Maryland Historical Trust

Maryland Inventory of Historic Properties number: K-674

Name: K-5/ MORGNEC RD OVER UNNAMED STREAM

The bridge referenced herein was inventoried by the Maryland State Highway Administration as part of the Historic Bridge Inventory, and SHA provided the Trust with eligibility determinations in February 2001. The Trust accepted the Historic Bridge Inventory on April 3, 2001. The bridge received the following determination of eligibility.

MARYLAND HISTORICAL TRUST

Eligibility Recommended _____ Eligibility Not Recommended __X____

Criteria: ____A ____B ____C ____D Considerations: ___A ___B ___C ___D ___E ___F ___G __None

Comments:_____

Reviewer, OPS:_Anne E. Bruder_____ Date:__3 April 2001____

Reviewer, NR Program:__Peter E. Kurtze_____ Date:__3 April 2001____

MARYLAND INVENTORY OF HISTORIC BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. K-677

SHA Bridge No. K-5 Bridge name Unnamed Stream

LOCATION:
Street/Road name and number [facility carried] Morgnec Road

City/town Morgnec Vicinity X

County Kent

This bridge projects over: Road____ Railway_____ Water X Land ____

Ownership: State County X Municipal _ Other _____

HISTORIC STATUS:
Is the bridge located within a designated historic district? Yes _____ No X
National Register-listed district ____ National Register-determined-eligible district __
Locally-designated district _____ Other _____

Name of district _____

BRIDGE TYPE:
Timber Bridge _____:
Beam Bridge _____ Truss -Covered ___ Trestle ___ Timber-And-Concrete ___

Stone Arch Bridge _____

Metal Truss Bridge _____

Movable Bridge ____:
Swing _____ Bascule Single Leaf _ Bascule Multiple Leaf _____
Vertical Lift _____ Retractile_____ Pontoon _____

Metal Girder_____:
Rolled Girder _____ Rolled Girder Concrete Encased _____
Plate Girder _____ Plate Girder Concrete Encased _____

Metal Suspension _____

Metal Arch _____

Metal Cantilever _____

Concrete X :
Concrete Arch_____ Concrete Slab X Concrete Beam _____ Rigid Frame _____
Other _____ Type Name _____

DESCRIPTION:

Setting: Urban _____ **Small town** _____ **Rural** X

Describe Setting: Bridge No. K-5 carries Morgnec Road over an unnamed stream near the community of Morgnec in southern Kent County. There is one modern house to the east; otherwise the area consists of woods and farmland. This is very isolated area. The stream flows towards the south.

Describe Superstructure and Substructure:

The existing structure, built in 1929, is a two span concrete slab bridge supported by concrete abutments and a concrete pier. Each span measures 18'. The total bridge length is 40'- 8". The concrete flared wingwalls form approximately a forty five degree angle with the centerline of the road. The solid concrete parapets are decorated with panelling and are integral with the bridge. They are capped with articulated coping stones. The concrete on the underside of the slab is badly deteriorated. Site inspection in August 1995 revealed that some patching has taken place in this area. There is also significant spalling occurring on the east abutment. The tops of both parapets have numerous cracks.

Discuss Major Alterations:

No major alterations are apparent

HISTORY:

WHEN was the bridge built 1929

This date is: Actual X **Estimated** _____

Source of date: Plaque _____ **Design plans** ____ **County bridge files/inspection form** ____

Other (specify): County files

WHY was the bridge built?

The need for a more efficient transportation network and increased load capacity in the decades following World War I.

WHO was the designer?

State Highway Administration

WHO was the builder?

State Highway Administration

WHY was the bridge altered?

There are no appparent alterations.

Was this bridge built as part of an organized bridge-building campaign?

As part of an effort by the State to increase load capacity on secondary roads during the 1930's.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:

A - Events _____ **B- Person** _____

C- Engineering/architectural character _____

This bridge does not have National Register significance.

Was the bridge constructed in response to significant events in Maryland or local history?
Reinforced concrete slab bridges are a twentieth century structure type, easily adapted to the need for expedient engineering solutions. Reinforced concrete technology developed rapidly in the early twentieth century with early recognition of the potential for standardized design. The first U.S. attempt to standardize concrete design specifications came in 1903-04 with the formation of the Joint Committee on Concrete and Reinforced Concrete of the American Society of Civil Engineers.

