Maryland Historical Trust

Maryland Inventory of Historic Properties Number: F-4-26

Name: US 40 Alt. over Catoctin 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 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 BRIDGES
HISTORIC BRIDGE INVENTORY
MARYLAND STATE HIGHWAY ADMINISTRATION/
MARYLAND HISTORICAL TRUST

MHT No. F-4-26

SHA Bridge No. 10040 **Bridge name** US 40 ALT over Catoctin Creek (Catoctin Creek Bridge)

LOCATION:
Street/Road name and number [facility carried] US 40 ALT (Old National Pike)

City/town Middletown **Vicinity** X

County Frederick

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** _____
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 X **Concrete Slab**_____ **Concrete Beam** ___ **Rigid Frame** _____

Other _____ **Type Name** _____

DESCRIPTION:
Setting: Urban _____ **Small town** _____ **Rural** X

Describe Setting:

Bridge 10040 carries US 40 alternate over Catoctin Creek in Frederick County. US 40 Alternate runs east-west and Catoctin Creek flows south. The bridge is located in the vicinity of Middletown, and is surrounded by scattered residential development.

Describe Superstructure and Substructure:

Bridge 10040 is a 1-span, 2-lane, concrete arch bridge. The bridge was constructed in 1923. The structure is 25.9 meters (85 feet) long and has a clear roadway width of 7.3 meters (24 feet); there are no sidewalks. The out-to-out width is 8.2 meters (26 feet 10 inches). The superstructure consists of 1 arch which supports a concrete deck and concrete parapets. The arch spans 85 feet and is a closed spandrel design. The concrete deck has a bituminous wearing surface. The structure has pierced parapets and the roadway approaches have metal guardrails. A date plaque on the parapet states that the bridge was built in 1923 by the State Roads Commission. The substructure consists of 2 concrete abutments. There are 4 flared concrete wingwalls. The bridge is not posted, and has a sufficiency rating of 79.3.

According to the 1996 inspection report, this structure was in satisfactory condition. The asphalt wearing surface is in good condition. The arch has medium cracks with heavy efflorescence. The spandrel walls have some delamination and cracking with heavy efflorescence. The wingwalls and abutments have some scaling and fine cracks. Also, the concrete parapets have loose caps and are out of alignment in some areas.

Discuss Major Alterations:

This bridge has had no major alterations.

HISTORY:

WHEN was the bridge built: 1923
This date is: Actual X **Estimated** _____
Source of date: Plaque X **Design plans** ___ **County bridge files/inspection form** ____
Other (specify): State Highway Administration Inspection Report/Bridge File

WHY was the bridge built?

This bridge was built as part of the improvement to the National Pike (US 40) in the 1920s.

WHO was the designer?

State Roads Commission

WHO was the builder?

State Roads Commission

WHY was the bridge altered?

N/A

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

The National Pike (U.S. 40) in western Maryland was originally chartered in 1792 by Maryland as a turnpike from Frederick to Cumberland. The road was financed by various Maryland banks, and construction began in 1816, reaching Cumberland and the National Road in 1821. 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 U.S. 40 in the mid-1920s.

SURVEYOR/HISTORIAN ANALYSIS:

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

The bridge is eligible for the National Register of Historic Places under Criteria A and C, as a significant example of concrete arch construction. The structure is related to improvements to the National Pike and its designation as US 40 in the mid-1920s. The structure has a high degree of integrity and retains such character-defining elements of the type as pierced parapets, spandrel walls, abutments and wingwalls.

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

The advent of modern concrete technology fostered a renaissance of arch bridge construction in the United States. Reinforced concrete allowed the arch bridge to be constructed with much more ease than ever before and maintained the load-bearing capabilities of the form. As the structural advantages of reinforced concrete became apparent, the heavy, filled barrel of the arch was lightened into ribs. Spandrel walls were opened, to give a lighter appearance and to decrease dead load. This enabled the concrete arch to become flatter and multi-centered, with longer spans possible. Designers were no longer limited to the semicircular or segmental arch form of the stone arch bridge. The versatility of reinforced concrete permitted development of a variety of economical bridges for use on roads crossing small streams and rivers.

Maryland's roads and bridge improvement programs mirrored economic cycles. The first road improvement 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 1920-1929, 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 been inadequate to the huge freight trucks and volume of passenger cars in use, with major improvements occurring in the late 1930's.

