

Maryland Historical Trust

Maryland Inventory of Historic Properties number: K-680

Name: 14021/MD 446 OVER EAST FORK (Mill Pond Crk)

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 <u>X</u>
Criteria: <u> </u> A <u> </u> B <u> </u> C <u> </u> D	Considerations: <u> </u> A <u> </u> B <u> </u> C <u> </u> D <u> </u> E <u> </u> F <u> </u> G <u> </u> None
Comments: _____ _____ _____	
Reviewer, OPS: <u>Anne E. Bruder</u>	Date: <u>3 April 2001</u>
Reviewer, NR Program: <u>Peter E. Kurtze</u>	Date: <u>3 April 2001</u>

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

MHT No. K-680

SHA Bridge No. 14021

Bridge name East Fork

LOCATION:

Street/Road name and number [facility carried] MD 446

City/town Langford

Vicinity X

County Kent

This bridge projects over: Road ___ Railway ___ Water X Land ___

Ownership: State X County ___ 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 _____ Retractable _____ 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. 14021 carries MD 446 over East Fork approximately one mile north of the community of Langford in eastern Kent County. The area around the bridge is predominantly wooded with some planted fields and modern house. The creek is flowing towards the southeast.

Describe Superstructure and Substructure:

The existing structure, built in 1929, is a one span concrete slab bridge supported by concrete abutments. The concrete flared wingwalls form approximately a thirty degree angle with the centerline of the road. The solid concrete parapets are decorated with panelling and are integral with the bridge. The span measures 20', and the total bridge length is 23'. The out to out width is 24'. In September 1994, the State Highway Administration recommended that the northwest wingwall be repaired with cast-in-place concrete and that the east and west edge of the slab be repaired with gunite. They called for cutting back some of the heavy vegetation around the structure. They further indicated that the northwest wingwall had some major spalling. Finally, they stated that the north abutment face has some heavy efflorescence seepage dripping down from the roadway, and that the south abutment has closed map, vertical, and horizontal 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): SHA 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 apparent 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

SHA inspection/bridge files X

Other (list):

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

K-680

SURVEYOR:

