Maryland Historical Trust

Maryland Inventory of Historic Properties number: M:33-27

Name: MD 29 over Northwest Branch of Anacostia River (Fourth Mills Road)

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 ____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 MHT Number M: 33-27
Historic Bridge Inventory
Maryland State Highway Administration
Maryland Historical Trust

SHA Bridge No. 15009 **Name:** US 29 over Northwest branch of the Anacostia River (Burnt Mills Bridge)

Location:
Street/Road Name and Number: US 29 (New Columbia Pike)

City/Town: Burnt Mills **Vicinity** X

County: Montgomery

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_____

M:33-27

Describe Setting:

Bridge 15009 carries US 29 over the Northwest Branch of the Anacostia River in Montgomery County. US 29 runs in a generally north-south direction over the eastern flowing Northwest Branch of the Anacostia River. The bridge is located in a heavily wooded, undeveloped section of Northwest Branch Park. The area immediately adjacent to the bridge has no residential development. The bridge carries 6 lanes of traffic, 3 lanes in each direction, and is located on the southern outskirts of Burnt Mills.

Describe Superstructure and Substructure:

Bridge 15009 is a hybrid structure consisting of a 1920 single-span, filled concrete arch, a 1931 arch widening on both sides of the existing bridge, and a 1955 non-composite steel beam widening on each side of the already widened concrete arch bridge. The concrete arch section is 52 feet long, with a 48-foot clear arch span and a 7 foot 7 inch rise above the springline. It carried a 27-foot roadway section with a 7-inch brush curb and a 5-foot sidewalk. The bridge had a pierced concrete parapet. Both the sidewalks and the parapets were eliminated with the 1955 widening. The arch had a concrete slab, a very thin fill section, and solid inscribed paneled concrete endposts with coping. The side faces of the bridge had an inscribed arch section.

In that the horizontal and vertical alignments were radically changed in 1955, the exact bridge widening is difficult to ascertain, but the bridge was extended approximately 7 feet 1 inch on the west or downstream side, and 55 feet 6 inches on the east or upstream side. The out-to-out width of the structure is 96 feet 4 inches, and the bridge has a clear roadway width of 84 feet. The typical bridge section now consists of 2 5-foot exterior concrete sidewalks, a 16-foot raised concrete median, and a 34-foot northbound and southbound roadway section. The length of the steel beam bridge portion is 51 feet 6 inches, and has a 47 foot 6 inches span. The widened section has semi-cantilevered reinforced concrete abutments with wingwalls, all on spread footings. The widened section has short vertical concrete parapets with 2 strand aluminum bridge railings and a reinforced concrete deck with a bituminous wearing surface. The bridge deck extends across the top of the arch in that the vertical grade was substantially raised. There is a 6-inch gas main under the west sidewalk, a 24-foot water main in the west wingwall, and 3 cable lines under the west median sidewalk.

According to a 1997 inspection report, the bridge is in satisfactory condition with a sufficiency rating of 74.0. The road surface is cracking and has light rutting. Fine cracking was also present in the median and exterior sidewalks, there were signs of deterioration on the underside of the bridge deck, and numerous popouts, efflorescence, stalactites, and scaling on the arch. The arch also had exposed reinforcement bars, large patched areas, and rusting on some of the steel beams. The abutments and wingwalls have fine cracking and the spandrel walls have light to medium cracking. There is evidence of scouring at the southwest wingwall.

Discuss Major Alterations:

The bridge was widened in 1931, with a concrete arch addition on each side. The bridge was again widened in 1955, incorporating a steel beam bridge section that totally obscures the original arch. Repairs were made to the underside of the concrete arch at the same time.

When Built: 1920, 1931, 1955
Why Built: Widening and geometric improvement to New Columbia Pike
Who Built: State Roads Commission
Who Designed: State Roads Commission
Why Altered: To widen the bridge to meet approach roadway section and to raise bridge superstructure to meet the new raised vertical alignment
Was this bridge built as part of an organized bridge building campaign?
Yes, this bridge was built as part of the improvements to US 29 in Montgomery County.

M: 33-27

Surveyor Analysis:

This bridge may have NR significance for association with:

__A Events __Person

__C Engineering/Architectural

This bridge does not have National Register significance due to the widening of the bridge with a steel beam section in 1955.

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

The improvement of Montgomery County roads and bridges resulted from several events that occurred during the first 3 decades of the twentieth century. The original Good Roads Movement was aimed towards improving the primary routes such as the Columbia Pike throughout the state, as well as the connecting routes between the counties. This era saw the transformation of an antiquated nineteenth-century system of unimproved roadways to a modern twentieth century infrastructure consisting of the first modern designed highways and bridges. A later impact of this movement included the widening and upgrading of the secondary roads system, including the replacement of substandard nineteenth-century structures so that the rebuilt system could handle the demands of the motorized vehicle. During the 1920s, the State Roads Commission focused on the improved safety and comfort of the main routes while rebuilding the secondary road system and the farmer-to-market network of feeder roads. By the 1930s, bridges that were once adequate when initial reconstruction began were also being replaced.

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?

During the time period when the bridge was built, Montgomery County was experiencing high growth and heavy development. Though this bridge by itself did not contribute significantly to the growth of the area, it was part of US 29, which did bring increased traffic and business to the area.

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, this bridge is not located in an area that is eligible for historic designation.

Is the bridge a significant example of its type?

