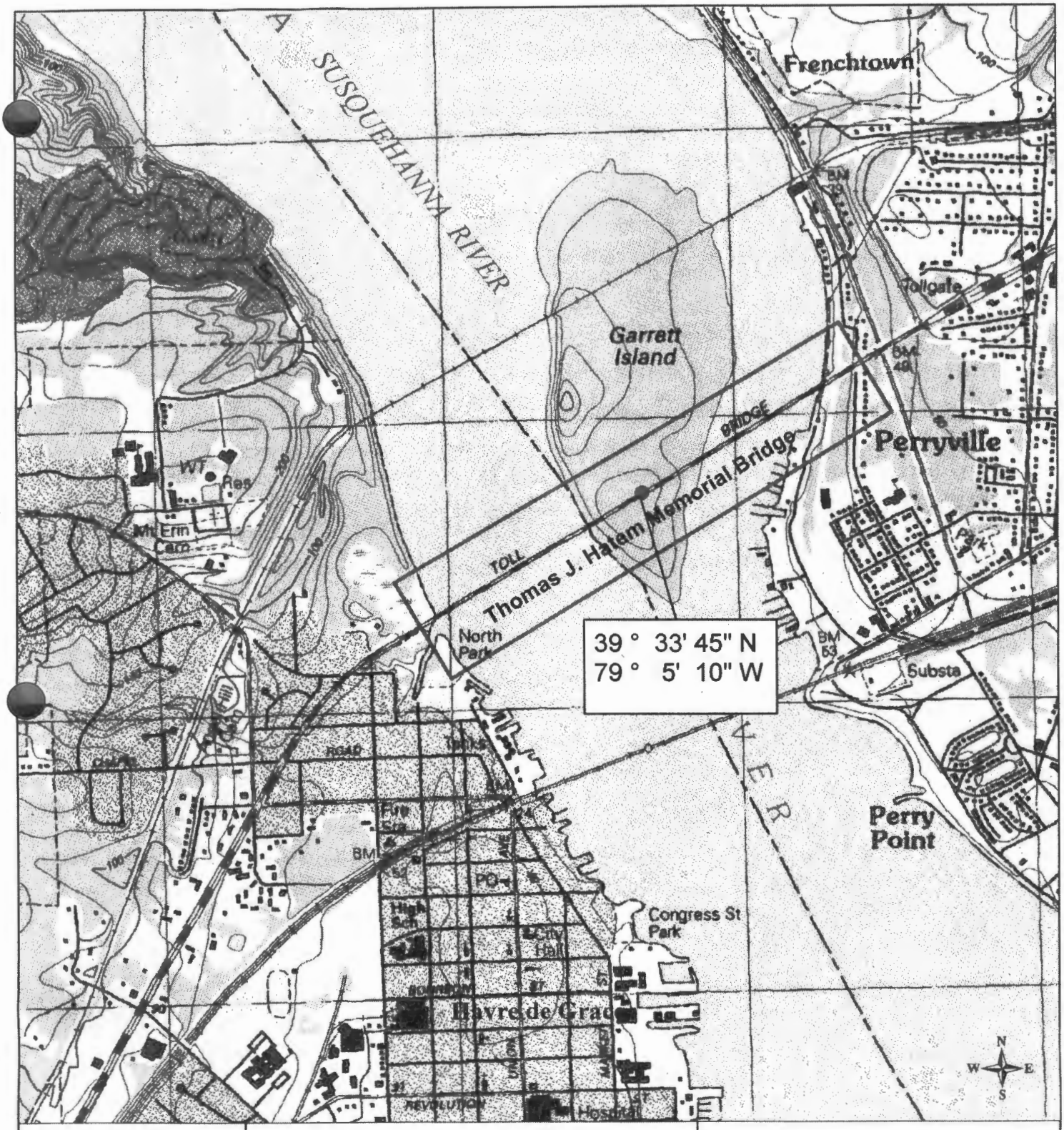

STRAUGHAN ENVIRONMENTAL SERVICES, INC.

Property Name:
Thomas J. Hatem Memorial Bridge

MHIP:
CE-1550
HA-2182

Scale:
1 inch equals 1,500 feet
0 0.125 0.25 0.5 Miles

Source: USGS. 1992. *7.5-Minute Topographic Quadrangle for Havre de Grace, Maryland.*

LC-1550
HA-2182