PHOTOGRAPHS

View of 9400 Woodland Drive, looking west.

View of 9405 Russell Road, looking northeast.

PHOTOGRAPHS

View of 9410 Russell Road, looking northeast.

Streetscape of Black Oak Court, looking northeast.

PHOTOGRAPHS

View of 1539 Red Oak Drive, looking southeast.

View of 1538 Red Oak Drive, looking south.

PHOTOGRAPHS

View of 9315 Crosby Road, looking south.

View of 1309 Dale Drive, looking northeast.

PHOTOGRAPHS

View of 1300 Midwood Road, looking southwest.

View of 1303 Midwood Place, looking northeast.

PHOTOGRAPHS

Streetscape featuring 1312 and 1314 Midwood Place, looking northeast.

View of 1708 White Oak Drive, looking south.

M: 36-98 Woodside Forest

PHOTO LOG

Number of Photos: **12**
Name of Photographer: **Mical Tawney**
Date of Photographs: **2019-07-08**
Location of Original Digital File: **MD SHPO**
File Format: **M: 36-98_2019-07-08_01.tif… etc.**

Photographs inserted on continuation sheets:

01.tif
View of 9400 Woodland Drive, looking west.

02.tif
View of 9405 Russell Road, looking northeast.

03.tif
View of 9410 Russell Road, looking northeast.

04.tif
Streetscape of Black Oak Court, looking northeast.

05.tif
View of 1539 Red Oak Drive, looking southeast.

06.tif
View of 1538 Red Oak Drive, looking south.

07.tif
View of 9315 Crosby Road, looking south.

08.tif
View of 1309 Dale Drive, looking northeast.

09.tif
View of 1300 Midwood Road, looking southwest.

10.tif
View of 1303 Midwood Place, looking northeast.

11.tif
Streetscape featuring 1312 and 1314 Midwood Place, looking northeast.

12.tif
View of 1708 White Oak Drive, looking south.

MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: Yes ___
No ___

Property Name: **Wyngate** Inventory Number: **M: 35-210**

Address: Southwest of interchange of I-495 and Old Georgetown Road Historic District: Yes

City: Bethesda Zip Code: 20817 County: Montgomery

USGS Quadrangle(s): Kensington

Property Owner: Multiple Tax Account ID: Multiple

Tax Map Parcel(s): Multiple Tax Map: GP61 and GP62

Project: I-495 & I-270 Managed Lanes Study Agency: MDOT SHA

Agency Prepared By: Dovetail CRG

Preparer's Name: Katherine M. Watts Date Prepared: Oct 17, 2019

Documentation is presented in: Project review and compliance files

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Preparer's Eligibility Recommendation: Not Recommended

Criteria: A B C D

Considerations: A B C D E F G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property:

Inventory Number: Eligible: Listed:

Site visit by MHT Staff ___ yes ___ no Name: Date:

Description of Property and Justification:

Setting:

Wyngate is a planned residential development in Bethesda, bound by the Ashburton subdivision (M: 30-44) on the north and west, Old Georgetown Road and St. Jane Frances de Chantal Church and School (M: 35-201) on the east, and the Hendry Estates and Alta Vista Terrace subdivisions on the south. The approximately 55.1-acre development includes 11 curvilinear streets, one cul-de-sac (Beck Court), and the west side of one main thoroughfare, Old Georgetown Road. The 243 single-family dwellings occupy lots between 0.12 and 0.3 acre and feature paved driveways and walkways to primary entrances. There are poured-concrete sidewalks on one side of most streets, excluding Kentstone Drive, Linder Lane, and parts of Singleton Drive. Streetlamps are on utility poles throughout the development. A large grassy median with trees and sewer caps is present in the center of Bulls Run Parkway. The individual lots are mostly flat, although slightly sloped terrain exists on Ewing Drive and portions of Wyngate Drive. The original houses have a consistent setback. The lots are landscaped with lawns, bushes at the façade, and moderate tree coverage in rear yards, many of which are fenced. Some front yards are also fenced. Secondary resources in Wyngate include sheds, and swimming pools.

MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended:	**Eligibility not recommended:**
Criteria: ___ A ___ B ___ C ___D	**Considerations: ___ A ___ B ___C ___D ___E ___F ___G**
MHT Comments:	
Reviewer, Office of Preservation Services:	**Date:**
Reviewer, National Register Program:	**Date:**

Special DOE form produced for the I-270 & I-495 Managed Lanes Study

Description:

Wyngate is a planned residential development comprising 243 single-family dwellings built between 1935 and 2017 with most houses constructed from 1939 to 1961. One outlier, 5700 Wyngate Drive, was noted to be constructed in 1935; however, it is stylistically similar to other houses in the development. The dwellings are predominantly built in the Minimal Traditional or Two-Story Massed forms or the Cape Cod subform; Colonial Revival-style elements are common throughout the development. There is one Split-Foyer house at 9512 Beck Court. There has been substantial infill in a variety of forms and styles larger in scale than the original dwellings in Wyngate, with 56 houses built between 1987 and 2017.

Original dwellings are three to five bays wide and one to two stories tall. The continuous foundations are clad in brick veneer. Basements are somewhat common, especially when the terrain allows. The structural systems are mostly clad in brick veneer, with some instances of vinyl siding, or a combination of brick and stone veneer or brick and vinyl siding. Roofs are side-gabled and sheathed in asphalt shingles. Most dwellings in Wyngate have an exterior-end brick chimney, although some interior-slope brick chimneys are present. Primary entrances are typically centered on the façade and contain a single-leaf wood or fiberglass door. Storm doors are common. Colonial Revival-style door surrounds are typical on the Two-Story Massed houses and Cape Cod subforms.

Original windows are six-over-six, double-hung-sash, wood-frame units or metal casement windows (9514 Milstead Drive). Replacement windows are common, comprising vinyl double-hung sash, tripartite, or bay units. Vinyl louvered or paneled shutters flank fenestration on most façades. Front-gabled entry porches are common, especially on the Two-Story Massed houses; many appear to be later modifications to the façade. A few Minimal Traditional houses have attached carports. Several Cape Cod subform houses (5819 Wyngate Drive) along a portion of Wyngate Drive have one-story, one-bay, front-gabled garages attached by covered walkways. Alterations include large-scale rear and side additions.

Several 1939 World's Fair Demonstration Home No. 1 houses were built in Wyngate (5700 Wyngate Drive). The houses, commonly known as "Dual Duty" houses, are discussed further below. They have a front hipped projection from the side-gabled roof and off-center primary entrances (1939 New York World's Fair).

Historic Context:

Walter and Elizabeth Spragg, his second wife, sold approximately 34 acres to Permanent Homes, Inc., in June 1939 (Montgomery County Deed Book [MCDB] CKW 737, 477-481). The Spragg Estate, as it was called in newspaper articles, was part of a large tract known as "Contention" and referred to as such in the deed of sale (The Evening Star 1939a, B-7). Wyngate was first platted in September 1939 for Permanent Homes, Inc., and its president George W. DeFranceaux (Montgomery County Plat [MCP] 1159). Wyngate was approved by the Federal Housing Administration (FHA) in October 1939, before two model houses opened to the public. The FHA-approved plan included approximately 150 houses in the $4,500 to $5,000 price range, although it does not appear that many were built (The Evening Star 1939b, B-9).

Under DeFranceaux's leadership, Permanent Homes, Inc., acquired a franchise for Demonstration Home No. 1, one of fifteen different houses exhibited in the Town of Tomorrow at the 1939 World's Fair in New York (The Washington Post 1939a, R11). The Town of Tomorrow was a faux suburb of small houses demonstrating new developments in design and materials, with support from a variety of corporate sponsors. Demonstration Home No. 1, known as the "Dual Duty" house for its multipurpose room use, was built by the National Home Builders Bureau, Inc., which previously completed a nationwide housing survey that showed more low-cost houses were needed (The Washington Post 1939b, R2). Demonstration Home No. 1 was highlighted in several articles and advertisements for Wyngate, and perhaps used as a marketing ploy to draw customers to Wyngate. Demonstration Home No. 15, the "Johns-Manville Triple Insulated House," was constructed under similar conditions by Garden Homes, Inc., at Northwood Park in nearby in Silver Spring (The Washington Post 1939c, R7). Advertisements for other houses built by Permanent Homes, Inc., in Wyngate included photographs and floor plans and emphasized the low cost of the houses and the name brands used for insulation, air conditioning, and kitchen cabinets (The Evening Star 1940, B-5).

Although the company was simultaneously developing other residential Maryland subdivisions such as Highland View of Sligo Park and Chalfonte, in 1941 Permanent Homes, Inc., was forced to sell, by order of the Circuit Court of Montgomery County, all

the remaining unbuilt lots in Wyngate to Henry J. Connor, Inc. (The Evening Star 1939c, B-1; MCDB CKW 837, 221). The deed ensured that Henry J. Connor, Inc., would be required to follow the covenants and building restrictions previously on file from Permanent Homes, Inc. (MCDB CKW 837, 221). Henry J. Connor, Inc., then purchased 21.5 acres from Mary Beck Oppenheim in 1947 and had it platted to bring Wyngate to its current size of approximately 55 acres (MCDB 1108, 317-318; MCP 2060).

Newspaper advertisements for the brick Cape Cod houses built by Henry J. Connor, Inc., emphasized their quality construction, full basements, separate dining rooms, and Westinghouse appliances. Wyngate's proximity to schools, churches, and public transportation were also noted in marketing (The Evening Star 1956, B-5). Modern infill began in Wyngate in 1987 and ballooned in the years 2001 through 2017. This infill resulted in the demolition of many original houses with replacements that were much larger in size and scale, dwarfing the surrounding extant original dwellings.

George W. DeFranceaux was a developer and mortgage banker in the Washington, D.C., area. He began his career in 1935 at Moss Realty, before moving on to form Permanent Homes, Inc., in 1938 (The Washington Post 1938, R1). After his involvement with Wyngate, he was chairman of the National Corporation for Housing Partnerships from 1969 to 1983, in addition to working for Frederick W. Berens, Inc., and Associated Mortgage Companies (The Washington Post 1997, C5).

Henry J. Connor was a builder in the Washington, D.C., area for 40 years and was also the president of Metropolitan Federal Savings & Loan Association (The Evening Star 1965, B-5). Connor developed the majority of Wyngate and also went on to develop Wyngate Section 2 in the early- to mid-1950s (MCP 2788).

Evaluation:

Wyngate was evaluated as a planned residential development in accordance with the Suburbanization Historic Context, Suburbanization Historic Context Addendum, and National Register of Historic Places Criteria A, B, and C.

Wyngate is a typical planned residential development constructed close to similar developments in Montgomery County. Both developers of Wyngate offered a limited number of house models from which to choose. While Wyngate did provide affordable housing options during a time when they were difficult to find, it was not the only low-cost housing in the Maryland suburbs (The Washington Post 1939b, R2). The licensing of Demonstration Home No. 1 by Permanent Homes, Inc., was a marketing strategy also used by other developers, and the inclusion of these homes was not part of an overarching vision that influenced future development. Only a limited number were constructed and only a few survive in Wyngate, and they have replacement materials and modifications (The Washington Post 1939a, R11). The subdivision did not introduce design innovations and does not demonstrate significant associations with suburban or exurban residential development. Furthermore, the development is not known to be associated with any other events that have made a significant contribution to the broad patterns of history. Therefore, the property is not eligible under Criterion A.

Although both of the developers, George DeFranceaux and Henry J. Connor, involved in the platting and construction of Wyngate worked on multiple residential development projects in the Washington, D.C., metropolitan area, they had no significant influence on suburbanization in Maryland. Research has not shown that the property is associated with the lives of other persons significant in the past. Therefore, the property is not eligible under Criterion B.

Wyngate has a significant amount of infill (56 houses), the majority of which dates from 2001 to 2017. Overall, the subdivision lacks cohesion in building forms, sizes, and styles. The modifications and replacement materials on original houses and the large amount of infill lead to an overall lack of integrity in Wyngate; consequently, it is not a good example of a planned residential development. The houses are not the work of master architects and exhibit common materials and forms. Therefore, the property is not eligible under Criterion C. Wyngate was not evaluated under Criterion D.

The boundary for the resource encompasses approximately 55.1 acres and is roughly defined by the Ashburton subdivision on the north and west, by Old Georgetown Road and St. Jane Frances de Chantal Church and School on the east, and Hendry Estates and Alta Vista Terrace subdivisions on the south. It includes multiple parcels found on Montgomery County Tax Maps GP61 and GP62 (2019).

References:

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---1939b. "F.H.A. Gives Approval to Wyngate Plans." October 7, 1939, B-9.
---1939c. "Realty Firm Carries On 90-Home Program." July 29, 1939, B-1.
---1940. "Wyngate: Developed by Permanent Homes, Inc." Advertisement. March 23, 1940, B-5.
---1956. "Wyngate: Bethesda's Best Buy." Advertisement. December 1, 1956, B-5.
---1965. "Henry J. Connor Dies; D.C. Builder 40 Years." November 5, 1965, B-5.

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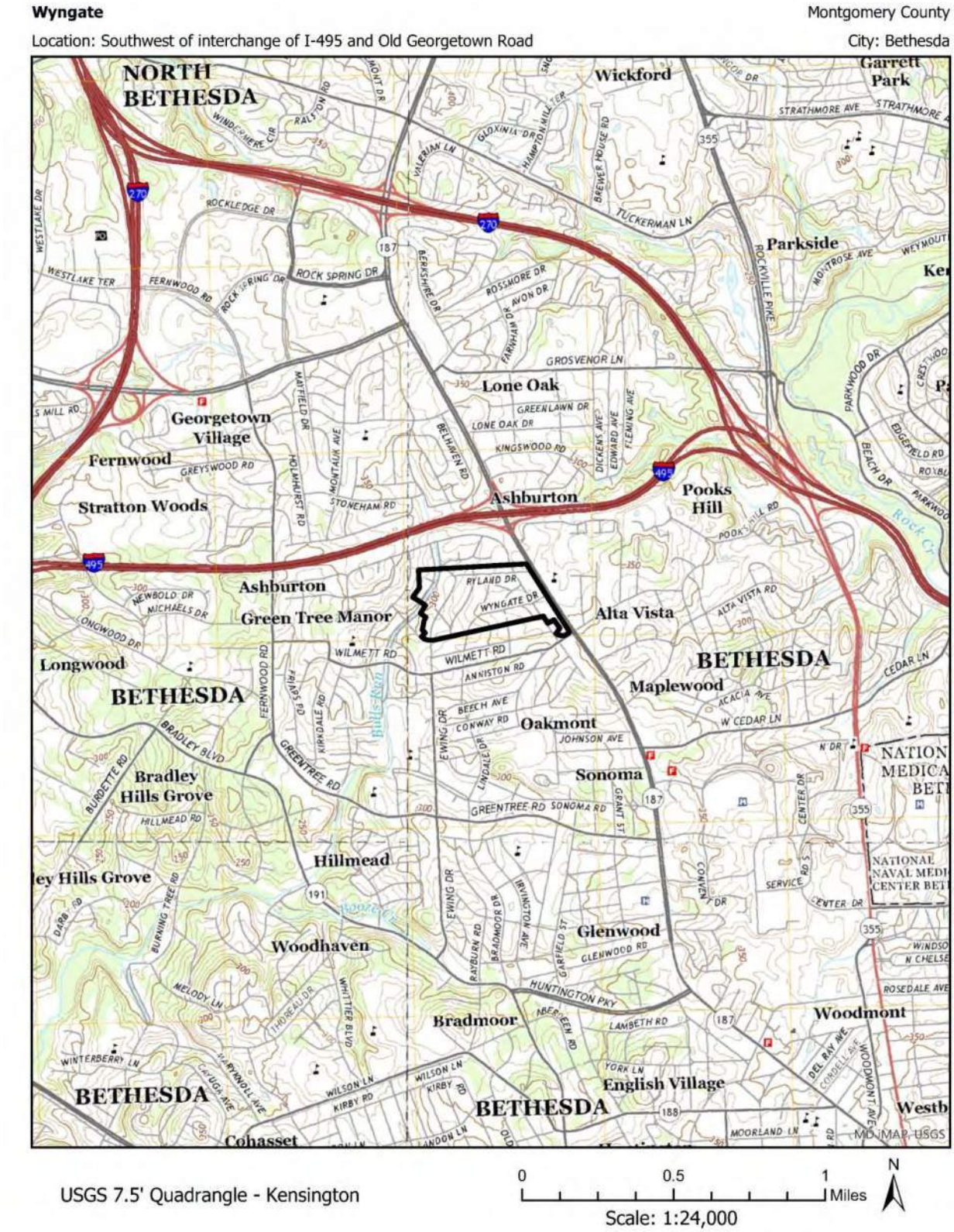
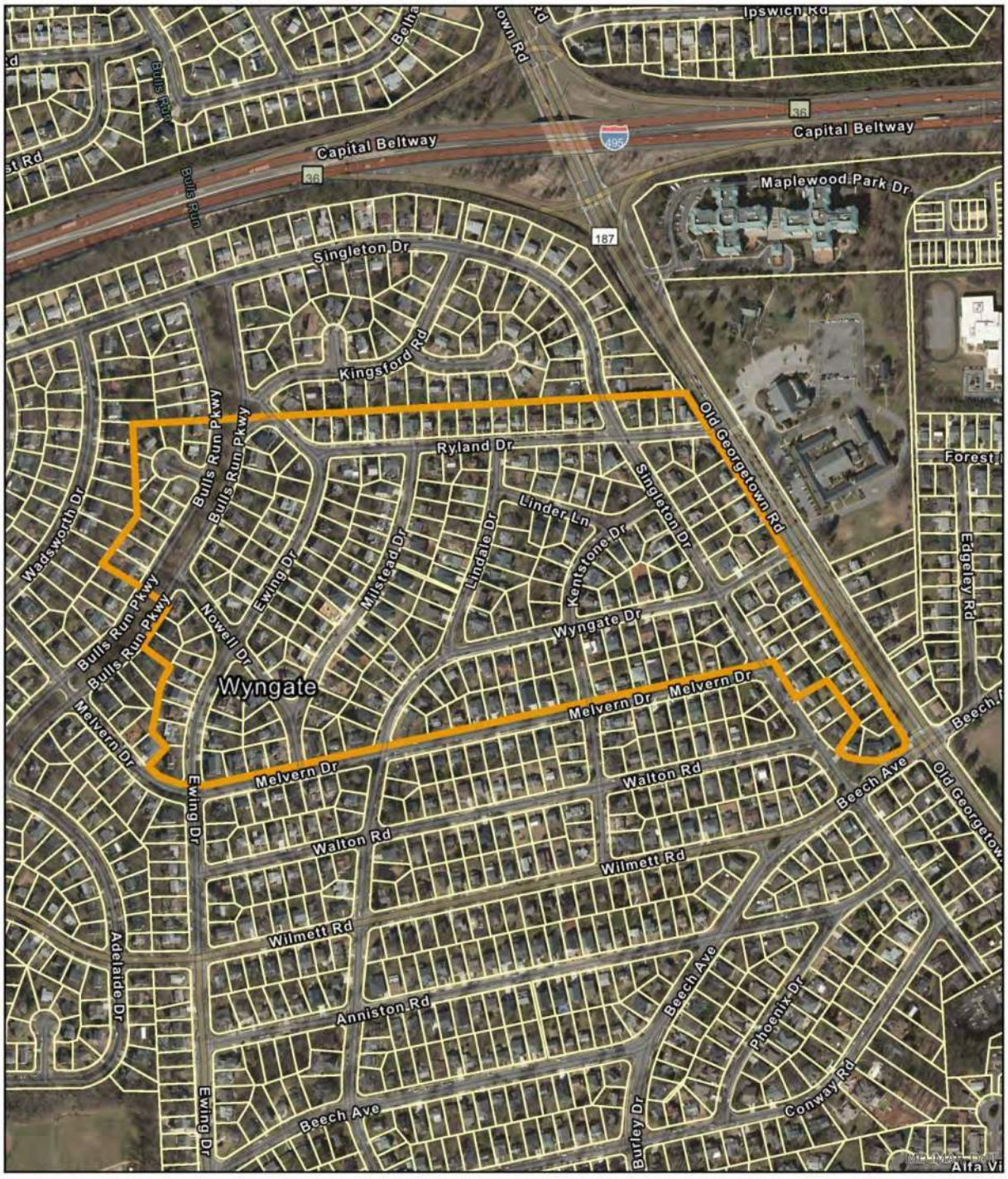
---1939a. "Fair Home Replica to Be Opened Today: Permanent Offers Demonstration Home in Wyngate, Md." November 19, 1939, R11
---1939b. "'Dual Duty' Home Planned for Bethesda: 'Wyngate' One-Story House to Duplicate Fair 'House No. 1'." August 6, 1939, R2.
---1939c. "World's Fair Home to Be Shown Here." June 18, 1939, R7.
---1997. "George DeFranceaux II Dies; Housing Development Executive." January 30, 1997, C5.


Wyngate
Montgomery County
Location: Southwest of interchange of I-495 and Old Georgetown Road
City: Bethesda
NORTH BETHESDA
Wickford
Garrett Park
Parkside
Lone Oak
Georgetown Village
Fernwood
Stratton Woods
Ashburton
Pooks Hill
Green Tree Manor
Alta Vista
Longwood
BETHESDA
Maplewood
Oakmont
Sonoma
Bradley Hills Grove
Hillmead
Woodhaven
Glenwood
Bradmoor
Woodmont
English Village
Cohasset
Westb
WYNGATE DR
RYLAND DR
WILMETT RD
ANNISTON RD
GREENTREE RD
SONOMA RD
GLENWOOD RD
HUNTINGTON PKY
LAMBETH RD
GROSVENOR LN
TUCKERMAN LN
ROCKLEDGE DR
ROCK SPRING DR
FERNWOOD RD
GREYSWOOD RD
STONEHAM RD
LONE OAK DR
GREENLAWN DR
KINGSWOOD RD
ROCKVILLE PIKE
STRATHMORE AVE
BRADLEY BLVD
HILLMEAD RD
WILSON LN
KIRBY RD
MOORLAND LN
MD MAP: USGS
USGS 7.5' Quadrangle - Kensington
0
0.5
1
Miles
N
Scale: 1:24,000

MAPS

Wyngate Montgomery County

Location: Southwest of interchange of I-495 and Old Georgetown Road City: Bethesda



PHOTOGRAPHS

Streetscape on Singleton Drive from 9505, looking southeast.

5806 Wyngate Drive, north elevation.

PHOTOGRAPHS

5707 Wyngate Drive, southeast oblique.

5802 Wyngate Drive, northeast oblique.

PHOTOGRAPHS

5714 Wyngate Drive, northwest oblique.

Streetscape along Singleton Drive with infill at 9409 Singleton, looking north.

PHOTOGRAPHS

5819 Wyngate Drive, southeast elevation.

9514 Milstead Drive, southeast elevation.

PHOTOGRAPHS

9511 Ewing Drive, northwest elevation.

Streetscape on Beck Court featuring 9510 and 9512, looking southwest.

PHOTOGRAPHS

9505 Lindale Drive, northwest elevation.

Streetscape along Bulls Run Parkway, showing center median, looking southeast.

Demonstration Home No. 1, Town of Tomorrow, 1939 World's Fair Brochure courtesy of https://www.1939nyworldsfair.com.

M: 35-210 Wyngate

PHOTO LOG

Number of Photos: **13**
Name of Photographer: **Adriana Moss**
Date of Photographs: **2019-10-09**
Location of Original Digital File: **MD SHPO**
File Format: **M: 35-210_2019-10-09_01.tif… etc.**

Photographs inserted on continuation sheets:

01.tif
Streetscape on Singleton Drive from 9505, looking southeast.

02.tif
5806 Wyngate Drive, north elevation.

03.tif
5707 Wyngate Drive, southeast oblique.

04.tif
5802 Wyngate Drive, northeast oblique.

05.tif
5714 Wyngate Drive, northwest oblique.

06.tif
Streetscape along Singleton Drive with infill at 9409 Singleton, looking north.

07.tif
5819 Wyngate Drive, southeast elevation.

08.tif
9514 Milstead Drive, southeast elevation.

09.tif
9511 Ewing Drive, northwest elevation.

10.tif
Streetscape on Beck Court featuring 9510 and 9512, looking southwest.

11.tif
9505 Lindale Drive, northwest elevation.

12.tif
Streetscape along Bulls Run Parkway, showing center median, looking southeast.

13.tif
Demonstration Home No. 1, Town of Tomorrow, 1939 World's Fair Brochure courtesy of https://www.1939nyworldsfair.com.

MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: Yes ___
No ___

Property Name: **Xaverian College (National Labor College)**
Inventory Number: **M: 33-37**

Address: 10000 New Hampshire Avenue
Historic District: Yes

City: Silver Spring Zip Code: 20903
County: Montgomery

USGS Quadrangle(s): Beltsville

Property Owner: ATU Tec Properties, LLC
Tax Account ID: 05-03644883

Tax Map Parcel(s): N990
Tax Map: KP13

Project: I-495 & I-270 Managed Lanes Study
Agency: MDOT SHA

Agency Prepared By: RK&K, LLP

Preparer's Name: Jacob Bensen, Christeen Taniguchi
Date Prepared: Jun 10, 2019

Documentation is presented in: Project review and compliance files

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Preparer's Eligibility Recommendation: Not Recommended

Criteria: A B C D

Considerations: A B C D E F G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property:

Inventory Number: Eligible: Listed:

Site visit by MHT Staff ___ yes ___ no Name: Date:

Description of Property and Justification:

The Xaverian College campus includes multiple buildings, constructed during building campaigns from circa 1934 to 2006. For the campus buildings constructed between 1961 and 1978, the following evaluation refers to the Suburbanization Historic Context Addendum (1961–1980), Montgomery and Prince George's Counties, Maryland (October 2018).

Location/Setting

Xaverian College, known as George Meany Center for Labor Studies between 1970 and 2004, as the National Labor College between 2004 and 2014, and as the Tommy Douglas Conference Center since 2015, is located just northwest of the Capital Beltway (I-495)/New Hampshire Avenue (MD 650) interchange in Silver Spring, Montgomery County, Maryland. The 46.81-acre property contains multiple buildings set in landscaped grounds and is in a densely developed suburban area surrounded by single-family dwelling, apartment, and commercial developments. The property is bordered to the north by single-family dwellings along Parkman Road, to the west by single-family dwellings along Xaveria Drive and Devere Drive, to the south by dense trees along I-495, and to the east by commercial buildings along New Hampshire Avenue and the Holly Hall Apartments

MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended:	**Eligibility not recommended:**
Criteria: ___ A ___ B ___ C ___D	**Considerations: ___ A ___ B ___C ___D ___E ___F ___G**
MHT Comments:	
Reviewer, Office of Preservation Services:	**Date:**
Reviewer, National Register Program:	**Date:**

complex. Trees buffer the property to the north, west, and south; a vinyl privacy fence separates the property from the Holly Hall Apartments.

Xaverian College is accessed by an asphalt and concrete driveway from a small extension of Powder Mill Road west of New Hampshire Avenue. The driveway then becomes the campus's internal circulation road, looping around all the campus buildings and providing access to three asphalt parking lots east of the buildings and to the service areas associated with individual buildings. A plastic business sign with brick base, reading "TOMMY DOUGLAS CONFERENCE CENTER" with the property's address and the center's logo, is located just north of the driveway at Powder Mill Road. Concrete pedestrian walkways and plazas are located throughout the campus, connecting the buildings to the parking lots and connecting the campus to the sidewalk at Powder Mill Road. Buildings are located in the approximate center of the property; a baseball field with a chain-link backstop and benches and an asphalt basketball court are northwest of the buildings. A small stream and three stormwater retention ponds are located between the buildings and the baseball field and basketball court. A utility pump on a concrete plinth is accessed by a driveway off the internal circulation road southwest near I-495. Directional and building signage in a variety of materials is located throughout the campus, along the roads and walkways, as well as in front of buildings. Lawns, trees, shrubs, planting beds, flag poles, metal light standards, and a gazebo are also located on the property.

The National Workers Memorial, installed in 2010 and consisting of granite benches and landscaping surrounding a plaza with inscribed brick and slate, is located east of the Auditorium/Former Chapel. Two abstract sculptures, of unknown installation date, are located on the property—one on the lawn to the east of the Academic Center and one within a grove of trees at the center of the property. An undated photograph on the National Labor College website shows a statue of St. Francis Xavier on the property, but this could not be field-verified.

Architectural Description

Note that the following buildings are numbered according to a numbering system established by the National Labor College. The campus buildings are described below in order of their construction date.

Building 1 – Academic Center (circa 1934)

The two-story, Colonial Revival-style, red brick-clad, hipped-roof building, currently used as administrative offices, has a symmetrical, 13-bay, east façade. The main entrance, at the central portico on the façade, consists of paired multilight wood doors, each with nine lights above and six lights below a central panel. The doors are flanked by side panels and topped by a segmental fanlight. Narrow one-over-one stained glass windows flank the entrance. The full-height portico, with dentiled pediment and Doric entablature, is supported by four Doric columns. A metal and glass light fixture is supported by chains hanging from the porch roof. The windows are primarily eight-over-eight double-hung, vinyl-sash replacements with wood sills and brick lintels. A band of windows consisting of paired four-over-four windows flanked by narrow two-over-two double-hung wood sash units is above the main entrance. A gable-roofed chapel wing with wood-sash stained glass windows extends from the center of the west (rear) elevation. The north elevation has a single metal door accessed by concrete steps and a single window filled in with brick. The door and window are flanked by two-story rectangular brick projections. The hipped roof is clad with asphalt shingles. At the north end is a hipped-roof dormer with a vented opening.

Building 3 – Barrett Residence Hall (circa 1957)

The two-story, stucco-clad residence hall with no style has a side-gable, nine-bay north façade with Romanesque elements and recessed one-bay, side-gable wings extending to the east and west. The main entrance is located at the façade and is accessed through a slightly recessed stuccoed arched opening with a double brick archway lined with brick quoins. The stuccoed keystone rises to a cross shape above the arch. The entry is recessed in the arched alcove and consists of a single metal-and-glass, 15-light door, flanked by 10-light sidelights and topped by a multi-light transom. The floor is multi-colored slate. Two modern light fixtures flank the entrance. Secondary entrances consist of single and paired multi-light metal and glass doors. The entrance on the west elevation is accessed by a staircase. Windows are eight-over-eight metal double-sash. The side-gable roof is clad in asphalt shingles.

Building 4 – South Residence Hall (between 1957 and 1963)

This three-story, H-shaped plan, Colonial Revival-style building is built into a slope so that it is two stories at the east elevation and three stories at the west elevation. The building is oriented north-south with east-west wings at the north and south ends. The building is clad in brick and features a wood cornice with dentils. Currently, the main entrance is located at the east elevation and consists of paired multi-light metal-and-glass replacement doors within a simple wood entablature supported by wood pilasters with carriage-style light fixtures. The entrance is flanked by multi-light, vinyl-sash sidelights. The gable-front wings have dentiled pediments with round louvered vents with four keystones and a one-bay central doorway with Doric pilasters supporting an entablature and pediment. The west elevation may have once served as the original main entrance and has three projecting bays at the center topped by a dentiled pediment similar to those on the east elevation. The one-bay central doorway has Doric pilasters supporting an entablature and pediment. The door has been replaced with a multi-light metal unit flanked by multi-light sidelights. Brick, hipped-roof projections with blind walls and arcades at the first story have been added to the ends of the gable-front wings. Secondary entrances consist of single and paired multi-light, metal-and-glass doors, many topped by a wood pediment supported by wood engaged columns. Stone staircases with metal railings and metal lamp posts are present at some entrances, as are concrete and brick patios. Windows consist of six-over-six double-hung, vinyl sash units. The main roof is clad in slate, and a brick chimney pierces the roofline where the south wing meets the main block of the building.

Building 7 –North Classroom Center (original construction between 1954 and 1958; south addition to northwest wing between 1970 and 1980)

The two-story, 6:1 common bond brick, U-shaped building with no architectural style serves as a dining hall and classroom building. The building's main entrance, located at the south façade and opening onto the courtyard formed by the building's wings, was not accessible during this survey. Secondary entrances consist of single metal doors; concrete staircases with metal railings access those entrances above and below ground level. A metal awning supported by square metal posts is present on the northwest elevation of the northwest wing. Windows are primarily four- and eight-light metal-sash casement units with sloped brick sills; four have been bricked-in on the northwest elevation of the northwest wing. The slate shingle-clad roof of the main building is hipped and the addition at the northwest wing has a shed roof. A brick chimney pierces the roof near the ridge, and mechanical equipment is also present on the roof.

Building 8 – Auditorium/Former Chapel (between 1957 and 1963)

This one-story, 6:1 common bond brick, front-gable, Colonial-Revival style chapel is now used as an auditorium. The main entrance is located at the east façade, opening onto the National Workers Memorial, and consists of an arched opening flanked by carriage-style light fixtures. The entry has paired multilight wood doors, each with a central panel with nine lights above and six lights below. The doors are topped by a multi-light fanlight. Above the entrance is a classical pediment with dentiled cornice and a round window with eight triangular lights. A square steeple with a hipped roof and arched louvered vents rises from the roof above the pediment. Secondary entrances consist of single doors. Windows are six-over-six, wood-sash, double-hung units. The windows at the façade are topped with multi-light fanlights. The building's steeply sloped, slate-shingle roof is front-gabled at the façade with a cross-gable at the northwest elevation; Small shed-roof projections extend from the north and south elevations near the east façade. A brick enclosure at the northwest elevation conceals mechanical equipment.

Building 10 – Single-family Dwelling (between 1957 and 1963)

This one-story, rectangular, Minimal Traditional-style single-family dwelling is clad in brick with aluminum siding on the western gable end. A one-bay, brick, hipped-roof projection extends to the northwest. The building is built into a slope, so the integral garage at the north elevation is part of a daylight basement. The main entrance is located at the three-bay, side-gabled south façade, which has two six-over-six windows flanked by applied shutters at the east end and an incised porch at the west end. The door is on the west elevation and consists of a single wood door with metal-and-glass storm door. The entrance opens onto a concrete porch with concrete and brick steps and decorative metal railings. Three-dimensional lettering on the façade under the windows reads "BUILDING 10." Secondary entrances consist of a single wood door with six lights and metal-and-glass storm door on the east elevation and a roll-up garage door on the north. Windows are six-over-six, vinyl-sash, double-hung units. The building's asphalt-shingle roof is side-gabled, and a brick chimney pierces the south slope of the main roof near the ridge. A prefabricated gambrel-roofed garage was built north of the dwelling sometime between 1988 and 2002.

Building 5 – Hoehler Residence Hall (1976)

This four-story, brick-clad, irregular plan building of no style is a residence hall with Brutalist and Shed style-influenced elements. The main entrances are located at the northeast and southeast elevations and consist of a recessed, single metal-and-glass door with a metal-sash sidelight, sheltered by a brick-clad overhang. A single-light, fixed metal-sash window is located above the overhang. Windows consist of three- or six-light, fixed metal-sash units, separated by brick pilasters. The building's roof is complex and includes gabled sections, flat sections, and shed-roof sections.

Building 2 – George Meany Archives and Library (1987)

This Modernist building was the library of the National Labor College and archives of the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO). The building has an irregular plan and is clad in brick. The two-story building is oriented north-south has a three-story tower with a flat roof at the southwest side. The west elevation has an irregularly shaped one-story projection with an irregular shallow-pitched roof clad in asphalt shingles. The main entrance is located at the east elevation, and secondary entrances are on the west elevation. The building has little fenestration, but there is a band of metal, fixed-pane ribbon windows on the west elevation just below the eaves. On October 1, 2013, the archival collection was transferred to the University of Maryland, College Park, and the building is now used by the Tommy Douglas Conference Center as additional meeting space.

Building 6 – North Residence Hall (circa 2004-2005)

The three-story, brick-clad, Colonial Revival-style building that serves as a residence hall is generally rectangular in shape and oriented north-south. It is built into a slope so that it is two stories at the east façade and three stories at the west elevation The main entrance is located at the east elevation, sheltered by a projecting porch with a flat roof and paneled balustrade supported by four Tuscan columns. A prominent three-bay portico with pediment supported by four Tuscan columns is located at the west elevation. A cornice with dentils is also present on all elevations. The roof is cross-hipped and clad in asphalt shingles.

Building 9 – Amalgamated Transit Union Center/Former Lane Kirkland Center (2006)

This two-story, irregularly shaped conference center and auditorium is clad in a mix of brick, metal, and glass. At the southeast façade, an organizational logo and three-dimensional lettering spelling "AMALGAMATED TRANSIT UNION" are affixed to the building. Fenestration includes metal fixed-pane window walls and vertical bands of fixed-pane metal windows.

Historic Context

The Xaverian College campus was built on Kinkora Farm, which was the country home of William A. Wimsatt (Photo Standalone 15, 11/30/1922, Deed Wimsatt to Xaverian Brothers, Inc.). When the Roman Catholic Xaverian Brothers purchased the property in 1931 from Wimsatt's estate, it totaled about 270 acres, and consisted of a 25-room residence, a dairy, two barns, bowling alleys, two cottages, two hay barracks, and two well houses (Deed, 1931, Wimsatt to Xaverian Brothers, Inc.; Washington Post 1931, M10). It is likely most of these buildings were located outside the surveyed property boundary.

The Xaverian Brotherhood was founded in Bruges, Belgium, in 1846 and first settled in the United States in Louisville, Kentucky, and established many schools and other sites throughout the United States, including Good Counsel High School in Wheaton (Washington Post 1931, M10; 1954, 9). At the time of purchase, the existing residence was anticipated to be remodeled as a chapel, and the property was anticipated to be a self-sufficient model farm with dairies providing the food, so the college could operate as an independent community. It was anticipated a monastery would be erected, with quarters housing 70 novitiates of the order (Washington Post 1931, M10).

The college opened in 1931 and, according to the Washington Post, in 1934, a dormitory and chapel were built at the Xaverian College. This building is likely extant and now referred to as the Academic Center (Building 1). The western wing served as the chapel and has stained glass windows (Washington Post 1934, 6). The Wimsatt residence was used as faculty quarters until 1953 when it burned in a fire. At the time, it was one of five buildings at the college (Washington Post 1953, 13). The Xaverian

brothers are also likely responsible for the construction of the Barrett Residence Hall (Building 3), the South Residence Hall (Building 4), the North Classroom Center (Building 7), and the Auditorium/Former Chapel (Building 8). Xaverian College was affiliated with Catholic University, and for several years students completed their junior and senior years at the university. In the mid-1950s, the school was independently accredited and operated as a junior college (Washington Post 1971, C2).

In 1968, the Xaverian College campus was used for the prefabrication of temporary buildings used to house the marchers of the Southern Christian Leadership Conference's Poor People's Campaign in Washington, DC. After being constructed at the college, the buildings were sent by truck to Washington, DC, where they were used during the six-week demonstration (Franklin 1968, 49; National Museum of African American History and Culture, 2019).

The college closed in 1970, when a change in criteria for acceptance into the Xaverian brotherhood required prior completion of college, which negated the need for a college facility (Washington Post 1971, C2). The 47-acre campus was then acquired by George Meany and Lane Kirkland, trustees for the AFL-CIO Labor Studies Center Inc. The property became the AFL-CIO-backed George Meany Center for Labor Studies in 1971. The center was founded in 1969 and previously operated on Massachusetts Avenue NW in Washington, DC (Smith 1974, C14). The campus formally opened in 1974, following renovations of the existing campus buildings by the architectural firm of Kamstra, Dickerson, and Associates of Reston, Virginia (Washington Post 1974, D3). Research has not shown whether Kamstra, Dickerson, and Associates were the designers of any of the buildings constructed on the campus following its acquisition by the AFL-CIO. The first building constructed after AFL-CIO's purchase of the property was a residence hall, Hoehler Hall (Building 5), in 1976. The George Meany Memorial Archives building (Building 2) opened in 1987. After the center began offering baccalaureate and graduate degrees in the late 1990s, the name changed to the George Meany Center for Labor Studies--the National Labor College, with the name later refined to the National Labor College in 2004. Soon thereafter, the campus was expanded and renovated, including the construction of the Kirkland Center (Building 9) and the North Residence Hall (Building 6) (History of the National Labor College).

After the National Labor College closed in 2014, the campus was purchased by the Amalgamated Transit Union (ATU), which represents transit workers. ATU moved their international headquarters onto the property and changed the campus name to the Tommy Douglas Conference Center. The union uses the property for labor-related training and education purposes, maintaining much the same building uses as the labor college (ATU 2015).

Eligibility Determination

Xaverian College was evaluated for significance as an educational campus using information available in the Suburbanization Historic Context Addendum and in accordance with the National Register of Historic Places (NRHP) Criteria A, B, and C. The property was not evaluated for eligibility under Criterion D.

The original buildings on the site do not have a significant association with the Xavarian Brothers. The campus was not the first location for the Xavarian Brothers in the United States or in the Washington, DC, area. Although the site was used as part of the preparations for the Poor People's Campaign, it does not have a significant association with that protest or the overall civil rights movement. As the National Labor College and its predecessor, the George Meany Center for Labor Studies, the resource does not have a significant association with the AFL-CIO, or the labor movement in the United States or region. The George Meany Center was founded in Washington, DC, and relocated to the Silver Spring campus later. Therefore, Xaverian College is not eligible for the NRHP under Criterion A.

Research has found no significant connection to persons important to local, state, or national history. Therefore, Xaverian College is not eligible under Criterion B.

The Xaverian College and National Labor College buildings are common examples of educational buildings, with non-significant examples of Colonial Revival style, Modernist, and Brutalist-influenced architecture. The only known architecture firm, Kamstra, Dickerson, and Associates, is credited with the renovation of buildings on campus, not the design of any building. Research has not found these buildings to be the work of a master and they do not possess high artistic value. Therefore, Xaverian College is not significant under Criterion C.

The property encompasses 46.81 acres and is confined to the current property tax parcel, which is found on Montgomery

County Tax Map KP13, Parcel N990 (2017). Tax account is 05-03644883.

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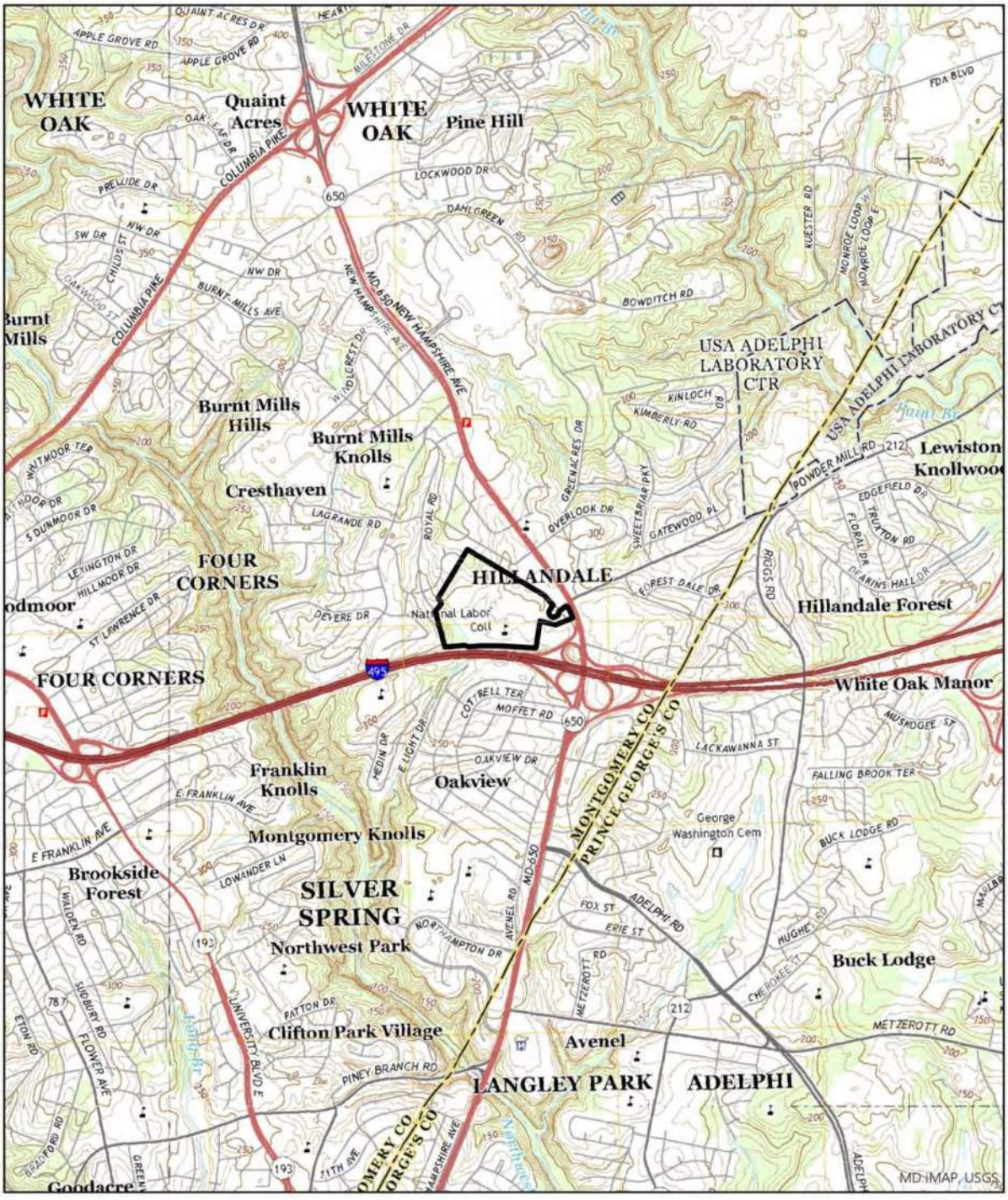
Xaverian College (National Labor College) Montgomery County

Location: 10000 New Hampshire Avenue City: Silver Spring



USGS 7.5' Quadrangle - Beltsville

0 0.5 1 Miles

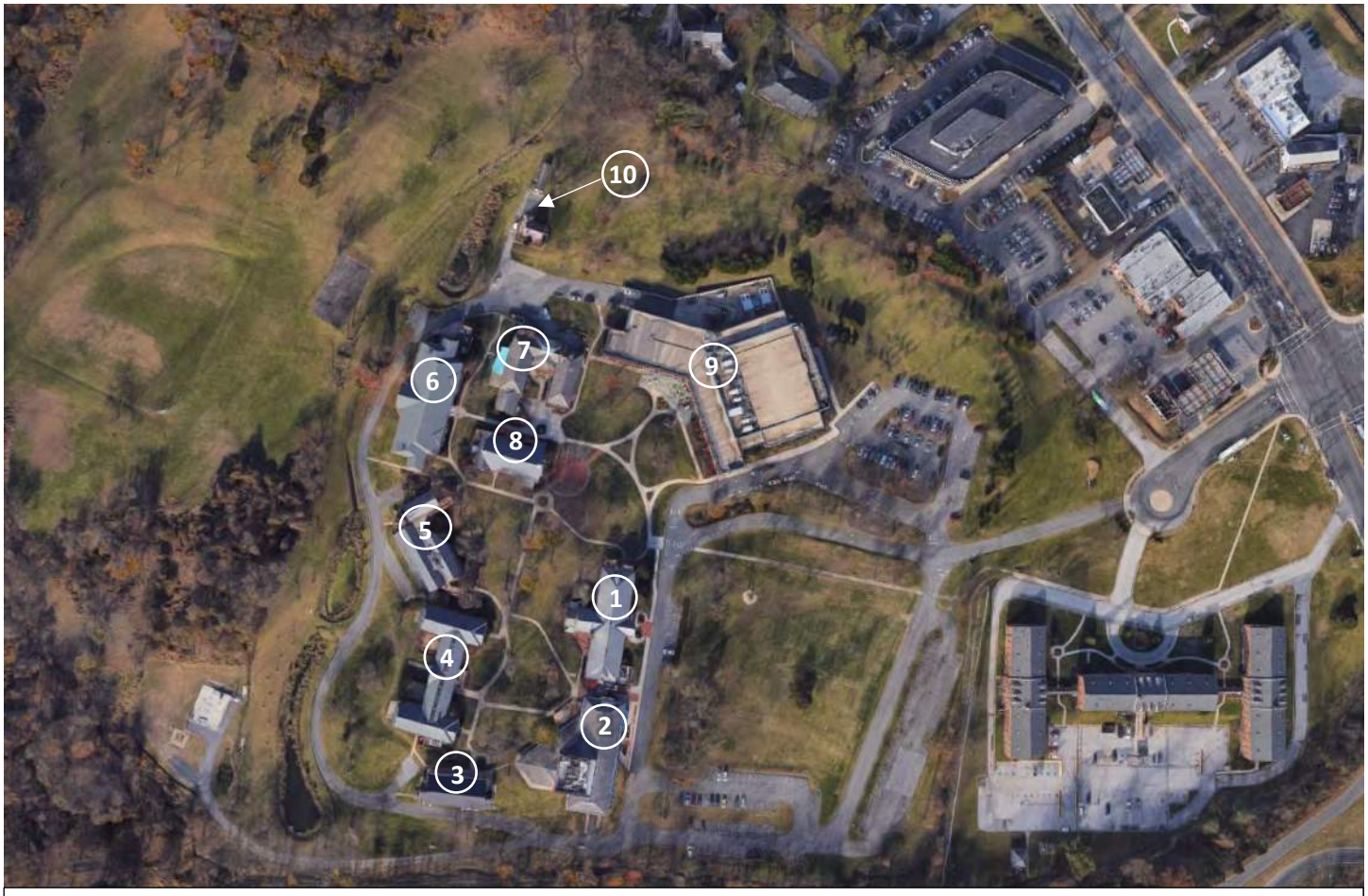
Scale: 1:24,000

MAPS

Xaverian College (National Labor College) Montgomery County

Location: 10000 New Hampshire Avenue City: Silver Spring

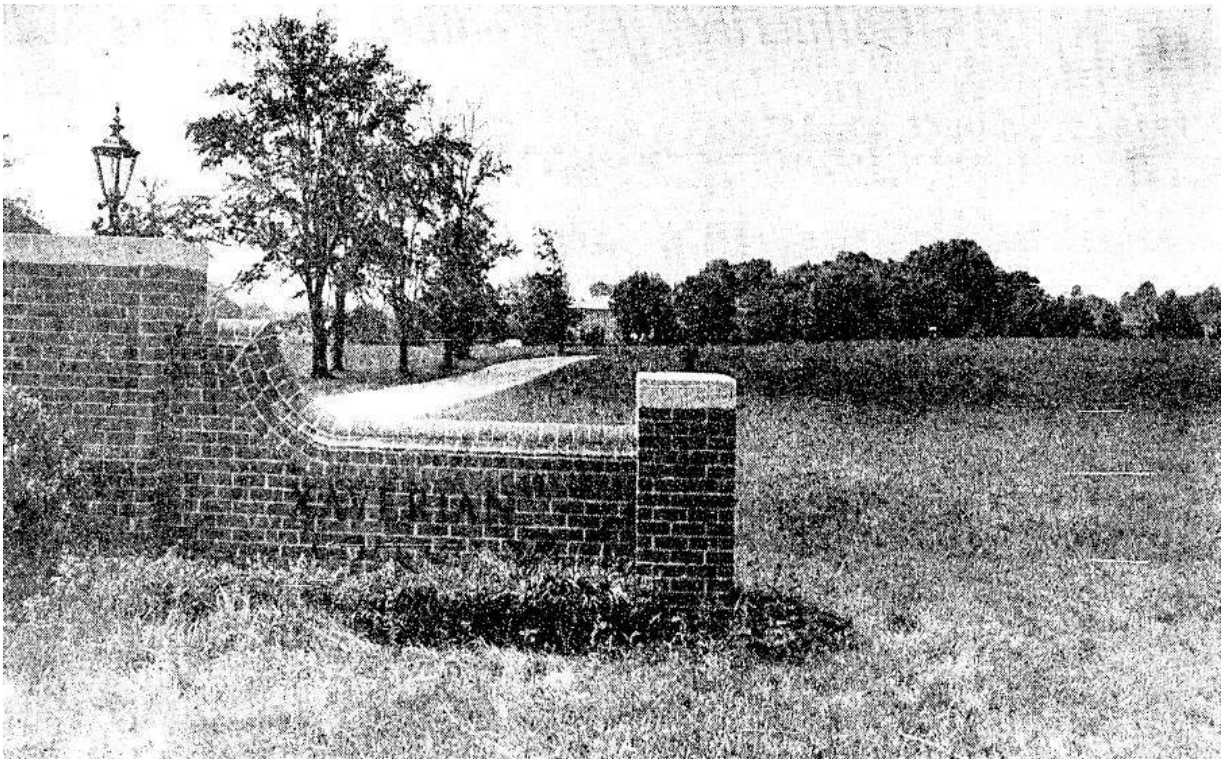
M: 33-37
Xaverian College (National Labor College)
10000 New Hampshire Avenue
Silver Spring, Maryland



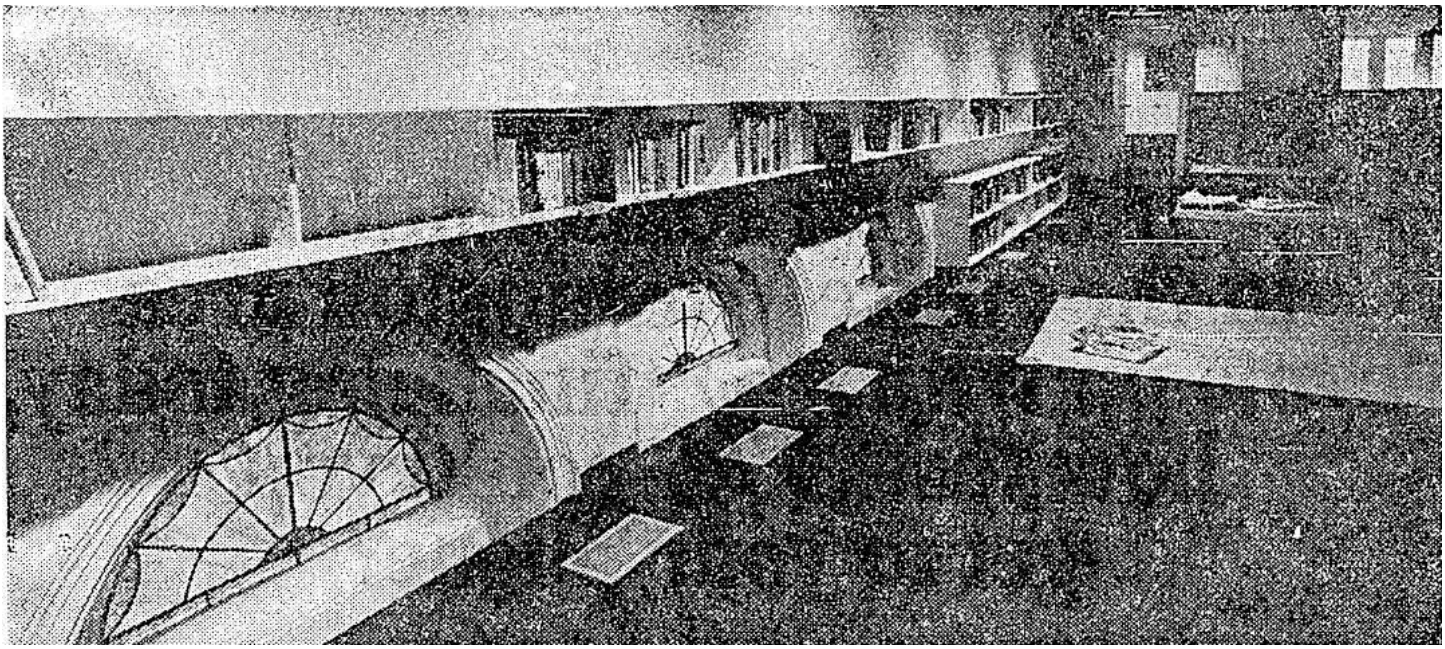
Key:
Building 1: Academic Center (ca. 1944)
Building 2: George Meany Archives and Library (1987)
Building 3: Barrett Residence Hall (ca. 1957)
Building 4: South Residence Hall (sometime between 1957 and 1963)
Building 5: Hoehler Residence Hall (1976)
Building 6: North Residence Hall (ca. 2004-2005)
Building 7: North Classroom Center (sometime between 1954 and 1958, addition sometime between 1970 and 1980)
Building 8: Auditorium/Former Chapel (sometime between 1957 and 1963)
Building 9: Amalgamated Transit Union Center/Former Lane Kirkland Center (2006)
Building 10: Single-family Residence (sometime between 1957 and 1963)

Circa 2019 aerial photo of Xavarian College with construction dates and building names.
Imagery from Google, map by Jacob Bensen.

M: 33-37
Xaverian College (National Labor College)
10000 New Hampshire Avenue
Silver Spring, Maryland



Xaverian College entrance, 1971.
Photo from *The Washington Post,* August 27, 1971, C2.



Building 8: Auditorium/Former Chapel, interior after renovations, 1974.
Photo from *The Washington Post,* November 9, 1974.

PHOTOGRAPHS

Building 1: Academic Center, east facade, looking west.

Building 3: Barrett Residence Hall, north facade, looking south.

Building 4: South Residence Hall, east elevation, looking southwest.

Building 7: North Classroom Center, northwest elevation, looking southeast.

Building 8: Auditorium/Former Chapel, east facade and south elevation, looking northwest.

Building 10: Single-Family Residence, south facade and west elevation, looking northeast.

Building 5: Hoehler Residence Hall, southeast elevation, looking northwest.

Building 2: George Meany Archives and Library, northwest elevation, looking southeast.

Building 6: North Residence Hall, east facade, looking northwest.

Building 9: Amalgamated Transit Union Center/Former Lane Kirkland Center, main entrance, looking northwest.

M: 33-37 Xaverian College (National Labor College)

PHOTO LOG

Number of Photos: **10**
Name of Photographer: **Michal Tawney**
Date of Photographs: **2018-12-06**
Location of Original Digital File: **MD SHPO**
File Format: **M: 33-37_2018-12-06_01.tif… etc.**

Photographs inserted on continuation sheets:

01.tif
Building 1: Academic Center, east facade, looking west.

02.tif
Building 3: Barrett Residence Hall, north facade, looking south.

03.tif
Building 4: South Residence Hall, east elevation, looking southwest.

04.tif
Building 7: North Classroom Center, northwest elevation, looking southeast.

05.tif
Building 8: Auditorium/Former Chapel, east facade and south elevation, looking northwest.

06.tif
Building 10: Single-Family Residence, south facade and west elevation, looking northeast.

07.tif
Building 5: Hoehler Residence Hall, southeast elevation, looking northwest.

08.tif
Building 2: George Meany Archives and Library, northwest elevation, looking southeast.

09.tif
Building 6: North Residence Hall, east facade, looking northwest.

10.tif
Building 9: Amalgamated Transit Union Center/Former Lane Kirkland Center, main entrance, looking northwest.

MARYLAND HISTORICAL TRUST
SHORT FORM FOR INELIGIBLE PROPERTIES

Property Name: Xerox Data Systems (BioMed Realty Trust)

Address: 1701 Research Boulevard

City: Rockville **Zip Code:** 20850 **County:** Montgomery

USGS Quadrangle(s): Rockville

Tax Map Parcel Number(s): 0000 **Tax Map Number:** FR563

Project: I-495 & I-270 Managed Lanes Study **Agency:** MDOT SHA

Agency Prepared By: RK&K, LLP

Preparer's Name: Jean M. Cascardi, Christeen Taniguchi **Date Prepared:** Jan 7, 2019

Preparer's Eligibility Recommendation: Not Recommended

Complete if the property is a contributing or non-contributing resource to a NR district/property:		
Name of the District/Property:		
Inventory Number:	Eligible:	Listed:

Description of Property and Justification: (Please attach map and photo)

The following evaluation refers to the Suburbanization Historic Context Addendum (1961-1980), Montgomery and Prince George's Counties, Maryland (October 2018).

Originally occupied by Xerox Data Systems (The Washington Post, November 15, 1970 display ad) and today by BioMed Realty Trust, this is a two-story, rectangular plan office building constructed in 1970 in the International Style. Located on two tax parcels consisting of 13.4 acres, the property is bordered on the east by I-495, on the west by Research Boulevard, and by other office development to the north and south. The building is set back from Research Boulevard on a mostly wooded lot and is approached through a wooded area via an asphalt driveway with a street-side metal business sign. To the north of the building is a large asphalt parking lot with landscaped islands and to the west is asphalt paving for the service area. Lawns with trees abut all elevations of the building.

MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended:	Eligibility not recommended:
MHT Comments:	
Reviewer, Office of Preservation Services	Date
Reviewer, National Register Program	Date

Xerox Data Systems (BioMed Realty Trust)

The building rests on a concrete foundation, and the shorter north and south elevations have brick exterior walls with few windows openings, while the longer east and west elevations feature bands of ribbon windows and opaque spandrels.

The north elevation includes six bays, five of which are devoid of openings. The section second from the east contains a metal-framed glass panel wall. A primary entrance, located in the lower-left corner of the panel wall, consists of paired glass doors with a single sidelight and a large fixed transom. A band of six vertical lights extends to the left of the entrance, and eight vertical lights fill the second level of the glass panel wall. A concrete pedestrian walkway and steps with metal handrails connect the entrance to the parking lot. The north elevation has no other fenestration.

The east elevation, facing I-270, but sheltered by a landscaped row of mature trees, has an additional entrance, consisting of paired metal and glass doors surrounded by sidelights and fixed transoms. The rest of its first floor consists of tinted glass panel walls and brick, and the second floor has a ribbon window with recessed metal panels above and below; the roofline is clad with brick. The projecting second floor is supported by metal beams resting on concrete footings in a bed of white rubble stone.

The south elevation could not be observed during this survey, so limited observations were made using Google 3D. This elevation faces a concrete pedestrian walkway and is similar to the north elevation, with an entrance that is surrounded by a tinted glass panel wall in metal frames.

The west elevation was altered in circa 2004 with replacement cladding, pedestrian entrances and vehicle loading dock. The elevation's north section has paired metal and glass doors accessed by concrete stairs and landings, with metal handrails that connect to a pedestrian walkway. The south section of the elevation has a service area with loading docks and two secondary entrances; the first and second floors of this elevation both have ribbon windows. The building has a flat roof occupied by mechanical equipment.

Xerox Data Systems (BioMed Realty Trust) is an altered example of a mid-twentieth-century office building common throughout Maryland. It is not associated with events or persons that have made a significant contribution to history and is therefore not eligible for the National Register of Historic Places (NRHP) under Criteria A or B. Since its construction, the building has been modified, primarily with significant alterations at the west elevation. It does not represent the work of a master or possess high artistic value and is not eligible for the NRHP under Criterion C. The property was not evaluated under Criterion D as part of this assessment.

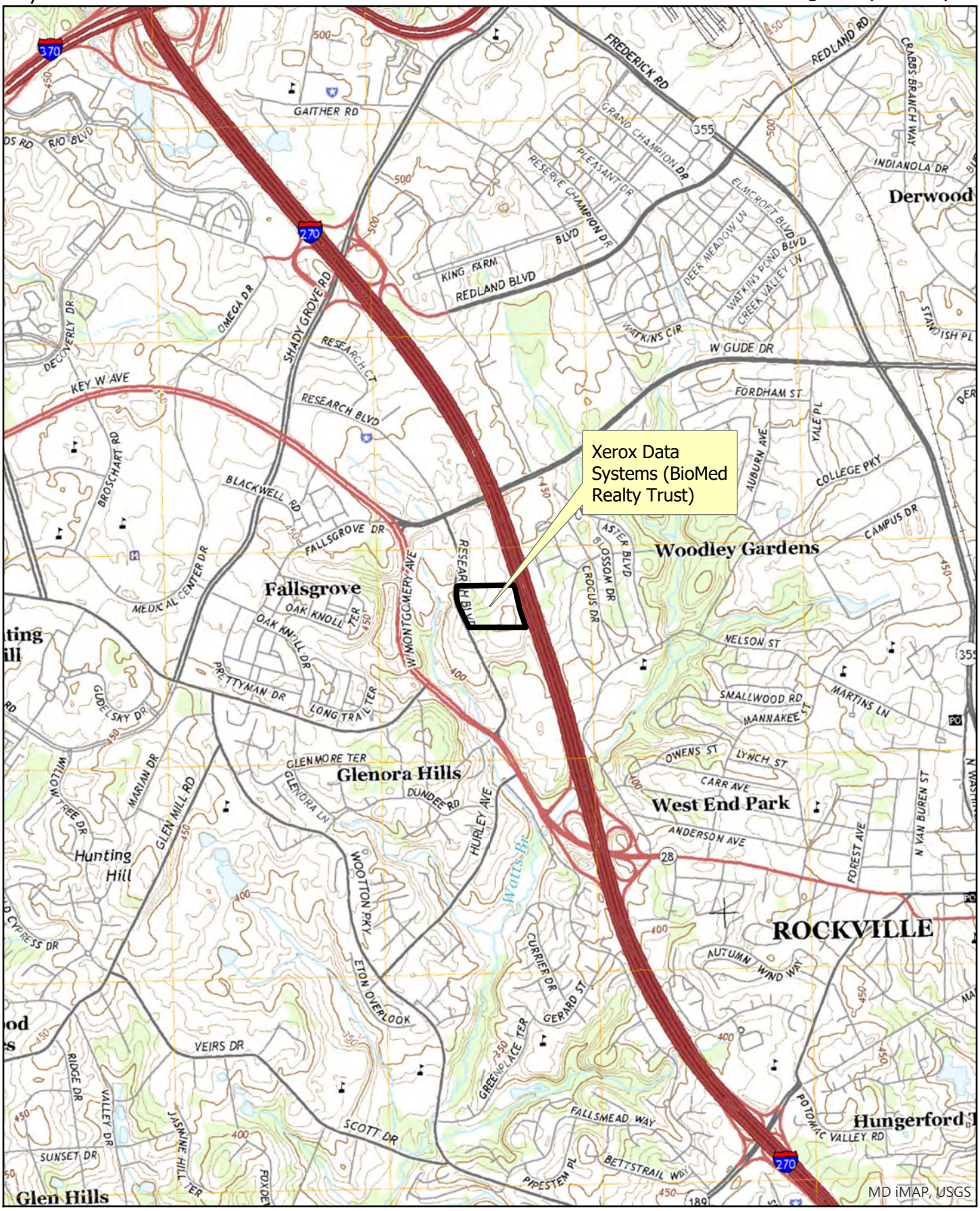
The boundary for the property encompasses 13.4 acres and is located on two tax parcels which are found on Montgomery County Tax Map FR563-0000, Parcel 0000 (2018).