As the nation's automotive traffic increased in the early twentieth century, local road networks were consolidated, and state highway departments were formed to supervise the construction and improvement of state roads. With a diverse topographical domain encompassing numerous small and large crossings, Maryland engineers quickly recognized the need for expedient design and construction through the standardization of bridge designs.

The concept and practice of standardization was one of the most important developments in engineering of the twentieth century. In Maryland, as in the rest of the nation, the standardized concrete types became the predominant bridge types built. In the period 1911 to 1920 (the decade in which standardized plans were introduced), beams and slabs constituted 65 percent and arches 35 percent of the extant 29 bridges built in Maryland during this period. In the following decade, 1921-1930, the beam (now the T-beam) and slab increased to 73 percent and the arch had declined to 27 percent of the 129 extant bridges; in the next decade (1931-1940), the beam and slab achieved 82 percent and arches had further declined, constituting only 18 percent of the total of extant bridges built on state-owned roads between 1931 and 1946.

Although beam and slab bridges became the utilitarian choice, it appears that the arch was selected when aesthetic as well as other site conditions were considered. The architectural treatment of extant arch bridges supports this assessment. Many of these bridges were multiple span structures with open spandrels or masonry facing. Another decorative feature of the concrete arch bridge was an open, balustrade-style parapet. Despite the popularity of ornamental arches and the increase in use of beam and slab bridges, examples of simpler, single and multiple span closed concrete arch bridges with solid parapets continued to be constructed throughout the early twentieth century.

The National Pike (U.S. 40) in western Maryland was originally chartered in 1792 by Maryland as a turnpike from Frederick to Cumberland. The road was financed by various Maryland banks, and construction began in 1816, reaching Cumberland and the National Road in 1821. 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 U.S. 40 in the mid-1920s.

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?

The bridge is a good example of the State Roads Commission standard 1920s bridge plan.

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

The bridge retains the character-defining elements of its type, as defined by the Statewide Historic Bridge Context, including pierced parapets, spandrel walls, abutments, and wingwalls, however some deterioration is evident.

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

This bridge is a significant example of the work of the State Roads Commission in the 1920s.

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

Johnson, Arthur Newhall
1899 The Present Condition of Maryland Highways. In *Report on the Highways of Maryland*. Maryland Geological Survey, The Johns Hopkins University Press, Baltimore.

P.A.C. Spero & Company and Louis Berger & Associates
1995 Historic Highway Bridges in Maryland: 1631-1960: Historic Context Report. Maryland State Highway Administration, Maryland State Department of Transportation, Baltimore, Maryland.