Maryland's road and bridge improvement programs mirrored economic cycles. The first road improvement program of the State Roads Commission was a 7 year program, starting with the Commission's establishment in 1908 and ending in 1915. Due to World War I, the period from 1916 -1920 was one of relative inactivity; only roads of first priority were built. Truck traffic resulting from war-related factories and military installations generated new, heavy traffic unanticipated by the builders of the early road system. From 1920 to 1929, numerous highway improvements occurred in response to the increase in Maryland motor vehicles from 103,000 in 1920 to 320,000 in 1929, with emphasis on the secondary system of feeder roads which moved traffic from the primary roads built before World War I. After World War I, Maryland's bridge system also was appraised as too narrow and structurally inadequate for the increasing traffic, with plans for an expanded bridge program to be handled by the Bridge Division, set up in 1920. In 1920 under Chapter 508 of the Acts of 1920 the State issued a bond of $3,000,000.00 for road construction; the primary purpose of these monies was to meet the state obligations involving the construction of rural post roads. The secondary purpose of these monies was to fund [with an equal sum from the counties] the building of lateral roads. The number of hard surfaced roads on the state system grew from 2000 in 1920 to 3200 in 1930.

With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction.

In the early years, there was a need to replace the numerous single lane timber bridges. Walter Wilson Crosby, Chief Engineer stated in 1906, "The general plan has been to replace these [wood bridges] with pipe culverts or concrete bridges and thus forever do way with the further expense of the maintenance of expensive and dangerous wooden structures". Within a few years, readily constructed standardized bridges of concrete were being built throughout the state.

The creation of standard plans and a description of their use was first announced in the 1912-15 Reports of the State Roads Commission whereby bridges spanning up to 36 feet were to use standardized designs.

Published on a single sheet, the 1912 Standard Plans included those structures that were amenable to such an approach: slab spans, (deck) girder spans, box culverts, box bridges, abutments, and piers (State Roads Commission 1912). Slab spans, with lengths of 6 to 16 feet in two foot increments, featured a solid parapet that was integrated into the slab, with a roadway of 22 feet.

In the Report for the years 1916-1919, a revision of the standard plans was noted:

> During the four years covered by this report, it has been found necessary to revise our standard plans for culverts and bridges, to take care of the increased tonnage which they have been forced to carry. Army cantonments...increased their operations several hundred per cent, and the brunt of the enormous truck traffic resulting therefrom, was borne by the State Roads of Maryland. In addition to these war activities, freight motor lines from Baltimore to Washington, Philadelphia, New York, and various points throughout Maryland,

and the weight of many of these trucks when loaded, was in excess of the loads for which our early bridges were designed (State Roads Commission 1920:56).

Published on separate sheets, the new standard plans (State Roads Commission 1919) for slab bridges reveal that the major changes was an increase in roadway width from 22 feet to 24 feet and a redesign of the reinforcement. The slab spans continued to feature solid parapets integrated into the span. The range of span lengths remained 6 to 16 feet, but the next year (1920) witnessed the issue of a supplemental plan for a 20 foot long slab span (State Roads Commission 1920).

When the bridge was built and/or given a major alteration, did it have a significant impact on the growth and development of the area?
There is no evidence that the construction of this bridge had a major impact on the growth and development of this area. Historic maps show that the area around this bridge has always been undeveloped.

Is the bridge located in an area which may be eligible for historic designation and would the bridge add to or detract from the historic/visual character of the potential district?
This area is not eligible for historic designation.

Is the bridge a significant example of its type?
No, this structure is an undistinguished example of a standardized concrete slab bridge.

Does the bridge retain integrity of important elements described in Context Addendum?
Yes, the character defining elements have retained their integrity.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?
No, this is structure is a typical example of a standardized concrete slab bridge.

Should the bridge be given further study before an evaluation of its significance is made?
This bridge does not warrant further study.

BIBLIOGRAPHY:

County inspection/bridge files X **SHA inspection/bridge files**
Other (list):