Xerox Data Systems (BioMed Realty Trust)

Location: 1701 Research Boulevard

City: Rockville

Montgomery County



USGS 7.5' Quadrangle - Rockville

0 0.5 1 Miles

Scale: 1:24,000

N

I-495/I-270 Managed Lanes Study
Short Form DOE Photographs

Xerox Data Systems (BioMed Realty Trust)

North elevation

East elevation

I-495/I-270 Managed Lanes Study
Short Form DOE Photographs

Xerox Data Systems (BioMed Realty Trust)

West elevation

MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: Yes ___
No ___

Property Name: **Yorkshire Village**
Inventory Number: **PG:76B-84**

Address: South of I-495, west of Old Branch Avenue
Historic District: Yes

City: Temple Hills Zip Code: 20748
County: Prince George's

USGS Quadrangle(s): Anacostia

Property Owner: Multiple
Tax Account ID: Multiple

Tax Map Parcel(s): Multiple
Tax Map: 0097

Project: I-495 & I-270 Managed Lanes Study
Agency: MDOT SHA

Agency Prepared By: Dovetail CRG

Preparer's Name: Heather Staton
Date Prepared: May 21, 2019

Documentation is presented in: Project review and compliance files

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Preparer's Eligibility Recommendation: Not Recommended

Criteria: A B C D

Considerations: A B C D E F G

Complete if the property is a contributing or non-contributing resource to a NR district/property:		
Name of the District/Property:		
Inventory Number:	Eligible:	Listed:

Site visit by MHT Staff ___ yes ___ no Name: Date:

Description of Property and Justification:

Setting:

Yorkshire Village is a planned residential development on the south side of I-495 in Temple Hills. It is bounded by I-495 on the north, the Woodlane single-family subdivision on the west, the Glenn Hills single-family subdivision on the south, and Old Branch Avenue on the east. A stream bisects the resource and traverses in a roughly northeast-to-southwest direction, passing under Old Branch Avenue and continuing west and southwest until it meets with Henson Creek.

The 70 single-family dwellings sit on lots ranging between 0.16 and 1.6 acres. Individual lots are evenly graded or moderately sloped with some tree coverage, plant beds, and bushes. All lots feature a concrete or paved-asphalt driveway and are occasionally fenced. Yorkshire Village has five streets: Old Branch Avenue, Sharon Road, Yorkville Road, Yorkfield Drive, and Henderson Road. Within the approximately 53.3-acre development, there are no curbs, sidewalks, or street lighting, except lamps erected by individual home owners on their lots. One office building, 5121 Henderson Road, and an associated parking lot are located at the northeastern corner of the subdivision. Secondary resources include sheds and pools.

MARYLAND HISTORICAL TRUST REVIEW	
Eligibility recommended:	**Eligibility not recommended:**
Criteria: ___ A ___ B ___ C ___D	**Considerations: ___ A ___ B ___C ___D ___E ___F ___G**
MHT Comments:	
Reviewer, Office of Preservation Services:	**Date:**
Reviewer, National Register Program:	**Date:**

Description:

Yorkshire Village, constructed between 1951 and 1979, is a planned residential development first platted in 1949 and comprising 70 single-family dwellings and one office building. Nearly 90 percent of the houses date to the 1950s. Most of the houses are constructed in variations of the Ranch and Split-Level forms and the Contemporary style; the office building was designed in the Colonial Revival style.

Dwellings are primarily four to six bays wide and one to two stories tall. Foundations, sometimes in the form of basements, are covered in a brick veneer or parged concrete, and cladding on the remainder of the building includes stretcher-bond brick or stone veneer, vinyl siding, or a combination of materials. Roofs are side gable, hipped, or side gable with a front-gabled projection and sheathed in asphalt shingles. Most dwellings feature a single brick chimney placed at the front or side elevation or metal flues that pierce the roof's slope.

Primary entrances are typically off-center on the façade and contain a single-leaf wood or fiberglass door and storm door often accessed by a concrete or brick stoop or entry porch. Original windows include wood-framed two-over-two, double-hung-sash, tripartite, and bay units. Many houses in the development have replacement vinyl windows, some with faux muntins. Paneled or louvered shutters commonly flank windows on the primary elevation. Attached, single-car garages are incorporated into the original design of many houses. Small additions on side and rear elevations are common.

A two-story office building at 5121 Henderson Road, known as the Colonial Building, was constructed in 1976 and reflects elements of the Colonial Revival style. It is clad in a brick stretcher-bond veneer and covered by a hipped roof with a front-gabled peak at the center of the façade (north elevation). Fenestration includes five single-leaf doors on the primary elevation and vinyl-framed windows.

Historic Context:

In October 1941, Arthur H. and Pearl H. Wood sold 33 acres to John M. and Pauline M. King (Prince George's County Deed Book [PGCDB] 629, 72; Prince George's County Plat Book [PGCPB] WWW 16, 34). The Kings created the first plat for Yorkshire Village in January 1949, a 33-acre subdivision that included six blocks and 43 lots. They sold undeveloped lots, primarily between 1951 and 1955, to buyers who often purchased multiple lots. Purchasers, such as Pinkney and Alice Earnshaw, Jr., Samuel Irvine Forsch, Leonard H. Simmons, Dewey M. Freeman, and Windston Dowdy, among others, constructed dwellings on the lots, in accordance with the restrictions and covenants laid out in the deed from the Kings (e.g., PGCDB 1286, 219; 1336, 320; 1346, 127). Showing their desire to remain invested and have say in the appearance and feel of Yorkshire Village, conveyance deeds from the Kings explicitly stated that "for a period of 20 years from and after Jan 1, 1949, the plans, materials, size, and general specification of any building erected on the land as well as alterations or additions, including grading/landscaping, must be approved" (PGCDB 1286, 219).

In November 1952, the Kings platted the 21.26-acre Addition to Yorkshire Village south of their earlier subdivision; it comprised three blocks and 36 lots on either side of Sharon Drive (PGCPB WWW 22, 17). In June of the following year, the Kings sold all 36 lots to Pinkney A. and Alice L. Earnshaw, Jr., with a deed that contained the same covenants as found in their original section (PGCDB 1619, 526). Although the construction of entrance and exit ramps for I-495 resulted in a slight modification to the subdivision, developers constructed most houses by 1959, with a few outliers in the 1960s and 1970s; some lots remain undeveloped.

Joseph M. Gebhardt and Benjamin S. Pecson platted a one-lot addition to Yorkshire Village in March 1973 (PGCPB WWW 82, 44). The irregularly shaped, 0.46-acre lot, located southwest of the intersection of Henderson Road and Old Branch Avenue, was sold soon thereafter to Henderson Road Associates, who then constructed a two-story office building on the lot (PGCDB 4572, 629).

Beginning in 2008, erosion from the stream south of Yorkville Road resulted in severe damage to five houses (5003, 5007, 5009, 5013, and 5017 Yorkville Road). In 2010, those houses were purchased by Prince George's County and subsequently demolished; today that land is fenced off and is part of the Yorkville Road Slope Failure Stream Stabilization Project (Korff 2016).

Early newspaper advertisements touted the houses in Yorkshire Village as custom-built with large bedrooms, multiple bathrooms, basements, and recreational area. Sometimes picture windows and flooring materials were referenced. Often referred to as ramblers, the houses within the subdivision were priced in the mid- to low-$20,000s during the 1950s (The Evening Star 1954, C-13; 1955, C-9; 1959, B-7). The location, with a direct access into Washington, D.C., was also noted as a selling point (The Evening Star 1955, C-9).

John M. King was a builder and involved in Washington, D.C.-area real estate development from the 1930s through the 1950s. His other projects included Michigan Park in Washington, D.C., and Michigan Park Hills in Prince George's County (The Evening Star 1956, A-14).

Pinkney A. and Alice Earnshaw, Jr., and Dewey M. Freeman purchased a majority of the lots in Yorkshire Village and were responsible for house construction on those parcels. Research did not yield much information about the career of the Earnshaws, although Pinkney is listed as the contact for some commercial lot and individual house sales in Clinton, Maryland, in the 1950s and 1960s (The Evening Star 1961, D-11; The Washington Post and Times Herald 1954, R11; 1962, D20).

Dewey M. Freeman was involved in Prince George's County real estate from the 1940s to the 1970s. In 1948, he was elected president of the Real Estate Board in Prince George's County and was listed as the seller for many individual houses in southern Prince George's County in the decades following World War II (The Evening Star 1947a, B-10; 1947b, E-9; 1948, B). He was also involved in the platting and development of the nearby Manchester Estates subdivision.

Evaluation:

Yorkshire Village was evaluated as a planned residential development in the Modern (1930-1960) and Suburban Diversification (1961-1980) periods, in accordance with the Suburbanization Historic Context, Suburbanization Historic Context Addendum, and National Register of Historic Places Criteria A, B, and C.

Yorkshire Village is typical of planned residential developments in Maryland and the Washington, D.C., suburbs. The development did not shape future residential design and does not demonstrate significant associations with important suburban trends. Furthermore, the resource is not known to be associated with any other events that have made a significant contribution to the broad patterns of history. Therefore, Yorkshire Village is not eligible under Criterion A.

John M. King, Dewey M. Freeman, and Pinkney A. Earnshaw, Jr. were all involved in real estate development in southern Prince George's County in the mid-twentieth century; however, they did not have significant influence on suburbanization in Maryland. Research has not shown that the development is associated with the lives of other persons significant in the past. Therefore, the resource is not eligible under Criterion B.

Yorkshire Village is a modest and basic example of a planned residential development and demonstrates no innovations in residential development. The development's buildings exhibit variations of the Ranch and Split-Level forms and Contemporary and Colonial Revival styles, which include standard features typical of the period and demonstrate no distinctive stylistic details. Because Yorkshire Village is a modest and basic example of a planned residential development and does not convey any distinctive characteristics or artistic values, the resource is not eligible under Criterion C. Yorkshire Village was not evaluated under Criterion D.

The boundary for the resource encompasses approximately 53.3 acres and is bounded by I-495 on the north, the Woodlane subdivision on the west, the Glenn Hills subdivision on the south, and Old Branch Avenue on the east, as defined in Prince George's County Plat Book WWW 16 page 34, WWW 22 page 17, and WWW 82 page 44. It includes multiple parcels found on Prince George's County Plat Tax Map 0097.

References:

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---1947b. Advertisements. July 27, 1947, E-9.

---1948. “Freeman Heads County Real Estate Board.” December 21, 1948, B.
---1954. “Yorkshire Village.” April 9, 1954, C-13.
---1955. “Yorkshire Village.” April 5, 1955, C-9.
---1956. “John Meador King, Building and Real Estate Developer.” June 16, 1956, A-14.
---1959. “Yorkshire Village- Custom-Built Rambler.” March 21, 1959, B-7.
---1961. “Clinton-MD.” August 30, 1961, D-11.

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Korff, Jay. 2016. “Worker dies at construction site when a tree fell on him, sustaining head trauma.” https://wjla.com/news/local/pg-fire-confirms-man-is-dead-after-tree-falls-on-him.

Manning, Matt, Danae Peckler, Kerri Barile, Christeen Taniguchi, and Matthew Bray. RK+K. 2018. Suburbanization Historic Context Addendum (1961-1980), Montgomery and Prince George’s Counties, Maryland. Draft. Prepared for the Maryland Department of Transportation State Highway Administration.

Prince George’s County Deed Book (PGCDB). n.d. Prince George’s County Land Records, misc. years. Archives of Maryland Online. Accessed February 8, 2019. http://www.mdlandrec.net/.

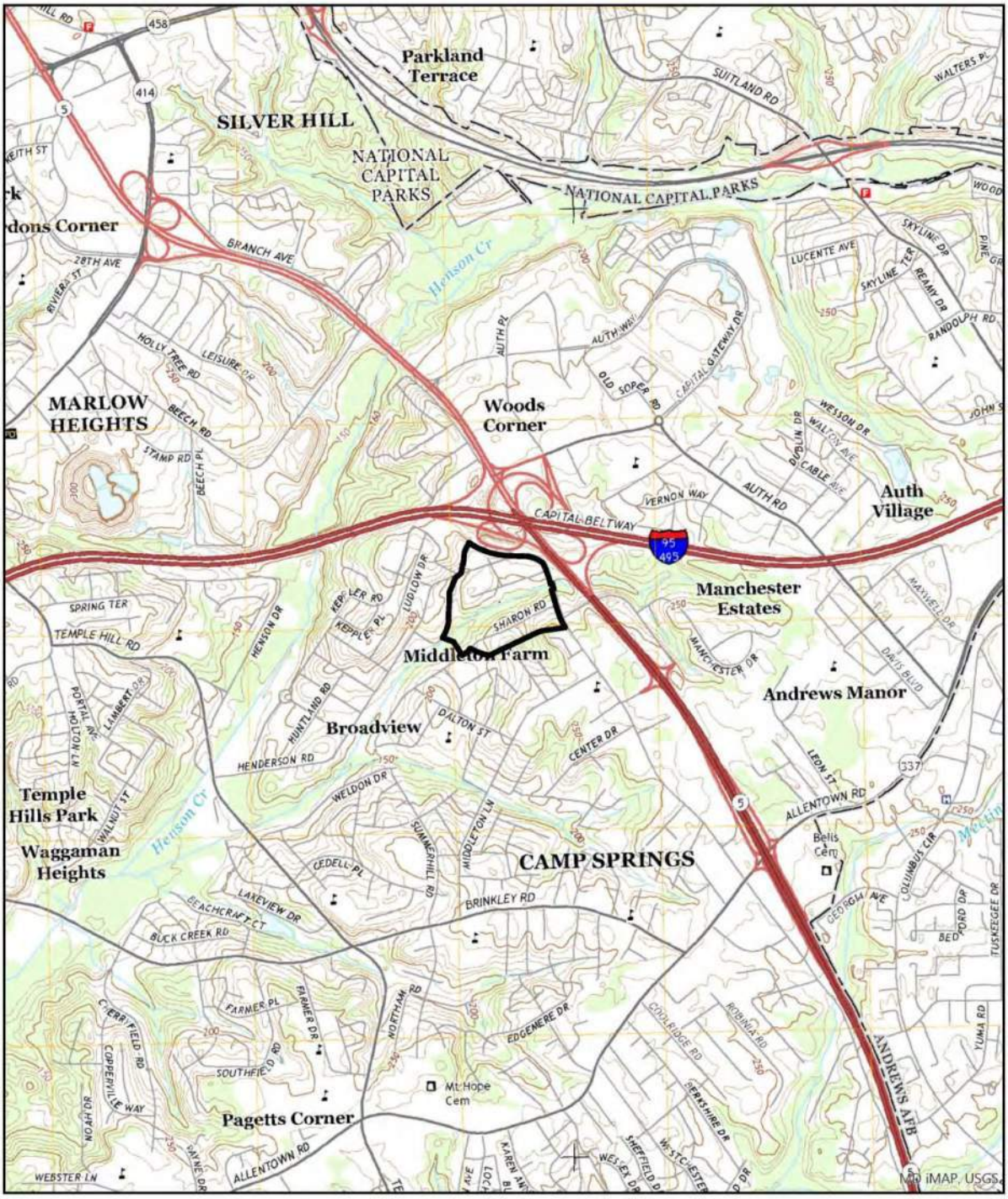
Prince George’s County Plat Book (PGCPB). n.d. Prince George’s County Land Survey, Subdivision, and Condominium Plats, misc. years. Archives of Maryland Online. Accessed February 8, 2019. http://www.mdlandrec.net/.

The Washington Post and Times Herald. 1954. “Clinton Area.” March 28, 1954, R11.
---1962. Advertisement. October 28, 1962, D20.

MAPS

Yorkshire Village Prince George's County

Location: South of I-495, west of Old Branch Avenue City: Temple Hills



USGS 7.5' Quadrangle - Anacostia

0 0.5 1 Miles

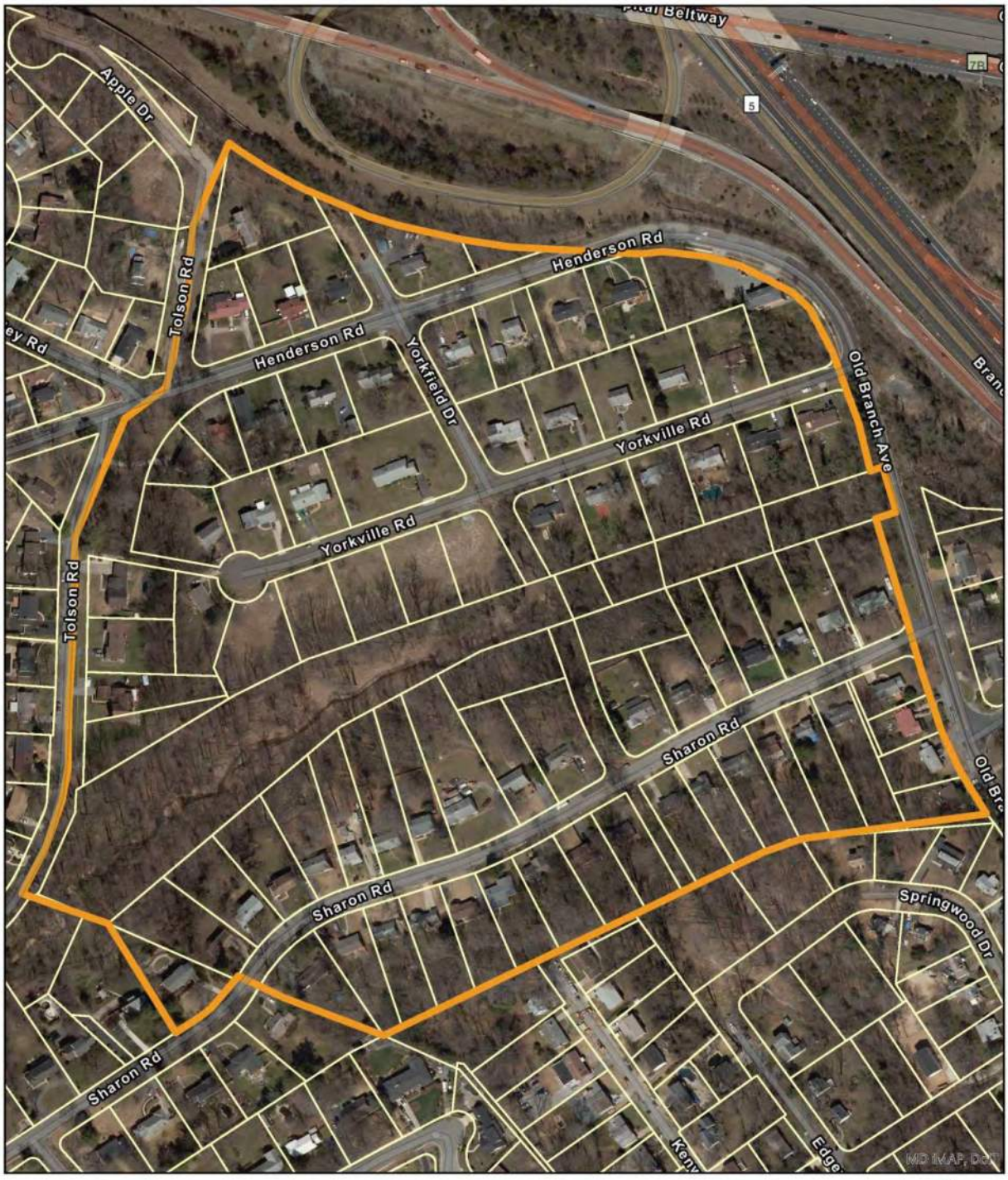
Scale: 1:24,000

N

MAPS

Yorkshire Village Prince George's County

Location: South of I-495, west of Old Branch Avenue City: Temple Hills



PHOTOGRAPHS

5010 Sharon Road, looking northwest.

Streetscape of Sharon Road, looking southwest.

PHOTOGRAPHS

5114 Sharon Road, looking northwest.

5116 Yorkville Road, looking north.

PHOTOGRAPHS

5100 Henderson Road, looking north.

Overview of 5008 and 5012 Henderson Road, looking northwest.

PHOTOGRAPHS

5321 Old Branch Avenue, looking southwest.

Colonial Building, 5121 Henderson Road, looking southeast.

PHOTO LOG

Number of Photos: **8**
Name of Photographer: **Katherine Watts**
Date of Photographs: **2019-03-19**
Location of Original Digital File: **MD SHPO**
File Format: **PG:76B-84_2019-03-19_01.tif… etc.**

Photographs inserted on continuation sheets:

01.tif
5010 Sharon Road, looking northwest.

02.tif
Streetscape of Sharon Road, looking southwest.

03.tif
5114 Sharon Road, looking northwest.

04.tif
5116 Yorkville Road, looking north.

05.tif
5100 Henderson Road, looking north.

06.tif
Overview of 5008 and 5012 Henderson Road, looking northwest.

07.tif
5321 Old Branch Avenue, looking southwest.

08.tif
Colonial Building, 5121 Henderson Road, looking southeast.

Appendix D

Previously Identified Historic Property Forms

(Intentionally Left Blank)

Appendix D

Previously Identified Historic Property Forms

(Intentionally Left Blank)

MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: yes ___
no ___

Property Name: Beallsville Historic District Inventory Number: M:17-01

Address: MD 28 at MD 109 Historic district: X yes ___ no

City: Beallsville Zip Code: 20839 County: Montgomery

USGS Quadrangle(s): Poolesville

Property Owner: multiple Tax Account ID Number: ___

Tax Map Parcel Number(s): ___ Tax Map Number: CU22

Project: MD 28 at MD 109 Repairs to Structure No. 15152RO Agency: State Highway Administration (SHA)

Agency Prepared By: SHA

Preparer's Name: Liz Buxton/Melissa Hess Date Prepared: 09/03/2004

Documentation is presented in: MHT State Historic Sites Inventory Form 17/1

Preparer's Eligibility Recommendation: X Eligibility recommended ___ Eligibility not recommended

Criteria: X A ___ B X C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property: ___

Inventory Number: ___ Eligible: ___ yes Listed: ___ yes

Site visit by MHT Staf ___ yes X no Name: ___ Date: ___

Description of Property and Justification: *(Please attach map and photo)*

Located at the intersection of two early roads, the Barnesville-Poolesville Road (MD 109) and the Old Baltimore Road (Darnestown Road, MD 28), Beallsville is a crossroads community located in a rural area of western Montgomery County. Originally called Bealls Crossroads, the town took its name from the Beall family, members of which owned land near the intersection.

Prior to the American Revolution, the crossroads was an important site for Maryland's Anglican population. In the mid 1700s, the denomination built a chapel of ease for its parishioners at present-day Beallsville. At the time, the chapel was one of only two Anglican places of worship between Rock Creek Parish and Fredrick. The chapel served both as a house of worship and a resting place for travelers.

The crossroads was the site of frequent Civil War activity, including a clash between Confederate and Union soldiers in September of 1862. Union Troops are believed to have used the Monocacy Chapel to stable their horses and eventually destroyed the structure beyond repair. Following the war, the land surrounding the chapel became a public cemetery. The cemetery is the site of 32 Confederate soldiers' graves.

MARYLAND HISTORICAL TRUST REVIE

Eligibility recommended X **Eligibility not recommended** ___

Criteria: X A ___ B X C ___ D **Considerations:** ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments:

John Barlow ✓
Reviewer, Office of Preservation Services 11/5/04 **Date**

Reviewer, National Register Program 11/11/04 **Date**

200403461

By the late nineteenth century, Beallsville had developed into a small village, which was an important center for the surrounding rural community, offering services such as a post office, gristmill, blacksmith shop, wheelwright, and general store. In the early twentieth century, Beallsville's crossroads location made it a convenient place for new businesses associated with the rise of the automobile. In the 1920s and 1930s, Beallsville had a gas station, an automotive repair shop, and an automotive dealership.

The community has not experience substantial growth since the first half of the twentieth century. Beallsville maintains its historic location and setting. The area surrounding the community remains primarily rural. Though the community's individual buildings have undergone minor alterations, most retain a high percentage of their historic materials. The workmanship of the district's buildings evidence late nineteenth and early twentieth century vernacular methods of construction, as well as the occasional high style detail. Though there are few businesses still in operation, Beallsville retains the feeling of a rural crossroads community. Because there is little modern intrusion within the historic district, Beallsville maintains a strong association with Montgomery County's rural history and in particular, the role of crossroads communities in rural economy and life.

The Beallsville Historic District is recommended eligible for the National Register of Historic Places (NRHP). The district is associated with events that have made a significant contribution to the broad patterns of our history (Criterion A). The district is eligible under Criterion A for its association with nineteenth and twentieth century rural small town life and Montgomery County's agricultural past. It is not known to be significant for associations with the lives of persons significant in our past (Criterion B). The district represents a significant and distinguishable entity whose components lack individual distinction (Criterion C). The district is not being evaluated under Criterion D.

CONTRIBUTING RESOURCES

Built in 1910, the Darby Store (M:17-1-2) is located on the northwest corner of MD 109 and MD 28. This two-story, front gabled, frame structure typifies late nineteenth-century general stores in Montgomery County. Though presently vacant, the Darby Store has not been significantly altered.

In 1921, H.C. Darby, the owner of the Darby Store, built a house located at 19811 Darnestown Road. It is a two-and-one-half story, three bay, frame, Queen Anne dwelling with a hipped roof. The front facade features a one story porch with classical columns that wraps to the east elevation.

The Staub Building is located at 19800 Darnestown Road. Built in 1921 by George Staub, it was one of the first auto dealerships in the area. Staub operated the dealership until 1936. The building was used as feed store and post office. Presently, it is a restaurant and post office.

Built in the 1870s, the Staub House at 19810 Darnestown Road features a wrap around porch with turned posts and a 1920s kitchen wing that was added by George Staub.

The house at 19821 Darnestown Road (MD 28) is a three bay, two-and-one-half story, cross gabled, frame dwelling, which features a full-engaged one story front porch.

The Belt-Griffith Store and residence was built on the northeast corner of MD 28 and MD 109 in 1872. The structure was demolished in 1983. A log smokehouse is the only structure remaining on the site.

MARYLAND HISTORICAL TRUST REVIE

Eligibility recommended _____ **Eligibility not recommended** _____

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

MHT Comments:

_____ _____

Reviewer, Office of Preservation Services **Date**

_____ _____

Reviewer, National Register Program **Date**

Beallsville Auto (M: 17-1-4) is a one story commercial automotive repair shop on the southeast corner on Darnestown Road. It was built in the 1930s by Mr. Roberts.

The Monocacy Cemetery (M:17-1-1) is a 13-acre cemetery which includes a chapel and caretakers house. The cemetery is located a the corner of MD 28 and West Hunter Road and contains over 3000 graves, including 32 Montgomery County residents who served in the Confederate Army. A circa 1760 chapel, believed to be constructed of brick, was apparently destroyed by Union Soldiers. The chapel presently standing on the site was built by the Daughters of the American Confederacy in 1912. It is constructed of rusticated coursed ashlar blocks with quoins and features Gothic Revival-influenced pointed arch windows. The caretakers' house dates to circa 1900. The Monocacy Cemetery is recommended individually eligible for the NRHP.

Built in 1921, Structure No. 15152R0 is a concrete retaining wall with a metal pipe railing that was built on the west side of MD 28 near the entrance to the Monocacy Cemetery. Structure No. 151752R0 is a not a contributing resource to the Beallsville Historic District.

The boundary of the Beallsville Historic District encompasses the tax parcels 300, 343, 396, 407, 414, 466, 470, 570, 575, 642, and 683 on Map CU22.

MARYLAND HISTORICAL TRUST REVIE

Eligibility recommended _____ **Eligibility not recommended** _____

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

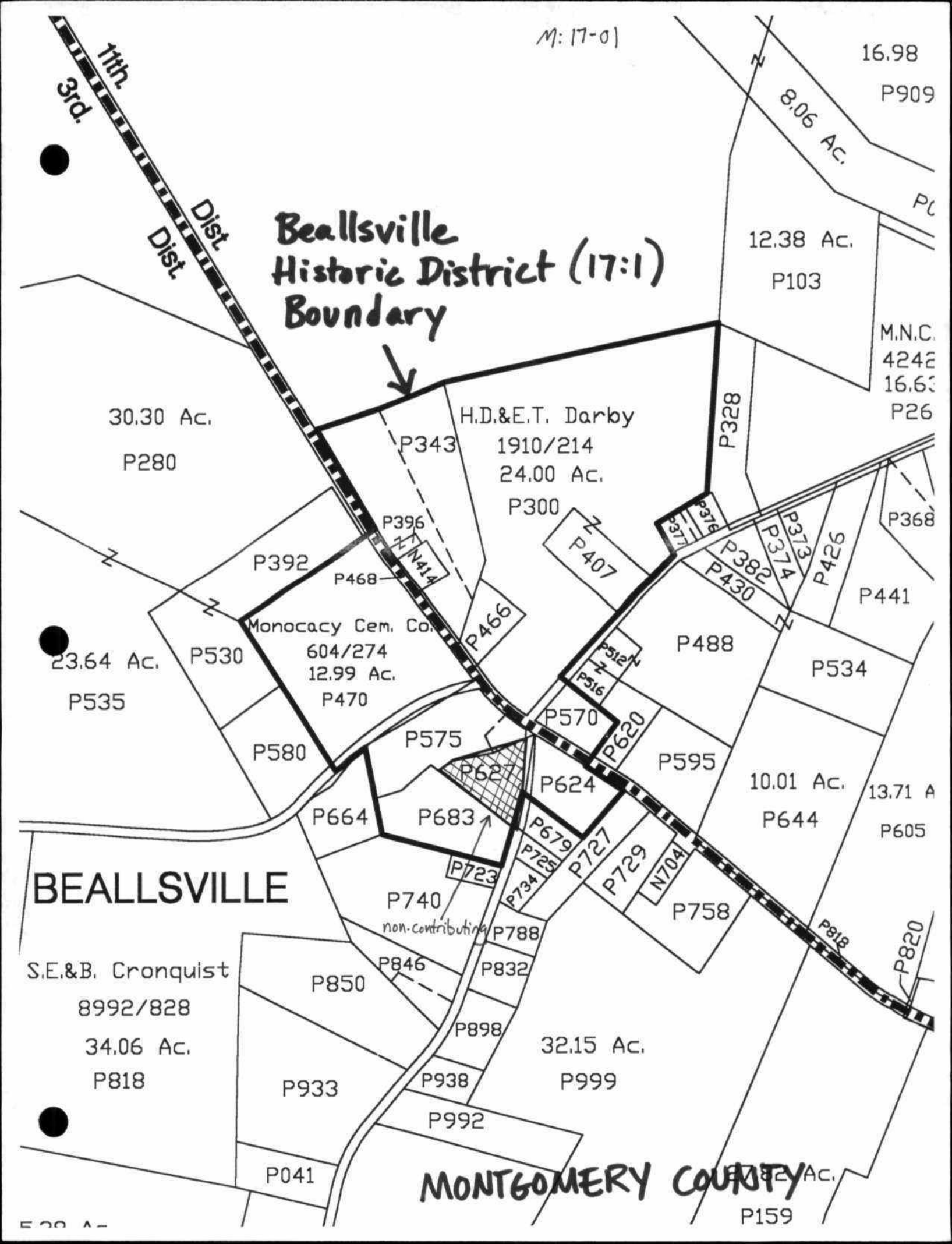
MHT Comments:

_____ _____

Reviewer, Office of Preservation Services **Date**

_____ _____

Reviewer, National Register Program **Date**


M: 17-01
11th
3rd.
Dist.
Dist.
Beallsville
Historic District (17:1)
Boundary
16.98
P909
8.06 Ac.
12.38 Ac.
P103
M.N.C.
4242
16.63
P26
30.30 Ac.
P280
P343
H.D.&E.T. Darby
1910/214
24.00 Ac.
P300
P328
P396
N414
P468
P392
P466
P407
P376
P377
P373
P374
P382
P430
P426
P368
P441
P488
P534
23.64 Ac.
P535
P530
Monocacy Cem. Co.
604/274
12.99 Ac.
P470
P512
P516
P570
P620
P575
P580
P627
P624
P595
10.01 Ac.
P644
13.71 A
P605
P664
P683
P679
P725
P723
P734
P727
P729
N704
P758
BEALLSVILLE
P740
non-contributing
P788
P818
P820
S.E.&B. Cronquist
8992/828
34.06 Ac.
P818
P850
P846
P832
P898
32.15 Ac.
P999
P933
P938
P992
P041
MONTGOMERY COUNTY
P159


Beallsville Historic District
M: 17-1
USGS Topo Quad POOLESVILLE
Barnesville Sta
Cem
BIG
WOODS
ROAD
4WD
Owens Park
Cem
Beallsville
HUNTER
ROAD
Seneca
Creek
BM 509
BM 506
Cem
Jerusalem
JERUSALEM
Jonesville
ROAD

Beallsville Historic District

M: 17-1

19831 Darnestown Road

Mont. Co

L. Buxton

Dec. 2003

MD SHPO

Looking North

1/26


BEALLSVILLE GARAGE

Beallsville Historic District

M: 17-1

Beallsville Garage - SE Corner of MD 28 and MD 109

Mont. Co.

L. Buxton

Dec. 2003

MD SHPO

Looking South

2/26

Beallsville Historic District

M: 17-1

19620 Beallsville Rd

Mont. Co

L. Buxton

Dec 2003

MD SHPO

Looking SW

3/36

Beallsville Historic District

MC 17-1

19620 Beallsville Rd

Mont. Co.

L. Buxton

Dec 2003

MD SHPO

Looking west

4/24


STAUBS
COUNTRY INN

Beallsville Historic District

MI: 17-1

Stauts Building - East elevation

19800 Darnestown Road

Mont. Co.

L. Burton

Dec. 2003

MD 5480

Looking NW

5/26

Beallsville Historic District
M: 17-1
Rear of Staub Building
19800 Darnestown Road
Mont. Co
L. Buxton
Dec. 2003
MD SHPO
Looking North
6/26

Beallsville Historic District

M: 17-1

outbuildings at 19876 Darnestown Rd.

Mont. Co.

L. Buxton

Dec 2003

MD SHPO

Looking North

7/26

Beallsville Historic District

M. 17-1

19810 Darnestown Road - east facade

Mont. Co.

L. Buxton

Dec. 2003

MD SHPO

Looking North

8/26

Beallsville Historic District

M:17-1

19810 Darnestown Road - Rear view

Mont Co.

L. Braxton

Dec 2003

MD SHPO

Looking east

9/26

Beallsville Historic District

MC 17-1

Outbuildings at 19810 Darnestown Rd

Mont Co

L. Buxton

Dec 2003

MD SHPO

Looking South

10/24

Beallsville Historic District

M: 17-1

19810 Darnestown Road

Mont. Co.

L. Burton

Dec 2003

MD SHPO

Looking South

11/26

Beallsville Historic District

M-17-1

Darby House Outbuilding/garage

19811 Darnestown Road

Mont. Co.

Buxton

Dec. 2003

MD SHPO

Looking North

12/26

Beallsville Historic District
M:17-1
Darby House
19811 Darnestown Road
Mont. Co.
L. Burton
Dec. 2003
MD-SHPO
looking North
13/26

Beallsville Historic District
m: 17-1
Darby House
19811 Darnestown Road
Mont. Co.
L. Buxton
Dec. 2003
MD - SHPO
Looking Northwest
14/26

Beallsville Historic District

M: 17-1

19821 Darnestown Road

Mont. Co.

L. Buxton

Dec 2003

MD SHPO

looking North

15/26

Beallsville Historic District

M: 17-1

View along MD 28 looking west at returning well in front of Monocacy Cemetery

Mont. Co

L. Buxton

Dec 2003

MD SHPO

Looking west

16/26

Beallsville Historic District

M: 17-1

View looking toward intersection of MD 28 and MD 109 at Stanley Bldg

Mont. Co

L. Buxton

Dec 2003

MD SHPO

Looking east

17/26


WEST
28
Dickerson
Frederick 18

Beallsville Historic District

M:17-1 - View

Looking west along MD 28 toward Monocacy Cemetery / caretakers house

Mont. Co.

L. Buxton

Dec 2003

MD SHPO

Looking West

18/26

Bealls v. lle Historic District

M: 17-1

Log structure at NE corner of MD 28/MD 109

Mont. Co.

L. Buxton

Dec 2003

MD SHPO

Looking NE

19/26


UNITED STATES
POSTAL SERVICE

Beallsville Historic District

M: 17-1

Staub Building - SW corner of MD 109/MD 28

19800 Darnestown Road

Mont. Co.

L. Buxton

Dec. 2003

MD SHPO

Looking SW

20/26

Beallsville Historic District

M: 17-1

Darby Store at MD 28 and MD 109

Mont. Co.

L. Buxton

Dec. 2003

MD SHPO

Looking North

21/26

7509 10 N N+1-10 AC+01 GR08 2079.1/100.0 N ### >023© BN


109
STOP

Beallsville Historic District

M-17-1

MD 28 - looking toward intersection of MD 109 and Darby House / Store

Mont. Co.

L. Buxton

Dec. 2003

MD 5480

Looking east along MD 28

22/26

Beallsville Historic District

M: 17-1

Monocacy Cemetary Caretakers house

19801 West Hunter Road

Mont. Co.

M. Buxton

MD SHPO

Dec. 2003

Looking west

23/26

Beallsville Historic District
M-17-1
Monocacy Cemetary Chapel
19801 West Hunter Road
Mont. Co.
L. Buxton
MD SHPO
Dec 2003
Looking east
24/26

Beallsville Historic District

M: 17-1

Monocacy Cemetery Chapel

Mont Co

L. Buxton

MD SHPO

Dec 2003

Looking North

25/26

Bealsville Historic District
III-17-1
Monocacy Cemetery Caretakers house
19801 West Hunter Road
Mont. Co
L. Buxton
MD SHPO
Dec 2003
looking North at front of house
24/26

Capsule Summary

Beallsville Historic District (Montgomery County #17/1)
Intersection, Routes 28 and 109
Beallsville, Maryland
Public/Private - Mid-late 1800's to early 1900's

Beallsville's significance is based on its location as a crossroads community, providing goods and services from the mid-19th until well into the 20th century to area residents and travelers on two important early roads, the Barnesville-Poolesville Road (now Route 109) and the Old Baltimore Road (Darnestown Road, Route 28). The area which is now known as Beallsville was, however, important as early as the mid-1700's because it was the site of a pre-Revolutionary War Anglican Chapel-of-Ease, the Monocacy Chapel, one of only two Anglican places of worship between Rock Creek Parish and Frederick until about 1880. Adjacent to the Chapel is Monocacy Cemetery, significant because it contains the graves of early settlers and Confederate soldiers. The Cemetery now covers 13 acres and contains about 3,000 graves.

The small community which began to develop in the mid-1800's at the intersection of two important roads was located on part of two land grants known as "Chappell Forest" and "Resurvey on Disappointment" originally called Beall's Crossroads, the town was probably named after a member of the County's prolific Beall family. Lemuel Beall had a residence near the intersection in 1865, on the north side of Darnestown

Road, and Grafton Beall owned a farm north of the town.

The Martinet and Bond Map of 1865 shows six buildings on the west side of the intersection: W. Bolinger's blacksmith shop and a store on the SW corner, where the Staub building is now located, and, on the NW corner, L. Beall's residence, another store, and a blacksmith shop. The Monocacy Chapel is not shown, although it existed by that time.

From the mid-19th century until the 1970's there was a general store on at least one of the four corners of the intersection and, at times, on more than one, in addition to a post office, a gristmill, several blacksmith shops and a wheelwright shop. In the early decades of the 20th century, with the opening of a garage and auto dealership in what is now the Staub building on the SW corner of the intersection, the emphasis shifted from servicing the horse-and-buggy traveler to the needs of the automobile owner. After the Second World War, with the development of shopping centers, the new mobility afforded by the automobile, and the sale of farms in the area to absentee owners, the importance of Beallsville as a crossroads community declined. Today, both the NE and SE corners of the intersection are vacant, except for a late 19th century log smokehouse on the NE corner. The H.C. Darby Store stands vacant on the NW corner. Only the SW corner, with the Staub building occupied by the post office, a restaurant and a store selling riding equipment, is a reminder of the era when the intersection was a busy commercial corner.

Survey No. M:17/1

Magi No.

DOE __yes __no

Maryland Historical Trust
State Historic Sites Inventory Form

1. Name (indicate preferred name)

historic Beallsville Historic District

and/or common

2. Location

street & number Intersection, Routes 28 and 109 ___ not for publication

city, town Beallsville ___ vicinity of congressional district 8

state Maryland county Montgomery

3. Classification

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

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

name List attached

street & number telephone no.:

city, town state and zip code

5. Location of Legal Description

courthouse, registry of deeds, etc. Montgomery County Courthouse liber See

street & number folio attached

city, town Rockville state Maryland

6. Representation in Existing Historical Surveys

title M-NCPPC Historic Sites Inventory

date 1976 ___ federal ___ state X county ___ local

depository for survey records Park Historian's Office

city, town Needwood Road Rockville state Maryland

7. Description

Survey No. M.17/1

Condition		Check one	Check one
___ excellent	___ deteriorated	___ unaltered	_X_ original site
___ good	___ ruins	___ 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.

Beginning at the NW corner of the intersection of Routes 28 and 109, two buildings are located on the NW corner, the H.C. Darby General Store and the Darby House (19811 Darnestown Road). Both buildings date from the early decades of the 20th century. The Darby Store is a rectangular, three bay, two-1/2 story gable-roofed frame building covered in white clapboard. The gable end, which faces Darnestown Road, has a returned cornice and a small Palladian-style window. There are large display windows across the first floor of the main facade and one window on the second floor is shuttered. Metal poles support a metal-roofed canopy over the front sidewalk, which is covered with wooden boards. The interior of the store has a pressed tin ceiling.

(Description of resources continues on attached sheet)

8. Significance

Survey No. M:17-1

Period	Areas of Significance—Check and justify below				
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	X 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	
X 1800–1899	X commerce	X exploration/settlement	___ philosophy	___ transportation	
X 1900–	___ communications	___ industry	___ politics/government	___ other (specify)	
		___ invention			

Specific dates Mid-late 1800's to early 1900's **Builder/Architect**

check: Applicable Criteria: __A __B __C __D
and/or
Applicable Exception: __A __B __C __D __E __F __G

Level of Significance: __national __state __local

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

Beallsville's significance is based on its location as a rural crossroads community, providing goods and services from the mid-19th until well into the 20th century for area residents and travelers on two important early roads, the Barnesville-Poolesville Road (Route 109) and the Old Baltimore Road (Darnestown Road, Route 28). The area which is now known as Beallsville, was, however, important as early as the mid-1700's because it was the site of a pre-Revolutionary War Anglican Chapel-of-Ease, the Monocacy Chapel, one of only two Anglican places of worship between Rock Creek Parish and Frederick until about 1800. Records show that the first Chapel on the site was probably in use by 1747 and that it served as a house of worship and a resting place for travelers until the Civil War, when it suffered extensive damage. The original Chapel, thought to have been of brick, was replaced in 1912 by the present building, built of stone.

(Statement of Significance continues on attached sheets)

9. Major Bibliographical References

Survey No. M. 17/1

(See attachment for complete listing)
Montgomery County Land Records, Montgomery County Courthouse, Rockville, Md.;
Interviews with residents of Beallsville;
1879 Atlas; 1865 Martinet and Bond Map;

10. Geographical Data

Acreage of nominated property 58 (approximately)

Quadrangle name _____ Quadrangle scale _____

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

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	Lois Snyderman		
organization	Montgomery County Historic Preservation Commission	date	Feb. 2, 1985
street & number	8804 Spring Valley Rd.	telephone	(301) 654-6423
city or town	Chevy Chase	state	Maryland 20815

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

M:17-1

To: The Montgomery County Historic Preservation Commission

From: Lois Snyderman, Researcher

Subject: Beallsville Historic District (17/1)

Date: February 3, 1985

Beallsville derives its significance from its history as a rural crossroads community, providing goods and services to area residents and to travelers on what is now Route 109 and Route 28, both important roads early in the county's history. The remaining buildings in this small community date primarily from the late 19th century and the early 20th century. Monocacy Cemetery is the only physical reminder of the area's importance in the mid-1800's, when the original chapel was erected at the site of the cemetery.

Although the buildings that comprise the potential historic district are on the west side of the intersection (except for the log smokehouse on the NE corner) the Commission may wish to consider including both the NE and SE corner lots because both were, at one time, used for commercial and residential purposes and, therefore, played a role in the development of the community. In addition, they can be viewed as "buffer" sites, since any future development * could severely impact the community, if it were incompatible.

* of these two sites

BEALLSVILLE (17-1)

A. Statement of Significance

Beallsville's significance is based on its location as a crossroads community, providing goods and services from the mid-19th until well into the 20th century to area residents and travelers on two important early roads, the Barnesville-Poolesville Road (now Route 109) and the Old Baltimore Road (Darnestown Road, Route 28). The area which is now known as Beallsville was, however, important as early as the mid-1700's because it was the site of a pre-Revolutionary War Anglican Chapel-of-Ease, the Monocacy Chapel, one of only two Anglican places of worship between Rock Creek Parish and Frederick until about 1800. Records show that the first Chapel on the site was probably in use by 1747 and that it served as a house of worship and a resting place for travelers until the Civil War, when it suffered extensive damage. The original Chapel, thought to have been of brick, was replaced in 1912 by the present building, built of stone.

Monocacy Cemetery, significant because it contains the graves of some of the earliest settlers in this part of Maryland as well as a number of Confederate soldiers, grew up around the Chapel. The Cemetery now covers 13 acres and contains about 3,000 graves.

What is now the Barnesville-Poolesville Road was known as the Barnesville to Monocacy Chapel Road when it was improved with public funds and opened for public use in 1838. In addition to providing a direct route to Monocacy Chapel, the improved road allowed for better mail delivery on an important mail route, with "---Monocacy Chappell (lying) in the nearest direction to Poolesville from Barnesville --- (with) considerable intercourse between the two places --- and the mail passing from Barnesville to Poolesville twice a week". Beallsville has had a post office since the early 1800's, with the facility located, at one time or another, in buildings on all four corners of the intersection. A third reason for the improvement of the road to Monocacy Chapel was the fact that nearby Medley Hill was (from the late 18th to the early 19th century) the polling place for area residents.

Old Baltimore Road (Route 28, Darnestown Road), which runs roughly east and west through Beallsville, has been a heavily-traveled thoroughfare since the 18th century, when it could be taken from Georgetown to the Mouth of the Monocacy. Beallsville was the next community on Darnestown Road, for

the traveler going east from the Mouth of the Monocacy.

Although the Metropolitan Branch of the B&O Railroad bypassed Beallsville, its completion in 1873 spurred the development of nearby Sellman Station as an important shipping point and processing center for the grain and dairy products produced by area farmers; it also increased the traffic that passed through Beallsville on the Barnesville-Poolesville Road. J. Thomas Scharf, in his 1882 History of Western Maryland, describes the community as a "thriving village, 18 miles from Rockville and 3 1/2 miles from Sellman's Station". T.H.S. Boyd, in The History of Montgomery County, Maryland, published in 1879, describes the Beallsville area as "producing good crops of wheat, corn and hay" and as having "churches, schools, a store, a post office and a wheelwright and blacksmith shop".

The small community which began to develop in the mid-1800's at the intersection of two important roads was located on part of two land grants known as "Chappell Forest" and "Resurvey on Disappointment" Originally called Beall's Crossroads, the town was probably named after a member of the County's prolific Beall family. Lemuel Beall had a residence near the intersection, on the north side of Darnestown Road in 1865, and Grafton Beall owned a farm north of the town.

The Martinet and Bond Map of 1865 shows six buildings on the west side of the intersection: W. Bolinger's blacksmith shop and a store on the SW corner, where the Staub building is now located, and, on the NW corner, L. Beall's residence, another store, and a blacksmith shop. The Monocacy Chapel is not shown, although it existed by that time.

The Hopkins Atlas of 1878 shows the W. Bolinger wheelwright and blacksmith shop and three other buildings on the SW corner. The Monocacy Cemetery is one block to the west, with what may be the caretaker's house shown near the intersection of Darnestown Road and Hunter's Road. The NW corner has the schoolhouse, a residence owned by A. Lindig (across from the Cemetery) and (clustered near the intersection) buildings belonging to L. Beall and J.M. Viers. The Atlas shows three buildings occupying the NE corner of the intersection, including the John A. Belt/F. Griffith store and post office, which was built in 1872 and demolished in 1983. Cattle scales were located on an adjacent lot, just north of the Belt property, in the late 19th and the early 20th centuries.

As the attached description indicates, from the mid-19th century until the 1970's there was a general store on at least one of the four corners of the intersection and, sometimes, on more than one, in addition (at various times) to a post office, a gristmill, several blacksmith shops and a wheelwright shop. In the early decades of the 20th century, with the opening of a garage and auto dealership in what is now the Staub building on the SW corner of the

intersection, the emphasis shifted from servicing the horse-and-buggy traveler to the needs of the automobile owner. There was, however, a working blacksmith shop behind the Staub building until about 1923. After the Second World War, with the development of shopping centers, the new mobility afforded by the automobile and the sale of some of the farms in the area to absentee owners, the importance of Beallsville as a crossroads community declined. Today, both the NE and SE corners of the intersection are empty, except for a late 19th century log smokehouse on the NE corner. The H.C. Darby Store stands vacant on the NW corner. Only the SW corner, with the Staub building occupied by the post office, a restaurent and a store selling riding gear, is a reminder of the era when the intersection was a busy commercial corner.

B. Description of Properties in Proposed Historic District

At the NW corner of the intersection of Routes 28 and 109 is the H.C. Darby general store and the Darby house, (19811 Darnestown Road), both of which date from the early decades of the 20th century. The Darby store is a rectangular, three bay, two-1/2 story gable-roofed frame building covered with white clapboard. The gable-end, which faces Darnestown Road, has a returned cornice and a small Palladian-style window. There are large display windows across the first floor of the main facade and one window on the second floor is shuttered. Metal poles support a metal-roofed canopy over the front sidewalk, which is covered with wooden boards. The interior of the store has a pressed tin ceiling.

The Darby store, built about 1910 by H.C. Darby, has been vacant since 1974, when the current owner, H.D. Darby (H.C. Darby's son) retired. The building appears to be in good condition, but is used only for storage. In the early 1920's the post office was located in the store and Mr. Darby's father was the postmaster. The Darby building, which has never been altered, is an excellent example of an early 20th century rural general store.

The Darby house, adjacent to the store, was built in 1921 by H.C. Darby. It is a two story, Queen Anne style white clapboard building with three bays, a hipped roof and side gables on each elevation. A one story porch, supported by classical columns, stretches the width of the main and east elevations. Double columns frame the central entranceway, which has sidelights and a transom..

There is a two story projecting bay at the east corner of the front elevation, topped with a gable with a small round-arch window. The east

elevation has a similar bay, with gable and window, while the west elevation has the gable and the window, but no bay. There is a two story corner porch at the northeast corner of the east elevation, and a ~~two~~ ONE story porch at the rear of the house. The windows are one over one, with shutters. The house appears to be in excellent condition.

The property on which the Darby store and house stand was part of the Brewer farm in the late 18th and early 19th centuries. In the mid-1800's the Brewers built a store and blacksmith shop on the northwest corner of the intersection. In 1891, the Allnutts acquired the farm and the commercial properties, which included a post office. In 1908, when Harry C. Darby bought some 27 acres, he tore down the existing buildings (including a gristmill built by George A. Staub, who built the Staub building) to build a larger commercial outlet. In the 1920's and 1930's the residents of nearby communities and farms shopped regularly at the Darby Store. In 1954 Harry C. Darby's widow sold the store to their son, H. Dunbar Darby, who closed it in 1974, when he retired.

West on Darnestown Road, on the north side of the road, are two buildings which appear to date from the late 19th or early 20th century. The house at 19821 Darnestown Road, next to the Darby house, is a two-1/2 story, gable-roofed , white clapboard, three bay structure. A one story porch with a center gable stretches across the width of the front elevation and has turned posts and decorative brackets. The house has two end chimneys, a metal roof, and a two bay, gable-roofed addition at the rear. This property may be the "A. Lindig" residence on the 1878 Atlas.

On the west side of this property, at 19831 Darnestown Road, is a simple, two story, three bay, gable-roofed, asbestos-sided residence with a one story porch across the front, a center entrance on the main facade and a small porch and entrance on the east elevation.

Across Darnestown Road, on the south side , is the Monocacy Cemetery, with its 1912 Chapel and late 19th-early 20th century caretaker's house, at 19801 West Hunter Road. (See site ~~attached~~ material for "Description" and "Significance" of Chapel and Cemetery). The caretaker's house is a two-1/2 story, L-shaped, gable-roofed, three bay, white clapboard structure. The main facade has a one story porch with turned posts and decorative brackets. There are two small windows in the east gable end and a shed-roofed addition in the rear.

Further east (and very close to the Staub building) is the house at 19810 Darnestown Road, probably dating from the third quarter of the 19th century. A two story, three bay, gable-roofed asbestos-sided building with a wrap-around porch and turned posts, it may be one of the properties pictured at the SW intersection on the 1865 Map and the 1878 Atlas. The gable-end is

turned toward the road and a small kitchen addition at the south end of the house forms an "ell". Charles N Staub, whose father, George, built the Staub building, lived in this house from 1925, when he was 5, until 1980. It was his father who added the kitchen in the 1920's. The house is on part of an 8 acre parcel which, until 1980, belonged to the Staubs and which includes the Staub building, a house at 19620 Beallsville Road, just south of the Staub building and a vacant lot between Staub's and the Beallsville Road property where another house stood until it was demolished in the 1960's.

Immediately next door, at the SW corner of the intersection, is the Staub Building, at 19800 Darnestown Road, occupied by the only businesses still in operation at the intersection. A two story, four bay, shed-roofed, stucco-covered building with a smaller shed-roofed addition in the rear, what is now the Staub building was built for use as a garage and auto dealership about 1921 by a Mr. Brosius, to replace an earlier garage on the site destroyed by fire. The auto dealership was one of the first in the area.

George A. Staub bought the building in 1923 and continued to operate the auto dealership, selling Chevrolets. At the time, a blacksmith shop was still located behind the garage; it was demolished by Mr. Staub in the 1940's. A log house, which stood just south of the garage on Beallsville Road was a (as mentioned above) demolished in the 1960's. About 1936, the garage was discontinued and, in the 1940's, Mr. Staub turned part of the building into a lunchroom and part into a feed store. His son, Charles N. Staub, bought the property from him in 1947 and discontinued the feed store in 1952. He sold it to the present owners, Semmes and Hinton, in 1980, but the building continues to be known as the Staub building. It now houses Staub's Country Inn (a restaurant), The Rusty Stirrup Tack Shop (selling riding clothes and accessories) and a post office. There has been a post office in the building since the early 1930's, when Mr. Staub's father was the postmaster. The outline of a set of double garage doors can still be seen in the center section of the building.

As noted earlier, a blacksmith shop and a store are shown on the SW corner on both the 1865 Martinet and Bond Map and the 1878 Atlas, indicating that the site has been used for commercial purposes for at least 120 years, serving, first, area farmers and travellers with their horses and buggies, and, later, changing to accomodate the new automotive age.

South of the Staub building, on the west side of Beallsville Road, at 19620 Beallsville, is a mid-late 19th century, two-story, three bay, gable-roofed house with a one story porch with turned posts and decorative brackets; asbestos siding covers the original clapboard. The door of a closet in the dining room has (according to Mr. Staub) the message "we moved in in 1835" written on it. Part of the house may be of log construction.

Although the 1878 Atlas shows the southeast corner of the intersection vacant (as it is today), a building existed there from the early years of the 20th century until it was demolished in the 1950's. Used for several years as both a residence (2nd floor) and a general store (1st floor), it was, according to conversations with residents of the area, owned first by the Hilliard's and then by the Robert's, both of whom also ran the store. The auto repair garage just east of the corner, on the south side of Darnestown Road, was built by Mr. Roberts in the 1930's. Before opening his own store, Mr. Darby ran the store on the southeast corner for several years. It apparently went out of business when Mr. Darby opened his store on the NW corner, after which the building was used only for residential purposes.

The northeast corner, as mentioned earlier, was the site of the John Belt/F. Griffith, store and post office in the late 1800's. Francis M. Griffith purchased the corner lot in 1872 and the building was constructed and occupied later that year, with John A. Belt running the general store and Francis Griffith as postmaster. In 1878 the store was taken over by the firm of Chiswell and Davis, although the property remained in Griffith's ownership. Griffith eventually owned a 28 acre block of land at the NE corner.

The property remained in the Griffith family until 1910, when the building and acreage were sold. The building was converted to residential use, with another building on the site being used for a garden business, in the mid-1950's. The 19th century Belt/Griffith store and post office was demolished in 1983; a late 19th century one-room log smokehouse with a gable roof and a stone foundation remains on the site, facing route 28.

==========

Bibliographic References

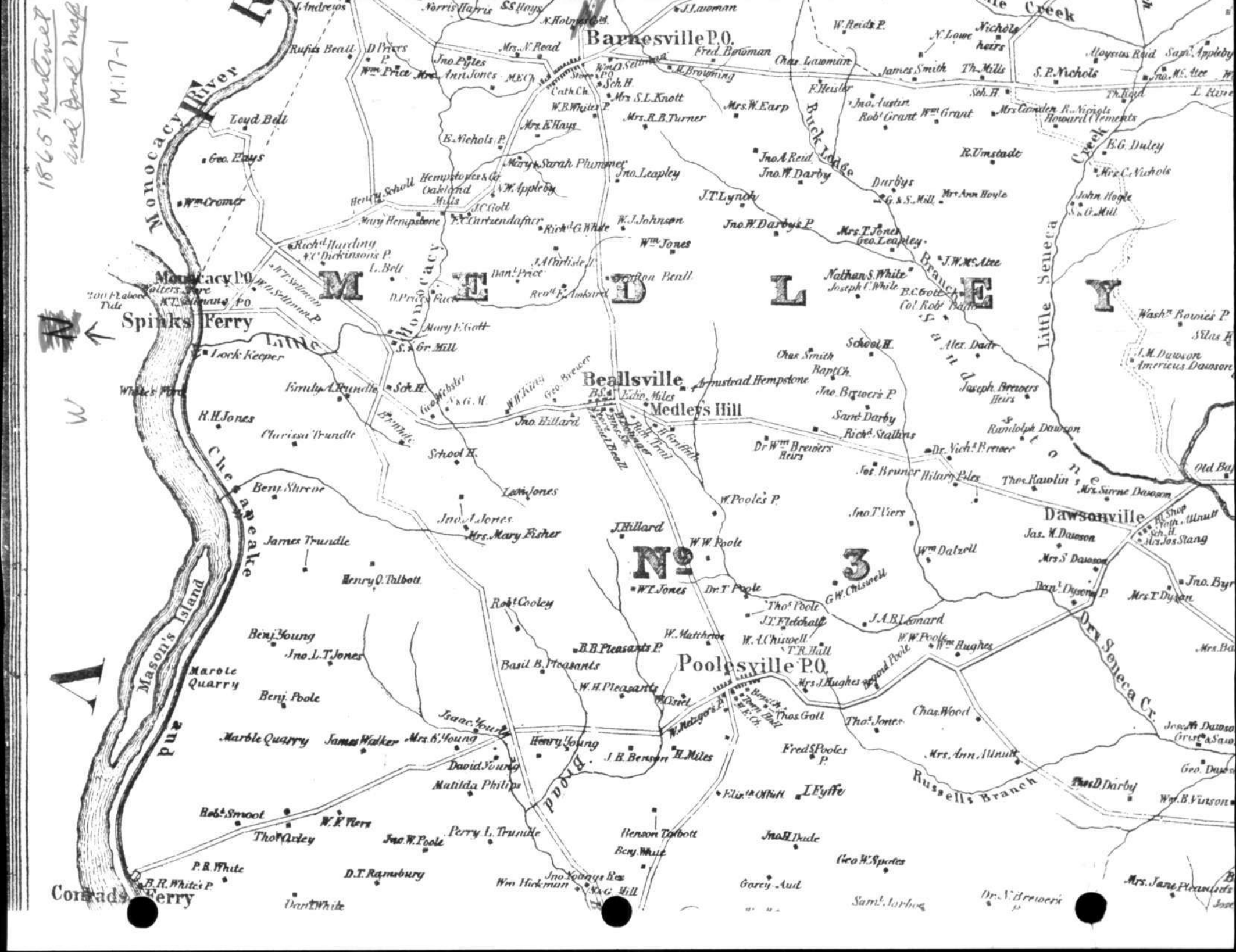
Monocacy Cemetery (P470) 604/274
Log Smokehouse Site (P570) 5486/306
Staub Building and House at 19810 Darnestown Rd. (P575) 5539/659
House at 19620 Beallsville Rd. (P683) 5539/659
H.C. Darby Store and House (P300) 1910/214
House at 19831 Darnestown Rd. (P343) 328/208
House at 19821 Darnestown Rd. (P466) 1025/309

A Grateful Remembrance, Hiebert and MacMaster
History of Western Maryland, J.T. Scharf (1882) Vol. I
The History of Montgomery County, Maryland, T.H.S. Boyd (1879)

1878 Hopkins Atlas
1865 Martinet and Bond Map

Interviews

Mr. Charles Elgin, President of the Monocacy Cemetery Co.
(301) 349-3372 Poolesville, Md.
Charles N. Staub, Frederick, Md. (301) 694-0868
Harry Darby, Beallsville, Md. (301)349-2657


1865 Martenet and Bond Map
M-17-1
Monocacy River
Barnesville P.O.
Buck Lodge
Little Seneca Creek
Monocacy P.O.
Spinks Ferry
Little Monocacy
Beallsville
Medley's Hill
Dawsonville
Poolesville P.O.
No. 3
Chesapeake
Mason's Island
Pur
Broad
Dry Seneca Cr.
Russells Branch
Conrads Ferry
M E D L E Y

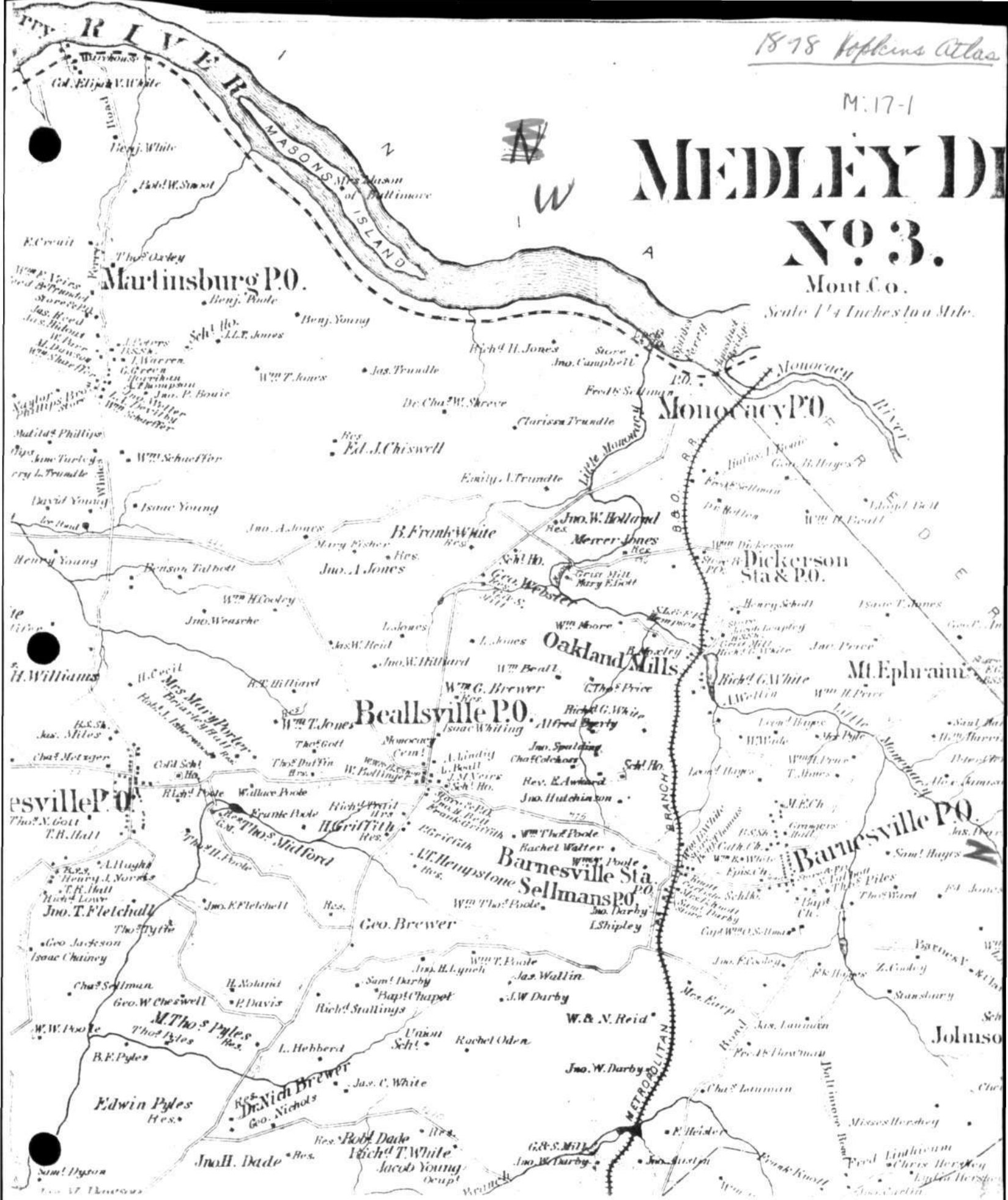
1878 Hopkins Atlas

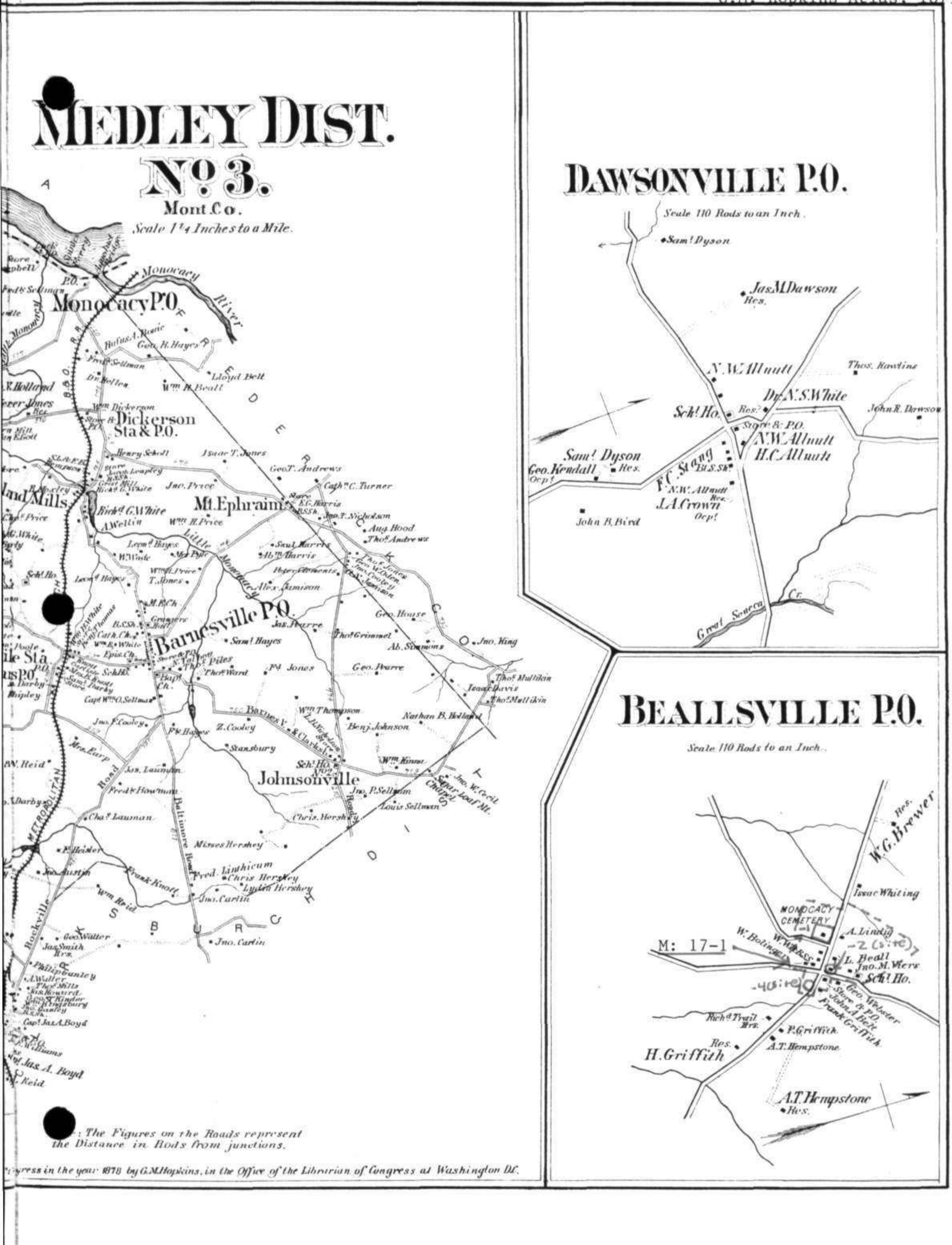
M:17-1

MEDLEY DI
No. 3.