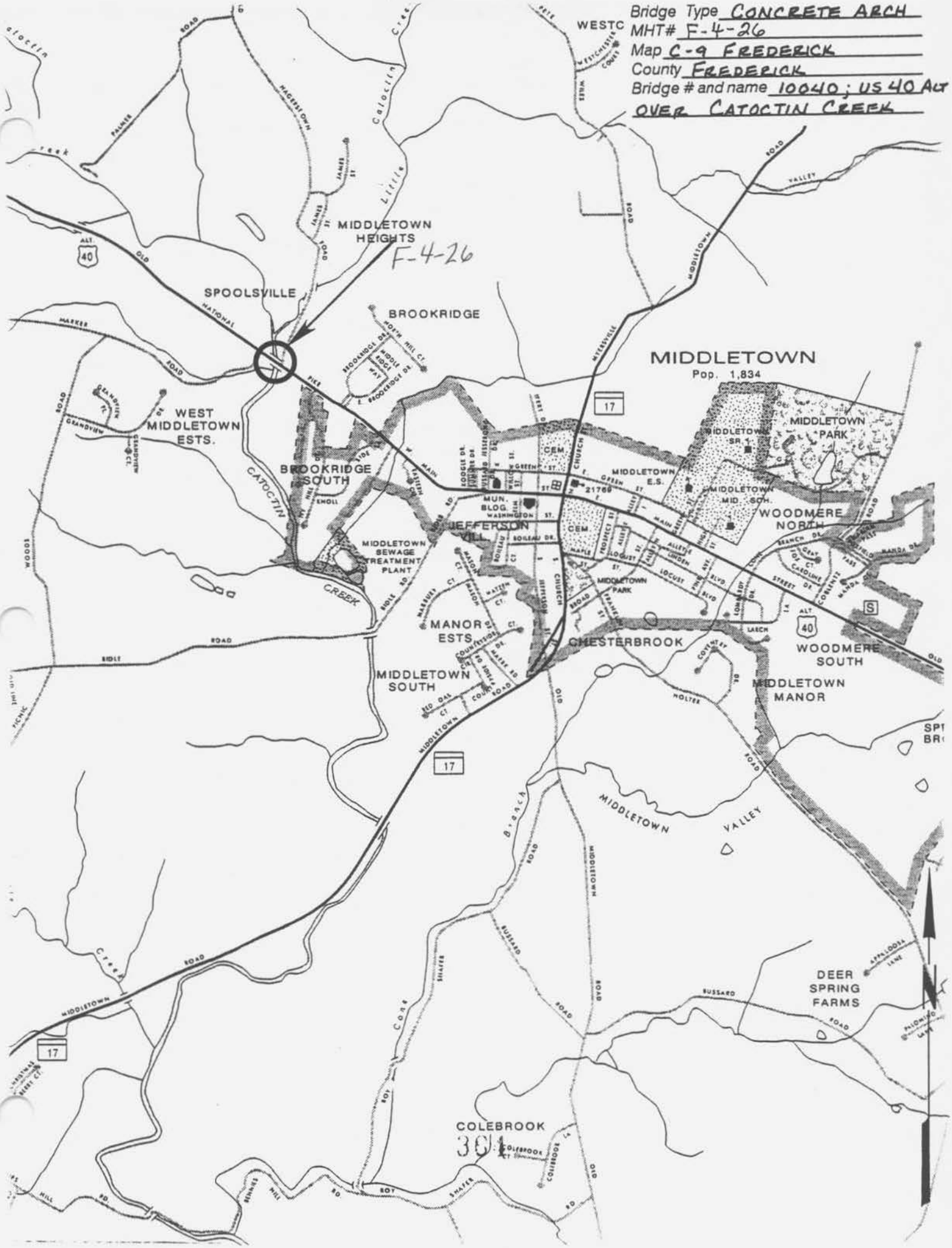
Raitz, Karl. ed.
1996 The National Road. The Johns Hopkins University Press, Baltimore.

State Roads Commission
1958 A History of Road Building in Maryland. State Roads Commission of Maryland, Baltimore.

Tyrrell, H. Grattan
1909 *Concrete Bridges and Culverts for Both Railroads and Highways*. The Myron C. Clark Publishing Company, Chicago and New York.