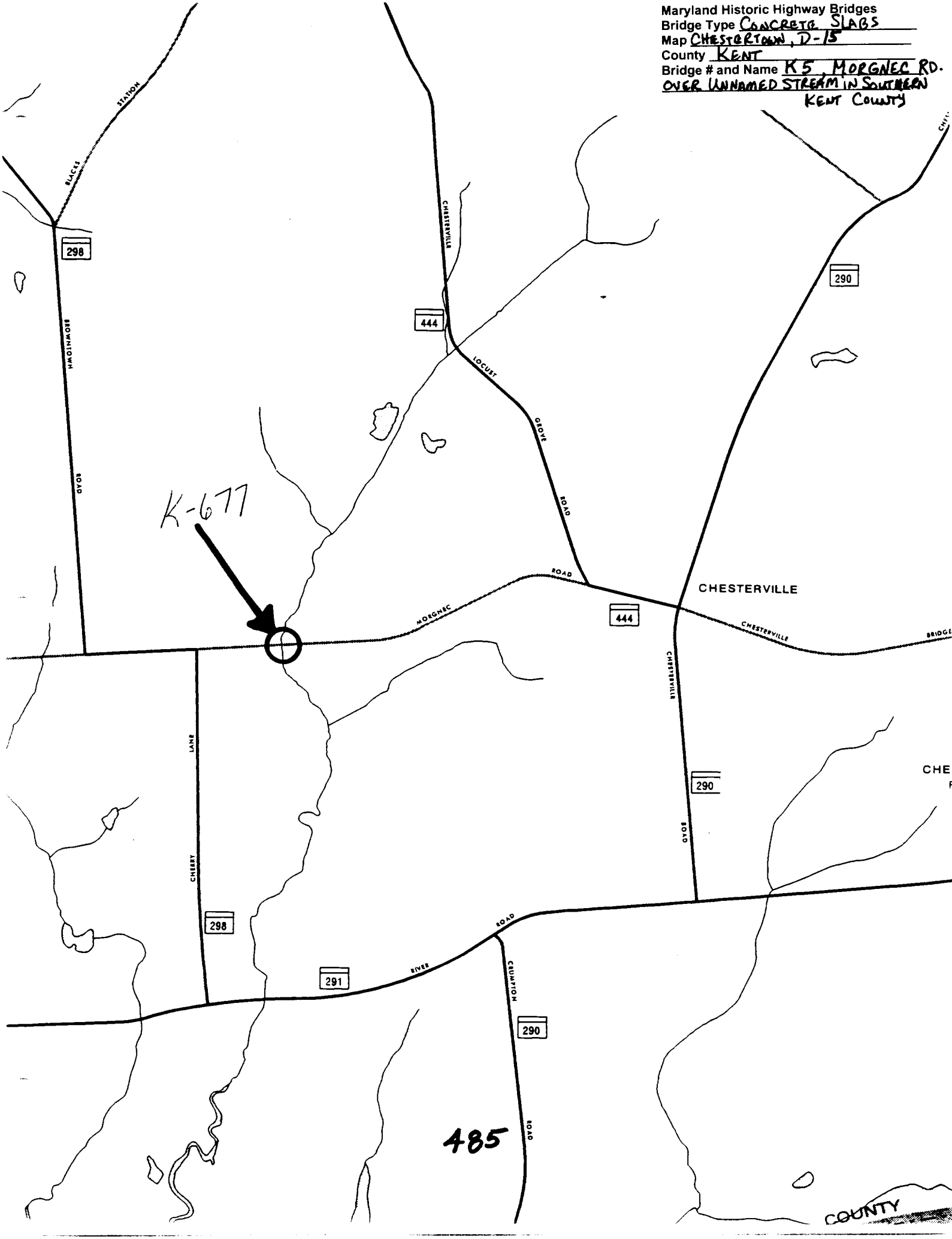
Lake, Griffin, and Stevenson, 1877 Atlases and other Early Maps of the Eastern Shore of Maryland, Philadelphia, 1877.

SURVEYOR:

Date bridge recorded 8/14/95

Name of surveyor Daniel Moriarty
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Suite 412, Baltimore, Maryland 21204
Phone number 410-296-1635 **FAX number** 410-296-1670

Maryland Historic Highway Bridges
Bridge Type CONCRETE SLABS
Map CHESTERTOWN, D-15
County KENT
Bridge # and Name K5 MORGNEC RD. OVER UNNAMED STREAM IN SOUTHERN KENT COUNTY



K-677
KENT COUNTY
MATT HICKSON
1-31-95
~~MARYLAND SHPO~~ SHA
BRIDGE K-5, LOOKING EAST
1 OF 4

K-677
KENT COUNTY
MATT HICKSON
1-31-95
~~MARYLAND SHPO~~ SHA
BRIDGE K-5, LOOKING WEST
2 OF 4

K-677
KENT COUNTY
MATT HICKSON
1-31-95
~~MARYLAND SHPO~~ SHA
BRIDGE K-5, LOOKING UPSTREAM (NORTH)
3 OF 4

K-677

KENT COUNTY

MATT HICKSON

1-31-95

~~MARYLAND SHPO~~ SHA

BRIDGE K-5, LOOKING DOWNSTREAM (SOUTH)

4 OF 4