Maryland Historical Trust

Maryland Inventory of Historic Properties number: WA-I-735

Name: 21026/MD62 OVER LITTLE ANTIETAM 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 ___X____ Eligibility Not Recommended _____

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. WA-I-735

SHA Bridge No. 21026 Bridge name MD 62 over Little Antietam Creek

LOCATION:
Street/Road name and number [facility carried] MD 62

City/town South of Leitersburg Vicinity ____

County Washington

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 _____ 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. 21026 carries MD 62 over Little Antietam Creek in Washington County. MD 62 runs north-south. Little Antietam Creek flows east-west. The area immediately around the bridge is wooded and sparsely developed. The bridge is located south of Leitersburg.

Describe Superstructure and Substructure:

Bridge No. 21026 is a three span, two-lane, concrete slab bridge built in 1931. The spans measure 24'-0", 25'-6", and 24'-1½", and the total length is 76'-7½". The bridge has open parapets with six panels, an articulated concrete coping stone, and end blocks. It has concrete abutments and flared concrete wingwalls. Both the piers and the wingwalls have molded chamfering which looks like stone.

The 1994 inspection of this bridge reported it to be in satisfactory condition. According to the inspection report: Two of the spans have a few 1'x1'x2' spalls with rusted rebar exposed. There is efflorescence exudation, and there are a few 2'x2' spalls still in place with open cracks around the area deck. All three spans have fine map cracking. The parapets have several 8"x6"x2" spalls with rusted rebar exposed. There are several open vertical cracks and large areas of light to moderate scaling, mostly on balustrade caps. The abutments have small areas of light scaling, a few fine vertical cracks, and a few 1"x2"x½" spalls. There are also pop outs with rusted rebar exposed. The pier caps are solid. However, both piers have stains, efflorescence, and fine vertical cracks. One of the piers has a 1'x6' area of medium scaling with heavy efflorescence exudation along the top edge adjacent to the deck.

Discuss Major Alterations:

Maryland State Highway Administration has inspection reports from 1982 to 1994 which consistently rate Bridge No. 21026 in satisfactory or good condition. In addition, these reports do not describe or mention any major alterations or repairs undertaken for this bridge.

HISTORY:

WHEN was the bridge built (actual date or date range) 1931

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

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

Other (specify) Maryland State Highway Administration bridge files

WHY was the bridge built?

Unknown

WHO was the designer?

Unknown

WHO was the builder?

Unknown

WHY was the bridge altered?

Has undergone no major alterations

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

Unknown

SURVEYOR/HISTORIAN ANALYSIS:

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

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.

Bridge No. 21026 is similar to SHA designs from 1930, but it does not appear to conform to SHA Standard Detail Sheets. Built for local transportation needs over a wide crossing, it is possible this bridge design was modified from SHA designs for use at this site.

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?
Unknown.

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. Bridge No. 21026 is not located in an area which is eligible for historic designation.

Is the bridge a significant example of its type?
Yes. Bridge No. 21026 is a potentially significant example of a multiple-span concrete slab bridge. Of the extant bridges surveyed, the bridge is unusually large, extending at least 73' in length; in comparison to other extant concrete slab bridges constructed in Maryland from 1920 to 1940, it is quite decorative in its design. The open parapets have six panels and an articulated coping stone. The end blocks are scored, and both the piers and wingwalls have been chamfered to give the appearance of natural stone. Finally, this bridge is in good condition and retains a high degree of material and design integrity.

Does the bridge retain integrity of important elements described in Context Addendum?
Yes, this bridge retains a high degree of material and design integrity.

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

WA-I-735

Should the bridge be given further study before an evaluation of its significance is made?
Yes, further evaluation is necessary to determine National Register significance. Moreover, additional research concerning the history of this bridge and its relationship to the surrounding landscape may be useful in providing a more complete picture of the bridge's background.