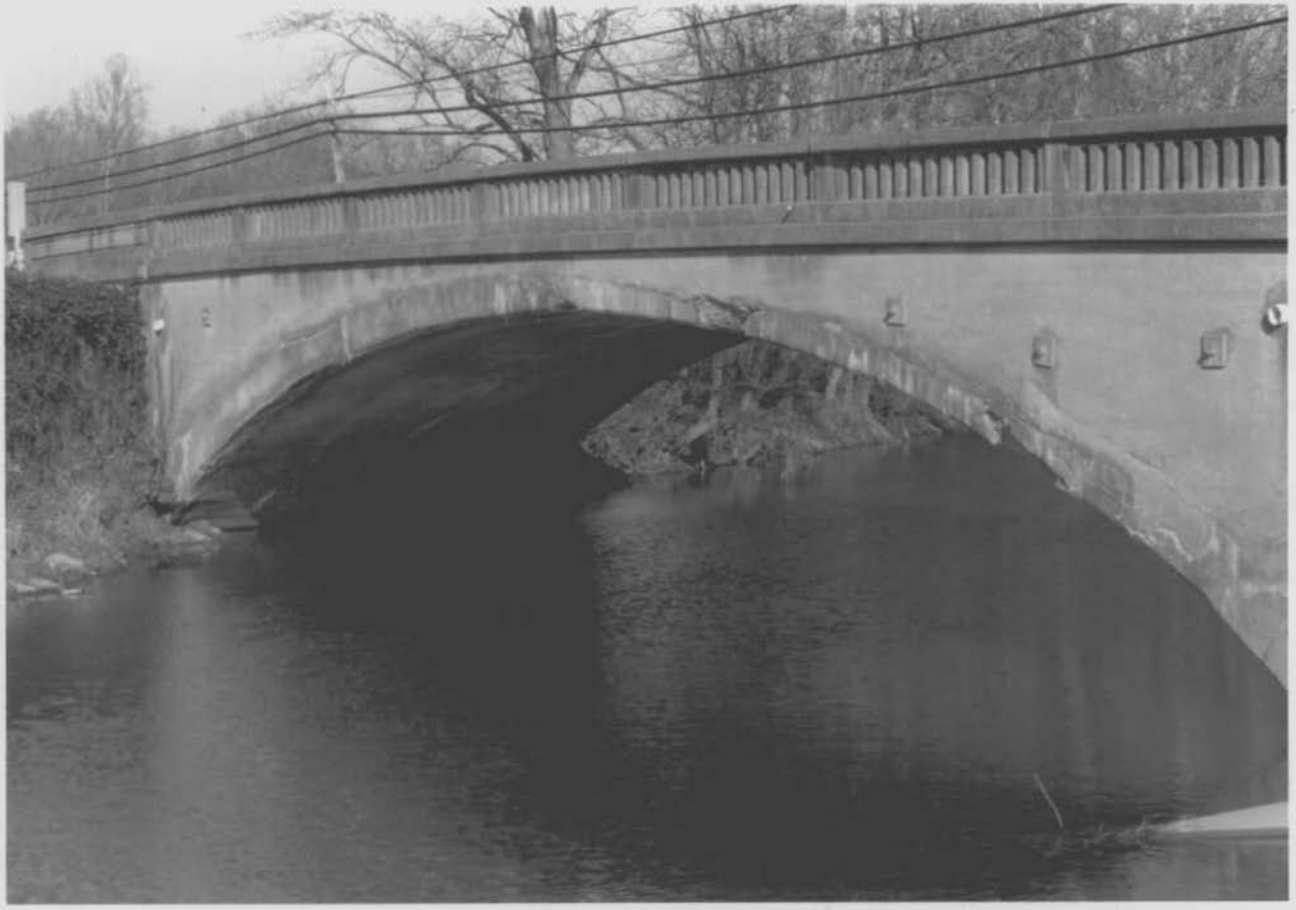
SURVEYOR:

Date bridge recorded December 1997
Name of surveyor Wallace, Montgomery & Associates / P.A.C. Spero & Company
Organization/Address P.A.C. Spero & Co., 40 W. Chesapeake Avenue, Baltimore, MD 21204
Phone number (410) 296-1635 **FAX number** (410) 296-1670