Mont Co.

Scale 1 1/4 Inches to a Mile.




MEDLEY DIST.
No 3.
Mont.Co.
Scale 1¼ Inches to a Mile.
Monocacy P.O.
Monocacy River
Dickerson Sta & P.O.
Mt. Ephraim
Barnesville P.O.
Johnsonville
Sugar Loaf Mt.
The Figures on the Roads represent the Distance in Rods from junctions.
gress in the year 1878 by G.M.Hopkins, in the Office of the Librarian of Congress at Washington DC.
DAWSONVILLE P.O.
Scale 110 Rods to an Inch.
Sam! Dyson
Jas.M.Dawson Res.
N.W.Allnutt
Thos. Rawlins
Dr. N.S.White
John R. Dawson
Sch! Ho.
Store & P.O.
N.W.Allnutt
H.C.Allnutt
Saml Dyson Res.
Geo.Kendall Ocp!
F.C.Stang B.S.Sh.
J.A.Crown Ocp!
John B. Bird
Great Seneca Cr.
BEALLSVILLE P.O.
Scale 110 Rods to an Inch.
W.G.Brewer Res.
Isaac Whiting
MONOCACY CEMETERY
A.Lindig
W.Bolinger
L.Beall
Jno.M.Wiers
Sch! Ho.
Geo.Webster
Store & P.O.
John A.Belt
Frank Griffith
Richd Trail Hrs.
P.Griffith
A.T.Hempstone
H.Griffith Res.
A.T.Hempstone Res.
M: 17-1


25'
20'
Mt Ephraim
Comus
Barnesville
Slidell
Dickerson
Barnesville Sta
Sellman
Monocacy
Poolesville
Dawsonville
Sugarland
Beallsville
Boyds
Woodfield
Bucklodge
METROPOLITAN
BALTIMORE
OHIO
FREDERICK
MONTGOMERY
Furnace Br
Little Monocacy
Little Seneca Creek
Bennett Creek
Turkey Foot Br
Whites Ford
Spinks Ferry
M: 17-1
Beallsville Historic District
Seneca 15' Quad, 1908, Reprinted 1932

M#17-1

1603225601

MARYLAND HISTORICAL TRUST WORKSHEET

NOMINATION FORM
for the
NATIONAL REGISTER OF HISTORIC PLACES, NATIONAL PARKS SERVICE

SEE INSTRUCTIONS

1. NAME

COMMON: Beallsville

AND/OR HISTORIC: Beallsville Post Office

2. LOCATION

STREET AND NUMBER: Rte. 28 and Rte. 109

CITY OR TOWN: Beallsville

STATE: Maryland

COUNTY: Montgomery

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☒ District ☒ Building ☐ Site ☐ Structure ☐ Object	☐ Public ☒ Private ☐ Both	Public Acquisition: ☐ In Process ☐ Being Considered	☒ Occupied ☐ Unoccupied ☐ Preservation work in progress	Yes: ☐ Restricted ☒ Unrestricted ☐ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☒ Commercial	☐ Industrial	☒ Private Residence	☒ Other (Specify) Vacant	
☐ Educational	☐ Military	☐ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY

OWNER'S NAME: Various private owners

STREET AND NUMBER:

CITY OR TOWN: STATE:

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Montgomery County Courthouse

STREET AND NUMBER:

CITY OR TOWN: Rockville STATE: Maryland

Title Reference of Current Deed (Book & Pg. #):

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: None

DATE OF SURVEY: ☐ Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS:

STREET AND NUMBER:

CITY OR TOWN: STATE:

M:17-1

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☒ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☒ Altered	☐ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (if known) PHYSICAL APPEARANCE

The remaining building sites at the crossroads are the old store and post office, Darby's Store, the balcksmith's shop, and a house. The store is a two story structure built in two sections; the west end had a central entrance and flanking windows. The east end is a two bay extension. The present facade has a central gable; the chimney appears to once have been at the east end of the smaller house but is now central.

The blacksmith's shop has a shed roof. It is now a luncheonette and post office and may not be the same building.

Darby's store is a frame, two story, facade, end gabled structure with large display windows on the main facade. In the gable there is a three-part window. The cornice returns into the gable end.

The house is a two story frame structure with a porch across the front. It has the end gable facing the street.

SEE INSTRUCTIONS

M:17-1

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

- ☐ Pre-Columbian
- ☐ 15th Century
- ☐ 16th Century
- ☐ 17th Century
- ☐ 18th Century
- ☒ 19th Century
- ☒ 20th Century

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

- ☐ Aboriginal
  - ☐ Prehistoric
  - ☐ Historic
- ☐ Agriculture
- ☐ Architecture
- ☐ Art
- ☐ Commerce
- ☐ Communications
- ☐ Conservation
- ☐ Education
- ☐ Engineering
- ☐ Industry
- ☐ Invention
- ☐ Landscape Architecture
- ☐ Literature
- ☐ Military
- ☐ Music
- ☐ Political
- ☐ Religion/Philosophy
- ☐ Science
- ☐ Sculpture
- ☐ Social/Humanitarian
- ☐ Theater
- ☐ Transportation
- ☐ Urban Planning
- ☐ Other *(Specify)* _____

STATEMENT OF SIGNIFICANCE

SEE INSTRUCTIONS

M:17-1

9. MAJOR BIBLIOGRAPHICAL REFERENCES

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY							OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES					
CORNER	LATITUDE			LONGITUDE				LATITUDE			LONGITUDE		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	°	'	"	°	'	"		°	'	"	°	'	"
NE	°	'	"	°	'	"							
SE	°	'	"	°	'	"							
SW	°	'	"	°	'	"							

APPROXIMATE ACREAGE OF NOMINATED PROPERTY:

Acreage Justification:

11. FORM PREPARED BY

NAME AND TITLE:
Christopher Owens, Park Historian

ORGANIZATION
M-NCPPC

DATE
17 May 74

STREET AND NUMBER:
8787 Georgia Avenue

CITY OR TOWN:
Silver Spring

STATE
Maryland

12. State Liaison Officer Review: (Office Use Only)

Significance of this property is:

National ☐ State ☐ Local ☐

Signature

SEE INSTRUCTIONS

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION
8787 Georgia Ave. • Silver Spring, Maryland 20910-3760

M:17-1

FOR ADDITIONAL INFORMATION

See correspondence dated January 11, 1989

ACTION TAKEN

M: 17-1 Beallsville Historic District

SUBJECT: Final Draft Amendment to the Master Plan for Historic Preservation: Beallsville Historic District

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I am pleased to transmit to you the Final Draft Amendment to the Master Plan for Historic Preservation: Beallsville Historic District.

This amendment recommends the designation of one historic district in Beallsville, in the western part of Montgomery County, to be protected under the Historic Preservation Ordinance, Chapter 24A of the Montgomery County Code.

Should you have any questions concerning this specific amendment, please do not hesitate to contact Gwen Marcus or Mary Ann Rolland of our staff at 495-4570.

DA:glm
Attachment

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

M:17-01

FOR ADDITIONAL INFORMATION

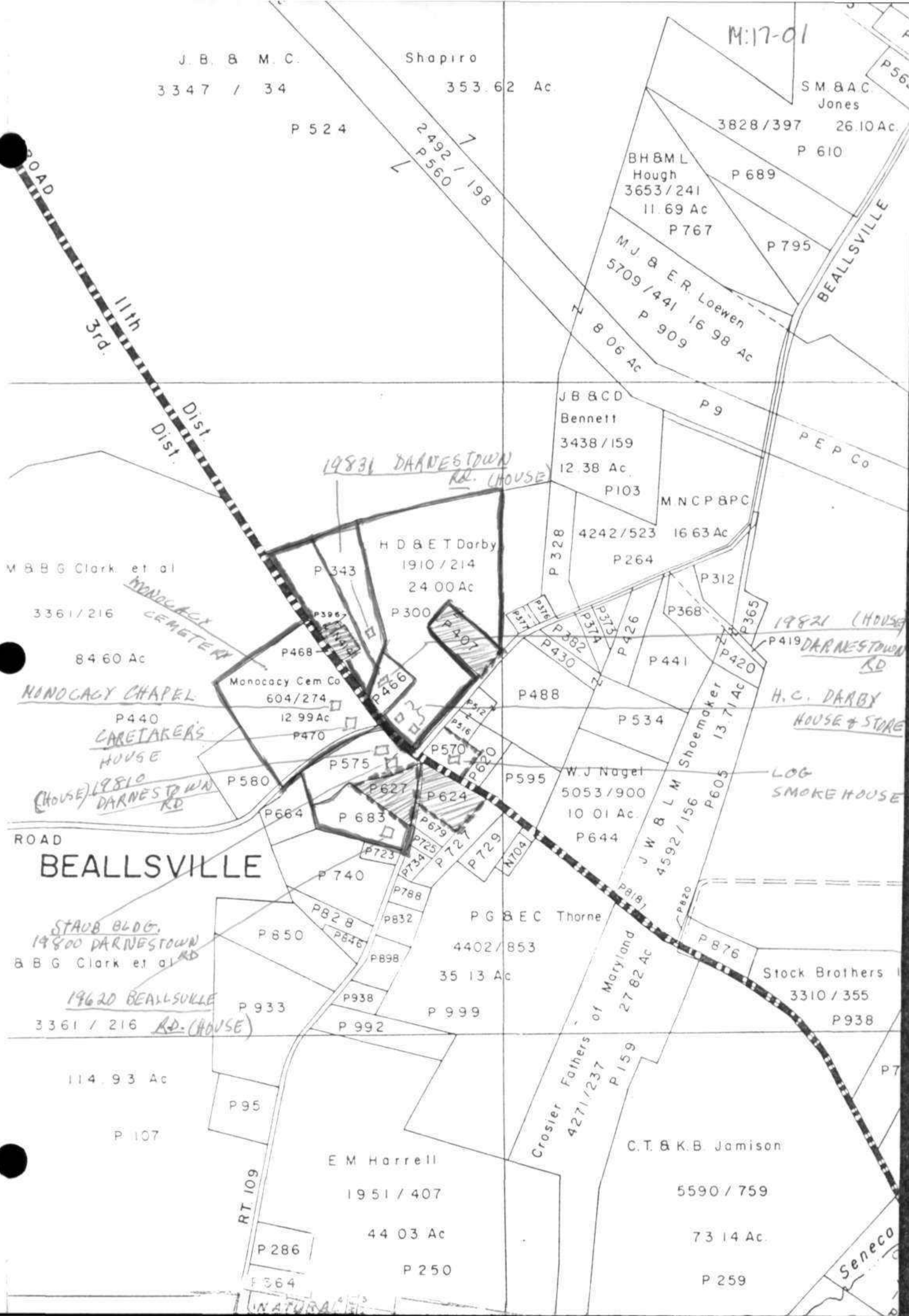
See correspondence dated May 9, 1988

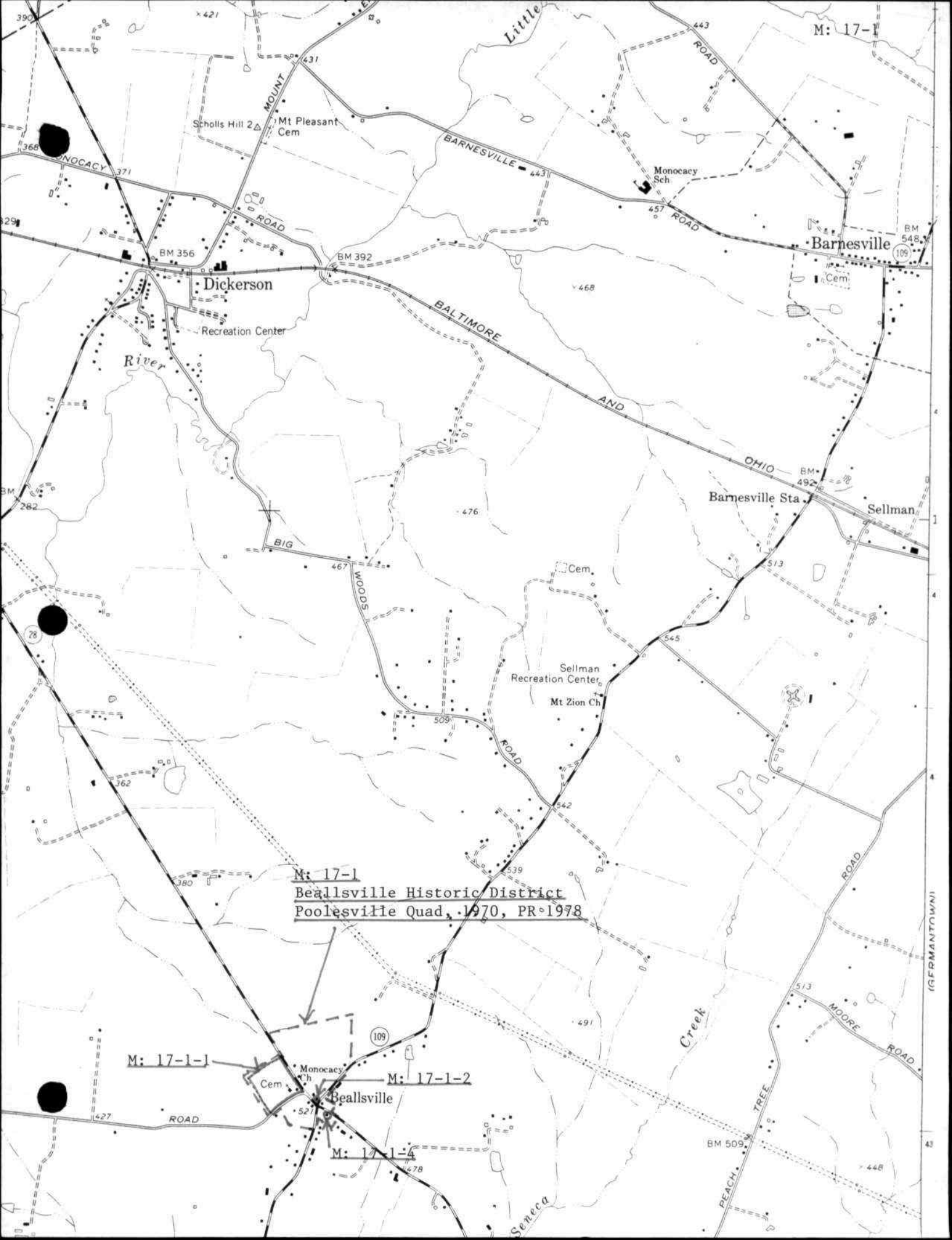
ACTION TAKEN

THE AMENDMENT

The purpose of this Amendment is to designate the following sites on the Master Plan for Historic Preservation thereby extending to them the protection of the County's Historic Preservation Ordinance, Chapter 24A of the Montgomery County Code.

M: 17-01	Beallsville H.D.
M: 17-02	Charline Manor/Hanover
M: 17-24	East Oaks
M: 17-26	Stoney Castle
M: 17-58	Montevideo
M: 17-61	Upton Darby House
M: 17-62	Pooles General Store
M: 18-13	White/Turner Farm
M: 18-14	Joseph White House
M: 18-15	Friends Advice
M: 18-17	Greenwood/Day House
M: 18-19	Hilary Pyles Farm


M:17-01
J. B. & M. C.
3347 / 34
P 524
Shapiro
353.62 Ac.
2492 / 198
P 560
S.M. & A.C. Jones
3828/397
26.10 Ac.
P 610
BH & ML Hough
3653/241
11.69 Ac
P 767
P 689
P 795
BEALLSVILLE
M.J. & E.R. Loewen
5709/441
16.98 Ac
P 909
8.06 Ac
ROAD
11th Dist.
3rd. Dist.
J B & C D Bennett
3438/159
12.38 Ac
P103
P 9
P E P Co
M.N.C.P. & P.C.
4242/523
16.63 Ac
P264
P 328
19831 DARNESTOWN RD. (HOUSE)
H D & E T Darby
1910/214
24.00 Ac
P 343
P 300
P 407
M & B G Clark et al
3361/216
84.60 Ac
MONOCACY CEMETERY
P396
P468
P466
Monocacy Cem Co
604/274
12.99 Ac
P470
MONOCACY CHAPEL
P440
CARETAKERS HOUSE
P580
(HOUSE) 19810 DARNESTOWN RD
P575
P570
P627
P624
P620
P512
P516
P664
P683
P679
P725
P727
P729
P723
P734
N704
P376
P377
P382
P374
P373
P426
P430
P368
P365
P312
P419
P420
P441
P488
P534
P595
19821 (HOUSE) DARNESTOWN RD
H.C. DARBY HOUSE & STORE
LOG SMOKEHOUSE
W.J. Nagel
5053/900
10.01 Ac.
P644
J.W. & L.M. Shoemaker
4592/156
13.71 Ac
P605
ROAD
BEALLSVILLE
P 740
P788
P828
P832
P846
P850
P898
P938
P 933
P 992
STAUB BLDG. 19800 DARNESTOWN RD
& B G Clark et al
19620 BEALLSVILLE RD. (HOUSE)
3361 / 216
114.93 Ac
P95
P 107
P G & E C Thorne
4402/853
35.13 Ac
P 999
P818
P820
P 876
Stock Brothers
3310/355
P938
Crosier Fathers of Maryland
4271/237
27.82 Ac
P 159
C.T. & K.B. Jamison
5590/759
73.14 Ac.
P 259
E M Harrell
1951/407
44.03 Ac
P 250
RT. 109
P 286
P 364
Seneca


M: 17-1
Little
ROAD
MOUNT
Scholls Hill 2
Mt Pleasant Cem
BARNESVILLE
Monocacy Sch
ROAD
Barnesville
BM 548
Cem
BM 356
BM 392
Dickerson
Recreation Center
BALTIMORE
AND
OHIO
River
BM 492
Barnesville Sta
Sellman
BIG
WOODS
Cem
Sellman Recreation Center
Mt Zion Ch
ROAD
M: 17-1
Beallsville Historic District
Poolesville Quad, 1970, PR 1978
M: 17-1-1
Monocacy Ch
Cem
M: 17-1-2
Beallsville
M: 17-1-4
ROAD
Creek
MOORE
ROAD
PEACH TREE
BM 509
Seneca
(GERMANTOWN)

M:17-1-2

NAME H.O. DARBY'S STORE #17-1

LOCATION Rt. 28 & Rt. 109 BEALLSVILLE, Md.

FACADE S

PHOTO TAKEN 5/17/74 M DWYER


STAUB'S
ICE
STAUB'S
WESTERN
WEAR
28
STOP

NAME BEALLSVILLE, Md STAUB'S & H.O. DARBY'S STORES #17-1

LOCATION Rt 28 + Rt 109

FACADE NE

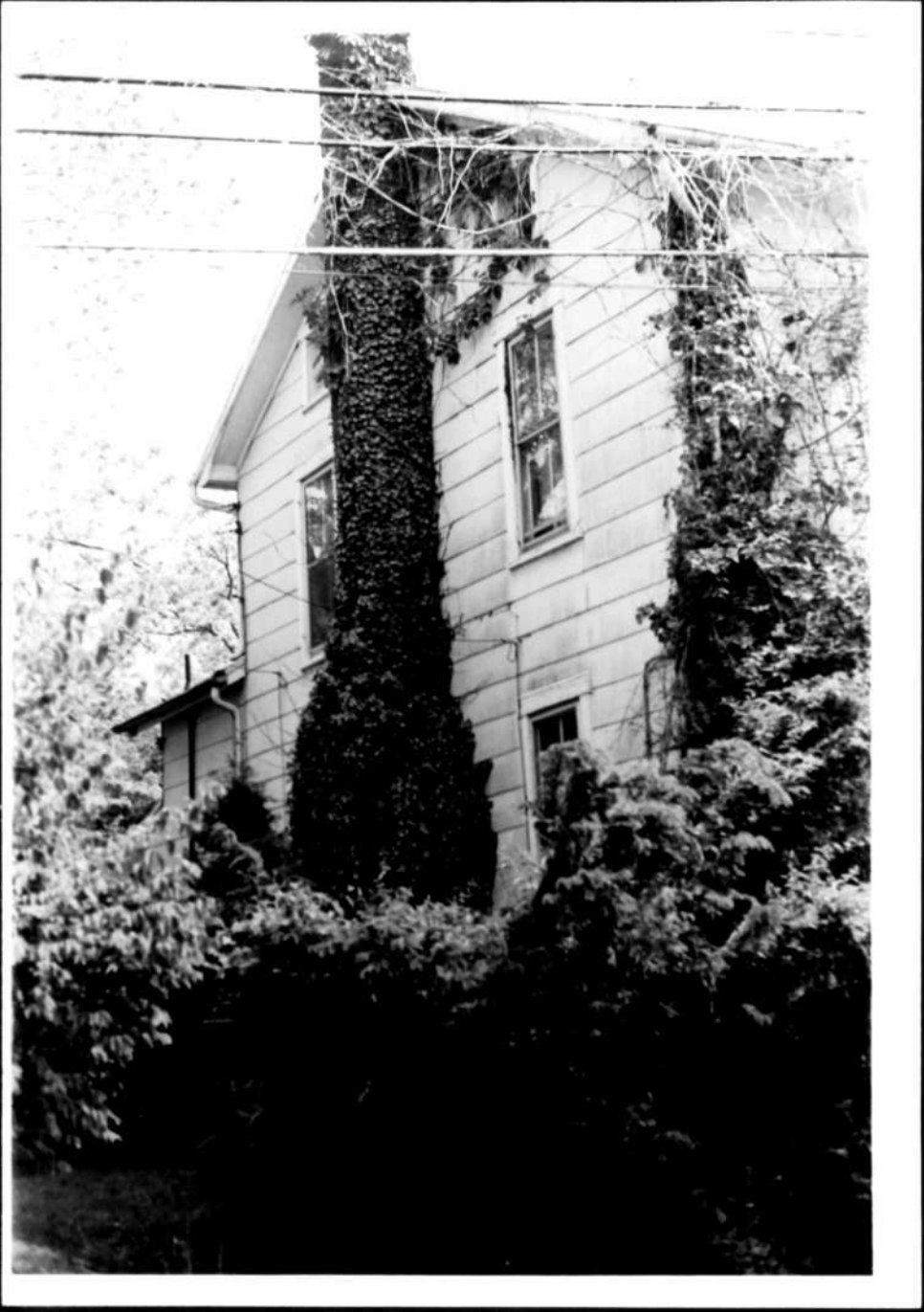
PHOTO TAKEN 5/17/74 MOWYER

NAME JOHN BELT STORE + P.O. #17-1

LOCATION Rt. 28 + Rt. 109 BEALLSVILLE, Md.

FACADE S

PHOTO TAKEN 5/17/74 MOWYER



NAME JOHN BELT STORE & P.O. #17-1

LOCATION Rt. 28 & Rt. 109 BEALLSVILLE, Md.

FACADE N CHIMNEY - W WING

PHOTO TAKEN 5/17/74 M DWYER

Name: H.C. Darby General ~~Store~~ (Beallsville H.D., 17/1)

Location: NW corner of intersection Rts. 28 and 109

Facade: ~~East~~ South

Photo taken: Oct., 1984

L. Snyderman

(M.17-1-2)


STAUBS COUNTRY RESTAURANT
Coca-Cola
Coca-Cola

Name: Staub Store (Beallsville H.D., 17/1)
Location: 19800 Barnestown Rd, SW corner of intersection of Rts 28 and 109
Facade: East
Photo taken: Oct, 1984 - K. Snyderman

Name: H.C. Darby House (Beallsville H.D.)

Location: 19811 Barnestown Rd. (17/1)
west side of rd.

Facade: South

Photo taken: Oct, 1984 - L. Snyderman

Name: Log smokehouse (Bellsville H.D., 17/1)

Location: NE corner, intersection Rts. 28 and 109

Facade: South

Photo Taken: Oct, 1984 - L. Snyderman

Maryland Historical Trust
Determination of Eligibility Form

Property Name: Beltsville Agricultural Research Center **Inventory Number:** PG:62-14

Address: Washington Boulevard (US 1) and Powder Mill Road **Historic District:** X **Yes** ___ **No**

City: Beltsville **Zip Code:** 20705 **County:** Prince Georges

USGS Quadrangle(s): Beltsville, Laurel

Property Owner: US Department of Agriculture **Tax Account ID Number:**

Tax Map Parcel Number(s): **Tax Map Number:**

Project: Section 110 Survey **Agency:** F/USDA

Agency Prepared By: P.A.C. Spero & Company

Preparer's Name: **Date Prepared:** 1998-10-01

Documentation Is Presented In: Historic Site Survey BARC, 6 volumes in MHT Library, report PR 229; Compliance file BARC

Preparer's Eligibility Recommendation: X **Eligibility Recommended** ___ **Eligibility Not Recommended**

Criteria: X **A** ___ **B** X **C** ___ **D** **Considerations:** ___ **A** ___ **B** ___ **C** ___ **D** ___ **E** ___ **F** ___ **G**

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property:

Inventory Number: **Eligible:** ___ **Yes** **Listed:** ___ **Yes**

Site Visit by MHT Staff: X **Yes** ___ **No** **Name:** Lauren Bowlin **Date:**

Description of Property and Justification: ***(Please attach map and photo)***

The entire 2664-hectare (6582-acre) Beltsville Agricultural Research Center was determined eligible for the National Register of Historic Places under Criteria A and C by the Maryland Historical Trust in a letter dated October 16, 1998. The BARC is eligible under Criterion A as an important site which reflects the development of a national center for agricultural experimentation and testing. It is the main research facility of the U.S. Department of Agriculture, and is the leading and most diversified agricultural research complex in the world. Government acquisition began in 1910, and grew rapidly with the Depression-era programs of the 1930s and 1940s. Included within the complex are areas for the Beltsville Human Nutrition Research Center, the Livestock and Poultry Science Institute, the Natural Resources Institute, and Plant Sciences Institute. The diversity of the scientific research conducted at BARC has influenced many aspects of 20th century living for the farmer as well as the consumer. The history and development of the agricultural research facility reflects New Deal policies and programs. The Beltsville Agricultural Research Center is also eligible under Criterion C. Because the mission of the facility has remained constant over the years, the landscape reflects a strong level of integrity. The physical appearance of BARC was strongly influenced in the 1930s by the planning team of A.D. Taylor, landscape architect, and Delos Smith, architect. The Civilian Conservation Corps and the individual bureaus at BARC played important roles in shaping the landscape as well. Contributing elements of the landscape include major paved roads, including Powder Mill Road, minor service roads, field and research crops, pasture lands, seasonal ponds, forests, sustainable meadows, other

MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: X **Eligibility Not Recommended:** ___

Criteria: X **A** ___ **B** X **C** ___ **D** **Considerations:** ___ **A** ___ **B** ___ **C** ___ **D** ___ **E** ___ **F** ___ **G**

MHT Comments: However, I recommend that the addendum be revised to evaluate the cistern & other lanscape features prior to demolition.

Anne Bruder — 1999-01-29

Reviewer, Office of Preservation Services — **Date**

Peter Kurtze — 1999-02-02

Reviewer, National Register Program — **Date**

landscape features, and buildings. The five buildings and complexes surveyed for this project cover a range of building types which represent the various aspects of the center, including a 1941 comfort station (Building 156), a once private residence (Building 186) which was purchased by the USDA and was once used as a visitor's center, a dairy laboratory building (Building 157), and a grain elevator (Buildings 85-90). The five buildings represent the research center tasks of meeting the needs of the public while performing agricultural experiments in the production and processing of crops and animal products, human nutrition, and natural resources.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: X **Eligibility Not Recommended:** __

Criteria: X **A** __ **B** X **C** __ **D** **Considerations:** __ **A** __ **B** __ **C** __ **D** __ **E** __ **F** __ **G**

MHT Comments: However, I recommend that the addendum be revised to evaluate the cistern & other lanscape features prior to demolition.

Anne Bruder	1999-01-29
Reviewer, Office of Preservation Services	**Date**
Peter Kurtze	1999-02-02
Reviewer, National Register Program	**Date**

Maryland Historical Trust
Determination of Eligibility Form

MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: X **Eligibility Not Recommended:** __

Criteria: X **A** __ **B** X **C** __ **D** **Considerations:** __ **A** __ **B** __ **C** __ **D** __ **E** __ **F** __ **G**

MHT Comments: However, I recommend that the addendum be revised to evaluate the cistern & other lanscape features prior to demolition.

Anne Bruder	1999-01-29
Reviewer, Office of Preservation Services	**Date**
Peter Kurtze	1999-02-02
Reviewer, National Register Program	**Date**

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. PG:62-14

Name of Property: Beltsville Agricultural Research Center (B.A.R.C.)
Location: Beltsville, Prince George's County

The purpose of preparing this addendum to the Beltsville Agricultural Research Center (B.A.R.C.) is to provide an updated, concise historic context since the property the was first recorded in 1970s and updated in the 1990s.

8.Significance

Historic Significance: Beltsville Agricultural Research Center Historic Context

BARC is an Agricultural Research Service (ARS) research facility of the USDA. The USDA acquired the first parcel of BARC land in 1910 for use by its Bureau of Animal Industry. The farm expanded gradually over the next few decades until New Deal policies and programs led to its substantial expansion beginning in 1933. By 1938, the property reached its peak size of 12,461 acres. Today, the site comprises 6,582 acres divided into five farms: the 367-acre South Farm (separated from the other four farms by Interstate 495), 549-acre North Farm, 460-acre Linkage Farm, 2,980-acre Central Farm, and the 2,225-acre East Farm (Robinson and Associates 1998) (Figure 1).

BARC's landscape consists of vast open space, cultivated fields, and hundreds of buildings and structures scattered throughout the facility. Historically, buildings were constructed in groupings associated with individual bureaus/divisions of the USDA or other federal agencies that leased or were assigned portions of the facility. The majority of BARC's buildings are farm research outbuildings, such as sheds, greenhouses, barns, and poultry houses, and the remainder are laboratories, dwellings, and office buildings. The Bureaus of Animal Industry, Dairy Industry, and Plant Industry were responsible for most of the building programs and land acquisitions at BARC (Robinson and Associates 1998).

The South Farm, located at the far southwestern end of BARC, includes open cultivated fields with a small number of small farm buildings on land purchased by the Bureau of Plant Industry between 1941 and 1943 for plant research. The North Farm, located immediately to the northeast of the South Farm, was acquired in 1933 and expanded in 1940 by the Bureau of Plant Industry. The North Farm contains cultivated farmland to the west and a densely developed area to the east. The Linkage Farm, located across Route 1 from the North Farm, contains the National Agricultural Library and the newer portion of the USDA George Washington Carver Center, but mostly includes open or cultivated fields. The Linkage Farm was assigned to the Bureau of Plant Industry in 1938, after being transferred from the Resettlement Administration to the USDA. The largest of the farms, the Central Farm, adjoins the Linkage Farm and contains approximately 12 clusters of farm or research-related buildings, as well as pasture and forested areas. The Central Farm, which contains the original acreage USDA purchased in 1910, historically was used by the Bureaus of Dairy Industry and Animal Industry, and their successor organizations. The USDA acquired the East Farm, which is adjacent to the east side of the Central Farm and largely forested, in the mid- to late-1930s for the Bureau of Animal Industry and other agencies, including the Soil Conservation Service. The East Farm only has a few building clusters (Robinson and Associates 1998).

The following historic thematic statements present BARC within the contexts of the federal role in agricultural research, experimental agricultural research, New Deal policies and programs, landscape architecture, experimental agricultural architecture, and Georgian Revival architecture.

Federal Role in Agricultural Research

The United States' public agricultural research system is rooted in several legislative acts Congress passed in the mid- and late-1800s. These acts established the USDA and the state agricultural experiment stations, and granted funds for agricultural colleges. Subsequent congressional acts in the first half of the twentieth century led to significant expansions in research funding and diversity of federal agricultural research subjects. The USDA and state agricultural experiment stations have been responsible for the majority of public agricultural research undertaken since the federal government

began to actively support agricultural research in the nineteenth century (OTA 1981). The BARC, established by the USDA in 1910 and significantly expanded in the 1930s, was the nation's largest and most prominent agricultural research facility, a key component of the federal agricultural research system.

Nineteenth Century Legislation
Three primary pieces of nineteenth century legislation form the foundation for the federal government's involvement in agricultural research: the Organic Act establishing the USDA in 1862, the Morrill (or Land-Grant College) Act of 1862, and the Hatch Act of 1887 (Huffman and Evenson 2008). The United States had an agricultural-based economy in the nineteenth century, and by the 1850s, farmers were lobbying for a new government department devoted to agriculture. Because of strong opposition from southern farmers, however, the USDA was not created until 1862 after the southern states seceded and the Civil War was well underway (Huffman and Evenson 2008). The new USDA had a mandate to serve the nation's farmers (Bowers 1993). The department inherited the government's agricultural library that had been created in 1839 (USDA 2016). Research was a primary component of the department's work from its inception, although research is not mentioned in the act that led to its creation (USDA 2016). The first USDA research bulletin (on sugar content of grapes and suitability for wine) was published the same year the department was founded (USDA 2016). By 1868, the USDA had begun research on animal diseases and published an analysis of corn as food (USDA 2016). It created the Bureau of Animal Industry in 1884 (USDA 2016).

The Morrill (or Land-Grant College) Act of 1862 authorized public land grants for colleges in each state to teach agriculture and mechanic arts. Some of the land-grant colleges eventually became agricultural research institutions that would go on to collaborate with the USDA's research efforts in the twentieth century. A second Morrill Act passed by Congress in 1890 provided additional funding. Though both acts were vague on the role of agricultural research, they made funds available for experimental farms and special projects (Huffman and Evenson 2008).

The passage of the Hatch Act in 1887 was "one of the most important legislative steps taken to develop public agricultural research in the United States" (Huffman and Evenson 2008; OTA 1981). The act authorized a crucial expansion of public agricultural research by allowing for the quick establishment of state experimental agricultural stations in all of the states (Huffman and Evenson 2008). The Office of Experiment Stations was established in 1888 to oversee the new stations. With the passage of the act, the modern network of state agricultural experiment stations was established and the close cooperation between regional research facilities and the USDA's nationally focused research activities was initiated (OTA 1981). Although the Hatch Act led to a rapid increase in the number of facilities nationwide that were undertaking agricultural research, funding for agricultural research was modest between 1888 and 1897 and USDA research facilities were limited (OTA 1981).

Expansion of Federal-State Agricultural Research System
It was not until the arrival of James Wilson as Secretary of Agriculture in 1897 that the USDA's research program began to significantly expand (OTA 1981.) During Wilson's 16-year term, the USDA established seven new scientific bureaus (only the Bureau of Animal Industry had existed previously): Plant Industry (1901), Forestry (1901, would became the Forest Service in 1905), Soils (1901), Chemistry (1901), Statistics (1903), Entomology (1904), and Biological Survey (1905) (OTA 1981). Congress quadrupled the Department's budget for research between 1897 and 1904 (OTA 1981). In 1898, Congress appropriated the first funds to collect, test, and prepare foreign plant materials and authorized testing of seeds purchased on the open market (USDA 2016). The department's staff increased more than six fold between 1897 and 1912 and expenditures increased from $800,000 in 1900 to $4 million in 1910 (OTA 1981).

The USDA's earliest national research facilities were on the National Mall, but as the department's research programs grew, researchers needed more space. Initially, the USDA procured use of 400 acres of the now-Arlington National Cemetery in 1900 for experimental farming and built two laboratory buildings on the Mall site in 1907, but these were insufficient to accommodate all their needs (OTA 1981). In 1910, the USDA purchased the 475-acre farm parcel in Beltsville, Maryland for work on dairying and animal husbandry (OTA 1981). Over the next two decades, gradual additions were made to the Beltsville and the Arlington farms as the department's programs continued to expand (OTA 1981).

Congress passed a number of key pieces of legislation during the Beltsville farm's early decades that grew the USDA's programs and would ultimately contribute to the department's decision to centralize agricultural research at Beltsville. Through the 1914 Smith-Lever Act, the USDA received an increase of funding that established the Agricultural Extension Service (later the Cooperative Extension Service) and formalized the department's educational outreach to farmers (Huffman and Evenson 2008). By 1916, there were 29 agricultural research stations in operation (it would eventually be 30) by the federal government, states, or cooperatively (OTA 1981). The subsequent 1925 Purnell Act authorized funds for research by agricultural experiment stations on economic and social problems of agriculture (USDA 2016). The Bankhead-Jones Act of 1935 provided for expansion of agricultural research (USDA 2016). In 1938, the Agricultural Adjustment Act established four regional USDA research centers to develop new uses for farm produce (Wyndmoor, PA; Peoria, IL; Albany, CA; and New Orleans, LA) (USDA 2016). The department created the Agricultural Research Administration in the early 1940s to administer the increasingly complex coordination between the many agricultural experiment stations and laboratories that were in operation by that time (OTA 1981). The Research and Marketing Act of 1946 included substantial funding for research, so that by the 1950s, the USDA's research programs were well funded (OTA 1981).

Between 1933 and 1953, the USDA centralized the Washington, D.C.-area research facilities at the Beltsville farm, which was re-designated as the National Agricultural Research Center. Research continued to be conducted concurrently at field and state stations, yet Beltsville swiftly became the largest agricultural research center in the country. Through its various divisions and bureaus, the USDA expanded its scientific inquiries into a wide number of topics related to animal husbandry and breeding, crop cultivation and soils, animal and plant diseases, and nutrition (USDA 2016). The "National" before the center's name was dropped in 1945 (USDA 2016).

Between 1888 and 1953, the federal and state agricultural research programs were integrated in both policy and funding through the USDA, which led to ongoing conflicts over funding for national research and state-level research. In 1915, 25 percent of the USDA's budget was devoted to research, but by 1920 only 6 percent, continuing to drop to 2.5 percent where it remained until the 1950s (OTA 1981). Despite its relative declining importance in the USDA budget, the dollar amount devoted to federal research remained steady, with an average of 78.8 percent devoted to federal research and 21.1 percent to State research through the early 1950s (OTA 1981). Conflict was inevitable between the USDA, who sponsored its own research, and the state agricultural experiment stations, since the USDA was also responsible for passing on funds to the states and determining the division of responsibility for research (OTA 1981).

Research System Decentralization

In 1953, the new Secretary of Agriculture, Ezra Taft Benson, led a major reorganization and decentralization of the department's agricultural research program that continued through the 1970s (OTA 1981). The decentralization had long-lasting consequences for Beltsville. The USDA's scientific bureaus and the Office of Experiments Stations were discontinued and the USDA's research functions were centralized under the new Agricultural Research Administration (OTA 1981). A separate Cooperative State Research Service was established in 1962 (OTA 1981). The reorganization "had the effect of subjecting the research structure of the Department—which had substantial stability and immunity from

political interference for 40 years...—to a succession of pressures for further drastic reorganizations with the changes in political administration in future years" (OTA 1981). The USDA again reorganized in 1972 with administrative decentralization in mind (OTA 1981). Operating responsibility was delegated to four regions, which were then subdivided into research area centers. Beltsville's scientists and facilities became a regional research facility, rather than a national one (OTA 1981). In the years between 1953 and 1973, research funds averaged 3 to 4 percent of the USDA budget. Of those funds, 77.4 percent went to federal research programs and 22.6 percent went to the states (OTA 1981). About half of the department's research facilities were built between 1958 and 1977 (OTA 1981).

Congress' preference for supporting local and state research stations over national stations lessened BARC's role within the United States' agricultural research system. By 1980, the USDA's research program was highly decentralized, with research undertaken at 148 locations, including the much diminished 450-scientist facility at Beltsville (OTA 1981). Between 1965 and 1985, Congress appropriated $242 million for the Agricultural Research Service's (ARS) facilities nationwide, while Beltsville (re-designated the BARC in 1984), which had 20 percent of the agency's employees, received only $8 million (Sinclair 1988). In 1988, Beltsville was bypassed in a continuing budget resolution, which diverted federal funds to research programs in powerful lawmakers' home districts. That year, Congress approved more than $57 million around the country for new agricultural research facilities at universities and outposts of the Agricultural Department of the USDA and "most of these projects, assigned to the USDA Agricultural Research Service that manages Beltsville, went to states represented by senior senators and representatives with key seats on congressional appropriations committees" (Sinclair 1988). Today, many of BARC's facilities are unused and in disrepair.

Experimental Agricultural Research

Developments in agricultural technology occurred more rapidly in the twentieth century than in all previous human history, predominantly due to advances in scientific knowledge discovered during experimental agricultural research. Major agricultural changes in technology began in earnest with the invention of hybrid corn varieties at the beginning of the twentieth century and continued with the introduction of herbicide and insect-resistant field crop varieties by the end of the twentieth century (Huffman and Evenson 2008). During the period between 1900 and 2000, the real aggregate agricultural output grew at an average annual rate of 1.61 percent per year, and 2.08 percent over 1970 to 1999 (Huffman and Evenson 2008). Particularly in the 1930s and after, agricultural research findings dramatically improved agricultural productivity in the United States. Through most of the twentieth century, BARC, which was established by the USDA in 1910 and substantially expanded in the 1930s, was the nation's largest and most diverse agricultural research center. BARC's scientists and researchers have made considerable contributions to agricultural science, and BARC has been the "location of an enormous body of important, innovative, agricultural research of national scope and significance" (Robinson and Associates 1998).

Agricultural advancements in the United States can be separated into four main periods: 1775 through the Civil War, when productivity relied on hand power and some later labor-saving equipment; Civil War to World War I, when productivity increased modestly because of the introduction of more efficient horse-drawn equipment; World War I to World War II, when animal power gave way to mechanical power; and World War II to the present, the era of "science power," when major advancements were made in agricultural research that substantially improved productivity and reduced many uncertainties of production (OTA 1981). Science power was largely the result of research that the public and private sectors began to take in earnest in the mid-1930s (OTA 1981). The Green Revolution from the 1930s to the late 1960s was a particularly ripe period of technological progress. New crops and techniques, new strains of plants and animals through the use of genetics, improved animal breeding, and pest and disease control in crops led to significantly increased food production in the United States and worldwide (Rasmussen and Mellanby n.d.).

Early Agricultural Research, Eighteenth to Early Twentieth Century
Prior to the 1862-acts that established the USDA and the Land-Grant College system and the 1887 act that established the state agricultural experiment stations, the U.S. patent system stimulated agricultural research by protecting individuals' inventions and implementing an active seed collection and distribution program (Huffman and Evenson 2008). Patents for agricultural inventions exceeded those for all other fields between 1790 and 1849, and the largest share were mechanical patents for agricultural tools and machinery (i.e., chemical and electrical inventions were not submitted in large numbers until after 1850) (Huffman and Evenson 2008). The Patent Office's foreign plant/seed introduction program was instituted in the 1840s (Huffman and Evenson 2008).

Private agricultural societies and the Yale Scientific School were also dabbling in agricultural research prior to the establishment of the USDA-state agricultural experiment stations system. Agricultural societies provided early support for agricultural improvements and were active during the 1800s distributing information to their members, collecting and distributing seeds, building reference libraries, and purchasing land for trials and experiments in plant and animal breeding and soil improvements (Huffman and Evenson 2008). In 1845, the Yale Scientific School was the first American educational institution to initiate an agricultural science program, a precursor to the later land-grant colleges inaugurated through the Morrill Acts of 1862 and 1890 (Huffman and Evenson 2008).

Although the legislation that created the USDA did not mention research, it was nevertheless an important component of the department's work. Early USDA research focused on four main areas: importation of seeds and plants and plant classification, statistics, chemical analyses, and livestock disease control (Huffman and Evenson 2008). The first three research areas were transferred from the Patent Office, which had previously instituted those programs. In its early years, the USDA led international exhibitions to search for new plant materials and widely distributed seeds to farmers to test in the nation's various climates (the public seed distribution was discontinued in 1923). One early success was the USDA's introduction of the Brazilian seedless navel orange to California (Huffman and Evenson 2008). Research on animal disease began in 1868 and resulted in the discovery of the causes of tick fever and hog cholera (Huffman and Evenson 2008). In the 1890s, the USDA established regulations for chemical analyses of soils and minerals that were used by public and private laboratories (Huffman and Evenson 2008). Between 1900 and 1914, the USDA expanded its mission to improve the social aspects of farm life as they worked to increase American farm diversification; the USDA began to conduct surveys and research into farm life and conditions in an attempt to obtain an accurate picture of American farm life (Edwards, Holycross, and Barnes 2004).

Early Research at Beltsville, 1910-1933
BARC began as an experimental farm for scientists focused on animal husbandry, dairying, and animal disease research. USDA purchased the 475-acre Beltsville farm on June 30, 1910 to supplement its research facilities in Bethesda, MD and elsewhere (Houck 1924). The 475-acre parcel in Prince George's County was divided between the department's Animal Husbandry Division and the Dairy Division, both part of the USDA's Bureau of Animal Industry (USDA 1949; Robinson and Associates 2000; USDA c. 1937; USDA 1921; Wiser and Rasmussen 1966). The bureau designated 190 acres for the Dairy Division to research dairy cattle breeding and care, forage crops, silage, and effect of feed on flavor and odor of milk, and granted the remainder to Animal Husbandry Division for experiments in breeding and feeding animals and poultry (Wiser and Rasmussen 1966; USDA 1921). The bureau moved the first mules and horses from Bethesda a week after purchase; sheep, goats, hogs, guinea pigs, and poultry equipment were transferred to the farm by early 1911 (Wiser and Rasmussen 1966, Houck 1924).

To accommodate the experimental farm's many research tasks during BARC's early period (1910-1933), staff constructed laboratories, farm buildings, pastures, and staff housing. The experimental farm acreage and facilities grew gradually.

Within a year of Beltsville establishment, the divisions had constructed the first buildings and fences, and equipped the farms (Wiser and Rasmussen 1966, Houck 1924). In 1912, the bureau erected a laboratory building (Mohler 1939; Houck 1924) and, in 1913, a barn (USDA n.d.; USDA 1921). In 1916, the bureau set aside 100 acres for work on intensive farm production of sheep and built a large concrete barn (Wiser and Rasmussen 1966). The Bureau of Animal Industry added laboratories for the Pathology and Zoological Divisions, and the Bureau of Plant industry began to operate at Beltsville on approximately 425 acres of leased land (subsequently purchased from Public Works funds) during the first few decades (Wiser and Rasmussen 1966; USDA c. 1937; USDA c. 1937; Wiser and Rasmussen 1966). By 1925, the USDA owned 1,062 acres at Beltsville and leased about 1,000 more acres (Wiser and Rasmussen 1966). By 1933, four land purchases, totaling 1,381 acres, further increased the farm's size (USDA c. 1937).

The scientists at Beltsville between 1910 and 1933 considered a broad range of research topics. By 1921, the farm had 145 head of dairy cattle (purebred Holsteins, Jerseys, Guernseys, and others) used in breeding, feeding, and dairy herd management experiments (USDA 1921; Trimble 1952). A large acreage was set aside at the farm for the study of sheep, and a new breed of chickens was developed at the farm ("Lamona") (Houck 1924). Staff were conducting experiments with forage crops for dairy feed and with silage growing under various conditions; studying the nature and extent of losses in the silo to determine relative merits of wood and concrete as silo building materials (Creamery Journal 1916); experimenting with open-shed types of barns versus ordinary closed barns and different kinds of stable floors; and studying factors effecting bacterial count of milk, breeding, and physiology of milk secretion (USDA 1921). Experiments on poultry breeding had been underway since 1912, and researchers were also studying the incubation of eggs and the effects of feeding on egg production (Mohler 1939, Houck 1924). In the 1920s, the Beltsville Farm researches showed that using pasteurized sweet cream instead of sour ripened cream helped butter last longer, thereby solving a major food problem (Yao 2010). They also released 'Mary Wallace,' the first disease-resistant shrub rose (Yao 2010).

Broadening of Beltsville Research, 1933-c.1960s

The USDA substantially expanded the Beltsville facility beginning in 1933. In 1935, the department re-designated the farm as the National Agricultural Research Center. Major landscape improvements and new facilities were designed and constructed to accommodate researchers. By 1939, the Beltsville facility contained laboratory buildings (including the Animal Husbandry Laboratory, Building 200, and the Germplasm Resources Laboratory, Building 004); the Bee Research Library (Building 476); brooder houses with service quarters in the center; colony houses; laying houses; pigeon lofts; feed houses; carpenter shops; garages; storage sheds; incubatory rooms; a coccidiosis building with incinerator for the Zoological Division's isolation unit for experimental work with coccidiosis of poultry; insectary; and experimental pens (Mohler 1939, Living New Deal n.d.). Beltsville expanded rapidly to accommodate the various bureaus that were consolidated at the site, including the Bureau of Animal Husbandry in 1942 (USDA ca. 1990) and facilities from the Arlington Farm of the Bureau of Plant Industry in 1942 (Wiser and Rasmussen 1966). Between 1940 and 1942, funds were also allocated for establishment of National Youth Administration Youth Resident Project "to give young men practical experience in the mechanical shops and laboratories of the farm" (Wiser and Rasmussen 1966).

The Agricultural Research Center had grown to approximately 12,000 acres by 1949. The Bureau of Plant Industry, Soils, and Agricultural Engineering; Bureau of Agricultural and Industrial Chemistry; Soil Conservation Service; Forest Service, Bureau of Entomology and Plant Quarantine; Production and Marketing Administration; Bureau of Dairy Industry; Bureau of Animal Industry; and the Bureau of Human Nutrition and Home Economics all operated from Beltsville (USDA 1949). Staff on site numbered 2,300 persons and included agronomists, animal husbandmen, apiculturists, architects, bacteriologists, biochemists, biologists, botanists, chemists, dairy technologists, engineers, entomologists, geneticists, grain technologists, helminthologists, home economists, horticulturists, mycologists, nematologists, olericulturists, nutritionists, parasitologists, pathologists, physicists, physiologists, statisticians, veterinarians, and zoologists (USDA

1949). The center had 3,000 experimental farm animals (cattle, hogs, goats, and poultry), more than 10,000 mature laying and breeding fowls, and about 5,500 small animals for laboratory testing, including guinea pigs, hamsters, rabbits, rats, and mice. The center also had bees (USDA 1949). The center's facilities included 40 laboratory buildings, 31 greenhouses (including 5 acres under glass), an apiary for bees, approximately 100 barns and storage buildings, 500 small animal and poultry houses, a granary, shops, warehouses, and heating, water-treatment, and sewage-disposal plants. Open areas included experimental pastures, ranges, orchards, gardens, fields for cultivated crops, timber stands, and soil-treatment plots (USDA 1949).

In 1952, the facility was 11,000 acres and the Bureau of Standards of the Department of Commerce, the Geochemical Prospecting Unit of the Geological Survey of the Department of the Interior, and the Veterinary Section of the Food and Drug Administration of the Federal Security Agency were also conducting research at the site. The Patuxent Research Refuge, where the US Fish and Wildlife Service of the Department of the Interior studied wildlife problems related to agriculture, adjoined the site (USDA 1952).

The USDA undertook a major reorganization in 1953 that abolished the bureaus as organizational units, though research continued in the same channels. At that time, Beltsville, then the nation's largest agricultural experiment center, became part of the ARS (Wiser and Rasmussen 1966, Matthews 1953). In 1959, the divisions and departments undertaking research at Beltsville included the: Agricultural Engineering Research Division, Animal Disease and Parasite Research Division, Animal Husbandry Research Division, Crops Research Division, Eastern Utilization Research and Development Division, Entomology Research Division, Institute of Home Economics, Plant Pest Control Division, and Soil and Water Conservation Research Division (USDA 1959). The Agricultural Marketing Service, Forest Service, Soil Conservation Service, and Fish and Wildlife Service of the Department of the Interior also operated on the site (USDA 1959).

The center researched "broad problems of national interest" in 1959 "to accumulate scientific information that can be applied anywhere." This research was often conducted in cooperation with state agricultural experiment stations (USDA 1959). On August 21, 1957, the first pioneering research laboratory with the purpose of investigating the mineral nutrition of plants was established at Beltsville. In 1959, the Agricultural Research Center still covered about 11,000 acres, which were divided into experimental pastures, ranges, orchards, gardens, fields for cultivated crops, timber stands, and soil-treatment plots. There were 950 buildings that provided office and lab space for approximately 2,300 employees. Half of employees were scientists or technicians, and the others were clerical, farm, and maintenance workers. Buildings included 58 laboratories, 31 greenhouses, 161 barns and storage buildings, 700 small animal and poultry houses, shops, an apiary, a granary, a warehouse, and heating, water-treatment, and sewage-disposal plants. The center had 3,000 experimental farm animals, more than 10,000 laying and breeding fowls, and about 5,500 small animals used in laboratory tests (USDA 1959).

In 1966, BARC staff had grown to 1,250 scientists and 1,500 supporting personnel who collaborated with 300 field stations around the country and overseas. Scientists and researchers studied crops, animal science, agricultural engineering, entomology, soil and water conservation, and human nutrition. By the mid-1960s, thousands of people were visiting the center to tour the $50,000,000 facility with 200,000 square feet of greenhouse space and 1,160 buildings, including the National Agricultural Library, previously in Washington, D.C., that had moved to Beltsville in 1967. The library holdings comprise 90,000 subject headings and cross references and are the most extensive agricultural collection in the world (Bowers *et al.* 1993).

Beginning in the mid-1960s, and particularly after the 1972 reorganization that decentralized the USDA, Beltsville declined in importance as significantly more funds were being directed to experimental stations elsewhere in the country (Sinclair

1988). By 1982, the center had diminished to 7,200 acres (Olmert 1982). In about 1984, the facility was re-designated as BARC. In 1988, BARC occupied 7,000 acres (Sinclair 1988). BARC contained eight institutes in 1990: Agricultural Environmental Quality, Animal Parasitology, Animal Science, Horticultural Science, Insect Identification & Beneficial Insect Introduction, Plant Genetics & Germplasm, Plant Physiology, and Plant Protection. About 2,550 USDA employees and 200 employees from other federal agencies worked at BARC in about 800 buildings that included research laboratories, greenhouses, barns, poultry houses, shops, and offices. About 900 of the employees were scientists and technicians. Animal researchers focused on livestock diseases, animal nutritional needs, and animal genetics and physiology to improve productivity of cattle, poultry, swine, and sheep. Plant specialists researched greater crop yields by breeding plants that used light and nutrients efficiently, had built-in disease resistance, and were able to cope with marginal growing conditions. Other researchers were developing new methods to fight plant pests and using biological controls and naturally occurring chemicals to reduce crop loss and to ensure meat, milk, and produce had natural taste and nutritional value (USDA ca. 1990).

Notable Research at Beltsville

The research accomplishments of BARC scientists and researchers have had wide- and long-reaching beneficial effects on national and international agricultural practices. Agricultural research at BARC has been a blend of foundational and applied scientific research. While the private sector has typically focused on practical applications of science (applied science) that would lead to profit, federal research has worked more frequently on biologically oriented research, which provides the foundational (basic) knowledge needed for practical applications (OTA 1981, USDA 1963).

Each of the units based at BARC has made major accomplishments. The Bureau of Dairy Industry, the earliest of the USDA's research divisions at Beltsville, conducted breeding and feeding research that has led to major improvements for small dairy farms, larger commercial dairies, and dairy production and manufacturing industries nationwide (Robinson and Associates 1998). The Division of Animal Husbandry of the Bureau of Animal Industry, the largest bureau at the site, undertook critical poultry and swine research improving the size and health of farm animals. The Bureau's Zoology Division's parasite research brought innovate new approaches to treating infestations. The Animal Disease Station developed vaccines to prevent Bang's disease and developed sterilization methods for contaminated hides. The Bureau of Entomology and Plant Quarantine, which came to BARC in the 1930s, conducted important research as the national headquarters for the Division of Bee Culture and developed the DDT aerosol bomb. The Bureau of Human Nutrition and Home Economics during World War II researched important nutrition and textiles. The Bureau of Plant Industry, the second largest bureau at BARC, developed many of the soy bean, blueberry, Easter lilies, zoysia turf, and forage crop lespedza used widely today, and conducted fundamental research into photo periods. The Food and Drug Administration conducted important research on insecticides (Robinson and Associates 1998).

Specific examples of BARC scientists and researchers' contributions to agricultural science include:

- 1930s: Developed and introduced pest-resistant potato varieties from the 'Katahdin' potato to grow in the northeastern United States ('BelRus') (USDA ca. 1990).
- 1930s: Produced the first successful *brucellosis* vaccine to immunize cattle against the disease that causes high numbers of miscarriages (Yao 2010).
- 1930s and 1940s: Bred the Beltsville Small White Turkey (USDA 1963).
- World War II: Invented and developed a new group of pesticides—DEET, DDT, rotenone, and allethrin—to guard soldiers and the general public against insect-borne diseases such as malaria and other tropical disease that saved thousands of lives during and after World War II (USDA ca. 1990; Yao 2010).

- 1950s: First to develop the framework of the sterile insect technique, releasing sterilized male flies to mate with native flies, so that by the 1980s, screwworms were eliminated from the United States (Yao 2010).
- 1950s: Developed many new varieties of fruits and vegetables that were both disease-resistant and more flavorful (Yao 2010).
- 1950s: Pioneered research on photoperiodism (plant response to variations in the light/dark cycle) that culminated in the chemical isolation of phytochrome (triggering mechanism of plant growth), a core concept in plant physiology (USDA ca. 1990, Yao 2010).
- 1960s: Developed the first computerized near-infrared spectrophotometer to measure traits without destroying a sample (Yao 2010).
- 1970s: Discovered plant viroids—a new class of disease-causing particles 80 times smaller than viruses (USDA ca. 1990; Yao 2010).
- 1990s: Developed technology to separate X- and Y-bearing sperm in animals, allowing for sex selection during breeding (Yao 2010).
- 1990s: Developed detergent chemical methods for determining nutritional value of feedstuff—now used in both human and animal nutrition (USDA ca. 1990).
- 1990s: Adapted automated equipment to energy metabolism research to determine exact amount and kind of feed required for optimum milk production (USDA ca. 1990).
- 1990s: Discovered and synthesized chemicals that a variety of major insect pests emit to attract their mates, now used in mass trapping to survey insect populations for integrated pest management programs (USDA ca. 1990).
- 1990s: Developed genetics concepts that laid the foundation for modern plant and animal breeding, and proved the value of statistical methods in evaluating inherited characteristics in populations (USDA ca. 1990).

Through most of the twentieth century, BARC was the nation's largest and most diverse agricultural research center. BARC's scientists and researchers have made major contributions toward scientific knowledge that have resulted in incredible advances in crop production, plant and animal disease control, and pest control.

New Deal Policies and Programs

The New Deal was a series of policies and programs initiated by President Franklin D. Roosevelt between 1933 and 1939 in response to widespread hardship during the Great Depression. The programs, which focused on "relief, recovery, and reform," greatly increased the scope of the federal government's activities (Berkin *et al.* 2011). Initial programs (1933-34) provided quick relief for banks through the Emergency Banking Act and the 1933 Banking Act. These acts granted funds to states and local municipalities through the Federal Emergency Relief Administration, as well as established make-work projects through the Civil Works Administration and conservation and reforestation projects through the Civilian Conservation Corps (CCC). Later programs (1935-1939) included the creation of the Works Projects/Progress Administration (WPA), Social Security Administration, the United States Housing Authority, and the Farm Security Administration; passage of the Fair Labor Standards Act of 1938 set minimum wages and maximum hours. BARC's substantial expansion between 1933 and 1941 was a direct consequence of the policies and programs of the New Deal.

Policies and Programs for Agriculture

In the 1930s, President Roosevelt, the Secretary of Agriculture Henry A. Wallace, and the Undersecretary of Agriculture Rexford G. Tugwell were determined to improve the lot of the nation's farmers through New Deal programs; BARC

became the nation's primary agricultural research center as a result. Even before the Great Depression, the agricultural markets had been struggling. Advances in farm production in the 1920s had led to overproduction and a near collapse of agricultural markets. Crops were left in the fields unharvested because prices did not warrant transporting them to market. The first major initiative was the Agricultural Adjustment Act of 1933 that paid farmers to produce less, thereby creating an artificial scarcity and raising prices, rapidly improving farm incomes (USDA 2016).

Nearly $11 million dollars in Public Works Administration (PWA), Civil Works Administration (CWA), WPA, and direct appropriations went to Beltsville between 1933 and 1941 (Robinson and Associates 1998). Secretary Wallace and Undersecretary Tugwell, keenly recognizing that there was more to be done to ensure the stability of the agricultural economy, orchestrated the allocation of funds from the Federal Emergency Administration of Public Works and other agencies for the construction of new scientific research facilities (USDA 1963). The experimental farm at Beltsville was significantly expanded to be a national model experiment station for agriculture (Robinson and Associates 1998). Tugwell specifically saw the capabilities of Beltsville as a way to help small farmers who were too poor and unorganized to conduct scientific research (Robinson and Associates 1998).

