Maryland Historical Trust

Maryland Inventory of Historic Properties Number: ~~WA-I-741~~ WA-I-842

Name: US 40 WB (NATIONAL PIKE)

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 bridged received the following determination of eligibly.

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 Properties
Historic Bridge Inventory
Maryland State Highway Administration
Maryland Historical Trust

MHT Number ~~WA-I-741~~ WA-I-842

SHA Bridge No. 21014 **Name:** US 40 WB over Antietam Creek
Location:
Street/Road Name and Number: US 40 WB (National Pike)

City/Town: Hagerstown **Vicinity** X

County: Washington

Ownership: X State_County_Municipal_Other

This bridge projects over: _Road_Railway X Water_Land

Is the bridge located within a designated district: _yes X no

_NR listed district_NR determined eligible district
_locally designated_other
Name of District

Bridge Type:

_Timber Bridge
_Beam Bridge_Truss-Covered_Trestle
_Timber-and-Concrete

_Stone Arch

_Metal Truss

_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

X Concrete
X Concrete Arch _Concrete Slab_Concrete Beam
_Rigid Frame

_Other Type Name_____

Describe Setting:

Bridge 21014 carries US 40 Westbound (National Pike) over Antietam Creek in Washington County. US 40 runs east-west over the northern flowing Antietam Creek. The bridge is in an area that is heavily developed both commercially and residentially.

Describe Superstructure and Substructure:

Bridge 21014 is a triple-span filled concrete arch bridge. The exterior of the bridge is faced in stone. The length of the bridge is 160 feet. The spans from east to west are 49 feet, 58 feet, and 49 feet respectively. The bridge has a rise of approximately 15 feet from springline to the crown. The bridge has 2 identical piers. The piers are approximately 60 feet long and 12 feet wide. The exterior face of the pier is 8 feet wide. The exterior of the pier has a pilaster that is 20 feet high and extends from the face of the bridge by 1.5 feet. The abutments are concrete and are approximately 60 feet wide and 15 feet high. Each abutment has 2 wingwalls. The eastern walls are 38 feet wide while the western walls are 45 feet wide. The arch has 3-foot solid concrete parapets faced with granite. There is a clear roadway width of 40 feet, with an overall width of 44 feet 6 inches. According to a 1996 inspection report, the bridge is in good condition with a sufficiency rating of 92.3.

Discuss Major Alterations:

There have been no major alterations to this structure.

When Built: 1936
Why Built: Relocation and Widening of US 40 between Frederick and Hagerstown
Who Built: State Roads Commission
Who Designed: State Roads Commission
Why Altered: N/A
Was this bridge built as part of an organized bridge building campaign?
Yes, this bridge was built as part of the relocation and widening of US 40 between Frederick and Hagerstown in the mid-1930s. Scenic US 40 was originally chartered in 1792 by Maryland as a turnpike from Frederick to Cumberland; it was a segment of the Baltimore-Cumberland Turnpike. The road, eventually know as the National Pike (as distinct from the National Road), was financed by various Maryland banks, and construction began in 1816. The road was completed to Cumberland by 1823. The turnpike ceased operations in 1889, when a storm wrecked bridges on the road, and the bridges were not rebuilt. The road had fallen into disrepair by the early-twentieth century, when the "Good Roads" Act of 1916 provided federal funding for road improvements. The National Pike was designated US 40 in the mid-1920s.

Surveyor Analysis:

This bridge may have NR significance for association with:
_X_ A Events _____ Person
_X_ C Engineering/Architectural

This bridge was determined eligible by the Interagency Review Committee in February, 1996.

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

In 1936 and 1937 several factors including the increase in vehicle registration, mechanical improvements to the vehicle itself, and an increase in mileage traveled put a tremendous strain on the existing road systems. This was particularly true of the mechanical improvements; each year cars were built which were capable of higher speeds and trucks were being built capable of higher loads. To meet the requirements of this increased traffic and providing for future increase, a new arterial system was planned.

The relocation of the National Pike between Frederick and Hagerstown did not have at that time sufficient volume to warrant the cost of a dual highway. However, right-of-way was acquired to permit the dualization of the highway. The relocated road was constructed in such a way that the 40-foot roadway could become the westbound lane of a dual highway.

The relocation of US 40 included the construction of many highway bridges and culverts. The designers considered the nature of the surrounding terrain and the existing historical landscape. It was decided to face the prominent structures with granite simulating the area's nineteenth century stone arches. Bridge 12014, crossing Antietam Creek near Hagerstown, was the largest of this type of bridge.

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?

Yes, this bridge was built as part of a relocation of US 40. Although there had been a road between Frederick and Hagerstown since 1806 this modern roadway allowed for increased traffic loads. The increase in traffic allowed for greater regional development.

Is the bridge located in an area that may be eligible for historic designation and would the bridge add to or detract from historic and visual character of the possible district?

No, the bridge is not located in an area that is eligible for historic designation.

Is the bridge a significant example of its type?

Yes, this bridge is a significant example of a triple span concrete arch built during the 1910-1940 key period of significance. During this period reinforced concrete structures where characterized by increasing standardization of small slab, beam, frame, and culvert spans. Special subtypes of reinforced concrete bridges, such as the Luten arch, open spandrel ribbed arch, the rigid frame bridge and concrete girders were introduced and built as grade crossing elimination structures.

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

Yes, this bridge retains integrity of its character defining elements. The wingwalls, the spandrel walls, the parapets, the piers, the arch rings, the barrels and the abutments all are original and have only moderate deterioration.