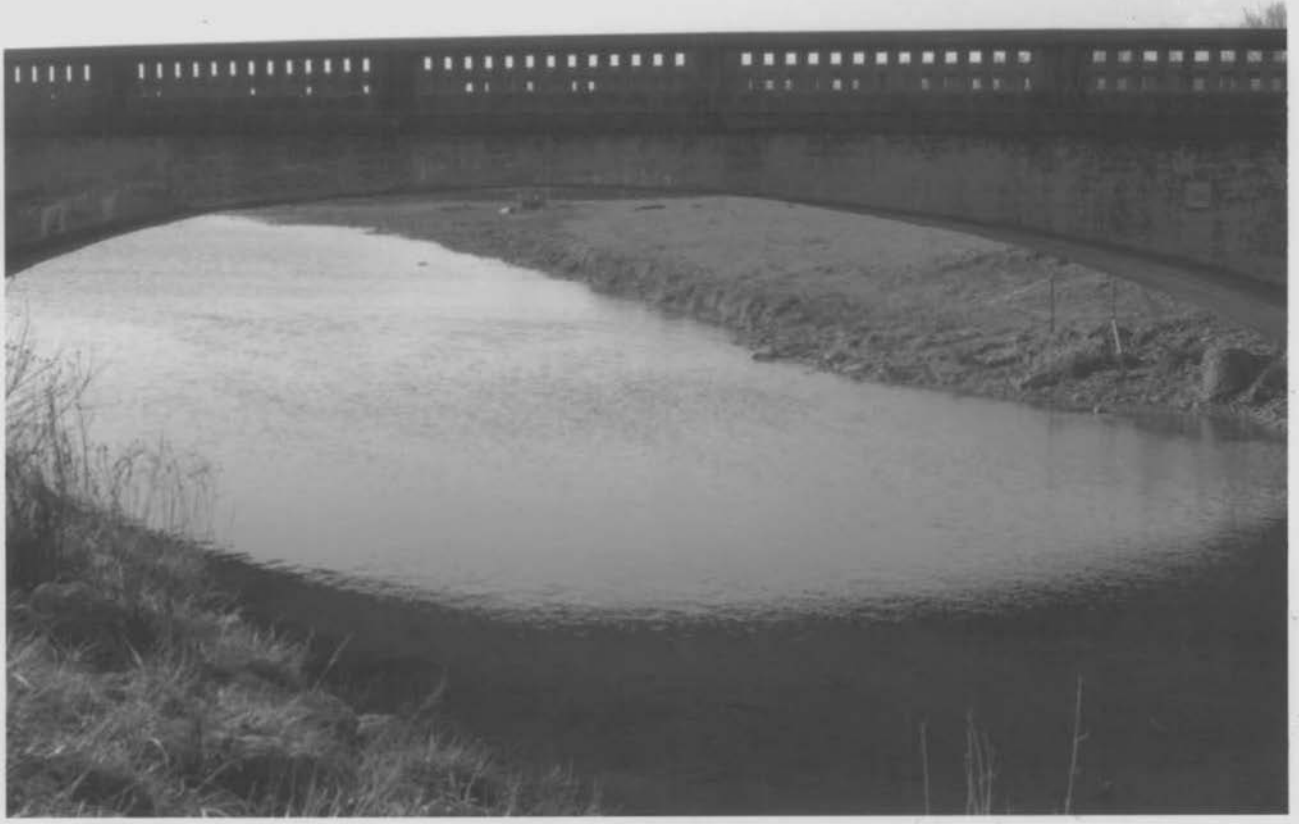

Bridge Type CONCRETE ARCH
MHT# F-4-26
Map C-9 FREDERICK
County FREDERICK
Bridge # and name 10040; US 40 ALT OVER CATOCTIN CREEK
F-4-26
MIDDLETOWN
Pop. 1,834
MIDDLETOWN HEIGHTS
SPOOLSVILLE
BROOKRIDGE
WEST MIDDLETOWN ESTS.
BROOKRIDGE SOUTH
JEFFERSON VILL.
MIDDLETOWN SEWAGE TREATMENT PLANT
MANOR ESTS.
MIDDLETOWN SOUTH
MIDDLETOWN PARK
MIDDLETOWN E.S.
MIDDLETOWN MID. SCH.
WOODMERE NORTH
WOODMERE SOUTH
CHESTERBROOK
MIDDLETOWN MANOR
MIDDLETOWN VALLEY
DEER SPRING FARMS
COLEBROOK
CATOCTIN CREEK
MUN. BLDG.
CEM.
ALT 40
17
S


CATOCTIN CREEK BRIDGE
BUILT-1928
STATE ROADS COMMISSION
JOHN N. MACKALL-CHAIRMAN & CHIEF ENGR.
OMAR D. CROTHERS
D. C. WINEBRENER
L. H. STEUART-SECRETARY

1. F-4-26
2. 10040, U.S. 40 Alt. over Catoctin Creek
3. Frederick County
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Bronze plaque southeast corner
8. 1 of 5



1. F-4-26
2. 10040, U.S. 40 AH. OVER CATOCTIN CREEK
3. FREDERICK COUNTY
4. WALLACE, MONTGOMERY & ASSOC.
5. 12/97
6. MD SHPO
7. ELEVATION LOOKING UPSTREAM
8. 2 OF 5



1. F-4-26
2. 10040, U.S. 40 ALT. OVER CATOCTIN CREEK
3. FREDERICK COUNTY
4. WALLACE, MONTGOMERY & ASSOC.
5. 12/97
6. MD SHPO
7. ELEVATION LOOKING DOWNSTREAM
8. 3 OF 5

1. F-4-26
2. 10040, U.S. 40 AH. OVER CATOCTIN CREEK
3. FREDERICK COUNTY
4. WALLACE, MONTGOMERY & ASSOC.
5. 12/97
6. MD SHPO
7. LOOKING EAST
8. 4 OF 5