No, this bridge is not a significant example of a concrete arch bridge. The addition of the steel beam section has had a negative impact on the integrity of the structure.

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

No, Bridge 15009 does not retain the integrity of its character defining elements. Its parapets were replaced during the first widening, and were replaced again in 1955. The arch section of the bridge is completely covered by the steel beam section.

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

No, the widening of the bridge eliminated the characteristics of the State Roads Commission's 1920s arch design.

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

No this bridge should not be given further study.

M:33-27

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.

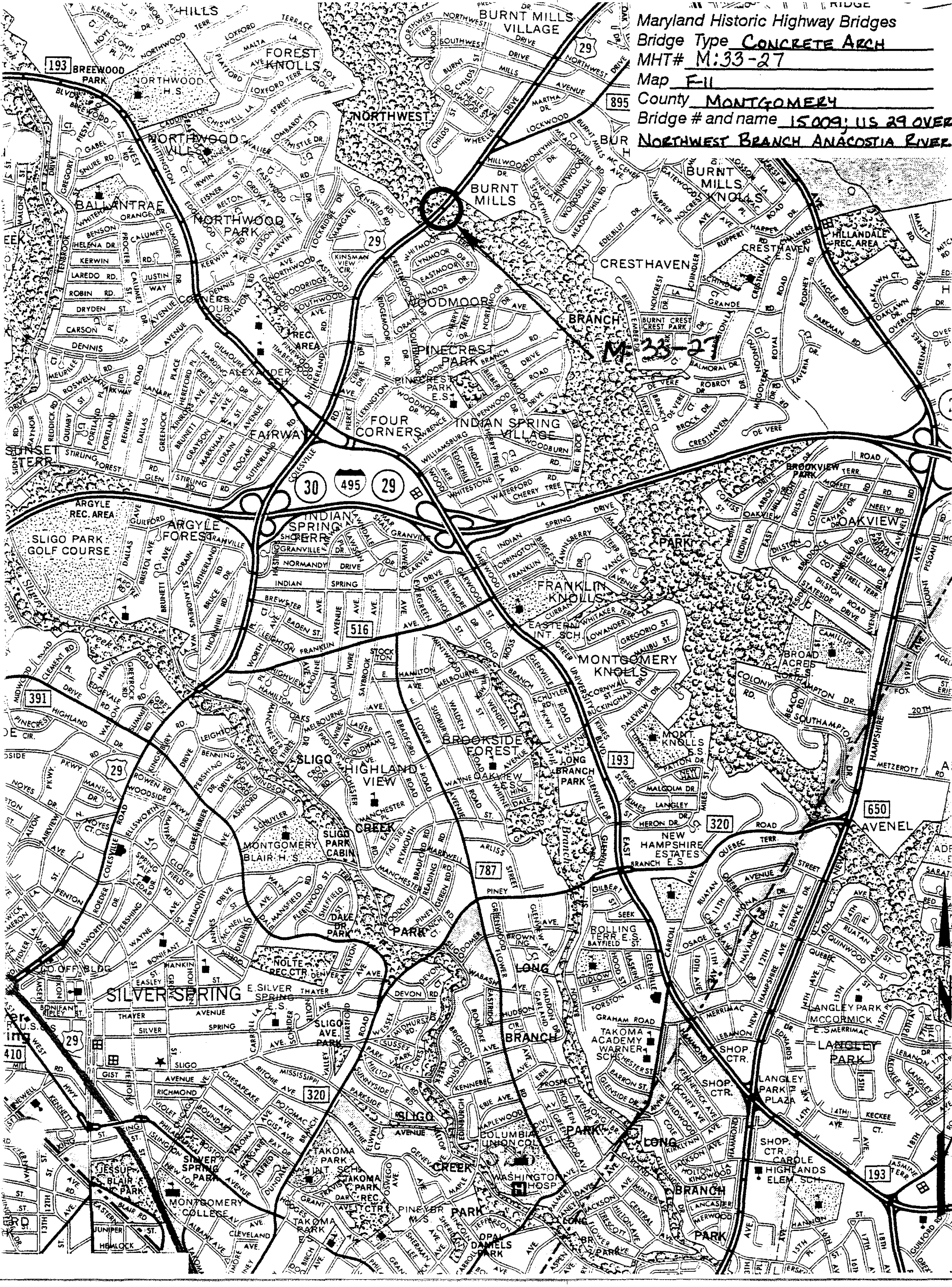
State Roads Commission
1958 *A History of Road Building in Maryland.* State Roads Commission of Maryland, Baltimore, Maryland.

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

Maryland Historic Highway Bridges
Bridge Type Concrete Arch
MHT# M:33-27
Map F-11
County Montgomery
Bridge # and name 15009; US 29 over Northwest Branch Anacostia River



1. M:33-27
2. U.S. 29 over Northwest Branch of Anacostia River
3. Montgomery Co., MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Elevation looking upstream
8. 1 of 4

1. M: 33-27
2. U.S.29 over Northwest Branch of Anacostia River
3. Montgomery Co., MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Elevation looking downstream
8. 2 of 4

1. M:33-27
2. US 29 over Northwest Branch of Anacostia River
3. Montgomery Co., MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Looking North
8. 3 of 4

1. M:33-27
2. US 29 over Northwest Branch of Anacostia River
3. Montgomery Co., MD
4. Wallace, Montgomery & Assoc.
5. 12/97
6. MD SHPO
7. Looking South
8. 4 of 4