The drought and windstorms that created the Dust Bowl in the southwestern states made the need for agricultural research even more urgent. In 1934, the USDA relocated most of the department's facilities around the Washington, D.C. region to Beltsville, including an animal disease station in Bethesda, MD; the experimental greenhouses on the National Mall between 13th and 14th Streets; the bee culture research building in Somerset, MD; and a small installation in Takoma Park, MD that studied the control of insects (USDA 1963). The Agricultural Adjustment Act of 1938 granted funds for the establishment of regional agricultural research centers that would collaborate with the Beltsville center (USDA 2016). Most of the historic buildings at Beltsville are a product of the New Deal-era funding programs.

Works Progress Administration and CCC at Beltsville
New facilities were needed at Beltsville to house the expanded role of the facility. The research center hosted four CCC camps, designated as Camps A-1, A-2, A-3, and A-4, during the Great Depression. The CCC men played an important role in the shaping the landscape of BARC by installing significant new infrastructure, including sewer, water, electrical, roads, bridges, fences, and landscaping/land clearing funded by the WPA. In addition to major landscaping projects, they constructed many new buildings including residences, laboratories (such as the Animal Husbandry Laboratory (Building 200), the Germplasm Resources Laboratory (Building 004), and the Bee Research Library (Building 476)), barns, sheds, an administration building, greenhouses, headhouses, and other outhouses (Robinson and Associates 1998, Living New Deal n.d.).

The first camp, Camp A-1, was organized in June 1933 at the Bureau of Animal Industry's Experimental Station. The camp commander, four officers, staffers, and 126 enlistees of Company 2301 (a "white" company) arrived in October 1933. The company built their barracks and, probably, their support structures. Their work focused on public campground improvements, fire hazard removal, firebreak construction, installation of truck trails and driveways for livestock, forest culture work, planting, topographical and timber surveys, landscaping, and drainage. The camp expanded in December 1934 to 200 men and by then was also completing road and fire lane construction, tree planting, and telephone line erection. Camp A-1 was discontinued by September 1936 when the Bureau of Animal Industry agreed to consolidate the four camps into three (Thomas, Newell, and Zebooker 1993).

Camp A-2 was established in September 1934 and was occupied in October 1934 by Company 1362, including 172 white personnel. The men constructed their own barracks and the officer's quarters and established a newspaper. Their duties included surveying; draining and ditching; road construction; forest clean-up; road clearing; road, surface drain, and water

line construction; drainage and sewage disposal; and bridge and culvert construction. In 1938, a 181-man "colored" company, Company 322-C, was established at Camp A-2. The camp continued to operate until at least April 1942 (Thomas, Newell, and Zebooker 1993).

Camp A-3 was established in November 1935, when Company 370, a 142-man white unit, transferred to Beltsville from Big Stone Gap, VA. The company members worked on 11,000 acres of the experimental farm, and performed work in animal husbandry, landscaping, laying sewer lines, forestry improvements, and road construction. The 5438th, a 220-member white company, occupied Camp A-3 in May 1936 and constructed sewer systems, fencing, water lines, and roads, as well as razed old buildings. A colored company, the 2134th-C, occupied Camp A-3 in October 1937. The 180 men worked on fencing and installed drainage, water, and sewer lines. By 1938, their work also included construction of equipment sheds and new lodges. In August 1939, they built an education building and a barracks. The company was relocated to Fort Meade, MD by November 1941. The exact date of the closing of Camp A-3 is not known (Thomas, Newell, and Zebooker 1993).

Company 309 occupied Camp A-4 in 1935. The 181 white men of Company 309 completed landscaping. The 204-member Company 5445 was assigned to Camp A-4 in May 1936; they worked on forestry improvement, landscaping and developing, maintaining a nursery, and constructing firebreaks and trails. By 1937, they were also involved with road construction, land clearing for experimental pastures, fencing, reclaiming wet grounds and swamps, and large landscaping projects. Three "junior colored companies" were transferred to the camp in 1937 and then Company 2317-C, consisting of 181 black men, occupied the camp. Camp A-4 was still operating in April 1942. No records have been found that indicate the closure date of Camp A-4 (Thomas, Newell, and Zebooker 1993).

BARC's Log Lodge, built by men of the PWA between 1934 and 1937, served as the recreation center for the four CCC camps at Beltsville. The Log Lodge was modeled after lodges in Yellowstone National Park and used lumber and logs from trees growing on BARC. The CCC used the lodge for recreation until 1942, when it was converted into a cafeteria that was used until 1985 (USDA 1988).

Overall, the camps were constructed by the first companies to arrive; additional structures and improvements were added as needed. Although early buildings, such as educational buildings and the recreation center (Log Lodge) were permanent buildings, as time passed, more temporary buildings were constructed. All but Camp A-1, which closed in 1936, were operational until at least mid-1942. It appears that each camp was assigned a certain tract within the BARC complex (Thomas, Newell, and Zebooker 1993).

Landscape Architecture

BARC's landscape consists of vast open space and cultivated fields, scattered with hundreds of buildings and structures. Historically, the landscape was grouped by association with individual bureaus/divisions of the USDA or other federal agencies that leased or were assigned portions of the facility. The Bureaus of Animal Industry, Dairy Industry, and Plant Industry were responsible for most of the building programs and land acquisitions at BARC (Robinson and Associates 1998). The landscape is unique and distinctive, combining elements found on typical farms, such as cultivated fields and grazing plots, with features required for agricultural research, such as large-scale infrastructure and large building clusters.

The landscape of BARC was chiefly devised in the 1930s, during the significant expansion of the property. Albert David (A.D.) Taylor (1883-1951) and architect Delos H. Smith (1884-1963) created the plan for BARC's Central and East Farms in 1934. The Central Farm, which encompassed the 375-acre parcel the USDA first purchased for the facility in 1910, was

used by the Bureau of Dairy Industry for several decades. Comprising 912 acres, the Central Farm was bound by Baltimore-Washington Parkway on the east, Edmonstron Road on the west, Greenbelt on the south, and the U.S. Department of Health and Human Services and U.S. Department of State complex and Muirkirk on the north. The Central Farm's designed farm landscape comprised five major clusters and contained most of the buildings and research activities at BARC (P.A.C. Spero 1998, Robinson and Associates 1998).

The CCC men at the four Beltsville camps constructed much of BARC's landscape, including roads, landscaping, fencing, drainage, and trails, and laid infrastructure such as water and sewer lines (Thomas, Newell, and Zebooker 1993).

A.D. Taylor graduated from Cornell University in 1905 with a Master's degree in Landscape Architecture and joined the office of Warren H. Manning in 1908. In 1914, he relocated to Cleveland, Ohio where he established his own firm and founded the Ohio State University landscape architecture program; he taught there from 1916 to 1926. Taylor participated in many Civil Works Administration (CWA) projects including Boys Town, NE, and Marine hospitals in Cleveland, New Orleans, and Baltimore. He served as a consultant to the U.S. Forest Service and published *Problems of Landscape Architecture in the National Forests* in 1936. He consulted with the federal government on the site plan for the Pentagon in 1942. He was a Fellow of the American Society of Landscape Architects and was president from 1936 to 1941 (Cultural Landscape Foundation n.d.).

Delos H. Smith graduated from George Washington University with a B.S. Arch in 1906 and an M.S. Arch in 1916. He trained in the Office of the Supervising Architect of the Treasury and with the firms Hornblower & Marshall and Jules Henri de Sibour. During World War I, Mr. Smith was Supervising Engineer at the U.S. Naval Academy. After the war, he completed a pioneering survey of Annapolis' historic resources; during the Great Depression, he completed Historic American Building Surveys (HABS) for churches, residences, schools, colleges, and industrial buildings in Arizona, Connecticut, District of Columbia, Maryland, Massachusetts, New Mexico, North Carolina, Ohio, Pennsylvania, South Carolina, Virginia, and Utah (HABS) (Kelly 2011, Library of Congress n.d.).

According to Robinson and Associates (1998), BARC "possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically" resulting from its "research mission, its physical development under the New Deal, the involvement of professional design and planning professionals, and the interrelationship of its resources." Contributing elements of the landscape include major paved roads, including Powder Mill Road, minor service roads, field and research crops, pasture lands, seasonal ponds, forests, sustainable meadows, other landscape features, and buildings." (P.A.C. Spero & Company 1998; Robinson and Associates 1998).

Experimental Agricultural Architecture

From early in BARC's history, agricultural architecture was a topic of inquiry. BARC scientists and researchers experimented with a wide array of designs and tested different materials, both for efficiency and usefulness in their own research facilities and for the improvement of the nation's farms. The result is BARC's collection of distinctive and unique architecture that was derived from the needs and findings of agricultural research.

The first instance of research into agricultural architecture at Beltsville was in 1916 when researchers developed a plan to build dairy-supportive buildings for specific regions, including a dairy stable to meet conditions in the south, and a combination creamery and milk-shipping station for use in the New England states (The Creamery Journal 1916). These new buildings were to be added to the existing Beltsville facilities, which then included the mess house, small animal house, and 30,000-gallon concrete reservoir and cooling tower, house for fire apparatus, heating system for

superintendent's house, refrigeration and darkroom equipment for administration building, electrical equipment, and refrigerating and pumping plant (The Creamery Journal 1916).

A few years later, in 1921, the Beltsville scientists began to study the nature and extent of the losses that take place in silos. They researched the use of different silo-building materials to determine which material would best withstand the acids of the silage. They also compared different stable floors and barn types for the care of dairy cattle, seeking materials and designs that could reduce the bacterial count in cow milk (USDA 1921).

Buildings to Control Disease, Productivity, and Efficiency
As part of the substantial expansion of Beltsville in the 1930s, and specifically beginning in 1934, the USDA constructed new poultry laboratory buildings and poultry houses on 177 acres to be used for poultry research work. These improvements to the facility's poultry research were placed into operation on July 1, 1935 through the National Poultry Improvement Plan, which was developed to aid the poultry industry in improving its efficiency. The Beltsville poultry farm had four laboratory buildings, a central heating plant, and more than 200 houses of various sizes for its poultry stock, including brooder houses, laying houses, and colony houses. Researchers experimented with many designs to control disease transmission, animal productivity, and efficiency. The brooder houses had varying plans, often having a two-story service quarter in the center with one-story wings that each had eight to 10 temperature-controlled sections. The use of wire-floor sections in both the brooder houses' interiors and yards facilitated the control of parasites and disease. The exterior pens had wire fencing that extended over the top of the pens to keep out birds; the buildings were supplied with supplementary steam heat. The facility had laying houses for breeding and nutritional investigations. The one-story laying houses had shed roofs and were divided into sections with solid partitions between the sections, and the fronts were left open during cold weather. The small colony houses were used for growing pullets in breeding investigations. These one-story, shed-roof buildings were located in a large enclosure with no separate yards, and the covered feed troughs and water fountains were located in the front of each building (Mohler 1939).

Post-World War II Farm Building Designs
Recognizing that many farmers did not have access to or could not afford to hire individualized architectural services, the USDA created Regional Plan Exchanges in the late 1940s through the 1960s to provide farmers access to plans and working drawings of farm buildings and structures. To develop the plans, the USDA conducted in-house research at Beltsville and collaborated with state agricultural experiment stations, Bureau of Home Economics, and agricultural engineering departments of state agricultural colleges to provide farmers with various plans and tools to aid in the building and remodeling of farmhouses, buildings, and structures. At least some of the designs were constructed at Beltsville (Marsh n.d.).

Beltsville researchers produced the farmhouse plans by organizing Regional Plan Services in four regions: Northeast, South, West, and North Central. Committees in each region reviewed plans for farmhouses and other farm buildings and selected the plans that best met their regions' needs. A 1947 USDA publication, *Your Farmhouse: How to Plan Remodeling*, acknowledged that most farming families lived in houses that were at least 50 years old, some too large or small for their present needs, and many not be suited to modern ways of living. Yet they were well-built houses that were maintained and worth the cost of remodeling. *Your Farmhouse: How to Plan Remodeling* was paired with another 1947 publication, *Your Farmhouse: Cut-Outs to Help in Planning*, which helped farmers make sound investments when remodeling an older farmhouse or building a new farmhouse. Recommendations included planning for the needs of all family members, such as preparing for more bedrooms, having a spacious living room for social gatherings, and including a modern kitchen and space for work rooms and storage. The report emphasized the importance of budgeting for extra costs such as insulation, weather stripping, heating, lighting, water and sanitation systems, repairs, and decoration.

Consequently, farmers could better understand the room lay-outs for improved use of space, minimum and desirable room sizes, and necessary clearances for furniture and equipment. The publication even provided instructions for farmers on how to make a cut-out plan to scale with a scale and ruler card, paper and scissors, pencil, and pins. In 1948, USDA published *Farmhouse Plans for Northeastern States*, which included 15 farmhouse plans for the northeast region (Marsh n.d.).

Future booklets become more specific. A 1950 guide addressed farmhouse plans for minimum budgets by presenting ideas for additions using standard building materials and approaches for building in stages as budgets allowed. In 1954, *Farmhouse: Split-Level Expansible,* featured plans for a split-level brick house designed for a sloping site that was suitable for a family with two or three small children to live comfortably. The plan provided options to utilize different materials and easy ways to add another bedroom with only minor changes in the original design. The researchers at Beltsville constructed this house on site (Marsh n.d.).

Following the theme of expansible and economical buildings, the 1954 report *Expansible Farmhouse: Frame* provided plans for a basic unit adequate for two people. The wood-frame, box-shaped house was inexpensive to build due to its simple wood-framed walls clad with exterior sheets of cement asbestos board, interior gypsum board, with two inches of wall insulation between. The design had the option to add two more bedrooms, a combination living room and sleeping area, dining room, spacious kitchen, work area, and bathroom. A subsequent report focused on the same building plans but for a concrete masonry house, offering flexibility in choice of building materials (Marsh n.d.).

In 1960, the USDA developed reports focusing on two and three-bedroom farmhouse configurations that were planned around the Beltsville Energy-Saving Kitchen Design No. 2. These house designs were of masonry and frame construction with low-pitched roofs, large window areas, carport, and basement. Both design themes were centered on convenience for the residents, such as having convenient indoor-outdoor living spaces and room layouts that worked in conjunction with each other. Emphasis was made towards families wanting larger living spaces and areas to entertain large groups, and options to partition off spaces to create extra bedrooms for growing families or elderly relatives. Additionally, these plans provided step-saving options to eliminate unnecessary storage, but also provided room options for laundering, storage, and modern appliances such as freezers and furnaces (Marsh n.d.).

Utilizing all the interior space in a thoughtful way was important in the USDA's 1965 report for the three-bedroom farmhouse with Beltsville Energy-Saving Kitchen-Workroom Design No. 1. The one-story, rectangular-shaped house had ample-sized rooms that were accessed by a main hall from either the front or rear entrance. Closets were strategically placed to act as sound buffers between sleeping and activity areas and the single chimney contained flues for both the fireplace and furnace. This extra level of planning for the interior spaces, and use of a grade beam and pier foundation with a concrete slab floor proved to be more economical (Marsh n.d.).

Farm Layouts

The experimental farms at Beltsville were a resource for individual farmers and agricultural scientists alike. Representational farm types included beef, cattle, dairy, poultry, sheep, horses, swine, fruit, vegetable, silage, and forage crops. Though the farms' foundational purpose was to support scientific research space, they were also working models of farm layout and operations. Visitors to Beltsville could tour the layouts directly and models based on Beltsville research were widely distributed in agricultural bulletins and journals (Robinson and Associates 1998).

Overall, scientists and researchers at BARC investigated the architecture of agricultural buildings and landscapes for a half century. The breadth of their research stretched from small brooding houses and large silos, to dairy barns, farm

residences, and cultivated fields, all with the intent to increase scientific knowledge and improve the efficiency and productivity of the country's farms.

Georgian Revival Architecture

A substantial number of the BARC buildings constructed during the expansion of the property in the 1930s and the following decades, including offices, laboratories, and greenhouses, are in the Georgian Revival style. The Georgian Revival style, a subset of the Colonial Revival style, was most popular from about 1880 to 1955. Inspired by the original Georgian style buildings of the eighteenth and early nineteenth centuries, the Georgian Revival building has a classic shape, typically two or three stories tall, with symmetrical balanced double-hung windows and a center accentuated front door. Distinguishing features from the original Georgian style are adjacent windows and a more accentuated front door that often extends forward and is supported by columns (McAlester 2013; Foster 2004). The consistent use of Georgian Revival architecture has created a cohesive built environment at BARC (Bowlin 2000).

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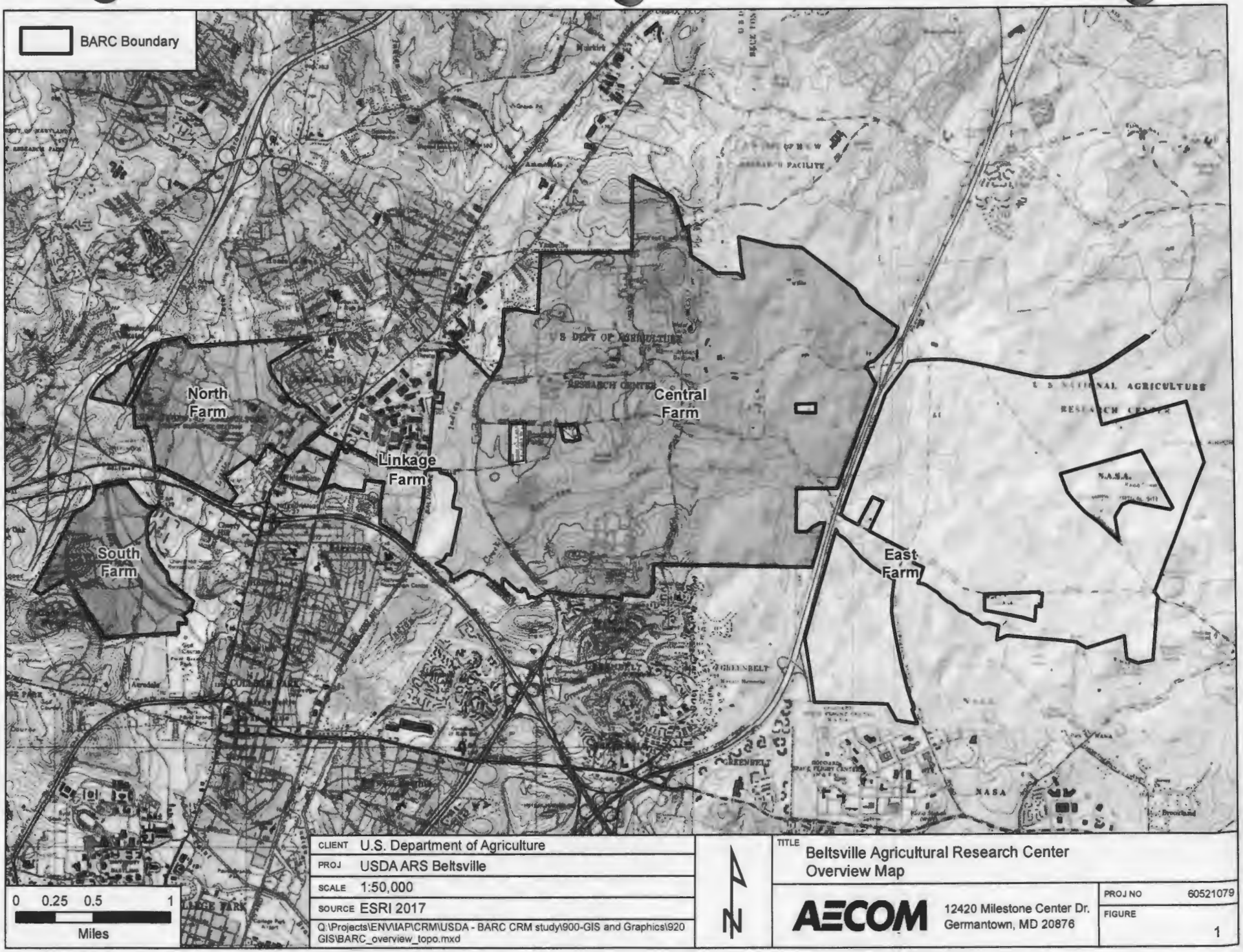

CLIENT	U.S. Department of Agriculture
PROJ	USDA ARS Beltsville
SCALE	1:50,000
SOURCE	ESRI 2017
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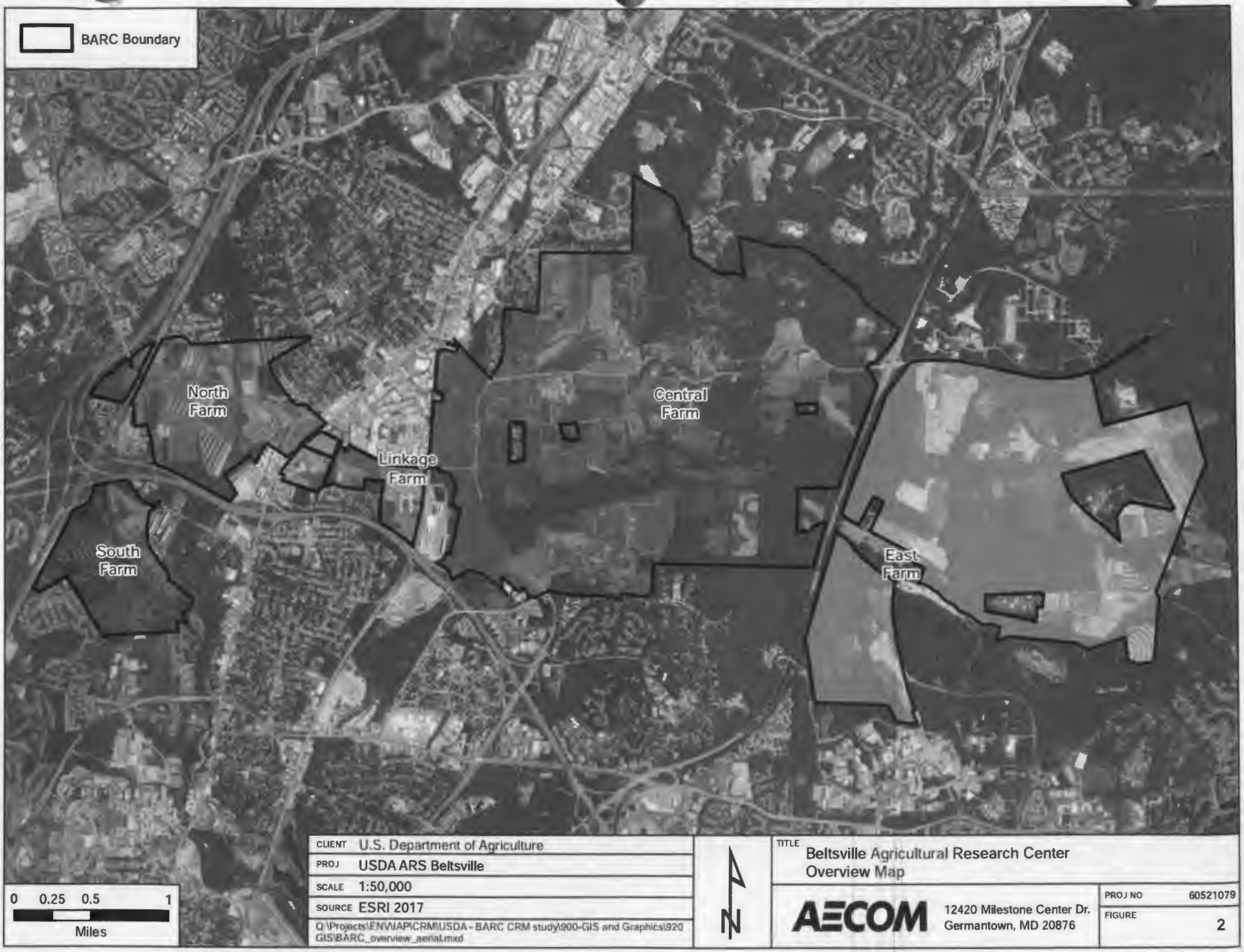
TITLE: Beltsville Agricultural Research Center Overview Map

AECOM
12420 Milestone Center Dr.
Germantown, MD 20876

PROJ NO 60521079

FIGURE 1

PG: 62-14


BARC Boundary
North Farm
Central Farm
Linkage Farm
South Farm
East Farm
0 0.25 0.5 1
Miles
CLIENT U.S. Department of Agriculture
PROJ USDA ARS Beltsville
SCALE 1:50,000
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TITLE Beltsville Agricultural Research Center Overview Map
AECOM
12420 Milestone Center Dr.
Germantown, MD 20876
PROJ NO 60521079
FIGURE 2

PG: 62-14

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Beltsville Agricultural Research Center Survey Number: PG :62-14

Project: Section 110 Survey Agency: F/USDA

Site visit by MHT Staff: ___ no _X_ yes Name L. Bowlin Date Jan 1997,1998

Eligibility recommended _X_ Eligibility **not** recommended ____

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

Justification for decision: (Use continuation sheet if necessary and attach map)

The Beltsville Agricultural Research Center (BARC) is one of the largest agricultural reseach facilities in the United States. Owned by the USDA, the facility was established in Beltsville in 1910 and significantly expanded in the 1930s and 1940s. The current site encompasses 6,582 acres and divided into five entities: South Farm, North Farm, Linkage Farm, Central Farm and the East Farm. The consultant prepared a six volume report highlighting the significance of the USDA property. The documentation clearly supports the site's significance. Under Criteria A, the diversity of the scientific research has influenced many apsects of twentieth century living for the farmer as well as the consumer. The history and developmenjt of the agricultural research facility reflects New Deal policies and programs. Several components of Criteria C are met too. The consistent use of Georgian Revival architecture has created a cohesive built environment which retains a high level of intregrity. Because the mission of the facility has remained constant over the years, the landscape also reflects a high level of integrity. The following two people made significant contributions to the physical appearance of BARC: the planning team of A.D. Taylor, landscape architect and Delos Smith, architect. The Civilian Conservation Corps and the individual research agencies at BARC played important roles in shaping the experimental farm as well. The Trust concurred that the entire BARC facility of 6582 acres was eligible for the National Register.

Documentation on the property/district is presented in: Historic Site Survey BARC, 6 volumes in MHT Library report PR229 SEE COMPLIANCE FOR BARC 110 SURVEY FOR DOE LETTER 10/98

Prepared by: Robinson and Associates

Lauren Bowlin 2/23/00
Reviewer, Office of Preservation Services Date

NR program concurrence: ✓ yes ___ no ___ not applicable

Reviewer, NR program 2/29/00
Date

Survey No. PG 62-14

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

____	Eastern Shore	(all Eastern Shore counties, and Cecil)
__X__	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:

____	Paleo-Indian	10000-7500 B.C.
____	Early Archaic	7500-6000 B.C.
____	Middle Archaic	6000-4000 B.C.
____	Late Archaic	4000-2000 B.C.
____	Early Woodland	2000-500 B.C.
____	Middle Woodland	500 B.C. - A.D. 900
____	Late Woodland/Archaic	A.D. 900-1600
____	Contact and Settlement	A.D. 1570-1750
____	Rural Agrarian Intensification	A.D. 1680-1815
____	Agricultural-Industrial Transition	A.D. 1815-1870
__X__	Industrial/Urban Dominance	A.D. 1870-1930
_X_	Modern Period	A.D. 1930-Present
____	Unknown Period (___ prehistoric ___ historic)	

III. Prehistoric Period Themes:

- ____ Subsistence
- ____ Settlement
- ____ Political
- ____ Demographic
- ____ Religion
- ____ Technology
- ____ Environmental Adaptation

IV. Historic Period Themes:

- __X__ Agriculture
- __X__ Architecture, Landscape Architecture, and Community Planning
- ____ Economic (Commercial and Industrial)
- __X__ Government/Law
- ____ Military
- ____ Religion
- ____ Social/Educational/Cultural
- ____ Transportation

V. Resource Type:

Category: buildings

Historic Environment: rural

Historic Function(s) and Use(s): agricultural research facility

Known Design Source: A.D. Taylor landscape architect, Delos Smith, architect among others

Property Address U.S. 1 and Powder Mill Road, Beltsville Vicinity, Prince George's County
Owner Name/Address U.S. Department of Agriculture
Year Built circa 1880 and 1925, 1934, 1936, 1941

Description:

The Beltsville Agricultural Research Center (BARC) was previously surveyed in 1973. A comprehensive survey of the entire Beltsville Agricultural Research Center was completed in June of 1998 for the United States Department of Agriculture, Agricultural Research Center by the firms of Robinson & Associates, Inc. and Rhodeside & Harwell, Inc. As a result of this survey, the Maryland Historical Trust determined in a letter dated October 16, 1998, that the entire 2664 hectare (6582 acre) area of BARC was eligible for the National Register of Historic Places under Criteria A and C. Five buildings or complexes located within the boundaries of the research center fall within the Area of Potential Effect of the proposed project. These specific buildings within BARC will be described in this form. The buildings are located within the areas described as the Linkage Farm and the Central Farm in the 1998 Robinson & Associates and Rhodeside & Harwell survey.

The first four buildings are located within the area known as the Central Farm. The Central Farm consists of an area of 912 hectares (2253 acres), bounded by the Baltimore-Washington Parkway on the east, Edmonston Road on the west, Greenbelt on the south, and the United States Department of Health and Human Services and United States Department of State complex and Muirkirk on the north. The Central Farm encompasses the area which was first purchased by the United States Department of Agriculture (USDA) in 1910. The Central Farm landscape developed as a planned landscape beginning in 1934, when landscape architect A.D. Taylor and architect Delos Smith created a plan for the development of the area. Five major cluster arrangements organize this farm landscape, which contains the largest portion of buildings and individual bureau research activities. The buildings in this form are located within the first cluster area known as the Bureau of Dairy Industry.

The first building is Building 156. It is located on the south side of Powder Mill Road, near its intersection with Edmonston Road. The building is identified as a guard's office on the map located on the BARC property, but it appears to be currently unoccupied. Plans for the building indicate that it was constructed in 1941 as a comfort station. In 1957, the building was used by Park Police and was later occupied by the BARC security force until the unit relocated to Building 186. The building is a 1-story, 5-bay, cross-gable structure. The building has projecting center gable-bays on the front and rear elevation. The structure has a cross-gable roof with slate shingles. It is of fieldstone and frame construction on a raised stone foundation. The windows are double-hung wood sash.

The north, or front elevation is marked with the number 156. It has a central projecting gable-front bay built of stone, flanked by two frame, side-gable wings with weatherboard siding, stone pilasters and arched cornices. The wings were originally porches on either side of the main building. They were enclosed at a later, unknown date. The first story has three entrances. One in the first bay, one in the third bay, and one in the fifth bay. All have 6-light doors. The center door is flanked by two 6/6 double-hung windows. The center-bay gable is sheathed in weatherboards and has a 9-light circular window.

The west elevation has a raised stone foundation. The gable-end of the side wing projects from the center block. There is a 4/4 double-hung window in the first bay, and a 6/6 double-hung window centered on the gable-end wall. The gable-end wall is sheathed in weatherboard with stone corner pilasters. The gable is also covered in weatherboards. The cornice is arched above the window.

The south, or rear elevation has a projecting gable-end stone center bay flanked by two frame side-gable wings. There are two 6/6 double-hung windows in the gable-end, and a 1/1 double-hung window in each of the flanking wings.

The east elevation has a raised stone foundation. The gable-end of the side wing projects from the center block. There is a 6/6 double-hung window centered on the gable-end, and a 4/4 double-hung window on the main block.

Property Address U.S. 1 and Powder Mill Road, Beltsville Vicinity, Prince George's County
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Description: (continued)

The building faces the road, and cultivated fields extend to within a few feet of the rear of the building. There is a small parking area and semi-circular drive located adjacent to the building.

The second building is Building 157, which was built in 1934. It is located at the corner of Powder Mill Road and South Dairy Road. The building is located in the U.S. Dairy Administration complex, and served as an experimental dairy laboratory building, but it is currently unoccupied. The Dairy Products Laboratory was constructed to expand the Bureau of Dairy Industry's research into the area of manufacturing. By 1936, there were more workers involved in manufacturing research than in actual production work at the Bureau of Dairy Industry. Then Chief of the Bureau, Oliver Reed, stated that he believed the manufacturing research yielded a higher economic return to the industry than the work on breeding and actual milk production. The floor plans indicated spaces for office and laboratories, as well as a specific cheddar cheese room, Swiss cheese room, market milk room, and seven curing rooms. It is a 2½-story, 8-bay concrete block building with incised beltcourse and water table detailing. The windows are 16-light metal, with the center-top 4-lights working as a hopper window. The structure has a hipped-roof covered with metal roofing, and there are 2 large vents on the top of the building.

The east, or front elevation faces onto South Dairy Road. It is 4-bays wide. The basement level has two fixed-light windows in the loading dock foundation. There is a 16-light window in the first bay, a loading dock with a concrete foundation and hipped roof. The loading dock has double-doors and a single door in the second and third bays. The fourth bay contains the main entrance, and a set of double-doors reached by a set of concrete steps. There are four 16-light windows on the second story. There are two hipped-roof dormers, each with two 6-light windows.

The south elevation has a 1-story concrete block garage/storage addition. There are three 16-light windows on the first story. The second story has two 16-light windows flanking central double doors. The west elevation has four 8-light windows on the basement level. There are eight 16-light windows on the first floor. The second floor has seven 16-light windows, and a fire-escape door, reached by a set of metal steps.

The north elevation has three 16-light windows on both the first and second stories.

There is a rectangular tower on the east side of the building, with a hipped roof. Building 157 is located next to cultivated fields on the west. There are dairy barns and research facilities to the south of the building. USDA housing is on the other side of South Dairy Road, to the east. A semicircular drive leads from South Diary Road to the loading dock on the east side of the building.

The third building is Building 186, located on the north side of Powder Mill Road and accessed by a driveway located to the west of North Dairy Road. Built circa 1880, Building 186 was altered in 1925 to serve as a residence for the Superintendent of the Beltsville Research Center. During the 1970s, the building served as a visitor's center; the building was used as the headquarters for the BARC police until February 1997. The building currently appears to be unoccupied. It is a 2-story, 3-bay side-gable farmhouse which has been altered. The building is T-shaped in plan, and has a 1-story integral porch on the front elevation. It also has a 1-story porch on the rear, and frame additions on the side. The structure has a cross-gable roof with asphalt shingles and two brick chimneys with corbelled chimney caps. It is of wood-frame construction with stucco over weatherboards, and it has a parged brick foundation. The windows are double-hung wood sash.

The south, or front elevation has a sweeping curved concrete ramp and steps leading up to the front porch. The porch is supported on square concrete pillars with curved brackets. There are paired metal-frame glass doors in the first bay under the porch. There are also two metal-frame 1/1 double-hung windows under the porch on the first story. The second story has a band of six 2/2 double-hung windows and a single 2/2 double-hung window.

Property Address U.S. 1 and Powder Mill Road, Beltsville Vicinity, Prince George's County
Owner Name/Address U.S. Department of Agriculture
Year Built circa 1880 and 1925, 1934, 1936, 1941

Description: (continued)

The east elevation has been altered by a frame addition and the front porch. There is a door at the basement level on the front wing of the house. The side addition has a 2/2 double-hung window, and there is one 2/2 double-hung window on the enclosed portion of the rear porch. There is a boarded doorway under the rear porch. There is a 1/1 double-hung window located between the first and second story, in the center of the front wing. Two 2/2 double-hung windows are located on the second story of the front wing. The gable has a fixed-light window.

The north elevation has a projecting, centered gable-end wing which extends from the front wing and a rear gable-roof porch which has been partially enclosed with weatherboard. There is a door under the cover of the rear porch and a fixed-light window on the enclosed porch wall. There is a 2/4 double-hung window in the first story of the gable-end, and a 2/2 double-hung window on the front wing. A square-bay window located on the west side of the building is visible from this elevation, and the north side has a 1/1 double-hung window. There are four 2/2 double-hung windows on the second story. There is a fixed-light window in the gable.

The west elevation is composed of the gable-end of the front wing, the side of the rear wing, and the enclosed elevation of the rear porch. The basement level has two window openings. The opening under the front wing has a 2-light fixed window, and the one under the rear wing is boarded. The square bay-window in the gable-end has two 1/1 double-hung windows. There is a 2/4 double-hung window on the rear wing. There is a small 2/2 double-hung window on the wall of the enclosed rear porch. The second story has paired 2/2 double-hung windows and a single 2/2 double-hung window on the gable end. There is a 2/2 double-hung window on the rear wing and a fixed-light window in the gable.

Building 188, a gambrel-roof barn, is located to the northeast of the farmhouse. It is of wood-frame construction with weatherboard siding. The gambrel roof has two metal vents and is covered in diamond-pattern shingles. The barn has double braced doors in the hayloft on the south end, and double-braced doors on the west and east elevations. According to drawings, the barn was built in 1933 as a hay barn.

The fifth complex is located in the area known as the Linkage Farm. The Linkage Farm consists of an area of 186 hectares (460 acres), and connects the North Farm and the Central Farm. The farm is discontiguous and consists of a 125.5 hectare (310 acre) west tract and a 60.7 hectare (150 acre) east tract. The west tract of the Linkage Farm is positioned between U.S. Route 1, Sunnyside Road and I-495. Rhode Island Avenue divides this tract. Mixed-use development occurs along the north side of Linkage Farm, residential along the southeast, Sunnyside Park and the Maryland State Police Barrack Q along the southwest, U.S. Route 1 and BARC North Farm on the west, and the WMATA Greenbelt Metro Station on the east side. The east tract is portioned between Powder Mill Road, the Baltimore and Ohio Railroad, Edmonston Road, and I-495. Sunnyside Road divides this tract. The 60.7 hectare (150 acre) tract was acquired in the 1940 and contains the granary complex. The granary was built in 1936 and expanded in 1939 to support the Dairy Bureau at Central Farm. The complex consists of Buildings 85-90, and serves as a grain elevator/granary. It is located on the south side of Powder Mill Road, adjacent to the CSX (B & O) railroad.

In 1931, mill equipment was purchased by BARC from the Sprout Waldron Company. At the time of the purchase, money was not available for the construction of a building suitable for the installation of the equipment, which was temporarily stored in a barn. Funds were acquired and a building was built in 1936. The building and equipment were to be used for the preparation of grain feed rations for dairy cattle. Shelled corn, oats, and other grains were to be used. The original plan included a receiving hopper on the west side of the building for grain that was delivered in bulk. An elevator would discharge the grain into a receiving separator and from the separator, it would be elevated onto a conveyor in the attic which would discharge into the whole grain storage bins. A return conveyor on the ground floor would return the grain to the same elevator. The elevator could also discharge into check bins over the mill room and from these bins, the grain would go to various mills. The ground feed would be conveyed from the mills to a sacking elevator if it were to be bagged or to a

Property Address U.S. 1 and Powder Mill Road, Beltsville Vicinity, Prince George's County
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Year Built circa 1880 and 1925, 1934, 1936, 1941

Description: (continued)

different elevator which would discharge into the ground feed storage bins. Space was provided for four different types of mills, although the initial installation was to include the burr mill and the oat crusher only. A trolley hopper scale provided under the ground feed bins would weigh feeds to be mixed. From the hopper scale, the ground feed went to the second elevator and discharged into the feed mixer. Bagged grain elevated to the mixer would be dumped into a hopper at floor level on the second elevator. All mixed feed would be bagged directly from the feed mixer and hauled to the barns and stables as required.

The main building is a 6-1 common bond brick building on a concrete block foundation with a metal gable roof and 16-light metal-frame windows. The building has multiple loading-dock doors on the east elevation. There is a 2-story, front-gable concrete-block building with clerestory windows attached to the south end of the brick building. Four large silos are attached to the southern end of the concrete block building. A large machine servicing wing is attached to the east elevation of the building.

There is an elevated metal conveyor system on the south end of the complex, leading from the railroad. It is of rolled-metal girder construction on a concrete foundation.

A 1-story brick service building is located to the east of the main building. It has a flat roof and a large central brick chimney. It has 8-light metal frame windows and a door on the south elevation.

A front-gable shed is located to the north of the service building. It has a concrete block foundation and is sheathed in corrugated metal. There is a garage door on the south elevation

National Register Evaluation:

The entire 2664-hectare (6582-acre) Beltsville Agricultural Research Center was determined eligible for the National Register of Historic Places under Criteria A and C by the Maryland Historical Trust in a letter dated October 16, 1998. The BARC is eligible under Criterion A as an important site which reflects the development of a national center for agricultural experimentation and testing. It is the main research facility of the U.S. Department of Agriculture, and is the leading and most diversified agricultural research complex in the world. Government acquisition began in 1910, and grew rapidly with the Depression-era programs of the 1930s and 1940s. Included within the complex are areas for the Beltsville Human Nutrition Research Center, the Livestock and Poultry Science Institute, the Natural Resources Institute, and the Plant Sciences Institute. The diversity of the scientific research conducted at BARC has influenced many aspects of twentieth century living for the farmer as well as the consumer. The history and development of the agricultural research facility reflects New Deal policies and programs. The Beltsville Agricultural Research Center is also eligible under Criterion C. Because the mission of the facility has remained constant over the years, the landscape reflects a strong level of integrity. The physical appearance of BARC was strongly influenced in the 1930s by the planning team of A.D. Taylor, landscape architect, and Delos Smith, architect. The Civilian Conservation Corps and the individual bureaus at BARC played important roles in the shaping of the landscape as well. Contributing elements of the landscape include major paved roads, including Powder Mill Road, minor service roads, field and research crops, pasture lands, seasonal ponds, forests, sustainable meadows, other landscape features, and buildings. The five buildings and complexes surveyed for this project cover a range of building types which represent the various aspects of the center, including a 1941 comfort station (Building 156), a once private residence (Building 186) which was purchased by the USDA and was once used as a visitor's center, a dairy laboratory building (Building 157), and a grain elevator (Buildings 85-90). The five buildings represent the research center tasks of meeting the needs of the public while performing agricultural experiments in the production and processing of crops and animal products, human nutrition, and natural resources.

Property Address U.S. 1 and Powder Mill Road, Beltsville Vicinity, Prince George's County
Owner Name/Address U.S. Department of Agriculture
Year Built circa 1880 and 1925, 1934, 1936, 1941

Verbal Boundary Description and Justification:

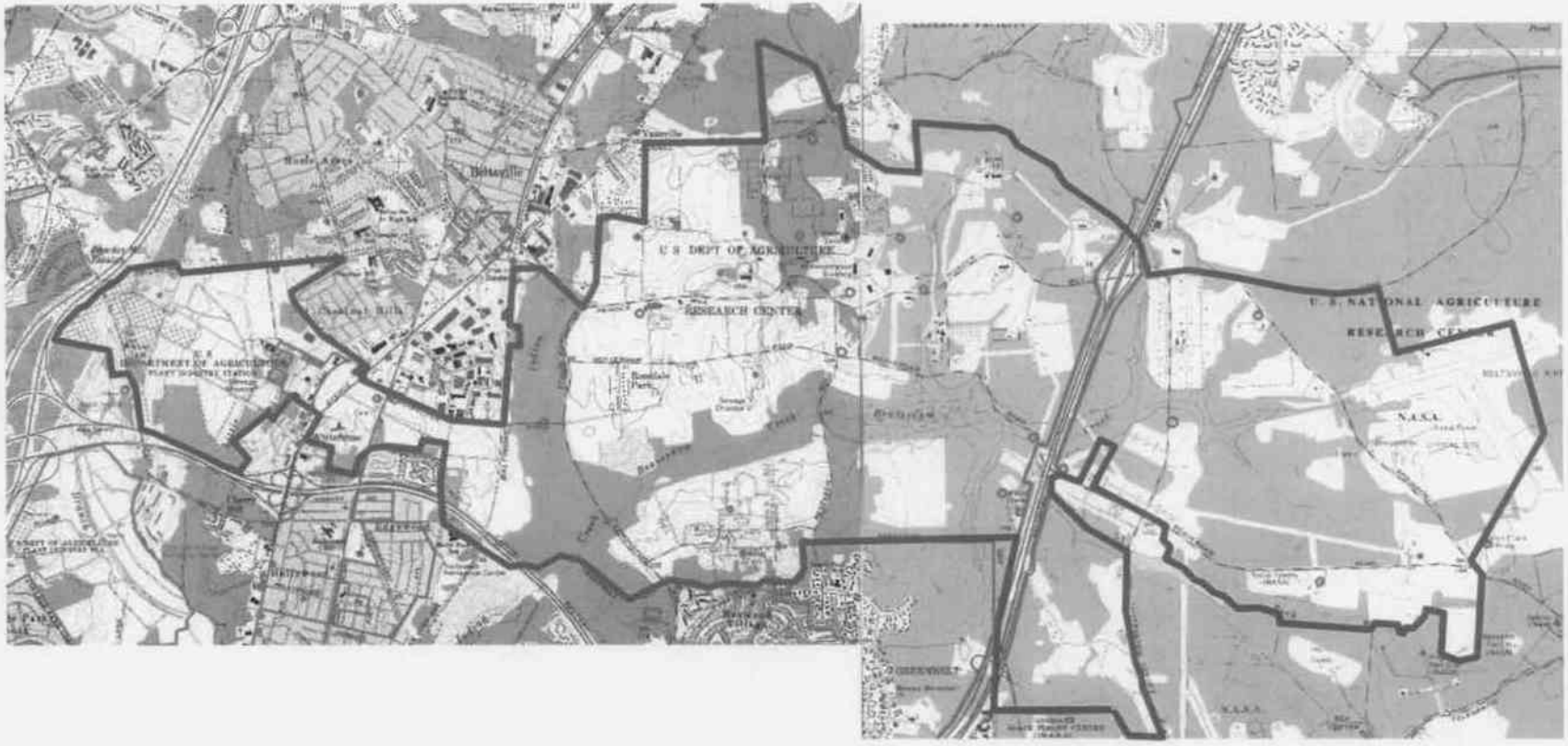
The National Register boundaries of the Beltsville Agricultural Research Center boundaries, as delineated in the previous survey form and approved by MHT, follow the current legal boundaries of the property, which consists of 2664 hectares (6582 acres). The property is bounded on the north by Sellman Road, Sunnyside Avenue, Odell Road, and the Patuxent Wildlife Research Center; on the west by the Patuxent Wildlife Research Center and Telegraph Road, on the south by NASA lands, the town of Greenbelt, and the Washington Beltway; on the east by Cherry Hill Road, I-95, the CSX Railroad (B&O), and Edmonston Road.

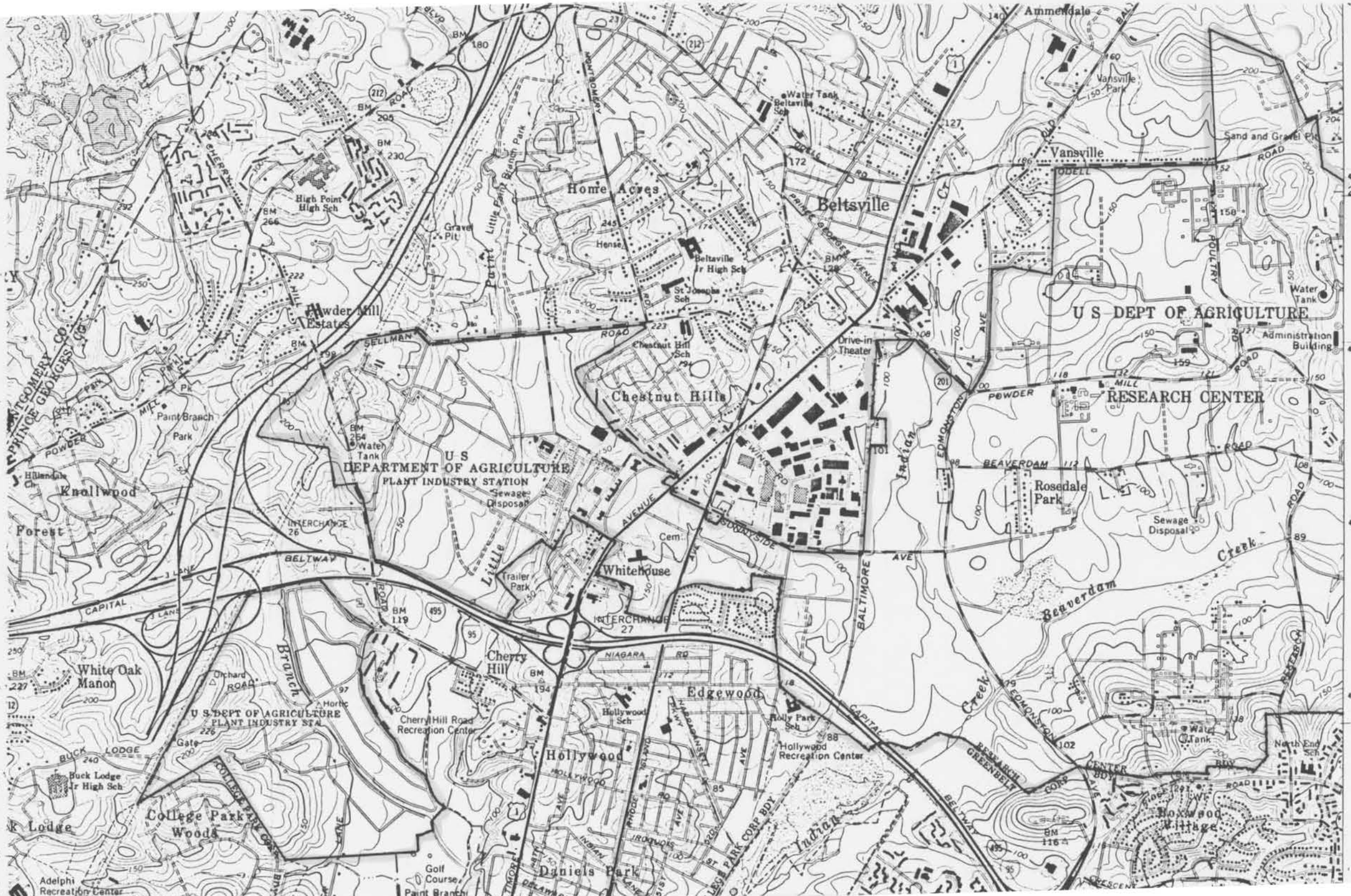
MHT CONCURRENCE:
Eligibility X recommended ____ not recommended
Criteria X A __ B X C __ D __ **Considerations** __ A __ B __ C __ D __ E __ F __ G __ None
Comments: HOWEVER I RECOMMEND THAT THE ADDENDUM BE REVISED TO EVALUATE THE INTEGRITY OF THE LANDSCAPE FEATURES PRIOR TO DEMOLITION

Reviewer, Office of Preservation Services / Date 1-28-99 Reviewer, NR program Date 2/2/99

Preparer:
P.A.C. Spero & Company
May 1998/revised October 1998

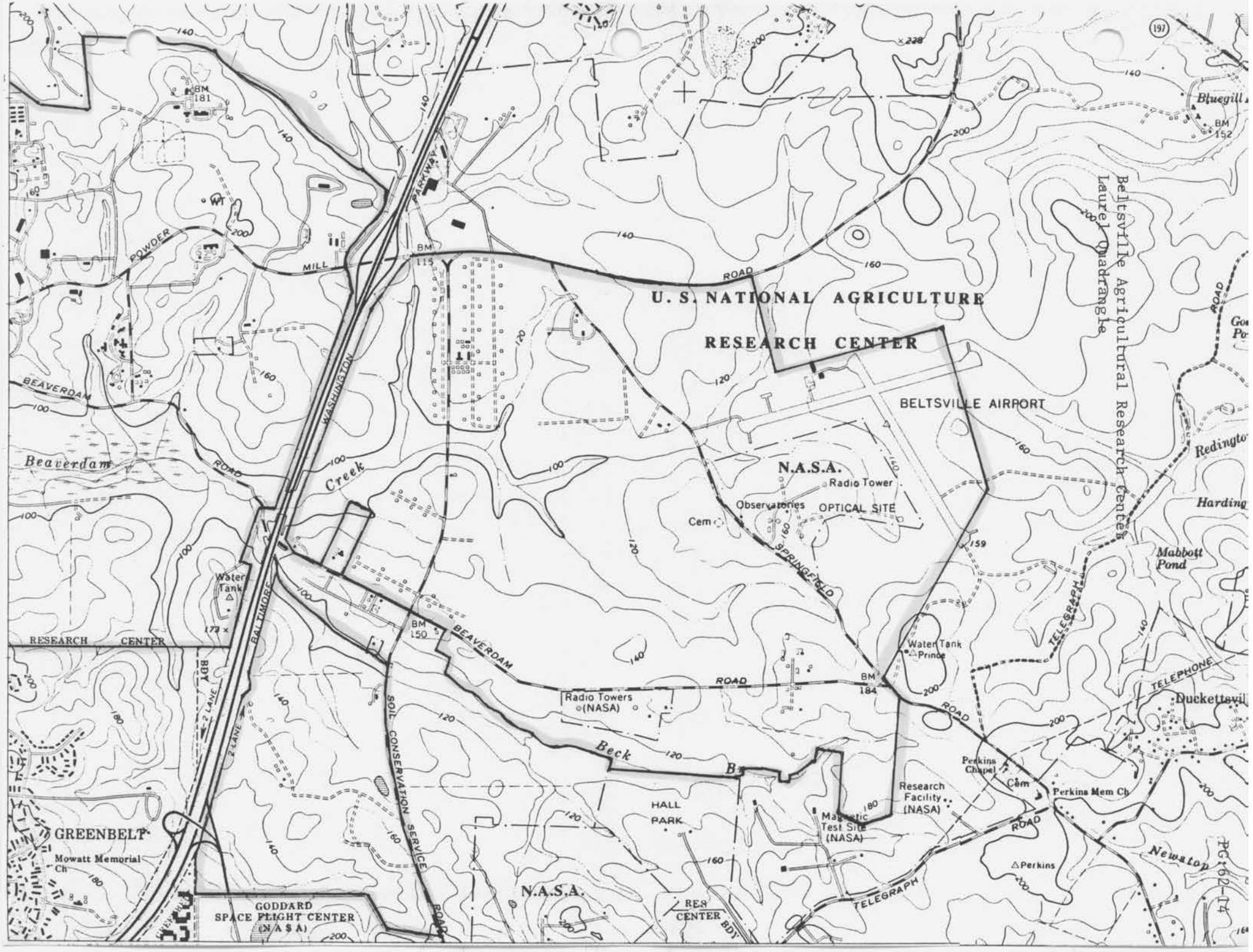
PG:62-14
Beltsville Agricultural Research Center
National Register-eligible Historic District
Beltsville and Laurel Quadrangles





Beltsville Agricultural Research Center
Beltsville Quadrangle

PG:62-14


Beltsville Agricultural Research Center
Laurel Quadrangle
U. S. NATIONAL AGRICULTURE
RESEARCH CENTER
BELTSVILLE AIRPORT
N.A.S.A.
Radio Tower
Observatories
OPTICAL SITE
Cem
SPRINGFIELD
Water Tank
Prince
BM 184
BM 181
BM 115
BM 150
BM 152
POWDER MILL ROAD
BEAVERDAM ROAD
Beaverdam Creek
WASHINGTON PARKWAY
BALTIMORE
2 LANE
BDY
RESEARCH CENTER
Water Tank
Radio Towers (NASA)
SOIL CONSERVATION SERVICE ROAD
Beck B
HALL PARK
Magnetic Test Site (NASA)
Research Facility (NASA)
Perkins Chapel
Cem
Perkins Mem Ch
Perkins
TELEGRAPH ROAD
TELEPHONE
Ducketteville
Mabbott Pond
Newton
GREENBELT
Mowatt Memorial Ch
GODDARD SPACE FLIGHT CENTER (N A S A)
N.A.S.A.
RES CENTER BDY
Bluegill
Harding
PG 62-14

PG. #62-14
P.G 36
1700364729

MARYLAND HISTORICAL TRUST

INVENTORY FORM FOR STATE HISTORIC SITES SURVEY

1 NAME

HISTORIC

AND/OR COMMON

U.S.D.A.-Beltsville Agricultural Center

2 LOCATION

STREET & NUMBER

U.S. Rte. 1 & Powder Mill Rd.

CITY, TOWN

Beltsville

__ VICINITY OF

CONGRESSIONAL DISTRICT

STATE

Maryland

COUNTY

Prince George's

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	✓PUBLIC	✓OCCUPIED	✓AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	__UNOCCUPIED	__COMMERCIAL	__PARK
__STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
✓SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	✓GOVERNMENT	✓SCIENTIFIC
	__BEING CONSIDERED	__YES: UNRESTRICTED	__INDUSTRIAL	__TRANSPORTATION
		__NO	__MILITARY	__OTHER

4 OWNER OF PROPERTY

NAME

United States Dep't. of Agriculture Telephone #:

STREET & NUMBER

CITY, TOWN

STATE, zip code

__ VICINITY OF

5 LOCATION OF LEGAL DESCRIPTION

Liber #:

Folio #:

COURTHOUSE, REGISTRY OF DEEDS, ETC.

Prince George's County Courthouse

STREET & NUMBER

CITY, TOWN

Upper Marlboro

STATE

Maryland

6 REPRESENTATION IN EXISTING SURVEYS

TITLE

DATE

__FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS

CITY, TOWN

STATE

DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
_EXCELLENT	_DETERIORATED	_UNALTERED	✓ORIGINAL SITE
_GOOD	_RUINS	_ALTERED	_MOVED DATE_____
_FAIR	_UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

This is a sprawling, 10,400 acre complex of fields, woods, and building complexes. The main administration center, located on Powder Mill Rd., is a series of "Maryland Georgian" style brick buildings, constructed early in this century. There are several older houses and farm complexes, of historic interest, located about the grounds. (See separate forms for each of these historic sites.)

CONTINUE ON SEPARATE SHEET IF NECESSARY

SIGNIFICANCE

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	
✓ 1900-	__COMMUNICATIONS	__INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)	
		__INVENTION			

SPECIFIC DATES

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

This is the world's major agricultural proving ground and study area. Government acquisition began with the purchase of 475 acres in 1910. During the 1930's and '40's, a series of steps (many prompted by Depression-era programs) resulted in the concentration of the USDA experimental facilities here. It is especially interesting to note that much of the initial interest in the formation of such a facility dates back to the 1850's, with the efforts of two of Mont. & P.G. Counties most famous statesmen/farmers-Francis P. Blair of "Silver Spring" and Charles B. Calvert of "Riversdale".

CONTINUE ON SEPARATE SHEET IF NECESSARY

9 MAJOR BIBLIOGRAPHICAL REFERENCES

1) Wiser, Vivian & Rasmussen, Wayne D. "Background for Plenty" MD. HISTORICAL MAGAZINE, Dec., 1966.

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY _____

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	COUNTY
STATE	COUNTY

11 FORM PREPARED BY

NAME / TITLE
Michael F. Dwyer, Senior Park Historian

ORGANIZATION
M-NCPPC

DATE
1/25/73

STREET & NUMBER
8787 Georgia Ave.

TELEPHONE
589-1480

CITY OR TOWN
Silver Spring

STATE
Maryland

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
The Shaw House, 21 State Circle
Annapolis, Maryland 21401
(301) 267-1438

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
GENERAL SERVICES DIVISION
HYATTSVILLE, MARYLAND 20782

PG:62-14

APR 2 1975

Mr. Tyler Bastian
Maryland Geological Survey
Latrobe Hall
The Johns Hopkins University
Baltimore, Maryland 21218

Dear Mr. Bastian:

Please refer to your letter of February 20, 1975, to Mr. Zane G. Smith, U.S. Department of Agriculture, Forest Service, and his undated letter of reply, relative to prehistoric Indian sites at the Beltsville Agricultural Research Center.

We, too, are concerned with the preservation of archeological resources on the Research Center and have been alert to the occasional find of arrowheads. We are, however, not aware of any significant findings on sites.

We will appreciate receiving any specific information you may have, relative to abundant prehistoric Indian archeological sites at the Center, so that we may further explore these locations.

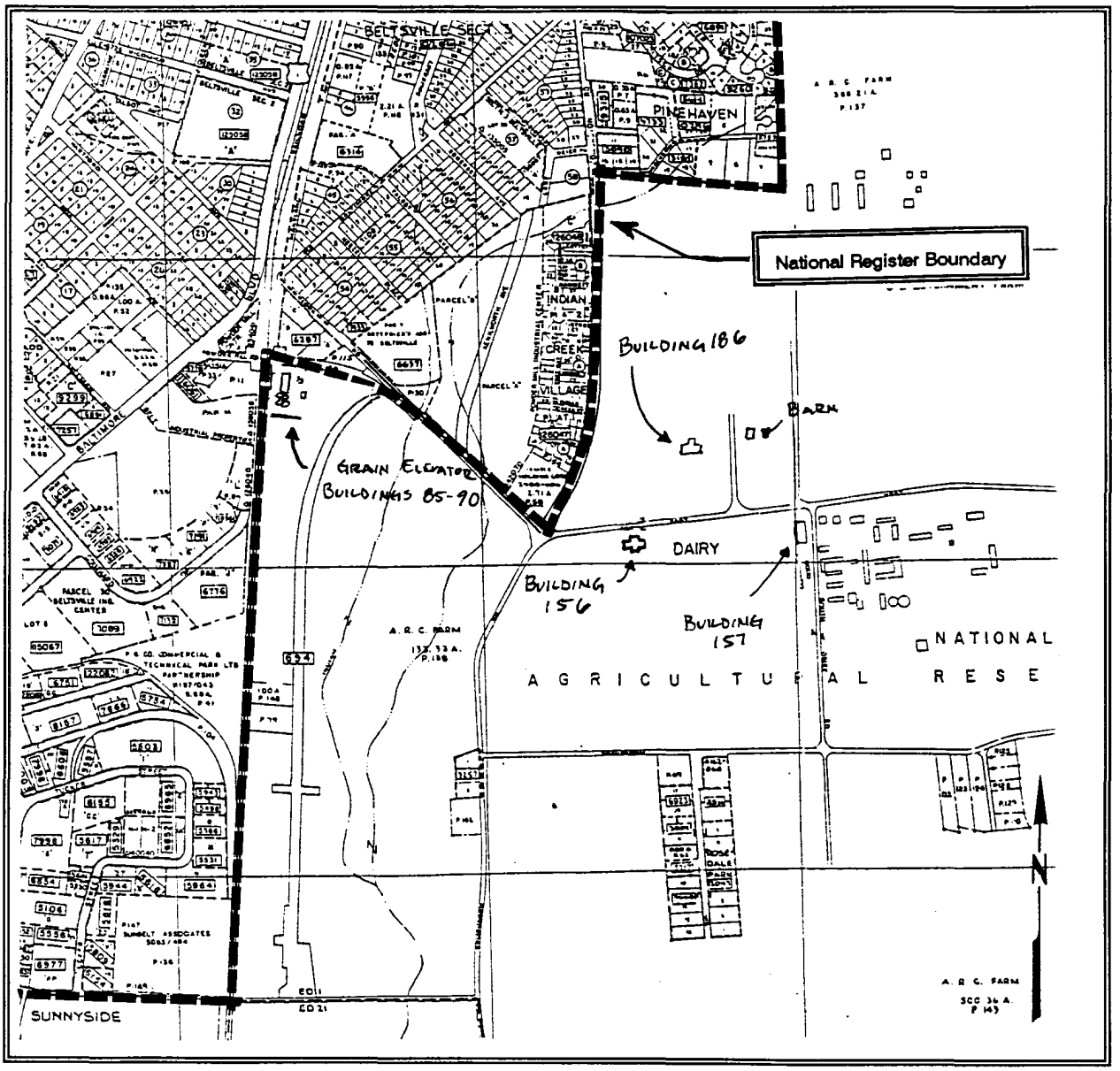
Sincerely,

Ralson R. Rhodes
Director

cc:
A. C. Townsend, Dir., Md. Historical Trust, Annapolis

Property Address U.S. 1 and Powder Mill Road, Beltsville Vicinity, Prince George's County
Owner Name/Address U.S. Department of Agriculture
Year Built circa 1880, circa 1930, circa 1940

Resource Sketch Map and National Register Boundary Map:



PG: 62-14

Beltsville Agricultural Research Center (BARC)
Beltsville, Prince George's County, Maryland

SEE HISTORIC AMERICAN BUILDINGS SURVEY (HABS) FOR ADDITIONAL INFORMATION.