NARROW
BRIDGE
40
MPH

1. F-4-26
2. 10040, U.S. 40 Alt. over Catoctin Creek
3. Frederick County
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Looking West
8. 5 of 5

F-4-26
U. S. 40A Catoctin Creek Bridge 1928
Middletown vicinity
Public

The U. S. 40A Catoctin Creek Bridge is a single span concrete arched bridge with simple Classical Revival-influenced balustrades and paneled solid end sections. Built in 1928, the bridge is a good example of the streamlined traditionally Classical Revival cut stone bridge using concrete. The stone abutments may have been part of an earlier bridge on the site, which is known to have once been a covered bridge. It was possibly this covered bridge which was burned during the Civil War during the movement of both Union and Confederate troops through the Middletown Valley.

F-4-26
U.S. Catoctin Creek Bridge
Middletown
Frederick County

HISTORIC CONTEXT:

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA

Georgraphic Organization: Piedmont
(Harford, Baltimore, Carroll, Frederick, Howard, Montgomery Counties, and Baltimore City)

Chronological/Development Period:
Industrial/Urban Dominance A.D. 1870-1930

Prehistoric/Historic Period Themes:
Transportation

Resource Types:

Category: Structure

Historic Environment: Rural

Historic Function and Use:
Transportation/road-related/bridge

Known Design Source: None

Survey No. F-4-26

Magi No.

DOE __yes X no

Maryland Historical Trust State Historic Sites Inventory Form

1. Name (indicate preferred name)

historic

and/or common U.S. 40A Catoctin Creek Bridge

2. Location

street & number U.S. 40A at Catoctin Creek ___ not for publication

city, town Middletown X vicinity of congressional district 6th

state Maryland county Frederick

3. Classification

Category	Ownership	Status	Present Use	
___ district	_X_ public	_X_ occupied	___ agriculture	___ museum
___ building(s)	___ private	___ unoccupied	___ commercial	___ park
_X_ structure	___ both	___ work in progress	___ educational	___ private residence
___ site	**Public Acquisition**	**Accessible**	___ entertainment	___ religious
___ object	___ in process	___ yes: restricted	___ government	___ scientific
	___ being considered	_X_ yes: unrestricted	___ industrial	_X_ transportation
	_X_ not applicable	___ no	___ military	___ other:

4. Owner of Property (give names and mailing addresses of all owners)

name Maryland Department of Transportation/State Highway Administration

street & number 707 N. Calvert Street telephone no.:

city, town Baltimore state and zip code Md. 21202

5. Location of Legal Description

courthouse, registry of deeds, etc. liber

street & number folio

city, town state

6. Representation in Existing Historical Surveys

title

date ___ federal ___ state ___ county ___ local

depository for survey records

city, town state

7. Description

Survey No. F-4-26

Condition		Check one	Check one
___ excellent	___ deteriorated	___ unaltered	_X_ original site
_X_ good	___ ruins	_X_ altered	___ moved date of move _____
___ fair	___ unexposed		

Prepare both a summary paragraph and a general description of the resource and its various elements as it exists today.

CONTRIBUTING RESOURCE COUNT: 1

The U. S. 40A Catoctin Creek Bridge is a single span concrete arched highway bridge built in 1928 over Catoctin Creek on the Old National Pike (U.S. 40 Alternate) about 1-1/2 miles west of Middletown, Frederick County, Maryland. The bridge has concrete balustrades on the sides and stone abutments on the creek banks. The bridge currently has an asphalt covered deck carrying two lanes of traffic.

The bridge is approximately 100 feet long and has a segmental arched concrete understructure. The concrete side balustrades have regular piers alternating with the balusters. Solid end sections are articulated by incised rectangular panels. On one of these panels is a bronze plaque identifying the bridge and its date of construction by the State Roads Commission.

8. Significance

Survey No. F-4-26

Period	Areas of Significance—Check and justify below			
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	___ religion
___ 1400–1499	___ archeology-historic	___ conservation	___ law	___ science
___ 1500–1599	___ agriculture	___ economics	___ literature	___ sculpture
___ 1600–1699	___ architecture	___ education	___ military	___ social/ humanitarian
___ 1700–1799	___ art	___ engineering	___ music	___ theater
___ 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ transportation
X 1900–	___ communications	___ industry	___ politics/government	___ other (specify)
		___ invention		

Specific dates 1928 **Builder/Architect** State Roads Commission

check: Applicable Criteria: X A ___B ___C ___D
and/or
Applicable Exception: ___A ___B ___C ___D ___E ___F ___G

Level of Significance: ___national ___state X local

Prepare both a summary paragraph of significance and a general statement of history and support.