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

Yes, this bridge is a significant example of the State Roads Commission's efforts during the 1930s to eliminate dangerous geometric alignments. The development of standardized plans help facilitate this process. The influence of stone-arch bridges was noticeable in the construction of bridges built on the relocated US 40 between Frederick and Hagerstown. Bridge 12014 was the largest of this type built.

Should this bridge be given further study before significance analysis is made and why?

Yes, this bridge should be given further study on how it relates to other structures built within the county under this program.

Bibliography:

County inspection/bridge files _____ **SHA inspection/bridge files** ___X___

Other (list):

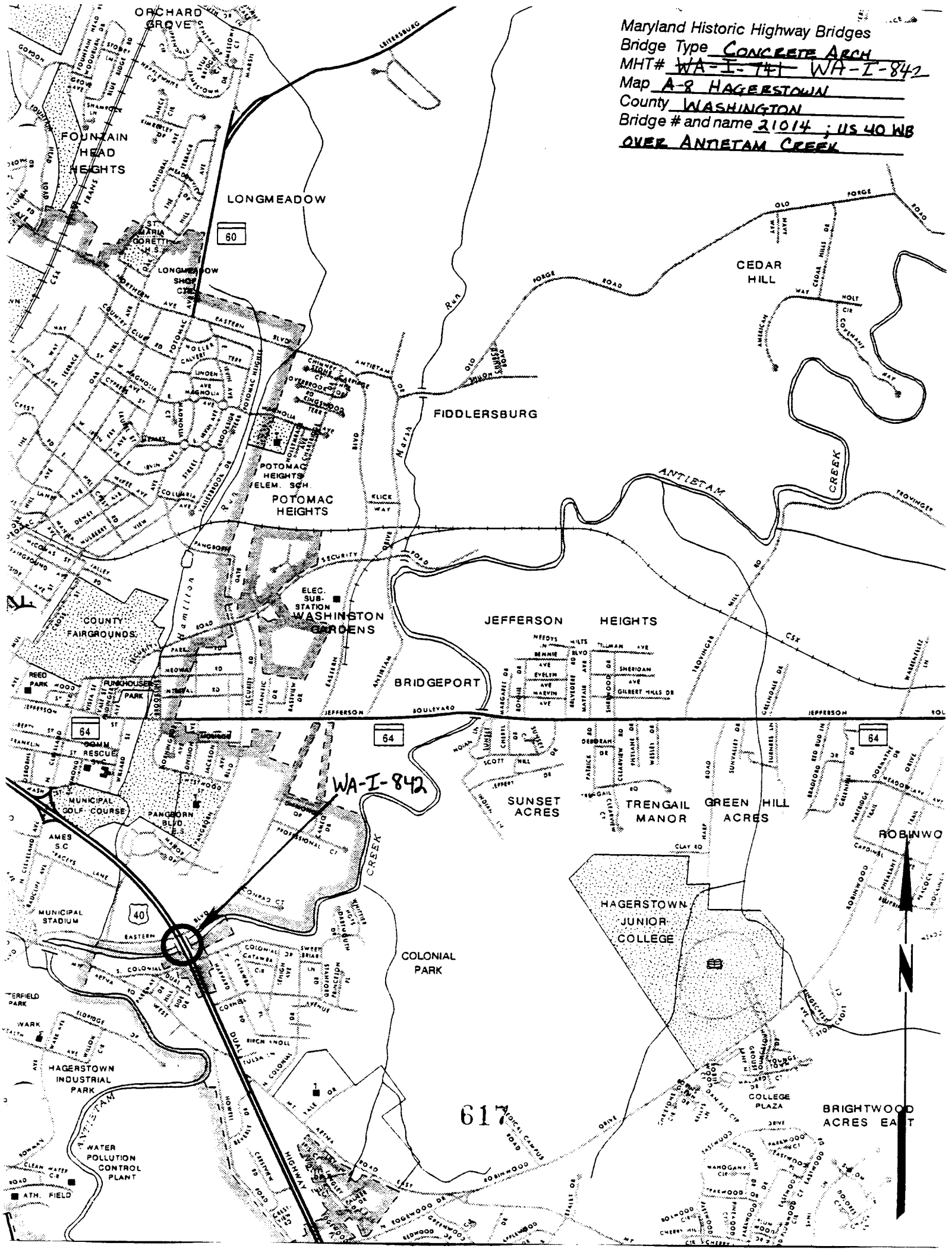
WA-I-842

Surveyor:

Name: Stacie Y. Webb **Date:** September 1995
Organization: State Highway Admin. **Telephone:** (410) 545-8559
Address: 707 N. Calvert Street Baltimore Maryland

Edited by P.A.C. Spero & Company, December 1997

Maryland Historic Highway Bridges
Bridge Type CONCRETE ARCH
MHT# ~~WA-I-741~~ WA-I-842
Map A-8 HAGERSTOWN
County WASHINGTON
Bridge # and name 21014 ; US 40 WB OVER ANTIETAM CREEK



WA-I-842

[illegible] # [illegible]

OVER ANTIETAM CREEK

WASHINGTON [illegible]

CHARLES [illegible]

[illegible]

S.H.A.

[illegible]

1 OF 4

WA-I-842

[illegible]

[illegible] ANTIETAM [illegible]

WASHINGTON CO., MD

[illegible]

2/23/75

S.H.A.

[illegible] APPROACH

2 OF 4

WA-I-842

BR# 210414

OVER ANTIETAM CREEK

WASHINGTON CO., MD.

CHARLES ZEGLER

2/23/95

S.H.A

NORTHEAST ELEVATION

3 OF 4

WA-I-842

LR # 201414

OVER ANTIETAM CREEK

WASHINGTON CO., MD.

CHARLES ZIEGLER

2/23/95

S. H. A.

NORTHWEST APPROACH

4 OF 4