

Maryland Historical Trust

Maryland Inventory of Historic Properties number: QA-483

Name: 17036/ MD 481 OVER BLOCKSTONE PARANCH

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: <u>THIS BRIDGE HAS BEEN DELETED FROM THE SHA INVENTORY.</u>	
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. QA-483

SHA Bridge No. 17036 Bridge name Blockstons Branch

LOCATION:

Street/Road name and number [facility carried] MD 481

City/town Ruthsburg

Vicinity X

County Queen Anne's

This bridge projects over: Road Railway Water Land

Ownership: State County Municipal Other

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes No
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 :
Concrete Arch _____ Concrete Slab Concrete Beam _____ Rigid Frame _____
Other _____ Type Name _____

DESCRIPTION:

Setting: Urban _____ Small town _____ Rural X

Describe Setting: Bridge No. 17036 carries MD 481 over Blockstons Branch approximately three miles south of the village of Ruthsburg. The area to the south of the bridge is wooded. There are a few modern houses to the north.

Describe Superstructure and Substructure:

This structure is a 2 span concrete slab bridge with a clear span of 16'-0" between the abutments and pier. The pier is a solid shaft pier. There are 4'-7" solid concrete Jersey type parapets on both sides of the bridge that are integral with the bridge and concrete shoulders to the edge of the asphalt roadway. There are two drains through the bottom of the parapet on both sides. The clear roadway is 27'-9". This bridge has approximately 5" of bituminous wearing surface above the concrete deck. It is a SHA standard bridge built in the 1930s.

The 1993 inspection report stated that map cracking was occurring in several places along the Jersey parapets. On Span #1, there were some hollow areas along each curb line on the top of the slab. At the underside of the slab, there were numerous longitudinal cracks with efflorescence leakage throughout the width of the slab. The concrete sounded hollow at several of these areas. Numerous longitudinal cracks appeared on Span #2 with some spalled areas in the underside.

There was cracking, hollow sounding and some heavy efflorescence seepage along the face of the both abutments, the pier and the northwest wingwall.

Discuss Major Alterations:

The parapets have been replaced with Jersey type parapets. Guardrails have been attached to the parapets.

HISTORY:

WHEN was the bridge built 1930s

This date is: Actual _____ Estimated X

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?

Parapets had become deteriorated

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 1920's and 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. By 1930, Maryland's primary system had become inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930s. Most improvements to local roads waited until the years after World War II.

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).

The 1924 standard plans remained in effect until 1930, when the roadway width for all standard plan bridges was increased to 27 feet in order to accommodate the increasing demands of automobile and truck traffic (State Roads Commission 1930). The range of span lengths remained the same, but there were some changes designed to increase load bearing capacities. The reinforcing bars were increased in thickness. Visually, the 1930 design can be distinguished from its predecessors by the pierced concrete railing that was introduced at this time.

Three years later, in 1933, a new set of standard plans was introduced (State Roads Commission 1933). This time, their preparation was not announced in the Report; new standard plans were by this time nothing special - they had indeed become standard. Once again accommodating the ever-increasing demands of traffic, the roadway width was increased, this time to 30 feet. The slab span's reinforcing bars remained the same diameter but were placed closer together to achieve still more load bearing capacity.

A system of standard nomenclature for plans was introduced at this time: span type was indicated by a two-letter designator followed by span length and the year of the plan. Thus, CS-18-33 indicates an 18 foot concrete slab of the 1933 standard plan design; CG-36-33 was a 36 foot concrete girder (T-beam) of the same year. The inclusion of the year designator gave ready access to design details for each bridge and indicates that the State Roads Commission anticipated revisions to standard plans.

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 to suggest that the construction of this bridge had a significant impact on local growth or development.

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?

No.

Is the bridge a significant example of its type?

No, this is an example of a standardized concrete slab bridge with replaced parapets.

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

No, the parapets have been recently replaced.

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

No, this is a substantially modified bridge built from standardized State plans.