The U. S. 40A Catoctin Creek Bridge is a good example of the streamlined Classical Revival-influenced bridges erected by the State Roads Commission in the period about 1911-1940. The use of a functional material, concrete, in place of more expensive cut stone for bridges was still governed by traditional aesthetics, as shown in the simple balustrades and the articulated end panels which are elements found in Classical Revival structures. By the 1930's, the influence of Art Deco and the streamlined style of skyscrapers was being echoed in fluted sections and geometric moldings and friezes on larger bridges. Smaller bridges such as the Catoctin Creek structure continued to be executed in scaled-down versions of the newer designs. The stone abutments of the Catoctin Creek Bridge may be rebuilt portions of a previous bridge on the National Pike. A covered bridge was believed to have been located here prior to the Civil War and a bridge was burned during that conflict, possibly the covered structure or a successor.

9. Major Bibliographical References

Survey No. F-4-26

10. Geographical Data

Acreage of nominated property less than 1

Quadrangle name Middletown, Md. **Quadrangle scale** 1:24000

UTM References do NOT complete UTM references

	Zone	Easting	Northing		Zone	Easting	Northing
A				B			
C				D			
E				F			
G				H			

Verbal boundary description and justification

Approximately .5 acre including the bridge and the stone abutments on the east and west banks of the creek.

List all states and counties for properties overlapping state or county boundaries