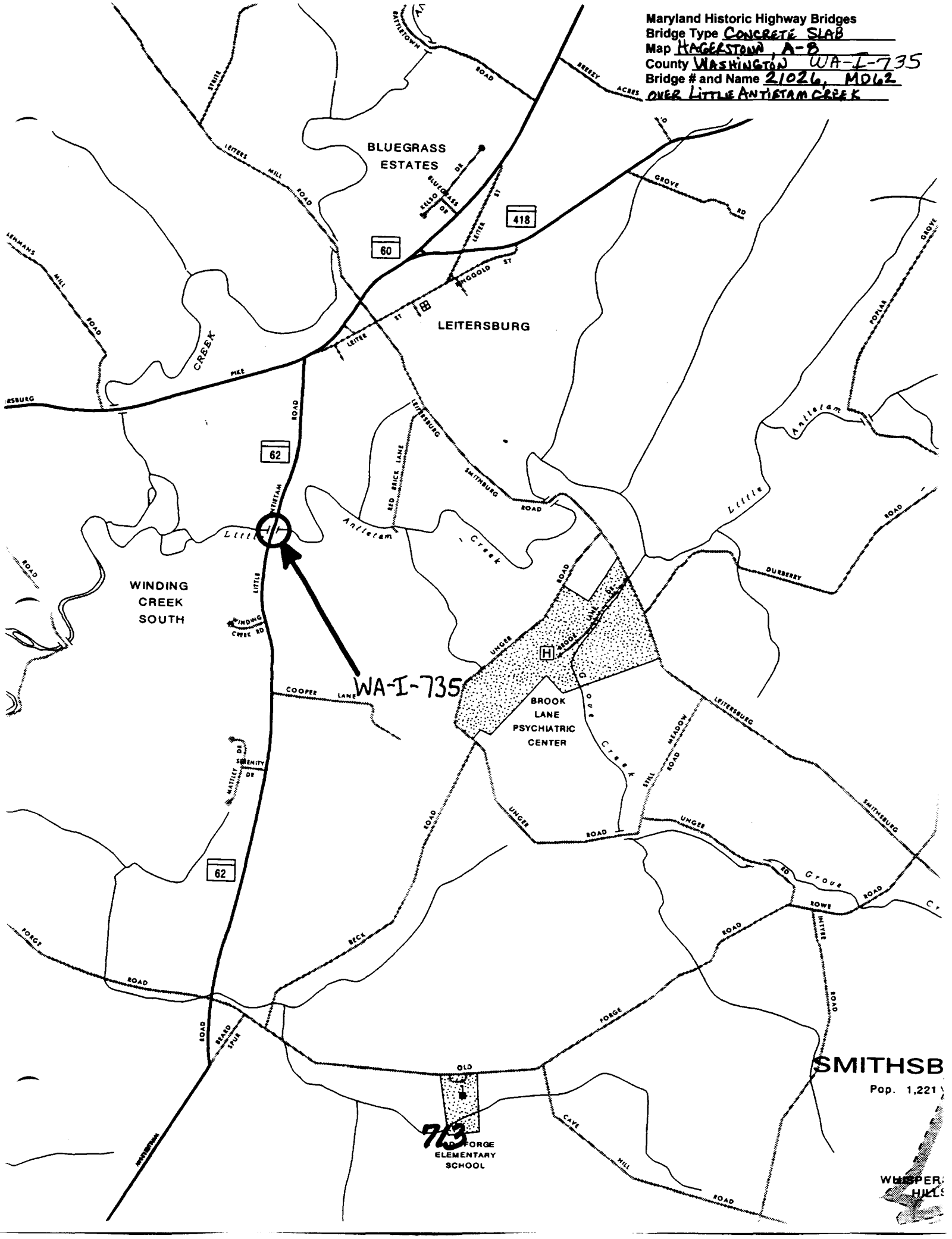
BIBLIOGRAPHY:

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

SURVEYOR:

Date bridge recorded August 1995
Name of surveyor Adrienne Beaudet Cowden
Organization/Address P.A.C. Spero & Company; 40 West 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 HAGGERSTOWN, A-B
County WASHINGTON WA-I-735
Bridge # and Name 21026, MD62
OVER LITTLE ANTIETAM CREEK



713

BK # [illegible] [illegible]

OVER LITTLE [illegible] CREEK

WEST STOCK CO., [illegible]

CHARLES ZIEGLER

2/22/45

S. F.

EAST ELEVATION (DOWNSTREAM)

[illegible] 4

BRIDGE NO. 1135

OVER LITTLE ANTIETAM CREEK

WASHINGTON CO. MD.

CHARLES ZIEGLER

2/22/95

S. H. A.

SOUTH APPROACH

2 OF 4

BRIDGE NO. 1 [illegible]

OVER LITTLE ANTIETAM CREEK

WASHINGTON CO., MD.

CHARLES ZUGLER

2/22/95

S.H.A.

NORTH APPROACH

3 OF 4

BR # [illegible]10261D [illegible]

OVER LITTLE ANTIETAM CREEK

WASHINGTON CO., MD.

CHARLES ZIEGLER

2/22/95

S. H. A.

WEST ELEVATION (UPSTREAM)

4 OF 4