156

1 PE: GJ - M

2 BARC Bldg 456 - [illegible]

3 Prince Georges Co MD

4 Susan Tang

5 [illegible]

6 MD SHPO

7 [illegible]

8 [illegible]


156

1 PG: 60-14

2 Baker Bldg 150

3 Prince Georges Co MD

4 Susan Taylor

5 [illegible]

6 MD SHPO

7 " Location

8 1 of 55

1 PG: 62-14

2 BARC Bldg. '56 - ground-floor

3 Prince Georges Co. MD

4 Susan Taylor

5 5/95

6 MD SHPO

7 [illegible] elevation

8 [illegible]

1 PK-GJ III

2 BARC Bldg 156 - guard office

3 Prince Georges Co. MD

4 Susan Taylor

5 6.195

6 MD SHPO

7 Sue Cahill

8 4 of 5

1 PG 62 W

2 BWC Bldg 156 - Grand Hall

3 Prince Georges Co, MD

4 Susan Taylor

5 S/T8

6 PMD SHPO

7 SE corner

8 6 of 35

1 PE-62-14

2 BARC Bldg-156 - [illegible]

3 Prince Georges Co. MD

4 Susan Taylor

5 3/98

6 MD SHPO

7. 5 elevations

8. 5 of 35

1 116 · 62 - 14

2 BARC Bldg 156 - guard office

3 Prince Georges Co. MD

4 Susan Taylor

5 5/98

6 MD SHPO

7 Elevation

8 7 of 35

1 PG:62-14

2 BARC Rudy 136 - ground office

3 Prince Georges Co. MD

4 Susan Taylor

5 3/98

6 MD SHPO

7 NE corner

8 E of 35

1 MD. 62-14

2 Power Bldg. (S.T. USDA Dairy)

3 Prince George's Co. MD

4 Susan Taylor

5 5198

6 MD SHPO

7 West elevation

8 9 of 35

1 PG: 62 - 14

2 BARC Bldg 15? - 115DA[illegible]

3 [illegible]

4 [illegible]

5 5/28

6 NL = HPO

7 SW corner

8 10 of 35


3

1 PE; 62-14

2 [illegible] Bldg 151 - [illegible] Dairy

3 Prince Georges Co, MD

4 Susan Taylor

5 5/98

6 MD SHPO

7 S elevation

8 11 of 35

1 AG:62-14
2 BARC Bldg 157 - USDA Dairy
3 Prince Georges Co MD
4 Susan Taylor
5 5/98
6 NW SW
7 SE corner
8 12 of 35

1 PG:62-14

2 BARC Bldg 5:1 USDA Dairy

3 Prince Georges Co MD

4 Susan Taylor

5 S/GS

6 MD SHPO

7 E elevation

8 13 of 35

1 PG 62-1d

2 BARC Bldg 157 - USDA Dairy

3. Prince Georges Co MD

4 Susan Taylor

5 5/98

6 MD St Plo

7 NE corner

8 14 of 35

1 PG:62-10

2 BARC Bldg 150

3 Prince Georges Co, Md

4 Susan Taylor

5 5/98

6 MD SHPO

7 NE Corner

8 1 of 3

1 PG: 62-14

2 BARC Bldg

3 Prince Georges Co. Md

4 Susan Taylor

5 E/W

6 N/D SHPO

7 N elevation

8 16 of 35


186

1 PG: 62-14
2 BARC
3 Pierce George A. old
4 Duncan Taylor
5 3/78
6 MD EHCU
7 S Elevation
8 18 of 35


BUILDING NUMBER
157

1 Pt 62-14
2 [illegible] Bldg [illegible]
3 Pioneer [illegible] Co [illegible]
4 Susan Taylor
5 5/94
6 [illegible]
7 [illegible]
8 17-25

1 [illegible]
2 Bike Rights
3 Prince George Canada
4 Susan Taylor
5 5/27
6 No Smoking
7 Elevation
8 80 of 3[illegible]


186

1 [illegible]

2 [illegible]

3 Prince Georges Co, MD

4 Susan Taylor

5 5/91

6 MD 210

7 NE corner house

8 21 of 32


oke

1 [illegible]

2 [illegible]

3 Prince [illegible] Co. Md

4 [illegible] Taylor

5 5/97

6 MD SHPO

7 [illegible]

8 [illegible]

1 PG-62-14

2 BARC Bldg-176

3 Prince George Co Md

4 Susan Taylor

5 5/98

6. Md SHPO

7 NW Corner

8 23 of 35

1 PG-62-111

2 BARC Bldg 185

3 Prince George's County

4 Susan Taylor

5 5/98

6 Md SHPO

7 W elevation

8 24 of 35


186

1 PG: 60 [illegible]

2 FPRCB [illegible]. 186

3 Prince Georges Co, Md

4 Susan Taylor

5 [illegible]/98

6 MD 5/[illegible]

7 5 [illegible] Court

8 25 of 35

1 PE: 62 - 12

2 BARC Bldg. 186

3 Prince George's Co., MD

4 Susan Taylor

5 5/98

6 MD SHPO

7 Gambrel roof barn, SW corner

8 26 of 35

1 PG [illegible]
2 [illegible] Bldg. [illegible]
3 Prince George's Co, Md
4 Susan Taylor
5 5/98
6 MD SHPO
7 W elevation, Barn
8 27 of [illegible]

1 PG: 62 of
2 BMC
3 Prince George Co. MD
4 Susan Taylor
5 5/96
6 MD SHPO
7 5 Elevation
8 28 OF 35

1 PG-69-14

2 BARC

3 Prince George's Co Md

4 Susan Taylor

5 5/98

6 Md SHPO

7 [illegible] grain elevator

8 29 of 35

1 PG-160-14

2 EHC

3 Prince George Co, Md

4 Susan Taylor

5 5/97

6 Md SHPO

7 Elevation

8 30 or 35

1 PG 62 14

2 BMKC

3 Prince George Co, Md

4 Lewis - Taylor

5 5 of 7

6 Md DPW

7 Elevation, Service

8 31 or 35

1 PG: 62 14

2 BARC

3 Prince George's Co Md

4 Susan Taylor

5 5-78

6 Md SHPO

7 Service bldg

8 32 OF 35

1 PG-62-14

2 BARC

3 Prince George Co., Md

4 Susan Taylor

5 5/91

6 MdSHA

7 Conveyor

8 33 of 35

1 PG-62-14

2 BHC

3 Prince Georges Co MD

4 Susan Taylor

5 5/97

6 Md SHPO

7 S elevation, shed

8 34 of 35

1 PG-62-1

2 BARC

3 Prince Georges Co. Md

4 Anacostia

5 5/98

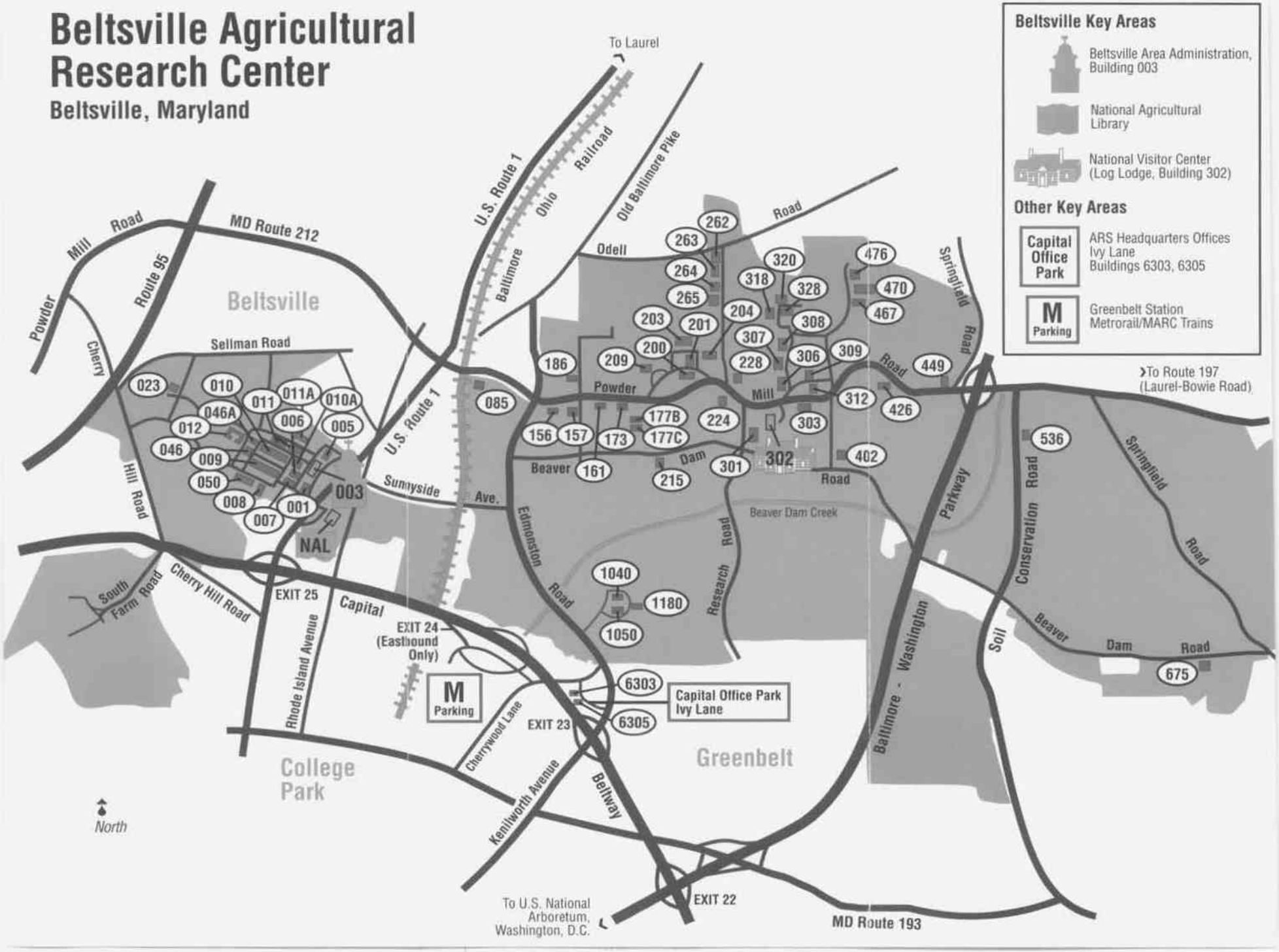
6 Md. DOT

7 Site View

8 35 OF 35

Beltsville Agricultural Research Center

Beltsville, Maryland



Area Map

Beltsville Agricultural Research Center

Beltsville Key Areas

Building 003
Beltsville Area Administration

National Agricultural Library
Hours: 8 a.m.-4:30 p.m.
Mon.-Fri., closed Sat. & Sun.,
and Federal holidays;
Stacks close at 4 p.m.

ARS National Visitor Center
Building 302
Hours: 8 a.m.-4:30 p.m.,
Mon.-Fri., closed Sat. & Sun.,
and Federal holidays.
Tours by appointment:
(301) 504-8483 or (301) 504-9403

U.S. Department of Agriculture
Agricultural Research Service
February 1994

West of Route 1

Building 003
Beltsville Area Director
Auditorium
Conference Room 020
Cafeteria
First Aid - Nurse, Room 12
(301) 504-7024

Building 005
National Program Staff
Conference Room 21

Building 007
Conference Room 006

Building 010A (Plant Science)
Conference Room

Building 011A (Bioscience)
Conference Room 119

East of Edmonston Road

Research
Dairy/Livestock
Poultry
Entomology
Parasitology
Human Nutrition

Operations
Facilities Engineering, Building 426
Farm Operations, Building 301
Research Animal Services, Building 177C

Building 186 - Security
Phone (301) 504-9107
In Emergency (301) 919-9546
or (301) 919-9547

Building 307
First Aid - Nurse, Room 124
(301) 504-8073
Conference Room 112

Building 1050
Conference House

Other Key Areas

Metrorail/MARC
Greenbelt Station
Cherrywood Lane

Capital Office Park, Ivy Lane
Agricultural Research Service
Headquarters Offices
Administrative Management,
Buildings 6303, 6305
Information Staff, Building 6303

U.S. National Arboretum
3501 New York Avenue, N.E.
Washington, D.C. 20002
(202) 475-4815
Hours: Mon.-Fri. 8 a.m. to 5 p.m.
Sat. & Sun. 10 a.m. to 5 p.m.
Directions from BARC:
Baltimore-Washington Parkway south to New York Avenue. Left at light onto Bladensburg Road. Left onto R Street; Follow to the end to Arboretum gates.

MARYLAND HISTORICAL TRUST

William Donald Schaefer
Governor

Jacqueline H. Rogers
Secretary, DHCD

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

M:18-8-1

Property/District Name: Boyds/White Grounds Historic District, Montgomery County Survey Number: ~~M:18-8-1~~

Project: MD 117 from MD 121 to MD 124 Agency: FSHA

Site visit by MHT Staff: ___ no _X_ yes Name Ron Andrews (82) Date 1982

Eligibility recommended _X_ Eligibility not recommended ___

Criteria: X A ___ B ___ C ___ D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Justification for decision: (Use continuation sheet if necessary and attach map)

Boyds/White Grounds Historic District consists of two distinct communities, a white community (Boyds) and a black community (White Grounds). The District contains of 40 major buildings including houses, churches, shools and commercial structures. Structures date from the late 19th and early 20th Century and are mostly frame.

Boyds/White Grounds is representative of rural towns which grew up around railroad stops in the Piedmont Region. In addition, it clearly illustrates the effects of a segregated society with the two distinct towns separated by approximately 600 feet, each containing its own store, school and church. The Village of Boyds was constructed by Col. James Alexander Boyd, contracted for the Metropolitan Branch of the B+O RR. The earliest structures in town were workers housing, but Boyd himself constructed his own home and farming operation here as well. White's Ground grew up as blacks purchased land in the area after the Civil War.

Documentation on the property/district is presented in: Maryland Historic Trust Inventory form ~~#38-1~~

Prepared by: Margaret Coleman, Sugarloaf Regional Trails 1973

Elizabeth Hannold 1/29/90
Reviewer, Office of Preservation Services Date

NR program concurrence: ___ yes ___ no ___ not applicable

Reviewer, NR program Date

Survey No. M-18-B-1

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

___	Eastern Shore	(all Eastern Shore counties, and Cecil)
___	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
X	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
___	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

___	Paleo-Indian	10000-7500 B.C.
___	Early Archaic	7500-6000 B.C.
___	Middle Archaic	6000-4000 B.C.
___	Late Archaic	4000-2000 B.C.
___	Early Woodland	2000-500 B.C.
___	Middle Woodland	500 B.C.- A.D.900
___	Late Woodland/Archaic	A.D. 900-1600
___	Contact and Settlement	A.D. 1570-1750
___	Rural Agrarian Intensification	A.D. 1680-1815
___	Agricultural-Industrial Transition	A.D. 1815-1870
X	Industrial/Urban Dominance	A.D. 1870-1930
___	Modern Period	A.D. 1930-Present
___	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

___	Subsistence
___	Settlement
___	Political
___	Demographic
___	Religion
___	Technology
___	Environmental Adaption

IV. Historic Period Themes:

___	Agriculture
___	Architecture, Landscape Architecture, and Community Planning
X	Economic (Commercial and Industrial)
___	Government/Law
___	Military
___	Religion
___	Social/Educational/Cultural
X	Transportation

V. Resource Type:

Category: Rural Village

Historic Environment: Rural

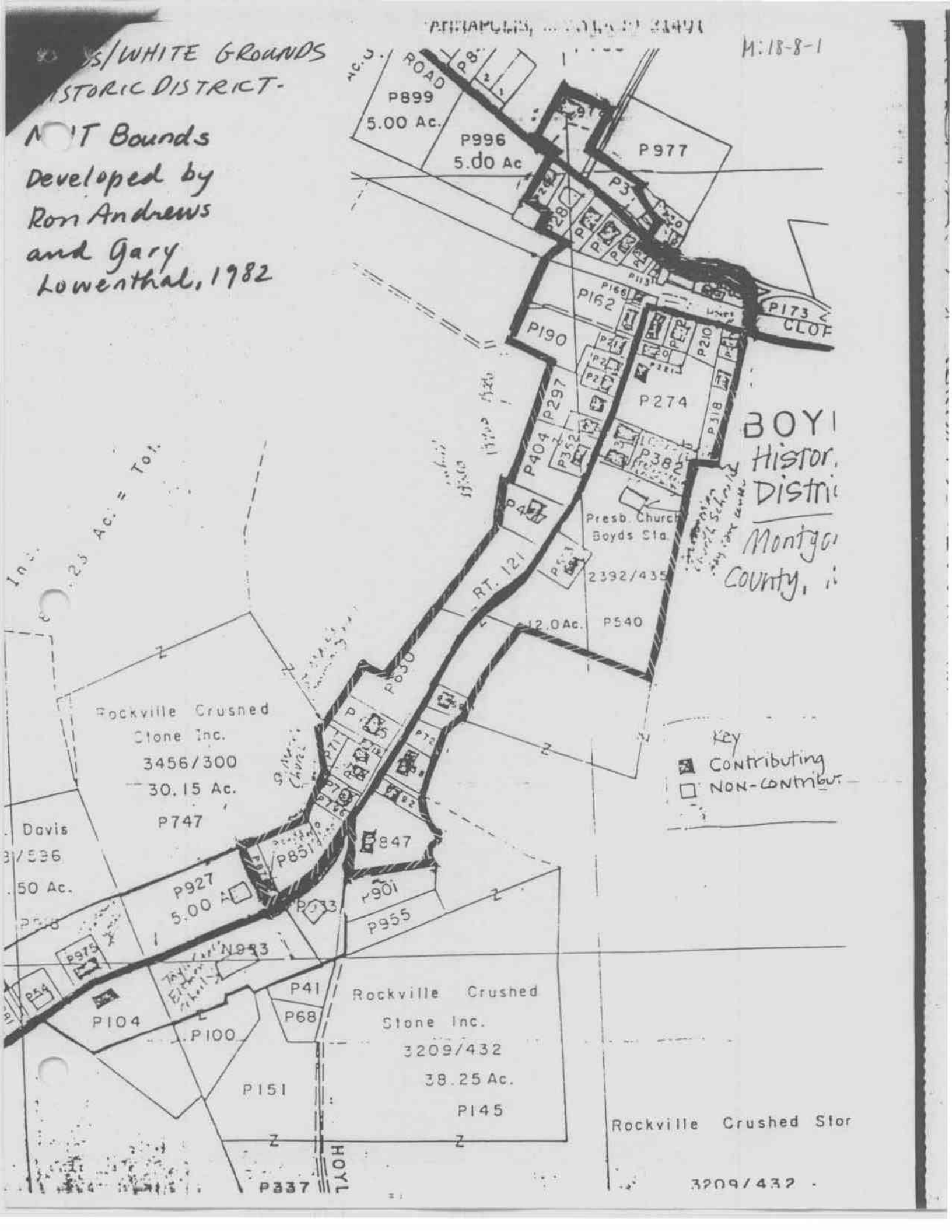
Historic Function(s) and Use(s): Commercial, residential, Transportation

Known Design Source: ---

M:18-8-1

...S/WHITE GROUNDS
...ISTORIC DISTRICT-

...T Bounds
Developed by
Ron Andrews
and Gary
Lowenthal, 1982



MARYLAND HISTORICAL TRUST

M: 18/8/1
Magi #

INVENTORY FORM FOR STATE HISTORIC SITES SURVEY

1 NAME

HISTORIC
Boyds Station

AND/OR COMMON
Boyds/White Grounds Historic District

2 LOCATION

STREET & NUMBER
White Grounds Road

CITY, TOWN
Boyds

__ VICINITY OF

CONGRESSIONAL DISTRICT
8

STATE
Maryland

COUNTY
Montgomery

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
X DISTRICT	__PUBLIC	X OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	X PRIVATE	X UNOCCUPIED	X COMMERCIAL	__PARK
__STRUCTURE	__BOTH	__WORK IN PROGRESS	X EDUCATIONAL	X PRIVATE RESIDENCE
__SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	X RELIGIOUS
__OBJECT	__IN PROCESS	X YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	__YES: UNRESTRICTED	__INDUSTRIAL	X TRANSPORTATION
		X NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME
Various

Telephone #:

STREET & NUMBER

CITY, TOWN

__ VICINITY OF

STATE, zip code

5 LOCATION OF LEGAL DESCRIPTION

Liber #:
Folio #:

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Montgomery County Courthouse

STREET & NUMBER

CITY, TOWN
Rockville

STATE
Maryland

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
M-NCPPC Inventory of Historical Sites

DATE
1976

__FEDERAL X STATE X COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS
Park Historian's Office

CITY, TOWN
Rockville

STATE
Maryland 20855

7 DESCRIPTION

M 17-8-1

CONDITION		CHECK ONE	CHECK ONE
__EXCELLENT	__DETERIORATED	__UNALTERED	X ORIGINAL SITE
X GOOD	__RUINS	X ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Boyds Historic District is located in northwest Montgomery County on the Baltimore and Ohio Railroad. It consists of about 70 acres, 42 major buildings (houses, stores, and churches) and numerous outbuildings.

The town is composed of two distinct communities which will be described separately. One was a white community (Boyds) which grew up here when the railroad was built, and the other a black community (White Grounds) which grew up at one end of the railroad town, seemingly unrelated to it. Physically the two residential areas are separated by about 600 feet of undeveloped land, and each is centered around its church. The commercial area is located on the north side of the railroad tracks, connected to the two residential areas along White Grounds Road by a subway below the tracks.

The white community has 17 houses, one church and two church halls south of the railroad. All of the houses and the church date from the late 19th or early 20th century. One church hall is the only modern structure in this section. All of the houses (except the brick parsonage) and the church are frame structures; the church hall is of concrete block. The houses are mostly large Victorians with many cross gables or simpler two-story buildings with single cross gable. There are several early 20th century cottages also. The buildings here line either side of the road. From the railroad tracks to the church, the buildings are set close to e road and close to each other and surrounded by many trees. Beyond the church are two houses, one on either side, set back from the road on a slope. Beyond this is undeveloped land, and beyond that the black community.

The black community is similar to the white one, though the houses are set slightly farther apart and are generally more vernacular structures on a smaller scale, although the two-story house with cross-gable is seen as well. Beyond the church in this section are several houses and the Boyds Negro School, then the modern Taylor School, and beyond that several more houses.

The commercial section is on higher ground than the parts of the district across the railroad tracks. There are fewer trees around the several houses here and the road is wider. Hoyle's Mill, the grocery store and a modern store building are clustered by the railroad directly across the tracks from White Grounds Road. There are several houses, similar to those in the black and white residential areas, across and down the road from these commercial buildings.

Boyds has the aura of another period, with all the older housing stock clustered beneath the trees and a small commercial area that serves only the immediate vicinity. The railroad tracks running through the district are reminiscent of the time when the town was dependent on rail transportation. Surrounding the town is farmland and woodland at the southern end. The abrupt change in use from farm/woods to town lots helps to distinctly define the borders of the historic district.

CONTINUE ON SEPARATE SHEET IF NECESSARY

8 SIGNIFICANCE

M:18-8-1

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
_PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	X COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	X RELIGION
_1400-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	_LAW	_SCIENCE
_1500-1599	X AGRICULTURE	X ECONOMICS	_LITERATURE	_SCULPTURE
_1600-1699	X ARCHITECTURE	_EDUCATION	_MILITARY	_SOCIAL/HUMANITARIAN
X 1700-1799	_ART	_ENGINEERING	_MUSIC	_THEATER
X 1800-1899	X COMMERCE	_EXPLORATION/SETTLEMENT	_PHILOSOPHY	X TRANSPORTATION
X 1900-	_COMMUNICATIONS	_INDUSTRY	_POLITICS/GOVERNMENT	X OTHER (SPECIFY) Victorian Railroad Town
		_INVENTION		

SPECIFIC DATES

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

Boyds Historic District is a Victorian village, built as a direct result of the railroad, and named for the branch's contractor, James Alexander Boyd. The town is untouched by the twentieth century's yen for shopping malls and high-rise apartments. The single commercial area includes one grocery store, one farm supply store, and one small business. The Boyds Historic District focuses on two churches, St. Mark's Methodist and Boyds Presbyterian. Builders of all the historic houses can be traced to one of these chapels. As the life of each individual is centered in the family, so the church is an integral part of family life in Boyds.

The rural heritage has been retained in this American small town. The quiet, shaded street, the railroad subway for passengers, the pretty houses, and the simple churches should be preserved for future generations. Boyds citizens want the town to stay the way it is. The Boyds-Clarksburg Historical Society was formed in May, 1978 as an outgrowth of the community interest in historical affairs.

The town was built on a 72 1/4-acre tract of land named by Thomas Howard in 1753, The Resurvey on Gum Spring.[1] Gum Spring is still active, pouring forth delicious, cool drinking water for all who thirst. Tall oaks surround the spring, which is kept covered with a piece of tin to keep the water clean. The current owner is Rockville Crushed Stone, Inc.[2]

White Grounds Road is narrow and winding. Leafy, green trees meet overhead, a welcome sight for federal bureaucrats returning home on the train. This was a poor and backward agricultural district by the time of the Civil War, and not even slave labor was able to wrest more than a marginal return from its exhausted soil, for the soil is thin and rocky, underlaid by diabase deposits.

Col. Boyd was a Scottish immigrant who held the contract to build the Metropolitan Branch of the Baltimore and Ohio Railroad, completed in 1873. The routing of the railroad created the town, originally one of Boyd's labor camps. In addition, he bought 1100 acres of land for his own use, on both sides of the track, and introduced the era of dairy farming to northwestern Montgomery County.

Boyd built a model village, surrounded by white board fence, and made up of a large, rather elegant main house, commodious houses for his farm administrators, small houses for the workers, and numerous barns and farm outbuildings. Thereby he created a flourishing dairy industry, and milk was whisked into Washington farm-fresh, using the new transportation method -- the railroad.[3]

James E. Williams and Mahlon T. Lewis moved here from Clarksburg and opened a store beside the depot in 1878. These three men, Boyd, Williams and Lewis, created a town, and revitalized the local economy.

(continued on Attachment Sheet A)

M. 3-8-1

9 MAJOR BIBLIOGRAPHICAL REFERENCES

SEE ATTACHED SHEET

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY c. 70 acres

VERBAL BOUNDARY DESCRIPTION

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE NONE COUNTY

STATE COUNTY

11 FORM PREPARED BY

NAME / TITLE
Pamela James, Architectural Description
Margaret M. Coleman; Map - Ann Stevenson, Photographs - Anne Lewis

ORGANIZATION
Sugarloaf Regional Trails

DATE
1978

STREET & NUMBER
Box 87

TELEPHONE
926-4510

CITY OR TOWN
Dickerson

STATE
Maryland

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
The Shaw House, 21 State Circle
Annapolis, Maryland 21401
(301) 267-1438

SUGARLOAF REGIONAL TRAILS
Box 87, Sugarloaf
Dickerson, Md. 20753
(301) 926-4510

PS-1108

ACHS SUMMARY FORM M:18-8-1

1. Name: Boyds Station/Boyds-White Grounds Historic District

2. Planning Area/Site Number: 18/8/1 3. M-NCPPC Atlas Reference: Map 6:H-14

4. Address: White Grounds Road, Boyds, Maryland.

5. Classification Summary

Category district
Ownership private
Public Acquisition NA
Status occupied/unoccupied
Accessible yes restricted/no
Present use commercial/educational/private residence/religious/transportation.

Previous Survey Recording yes
Title and Date: M-NCPPC, 1976

Federal ___ State x County x Local ___

6. Date: late 19th, early 20th century

7. Original Owner: Richard Gott, James E. Williams, James A. Boyds and others.

8. Apparent Condition

a. Various b. unaltered/altered c. original site

9. Description: The Boyds Historic District consists of 42 major buildings and numerous outbuildings. It has the aura of another period, with all the older housing stock clustered beneath old shade trees, and a small commercial area that serves only the immediate vicinity.

The town is composed of two distinct communities, a white community (Boyds), and a black community (White Grounds). The two areas are separated by about 600 feet of undeveloped land. The white community has 17 houses, one church, and two church halls. All of the houses and the church date from the late 19th or early 20th c. and are frame. The houses are mostly large Victorians with many cross-gables or s[illegible]ler two story buildings with single cross gables.

The black community is similar to the white one, though the houses are set slightly farther apart and are generally on a smaller scale. Beyond its church are several houses and the Boyds Negro School, the modern Taylor School and beyond that several more houses.

The commercial section is set across the railroad tracks on higher ground.

10. Significance: Boyds Station Historic District captures the rural heritage of America's small towns. The village of Boyds was built by Col. James Alexander Boyd, contractor for the Metropolitan Branch of the B & O Railroad. Its first houses were a labor camp for the railroad construction crews. Boyd introduced modern techniques of dairy farming to northwestern Mont. Co. on his 1100 acre farm. The farm, surrounded by white board fence, had his elegant house and commodious houses for his farm administrators, small houses for the workers, and numerous barns and farm outbuildings. James E. Williams and Mahlon T. Lewis moved here from Clarksburg and opened a store beside the depot in 1878. These two men, and Col. Boyd created the town. Williams built 8 houses for members of his family. Boyds Presbyterian Church was built in 1876 for the white community and St. Mark's United Methodist Church was established by the black community, which had grown up as blacks bought land along White Grounds Road after the Civil War. Two schools were established -- one for white and one for black children. Two general stores opened, and a mill.

It was a progressive community and had its own telephone exchange, The Boyds Telephone Co., before 1895. Trains brought in tourists to the Tenmile Creek valley nearby, and boarding houses sprang up as a new industry -- tourism-- began. People commuted by train to jobs in Washington.

By the 1930s the automobile lessened the importance of the railroad. Boyds still is a commuter stop. The churches are unchanged; the school buildings remain, but blacks and whites now go to Edward U. Taylor School. One general store and a new farm implement store remain.

11. Researcher and date researched: Margaret M. Coleman, 1978
Pamela James, Arch. Description

12. Compiler: Gail Rothrock

13. Date Compiled: 10/79

14. Designation Approval ___

15. Acreage: c. 70 acres

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New residents were attracted to the village. A wealthy heiress, Mary Howe Totten, rode through town in her compartment, and decided to build a home at Boyds.[4] Captain F.P. Meigs purchased a lot directly across the track from Boyd's home, and built a magnificent structure in 1879.[5]

Two nineteenth century churches dominate activities in the town. One church serves the black community, and one the white. The blacks built homes around St. Mark's United Methodist Church. Their ancestors settled in the area in the late eighteenth century, making them the oldtimers of Boyds.[6] The white community is located near the Boyds Presbyterian Church, and was settled in the late nineteenth century. Two general stores opened, and a mill. Two schools were built -- one for the black, and one for the white children. Tobacco planters switched to dairy farming for their major source of income. It was a progressive community, and had its own telephone exchange, the Boyds Telephone Company, before May, 1895.[7] Trains brought in tourists to the Tenmile Creek Valley nearby, and boarding houses sprang up as a new industry began -- tourism. Just as the railroad made possible a modern agricultural economy, so also it provided ready passenger service to Washington, and by the mid-1800s, daily commuting to jobs in Washington had begun. Trains stopped frequently at Boyds Station, and also at the home of Col. Boyd, James Williams, and others on request.[8]

In 1928 the track was doubled and straightened. Access to the heiress' house was cut off, and the Meigs' house was taken apart and moved.[9] The advent of the motor car liberated the population from dependence on the railroad, and railroad service declined accordingly all along the line. However, Boyds still has a small corps of devoted rail commuters, and the trains stop there twice each morning and evening to accommodate them, but there is no longer a railroad depot at Boyds Station.

However, the churches are unchanged. In appearance, total membership and corporate wealth, they are very much the same as they were at the turn of the century. The school buildings remain, but black and white children learn together in a new school, named for Edward U. Taylor, the first black to achieve prominence in the Montgomery County school system. One general store remains, and a farm implement store completes the business district. The house built by the heiress, and the resorts of Tenmile Creek Valley are threatened by a proposed lake. But the churches have remained constant. They are the focal point of the town of Boyds.

St. Mark's United Methodist Church

St. Mark's Church is the center of the black community. Worshippers have gathered every Sunday in a church at this location since before 1879. The church is currently supported by about eighty member families, led by Rev. Albert Luckett. A community building next door is used for Sunday School classes, church dinners and a variety of

social events. The church is maintained by volunteer labor provided by members. A cemetery behind the buildings is carefully tended by parishioners.

The church was completed in 1893. In 1879 Col. Boyd sold the fifty-five square perches to the church trustees for educational and religious use "in the building now thereon or in any building that may hereafter be erected thereon."[10]Therefore it is assumed that the present building is on the site of an earlier church. The minister was shared with black churches in Germantown, Clarksburg, and Hyattstown, a practice that continues today with the exception of Hyattstown, now defunct.

Boyds Negro School

St. Mark's doubled as a school for black children until the "Negro School" was completed, in the late 1890s. In 1936 school was closed, and the students bussed to another segregated school in Clarksburg.[11] The Negro School building is now vacant.

The Duffin House, 19935 White Grounds Road

Henry, Caleb and Addison Eugene Duffin are listed as trustees on the 1879 deed to St. Mark's. Addison Duffin bought land across the street from the church, and built a house, 19635 White Grounds Road.[12] Until a manse was built, the St. Mark's ministers lived at the Duffin's, and the Duffins lived at the Nathan Gott Farm, Bucklodge. In the early 1900s a manse was built, and the Duffin family moved into the house Addison had built, across from the church. Addison Duffin died in the house he had built, on a Sunday morning, his sixtieth wedding anniversary. Duffin's daughters, Mrs. Edna Johnson and Miss Lorraine Duffin, now own the Duffin home. They are influential in the community; Lorraine is treasurer of the Boyds-Clarksburg Historical Society. Both ladies consider their church an outgrowth of their home. They attend services regularly, and frequent the gravesites of their ancestors.[13]

The Duffins are representative of the many black families who chose to remain in the area. Other names in the current community also found on the 1867 Slave Census include Hawkins, Johnson, Hebron, Nailor (current spelling, Naylor), Coates and Talley.[14]

The Resurvey on Gum Spring

In 1870 a certain James Emory Williams of Clarksburg bought The Resurvey on Gum Spring from George Clements.[15] Railroad construction had commenced, and he probably recognized that Clarksburg was going to be bypassed completely, and that prospects were brighter at Boyds. Williams built for himself a seventeen-room house, several barns and tenant houses. He hired a tutor for his children, and operated his own school in his home.[16] When the Metropolitan Branch of the B & O Railroad came through his property, he became the first stationmaster,

postmaster and store owner. According to his descendants, the town was first called Williamsburg.[17] His house is now gone, but numerous barns and outbuildings remain. (Current owner, Rockville Crushed Stone.[18])

Boyds Presbyterian Church, 19901 White Grounds Road

Williams sold part of Gum Spring land to the Boyds Presbyterian Church trustees in July, 1876. Eighty-four square perches of land was dedicated to God and the Presbyterian Church. Williams, Col. Boyd, Mahlon T. Lewis, Williams' business partner, Benjamin Gott and William Rinehart, Boyd's brother-in-law, were the founding trustees.[19] The Board of the Church Erection Fund of the General Assembly of the Presbyterian Church in the United States granted a mortgage of $583 to begin construction of a "House of Worship." In 1878 an additional three-fourths acre was added for a cemetery.[20]

The Rev. T. Davis Richards was hired as the first minister. He bought slightly more than three acres of Gum Spring adjacent to the church in 1891,[21] and built a house. Richards tolerated no deviations of opinion. He and Boyd quarreled. Richards attempted to have both Boyd and his wife removed from the Presbyterian Church, and Boyd tried to have Richards defrocked.[22] Neither was successful, but Richards left Boyds. The early records of the church disappeared at the same time. Richards sold his house to James L. and Alice C. Higgins in December, 1896.[23] Subsequently he moved to Germantown, and became the minister of the Neelsville Presbyterian Church.[24]

At the turn of the century the vestibule, steeple and bell were added to the building, paid for by various fundraising activities generated by church members.[25] Throughout the years members have continued to contribute time and talents as well as money.

In 1923 a community hall was built on part of the original plot. Sarah Ellen Boyd donated the major construction fund, and the Ladies Aid Society held oyster and ham suppers as fundraisers.[26]

Sarah Boyd, widow of the Colonel, left a legacy of $75,000 to the church in 1925.[27] A manse was built, and the remainder invested.

Stained glass windows were installed the same year for a donation of $75.00

Twelve acres of adjoining land were bought in 1957, and a Christian Education Building was constructed.[28] Named Kerr Fellowship Hall, the structure is used on Sundays for Sunday School, and throughout the week by the Boyds Day Care Center, Boyds-Clarksburg Historical Society, Civic Association, Federal Credit Union, and numerous adult education classes.

Following Rev. T. Davis Richards' departure, the church had no fulltime minister for thirty years. However, a Rev. James Patterson Kerr came to the Boyds Presbyterians from 1928 to 1960; Rev. Philip J. Lee, 1962-1967; and the current minister, Rev. Merritt Ednie arrived in 1969. Current membership is about eighty families.[29]

Boyds Station

The Caroline Rine House, 19925 White Grounds Road

In addition to the land sold to the church, Williams deeded one-quarter acre to a Caroline E. Rine in 1881.[30] Rine managed to build herself a house twenty-four years before women voted. Subsequently the house was sold to James Higgins for the use of his invalid sister.[31] The home is now owned by Mrs. Mable Ballenger and has been inhabited mostly by single women.[32]

Mahlon T. Lewis House,

Williams sold land to his partner, Mahlon T. Lewis of Clarksburg.[33] Lewis built the house now owned by Harold J. Lutz, and converted into large apartments.[34] Williams and Lewis owned and operated the Boyds store from 1873-1878, known as Williams & Lewis.[35]

Williams Houses, 19810 to 19934 White Grounds Road

At the turn of the century, Williams built houses for his five children, grandaughter, and sister. The homes built by Williams for his family include:

1. 19810, present owner, Garvin Tankersley, built for William's sister, Susan Collum Watkins, Mrs. Charles Watkins.[36]

2. 19900, present owner, D. Dwight Mote, built for William's son, William.[37] Mote was attracted to the area because of the train. He walks the short distance from his house to the train stop, and rides into the District of Columbia everyday.

3. 19910, built for daughter Cora Lee, Mrs. George Findlay Pollock; present owner, Rufus Gilliam.[38]

4. 19916, built for son John M.; present owner, Steven C. Gibson.[39]

5. 19920, built for daughter Lulu Belle, Mrs. Benjamin Dutrow; present owner, Gary Lowenthal.[40]

6. 19924, built for grandaughter, Florence White, called "Dottie." Dottie was raised by her grandparents. She was orphaned in 1882 as an infant, and her parents received the dubious honor of becoming the first people to be buried in the brand new Presbyterian Cemetery at Boyds. Beulah Orme is the current owner.[41]

7. 19934 was built for William's son, James B., and his wife, India Estelle. Present owner is M. Cariolen Spring.[42]

Boyds Station

8. 1940, first owned by Lulu Belle Williams Dutrow, and since 1972 by James E. Guynn.

In 1922, Cora Lee Pollock brought to court a case naming her siblings and Aunt Dottie as defendants in an equity case.[44] James and Sarah Jane Williams had died intestate, and the family was in agreement that a judge should decide the inheritance. Each one bought back his own house for a total of $11,393.00. Costs amounted to $697.90. The remaining $10,695.10 was distributed evenly among the heirs.

Boyds Station and Subway

The railroad station is gone. Although no clear description of the first one has been located, mention is made on an 1879 map of a station in Boyds. A magnificent, brick structure was built in 1886 on the south side of the tracks, designed by the B & O's Chief architect, E.F. Baldwin. A third station, of frame construction, was built in 1928, closed in the late 1950s, and torn down in 1968.[45]

In 1928 the single track was doubled, and an elaborate passenger subway was installed.[46] Five separate cement stairways were constructed, one leading to White Grounds Road, one to Barnesville Road, one to a sidewalk under the railroad bridge, one to the store, and one to the Guynn's house.

White Grounds Road

White Grounds Road was commissioned in 1875 to connect Dawsonville with Boyds Station. Property owners requested payment of $3,925, but received $2,645. Landowners involved were Nathan W. Allnutt, Thomas Rawlings, John R. Dawson, Benjamin F. Dyson, Benjamin C. Gott, the heirs of George Hoyle, Joseph Davis, George H. Clements and James E. Williams.[47]

Boyds Commercial District

A grocery store, farm implement store, and a small manufacturer form the Commercial District. Boyds Market stocks a wide variety of grocery items, and also sells freshly made, delicious sandwiches. Anderson's Supply Company, the farm store, stores supplies in a nineteenth century building which was built as Hoyle's Mill. The Hoyle family had operated a mill on Little Seneca Creek for more than a century. But in 1893 Smith Hoyle moved into Boyds, and built a new mill alongside the railroad tracks. The small manufacturer is the National Solvent Company.

Boyds Station

FOOTNOTES

1. Patent Certificate BC & GS #2/422-424, Hall of Records, Annapolis. Thomas Howard buys Resurvey on Gum Spring from Charles, Lord Baron of Baltimore, September 25, 1753. Patent includes 100 acres "under new rent." States also a discovery of vacant land of 150 acres. Payment was seven pounds, ten shillings paid to Lord Baltimore by T. Howard. Land is located in "Conigocheige Manor," and subsequently noted on BC & GS #5/61, February 20, 1756, to Thomas Howard by Horatio Sharpe, Governor of Maryland.

2. Montgomery County Land Record, 3335/424.

3. J. Thomas Scharf, History of Western Maryland; Regional Publishing Company, Baltimore, 1968, reprint; p. 734.

4. Hershey Ayton, who was long a friend of the Totten family, and a frequent visitor to their home, Winderbourne. Gaithersburg, Personal Interview, 1978.

5. T.H.S. Boyd, History of Montgomery County, Maryland from Its Earliest Settlement in 1650 to 1879. Clarksburg: 1879. Republished Baltimore: Regional Publishing Company, 1972; p. 113.

6. United Slave Census, 1867. Viewed on microfilm, Rockville Public Library, 1978.

7. Montgomery County Sentinel, May 17, 1895.

8. Mrs. Edna Duffin Johnson, daughter of Addison Eugene Duffin; Personal Interview, 1978.

9. Hershey Ayton, a long time friend of the Totten family. Personal Interview, 1978.

10. EBP 20/7. Duffy family buys land from Boyd for a church. Addison Eugene Duffin changed the name from Duffy to Duffin, according to his daughters, Edna Johnson and Lorraine Duffin. 1879.

11. Nina H. Clarke and Lillian B. Brown, History of the Black Public Schools of Montgomery County, Maryland, 1872-1961. Vantage Press, Inc., New York, 1978.

12. JA 58/196. Addison Eugene Duffin buys the land for his house, 1897.

13. Newspaper clipping owned by the Duffin sisters: "Obit: August 1904. Maria Duffin, colored, one of the oldest slaves in this section of the county, died at her home here last night, in her eightieth year after an illness of several months. She was born near here and was

FOOTNOTES

owned by a family named Edelyn, who sold her for $1,600 to the late John Darby of this place where she lived several years after the abolition of slavery. For the last thirty-four years she has been a servant at the home of Mrs. Sarah E. Boyd and was one of the most esteemed colored woman in the County." Maria Duffin was the mother of Addision, and lived next door.

14. Slave Census

15. EBP 8/59. George H. and Sarah E. Clements sell to James E. and Sarah E. Williams for $1,083.75, The Resurvey on Gum Spring, 72¼ acres, November 24, 1870.

16. Hershey Ayton.

17. Ibid. Also Mrs. Anna Williams Headley, Gaithersburg, grandaughter of Williams. Personal Interview, 1978.

18. 3335/474. Rockville Crushed Stone Deed to the Spring, and William's Farm.

19. EBP 15/284. Boyd et al buy land from J. Williams, July 17, 1876.

20. EBP 18/307. Boyd et al buy additional land from Williams, July 23, 1878.

21. Earle L. Vail, The Presbyterian Church at Boyd's Station, The First One Hundred Years; Boyds Presbyterian Church, Boyds, 1976; p. 11. Also Charles G. Linthicum, Personal Interview, 1978.

22. JA 56/488. Higgins buys land from Richards, December 29, 1896.

23. TD 12/452. Richards buys land from John T. Gassaway, Germantown; February 14, 1900.

24. Charles G. Linthicum, 86 years a resident of Boyds. Personal Interview, 1978.

25. Vail, p. 15.

26. Ibid., p. 16.

27. PEW 2/461, 1925. Will of Sarah Boyd.

28. 2392/435. Church buys 12 acres from Garvin and Ruth Tankersley, 1957.

29. Vail, pp. 21-32, 39-40 and 41. Also Merritt Ednie, "Boyds Presbyterian Church Family:" Boyds, 1977.

30. EBP 25/489. Caroline E. Rine buys a lot from James Williams; 1881.

31. JA 11/48. James Higgins buys the Rine House; 1888.

FOOTNOTES

32. 1196/290. Current deed for Rine house, held by Mrs. Mable Ballenger.

33. Portrait and Biographical Record; Chapman Publishing Co., New York; 1898; p. 770.

34. 4628/851. Harold J. Lutz buys the Mahlon T. Lewis house.

35. Portrait and Biographical Record; p.770.

36. 2843/68. Garvin E. Tankersley buys the Watkins house; 1961.

37. 4195/120. D. Dwight Mote buys Will William's house.

38. 1856/20. Rufus Gilliam buys Cora Lee Pollock's house, 1953.

39. 4758/193. Steven Gibson buys the John M. Williams house, February, 1976.

40. 5109/256. Gary Lowenthal buys the Lulu Belle Dutrow house, March 28, 1978.

41. 670/444. Beulah Orme buys Florence White house, 1937.

42. 677/456. Rupert W. Spring buys a second Lulu Belle Dutrow house, 1937.

43. 4210/603. James E. Guynn buys Lulu Belle's house, 1972.

44. Equity #3873, Cora Lee Pollock vs. Florence M. and Nathan Smith, White, Lulu B. and Benjamin H. Dutrow, James B. and India E. Williams, John W. and Ada Williams, and William M. and Sarah G. Williams, 1922.

45. Carlos Avery, "Victorian Stations on the B & O's Metropolitan Branch," Rockville, 1978.

46. Ibid.

47. EBP 14/10. White Grounds Road commissioned; 1875.

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Patent Certificate BC & GS #5/61; Horatio Sharpe, Governor of Maryland, assigns Gum Spring to Howard, noting "Conigocheige" Manor, February 20, 1756.

II. Montgomery County Records

Equity Case #3873, Cora Lee Pollock vs. Florence M. and Nathan Smith White, Lulu B. and Benjamin H. Dutrow, James B. and India E. Williams, John W. and Ada Williams, and William M. and Sarah G. Williams; 1922.

Land Records

EBP 15/284. Boyd et al buy land from J. Williams; 1876.
EBP 17/449. Mortgage granted trustees of Presbyterian Church; 1878.
EBP 18/307. Boyd et al buy additional land from Williams; 1878.
2392/435. Tankersley sells land to Church; 1957.
EBP 20/7. Duffy Family buys land for Church; 1879.
JA 58/196. Addison Eugene Duffin buys land for his home; 1897.
EBP 8/59. J. Williams buys The Resurvey on Gum Spring; 1870.
EBP 25/489. Caroline Rine buys land from Williams; 1881.
JA 11/48. James Higgins buys Rine House; 1888.
278/443. Smith Hoyle buys house from S. Williams; 1919.
JA 56/488. Higgins buys from Rev. T. Davis Richards; 1896.
333 474. Rockville Crushed Stone Co. deed to Gum Spring and Williams Farm.
1196/330. Current deed to Caroline Rine house, held by Mable Bollenger.
JA 23/318. Richards buys land from Williams; 1891.
TD 12/452. Richards buys land from John T. Gassaway, Germantown; 1900.
2392/435. Presbyterian Church buys 12 acres from Tankersley; 1957.
4628/851. Harold K. Lutz buys the Mahlon T. Lewis house.
2843/61. G. Tankersley buys the Watkins house; 1961.
4195/120. D. Dwight Mote buys Will Williams house.
1856/20. Rufus Gilliam buys Cora Lee Pollock's house; 1953.
4758/193. Steven Gibson buys the John M. Williams house; 1976.
5109/256. Gary Lowenthal buys the Lulu Belle Dutrow house; 1978.
670/444. Beulah Orme buys Florence White house; 1937.
677/456. Rupert W. Spring buys a second Lulu Belle Dutrow house; 1937.
4210/603. James E. Guynn buys a Williams house; 1972.
EBP 14/10. White Grounds Road commissioned; 1875.

Wills

PEW 2/461. Will of Sarah E. Boyd; 1925.

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III. Newspaper
Old newspaper clipping owned by the Duffin sisters, Mrs. Edna Johnson and Miss Lorraine Duffin.
Montgomery County Sentinel, May 17, 1895.

IV. Census
United States Slave Census, 1867. Seen on microfilm in Rockville Public Library.

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Attachment Sheet A - Page 11
Property Owners

M: 18/8/1
MAGI#

. Mark's United Methodist Church
Mrs. Mary Naylor, 19610 White Grounds Road (Trustee)

Board of Education
850 Hungerford Drive, Rockville

Mrs. Edna Johnson and Miss Lorraine Duffin
19935 White Grounds Road

Mr. and Mrs. Garvin Tankersley
Owners: 19810 White Grounds Road

Rockville Crushed Stone, Inc.
13900 Piney Meeting House Road
Rockville

William W. Burdette
19735 White Grounds Road

M C and M T Diggins
19933 White Grounds Road

Henrietta Randolph
521 18th NE
Washington D.C.

Boyds Presbyterian Church
Rev. Merritt W. Ednie, pastor
19904 White Grounds Road

Mr. and Mrs. Albert Gloyd
19921 White Grounds Road

Mrs. Mable Ballenger
19925 White Grounds Road

Mr. and Mrs. Harold J. Lutz
19134 Bucklodge Road

Mr. and Mrs. J A Kay
15010 Clopper Road

Mr. and Mrs. James E. Guynn
19940 White Grounds Road

M. Cariolen Spring
19934 White Grounds Road

Mrs. Beulah Orme
19924 White Grounds Road

Gary Lowenthal
19920 White Grounds Road

Mr. and Mrs. Steven C. Gibson
19916 White Grounds Road

Mr. and Mrs. Rufus C. Gilliam
19910 White Grounds Road

Rev. and Mrs. Merritt W. Ednie
19904 White Grounds Road

Mr. and Mrs.D. Dwight Mote
19900 White Grounds Road

William Anderson
15100 Barnesville Road

Boyds Market
15100 Barnesville Road

National Solvents Co., Inc.
15114 Barnesville Road

Attachment Sheet B
Boyds/White Grounds Road Historic District
Drawn By Ann Stevenson, 1978

M: 18/8/1
MAGI#

HISTORIC BOYDS

Barnesville Road

Clopper Road

CLOPPER ROAD

WHITE GROUNDS ROAD

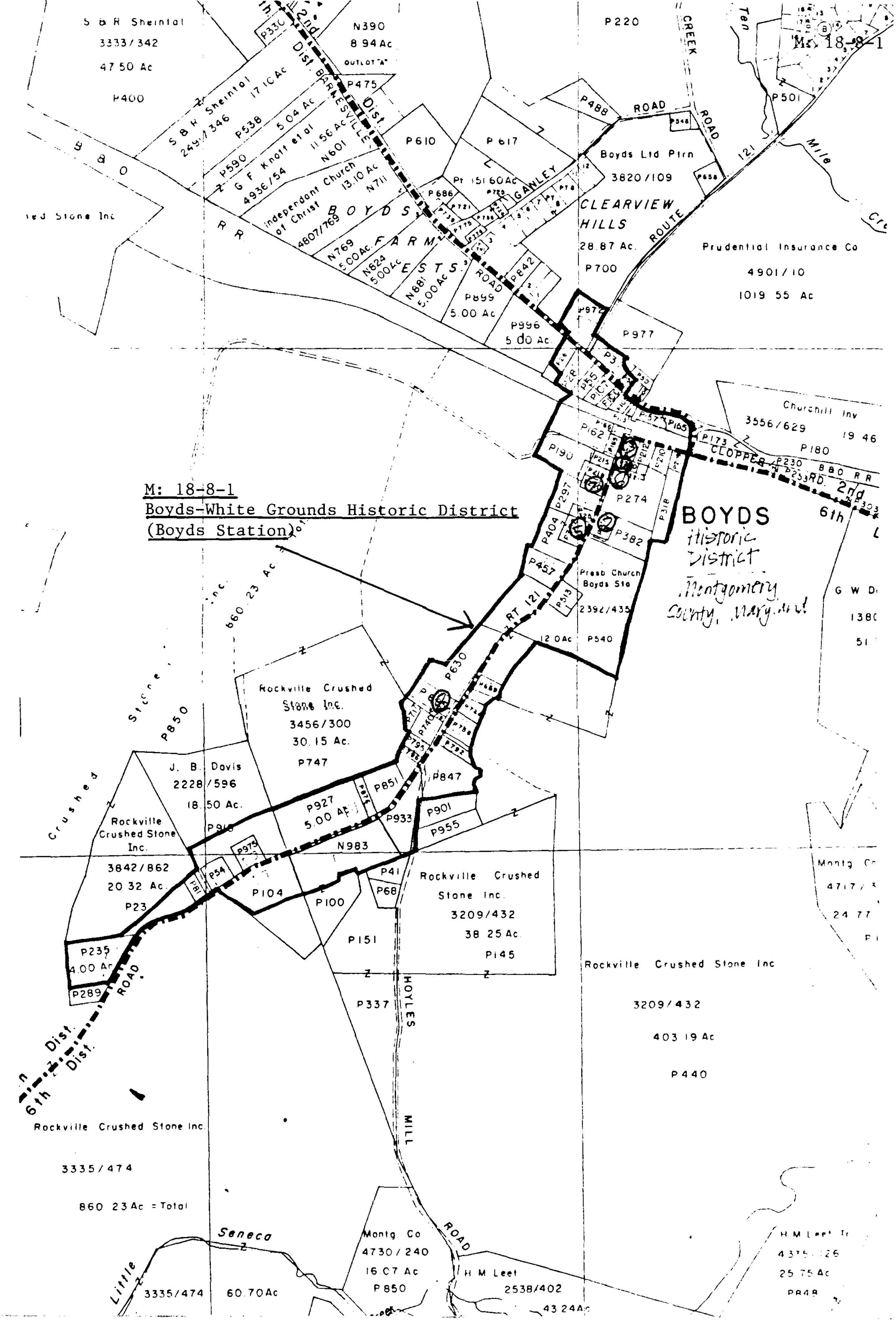
Boyds Presbyterian Church

Gum Spring

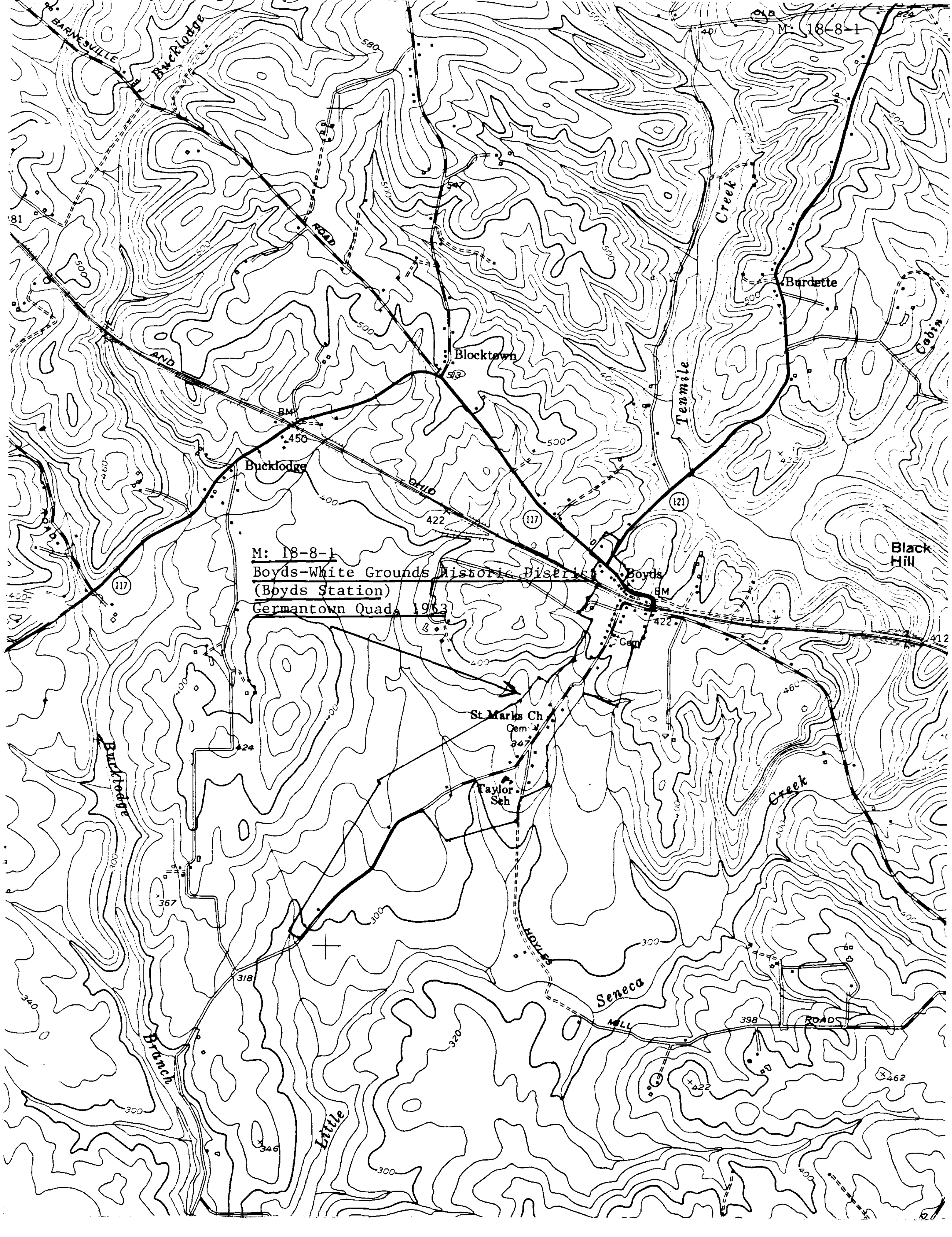
St. Marks Church

N

1	1875 - 1900
2	1901 - 1925
3	built since 1925
U	unresearched


M: 18-8-1
Boyds-White Grounds Historic District
(Boyds Station)
BOYDS
Historic District
Montgomery County, Maryland
S & R Sheintal
3333/342
47 50 Ac
P400
P330
N390
8 94 Ac
OUTLOT "A"
P475
P220
CREEK
ROAD
P488
P501
Ten Mile Creek
121
S & R Sheintal 17 10 Ac
249/1346
P538 5 04 Ac
P590
G F Knott et al 11 56 Ac
4936/54
N601
Independent Church of Christ 13.10 Ac
4807/769
N711
BOYDS FARM ESTS
N769 5.00 Ac
N624 5.00 Ac
N881 5.00 Ac
P610
P617
P686
Pt 151 60 Ac
GANLEY
P842
P899 5.00 Ac
P996 5.00 Ac
Boyds Ltd Ptrn
3820/109
CLEARVIEW HILLS
28.87 Ac.
P700
ROUTE
Prudential Insurance Co
4901/10
1019 55 Ac
P977
P3
P162
P190
P165
P173
P215
P212
P210
P274
P297
P318
P404
P382
P457
P513
Presb Church Boyds Sta
2392/435
12 0 Ac
P540
RT 121
Churchill Inv
3556/629
19 46
P180
CLOPPER RD.
P230
P253
B & O R R
2nd
6th
P630
P669
P740
P795
P792
P847
Rockville Crushed Stone Inc.
3456/300
30.15 Ac.
P747
P850
J. B. Davis
2228/596
18.50 Ac.
P910
Rockville Crushed Stone Inc.
3842/862
20.32 Ac.
P23
P927
5.00 Ac
P851
P933
P901
P955
N983
P975
P54
P104
P100
P41
P68
Rockville Crushed Stone Inc.
3209/432
38 25 Ac.
P145
P151
P235
4.00 Ac
P289
ROAD
6th Dist.
2nd Dist.
P337
HOYLES MILL ROAD
Rockville Crushed Stone Inc
3209/432
403 19 Ac
P440
Rockville Crushed Stone Inc.
3335/474
860 23 Ac = Total
Little Seneca
3335/474
60.70 Ac
Montg Co
4730/240
16.07 Ac
P850
H M Leet
2538/402
43 24 Ac
H M Leet Tr
25 75 Ac

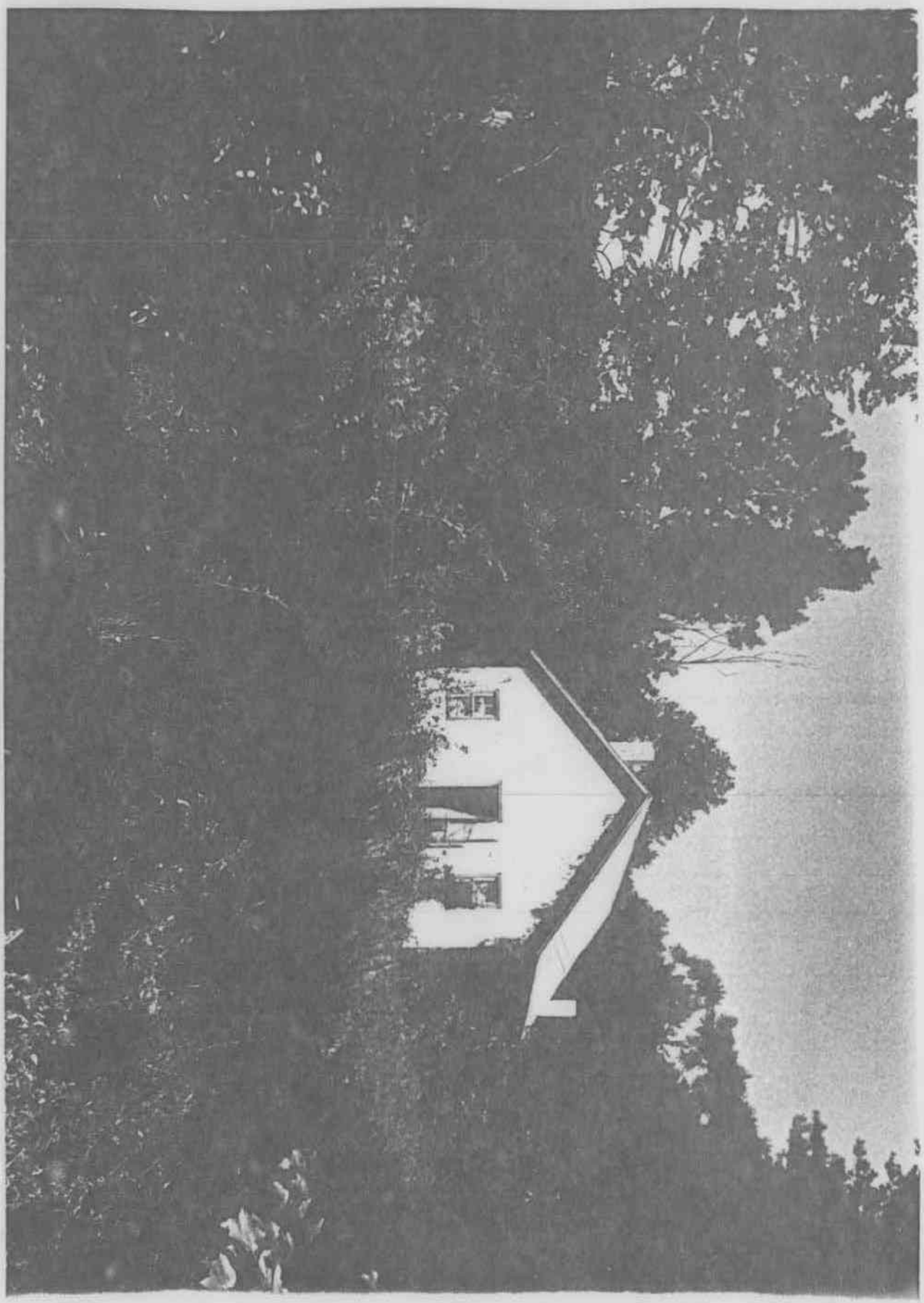
M: 18-8-1


M: 18-8-1
Boyds-White Grounds Historic District
(Boyds Station)
Germantown Quad. 1953
Barnesville
Bucklodge
Road
And
Ohio
Blocktown
Bucklodge
Boyds
Burdette
Tenmile
Creek
Cabin
Black Hill
St. Marks Ch
Cem
Taylor Sch
Hoyles
Seneca
Mill
Road
Creek
Bucklodge
Branch
Little
117
121
BM
450
422
513
547
580
500
400
460
432
424
347
367
318
340
300
320
398
422
462
346
412
401

Attachment Sheet C
Boyds/White Grounds Historic District
Taken By Anne Lewis, 1978
Facade, west