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

Other (list):

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

SURVEYOR:

Date bridge recorded 8/11/95

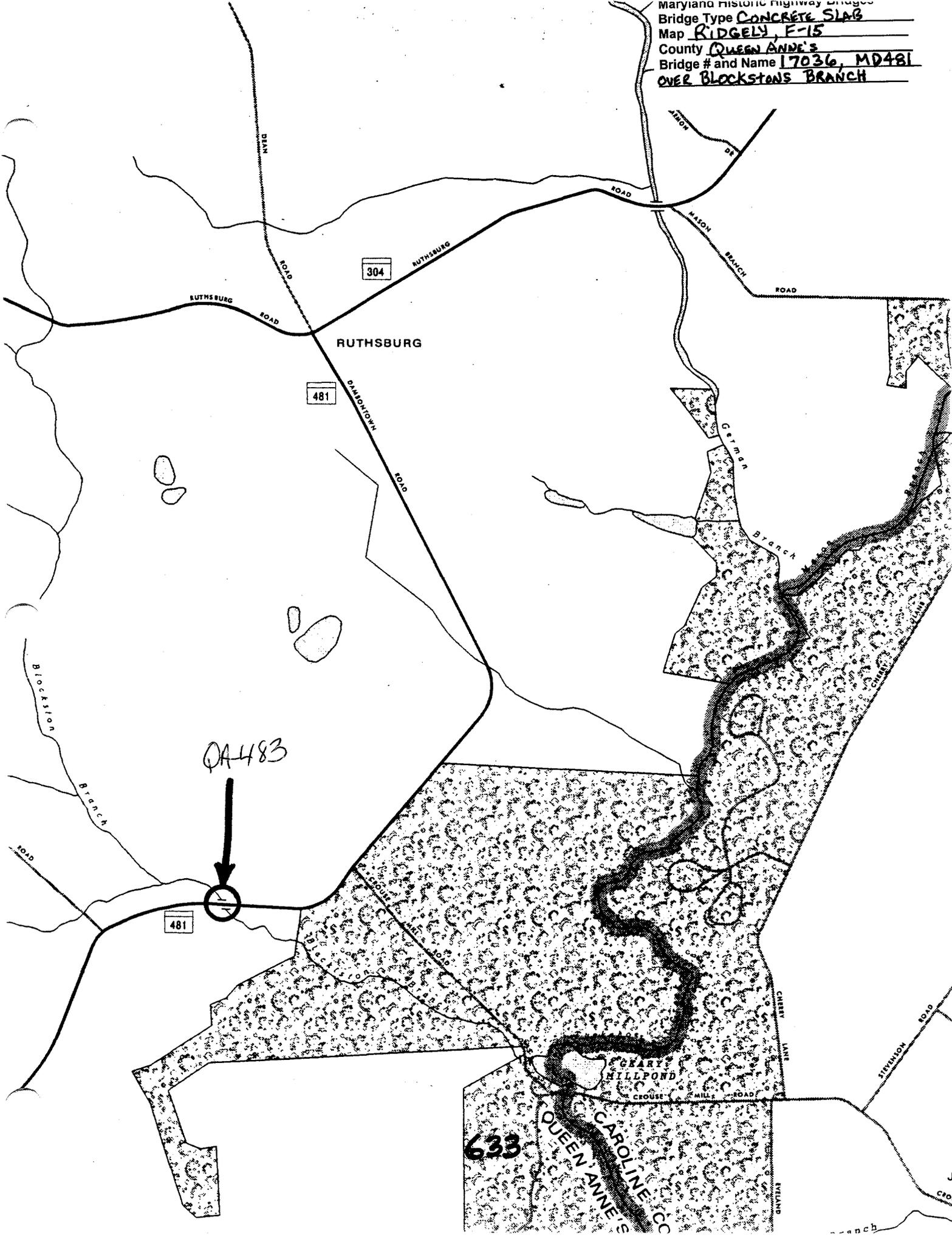
Name of surveyor Daniel Moriarty

Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Suite 412, Towson, Maryland 21204

Phone number 410-296-1635

FAX number 410-296-1670

Maryland Historic Highway Bridges
Bridge Type CONCRETE SLAB
Map RIDGELY, F-15
County QUEEN ANNE'S
Bridge # and Name 17036, MD481
OVER BLOCKSTON BRANCH





GA-433

QUEEN ANNES COUNTY

MATT HICKSON

3-10-95

MARYLAND ~~SHRO~~ SFA

BRIDGE 17036, LOOKING EAST

1 OF 4



QA 483

QUEEN ANNES COUNTY

MATT HICKSON

3-16-95

~~MARYLAND SHPO~~ SHA

BRIDGE 17036, LOOKING WEST

2 OF 4



QH.483

QUEEN ANNES COUNTY

MATT HICKSON

3-16-95

~~MARLAND ST. 114~~

BRIDGE 17036, LOOKING DOWNSTREAM (SOUTH)

