Maryland Historical Trust

Maryland Inventory of Historic Properties number: QA-505

Name: Crouse Mill Rd. over Tuckahoe Creek

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 __X__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. QA-505

SHA Bridge No. Q 41 **Bridge name** Crouse Mill Road over Tuckahoe Creek

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

City/town Queen Anne **Vicinity** X

County Queen Anne's

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

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DESCRIPTION:

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

Describe Setting:

Bridge No. Q 41 carries Crouse Mill Road over Tuckahoe Creek in Queen Anne's County. Crouse Mill Road runs east-west and Tuckahoe Creek flows north-south. The bridge is located in the Queen Anne vicinity, within the Tuckahoe State Park, and is surrounded by Lake Tuckahoe to the north and wooded wetlands to the south.

Describe Superstructure and Substructure:

Bridge No. Q 41 is a 14-span, 2-lane, timber bridge. The bridge was originally built in 1946, and was reconstructed in 1969. The structure is 32.3 meters (106 feet) long and has a clear roadway width of 4.97 meters (16.3 feet); there are no sidewalks. The out-to-out width is 5.8 meters (19 feet). The superstructure consists of eleven timber beams which support a timber plank deck and timber rails. The beams are 10.16 centimeters (4 inches) wide by 35.5 centimeters (14 inches) high and are spaced .5 meters (1.6 feet) apart. The structure has single strand railings and the roadway approaches have no traffic barriers. The substructure consists of two timber pile abutments and thirteen timber pile bents. Seven of the pile bents have steel pier caps and six of the timber pile bents have timber pile caps. There are four straight wingwalls. The bridge is posted for 4.5 tonnes (5 tons), and has a sufficiency rating of 14.2.

According to the 1996 inspection report, this structure was in poor condition with split, worn and broken planks in the deck, severe decay at the stringer ends and minor crushing of the stringers over the pile bents.

Discuss Major Alterations:

The timber pile bents with steel pile caps were installed between the existing pile bents with timber pile caps in 1969. In addition, the deck and railings were replaced in 1969.

HISTORY:

WHEN was the bridge built: 1946
This date is: Actual ____X____ **Estimated** _____
Source of date: Plaque ____ **Design plans** ___ **County bridge files/inspection form** __X__
Other (specify):

WHY was the bridge built?

The bridge was constructed in response to the need for more efficient transportation network and increased load capacity.

WHO was the designer?

Unknown

WHO was the builder?

Unknown

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WHY was the bridge altered?

The bridge was altered to ensure its structural integrity. In 1969, the timber pile bents were reconstructed with steel caps placed between the existing pile bents. In addition, the deck and railings were replaced.

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

There is no evidence that the bridge was built as part of an organized bridge building campaign.

SURVEYOR/HISTORIAN ANALYSIS:

This bridge may have National Register significance for its association with:
A - Events _____ B- Person _____
C- Engineering/architectural character _____

The bridge does not have National Register significance.

Was the bridge constructed in response to significant events in Maryland or local history?

The earliest bridges built in North America were timber bridges. According to one account, European settlers at first utilized the bridges constructed by the Native American populations, which consisted of tied timbers laid across up-turned forked tree trunks (American Association of State Highway Officials 1953: 19). This design was adopted by the settlers, who then modified the design by hewing the upper portions of the timbers to provide a flat surface and by adding a handrail to one side (American Society of Civil Engineers 1976: 143). Where crossings exceeded the length of the available timber, short spans were joined and supported on wood piles or on timber cribs filled with earth or stone. In fact, the earliest recorded bridge built by European settlers in America was most likely this type of design. Constructed in 1611 on James Towne Island, Virginia, this timber bridge extended approximately 200 feet into the water and provided docking facilities in the 12 foot deep channel (American Association of State Highway Officials 1953: 19).

The railroads had a significant impact on the construction as well as the on-going popularity of the timber bridge. During the 1830s, the Baltimore & Ohio Railroad employed engineers such as Theodore Burr and Lewis Wernwag to construct bridges over its major crossings. Burr, Town and Long trusses were all extensively employed and became standard for railroad-bridge construction (Waddell 1916: 21).