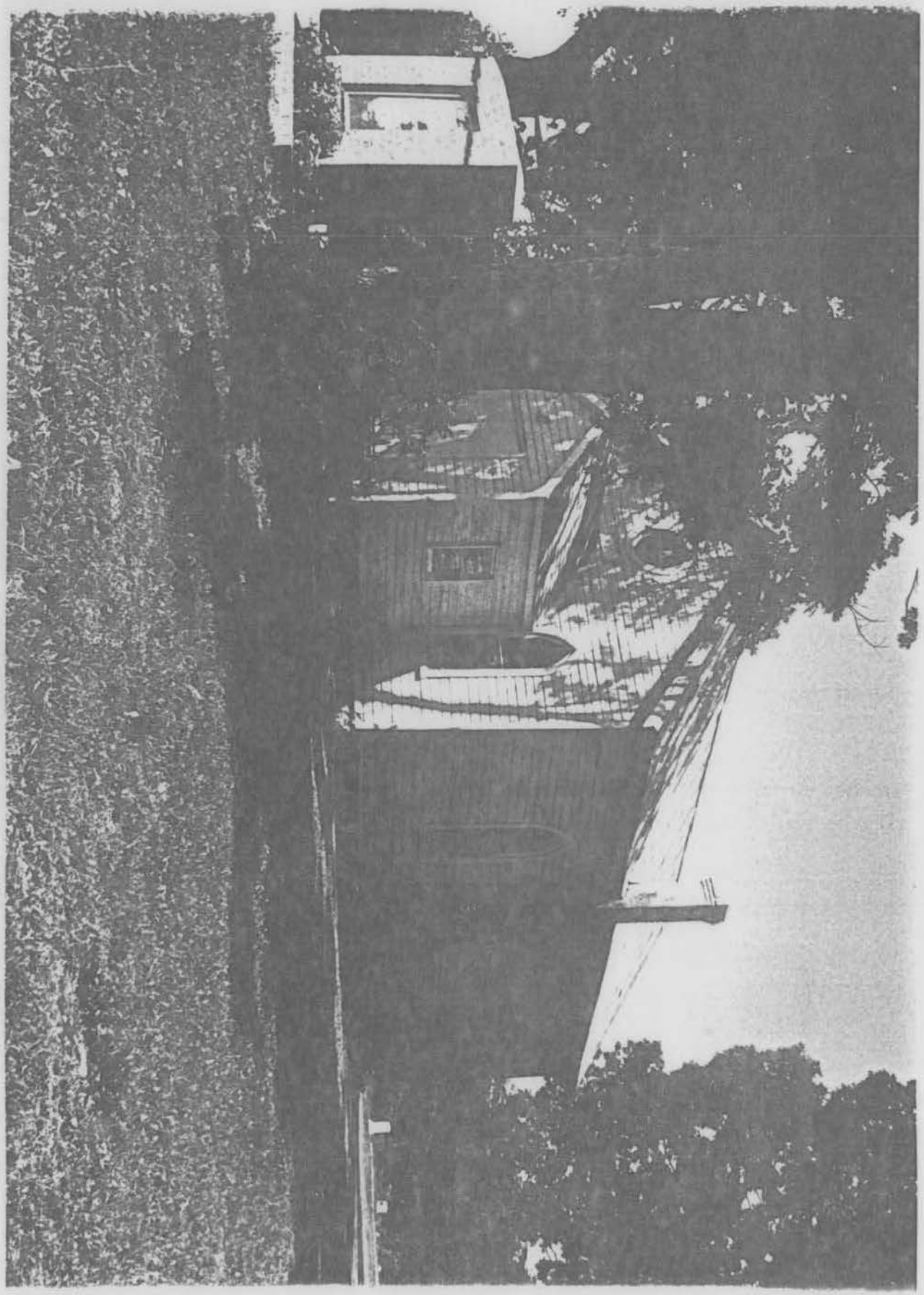
M: 18/8/1
MAGI#

Boyds Negro School



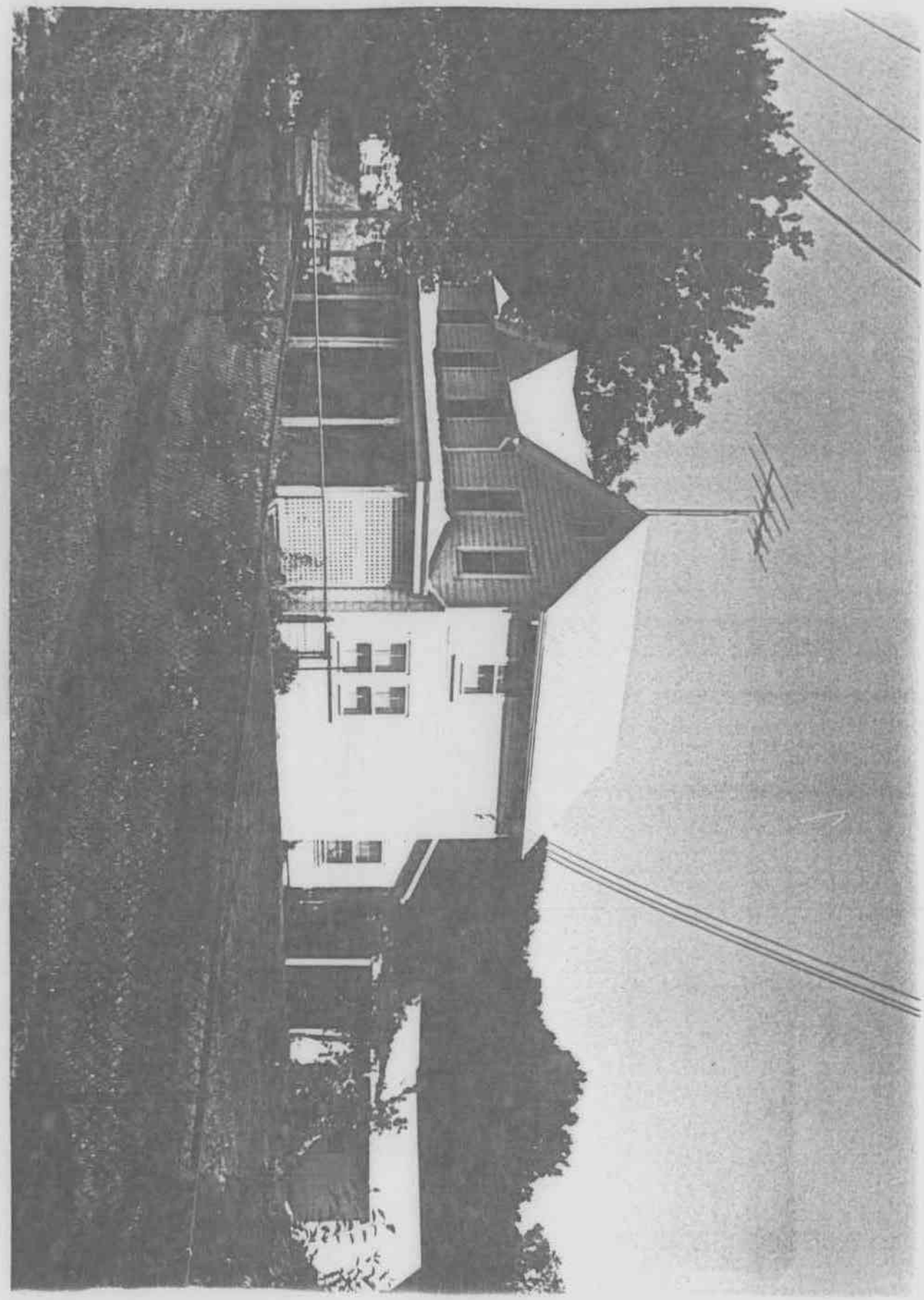
Attachment Sheet D
Boyds/White Grounds Historic District
St. Mark's United Methodist Church
Taken by Anne Lewis, 1978
Facade, West

M: 18/8/1
MAGI#



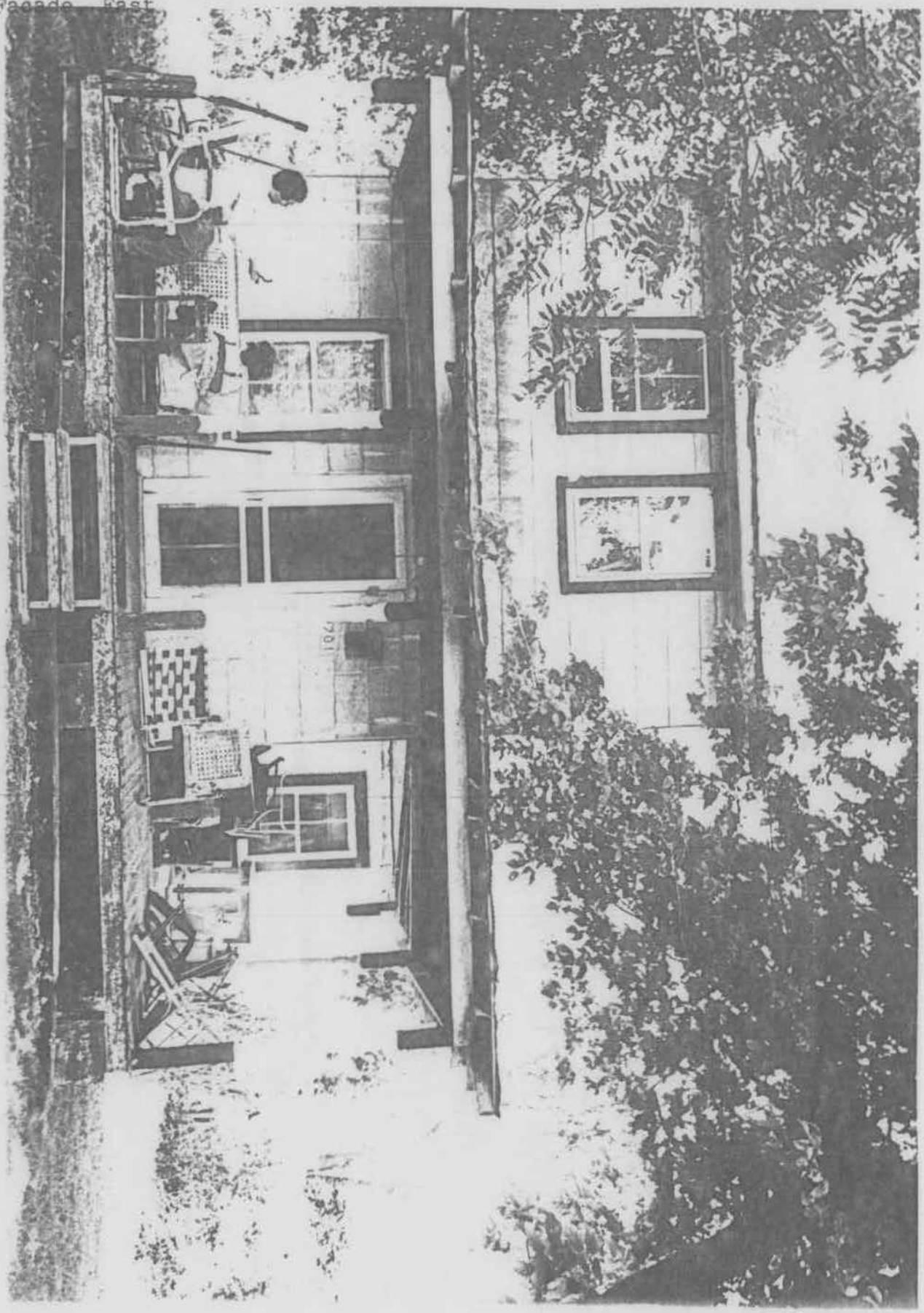
Attachment Sheet E
Boyds/White Grounds Historic District
Addison E. Duffin House
Taken By Anne Lewis, 1978
Facade, North and East

M: 18/8/1
MAGI#



Attachment Sheet F
Boyds/White Grounds Historic District
House of M. Courtney Diggins/Figures, Diggins and M. M. Coleman
Taken By Anne Lewis, 1978
Facade - East

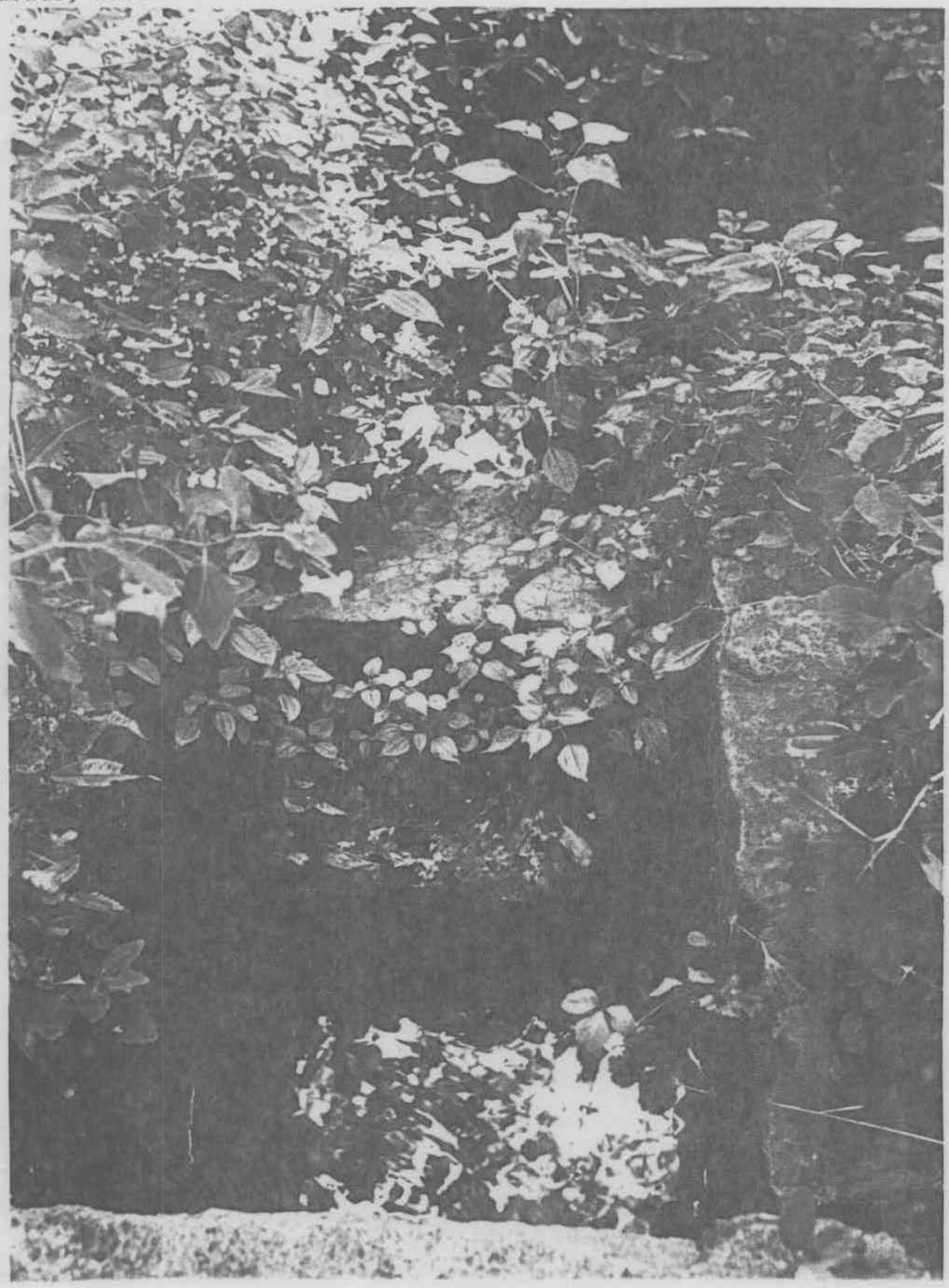
M: 18/8/1
MAGI#



Attachment Sheet G
Boyds/White Grounds Historic District

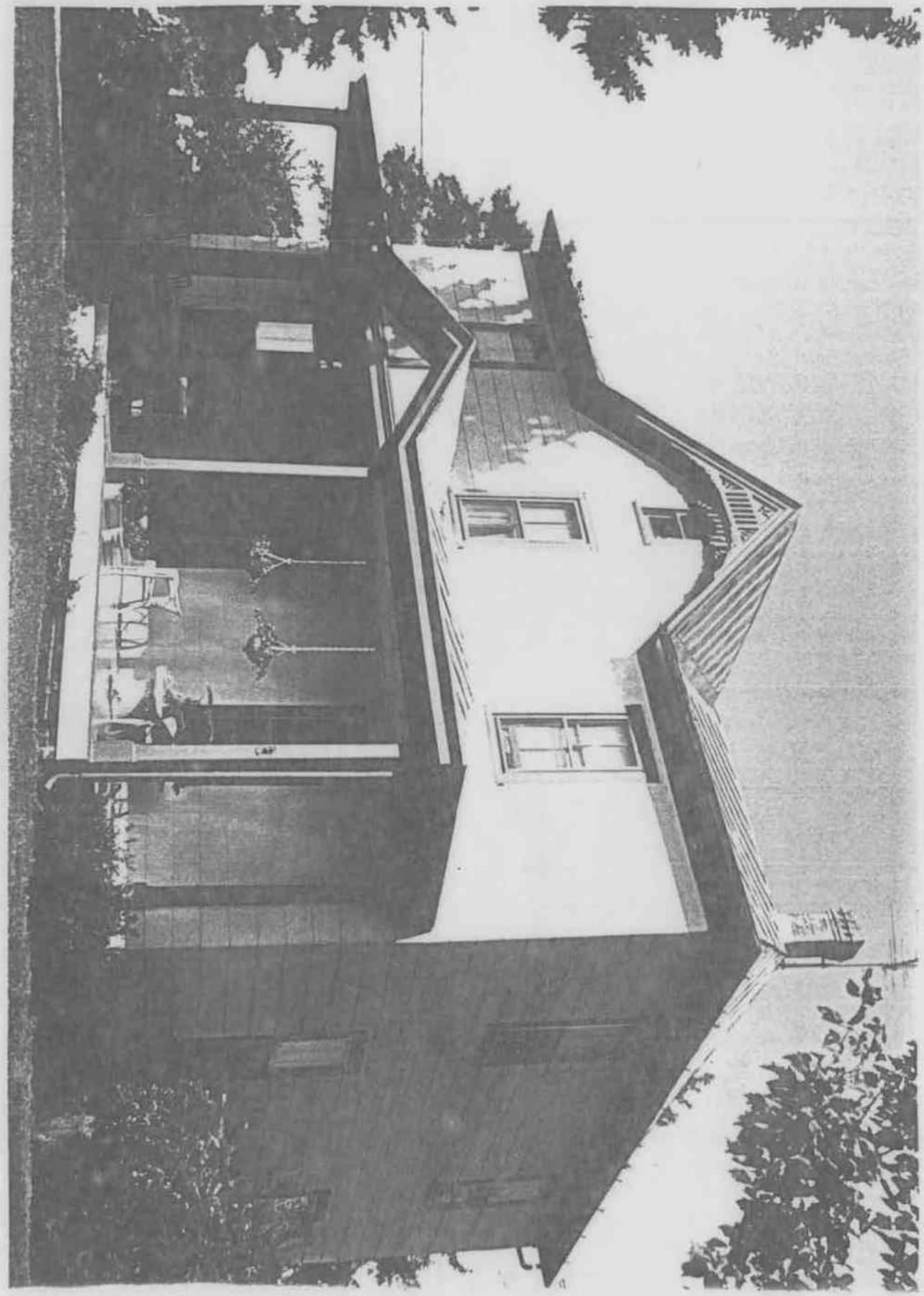
M: 18/8/1
MAGI#

Gum Spring
Taken By Anne Lewis, 1978
Facade, West



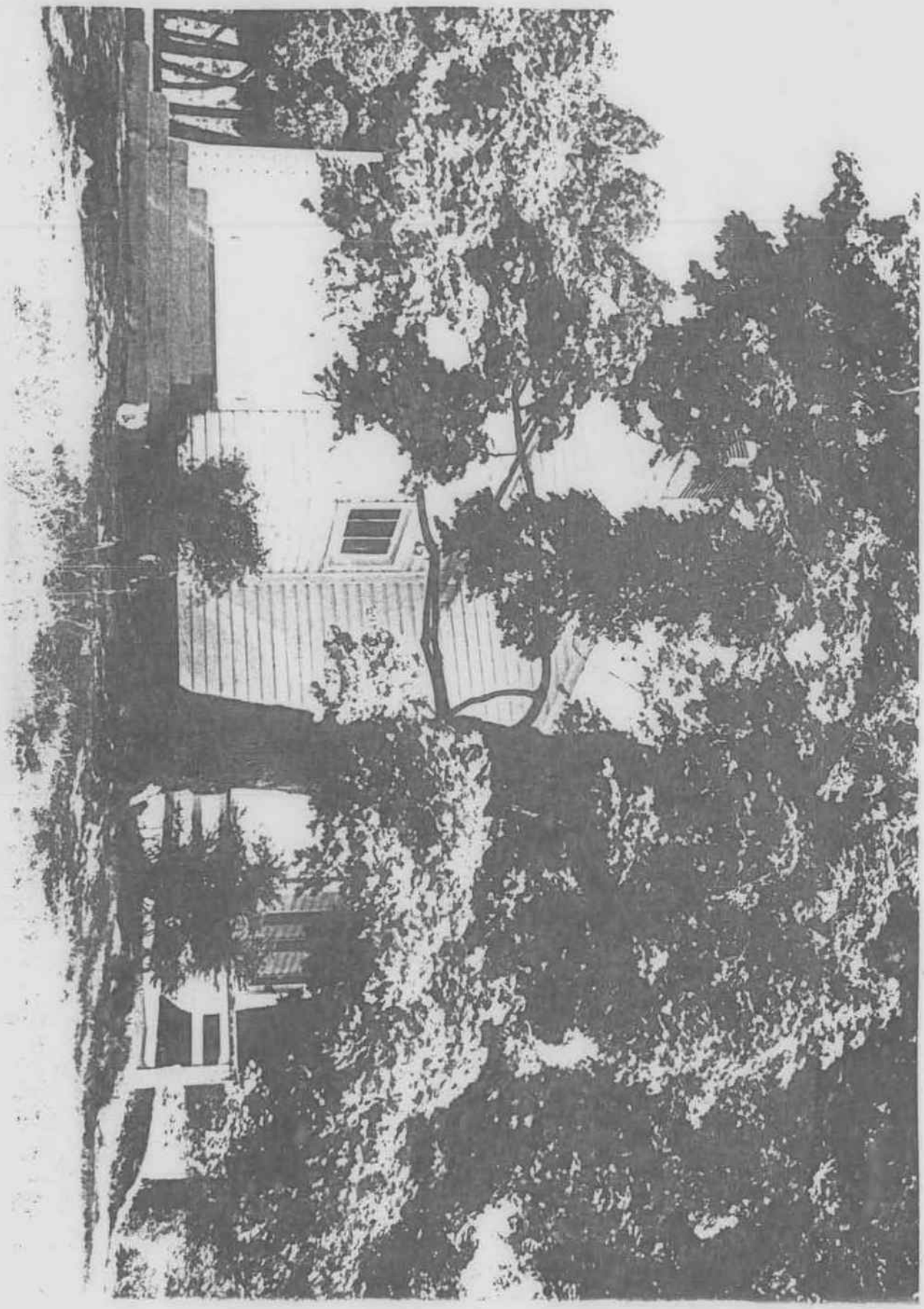
Attachment Sheet H
Boyds/White Grounds Historic District
William Williams House
Taken By Anne Lewis, 1978
Facade, West

M: 18/8/1
MAGI#



Attachment Sheet I
Boyds/White Grounds Historic District
Taken By Anne Lewis, 1978
Facade, East
Boyds Presbyterian Church Hall

M: 18/8/1
MAGI#

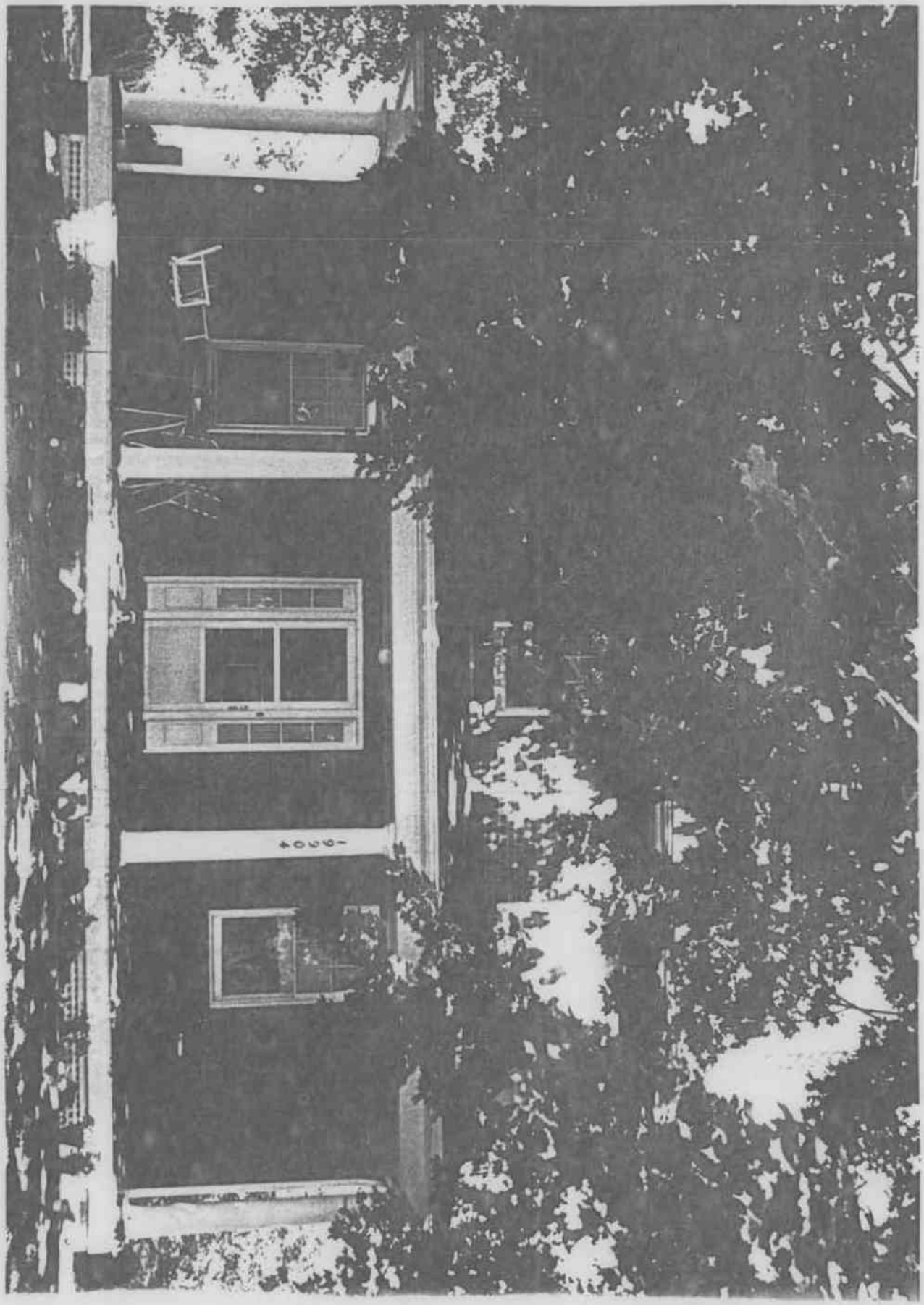


Attachment Sheet J
Boyds/White Grounds Historic District
Boyds Presbyterian Church
Taken By Anne Lewis, 1978
Facade, East

M: 18/8/1
MAGI#

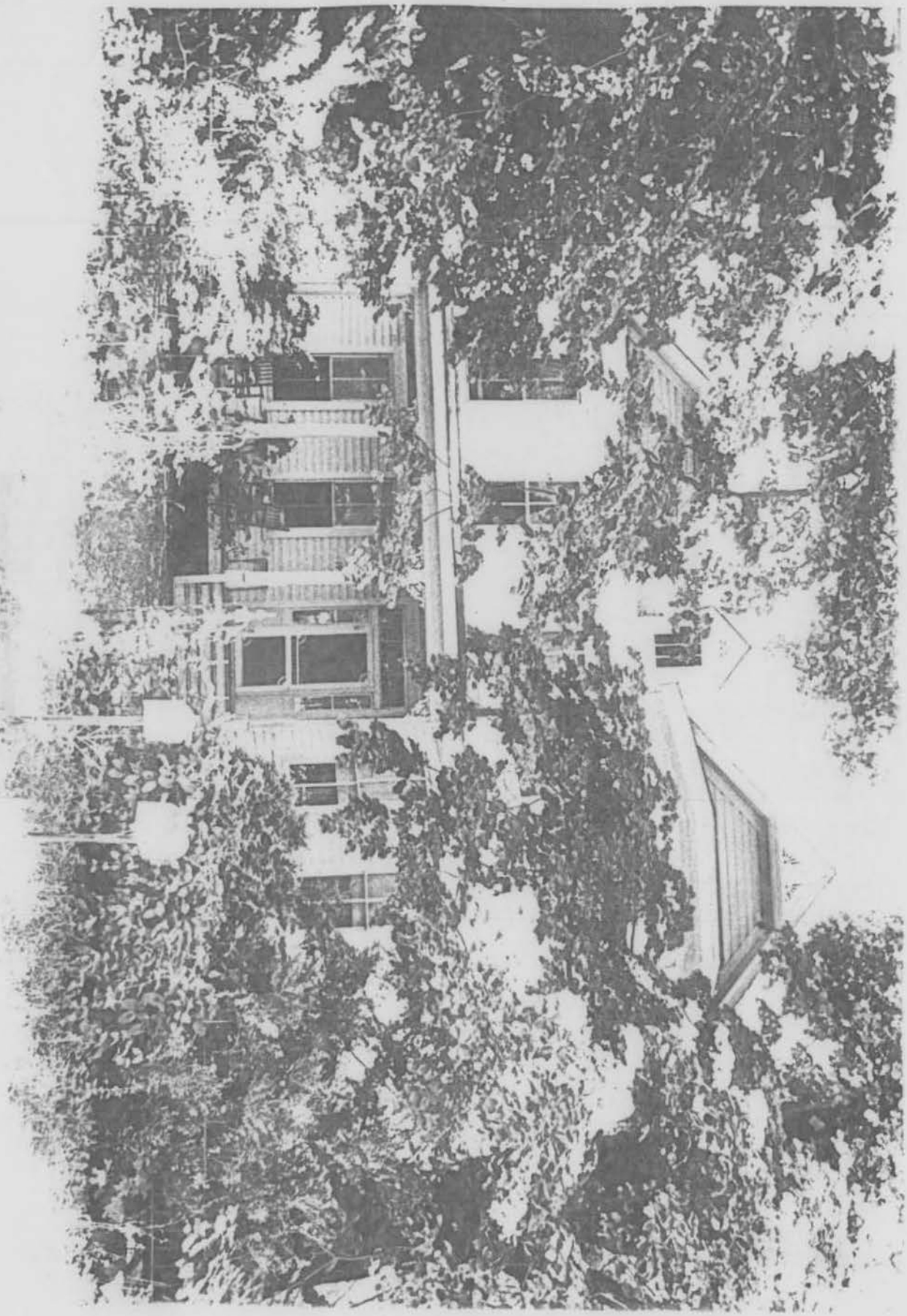
Attachment Sheet K
Boyds/White Grounds Historic District
Boyds Presbyterian Church Parsonage
Taken By Anne Lewis, 1978
Facade, West

M: 18/8/1
MAGI#



Attachment Sheet L
Boyds/White Grounds Historic District
Rev. T. Davis Richards House
Taken By Anne Lewis, 1978
Facade, East

M: 18/8/1
MAGI#

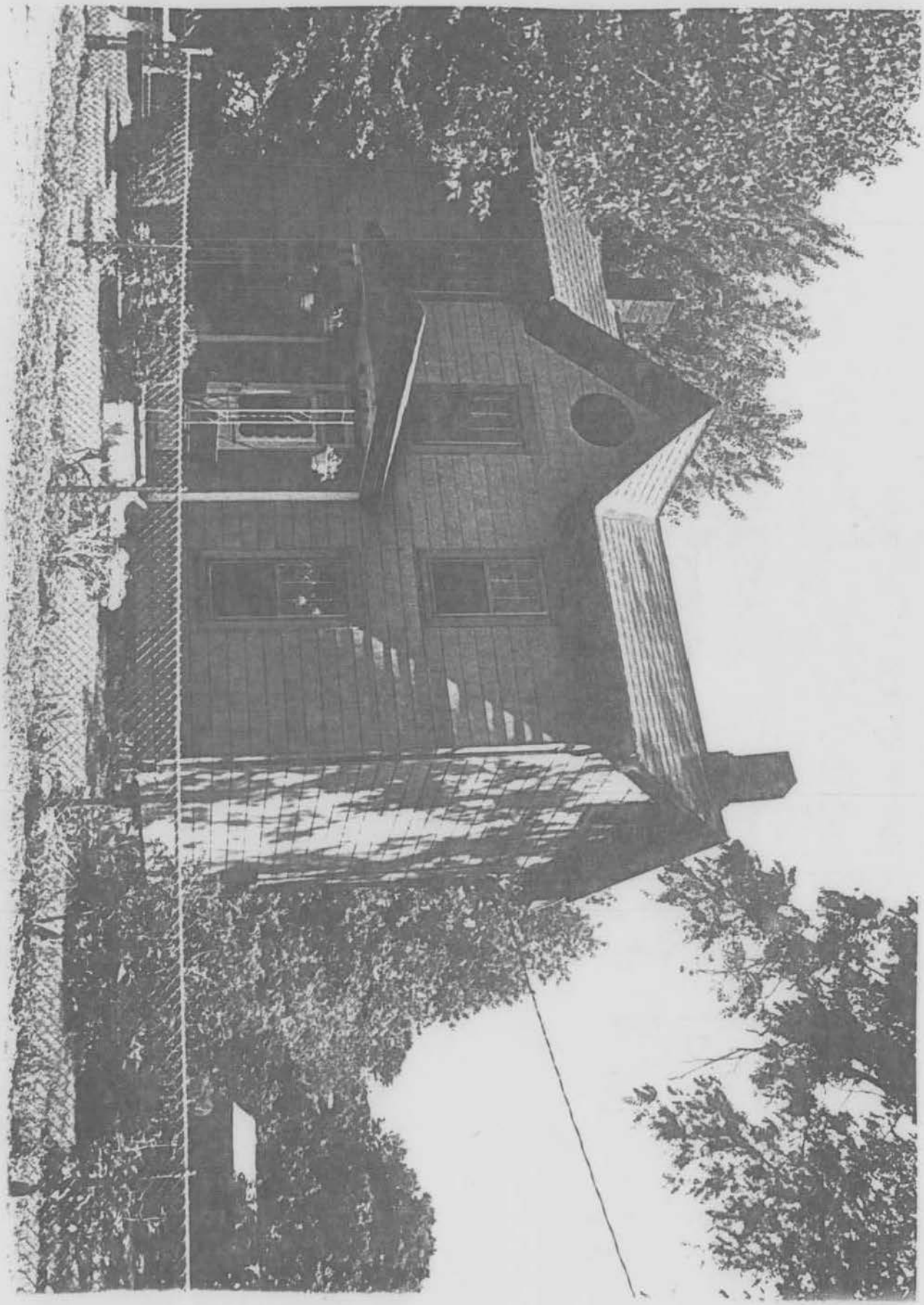


Attachment Sheet M
Boyds/White Grounds Historic District
Smith Hoyle House
Taken By Anne Lewis, 1978
Facade, North and West

M: 18/8/1
MAGI#

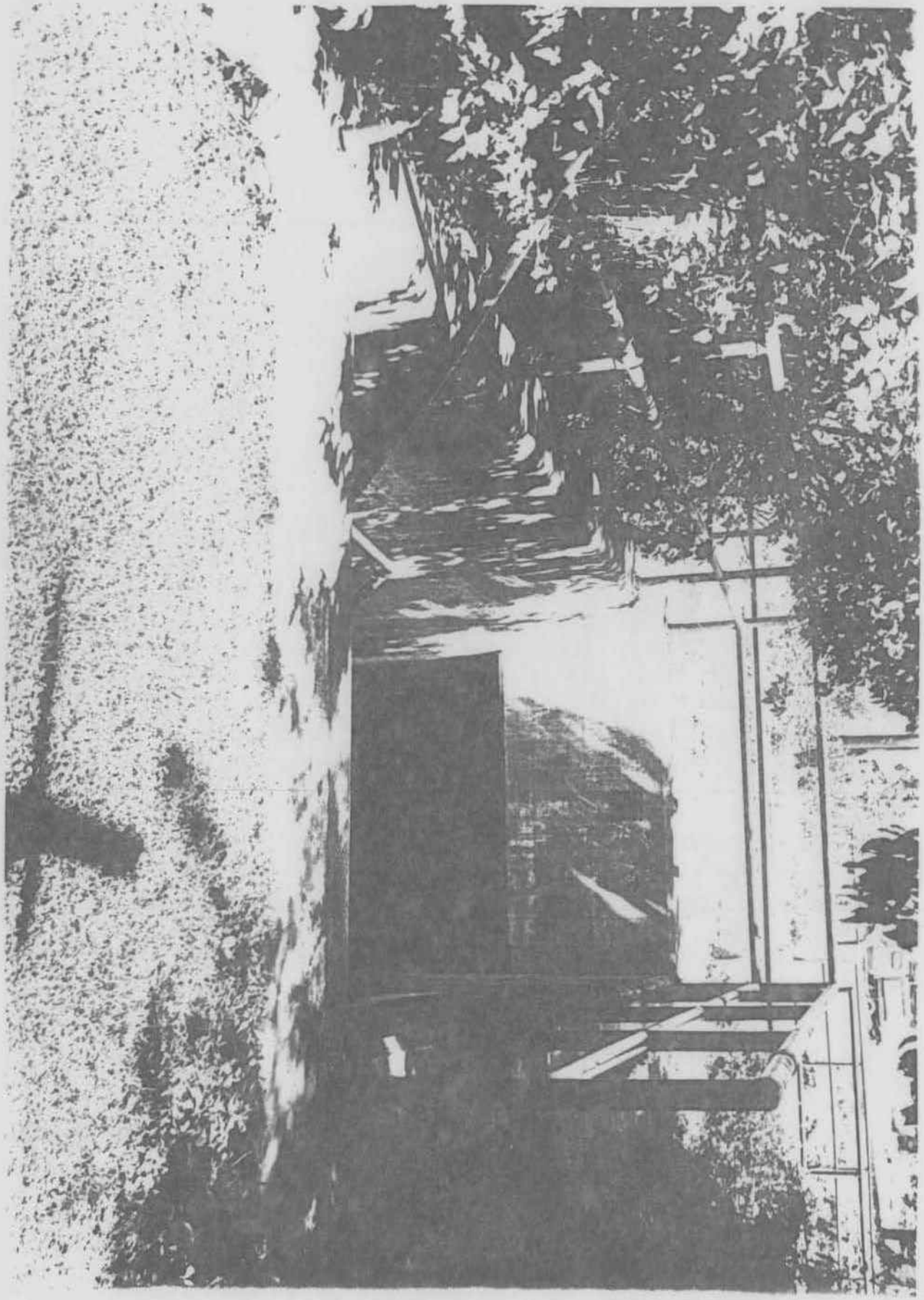
Attachment Sheet N
Boyds/White Grounds Historic District
Caroline Rine House
Taken By Anne Lewis, 1978
Facade, East

M: 18/8/1
MAGI#



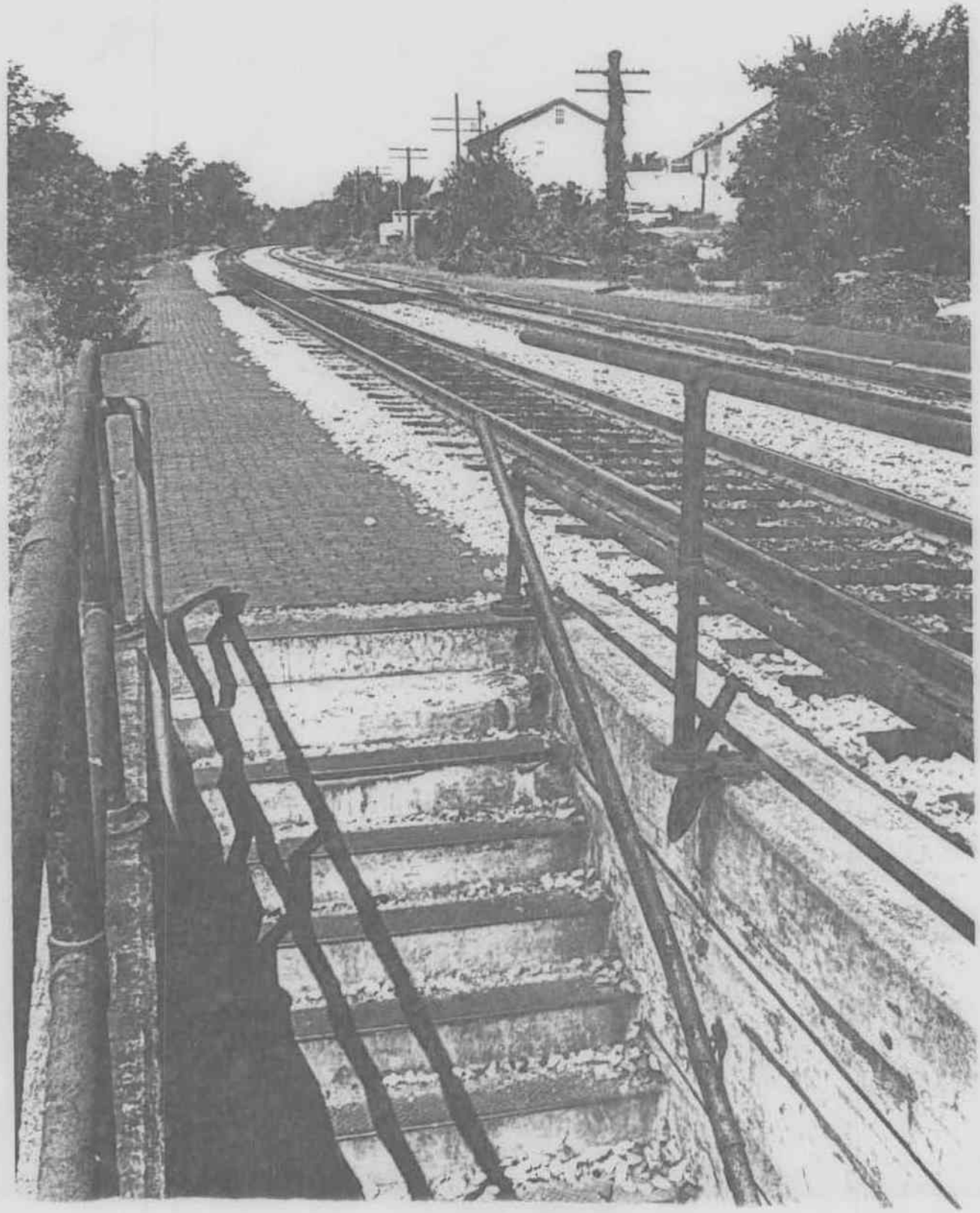
Attachment Sheet 0
Boyds/White Grounds Historic District
Railroad Subway at Boyds Station
Taken By Anne Lewis, 1978
Facade, North

M: 18/8/1
MAGI#



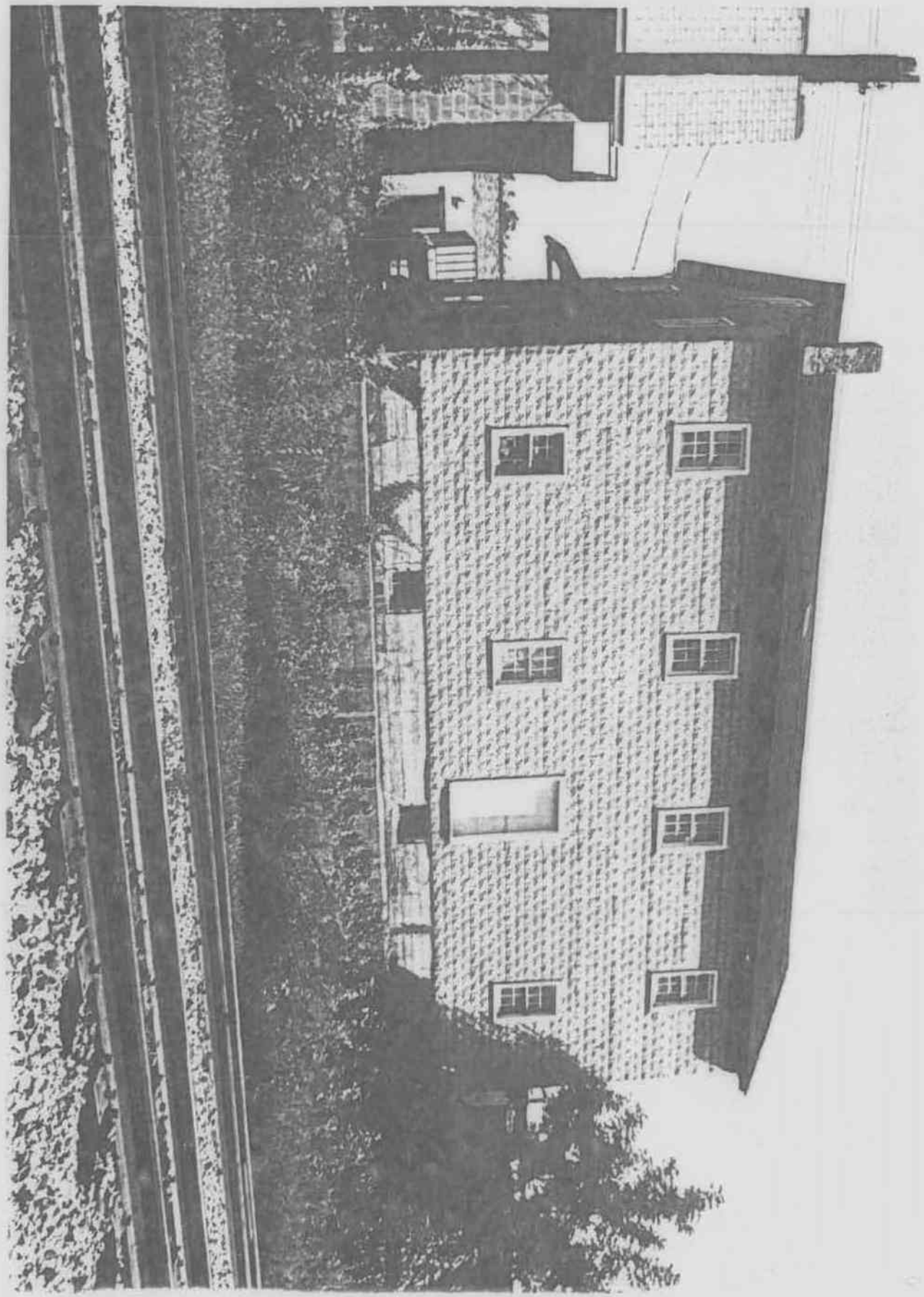
Attachment Sheet P
Boyds/White Grounds Historic District
Railroad at Boyds Station, Showing One of Three Subway Exits
Taken By Anne Lewis, 1978
Facade,West

M:18/8/1
MAGI#



Attachment Sheet Q
Boyds/White Grounds Historical District
Smith Hoyle's Mill
Taken By Anne Lewis, 1978
Facade, North

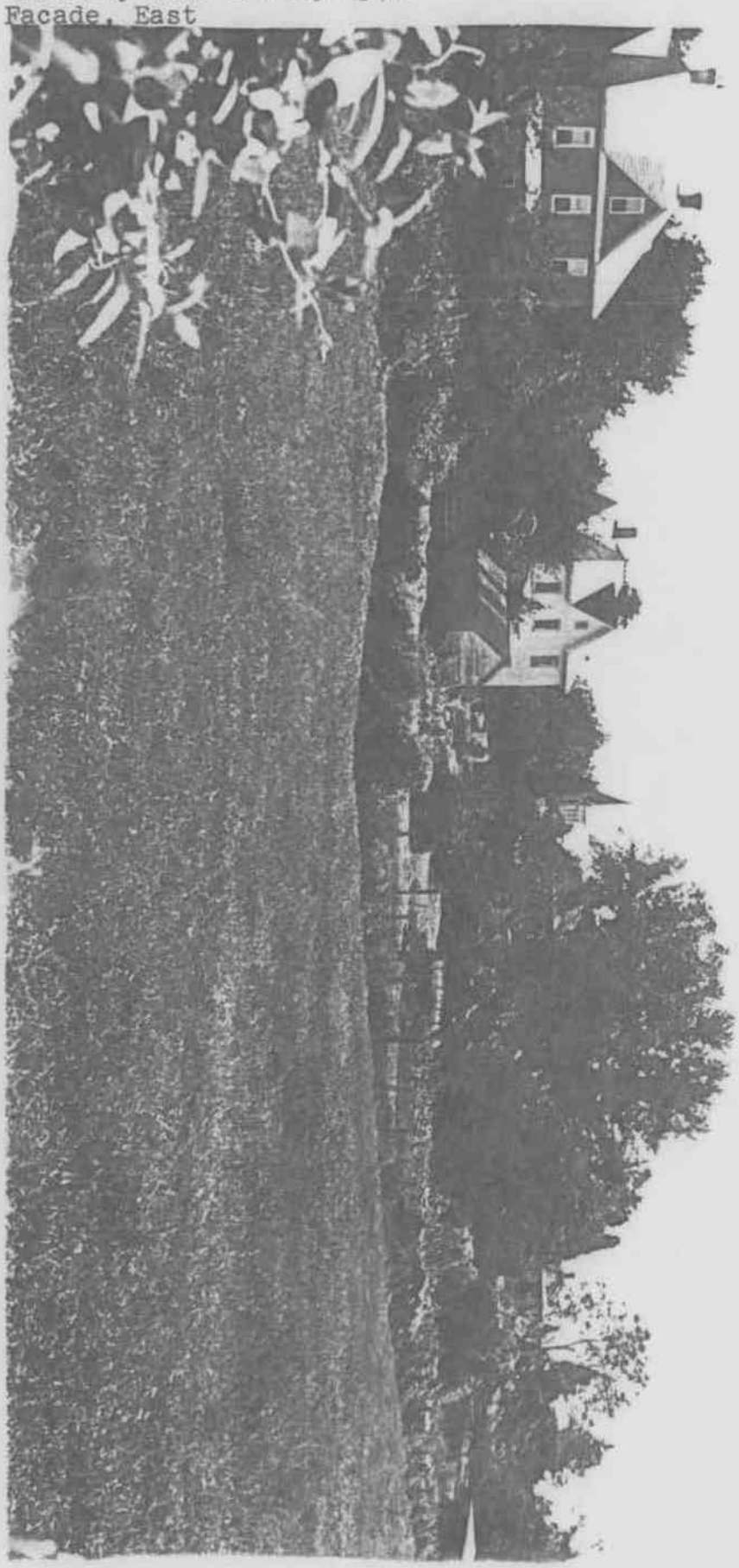
M: 18/8/1
MAGI#



Attachment Sheet R
Boyds/White Grounds Historic District

M: 18/8/1
MAGI#

Houses and Presbyterian Church Steeple
Taken By Anne Lewis, 1978
Facade, East



Maryland Historical Trust
Determination of Eligibility Form

Property Name: Burning Tree Club **Inventory Number:** M: 35-121

Address: 8600 Burdette Road **Historic District:** ___ Yes X No

City: Bethesda **Zip Code:** 20817 **County:** Montgomery

USGS Quadrangle(s): Falls Church, Rockville

Property Owner: Burning Tree Club, Inc. **Tax Account ID Number:**

Tax Map Parcel Number(s): 366,90,327 **Tax Map Number:** GN343

Project: **Agency:**

Agency Prepared By: Sara Amy Leach (KCI Technologies, Inc.)

Preparer's Name: **Date Prepared:** 2000-05-01

Documentation Is Presented In: Maryland Inventory Form M: 35-121

Preparer's Eligibility Recommendation: X **Eligibility Recommended** ___ **Eligibility Not Recommended**

Criteria: X **A** ___ **B** X **C** ___ **D** **Considerations:** ___ **A** ___ **B** ___ **C** ___ **D** ___ **E** ___ **F** ___ **G**

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property:

Inventory Number: **Eligible:** ___ Yes **Listed:** ___ Yes

Site Visit by MHT Staff: ___ Yes X No **Name:** **Date:**

Description of Property and Justification: ***(Please attach map and photo)***

Burning Tree Club is eligible for the National Register of Historic Places under Criteria A and C.

Eligibility under Criterion A, association with events that have made a significant contribution to the broad patterns of our history, is found in Burning Tree as an exclusive, male-only institution devoted to the pastime of golf, an example of a type of recreational organization that flourished during the 1920s. Further, through a series of legal challenges in the 1970s-80s, Burning Tree was rendered one of the last enclaves to continue the male-only tradition, when other private and historically male-only institutions modified membership rules to admit women and minorities. Eligibility under Criterion C requires that character-defining features of architectural design and setting be extant. The Burning Tree clubhouse and 18-hole course have both been altered somewhat since 1923; however, these modifications are minimal, in keeping with the scale and style of the original design, and do not alter the architectural or landscape architectural integrity of the property. Therefore, the property is eligible under Criterion C as a good example of a 1920s private golf club and course. For the property to be eligible under Criterion B would require association with significant persons; while important individuals have been members of this club during its history, these persons are not individually the source of its significance, therefore it is not eligible under Criterion B. Investigations have not been conducted to determine whether the property has the potential to yield information important in history or prehistory; therefore National Register Criterion D cannot be assessed at this time.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: X **Eligibility Not Recommended:** ___

Criteria: X **A** ___ **B** X **C** ___ **D** **Considerations:** ___ **A** ___ **B** ___ **C** ___ **D** ___ **E** ___ **F** ___ **G**

MHT Comments:

Anne Bruder — 2000-09-11

Reviewer, Office of Preservation Services — **Date**

Peter Kurtze — 2000-10-12

Reviewer, National Register Program — **Date**

Maryland Historical Trust
Determination of Eligibility Form

MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: X **Eligibility Not Recommended:** __

Criteria: X **A** __ **B** X **C** __ **D** **Considerations:** __ **A** __ **B** __ **C** __ **D** __ **E** __ **F** __ **G**

MHT Comments:

Anne Bruder	2000-09-11
Reviewer, Office of Preservation Services	**Date**
Peter Kurtze	2000-10-12
Reviewer, National Register Program	**Date**

CAPSULE SUMMARY SHEET

Survey No.: M:35-121 **Construction Date:** 1922-1923

Name: Burning Tree Club

Location: 8600 Burdette Road, Bethesda Vicinity, Montgomery County

Private Ownership / Present Use: Entertainment / Occupied / Condition: Excellent / Restricted Access

Description:

The ca. 221-acre Burning Tree Club is located in the northeast quadrant of the intersection of the Capital Beltway and River Road in Montgomery County; the property is bounded on the east by Burdette Road, on the north by Bradley Boulevard, and on the west in part by the Capital Beltway. Its Tudor Revival clubhouse is a modest-sized recreational building designed to provide basic services and dramatic vistas of an outstanding 18-hole golf course, both dating to 1922-23. Slightly enlarged and modified over the years, the building retains much of its architectural character and setting. The course was designed by an internationally recognized team of golf course architects and remodeled somewhat by equally notable designers. Constructed in Montgomery County at a time of trends in both national country club development and suburban development that often included amenities such as country clubs with recreational facilities, Burning Tree Club served a wealthy non-location-based membership. The ensemble of extant architectural and landscape-architectural features, coupled with its social significance, represents a preserved example of the exclusive, male-only golf club typical of the 1920s.

Significance::

Beginning in the 1920s and continuing through the 1940s, planned suburban developments capitalized on the affordability of the automobile, designed on the outskirts of cities to offer a healthful, recreational environment for families wanting to escape a congested city existence. Also in the 1920s, country club development across the nation soared. Montgomery County was developing at a rapid pace during this period, with the construction of residential communities and a host of country/golf clubs where residents could find restorative open space. Because of the wealth base in the area, several exclusive clubs were formed during the 1920s to provide private havens where political and business connections would become the subtle byproduct of a round of golf. Such institutions were commonly restricted to white males until the 1970s when issues of equal rights and sex/racial discrimination were introduced in Maryland. Burning Tree was at the core of the legal battle that resulted in most clubs bowing to public and political pressure, and diversifying memberships to include women and minorities. In contrast to changing times, however, the 78-year-old Burning Tree Club has maintained its original tenets and facilities: its Tudor-Revival clubhouse and renowned golf course constitute a largely preserved landscape, and its membership remains a male domain that is socially rare.

Preparer
KCI Technologies, Inc.
May 2000

Survey No. M:35-121

Maryland Historical Trust
Maryland Inventory of Historic Properties

DOE ☐ yes ☐ no

1. Name (indicate preferred name)

historic Burning Tree Club (Preferred)

and/or common

2. Location

street & number: 8600 Burdette Road ☐ not for publication

city, town vicinity of Bethesda congressional district

state Maryland county Montgomery

3. Classification

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

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

name Burning Tree Club, Inc.

street & number: 8600 Burdette Road telephone no.: (301) 365-1200

city, town Bethesda state and zip code: MD 20817

5. Location of Legal Description

courthouse, registry of deeds, etc. Montgomery County Judicial Center liber: 324

street & number 50 Maryland Avenue folio: 436

city, town Rockville state Maryland

6. Representation in Existing Historical Surveys

title

date ☐ federal ☐ state ☐ county ☐ local

depository for survey records

city, town state

7. Description

Survey No. M:35-121

Condition		Check one	Check one	
☒ excellent	☐ deteriorated	☐ unaltered	☒ original site	
☐ good	☐ ruins	☒ altered	☐ moved	date of move

Resource Count: 2 (Clubhouse and designed landscape)

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

Summary:

The ca. 221-acre Burning Tree Club is located in the northeast quadrant of the intersection of the Capital Beltway and River Road in Montgomery County; the property is bounded on the east by Burdette Road, on the north by Bradley Boulevard, and on the west in part by the Capital Beltway. Its Tudor Revival clubhouse is a modest-sized recreational building designed to provide basic services and dramatic vistas of an outstanding 18-hole golf course, both dating to 1922-23. Slightly enlarged and modified over the years, the building retains much of its architectural character and setting. The course was designed by an internationally recognized team of golf course architects and remodeled somewhat by equally notable designers.

General:

The Burning Tree clubhouse, the primary structure on the property completed in 1923, was designed by architect Harry Francis Cunningham and Manning F. Stead. The Tudor Revival structure is relatively small for a clubhouse serving 500 members, with an irregular plan that is predominantly two stories tall with two wings: rear/west and front/northeast. The structure is brick and stone composite, with small areas of half-timbering flanking the entry porch on the east elevation and on a small area of the second floor on the north elevation. Rough-cut stone dominates the first-floor structure and continues moving upward into the second-story brick walls for an ornamental effect; it is used around door and window openings, often with keystones, and as quoining. The complex roof features gable, gable-on-hip, and pyramidal forms with complex intersections; all roof areas are covered with ¾" slate except the flat, asphalt-covered porch roof along the south elevation, which covers spaces that are not original to the structure. The building is served by a system of copper guttering. According to architect Cunningham, the design of the club was noteworthy for its "combinations of old brick and local stone, as well as trusses of a particular type unusual in the USA." (FAIA nomination form)

The gable ends of the main block are dominated by a first-floor wall, composed of fixed, floor-to-ceiling plate glass windows. The south end includes two single doors. The second floor of the main block contains two large, half-round window with a third, smaller half-round window located on the south elevation of the west wing. The two larger windows contain a combination of glazing; the northern example has two stone mullions, the southern example is a combination of multiple small lights and a single, large plate glass window.

The rear/west wing off the main block is a series of connected one-story units. On the south elevation, the wall is dominated by six, nearly full-height plate glass windows set in wood frames, which illuminates the bar inside. Moving westward is a partially enclosed breezeway linked to a one-story pyramidal-roofed space, housing the pro shop and storage area for members' golf bags and related gear. The north elevation of the west wing provides minimal fenestration, mostly small, contemporary and fixed; inside are showers/locker room facilities.

7. Description (continued)

The formal entrance to the clubhouse faces onto the oval driveway loop; the brick one-story, hip-roofed entry porch has three open archways, with the fourth containing the building's doorway. The exposed wooden ceiling overhead supports a single suspended iron and glass chandelier. The double, glazed doors are topped by a glazed transom containing an image of the club seal. Metal railings are in the two side arches. The balance of the building entries--at least six--are unobtrusive single doors located: at the south end of the main block, on the north side of the rear wing, on the west side of the bar in the rear wing, on the rear elevation of the northeast wing, and on the second-story rear wall of the main block accessing the roof.

Built exterior features include an approximately 7' high composite brick and stone wall with double wooden gates, which angles northeastward from the rear of the northeast wing to hide the kitchen, delivery, and waste-disposal areas. Portions of a similarly tall and substantial stone wall indicate a nearby entrance to the golf course. A low stone retaining wall meanders along areas of the north elevation of the west wing.

Alterations to the building exterior includes: the replacement of the rustic wooden balustrade around the flat porch roof with same metal railing installed in the entry porch; a cantilevered porch on the south elevation of the main block may have been added, along with modifications to the entire south elevation of the west wing. Other than the plate glass like windows, most first-floor fenestration has been covered and sealed with wood shuttering.

The interior of the structure appears to contain much of its original character. The first floor of the main block is fronted by a vestibule with a barrel-vaulted ceiling and rounded openings, and three small management offices. The main interior space is open, with recessed arches along areas of the walls and an exposed-beam wood ceiling that is braced at the mantle of the large stone fireplace mantle. There are two inspirational inscriptions painted in gold onto facing ceiling beams overhead:

> '"Here will I dwell, for I have a delight therein." – Psalm 132, Verse 15' *and*
>
> '"But certain issue strokes must arbitrate." --Macbeth, Act V, Sc. 4, 1.20'

A small stone mantle is extant on the rear wall of the north end of the space. A plaque on the east wall states the date the club was organized December 8, 1922. The undivided room is carpeted and the walls are painted. The southern end of the building was enlarged through the enclosure of an open porch in the 1960's. This space serves as a small dining and lounge area.

The second story of the main block contains an open truss roof with exposed beams. The north portion of this undivided space houses supplementary lockers and seating; the south end contains a large table and chairs and serves as a conference space. A combination of contemporary track lighting and chandeliers illuminate the area. Suspended from the ceiling as décor are colorful flags donated by members, reflecting their professional affiliations. Two sets of small, turned stairways connect the first floor with the basement and the second story of the main block/northwest wing, which are located adjacent to the north end of the main block. An unfinished basement extends the full length of the original main block, and contains components of the water, electrical, and HVAC systems.

7. Description (continued)

The first floor of the northeast wing contains the kitchen, probably the laundry room, and other service functions. The second floor contains about five staff-changing rooms that are extremely small and unadorned, along with a bathroom. The slope of the roof on the exterior elevations of the building cuts sharply into the area of these rooms.

The west wing contains the club's bar, primary locker room, showers, and pro shop/golf equipment storage area. The bar room was added in the 1950's and is appointed with carpeting, contemporary faux-wood wall paneling, and a dropped acoustical-tile ceiling; the bar itself is covered with tufted leather(ette). The walls are covered with framed sketches of club members. The locker room is located in the space covered by the steep gable-on-hip roof; the ceiling, like the second floor of the main block, contains an open truss roof with exposed beams, from which flags are suspended. Next to this block is the pro shop a self-contained building unit that has been remodeled recently and completely: floors are carpeted, walls are papered, and there are no apparent historic features extant. From this commercial space is a passageway to a utilitarian room where club members store their golf bags.

The systems in the clubhouse have been modified. Electric wiring is contained in metal piping affixed to the walls/ceilings. Contemporary equipment for HVAC is located on the roof of the porch along the south side of the west wing; exterior ducts are visible on the second-story of the main block, entering windows on the east side of the building. Interior ducts are visible along the open ceilings.

In addition to the clubhouse, the superintendent's house was constructed in the mid 1920's. Located, approximately 500 yards southwest of the clubhouse, is a single-story stone structure with a slate-covered hip roof.

Nearby, the superintendent's house is a collection of four contemporary service structures that make up the maintenance yard, housing golf carts, lawn chemicals, etc.; they are built of concrete block, wood, and/or metal. The Burdette Road entrance to the club grounds features a pair of brick gate posts flanking the road, which are were a gift from the club's first president. Elsewhere on the course is a circular Roman temple form structure containing a drinking fountain, donated by a member in the 1960s.

The grounds consist of an 18-hole course designed by the London firm Colt, Mackenzie and Alison. The course was built on hilly terrain and there are water hazards on three holes. The signature hole is #18, a 412-yard, par 4, requiring a tee shot over a pond to an elevated fairway, then an approach shot to a small, well-bunkered green. In addition, the view of the clubhouse from the tee box on hole#18 is spectacular. The course has been rated among America's 100 "Best Classical Courses" by *Golfweek*.

8. Significance

Survey No. M:35-121

Period	Areas of Significance – Check and justify below				
☐ prehistoric	☐ archaeology-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		
☐ 1800-1899	☐ commerce	☐ exploration/settlement	☐ philosophy	☐ theater	
☒ 1900-	☐ communications	☐ industry	☐ politics/government	☐ transportation	
	☐ invention			☐ other (specify)	

Specific Dates 1922-1923 **Builder Architect** Harry F. Cunningham and Manning F. Stead (Clubhouse)
Colt, Mackenzie and Alison (Golf Course)

Check: Applicable Criteria: ☒ A ☐ B ☒ C ☐ D
and/or
Applicable Exception: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

Level of Significance: ☐ national ☒ state ☐ local

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

Summary:
Constructed in Montgomery County at a time of trends in both national country club development and suburban development that often included amenities such as country clubs with recreational facilities, Burning Tree Club served a prominent and wealthy non-location-based membership. The ensemble of extant architectural and landscape-architectural features, coupled with its social significance, represents a preserved example of the exclusive, male-only golf club typical of the 1920s.