Date bridge recorded 8/14/95

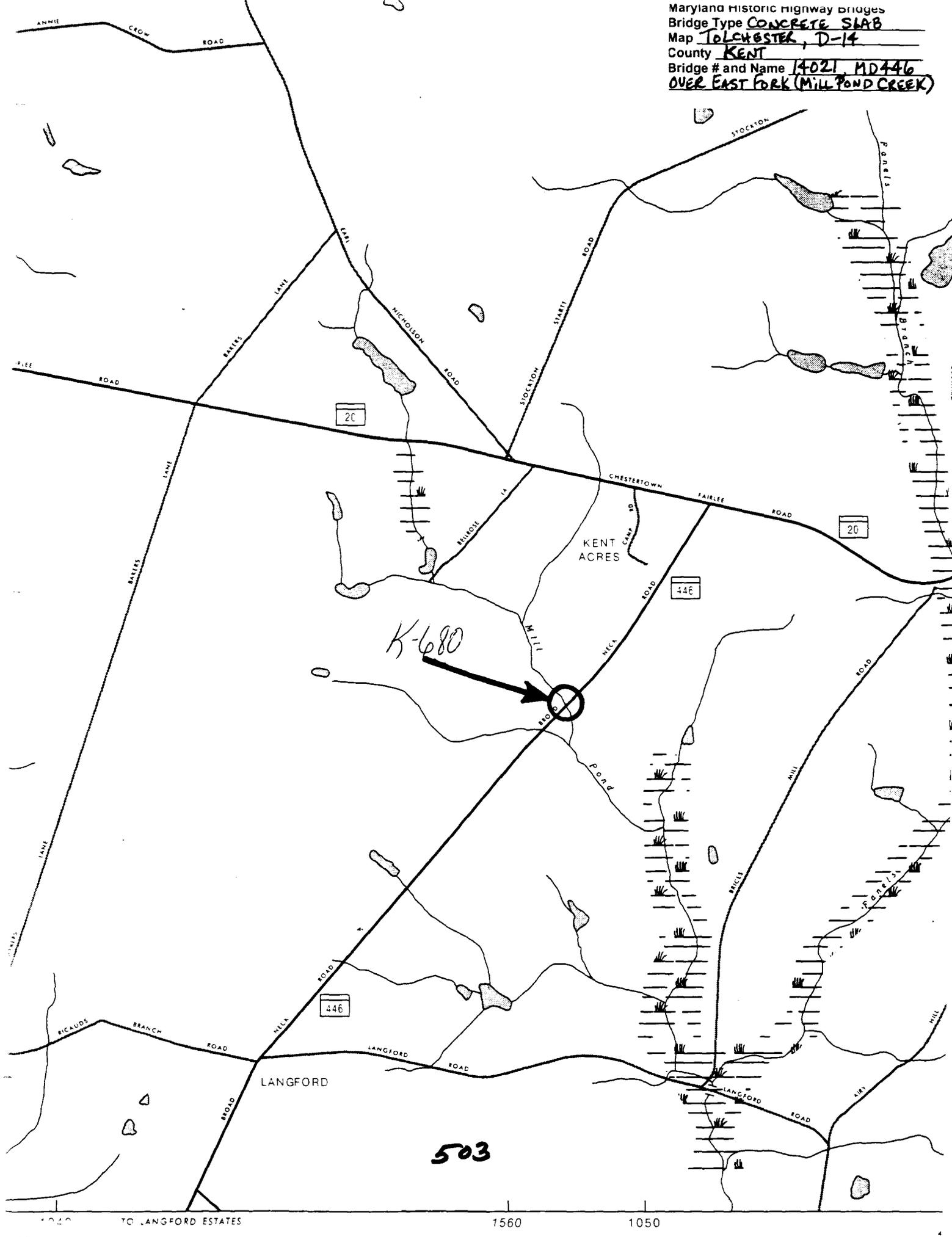
Name of surveyor Daniel Moriarty

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 SLAB
Map TOLCHESTER, D-14
County KENT
Bridge # and Name 14021, MD446
OVER EAST FORK (MILL POND CREEK)



K-680

503

1020

TO LANGFORD ESTATES

1560

1050



K-630

KENT COUNTY

MATT HICKSON

1-31-95

~~MARYLAND~~ 5400-SH?

BRIDGE 14021, LOOKING NE

1 OF 4



K-680

KENT COUNTY

MATT FICKSON

1-3-05

~~PROPERTY~~ SHED SHA

BRIDGE (NO. 21) LOOKING SW

2 OF 4



A-580

KENT COUNTY

MATT HICKSON

1-31-95

~~MARYLAND~~ SHIP SHA

BRIDGE 141031, LOOKING UPSTREAM (NW)

3 of 4



K-680

KENT COUNTY

MATT HICKSON

1-31-95

~~MARYLAND SHAD~~ SMA

BRIDGE 14221, LOOKING DOWNSTREAM (SE)

4 OF 4

**MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM**

NR Eligible: yes ___
no ___

Property Name: Bridge 14021 Inventory Number: K-680

Address: MD 446 over Mill Creek Pond City: Near Langford Zip Code: N/A

County: Kent USGS Topographic Map: Chestertown

Owner: MD SHA

Tax Parcel Number: N/A Tax Map Number: N/A Tax Account ID Number: N/A

Project: MD 446 over Mill Creek Pond Agency: _____

Site visit by MHT Staff: ___no ___yes Name: _____ Date: _____

Eligibility recommended ___ Eligibility **not** recommended X

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

Is the property located within a historic district? Xno ___yes Name of district: _____

Is district listed? ___no ___yes Determined eligible? ___no ___yes District Inventory Number: _____

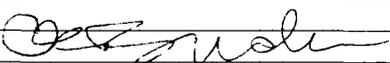
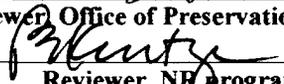
Documentation on the property/district is presented in: Compliance files

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*

Bridge No. 14021 was evaluated by the Interagency Historic Bridge Committee and determined ineligible for inclusion in the National Register of Historic Places on September 21, 1995 due to lack of integrity. Built in 1929, this one span concrete slab bridge, supported by concrete abutments, has heavy efflorescence seepage dripping down from the roadway and the south abutment has extensive vertical and horizontal cracks. The northwest wingwall was repaired with cast-in-place concrete and the east and west edges of the slab were repaired with gunnite. The structure was evaluated and we have confirmed that this structure does not have the potential to be listed on the National Register of Historic Places.

Prepared by: Rita M. Suffness

Date Prepared: February 22, 2001

MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended ___	Eligibility not recommended <u>X</u>
Criteria: ___A ___B ___C ___D	Considerations: ___A ___B ___C ___D ___E ___F ___G ___None
Comments: _____	
	<u>4/4/01</u>
Reviewer, Office of Preservation Services	Date
	<u>4/6/01</u>
Reviewer, NR program	Date

**PRESERVATION VISION 2000; THE MARYLAND PLAN
STATEWIDE HISTORIC CONTEXTS**

I. Geographic Region:

- Eastern Shore (all Eastern Shore counties, and Cecil)
- Western Shore (Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
- Piedmont (Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
- Western Maryland (Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

- Rural Agrarian Intensification A.D. 1680-1815
- Agricultural-Industrial Transition A.D. 1815-1870
- Industrial/Urban Dominance A.D. 1870-1930
- Modern Period A.D. 1930-Present
- Unknown Period (prehistoric historic)

III. Historic Period Themes:

- Agriculture
- Architecture, Landscape Architecture, and Community Planning
- Economic (Commercial and Industrial)
- Government/Law
- Military
- Religion
- Social/Educational/Cultural
- Transportation