state	code	county	code
state	code	county	code

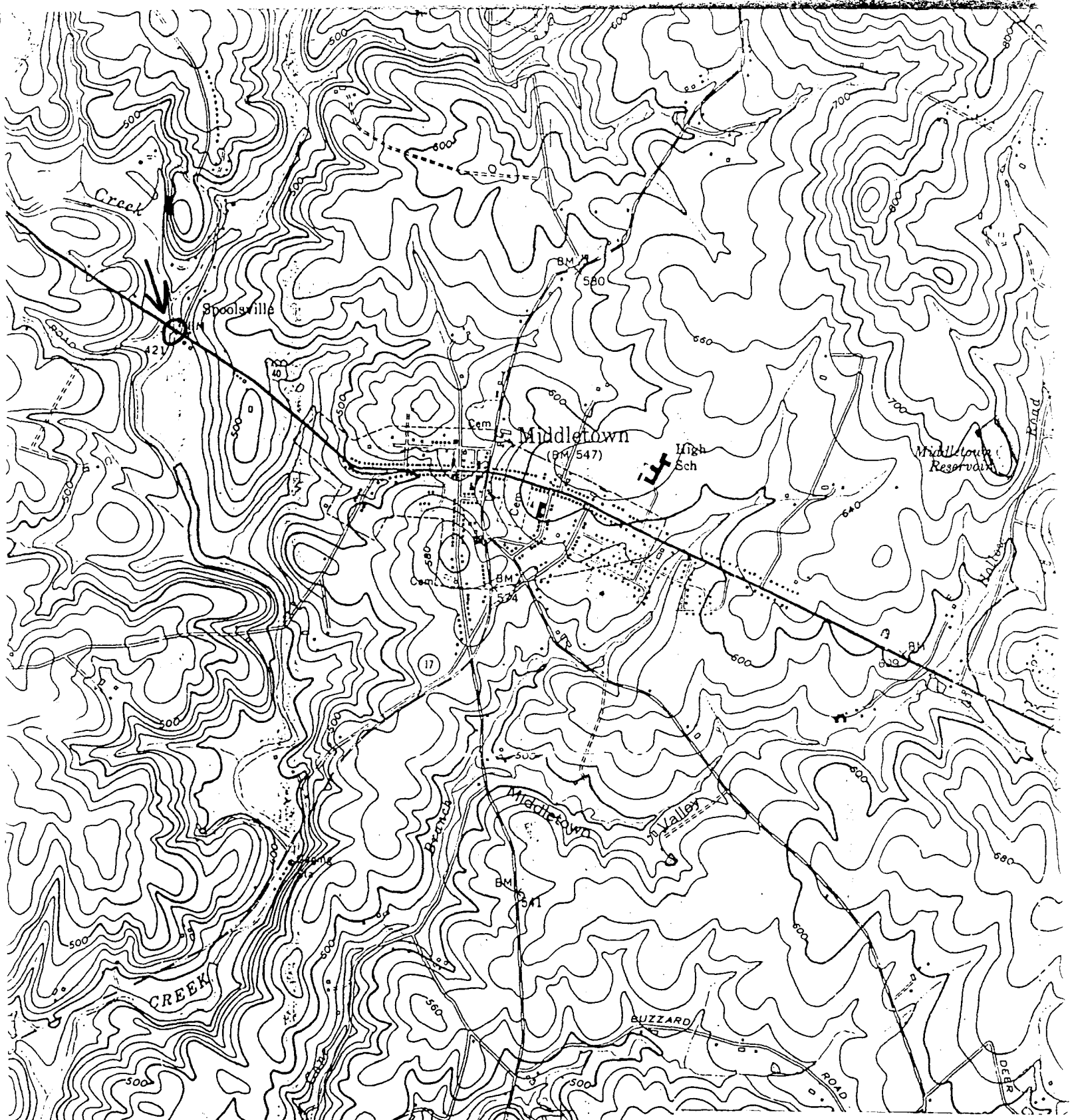
11. Form Prepared By

name/title	Janet L. Davis, Historic Sites Surveyor		
organization	Frederick County Planning & Zoning Dept.	**date**	February 1992
street & number	12 E. Church Street	**telephone**	696-2958
city or town	Frederick	**state**	Md. 21701

The Maryland Historic Sites Inventory was officially created by an Act of the Maryland Legislature to be found in the Annotated Code of Maryland, Article 41, Section 181 KA, 1974 supplement.

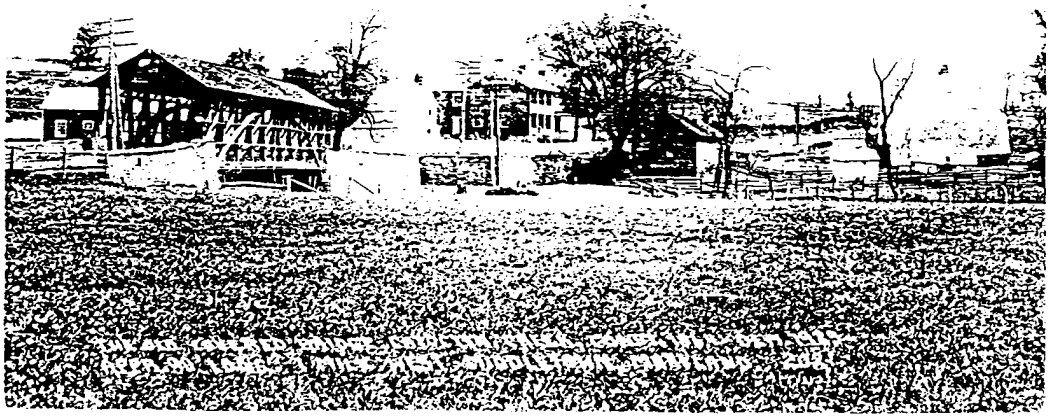
The survey and inventory are being prepared for information and record purposes only and do not constitute any infringement of individual property rights.

return to: Maryland Historical Trust
Shaw House
21 State Circle
Annapolis, Maryland 21401
(301) 269-2438



F-4-26
U.S. 40A Catoctin Creek Bridge
Frederick County
USGS Middletown, Md.
1:24000

F-4-26



Postcard views Present Rt 40A at Catoctin Creek (Spoolsville), Middletown vic

Previous bridge at location of present bridge (1938
Built 1864, demolished 1923, replaced covered bridge burned
in 1862

F-4-26
Catoctin Creek Bridge [illegible]
Frederick County
Photo: Janet Davis
February 1992
[illegible] Pike, [illegible], MD.
View from north
2/2

F-4-26
Catoctin Creek bridge on U.S. 40 Alt
Frederick County
Photo: Janet Davis
February 1992
Neg. loc.: Md. SHPO
View from east coast
1/2