3 OF 4



QA 483

QUEEN ANNES COUNTY

MATT HICKSON

3-16-95

MARYLAND ~~SHPO~~ SHA

BRIDGE 17036, LOOKING UPSIREAM (NORTH)

4 OF 4

200003599

MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM

QA-483

Property Name: Bridge 17036 (QA 483)

Address: MD 481 over Blockston Branch, Ruthsburg, Queen Anne's County, Maryland

Owner: SHA

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

Project: No. QA709B21 Agency: SHA

Site visit by SHA Staff: no yes Name _____ Date N/A

Eligibility recommended No Eligibility **not** recommended X

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

Is property located within a historic district? X no ___ yes Name of district:

Is district listed? N/A no ___ yes Documentation on the property/district is presented in: Historic Bridge Inventory

Description of Property and Eligibility Determination

This structure is not eligible for listing in the National Register due to the fact that it is lacking parapets, a CDE for concrete slab bridges. The abutments and piers of the structure were undermined during Hurricane Floyd. It was built in 1932 to carry MD 481 over Blockston Branch. It is a two-span concrete slab. The superstructure has been altered from its original appearance by the removal and replacement of the original parapets with jersey barriers with metal guardrails attached on both roadway approaches. The abutments and pier faces are covered with efflorescence full width, with cracks evident of all of the substructure and wingwalls. Hurricane Floyd undermined the abutments and pier in September 1999. Both abutments have grout bags stacked along the footers and the undermined voids under each have been filled with grout. The west approach was washed out in the hurricane, and filling with stone and flowable fill has repaired it.

This structure does not currently appear eligible for listing in the National Register individually as a bridge due to lack of integrity and the fact that it is not a significant example of a concrete slab. According to Historic Highways Bridges in Maryland: 1631-1960: Historic Context Report (October, 1995), the CDE's for a concrete slab structure are the slab, beam and parapet for the superstructure, and abutments, piers and wing walls of the substructure (pages C-60 and 61). The bridge does not retain parapets, thus it does not retain one of the primary CDE's.

Prepared by: SHA Architectural and Bridge Historian Rita M. Suffness

MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended <u>___</u>	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, Office of Preservation Services <u>[Signature]</u>	Date <u>11/24/00</u>
Reviewer, NR program <u>[Signature]</u>	Date <u>11/16/00</u>

gmg

**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

QA-483



Bridge 17036 on MD 481 over Blockston Branch
Looking East



Bridge 17036 on MD 481 over Blockston Branch
Looking West

QA-483



Bridge 17036 on MD 481 over Blockston Branch
Upstream



Bridge 17036 on MD 481 over Blockston Branch
Downstream

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

MHT No. QA-483

SHA Bridge No. 17036 Bridge name Blockston Branch

LOCATION:

Street/Road name and number [facility carried] MD 481

City/town Ruthsburg

Vicinity

County Queen Anne's

This bridge projects over: Road Railway Water Land

Ownership: State County Municipal Other

HISTORIC STATUS:

Is the bridge located within a designated historic district? Yes No
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 :
Concrete Arch Concrete Slab Concrete Beam Rigid Frame
Other Type Name _____

DESCRIPTION:

Setting: Urban _____ Small town _____ Rural X

Describe Setting: Bridge No. 17036 carries MD 481 over Blockstons Branch approximately three miles south of the village of Ruthsburg. The area to the south of the bridge is wooded. There are a few modern houses to the north.

Describe Superstructure and Substructure:

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There was cracking, hollow sounding and some heavy efflorescence seepage along the face of the both abutments, the pier and the northwest wingwall.

Discuss Major Alterations:

The parapets have been replaced with Jersey type parapets. Guardrails have been attached to the parapets.

HISTORY:

WHEN was the bridge built 1930s

This date is: Actual _____ Estimated X

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?

Parapets had become deteriorated

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 1920's and 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

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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?