Another type, the timber trestle bridge, also was used extensively by the railroads. The first timber trestle was built by the Philadelphia and Reading Railroad in 1840 (Waddell 1916: 22). With timber in abundant supply, the railroads used this functional design as an inexpensive and practical bridge design for its lines, particularly in remote locations of the country.

The combination of timber with other materials began with the invention of the Howe truss in 1840. William Howe patented a truss which utilized iron verticals as tension members and wood diagonals as compression members. The Howe truss became a standard of railroad bridge design. By the 1860s, the problem of wood deterioration was under better control with the invention of pressure creosote treatments, which extended the life of the wood members. Timber pile bent structures remained popular, particularly in tidal areas, into the twentieth century. These were most often used in combination with concrete.

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The popularity of the timber bridge continued into the 1880s even with the ascension of iron and steel as bridge materials. Due to the availability of lumber in the state, the timber bridge was a functionally popular bridge type in Maryland from the European settlement era to the twentieth century. The numerous small streams that cross the state as well as the larger rivers such as the Susquehanna were often spanned by timber bridges during the eighteenth and nineteenth centuries.

Despite the rise of use of metal and concrete in bridge building, timber bridges continued to be constructed in Maryland in the twentieth century. Many of these later timber bridges were combination structures that have been favored in the flat terrain of the Tidewater Region.

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 significant impact on the growth and development of this area.

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?

The bridge is located in an area which does not appear to be eligible for historic designation.

Is the bridge a significant example of its type?

A significant example of a timber beam bridge should possess character-defining elements of its type, and be readily recognizable as an historic structure from the perspective of the traveler. The integrity of distinctive features visible from the roadway approach, including parapet walls or railings, is important in structures which are common examples of their type. In addition, the structure must be in excellent condition. This bridge, which has alterations to its piers, abutments and beams and which is lacking such original features as the deck and railings, is an undistinguished example of a timber beam bridge.

Does the bridge retain integrity of important elements described in Context Addendum?

This bridge was reconstructed in 1969, resulting the alteration of such character-defining elements as the piers, abutments, deck and railing.

Is the bridge a significant example of the work of a manufacturer, designer, and/or engineer?

This bridge is not a significant example of the work of a manufacturer, designer, and/or engineer.

Should the bridge be given further study before an evaluation of its significance is made?

No further study of this bridge is required to evaluate its significance.

BIBLIOGRAPHY:

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

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Tyrrell, H. Grattan
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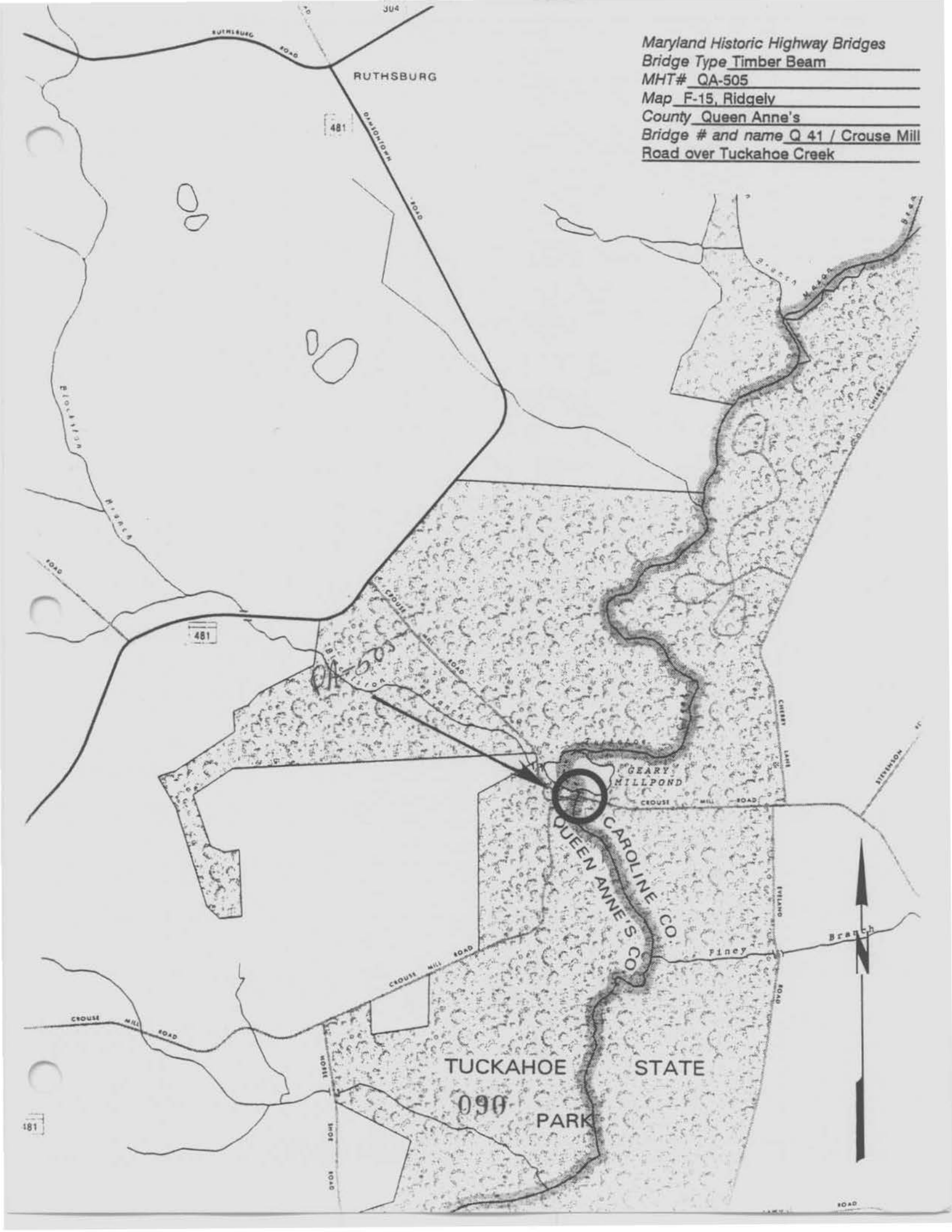
SURVEYOR:

Date bridge recorded February 1998
Name of surveyor Caroline Hall/Marris German
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204/
Wallace Montgomery & Associates, 110 West Road, Towson, MD 21204
Phone number (410) 296-1635 **FAX number** (410) 296-1670


Maryland Historic Highway Bridges
Bridge Type Timber Beam
MHT# QA-505
Map F-15, Ridgely
County Queen Anne's
Bridge # and name Q 41 / Crouse Mill Road over Tuckahoe Creek
RUTHSBURG
RUTHSBURG ROAD
481
GREENSPRING ROAD
CROUSE MILL ROAD
GEARY MILLPOND
QUEEN ANNE'S CO.
CAROLINE CO.
TUCKAHOE STATE PARK
090
QA-505
N

1 QA-505

2 Crouse Mill Rd over Tuckahoe Creek

3 Queen Anne's Co., MD

4 3/98

5 Marris German, WMA

6 MD SHPO

7 Looking upstream dam for Tuckahoe Lake

8 1 of 5

1 QA-505

2 Crouse Mill Rd. over Tuckahoe Creek

3 - Queen Anne's Co MD

4 3/98

5 Marris German, WMA

6 MD SHPO

7 Elevation looking upstream

8 2 of 5

1 QA-505

2 Crouse Mill Road over Tuckahoe Creek

3 Queen Anne's County, MD

4 3/98

5 Marris German, WMA

6 MD SHPO

7 Elevation looking downstream

8 3 of 5

1 QA-505

2 Crouse Mill Rd. over Tuckahoe Creek

3 Queen Anne's Co., MD

4 3/98

5 Marris German, WMA

6 MD SHPO

7 Looking east

8 4 of 5

1 QA-505

2 Crouse Mill Rd over Tuckahoe Creek.

3 Queen Anne's Co. MD

4 3/98

5 Marris German, WMA

6 MD SHPO

7 Looking west

8 5 of 5