Beginning in the 1920s and continuing through the 1940s, planned suburban developments capitalized on the affordability of the automobile, designed on the outskirts of cities to offer a healthful, recreational environment for families wanting to escape a congested city existence. Also in the 1920s, country club development across the nation soared. Montgomery County was developing at a rapid pace during this period, with the construction of residential communities and a host of country/golf clubs where residents could find restorative open space. Because of the wealth base in the area, several exclusive clubs were formed during the 1920s to provide facilites which afforded the social amenities of a game of golf in an atmosphere of slective political and business connections. Such institutions were commonly restricted to white males until the 1970s when issues of equal rights and sex/racial discrimination were introduced in Maryland. Burning Tree was at the core of the legal battle that resulted in most clubs bowing to public and political pressure, and diversifying memberships to include women and minorities. In contrast to changing times, however, the 78-year-old Burning Tree Club has maintained its original tenets and facilities: its modest Tudor-Revival clubhouse and renowned golf course constitute a largely preserved landscape, and its membership retains its exclusive, male constituency.

General:
Burning Tree Club was organized in 1922 with Isaac T. Mann as president and John B. Henderson and Walter R. Tuckerman as directors (Farquhar, 66). It was one of a several social and recreational organizations founded amid the burgeoning suburban landscape of Montgomery County during the 1920s, which included Indian Spring Country Club (1921), Woodmont Country Club and Congressional Country Club (1922) and, a few years later, Bannockburn Country Club and White Flint Golf Course (McMaster and Hiebert, 266). The 1920s were a period of growth for country clubs across the nation. In 1915 there were 1,000 clubs, but by 1927 that number rose to 5,500, with an estimated 2.7 million members (Mayo, 134). Burning Tree is purportedly named for a majestic tree—whether mythic Indian legend or real is undetermined—whose colors suggested that it was afire. According to Tuckerman, "They called it Potomac, the Place of the Burning Tree." (Offutt, 312)

8. Significance (Continued)

According to Tuckerman, an area developer, the club "grew out of the impatience of a foursome at the Chevy Chase Club. One of those four, Marshall Whitlatch, found a pair of 100-acre farms near River Road for about $300 an acre, and Tuckerman added thirty acres of his own. Under a 1922 agreement, each member subscribed $10,000." The laborers who cleared the heavily forested land earned $3.20 a day. The course was slated to open in summer 1923; the clubhouse was completed the same year. By May 1924, the "Founders" had contributed $242,000 to the club; the largest monetary support came from president Mann, however, who held the second mortgage on the property and paid for the construction of the gate posts, driveway and parking area. By the end of that year, Burning Tree boasted 77 members, but not enough to retire the mortgage debts as projected—with 500 members paying $1,000 in annual dues, (Offutt, 311-12; Mayo, 154-55). Like a handful of the most exclusive clubs—but in contrast to the more accessible clubs such as Indian Spring, Argyle, and Kenwood—Burning Tree's membership depended on the prominent personalities throughout the Greater Washington area and beyond, not the convenience of location.

The Burning Tree clubhouse, the primary structure on the property completed in 1923, was designed by architect Harry Francis Cunningham (1888-after 1955), and Manning F. Stead. Between ca. 1911 and the 1950s, Cunningham worked alone and in partnership with other architects as Cunningham & Bullock, Cunningham & Stead, and Cunningham, Stead & Cunningham (Scott, 45). He served as secretary of the D.C. chapter of the American Institute of Architects in 1923-24 when the organization was lobbying for professional licensing (Bushong, 47, 53). Elsewhere in the area, he designed the Chancery of the Brazilian Embassy (1937) and the Heatherington Apartments (1938) in the District of Columbia; he also designed the tower of the Nebraska State Capitol and its interior Memorial Room (1934). Cunningham founded the Department of Architecture at the University of Nebraska in 1930, and served as its chairman for four years (FAIA nomination form). He co-authored *Measured Drawings of Georgian Architecture in the District of Columbia* (1914), and was sole author of *Lincoln, Nebraska Capital: An Architectural Masterpiece* (ca. 1954).

By the 1920s, the design of American clubhouses had developed into a handful of forms, against which Burning Tree's layout appears to conform. For efficiency, club functions would be logically clustered together: kitchen, dining room and grill; and entrance lobby, manager's office, and great hall. This is largely the case at Burning Tree where aspects of the "finger" and "corridor" plan types are seen. The finger plan places central functions, such as the lounge and dining rooms, in a central block, attached to angular wings housing other activities: locker rooms, guest rooms, and in this case, food preparation. The corridor plan was considered most adaptable to small clubs, so that a number of functions were aligned next to one another (Mayo, 143).

Burning Tree's praiseworthy 18-hole course was designed by the London firm Colt, Mackenzie and Alison. The principals of this firm were Harry Shapland Colt (1869-1951), Charles Hugh Alison (1882-1952) and, briefly, Alister Mackenzie, M.D. (1870-1934). Although this professional partnership technically lasted from 1918 to about 1928, in reality the work from 1921 forward was predominantly that of Colt, who trained and then worked with Alison for more than 20 years. Even then, these two men typically worked independent of each other. The design of Burning Tree Club is generally considered the work of only Alison, who worked extensively in North America and the Far East; Colt—a lawyer who gave up his practice to become one of the world's leading golf designers—designed courses throughout Great Britain and Europe. Their collective work, much of which dates to the 1920s-1930s, is found through out the United States and the world, especially England, France, Germany, Japan, and the Netherlands. In America, they designed nearly two-dozen courses in Georgia, Illinois, Iowa, Michigan, New Jersey, Ohio, Wisconsin, and several in New York, in addition to Burning Tree. In 1924, the firm also remodeled the course at Maryland's Chevy Chase Country Club, their only other work in the area. Alison and Colt authored *Some Essays on Golf Architecture,*1920. (Cornish and Whitten, 190-91, 224-25, 331-32).

8. Significance (Continued)

Two of the firms works are among the most prostigous private clubs in America: Pine Valley Golf Club in New Jersey and Augusta National in Georgia.
Even prior to its opening, which occurred in May 1924, the Burning Tree course was highly praised in the local press:

> At least three of the golf courses about Washington now...rank as tests as fine as any in the country....These courses are Columbia, Chevy Chase, and Indian Spring.... At least three other courses, now under construction, will join the [aforementioned] three named as leading tests of the game about Washington. These are those of the Burning Tree Club, the Washington Golf and Country Club, and the Congressional Club. Without question the Burning Tree course will immediately take rank as one of the best of the east after its opening next month. No expense has been spared to make this course a model in every respect.... (*Washington Evening Star*, 29 April 1923).

The course was later credited for "fine greens and challenging holes laid out for the accurate hitter, not the long ball." Supervision of the course was the pastime of Dr. Walter Harban, the first president of the D.C. Golf Association (Offutt, 311-12). Over the years, it was remodeled three times by three significant golf course architects, although the degree of change to the layout is undetermined. The construction of the Capital Beltway forced some minor redesign of the 10th tee and the realignment of the 11th hole during the 1963 remodeling (Briggs interview, 12 April 2000). The course was remodeled by William S. Flynn (1890-1954), Robert Trent Jones (1906-), and Edmund B. Ault (1908-89); without specific information, "remodeling" can encompass the gamut of minor revision to a new layout. Flynn worked throughout the area in the 1920s-30s, when the work was probably accomplished; in addition to Burning Tree, he remodeled the courses at Columbia and Woodmont country clubs in Montgomery County, and East Potomac Park and Rock Creek Park golf clubs in Washington. Jones, perhaps the most recognized name in course architecture, remodeled aspects of Burning Tree in 1963—at the same time as Ault—perhaps related to the Capital Beltway intrusion, and again in 1977; he similarly worked at the nearby courses of Chevy Chase, Congressional, and Suburban country clubs. Ault, a designer native to the Washington area and prolific, Today the course is a par 71, 18-hole course, 6,400 yards and slope of 122, with a rating of 70.0 (*Washington Golf Monthly*, April 2000)

The facility has always been solely a day-use golf club with shop, a modest dining area and bar. Once constructed, the club has continued largely unchanged over the years except, like other American recreational facilities, during the World War II years when non-critical resources and travel were limited. In 1941, Edward R. Murrow was playing a second round at Burning Tree when news of the Pearl Harbor bombing was brought to him; he purportedly finished the round because the source of the report was Reuters, and apparently suspect; but later, when the news was confirmed, he sat in a locker alley and cried (Offutt, 494). In January 1943, all U.S. pleasure driving was banned due to tire and gasoline rationing, and the suburban country and golf clubs inaccessible by public transportation felt the pinch. Some closed, others served by bus or streetcar lines, or within walking distance, continued to operate. The isolated Burning Tree sometimes went a week with no golfers. When possible, manager Joseph Langer would provide a bus service of sorts on his way to work, especially on Sundays. To help survive these lean years, the club extended war memberships to approximately 35 men stationed nearby in connection with national defense. Other clubs made similar efforts: Chevy Chase accepted flag rank officers, and Woodmont accepted Naval Hospital, National Institute of Health, recovering patients in need of therapy, and other military personnel at this time (cited in Offutt, 552).

It maintains a roster of 500 resident and non-resident members whose ages average in their 60s, and a long waiting list for those interested in joining. Members must be male, at least 40 years old, and can only be invited to join (Briggs interview, 12 April 2000). The length of the waiting list is irrelevant if the individual "will add to the club's stature." (*Washington Star,* 4 July 1979)

8. Significance (Continued)

Burning Tree boasts an impressive number of former politicians, pillars of the community, and especially presidents, most of whom since Harry Truman have been members at least during their terms of office: Dwight Eisenhower was a member, and Richard Nixon sponsored Jack Kennedy in the mid 1950s. Members have also included former vicepresidents Spiro Agnew and Gerald Ford; former Chief Justice Warren Burger, Army General Omar Bradley, former secretaries of commerce, treasury and state; and the heads of Reynolds Metals, Hearst Corporation, General Electric, Martin Marietta, Firestone, and the Marriott Corporation.

Burning Tree currently ties with Bethesda Country Club and Chevy Chase Country Club for the area's second-highest initiation fee, $50,000, after Congressional County Club's $65,000 fee. Annual dues are the highest in the area at, $525 per member (*Washington Golf Monthly* website, April 2000).

In an era of political correctness and non-discrimination, Burning Tree is a rare remaining male-only organization in the greater Washington area and beyond. Women, must remain in the car when they pick up their husbands, and are only allowed to visit the pro shop at Christmas time for the purpose of shopping (*Washington Star,* 4 July 1979). The daughter of one club founder, Laura Tuckerman Triest, recalled why the no-female policy came to be so staunchly defended. She said that during the Depression, the club had planned to vote to allow women to join for twice weekly visits, but she and her mother predicted that would mean that by the end of three months, "We'll be there everyday" and her father would ruin the club. She describes it "as an escape from [Tuckerman's] household of women, which he needed immensely," adding, "I can't imagine the wives getting along anyway. It is not the right membership for a family club." (cited in Offutt, 311)

For many years, the gender of membership was a not an issue because many area clubs barred women and minorities from membership without controversy. The anti-discrimination efforts of the 1970s were triggered by a taxation issue that dated to 1965, when the Maryland legislature passed H.B. 555, permitting country clubs to obtain a tax break under open spaces assessments. Based on the law, in 1965, Burning Tree entered a 10-year agreement with the state to maintain its golf course as open space in return for the tax reduction. Roy N. Staten sponsored the legislation at the behest of Blair Lee, at the time a registered lobbyist for the Montgomery County country clubs. The purpose of the bill, Staten recalls, "was to provide an incentive for the growth of country clubs and the expansion of open spaces, even open spaces admittedly dedicated to private purposes." Rejecting a question that the tax break was introduced to offset future taxation indicated by rising real estate values and growing commercial/residential development in the area, he went on to assure "with a reasonable degree of certainty that, because the [Ways and Means Committee] did not view it as a problem or potential problem at the time, the question of the tax loss was not scrupulously examined....no one truly envisaged the tax subsidy in one county growing to such proportions in 1965." Between 1971 and 1979, it was calculated that the tax subsidy in Montgomery County for country clubs grew from $133,050 to $1.2 million. In 1966, the market value of Burning Tree's 221 or so acres was $935,000; the tax break represented a revenue loss of $8,154 to the county. By 1979, the club's value climbed to just over $8 million, representing a loss of state and county tax revenue of just over $119,000. (Letter and attachments, Roy Staten to Luiz Simmons, 6 September 1979, vertical files, Rockville Library).

8. Significance (Continued)

In 1974, the Maryland legislature amended Article 81 of the law tax-break provision so as to deny it to any clubs that discriminate--but excluded single-sex country clubs and clubs that exclude certain sexes on certain days and times. In 1975 Burning Tree entered into its second 10-year commitment to the state to preserve its course as open space for the tax benefit.

At the same time, the state launched an investigation into eleven Montgomery County golf and country clubs to determine if discriminatory practices were apparent. This resulted in many clubs—such as Chevy Chase and Columbia—signing consent agreements to change their membership practices, without admitting actual discrimination. Kenwood Country Club, which was exonerated in 1976, had been the site of an incident that "was one of the most important in promoting legal changes in the mid-1970s," according to state legislators. "In 1968, then D.C. Mayor Walter Washington, an African-American, had been invited to a meeting of the Wellesley College Alumnae Association at Kenwood, an all-white club. The club replied that it could not accommodate the meeting because Mayor Washington is a Negro." (*Montgomery Journal*, 31 May 1983)

In the meantime, Bainum and his sister, Barbara Bainum Renschler, filed suit against the State of Maryland and Burning Tree in August 1983, with Renschler seeking club membership. On September 3, 1984, Judge Irma Raker, the only woman on the Montgomery County Circuit Court, ruled that the tax break Burning Tree enjoyed was a violation of the state's Equal Rights Amendment, which had been passed in Maryland in 1972. Support for Bainum's bills and the ruling came from the National Organization for Women, the National Association for the Advancement of Colored People, and the Anti-Defamation League (*Montgomery Journal*, 23 March 1984). Burning Tree successfully appealed the decision, and in December 1985 the Maryland Court of Appeals struck down parts of the law and its amendment, which allowed Burning Tree to keep its tax benefit and continue to discriminate (305 Md. 53, 501 A.2d 817 (1985).

Within six weeks, Maryland passed a bill (Ch. 334) whose only exception to discrimination was the heretofore unchallenged exception that allowed clubs to reserve courses at certain times for men and women. Burning Tree immediately took the case to Maryland's Circuit Court making several assertions, but the one concurred with by the court, ironically, was that the "periodic discrimination" provision violated the state's Equal Rights Amendment and therefore was unconstitutional (*Washington Post*, 23 July 1987).

At the same time, in a high-profile case taking similar legal direction toward breaking down the doors of same-sex clubs, the U.S. Supreme Court ruled on May 4, 1987, that the all-male Rotary International clubs must admit female members, upholding a California case decision. The impact of this case on the Burning Tree effort would depend, according to Justice Lewis F. Powell, Jr., "on whether a particular club or organization is 'sufficiently personal or private' or more open and business-related in its activities (*Washington Post*, 5 May 1987)." In the Rotary Club case, the court specifically found that the admittance of women would not "affect in any significant way the existing members' ability to carry out those activities," and introducing women to the club would not "interfere unduly with club members' freedom of private association." (481 U.S. 537)

Following the state's 1987 defeat, and cross appeals by both Burning Tree and the state, the Court of Special Appeals ruled that the "periodic prohibition" clause was both invalid and severable from the larger law. Subsequently, in March 1989, the Maryland Court of Appeals "upheld the framework of a 1986 law aimed at excluding Burning Tree from a state-sponsored program that gives country clubs lower tax rates" for preserving open space. (*Washington Post*, 29 May 1989).

8. Significance (Continued)

Burning Tree petitioned the U.S. Supreme Court to review its case during the term commencing in October 1989, but the request was rejected and the club's legal remedies were officially exhausted. All that remained was for Burning Tree to decide whether or not to drop its restriction on female membership or pay several years worth of back taxes (*Washington Post*, 3 October 1989). On the heals of the Supreme Court's decision not to hear the case, the Maryland Commission on Human Relations recommended the elimination of "tax breaks and licensing privileges for private clubs and associations...that discriminate against women or blacks." The study grew out of court rulings elsewhere determining that local jurisdictions can regulate private clubs, according to officials, as well as the 1987 Burning Tree ruling by the state Court of Appeals (*Washington Post*, 5 December 1989).

Subsequent to the U.S. Supreme Court's decision not to hear the case, the state of Maryland assessed Burning Tree Club $938,000 in back taxes for the years 1986-89, based on a revised, higher rate exclusive of any tax exemptions or reductions because it chose to continue its discriminatory practices. Although the club initially challenged the bill, it soon paid the hefty sum. Burning Tree continues to bar women from its membership, and is one of the few organizations anywhere to continue to do so (*Washington Post*, 4 October 1989, 23 July 1990).

National Register Evaluation:

Burning Tree Club is eligible for the National Register of Historic Places under Criteria A and C.

Eligibility under Criterion A, association with events that have made a significant contribution to the broad patterns of our history, is found in Burning Tree as an exclusive, male-only social institution devoted to the pastime of golf, an example of a type of recreational organization that flourished during the 1920s. Further, through a series of legal challenges in the 1970s-80s, Burning Tree was rendered one of the last enclaves to continue the male-only tradition, when other private and historically male-only institutions modified membership rules to admit women and minorities. Eligibility under Criterion C requires that character-defining features of architectural design and setting be extant. The Burning Tree clubhouse and 18-hole course have both been altered somewhat since 1923; however, these modifications are minimal, in keeping with the scale and style of the original design, and do not alter the architectural or landscape architectural integrity of the property. Therefore, the property is eligible under Criterion C as a good example of a 1920s private golf club and course. For the property to be eligible under Criterion B would require association with significant persons; while important individuals have been members of this club during its history, these persons are not individually the source of its significance, therefore it is not eligible under Criterion B. Investigations have not been conducted to determine whether the property has the potential to yield information important in history or pre-history; therefore National Register Criterion D cannot be assessed at this time.

MARYLAND HISTORICAL TRUST

Eligibility recommended XX

Eligibility Not Recommended:

Comments:

Reviewer, OPS: [signature] Date: 9/11/00

Reviewer, NR Program: [signature] Date: 10/12/00

9. Major Bibliographical References

Survey No. M:35-121

See Continuation Sheet

10. Geographical Data

Acreage of nominated property 221.45 acres

Quadrangle name Falls Church, VA-MD and Rockville, VA-MD Quadrangle scale 1:24,000

Verbal boundary description and justification
See Continuation Sheet

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 Sara Amy Leach	
organization KCI Technologies, Inc.	date May 2000
street & number 10 North Park Drive	telephone 410-316-7800
city or town Hunt Valley	state/zip Maryland, 21030

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 purposed only and do not constitute any infringement of individual

Return to:

Maryland Historical Trust
DHCP/DHCD
100 Community Place
Crownsville, MD 21032-2023
410-514-7600

9. Major Bibliographical References (Continued)

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"Burning Tree Club v. Bainum," 305 Md. 53, 501 A.2d 817 (1985).

"Burning Tree Club Inc. et al. v. Maryland, et al.," 315 Md. 254, 554 A.2d 366 (1989), Certiorari denied by MD Court of Appeals.

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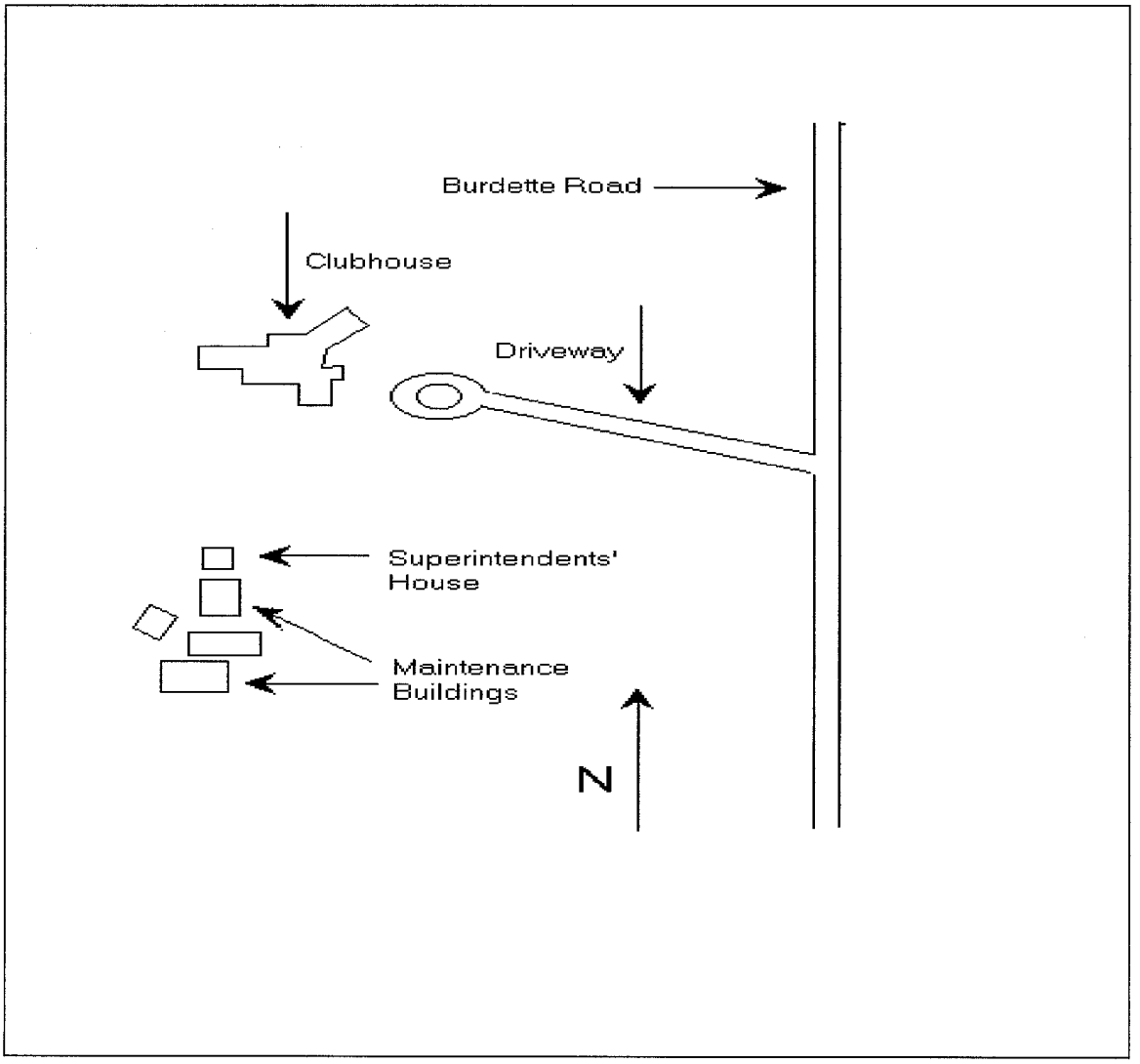
"State v. Burning Tree Club," 301 Md. 9, 32, 481 A.2d 785, 797 (1984).

10. Geographical Data(Continued)

Resource Sketch Map:

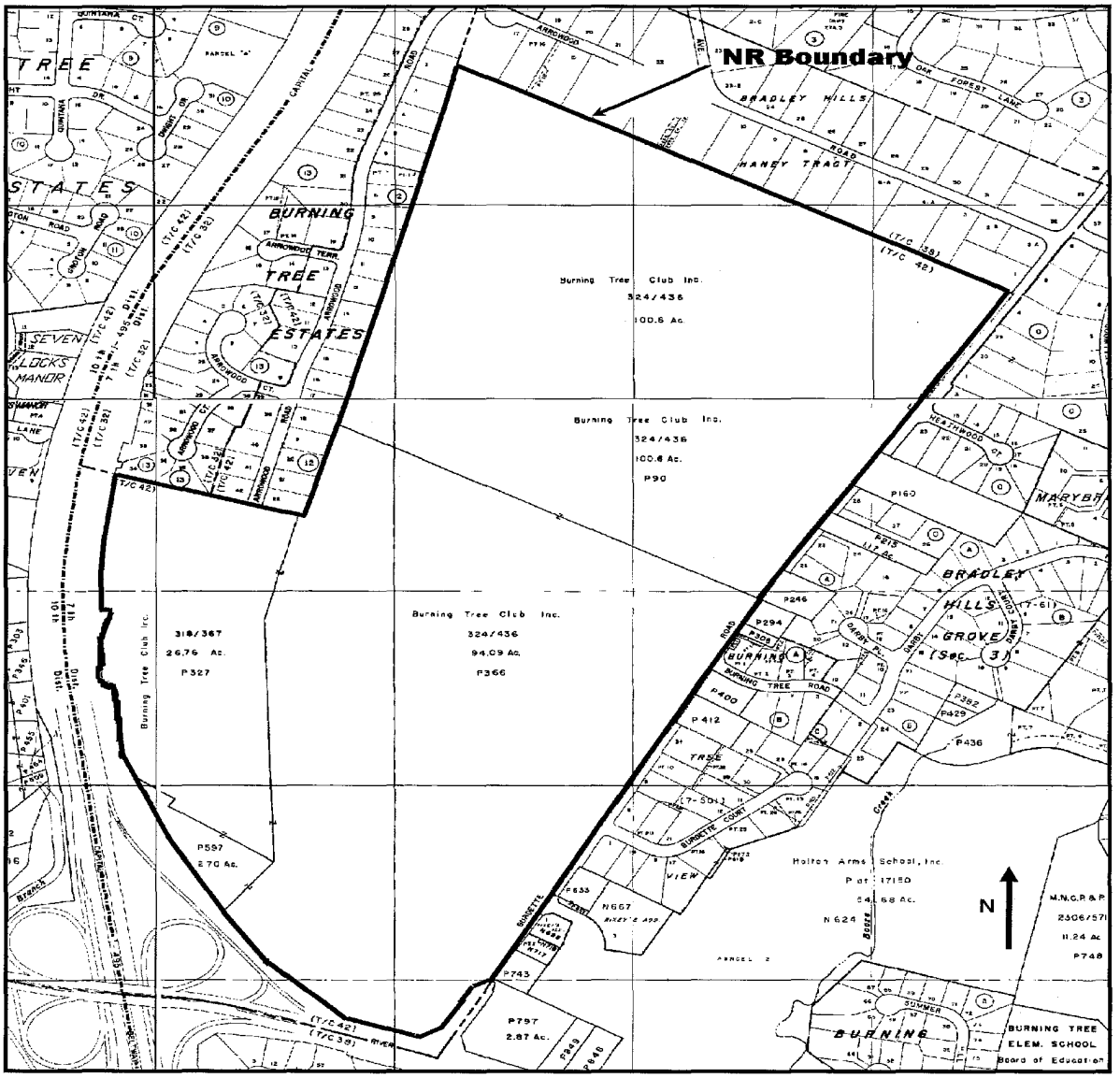


CONTINUATION SHEET

MARYLAND HISTORICAL TRUST
STATE HISTORIC SITES INVENTORY FORM
RESOURCE NAME: Burning Tree Club
SURVEY NO.: M:35-121
ADDRESS: 8600 Burdette Road, Bethesda Vicinity, Montgomery County

10. Geographical Data (Continued)

National Register Boundary Map:



10. Geographical Data (Continued)

Verbal Boundary Description and Justification:

The National Register boundary of the Burning Tree Club property includes the entirety of its tax parcels (GN343-). It is bounded on the east by Burdette Road, on the south and west by the Capital Beltway. This is the historic boundary of the club, except for approximately 20 acres lost to the Capital Beltway construction in the 1960s, and it encompasses the complete, nationally recognized 18-hole golf course.

CONTINUATION SHEET

MARYLAND HISTORICAL TRUST
STATE HISTORIC SITES INVENTORY FORM
RESOURCE NAME: Burning Tree Club
SURVEY NO.: M:35-121
ADDRESS: 8600 Burdette Road, Bethesda Vicinity, Montgomery County

Maryland Comprehensive Historic Preservation Plan Data Sheet

Historic Context:

MARYLAND COMPREHENSIVE PRESERVATION DATA

Geographic Organization:

Piedmont

Chronological/Development Period Theme(s):

Modern

Prehistoric/Historic Period Theme(s):

Architecture, Landscape Architecture, Community Planning
Social/Education/Cultural

RESOURCE TYPE:

Category (see Section 3 of survey form):

Building, Site

Historic Environment (urban, suburban, village, or rural):

Suburban

Historic Function(s) and Use(s):

Entertainment, Golf club

Known Design Source (write none if unknown):

None

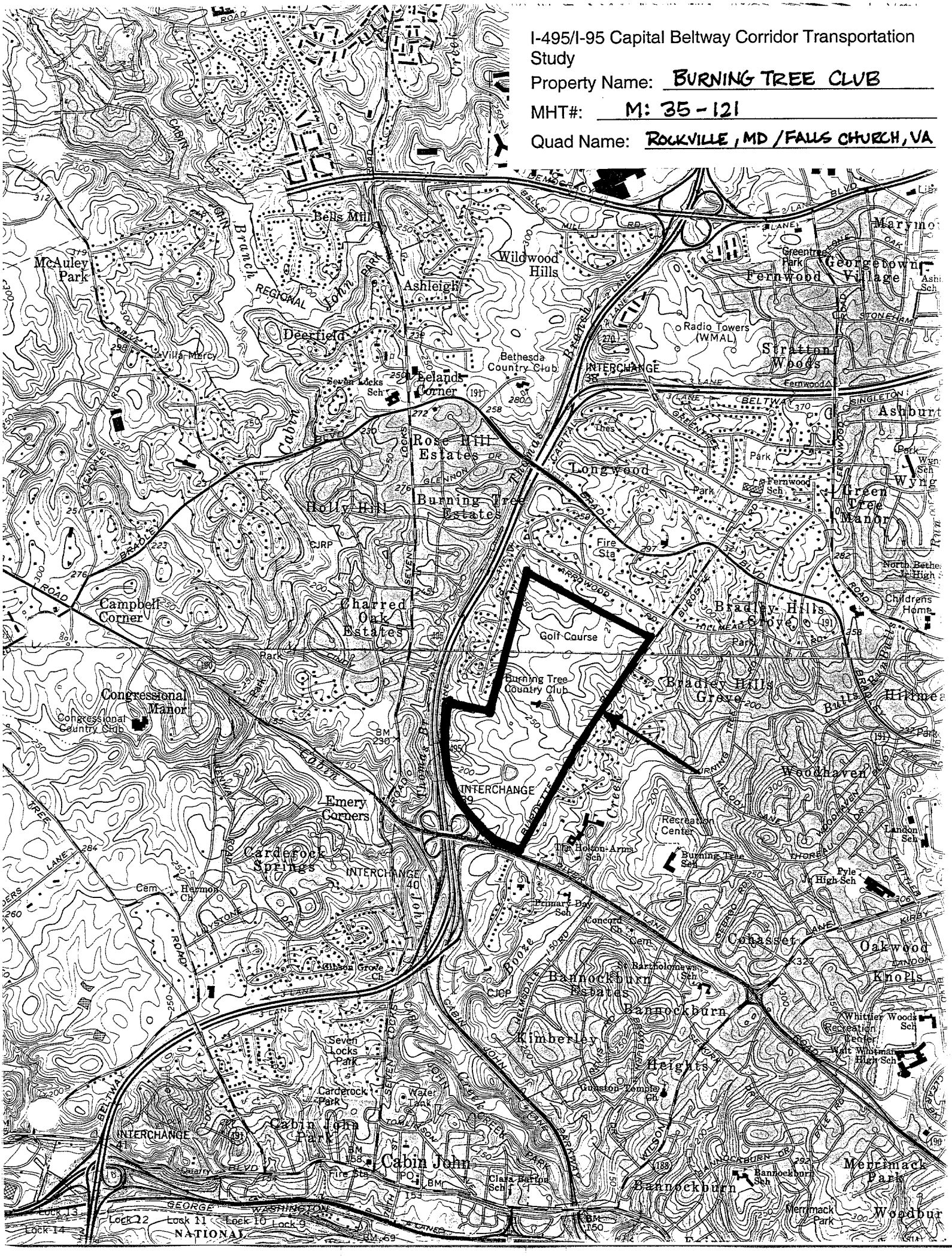
Preparer
KCI Technologies, Inc.
May 2000

I-495/I-95 Capital Beltway Corridor Transportation Study

Property Name: BURNING TREE CLUB

MHT#: M: 35-121

Quad Name: ROCKVILLE, MD / FALLS CHURCH, VA



1 M:35-121

2 BURNING TREE CLUB

3 MONTGOMERY COUNTY, MD

4 SARA LEACH

5 4/00

6 MD SHPO

7 8600 BURDETTE ROAD, BETHESDA
NORTH ELEVATION OF REAR WING, VIEW SW

8 1 OF 16

1. M:35-121
2. Burning Tree Club
3. Montgomery County
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   Distant View of rear wing, South elev. View N
8. 2 of 16

1. M:35-121

2. Burning Tree Club

3. Montgomery County, MD

4. Sara Leach

5. 4/00

6. MD SHPO

7. 8600 Burdette Road, Bethesda
To rear of Pro Shop & Bar, rear wing, View E

8. 3 of 16

1. m: 35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   Roof of Proshop & breezeway, View NW
8. 4 of 16

1. M: 35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   Distant View to rear wing, North elev., View S
8. 5 of 16

1. M: 35-121

2. Burning Tree Club

3. Montgomery County, Bethesda

4. Sara Leach

5. 4/00

6. MD SHPO

7. 8600 Burdette Road, Bethesda
N. elevation of rear wing, view SE

8. 6 of 16

1. M: 35-121

2. Burning Tree Club

3. Montgomery County, Bethesda

4. Sara Leach

5. 4/00

6. MD SHPO

7. 8600 Burdette Road, Bethesda
E. elevation w/entry porch and view of NE wing, View SW

8. 7 of 16

1. m: 35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   Front Entry & S. end of main Block, View NW
8. 8 of 16

1. M: 35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   Roof of main block, South end, View E.
8. 9 of 16

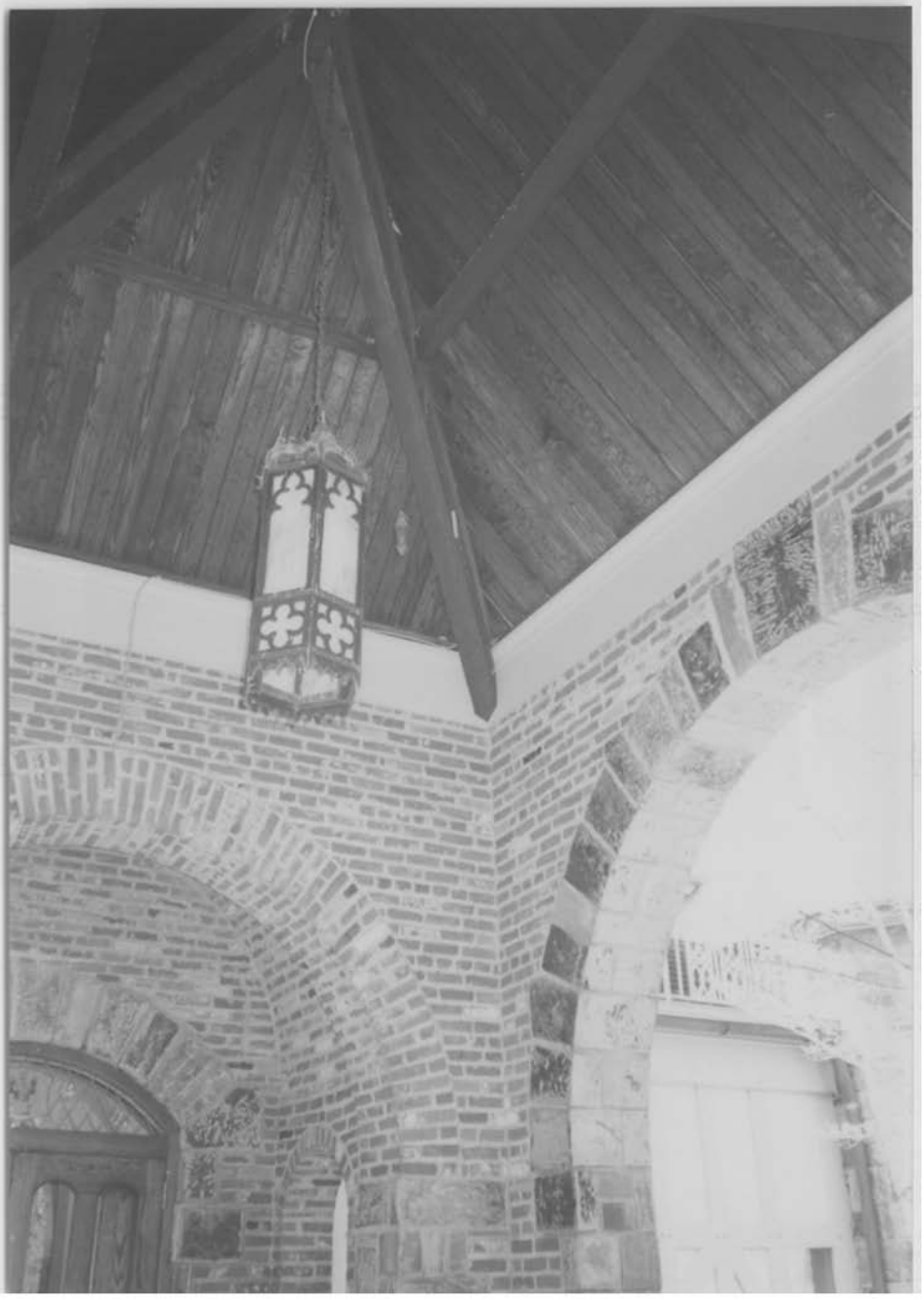
1. m: 35-121
2. Burning Tree Club
3. Montgomery County. Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   Roof of rear wing (over locker room) View NW
8. 10 of 16

14

1. M: 35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   Roof of Pro Shop & Breezeway, View NW
8. 11 of 16

1. M:35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
2nd Fl., main block, South end View S
8. 12 of 16

1. M: 35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   View of locker room ceiling, rear wing, View N. up
8. 13 of 16



1. m: 35-121

2. Burning Tree Club

3. Montgomery County, Bethesda

4. Sara Leach

5. 4/00

6. MD SHPO

7. 8600 Burdette Road, Bethesda
Ceiling of entry Porch on E. elev., View Up

8. 14 of 16

1. M: 35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4. Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   View of bar, rear wing. View E.
8. 15 of 16

1. M: 35-121
2. Burning Tree Club
3. Montgomery County, Bethesda
4 Sara Leach
5. 4/00
6. MD SHPO
7. 8600 Burdette Road, Bethesda
   Interior of great hall, from vestibule. View N
8. 16 of 16

F-1-134

Carrollton Manor Rural Historic District

Architectural Survey File

This is the architectural survey file for this MIHP record. The survey file is organized reverse-chronological (that is, with the latest material on top). It contains all MIHP inventory forms, National Register nomination forms, determinations of eligibility (DOE) forms, and accompanying documentation such as photographs and maps.

Users should be aware that additional undigitized material about this property may be found in on-site architectural reports, copies of HABS/HAER or other documentation, drawings, and the "vertical files" at the MHT Library in Crownsville. The vertical files may include newspaper clippings, field notes, draft versions of forms and architectural reports, photographs, maps, and drawings. Researchers who need a thorough understanding of this property should plan to visit the MHT Library as part of their research project; look at the MHT web site (mht.maryland.gov) for details about how to make an appointment.

Last Updated: 09-12-2018

MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM

NR Eligible: yes X
no ___

Property Name: Carrollton Manor Rural Historic District Inventory Number: F-1-134
MD Rt 28 on south, Tuscarora Creek on west, Fountain Run on north, Monocacy
Address: River on east City: Buckeystown, Adamstown Zip Code: ___

County: Frederick USGS Topographic Map: Buckeystown

Owner: Multiple-more than ten

Tax Parcel Number: ___ Tax Map Number: 85, 94, 103, 109 Tax Account ID Number: ___

Project: ___ Agency: ___

Site visit by MHT Staff: ___ no ___ yes Name: ___ Date: ___

Eligibility recommended X Eligibility **not** recommended ___

Criteria: X A ___ B X C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G ___ None

Is the property located within a historic district? ___ no X yes Name of district: Carrollton Manor Rural HD

Is district listed? X no ___ yes Determined eligible? ___ no ___ yes District Inventory Number: ___

Documentation on the property/district is presented in:
MIHP forms

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*

This investigation into the potential for a rural historic landscape in southern Frederick County near Buckeystown and Adamstown was undertaken on behalf of Duke Energy North America as part of the cultural resources investigations to support the proposed construction of a power plant in the area (Goodwin 2001). Discussions with the Maryland Historical Trust (MHT) at the beginning of the investigations identified properties for individual assessment applying the National Register of Historic Places Criteria for Evaluation in the vicinity of the proposed power plant. Correspondence dated 16 January 2002 from the MHT regarding the project identified that a Maryland Inventory of Historic Properties (MIHP) Form and a MHT NR-Eligibility Review Form be prepared to document the evaluation of the Carrollton Manor Rural Historic District. This current MIHP form was prepared to satisfy that request. The form is based on existing MIHP documentation located in the files of the Maryland Historical Trust. No additional intensive survey was undertaken to update this data. Only reconnaissance survey from the public right-of-way was completed for a portion of the area. Extant built resources in the area are in private ownership and located off the main roads.

The Carrollton Manor Rural Historic District is an area located in southern Frederick County, in the southern portion of the Adamstown Planning Region, near Adamstown and Buckeystown. This district is associated with the historic land patent known as "Carrollton Manor" that has variously been reported as containing 10,000 to

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended X **Eligibility not recommended** ___

Criteria: X **A** ___ **B** X **C** ___ **D** **Considerations:** ___ **A** ___ **B** ___ **C** ___ **D** ___ **E** ___ **F** ___ **G** ___ **None**

Comments: ___

Patricia M. Erich ✓ 6/19/02
Reviewer, Office of Preservation Services **Date**

P Kuntz 7/19/02
Reviewer, NR program **Date**

F-1-134

MARYLAND HISTORICAL TRUST
NR-ELIBILITY REVIEW FORM

Continuation Sheet No. 1

12,000 acres. The exact boundaries of this major historic land patent remain to be fully documented. The area retains a substantial number of landscape elements that illustrate the history of agriculture in Frederick County from ca. 1800–1940. The large manor historically was divided into tenant farms that were purchased by individual landowners during the mid-nineteenth century. The district retains a significant concentration of buildings, structures, and clusters that illustrate the architectural history of the region from ca. 1820 through the early decades of the twentieth century. In addition, the area contains small communities that evolved to support agricultural activities and at least one settlement established by freed slaves who formerly labored on the manor.

The Carrollton Manor Rural Historic District is an example of a rural historic district that possesses a significant concentration, linkage, and continuity of areas of land use, buildings and structures, and roads that illustrate the agricultural history and architectural history of Frederick County under National Register Criteria for Evaluation A and C. The Carrollton Manor Rural Historic District evolved as an agricultural area and most of it remains in agricultural production. This area retains a significant concentration of farmsteads and other landscape elements that illustrate the historical evolution of agriculture in Frederick County (Criterion A). Many historic farmsteads illustrate land uses and spatial patterns from ca. 1800-1940; the open fields and property boundaries reflect boundaries of the eighteenth-century tenant farms. New Design Road, an interior roadway, provided access to the tenant farms. The area also possesses a significant concentration of buildings, structures and clusters with integrity to illustrate historic farming patterns under Criterion C. The farmsteads often are centered on substantial houses that feature a variety of high-style ornamentation and often contain a full complement of agricultural outbuildings illustrating a wide range of construction dates. As a whole, the Carrollton Manor Rural Historic District possesses the qualities of significance and a high degree of integrity to meet the criteria for listing in the National Register of Historic Places as a rural historic landscape.

Prepared by: Katherine Grandine/Senior Historian, R. Christopher Goodwin & Associates, Inc.

Date Prepared: March 2002

Carrollton Manor Rural Historic District (F-1-134)
Vicinity of Buckeystown and Adamstown
Frederick County
Private

Capsule Summary

This investigation into the potential for a rural historic landscape in southern Frederick County near Buckeystown and Adamstown was undertaken on behalf of Duke Energy North America as part of the cultural resources investigations to support the proposed construction of a power plant in the area (Goodwin 2001). Correspondence dated 16 January 2002 from the MHT regarding the project identified that a Maryland Inventory of Historic Properties (MIHP) Form and a MHT NR-Eligibility Review Form be prepared to document the evaluation of the Carrollton Manor Rural Historic District. No additional intensive survey was undertaken to update this data.

The Carrollton Manor Rural Historic District is an example of a rural historic district that possesses a significant concentration, linkage, and continuity of areas of land use, buildings and structures, and roads that illustrate the agricultural history and architectural history of Frederick County under National Register Criteria for Evaluation A and C. The district is associated with the historic land patent known as "Carrollton Manor" that contained 10,000 to 12,000 acres. The exact boundaries of this major historic land patent remain to be fully documented. The Carrollton Manor Rural Historic District evolved as an agricultural area and retains a significant concentration of built resources and other landscape elements to illustrate the historical evolution of agriculture in Frederick County (Criterion A). The area also possesses a significant concentration of buildings, structures and clusters with integrity to illustrate historic farming patterns under Criterion C. Many farmhouses feature a variety of high-style ornamentation and farmsteads contain a full complement of agricultural outbuildings illustrating a wide range of construction dates.

Maryland Historical Trust
Maryland Inventory of
Historic Properties Form

Inventory No. F-1-134

1. Name of Property (indicate preferred name)

historic Carrollton Manor Rural Historic District

other

2. Location

street and number Bounded approximately by Monocacy River on east, MD Rt 28 on south, Pleasant View Road and Tuscarora Creek on west, and Rocky Fountain Run on north ___ not for publication

city, town Buckeystown X vicinity

county Frederick

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

name multiple ownership

street and number telephone

city, town state zip code

4. Location of Legal Description

courthouse, registry of deeds, etc. Frederick County Courthouse liber multiple folio

city, town Frederick tax maps 85,94,103,109 tax parcel Multiple tax ID number

5. Primary Location of Additional Data

_____ Contributing Resource in National Register District
_____ Contributing Resource in Local Historic District
_____ Determined Eligible for the National Register/Maryland Register
_____ Determined Ineligible for the National Register/Maryland Register
_____ Recorded by HABS/HAER
_____ Historic Structure Report or Research Report at MHT
X Other: MIHP forms listed in Section 7

6. Classification

Category	Ownership	Current Function		Resource Count*	
X district	____ public	X agriculture	X landscape	Contributing	Noncontributing
____ building(s)	X private	____ commerce/trade	____ recreation/culture	266	6 buildings
____ structure	____ both	____ defense	____ religion	3	____ sites
____ site		X domestic	____ social	____	1 structures
____ object		____ education	____ transportation	____	____ objects
		____ funerary	____ work in progress	269*	7 Total
		____ government	____ unknown		
		____ health care	____ vacant/not in use		
		____ industry	____ other:		

Number of Contributing Resources previously listed in the Inventory
269*

***estimated based on existing MIHP and NR forms**

7. Description

Inventory No. F-1-134

Condition

X excellent	___ deteriorated
X good	___ ruins
___ fair	___ altered

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

Introduction

This investigation into the potential for a rural historic landscape in southern Frederick County near Buckeystown and Adamstown was undertaken on behalf of Duke Energy North America as part of the cultural resources investigations to support the proposed construction of a power plant in the area (Goodwin 2001). Discussions with the Maryland Historical Trust (MHT) at the beginning of the investigations identified properties for individual assessment applying the National Register of Historic Places Criteria for Evaluation in the vicinity of the proposed power plant. Correspondence dated 16 January 2002 from the MHT regarding the project identified that a Maryland Inventory of Historic Properties (MIHP) Form and a MHT NR-Eligibility Review Form be prepared to document the evaluation of the Carrollton Manor Rural Historic District. This current MIHP form was prepared to satisfy that request. The form is based on existing MIHP documentation located in the files of the Maryland Historical Trust. No additional intensive survey was undertaken to update this data. Only reconnaissance survey from the public right of way was completed for a portion of the area. Extant built resources in the area are in private ownership and located off the main roads.

Summary

The Carrollton Manor Rural Historic District is an area located in southern Frederick County, in the southern portion of the Adamstown Planning Region, near Adamstown and Buckeystown. This area is associated with the historic land patent known as "Carrollton Manor" that has variously been reported as containing 10,000 to 12,000 acres. The exact boundaries of this major historic land patent remain to be fully documented. The area retains a substantial number of landscape elements that illustrate the history of agriculture in Frederick County from ca. 1800–1940. The large manor historically was divided into tenant farms that were purchased by individual landowners during the mid-nineteenth century. The area retains a significant concentration of buildings, structures, and clusters that illustrate the architectural history of the region from ca. 1820 through the early decades of the twentieth century. In addition, the area contains small communities that evolved to support agricultural activities and at least one settlement established by freed slaves who formerly labored on the manor.

Description

A cultural landscape is defined as "a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural and aesthetic values" (Birnbaum and Peters 1996; Goetchus in *CRM* 2002:24). The four general types of cultural landscapes include historic designed landscapes, historic vernacular landscapes, historic sites, and ethnographic landscapes. The Carrollton

Manor Rural Historic District is an example of an historic vernacular landscape, defined as a landscape that evolved through use by the people whose activities or occupancy shaped it. Through social or cultural attitudes of an individual, a family, or a community, the landscape reflects the physical, biological, and cultural character of everyday lives (Birnbaum and Peters 1996). In order to possess significance defined by the National Register Criteria for Evaluation (36 CFR 4.60 (a-d)) as a rural historic landscape, the area must possess a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features. The area must also retain integrity (McClelland and Keller 1995).

The evidence of human use or activity is examined through eleven landscape characteristics:

- land uses and activities,
- patterns of spatial organization,
- response to the natural environment,
- cultural traditions,
- circulation networks,
- boundary demarcations,
- vegetation related to land use,
- buildings, structures, and objects,
- clusters,
- archeological sites, and
- small-scale elements (McClelland and Keller 1995).

The following description is organized according to the above-cited landscape characteristics.

Land Uses and Activities

Carrollton Manor historically was used for agriculture. Carrollton Manor was the first large land patent issued west of the Monocacy River. The patent included the richest soils in the area. The region was well watered by the Tuscarora Creek on the western edge of the land patent and the Monocacy River on the east. These two waterways provided sites for mills that operated during the early nineteenth century to grind wheat produced on the manor, when the dominate crops were grains, primarily wheat and corn. Until ca. 1850, the land was farmed by tenant farmers for an absentee landowner and

was a source of great wealth for members of the Carroll family. After the property was sold to owners, the individual farms remained some of the highest valued farms in the Adamstown Region throughout the nineteenth century.

One of the primary labor sources on Carrollton Manor during the eighteenth and mid-nineteenth centuries was slave labor. After the Civil War, some former slaves settled on the edge of a former owner's property. This resulted in the founding of the African-American community of Pleasant View on land formerly part of the Moreland farm on Carrollton Manor.

The land represents the evolution of agriculture in this area of Frederick County from the eighteenth through the mid twentieth centuries. Historically, each farmer raised a variety of crops that supported the needs of his family and a cash crop. The cash crops before 1900 included tobacco during the eighteenth century; wheat and corn during the mid-nineteenth century; and, grain, cattle, and orchards during the late nineteenth century. Lime that increased crop yields during the last half of the nineteenth century also was produced in the area. Dairy farming was the primary agricultural activity during the first half of the twentieth century in Frederick County. Much of the land in the Carrollton Manor Rural Historic District remains open and supports agricultural production. Some farms raise crops; other farms have been converted to tree or sod farms.

While the primary land use remains agriculture, some subdivision of land to support single-family houses has occurred near Adamstown and Buckeystown. Industrial uses border the area on the north. EastAlco is located just west of the Carrollton Manor House (F-1-019) on land that may have been part of the historic Carrollton Manor tract.

Patterns of Spatial Organization

The original land patent of Carrollton Manor was divided into tenant farms during the 1730s (Tracey and Dern 1987). The 1858 Bond map indicated the outlines of many tenant farms, especially along the southern end of New Design Road. These divisions seem to be the same parcels sold to individual owners during the mid nineteenth century. New Design Road was the primary internal road that connected all the tenant farms; the road became public after the manor was subdivided and sold to individual owners.

Many of the extant farmsteads date from the mid and late nineteenth century after the property was sold to individual landowners. Many farm complexes were constructed to occupy the interiors of their respective property boundaries. The central locations allowed farmers direct access to all parts of the farms within reasonable amounts of time. The primary

farmhouses were oriented towards the main roads, particularly New Design Road. Farmhouses constructed along the west side of New Design Road typically faced east. Farmhouses constructed along the east side of New Design Road were constructed to face either west towards New Design Road or eastwards towards Buckeystown Pike (MD RT 85). Some main farmhouses, such as the Archibald T. Snouffer Farm (F-1-165), were constructed with equally impressive facades on both east and west elevations in response to the two major roads through this area.

Another element that shaped the overall spatial organization of the area was the construction of the Baltimore and Ohio Railroad across the Manor property. As a result of the railroad, several small towns were established, including Adamstown and Buckeystown Station.

Pleasant View Road is a late nineteenth century road that first appears on the 1873 Atlas of Frederick County. The road essentially defines the western border of the Carrollton Manor. Small communities were established along this road. The primary community was Pleasant View, which was founded ca. 1869 by former slaves who worked on one of the manor farms.

Response to the Natural Environment

The area has natural advantages that supported agriculture. Grove (1928:130-131) described the land as "level, but rolling enough to make good drainage, the quality of the land with its clay subsoil could not be surpassed and the immense forest trees were an evidence of its fertility." The productivity of the farms in this area was attested to by the consistently high valuations of farms in this area in the 1850 and 1880 agricultural censuses for the Buckeystown region.

Cultural Traditions

Historically, the manor was rented to persons of English descent (Tracey and Dern 1987). By the nineteenth century, persons of both English and German descent were tenants of the property. No study has been undertaken to categorize the evidences of the two cultural traditions that remain in this area. It is likely that few distinct cultural differentiations between persons of English and German descent remain in the area since the majority of extant built resources date from the mid-ninteenth century through ca. 1920. By the mid-nineteenth century, it is hypothesized that most cultural distinctions that separated German and English building traditions were subsumed in the wider trends of American culture.

Circulation Networks

The primary road through Carrollton Manor is New Design Road. New Design Road originally served as an internal roadway that linked the tenant farms of Carrollton Manor and essentially bisected the manor. New Design Road became a public road after the subdivision of the manor during the mid-nineteenth century. Buckeystown Pike (MD RT 85) located on the east side of the Manor linked Frederick Town with Buckeystown and the Potomac River. This road was established during the eighteenth century.

The Baltimore and Ohio (B&O) Railroad was constructed through this area during 1832. Charles Carroll of Carrollton, the signer of the Declaration of Independence and owner of Carrollton Manor, served as a director of the B&O Railroad (Reed 1997). The Carroll family supported the construction of the railroad to connect the manor with wider markets in Baltimore.

Boundary Demarcations

While historic map research indicates a strong correlation between the boundaries of the eighteenth-century tenant farms and the boundaries of owner-occupied farms during the mid and late nineteenth century, no specific boundary demarcations were noted during the course of reconnaissance windshield survey. The land is primarily open between farms and boundaries are not delineated by tree lines.

Vegetation Related to Land Use

The reconnaissance windshield survey undertaken for this current investigation noted no vegetation related to land use.

Buildings, Structures, and Objects\Clusters

The Carrollton Manor Rural Historic District contains a significant concentration of buildings and structures, both individually and in clusters, that illustrate the architectural history of Frederick County. Many buildings and farmstead clusters have been surveyed and identified as possessing significance under Criterion C for individual listing on the National Register of Historic Places.

The earliest extant buildings remaining in the area are the stone mills. The Carroll Mill (F-1-005) located on the Tuscarora Creek near Doubs was constructed ca. 1812. Another early mill included Greenfield Mills (F-1-028, 1830-1890, currently a site). The mills primarily were utilitarian in appearance and constructed of stone.

One of the earliest houses in the area was Carrollton Manor House (F-1-019) constructed ca. 1820 for one of the heirs of the Charles Carroll family (Reed 1997). This house is listed in the National Register of Historic Places for its architectural significance (Criterion C). The two-story, three-bay house is constructed of native limestone and features an unusual blend of high style and vernacular elements.

St. Joseph's Catholic Church (F-1-018) represents the religion of the original owners of Carrollton Manor. Although the current stone church was constructed ca. 1867, a Catholic chapel was established on the manor at least by the early nineteenth century (Reed 1997).

A large group of farmsteads feature houses that date from between ca. 1850 and ca. 1880. These houses and farm complexes were constructed by the new owners when the manor was subdivided initially among family members, then sold to local farmers. The owner-occupied houses often were substantial constructions, primarily of brick, and often incorporated ornamentation of a variety of architectural styles popular during the mid-nineteenth century. The Joseph N. Chiswell Farmstead (F-1-188, ca. 1852), Castle-Thomas Farmstead (F-1-191, ca. 1853), and David Specht House (F-1-205, ca. 1837) are examples of Greek Revival architecture (Davis 1993). The A. T. Snouffer Farmstead (F-1-165, ca. 1866), the Thomas Sinn Farmstead (F-1-195, ca. 1876), the Jacob Dutrow Farmstead (F-1-199, ca. 1852), and the Waters-Thomas Farmstead (F-1-198, ca. 1850) feature main houses with Italianate detailing (Davis 1993). Farmhouses ornamented with Gothic Revival detailing include the Nicodemus-Hildebrand Farmstead (F-1-177, ca. 1880s) and the Eli Nicodemus Farmstead (F-1-201, ca. 1870). Farmhouses ornamented with Colonial Revival ornamentation include John B. Thomas Farmstead (F-1-161, ca. 1900-1905). Many of the farmsteads also feature barns and other agricultural outbuildings. Previous architectural surveys in the area have noted many buildings and complexes that possess the qualities of significance for National Register listing based on architecture (Criterion C).

The area also contains buildings, structures, and sites that illustrate the history of African Americans in Frederick County. Many of the farms comprised in Carrollton Manor were operated using slave labor. Supporters of slavery were well represented in the individual owners of the farms during the 1850s. The Thomas Sinn Farmstead (F-1-195; ca. 1876) and

the George Kephart Farmstead (F-1-094) were owned by noted local slaveholders. The slave market that operated in Licksville (Grove 1928) was associated with the George Kephart (*Up From the Meadows* ca. 2000). Following the Civil War, former slaves settled on the edge of their former owner's property and established the community of Pleasant View (F-1-139). The centerpiece of this community is the Gothic Revival style, wood-frame church (F-1-006, 1910).

Communities that developed on the former manor included Adamstown (F-1-185) and Buckeystown Station (F-1-181). Both of these communities grew because of the B&O railroad, constructed through the area in 1832.

Historic Archeological Sites

No systematic archeological investigations of historic sites have been conducted in the Carrollton Manor Rural Historic District.

Small-Scale Elements

Small-scale elements have been defined as foot bridges, signs, road remnants, boundary stones, or regularly occurring small elements (McClelland and Keller 1995). No small-scale elements were noted during the windshield reconnaissance survey conducted for this area.

Summary

While additional survey work needs to be accomplished to detail the precise boundaries of the historic Carrollton Manor land patent, a reconnaissance windshield survey of the area revealed that the Carrollton Manor Rural Historic District possesses a significant concentration, linkage, and continuity of areas of land use, buildings and structures, and roads that illustrate many significant aspects of the agricultural and architectural history of Frederick county. New Design Road forms the spine of the area that links many notable farmsteads constructed during the mid to late nineteenth century after the ownership of the manor passed to many individuals from Carroll family members. These farm complexes illustrated the wealth of the grain growing era in the county. Many farmsteads retain a high degree of integrity. In addition, the area contains religious buildings and small communities that evolved to support agricultural activities. Many of the buildings in the communities represent architectural construction through the early part of the twentieth century.

MIHP #	Name	Author	Date	Date of Construction	Estimated Contributing Elements	Estimated Non-Contributing Elements	Notes
F-1-005	Carroll Mill	Cherilyn Widdell	1978	ca. 1812	1		
F-1-006	Pleasant View Methodist Episcopal Church	Cherilyn Widdell	1878	1910			Counted with F-1-139
F-1-012	Saleaudo	Cherilyn Widdell	1978	1866	5		
F-1-013	Adamstown Public School	Cherilyn Widdell	1978	late 1880s			Counted with F-1-185
F-1-014	Green Manor	Cherilyn Widdell	1978	ca. 1864			Counted with F-1-185
F-1-015	Kohlenberg, Adam, House	Janet L. Davis	1993	ca. 1850			Counted with F-1-185
F-1-016	Bready House	Cherilyn Widdell	c. 1978	ca. 1820			Counted with F-1-185
F-1-017	Graham, James, House	Janet L. Davis	1993	1830-1850	1		
F-1-018	St. Joseph's Catholic Church	Cherilyn Widdell	1978	1867	1		
F-1-019	Carrollton Manor	Paula Reed	1997	ca. 1820	3	2	
F-1-021	Lime Kiln Site	Cherilyn Widdell	1978	ca. 1800	1 site		
F-1-028	Greenfield Mills	Cherilyn Widdell	1978	1830-1890	1 site		
F-1-029	Buckeystown Historic District	Cherilyn Widdell	1978	1700-1899	61		Count includes F-1-013-F-1-033;F-1-037-F-1-077; F-1-109-F-1-116; F-1-118-F-1-122
F-1-036	St. Luke's PE Church	Cherilyn Widdell	1978	1882	1		
F-1-082	Bridge # 100015	P. Spero		20th century		1 structure	
F-1-090	Carrollton Manor Tenant House #2	Cherilyn Widdell	1978	ca. 1750	Demolished		
F-1-091	Trundle, John, House	Cherilyn Widdell	1979	ca. 1850	1		

F-1-160	G.W. Snouffer House (II)	Peggy Bruns Weissman	1982	late 19th century	1
F-1-161	John B. Thomas Farmstead	Janet L. Davis	1993	ca. 1900-1905	4
F-1-162	House on Thomas Property	Peggy Bruns Weissman	1982	19th century	1
F-1-163	G.W. Snouffer Property	Peggy Bruns Weissman	1982	19th century	2
F-1-164	Moreland	Janet L. Davis	1993	1856-1861	5
F-1-165	Archibald T. Snouffer Farmstead	Janet L. Davis	1993	1866	5
F-1-166	R.J. Snouffer Farm	Peggy Bruns Weissman	1982	early 19th century	1
F-1-167	T. Harwood Farm	Peggy Bruns Weissman	1982	19th century	2
F-1-168	Mountville Manor	Peggy Bruns Weissman	1982	ca. 1900	1
F-1-170	Public School 93	Peggy Bruns Weissman	1982		Demolished
F-1-173	Licksville School	Janet L. Davis	1993	ca. 1846	1
F-1-174	Forest Grove UM Church	Janet L. Davis	1993	1874	1
F-1-177	Nicodemus-Hildebrant Farmstead	Janet L. Davis	1993	ca. 1880s	5
F-1-178	Samuel Dutrow Farmstead	Janet L. Davis	1993	1872	10

F-1-181	Buckeystown Station Survey District	Janet L. Davis	1993	1850-1945	15	
F-1-184	Renn, William, Farmstead	Janet L. Davis	1993	ca. 1897-1920	6	
F-1-185	Adamstown Survey District	Janet L. Davis	1993	1835-1940	63	Includes F-1-013-F-1-016; F-1-035;F-1-097;
F-1-188	Chiswell, Joseph N., Farmstead	Janet L. Davis	1993	ca. 1852-1930	6	
F-1-191	Castle-Thomas Farmstead	Janet L. Davis	1993	1853-1920	6	
F-1-193	Richard P.T. Dutrow Farmstead	Janet L. Davis	1993	1850-1910	4	
F-1-195	Thomas Sinn Farmstead	Janet L. Davis	1993	1876-1910	5	
F-1-197	Samuel C. Thomas Farm Outbuildings	Janet L. Davis	1993	1875-1920	6	
F-1-198	Waters-Thomas Farmstead	Janet L. Davis	1993	1850-1900	3	
F-1-199	Jacob Dutrow Farmstead	Janet L. Davis	1993	1852-1900	5	
F-1-201	Eli Nicodemus Farmstead	Janet L. Davis	1993	1870-1940	8	
F-1-205	David Specht House	Janet L. Davis	1993	1837	1	
F-1-210	Thomas, Curtis W., Tenant House	Janet L. Davis	1993	ca. 1900	1	
F-1-213	Snouffer-Allnutt House	Janet L. Davis	1993	ca. 1890	1	
F-1-214	Talbott-Lamar House and Store	Janet L. Davis	1993	ca. 1868-1879	2	

* Resource numbers estimated based on existing MIHP and National Register forms

F-1-093	Greenfield Mills Stone House	Cherilyn Widdell	1979	ca. 1800	1		
F-1-094	Kephart, George, House	Janet L. Davis	1993	ca. 1850	2 bldg, 1 site		
F-1-097	Adamstown Bank	Cherilyn Widdell	1979	ca. 1920			Counted with F-1-185
F-1-118	Buckeystown Packing and Canning Co.	Cherilyn Widdell	1979	1895			Counted with F-1-029
F-1-119	Buckeystown Canney House	Cherilyn Widdell	1979	1893			Counted with F-1-029
F-1-125	Adamstown Log House	Cherilyn Widdell	1979		Demolished		
F-1-126	Hill, C., House	Cherilyn Widdell	1979	ca. 1893	1		
F-1-128	Doll, James, House	Cherilyn Widdell	1980	ca. 1858-1860	Demolished		
F-1-139	Pleasant View Survey District	Janet L. Davis	1993	1870-1910	8	4	Includes F-1-006
F-1-140	Careytown Survey District	Janet L. Davis	1993	1901-1921	5		
F-1-141	House on Bowersox Property	Peggy Bruns Weissman	1982	19th century	1		
F-1-142	Frame House	Peggy Bruns Weissman	1982	19th century	1		
F-1-143	B.J. Snouffer Farm	Peggy Bruns Weissman	1982	mid-19th century	1		
F-1-147	Two-story House	Peggy Bruns Weissman	1982	late 19th century	1		
F-1-152	Two-story German sided House	Peggy Bruns Weissman	1982	mid-19th century	Demolished		

8. Significance

Inventory No. F-1-134

Period	Areas of Significance	Check and justify below		
__ 1600-1699	X agriculture	__ economics	__ health/medicine	__ performing arts
X 1700-1799	__ archeology	__ education	__ industry	__ philosophy
X 1800-1899	X architecture	__ engineering	__ invention	__ politics/government
X 1900-1999	__ art	__ entertainment/ recreation	__ landscape architecture	__ religion
__ 2000-	__ commerce	__ ethnic heritage	__ law	__ science
	__ communications	__ exploration/ settlement	__ literature	__ social history
	__ community planning		__ maritime history	__ transportation
	__ conservation		__ military	__ other: _____

Specific dates

Architect/Builder N/A

Construction dates

Evaluation for:

___X___ National Register ___X___ Maryland Register _____ not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

Summary

This investigation into the potential for a rural historic landscape in southern Frederick County near Buckeystown and Adamstown was undertaken on behalf of Duke Energy North America as part of the cultural resources investigations to support the proposed construction of a power plant in the area (Goodwin 2001). Correspondence dated 16 January 2002 from the MHT regarding the project identified that a Maryland Inventory of Historic Properties (MIHP) Form and a MHT NR-Eligibility Review Form be prepared to document the evaluation of the Carrollton Manor Rural Historic District. This current MIHP form was prepared to satisfy that request applying the National Register Criteria for Evaluation and Guidelines for Evaluating and Documenting Rural Historic Landscapes (McClelland and Keller 1995) as a type of cultural landscape. This MIHP form was compiled based on previous survey documentation located in the architectural survey files at MHT, Crownsville, Maryland. No additional fieldwork was undertaken during the preparation of this documentation. The boundaries of the resource are preliminary; intensive field investigations are needed to define the precise boundaries of the historic Carrollton Manor land patent and numbers of contributing resources.