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

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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):

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SURVEYOR:

Date bridge recorded 8/11/95

Name of surveyor Daniel Moriarty

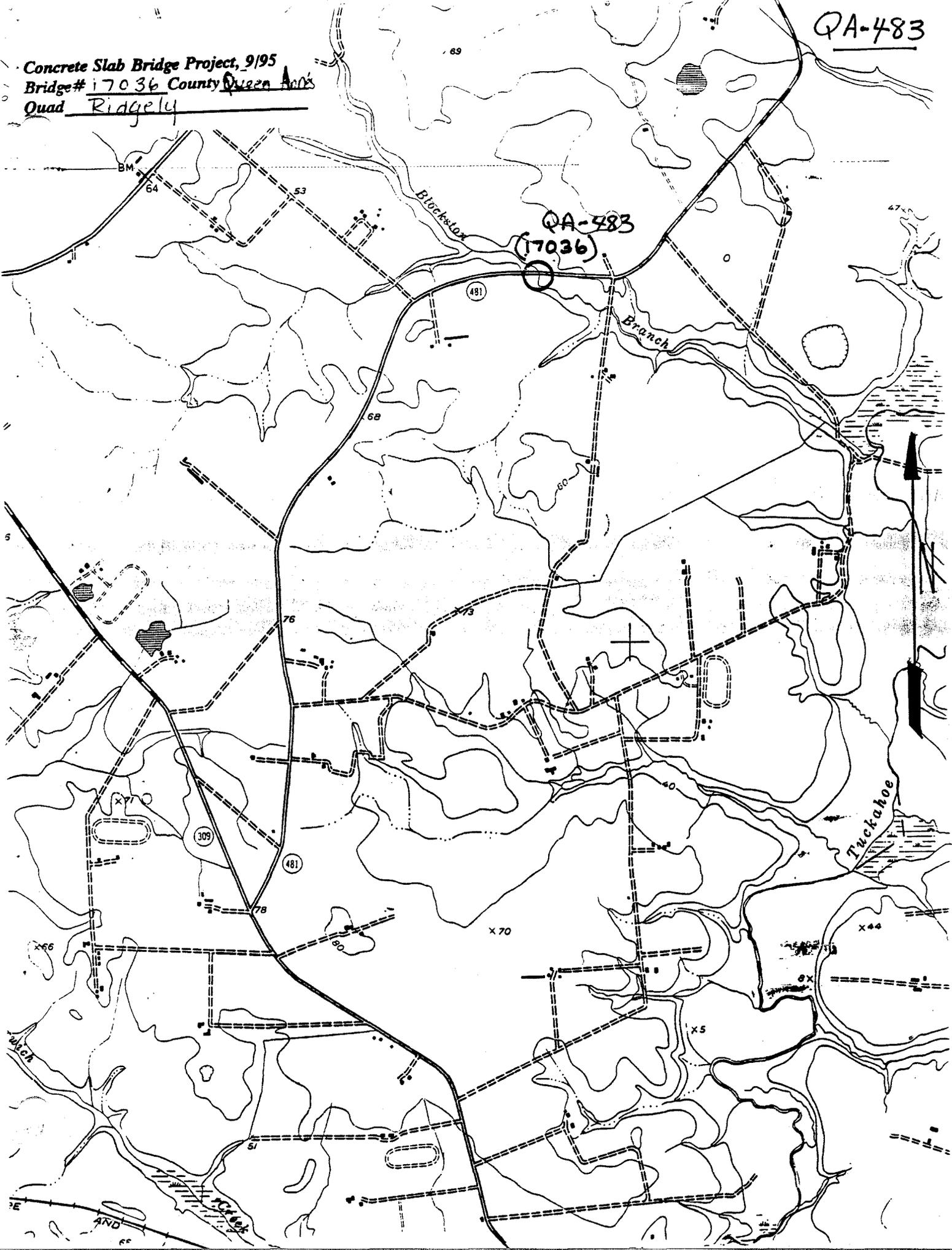
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Suite 412, Towson, Maryland 21204

Phone number 410-296-1635

FAX number 410-296-1670

QA-483

Concrete Slab Bridge Project, 9/95
Bridge # 17036 County Queen Anne's
Quad Ridgely





QA-483

Bridge #17036

MD 481 over Blockston Branch,
Ruthsburg



QA-483

Bridge #17036

MD 481 over Blockston Branch,
Ruthsburg