IV. Resource Type:

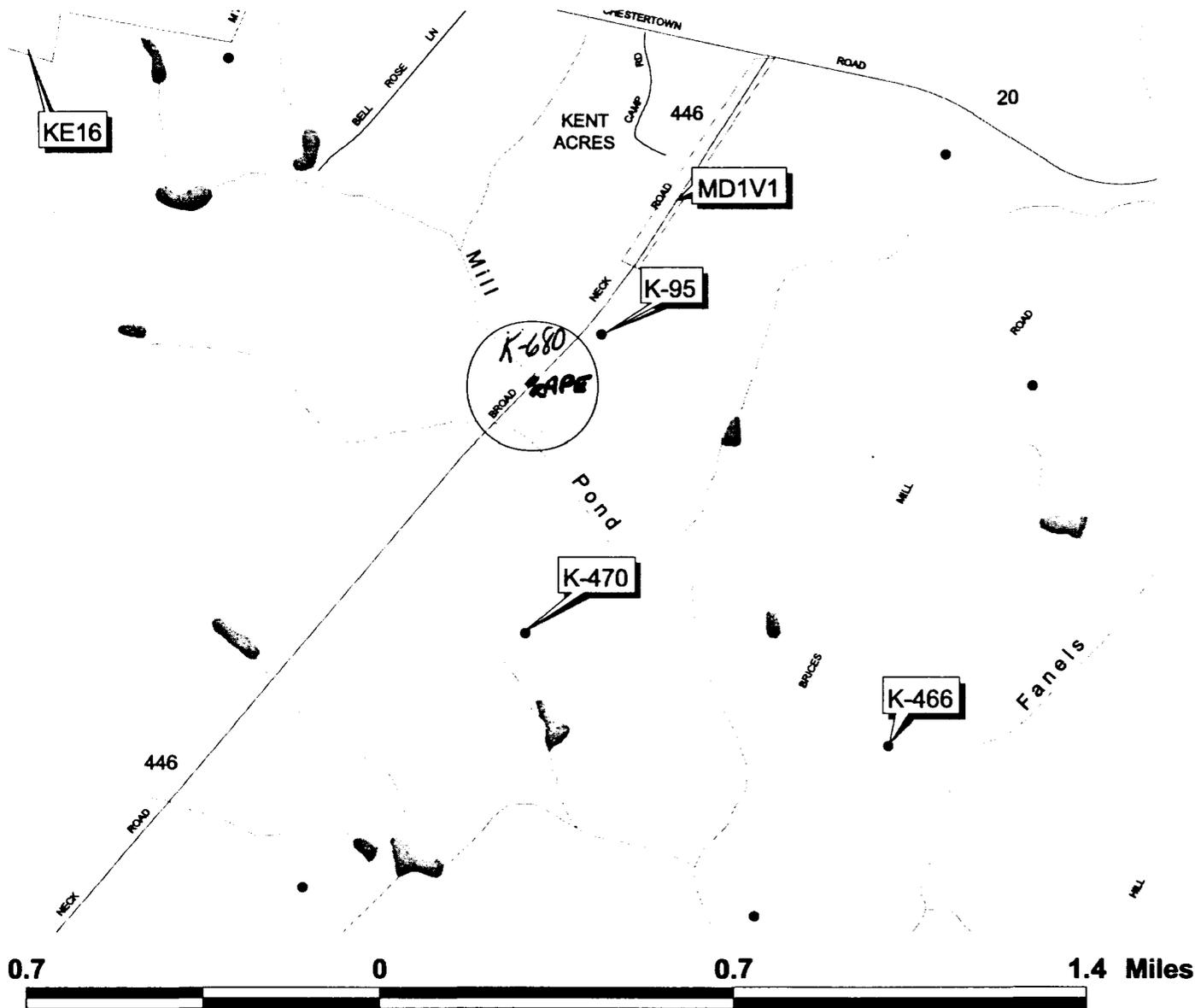
Category: Structure

Historic Environment: Rural

Historic Function(s) and Use(s): Transportation

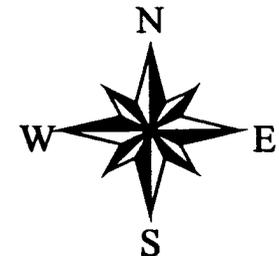
Known Design Source: SHA

MD 446, Bridge No. 14021 Over Mill Pond Creek



- National Register of Historic Places
- Roads**
- CO
- IS
- MD
- OP
- SR
- US
- MU
- GV
- Maryland Inventory of Historic Properties
- Archaeological Surveys
- Maryland Historical Trust Easements
- County

Chestertown Quad



K-680



10 1 '00

K-680

14021

mid sec 510-1100' E of creek

S approach Lk 9 North



K-680

5/22

12/2/80
12/2/80
12/2/80

C. 1 2. 2