A rural historic district is defined as a geographical area that historically has been used by people or shaped or modified by human activity, occupancy, or intervention, and that possesses a significant concentration, linkage, or continuity of areas of land use, vegetation, buildings and structures, roads and waterways, and natural features (McClelland and Kelle 1995). In order for an area to be significant, the rural area must meet the National Register Criteria for Evaluation (36 CFR 60.4 (a-d)) and possess integrity. The National Park service has formulated a classification system to assist in analyzing the elements of a rural landscape. These elements are land use and activities, patterns of spatial organization, response to natural environment, cultural traditions, circulation networks, boundary demarcations, vegetation related to land use, buildings and structures, clusters, archeological sites, and small-scale elements (McClelland and Keller 1995).

The Carrollton Manor Rural Historic District evolved as an agricultural area and remains an area with open space, much of which remains in agricultural production. This area retains a significant concentration of built resources, vegetation, and historic boundaries, to illustrate the historical evolution of agriculture in Frederick County (Criterion A) during the period of significance identified as ca. 1800-1940. Although the area is used for twentieth-century agricultural practices, the elements that suggest the historical evolution of agriculture in Frederick County survive. Many historic farmsteads illustrate land uses and spatial patterns from ca. 1820 through 1870; the open fields and property boundaries reflect boundaries of the eighteenth-century tenant farms. New Design Road, an interior roadway, provided access to the tenant farms. The area also possesses a significant concentration of buildings, structures and clusters with integrity to illustrate historic farming patterns under Criterion C. The farmsteads often are centered on substantial houses that feature a variety of high-style ornamentation and often contain a full complement of agricultural outbuildings illustrating a wide range of construction date. As a whole, the Carrollton Manor Rural Historic District possesses the qualities of significance and a high degree of integrity to meet the criteria for listing in the National Register of Historic Places as a rural historic landscape.

Resource History

The following resource history is organized to emphasize the presence or absence of landscape-defining elements in the historic context.

Land Patterns and Spatial Organization

Historically, the region of southern Frederick County, now contained in the Adamstown Planning Region, developed as an agricultural area. Land in the area was first patented during the 1720s. Two patterns of landholding occurred historically in this area: large-scale absentee landholding and smaller-scale, owner-occupied farmsteads.

The earliest and largest land patent issued in this region of Frederick County was "Carrollton," patented in 1723 for the four young children of Charles Carroll the Settler (1660-1720). This tract comprised approximately 10,000 acres of land bounded approximately by the Monocacy River on the east, the Potomac River on the south,

Tuscarora Creek on the west, and Rocky Fountain Run on the north (Tracey and Dern 1987:25-29). The precise boundaries of this large tract have yet to be documented.

By 1734, Charles Carroll of Annapolis (1702-1782) (the son of Charles Carroll the Settler) was actively managing the Carrollton Manor estate. John Nelson was appointed as overseer of the tenant farms and leases were issued. The first recipients of the leases included William Griffith, William and George Matthews, James Wright, Richard Touchstone, and John Powell. These names suggest the English origin of the earliest settlers in this region; many names of the early leaseholders appeared on a petition to establish All Saints Parish (Church of England) in Frederick County.

Charles Carroll of Carrollton (1737-1832), the signer of Declaration of Independence, was the son of Charles Carroll of Annapolis. He was given Carrollton Manor by his father ca. 1765 (Reed 1997). Charles Carroll (son) began to use the appellation "of Carrollton" in 1765 to differentiate himself from his father and other relatives named Charles Carroll (Tracey and Dern 1987:25-29).

Charles Carroll did not reside on Carrollton Manor. The Carrollton Manor was divided into numbered farms and leased to long-term tenants. The rents provided income to members of the Carroll family until the mid-nineteenth century. The house known as Carrollton Manor (F-1-019) was constructed ca. 1820 for the granddaughter of Charles Carroll of Carrollton, who may have resided there for short periods of time to oversee the operations of the manor (Reed 1997).

Other influences of Charles Carroll's management of the property included the establishment of a Catholic chapel on the property and the construction of a mill to grind grain. The Carroll Mill (F-1-005) was constructed ca. 1812 on Tuscarora Creek near the present town of Doubs. The mill building was constructed of stone. The Catholic chapel evolved into St. Joseph's Catholic Church (F-1-018) located near the Carrollton Manor house (F-1-019), The present stone church was constructed 1867, but a Catholic chapel was active since the early nineteenth century.

Cultural Traditions

While the earliest eighteenth-century tenants were primarily of English descent, tenants of German descent also became associated with the manor. Three brothers, John, Peter, and Valentine, of the Thomas (German) family emigrated from Germany ca. 1750 and settled on the manor; descendants of the German Thomas family, including John B. Thomas owner associated with F-1-161, held property in the region through the nineteenth century (Grove 1928:166). Grove (1928:171) identified George Snouffer as a native of Holland. No studies to date have quantified the ethnic origins of the tenants on Carrollton Manor.

Another ethnic group represented on the manor was African American. Buckeystown Election District including Carrollton Manor had the highest number of slaves recorded in the 1850 census (Hitselberger and Dern 1978). Grove (1928) reported that numerous landholders in the area were slaveholders and sympathetic to the South during the Civil War. After the Civil War, the community of Pleasant View (F-1-139) was established by former slaves on land sold to them by their former owner (Davis 1993).

Circulation Networks

The primary internal transportation network on Carrollton Manor is New Design Road. This road originated as an internal farm road. It was oriented north-south along the internal spine of the property and linked the tenant farms. It became a public road after Carrollton Manor was sold to individual owners.

The Buckeystown Pike was established as a public road by the mid-eighteenth century. It remains undocumented whether the path of Buckeystown Pike defined the eastern edge of Carrollton Manor or crossed the property.

The third transportation route that affected the subsequent development of the manor was the Baltimore and Ohio Railroad. The railroad was constructed across Carrollton Manor by 1832. Charles Carroll was a director of the railroad (Reed 1997). The railroad spurred the growth of small communities, including Adamstown and Buckeystown Station. The railroad linked the manor to wider markets for agricultural products and industries, such as the production of lime, that supported agricultural activities.

Buildings, Structures, and Clusters

Beginning in 1821, Charles Carroll began to divide the manor property among his children and grandchildren (Reed 1997). Catherine Harper (daughter) and Mariana Caton (granddaughter) were among the heirs. Beginning ca. 1840, the heirs began to sell large farms of the Carrollton Manor to owners outside the Carroll family. The farm divisions may have corresponded to the tenant farms originally established during the eighteenth century. Many farms were sold to long-term leaseholders already residing on the property.

The subdivision of the manor resulted in new construction as prosperous new owners constructed dwellings, barns, and agricultural outbuildings that represented the agricultural wealth of farms during the mid through late nineteenth century. The farmsteads constructed during this time were substantial buildings, generally constructed of brick, ornamented with the prevalent architectural styles of their day. Architectural styles represented by farmhouses included Greek Revival, Italianate, Gothic Revival, Classical, Revival, and Colonial Revival. The farm complexes often were located in the middle of the associated farm acreage and accessed from major roads by long lanes. The result is that New Design Road and Buckeystown Pike are lined with notable examples of agricultural complexes that often feature high-style farmhouses.

Summary

The Carrollton Manor Rural Historic District is an example of a rural historic district that possesses a significan concentration, linkage, or continuity of areas of land use, buildings and structures, and roads that illustrate the agricultural history and architectural history of Frederick County under National Register Criteria for Evaluation A and C. The Carrollton Manor Rural Historic District evolved as an agricultural area and most of it remains in agricultural production. This area retains a significant concentration of built resources and other landscape elements to illustrate the historical evolution of agriculture in Frederick County (Criterion A). Many historic farmsteads illustrate land uses and spatial patterns from ca. 1800-1940; the open fields and property boundaries reflect boundaries of the eighteenth-century tenant farms. New Design Road, an interior roadway, provided access to the tenant farms. The area also possesses a significant concentration of buildings, structures and clusters with integrity to illustrate historic farming patterns under Criterion C. The farmsteads often are centered on substantial houses that feature a variety of high-style ornamentation and often contain a full complement of agricultural outbuildings illustrating a wide range of construction dates. As a whole, the Carrollton Manor Rural Historic District possesses the qualities of significance and a high degree of integrity to meet the criteria for listing in the National Register of Historic Places as a rural historic landscape.

9. Major Bibliographical References

Inventory No. F-1-134

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1996The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. U.S. Department of the Interior, National Park Service, Cultural Resource Stewardship and Partnerships, Washington, D.C.

10. Geographical Data

Acreage of surveyed property	approx. 10,000-12,000 acres		
Acreage of historical setting	approx. 10,000-12,000 acres		
Quadrangle name	Buckeystown	Quadrangle scale:	1:24,000

Verbal boundary description and justification

The boundaries of the Carrollton Manor Rural Historic District are only preliminarily defined based on Tracey and Dern (1987) and Bond (1858). The general boundaries are the Monocacy River on the east, the Potomac River on the south, the Tuscarora Creek on the east, and Rocky Fountain Run on the north. Additional research will be needed to determine the exact boundaries of the manor proper. The justification is the original land patent of the property and the high degree of rural historic landscape elements that remain on the manor.

11. Form Prepared by

name/title	Katherine Grandine/Senior Historian		
organization	R. Christopher Goodwin & Associates, Inc.	date	March 2002
street & number	241 E. 4th Street, Suite 100	telephone	301-694-0428
city or town	Frederick	state	MD 21701

return to:

Maryland Historical Trust
DHCD/DHCP
100 Community Place
Crownsville, MD 21032-2023
410-514-7600

Bond, Isaac
1858 Map of Frederick County. By Author. Lithographed by E. Sachse & Co., Baltimore, Maryland.

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1993 Buckeystown Station Survey District (F-1-181). MIHP form available at Maryland Historical Trust, Crownsville, MD.

1993 Archibald T. Snouffer Farmstead (F-1-165). MIHP form available at Maryland Historical Trust, Crownsville, MD.

1993 Castle-Thomas Farmstead (F-1-191). MIHP form available at Maryland Historical Trust, Crownsville, MD.

1993 David Specht House (F-1-205). MIHP form available at Maryland Historical Trust, Crownsville, MD.

1993 Eli Nicodemus Farmstead (F-1-201). MIHP form available at Maryland Historical Trust, Crownsville, MD.

1993 George Kephart House (F-1-094). MIHP form available at Maryland Historical Trust, Crownsville, MD.

1993 Jacob Dutrow Farmstead (F-1-199). MIHP form available at Maryland Historical Trust, Crownsville, MD.

1993 John B. Thomas Farmstead (F-1-161). MIHP form available at Maryland Historical Trust, Crownsville, MD.

1993 Joseph N. Chiswell Farmstead (F-1-188). MIHP form available at Maryland Historical Trust, Crownsville, MD.

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Up from the Meadows
Ca. 2000 Video prepared by Local Cable Channel 10, now Adelphia Cable Company, Frederick, MD.

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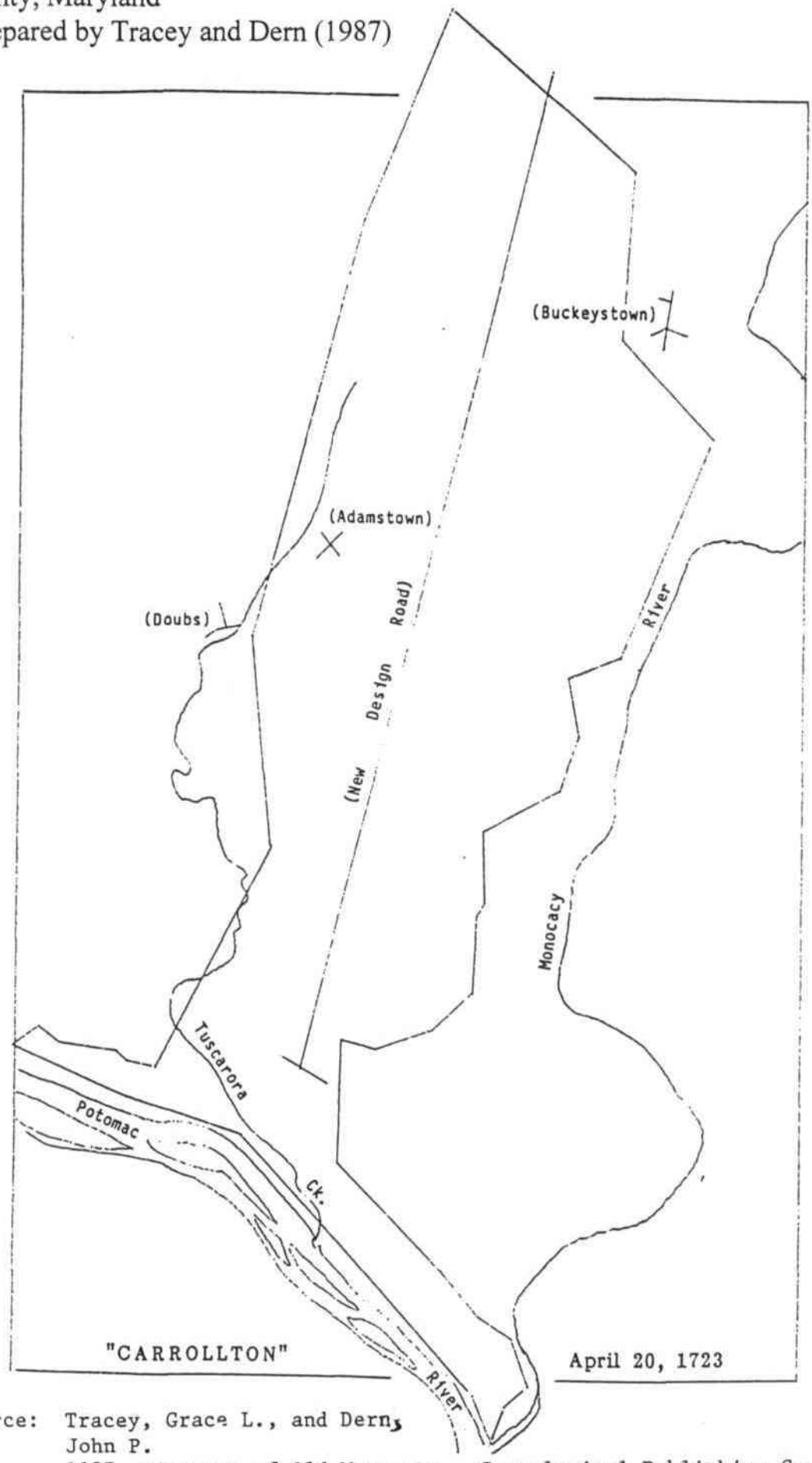
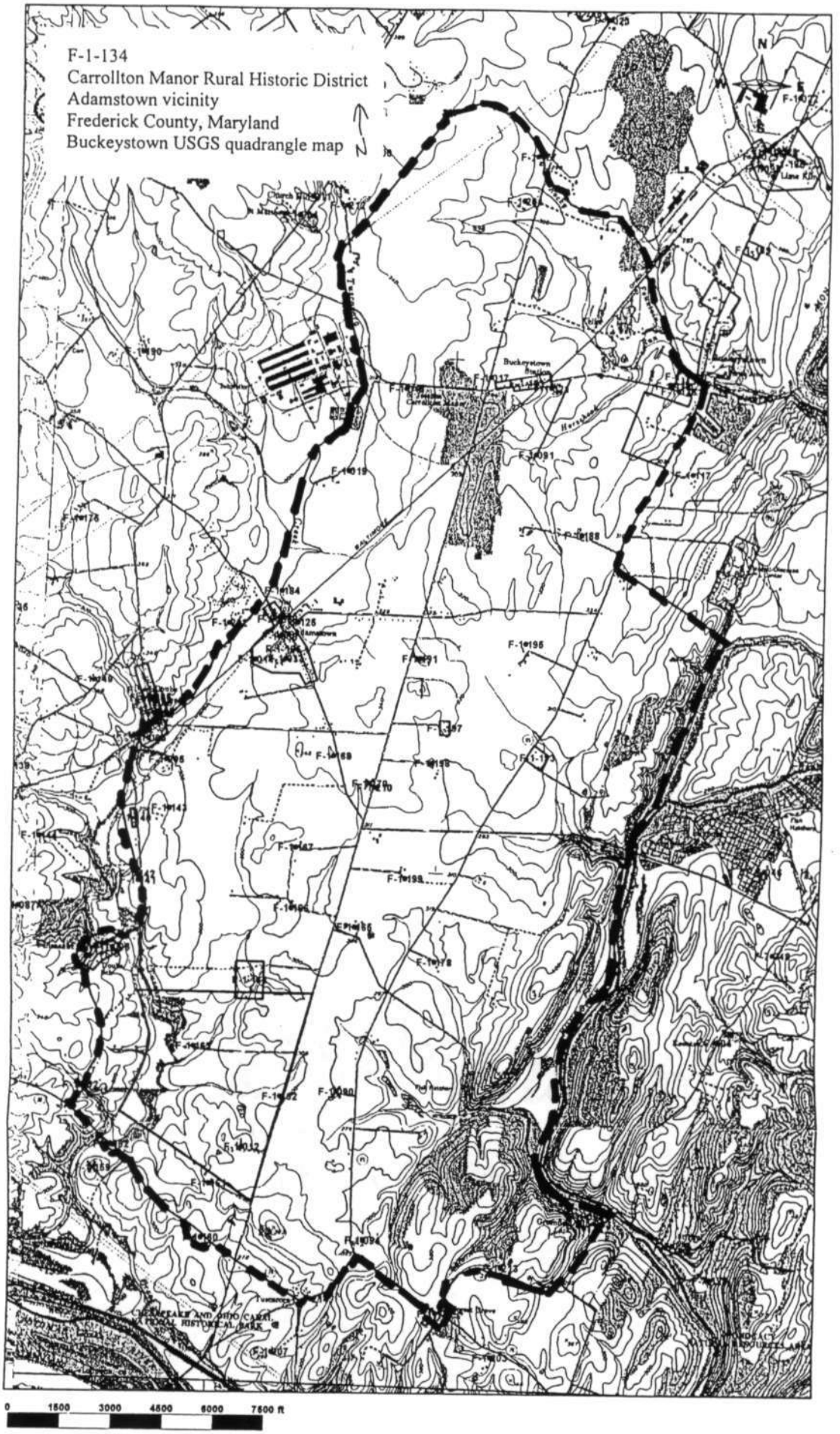
1978 St. Joseph's Catholic Church (F-1-018). MIHP form available at Maryland Historical Trust, Crownsville, MD.

F-1-134
Carrollton Manor Rural Historic District
Adamstown vicinity
Frederick County, Maryland
atent map prepared by Tracey and Dern (1987)



Source: Tracey, Grace L., and Dern, John P.
1987 Pioneers of Old Monocacy. Genealogical Publishing Co., Baltimore, MD.
P. 29. Scale 1/62,500


F-1-134
Carrollton Manor Rural Historic District
Adamstown vicinity
Frederick County, Maryland
Buckeystown USGS quadrangle map
N
0 1500 3000 4500 6000 7500 ft


1221

F-1-134

Carrolton Manor Rural Historic District

Frederick Co, Md.

K. Grandine

3/2002

Md SHPO

View N along New Design Rd.

1/7


S 3'02

F-1-134

Carrolton Manor Rural Historic District

Frederick Co. Md

K. Grandine

3/2002

Md SHPO

F-1-165, view NE

2/7


S 3'02

F-1-134

Carrolton Manor Rural Historic District

Frederick Co. Md

K. Grandine

3/2002

Md SHPD

F-1-166, view W

3/7


S 3'02

F-1-134

Carrolton Manor Rural Historic District

Frederick Co. Md

K. Grandine

3/2002

Md SHPO

F-1-198, view E

4/7


S 3'02

F-1-134

Carrollton Manor Rural Historic District

Frederick Co. Md

K. Grandine

3/2002

Md SHPO

Housing Development, view NW

5/7


3'02

F-1-134

Carrollton Manor Rural Historic District

Frederick Co. Md

K. Grandine

3/2002

Md SHPO

St. Joseph's Church, F-1-018, view SE

6/7

F-1-134

Carrollton Manor Rural Historic District

Frederick Co Md

K. Grandine

3/2002

Md SHPO

F-1-019, view S

7/7

F-1-202

Hebb-Kline Farmstead

Architectural Survey File

This is the architectural survey file for this MIHP record. The survey file is organized reverse-chronological (that is, with the latest material on top). It contains all MIHP inventory forms, National Register nomination forms, determinations of eligibility (DOE) forms, and accompanying documentation such as photographs and maps.

Users should be aware that additional undigitized material about this property may be found in on-site architectural reports, copies of HABS/HAER or other documentation, drawings, and the "vertical files" at the MHT Library in Crownsville. The vertical files may include newspaper clippings, field notes, draft versions of forms and architectural reports, photographs, maps, and drawings. Researchers who need a thorough understanding of this property should plan to visit the MHT Library as part of their research project; look at the MHT web site (mht.maryland.gov) for details about how to make an appointment.

Last Updated: 11-21-2003

F-1-202
Hebb-Kline Farmstead Ca.1855-1910
Adamstown vicinity
Private

The Hebb-Kline Farmstead is an agricultural complex begun about 1855 with the construction of a two-story brick Italianate dwelling, with segmental arches and a cornice with paired brackets. Built about the same time was the brick summer kitchen or tenant house, a two-story free-standing brick structure similar to rear wings of other mid-19th century houses. The summer kitchen has a two-story integral open porch and a one-story adjoining brick smokehouse. Also on the property are a group of late 19th century frame agricultural sheds linked in a rectangular row with swing doors on their principal elevations and terminating in a concrete block garage. A frame wagon shed/corn crib of about 1875-1900 is located nearby. The house was built by Edward T. Hebb, a large slaveowner in the Adamstown vicinity who was also a raiser of fine horses. In 1867, the farm was sold to John Kline, whose son Jacob retained the place until 1908. The farmstead is significant for the architectural style of the dwelling, which illustrates the Italianate style in its bracketed cornice, segmental arches, and scroll-sawn trim on the porch. The building history of the summer kitchen and its use over time are an unresolved aspect of the property's overall significance, but it is certainly of the same period as the main dwelling and may possibly have been intended as the wing, but the finished house was re-oriented in a different location.

F-1-202
Hebb-Kline Farmstead
Adamstown
Frederick County

HISTORIC CONTEXT:

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA

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

Chronological/Development Period:
Agricultural-Industrial Transition, A.D. 1815-1870
Industrial/Urban Dominance, A.D. 1870-1930

Prehistoric/Historic Period Themes:
Architecture, Landscape Architecture and Community Planning

Resource Types:

Category: Building

Historic Environment: Rural

Historic Function & Use
Domestic/single dwelling/residence
Domestic/secondary structure/smokehouse
Agriculture/Subsistence/storage/granary

Known Design Source: None

M103 P5

MARYLAND INVENTORY OF HISTORIC PROPERTIES

Survey No. F-1-202

Magi No.

DOE __yes x no

Maryland Historical Trust State Historic Sites Inventory Form

1. Name (indicate preferred name)

historic Hebb-Kline Farmstead

and/or common

2. Location

street & number 5515B Mountville Road ___ not for publication

city, town Adamstown x vicinity of **congressional district** 6th

state Maryland **county** Frederick

3. Classification

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

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

name Harry N. & Barbara L. Kanode

street & number P.O. Box 1 telephone no.:

city, town Adamstown state and zip code MD 21710

5. Location of Legal Description

courthouse, registry of deeds, etc. Frederick County Courthouse liber 671

street & number 100 W. Patrick Street folio 302

city, town Frederick **state** MD 21701

6. Representation in Existing Historical Surveys

title

date ___ federal ___ state ___ county ___ local

depository for survey records

city, town **state**

7. Description

Survey No. F-1-202

Condition		Check one	Check one
_x_ 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: 4

The Hebb-Kline Farmstead is centered on a circa 1855 Italianate two-story brick dwelling with segmental arches, a bracketed cornice, and its remaining contributing outbuildings which are a two-story brick summer kitchen with an attached one-story brick smokehouse, and a group of frame sheds and a corn crib located on the south side of Mountville Road west of the former B&O Railroad line near Adamstown, Frederick County, Maryland. The outbuildings range in date from contemporary with the dwelling to about 1910. The house's main elevation faces south and the farmstead is reached by a long driveway which passes between houses along Mountville Road which were built in the early 20th century at the outer edges of Adamstown. Date estimates for the buildings were based on architectural details, Grove's History of Frederick County, land records, and historical maps.

The white-painted dwelling has a five-bay south elevation on the main section and a two-story rear wing extending from the middle of the north elevation with one-story porches on both the east and west sides. The south elevation has a one-story porch over the central three bays. The window and door openings have segmental arches and 1/1 sash. The first story windows are tall and narrow, reaching almost to the floor of the porch. The doorway has a two-light transom and sidelights. The porch has scrolled brackets and chamfered square posts with a wo deck. The flat roof of the porch has an iron mesh fencing along the top and t center second story bay is a small door opening on the porch roof. The main cornice of the house has extended eaves and paired brackets which extend on all elevations of the front section. The wing has single brackets in its cornice. The north and south elevations have two bays each with small attic windows. The composition roof was probably wood shingles or slate in its original form. The interior end chimneys are still intact. The rear wing has a single interior chimney near the center of the section. The east and west side porches have scroll-sawn brackets and balustrades. The porch on the south side has a concrete block base below the deck. The north side has an enclosed section at the west end of the porch, with a 2/2 window. This was probably the original sash configuration of the entire house. The interior was not accessible for this survey.

Summer kitchen/smokehouse: The term summer kitchen may be an understatement of the original intent of the structure. This outbuilding resembles a free-standing rear wing as found on mid-19th century houses. It is only slightly lower in height than the rear wing of the dwelling. its brick structure has an integral two-story porch on the south side and interior end chimneys. There are three bays on the first story and four on the second. The upper porch has a plain balustrade and square posts. The roof of the building is composition. The sash is 2/2. On the north elevation are three bays on the first story and two on the second. The cornice is corbeled. Attached to the summer kitchen on the east gable end is the one-story brick smokehouse. It has a standing seam roof and a single vertical board door on the north. At the east gable end is a pierced brick vent in the wheat sheaf pattern often seen in brick barns. The interior of the summer kitchen was not accessible. but observation of its interior features may reveal more about its purpose a

(Continued on separate sheet)

8. Significance

Survey No. F-1-202

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	_x_ architecture	___ education	___ military	___ social/ humanitarian	
___ 1700–1799	___ art	___ engineering	___ music	___ theater	
x 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ transportation	
x 1900–	___ communications	___ industry	___ politics/government	___ other (specify)	
		___ invention			

Specific dates C. 1855-1910 **Builder/Architect**

check: Applicable Criteria: __A __B x 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 Hebb-Kline Farmstead is significant for the architecture of the dwelling and the summer kitchen. The segmental arches, paired brackets in the cornice, scroll-sawn trim, and tall narrow windows are the important characteristics of the style, which was popular in Frederick County from about the late 1840's to the early 1870's. Although the house has been altered in its window type and on the exterior rear wing, it remains a fairly good example of the style. The summer kitchen may have had another purpose in its original construction period. The siting of the building and its size suggest that it may have been built as the rear wing of the planned main house, which was re-oriented from west to south before being completed and the already built wing section left in place to serve as a domestic outbuilding for several uses: summer kitchen, possible slave quarters, and tenant house. The main house was built by Edward T. Hebb about 1855, the year in which he purchased 234 acres from Richard Bayard, whose wife Mary Sophia received the property in 1821 from her grandfather Charles Carroll of Carrollton. According to Grove's History of Carrollton Manor 1928), Hebb "was a great character who took a particular fancy to raising five stock and always bragged on having the best team of horses in the neighborhood. He was intensely Southern in his views, he owned a large number of slaves, and married Oliva Johnson. They had two children." Being a slaveowner with a large farm, Hebb was probably financially devastated by Emancipation, because he sold the farm in 1867 to John Kline. In 1880, Kline sold the property to his son Jacob, who retained the farm until 1907. After two subsequent owners during the period 1908 to 1939, Harry and Essie N. Kanode, the parents of the current owner, Harry N. Kanode, bought the property in 1939.

9. Major Bibliographical References

Survey No. F-1-202

Bond, Isaac. Map of Frederick County, 1858
Grove, William J. History of Carrollton Manor. Frederick: Marken & Bielfeld, Inc. 1928, 166
Land Records of Frederick County
Titus, C.O. Atlas of Frederick County, 1873

10. Geographical Data

Acreage of nominated property 3 acres

Quadrangle name Buckeystown, Md.-Va. **Quadrangle scale** 1:24000

UTM **References** do NOT complete UTM references

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

Verbal boundary description and justification

Approximately 3 acres centered on the main dwelling on Tax Map 103, Parcel 5

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** July 1993

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

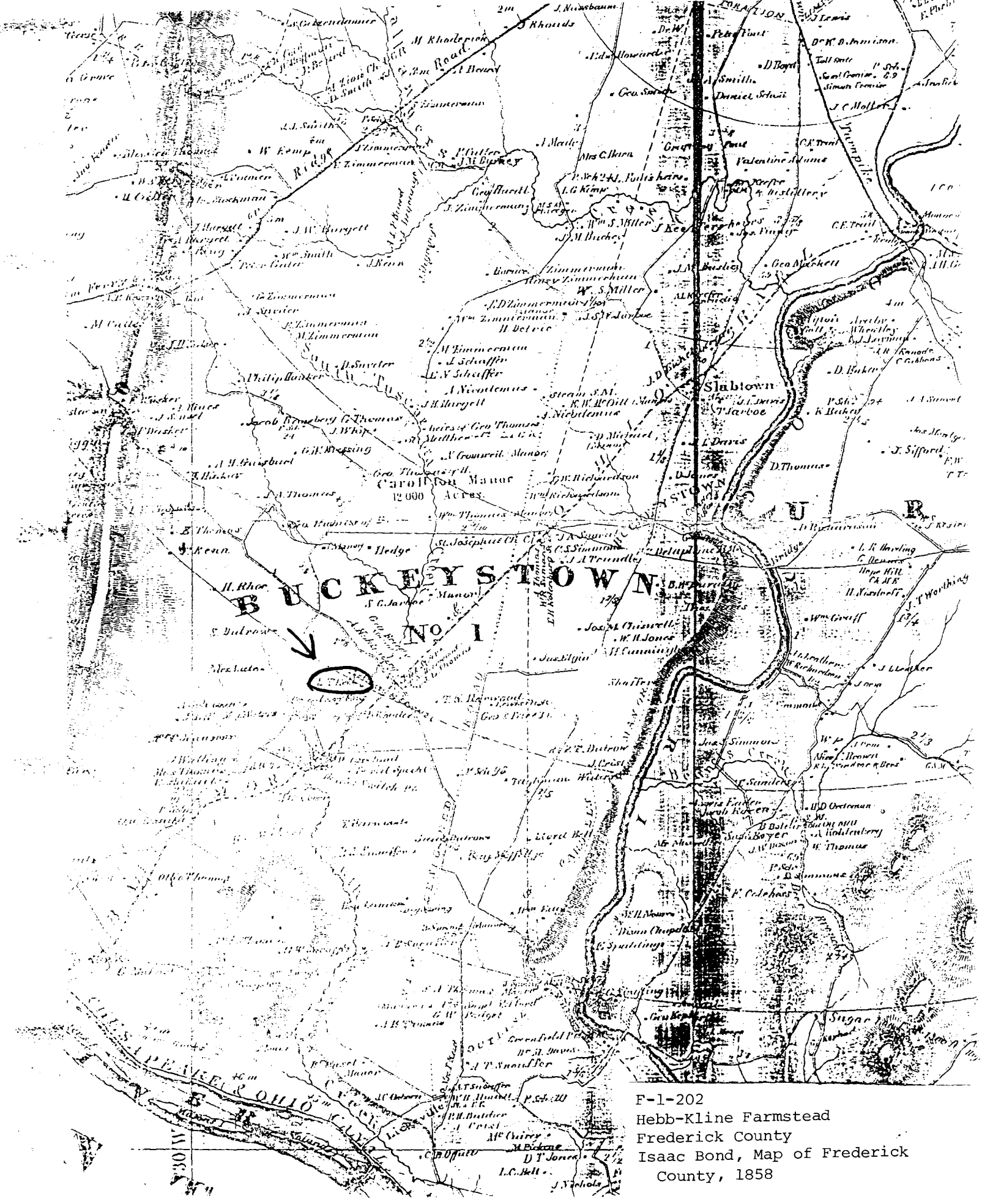
PS-2746

7.1 Description (Continued)

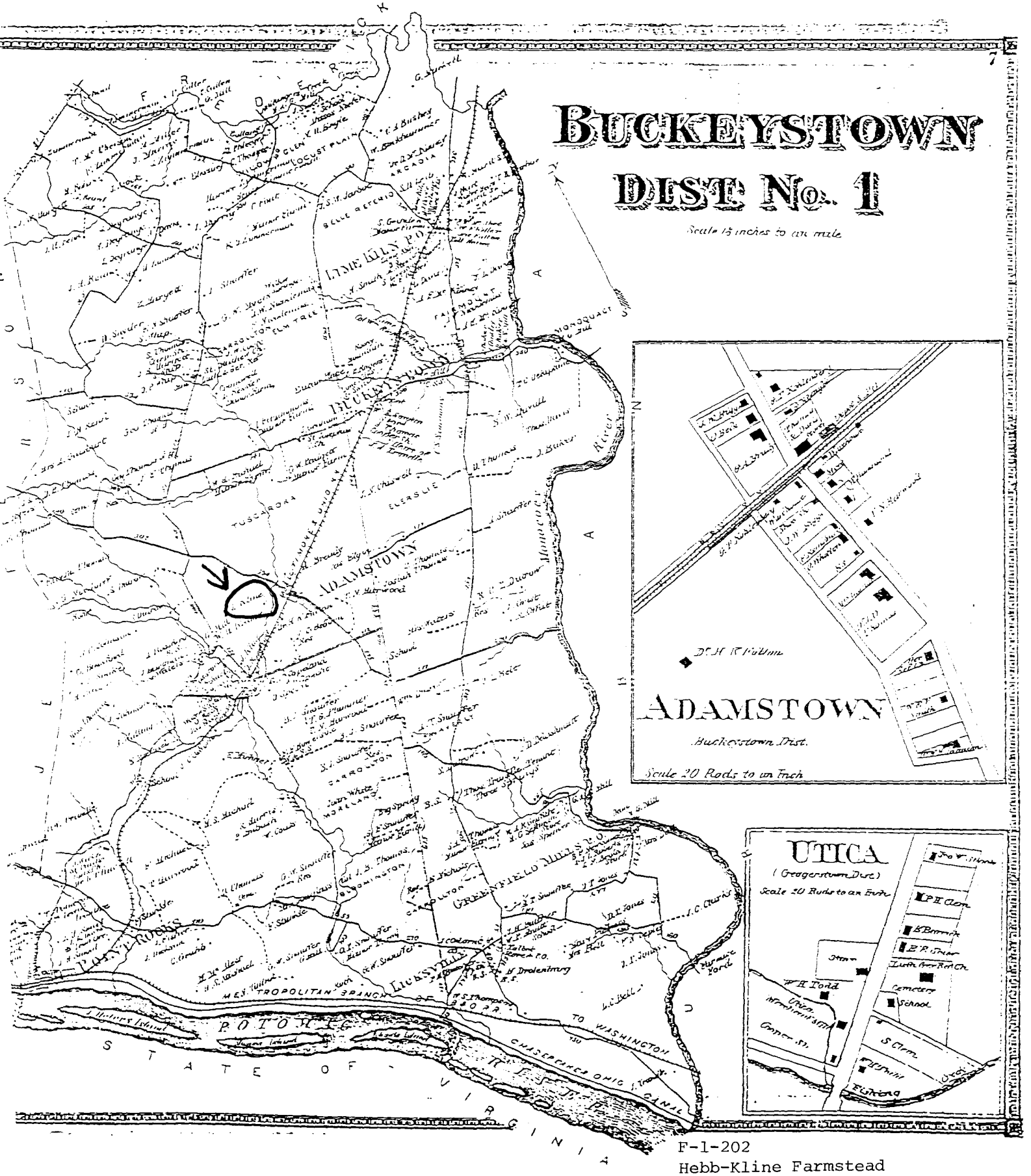
building history. Local tradition says the building was occupied in the 20th century by black servants.

Frame sheds: The frame sheds are located around a paved driveway termination east of the house. Non-contributing concrete block dairy and other agricultural buildings border the east side of the driveway from near the entrance on Mountville Road to this termination. The rectangular frame building on the south side of the paved area is partially covered with asbestos shingle siding with a vertical board section at the north end. Two sets of double swing doors are located near the north end and the building is adjoined by a shed roofed double bay garage of concrete block with open passages on the east. The roof of the larger section is standing seam metal and the shed roof on the concrete block garage is corrugated metal. The sheds probably span a period dating from about 1890 to 1920.

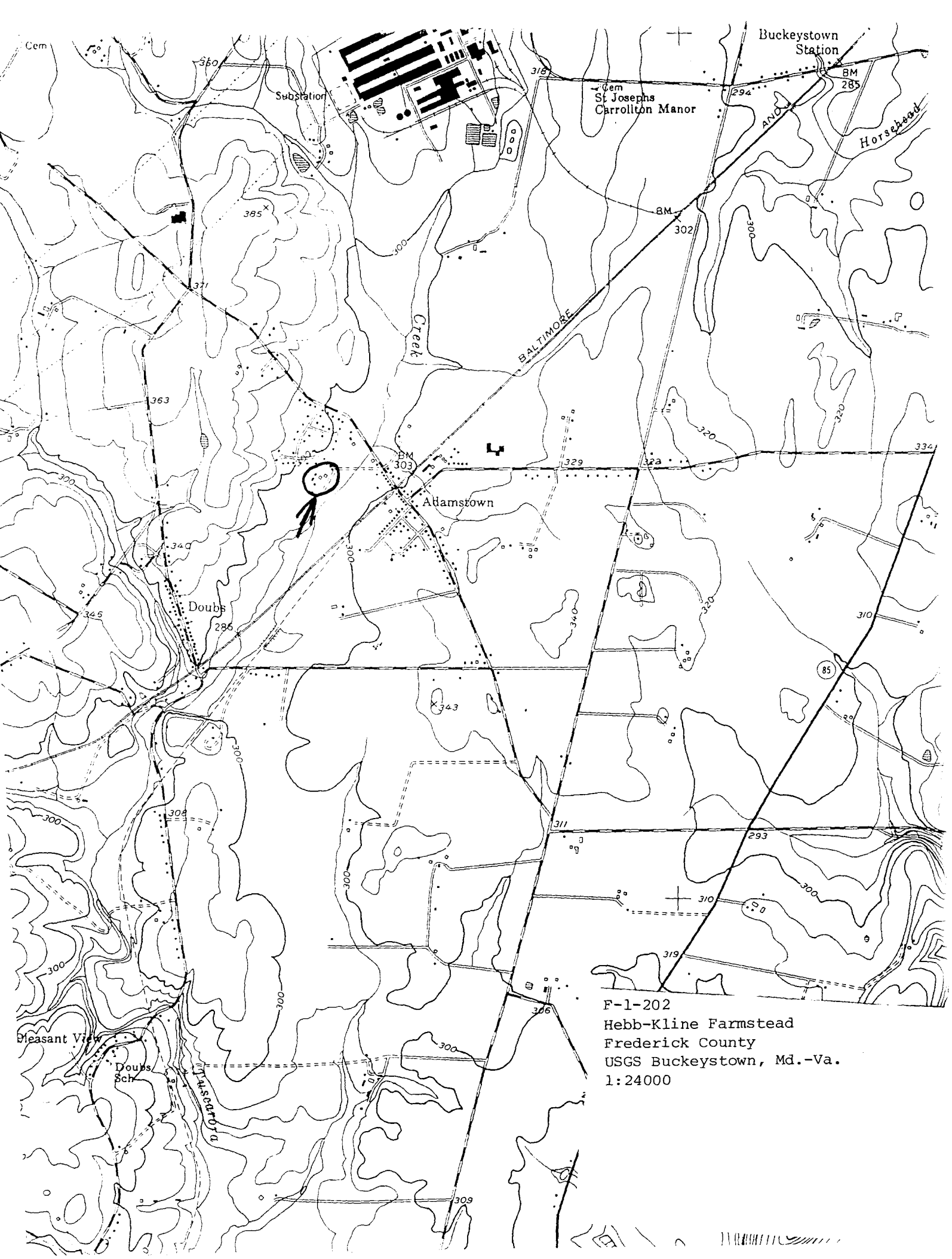
Wagon shed/corn crib: The frame wagon shed is at the north side of the paved area. It has corrugated metal siding on the west elevation and vertical siding on the east, with sliding doors to close off the drive-through. The north and south sides of the crib have vertical lath strips. The roof is standing seam metal. The wagon shed may date from about 1890.



F-1-202
Hebb-Kline Farmstead
Frederick County
Isaac Bond, Map of Frederick County, 1858



F-1-202
Hebb-Kline Farmstead
Frederick County
C.O. Titus, Atlas of
Frederick County, 1873



F-1-202
Hebb-Kline Farmstead
Frederick County
USGS Buckeystown, Md.-Va.
1:24000

F-1-202
Hebb-Kline Farmstead
Frederick County
Photo: Janet Davis
July 1993
Neg. loc.: Md. SHPO. Crownsville, Md.
Southeast elevation
1/4

F-1-202
Hebb-Kline Farmstead
Frederick County
Photo: Janet Davis
July 1993
Neg. loc.: Md. SHPO. Crownsville, Md.
North elevation
2/4

F-1-202
Hebb-Kline Farmstead
Frederick County
Photo: Janet Davis
July 1993
Neg. loc.: Md. SHPO, Crownsville, Md.
Tenant house/smokehouse, east elevation
3/4

F-1-202
Hebb-Kline Farmstead
Frederick County
Photo: Janet Davis
July 1993
Neg. loc.: Md. SHPO, Crownsville, Md.
Garage and wagon shed/corn crib, view from east
4/4

MARYLAND HISTORICAL TRUST

William Donald Schaefer
Governor

Jacqueline H. Rogers
Secretary, DHCD

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Cedar Grove Historic District (Montgomery County) Survey Number: M-14-27

Project: MD 27 from MD 355 to I-80 Agency: SHA

Site visit by MHT Staff: \ no ___ yes Name _____ Date _____

Eligibility recommended X Eligibility not recommended ___

Criteria: X A ___ B X C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G ___ None

Justification for decision: (Use continuation sheet if necessary and attach map)

Cedar Grove is significant for its late 19th and early 20th c. buildings, including a store, church and a number of residences. ~~The Cedar G.~~ The residences include an earlier simple vernacular residence and a few late Victorian, Queen Anne influenced residences. The village is relatively unchanged, still conveying a sense of the original turn-of-the century community.

The town is also significant as a representative example of the small cross-roads communities that developed in Western Montgomery County during the turn of the century. Cedar Grove began as the store and residence of Oliver T. Watkins ~~with a~~ The church was soon erected and, with the store, served as a focal point of the community. The store is ~~one~~ of the County's few remaining general merchandise stores.

Documentation on the property/district is presented in: Inventory File # M-14-27 and project file

Prepared by: Catherine Crawford Rita Suffness

Elizabeth Hannold 8/30/91

Reviewer, Office of Preservation Services Date

NR program concurrence: X yes ___ no ___ not applicable

R Anderson 30 Aug 91

Reviewer, NR program Date

jmg

Survey No. H-14-27

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

___	Eastern Shore	(all Eastern Shore counties, and Cecil)
___	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
X	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
___	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

___	Paleo-Indian	10000-7500 B.C.
___	Early Archaic	7500-6000 B.C.
___	Middle Archaic	6000-4000 B.C.
___	Late Archaic	4000-2000 B.C.
___	Early Woodland	2000-500 B.C.
___	Middle Woodland	500 B.C.- A.D.900
___	Late Woodland/Archaic	A.D. 900-1600
___	Contact and Settlement	A.D. 1570-1750
___	Rural Agrarian Intensification	A.D. 1680-1815
___	Agricultural-Industrial Transition	A.D. 1815-1870
X	Industrial/Urban Dominance	A.D. 1870-1930
___	Modern Period	A.D. 1930-Present
___	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

___	Subsistence
___	Settlement
___	Political
___	Demographic
___	Religion
___	Technology
___	Environmental Adaption

IV. Historic Period Themes:

___	Agriculture
X	Architecture, Landscape Architecture, and Community Planning
X	Economic (Commercial and Industrial)
___	Government/Law
___	Military
___	Religion
___	Social/Educational/Cultural
___	Transportation

V. Resource Type:

Category: Village

Historic Environment: Rural

Historic Function(s) and Use(s): Crossroads Village serving surrounding farms

Known Design Source: —

Survey No. M 14-27

Magi No.

DOE __yes __no

Maryland Historical Trust
State Historic Sites Inventory Form

1. Name (indicate preferred name)

historic Cedar Grove Historic District

and/or common Cedar Grove

2. Location

street & number Intersection of Ridge and Davis Mill Roads ___ not for publication

city, town Germantown ___ vicinity of congressional district 2nd & 12th

state Maryland county Montgomery

3. Classification

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

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

name Multiple ownership- see listing

street & number telephone no.:

city, town state and zip code

5. Location of Legal Description

courthouse, registry of deeds, etc. Montgomery County Courthouse liber

street & number folio

city, town Rockville state Maryland

6. Representation in Existing Historical Surveys

title M-NCPPC Historic Sites Survey

date 1976 ___ federal X state X county ___ local

depository for survey records Park Historian's Office, M-NCPPC

city, town Rockville state Maryland

7. Description

Survey No. M 14-27

Condition		Check one	Check one
___ excellent	___ deteriorated	___ unaltered	___ original site
___ good	___ ruins	___ 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.

Cedar Grove is located in the still largely rural area of northern Montgomery County, in the Seneca Creek region. It lies at the intersection of Ridge Road (Rt. 27) and Davis Mill Road. It includes a small collect of late nineteenth and early twentieth century buildings centered around this intersection. There has been very little infill of later buildings, the exception being a automobile repair shop which sits near the Cedar Grove store. The focal points of this small community are the Cedar Grove general merchandise store and the Upper Seneca Baptist Church which both have the longest history of the buildings found here.

8. Significance

Survey No. M 14-27

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
___ 1900–	___ communications	___ industry	___ politics/government	___ other (specify)
		___ invention		

Specific dates **Builder/Architect**

check: Applicable Criteria: __A __B __C __D
and/or
Applicable Exception: __A __B __C __D __E __F __G

Level of Significance: __national __state __local

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

Cedar Grove is significant for its late nineteenth and early twentieth century buildings which include a store, church and a number of residences. The Cedar Grove store is one of Montgomery County's remaining continously operating general merchandise stores. The residences include an earlier simple vernacular residence and a few late victorian Queen Anne influenced residences.

Cedar Grove is representative of the small cross-road communities that developed in western Montgomery County during the turn of the century period. Cedar Grove began as the store and residence of Oliver T. Watkins with a church and scattered farms. In the late nineteenth century to which later added other residences.

9. Major Bibliographical References

Survey No. M 14-27

Montgomery County Land, Judgment and Will Records
Montgomery County Commissioners Tax Assessment Records
Hopkins Atlas of 1879
Assorted newspaper articles, as cited in text

10. Geographical Data

Acreage of nominated property _____

Quadrangle name _____ **Quadrangle scale** _____

UTM **References** do NOT complete UTM references

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

Verbal boundary description and justification

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 Catherine Crawford

organization Mont. Co. Hist. Pres. Comm. **date** 6/86

street & number **telephone**

city or town Rockville **state** Maryland

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

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All of Cedar Grove was at one time the property of Oliver T. Watkins who had a farm here beginning in 1851 when he acquired two hundred acres from his uncle and soon to be father-in-law, Vincent Brewer (Deed JSH 1/53). After pruchasing this property he married his cousin, Eleanor Brewer and probably then built the first part of his large residence which now sits back off of Ridge Road (and is owned by MNCPPC). The 1879 Hopkins Atlas shows two O.T. Watkins houses here, along with a store and post office. Sometime after 1865 Oliver Watkins built a store along the road from Damascus and other northwestern county towns to Germantown and Gaithersburg which were along the Metropolitan Branch of the B & O Railroad which came through in 1873. For what ever reason, he must have built this second residence which sits next to the store and is oriented towards the road. This second dwelling appears on Hopkins 1879 Atlas as "Res." Oliver T. Watkins. Perhaps he lived here while adding on to the early modest farm dwelling off the road or merely wanted to capitalize on the traffic through Cedar Grove by providing a stop over. He did, however, establish the town's first post office here in his store in 1877 (M.C.H.S. files-post offices). An advertisment for Watkin's store appears in Hopkins Atlas (p. 27) which states, "Cedar Grove - Oliver T. Watkins, Dealer in General Mdsc., Country produce Taken in Exchange for Goods - Dry Goods, Boots, Shoes, Liquors, etc." Watkins became quite prosperous here, both as a merchant and a a farmer. According to T.S. Boyd in his History of Montgomery County Maryland Cedar Grove was a wheat, corn, tobacco and hay producing are (p. 123). In the area surrounding Watkins store in 1879 there were farms, a school, and Salem M.E. Church and, the White Oak Chapel not to distant.

Cedar Grove remained little more than a store at the crossroads for quite some time. In 1888 the new Upper Seneca Baptist Church was built on a one acre lot given to the church by Eleanor Watkins which still stands. The addition of the later homes now in Cedar Grove did not come until after the death of Oliver T. Watkins in 1894 at which point his heirs began selling off the property. The farm was sold in 1894. The heirs retained the house near the store until 1913. James E. King purchased the store lot in 1901 and a few years later replaced it with another store building. Thus, in the couple decades that followed the death of Oliver T. Watkins the few additional dwellings now found in Cedar Grove were constructed by his heirs and others.

Cedar Grove today remains much as it was in the early twentieth century. That is, little additional development (an automotive garage and a few residences on the outskirts) has taken place and the Cedar Grove general merchandise store can still be counted on to supply the basic needs of the community.

The heart of Cedar Grove is the Cedar Grove General Merchandise Store, #23412 Ridge Road. As mentioned, a store was first established here by Oliver T. Watkins sometime between 1865 and 1877, which he operated during his life time. He left no will when he died in 1894 but the inventory of his personal estate lists the obvious contents of a general merchandise store including, woolen shirts, flannel pants, shoes, hats, linen collars and cuffs, suspenders, corsets and other items of clothing as well as calicoes, "India linen", plaid muslins and spools of silk. The store sold produce and canned goods, cigars, tea, spices, candy "Jamaica Gin," Victors relief pills and liniments and Castor Oil. It also sold hardware, tools, plows, horse collars, bridals and halters and paint and turpentine as well as glassware, lamps and lanterns, scissors, razors, pencils, slates, etc. (Reg. of Wills GCD 5/66).

The store lot was sold out of the family in 1901 to James E. King (Deed TD19/185) who later sold to James O. and Alma King in January of 1904 (Deed 176-308).

James O. King later replaced Oliver Watkins store building with the current store about 1909 (according to current owner Willard Main, Carol Blackburn, The Gaithersburg Gazette October 28, 1982, Sect. D-1). The current proprietors of the store, who know much about the store's history through long time regular customers and Mr. Main, say that the store served as a center for social activity. Local farmers would gather around the store's wood burning stove in the evenings sometimes staying until late at night. Over the store is now an apartment but this area was once used for various community purposes, as a gathering place, a restaurant, etc. The store also included a barber shop in the front near the main entry, where Arnold Main used to cut hair. The store still retains much of its early interior woodwork and shelving along with a "silent butler" for carrying goods from the basement to the first or second floors of the building and an old scale. (Interview with current proprietors, George and Becky Bonbrest 5/30).

In 1938, Arnold Main became the proprietor of the store, later purchasing the building from the Kings in 1946 (Deed 1004/87). After returning from military service during World War II Arnold Main's son, Willard Main, took over the business. Mr. Main made a brick addition to the store in 1957 nearly doubling its size of the store itself (Gazette). Willard Main continued to sell a variety of merchandise including some hardware and farm supplies as well as groceries, dairy products and meats. Though Willard Main still retains ownership of the building, he retired three years ago, selling the business to it's new proprietor, George and Becky Bonbrest who maintain a tradition general store.

The store is a two story three bay by three bay frame building with a front-facing gable roof. The double glass panel door entry is to the center of the facade with a four light transom above. To either side of the entry is a long two over two sash window with shutters. On the second story facade are three slighty shorter bays. In the facade gable end is a single four light casement, pointed arched window. A shed roof porch supported by plain iron posts covers the facade bays. The exterior frame walls are now covered with vinyl siding added in 1985. To the western side elevation is a long, rectangular single story flat roof brick addition which extends outward from the old store building enough to include an entry at the eastern elevation. At the facade is a large picture window.

The other center of community activity in Cedar Grove is the Upper Seneca Baptist Church, #23425 Davis Mill Road. This is the fourth oldest Baptist Church in Maryland, established on June 28, 1805. The original church, known as "White Oak Chapel" was a log structure located on Watkins Road to the east of the present building (Jill Teunis "Cedar Grove Church Celebrates it's History," Damascus Courier - Gazette July 24, 1985). The present church was built in 1888 by builder and carpenter William Henry Hobbs on an acre of land donated by Oliver T. and Eleanor Watkins. (Belle Napoli, "From Whence We Came", MCHS). The basement was dug out in 1937 to create a social hall (J. Teunis). Later, a educational annex was added to the church building in 1954 (Mrs. Ulysses Griffith IV "Upper Seneca Baptist Church is amoung county's oldest," Sentinel June 16, 1955).

Also on the church property is the parsonage house #23415 Davis Mill Road the heirs of Oliver T. Watkins conveyed a one-half acre lot to the Board of Trustees of Upper Seneca Baptist Church for $50 in October of 1904 (Deed 180/171). The parsonage was built later, in 1916-1917 (Mr. N.S. Griffith).

Upper Seneca Baptist Church is a one story three bay by four bay rectangularly shaped frame structure with a front facing gable roof. The entry is to the center of the facade with double, wooden panel doors with a stained glass rounded arched transom above. To either side is a long, narrow, stained glass one over one sash window, also with a rounded arched top. These same windows appear at both side elevations. Covering the entry is a simple pedimented portico with slightly tapering squared columns, which rest on smooth faced concrete piers. The base of the porch is of poured concrete with smooth faced concrete block side walls. The foundation again is of smooth faced concrete blocks (which were probably added as reinforcements when the basement was dug out). The exterior walls are covered with German siding and the roof with composition shingle. To the west of the facade is a stair well down to a basement entry. At the west side of the rear elevation is a brick chimney. The later addition is to the eastern side elevation to the rear of the building it is a long, rectangular single story wing, four bays long with a gable roof covered with raised seam metal. The first bay near the church is an entry. It is lit by six over six sash windows. The exterior walls are covered with German siding.

The parsonage next door, #23415 Davis Mill Road, is a two story frame three bay by three bay residence with a cross gable roof. At the western side of the facade a two story crossing wing or L extends out. It has paired windows on both the first and second story elevations. The entry with transom above is on the inside with a single window to the other side. Centered above these two bays is a single window. There are small casement windows in the gable ends. To the rear is a single story addition. The partonage rests on a stone foundation, the exterior walls are covered with German siding and the roof with raised seam metal.

Next to the store is the Oliver T. Watkin's residence, #23406 Ridge Road, probably built about the time of the original store building sometime between 1865 and 1877. It is a simple vernacular dwelling built in two parts. The north end is a three bay unit with the entry to the center and a bay to either side, on the second story are also three bays. The southern section is two bays with the doorway to the inside. Again, there is a second story bay over each of those on the first story. The two entries are about equally spaced giving unity to the parts. The two entries and the center bay of the house are covered by a wooden shed roof proch supported by turned posts. It is a long, rectangular shaped dwelling one bay deep with a gable roof. The house is lit by six over six sash windows with shutters. It has two brick chimneys, one at the north end of each of the two sections of the house. At the rear elevation at the northern end is a one and one half story, two bay deep gable roof ell. The house rests on a stone foundation. The exterior walls are covered with weatherboard siding and the roof with raised seam metal.

Next to the church #24311 is a large Queen Anne style residence. It is a large two story, multi-gabled frame residence five bays by two bays. The center of the facade is three bays under a front facing gable in which is located a four light pointed arched window. The entry with transom is to the northern end under a shed roof but connecting with the main block is a fourth bay up and down. This is probably a later addition. The fifth bay across the front is a long a recessed wing which crosses the main block. A wooden, low hipped roof porch supported by doric columns with balustrade runs the length of the facade and around the side of the main block to cover the fifth front facing bay. At the southern side elevation is a two story, three sided bay window with a front facing gable roof in which is found another pointed arched window. (This window appears in all gable ends). To the rear is a small single story gable roof ell, at the north end. To the southern side of the rear elevation is a one bay deep one story shed addition. The house is lit by one over one sash window with the exception of the foward bay in the first story of the southern elevation which is a triple three over one sash window.

This residence was built by James Obed King and his wife Alma, circa. 1911 (Real Estate Inventory VMB 139-557). They purchased the property on which their home was built, 74 square perches of "Locust Level", for $55.00 from the heirs of Oliver T. Watkins in January 1904 (Deed 178/139). That same day the Kings also received title for the old Oliver Watkins store lot. Thus, James O. King was Cedar Grove's storekeeper. Mr. King passed away in December of 1962, predeceased by his wife, Alma. This house (and the house next door) then passed on to his adopted daughter, Katherine L. King (then, Katherine King Hunt), according to his last will and testament (VMB 155/868). According to the real estate inventory of James Obed King, this was discribed as a detached two story, nine room and bath frame dwelling with an attic and cellar, built circa. 1911. Katherine King Hunt sold the property two years late and in 1977 it was purchased by the current owners, Steven M. and Janet M. Wells (Deed 5074-212).

Next door to King house #23401 Ridge Road, was also owned by James Obed King. The real estate inventory following his death in 1962 refers to this house as the "Beall House" built "prior to 1900", it is described as a two story single family home of seven rooms and a bath, with an attic (Real Inventory VMB 139-557). It is a turn of the century era dwelling, a simplified Queen Anne which resembles the parsonage house.

It is a two story, frame residence four bays by two bays with a front facing L with a cross gable roof. The front facing L is two bays and the facade of the main block is two bays with the entrance, with transom above, to the inside. The front facing gable roof of the L is shingled with a single window. The windows all around are two over two sash. A low hipped roof porch supposed by plain wooden posts with enclosed balustrade covers the entry and end bay only. Where the front facing L and main block meet is a brick chimney. The house rests on a stone foundation and the exterior walls are covered with asbestos shingles.

CURRENT OWNERS

P-902 Cedar Grove Store
23412 Ridge Road
Germantown, Md. 20874
J. Willard Main
23807 Ridge Rd.

P-933 Oliver Watkins, Res.
23406 Ridge Road
David J. Frederick, et al

P-938 Beall House
23411 Ridge Road
Steven M. & J.M. Wells

P-992 King House
23401 Ridge Road
James S. & B.C. Lynch

P-21 Upper Seneca Baptist Church
23425 Davis Mill Road

P-33 Upper Seneca Baptist Church Parsonage
23415 Davis Mill Road
%Upper Seneca Baptist Church
23425 Davis Mill Road

M:14-27

FOR ADDITIONAL INFORMATION

See correspondence dated March 9, 1990

ACTION TAKEN

THE AMENDMENT

The purpose of this amendment is to designate one district in Montgomery County on the Master Plan for Historic Preservation, thereby extending to it the protection of the County's Historic Preservation Ordinance, Chapter 24A of the Montgomery County Code.

Atlas #	Site	Location
14/27	**Cedar Grove Historic District**	**Intersection of Route 27 and Davis Mill Road (See map of boundaries)**

Historic Significance of the Resource:

Cedar Grove is significant as one of the few continuously operating rural crossroads communities serving farm families for over a century. Relatively unchanged over the years, it retains its original character and rural identity as a cohesive collection of 19th and early 20th century buildings that provide a community meeting place and focal point.

M #14-27

1601995629

MARYLAND HISTORICAL TRUST WORKSHEET

NOMINATION FORM
for the
NATIONAL REGISTER OF HISTORIC PLACES, NATIONAL PARKS SERVICE

SEE INSTRUCTIONS

1. NAME

COMMON: CEDAR GROVE, Md./STORE/BAPTIST CH.AREA

AND/OR HISTORIC: Upper Seneca Baptist Church and Rectory

2. LOCATION

STREET AND NUMBER: Davis Mill Road

CITY OR TOWN: Cedar Grove

STATE: Maryland

COUNTY: Montgomery

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☒ Building ☐ Site ☐ Structure ☐ Object	☐ Public ☒ Private ☐ Both	Public Acquisition: ☐ In Process ☐ Being Considered	☒ Occupied ☐ Unoccupied ☐ Preservation work in progress	Yes: ☒ Restricted ☐ Unrestricted ☐ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☐ Private Residence	☐ Other (Specify)	
☐ Educational	☐ Military	☒ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY

OWNER'S NAME: Trustees of Upper Seneca Baptist Church

STREET AND NUMBER:

CITY OR TOWN: Cedar Grove

STATE: Maryland

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Montgomery County Courthouse

STREET AND NUMBER:

CITY OR TOWN: Rockville

STATE: Maryland

Title Reference of Current Deed (Book & Pg. #):

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: None

DATE OF SURVEY: ☐ Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS:

STREET AND NUMBER:

CITY OR TOWN:

STATE:

M: 14-27

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☒ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☒ Altered	☐ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE

The church is a frame structure. The arched central doorway is flanked by tall, narrow, arched, stained glass windows. Four similar windows are on either side wall. The entrance porch is pedimented, supported by large, square columns.

Adjacent to the church is the rectory--a two story, frame structure with a forward-facing gable and returned cornice.

SEE INSTRUCTIONS

M:14-27

SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

- ☐ Pre-Columbian
- ☐ 15th Century
- ☐ 16th Century
- ☐ 17th Century
- ☐ 18th Century
- ☒ 19th Century
- ☐ 20th Century

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

- ☐ Aboriginal
- ☐ Prehistoric
- ☐ Historic
- ☐ Agriculture
- ☐ Architecture
- ☐ Art
- ☐ Commerce
- ☐ Communications
- ☐ Conservation
- ☐ Education
- ☐ Engineering
- ☐ Industry
- ☐ Invention
- ☐ Landscape Architecture
- ☐ Literature
- ☐ Military
- ☐ Music
- ☐ Political
- ☐ Religion/Philosophy
- ☐ Science
- ☐ Sculpture
- ☐ Social/Humanitarian
- ☐ Theater
- ☐ Transportation
- ☐ Urban Planning
- ☐ Other *(Specify)* _____

STATEMENT OF SIGNIFICANCE

The congregation was established in 1805, although the present structure is of much more recent date.

SEE INSTRUCTIONS

M:14-27

9. MAJOR BIBLIOGRAPHICAL REFERENCES

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY							OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES					
CORNER	LATITUDE			LONGITUDE				LATITUDE			LONGITUDE		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	°	'	"	°	'	"		°	'	"	°	'	"
NE	°	'	"	°	'	"							
SE	°	'	"	°	'	"							
SW	°	'	"	°	'	"							

APPROXIMATE ACREAGE OF NOMINATED PROPERTY:

Acreage Justification:

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:		COUNTY	
STATE:		COUNTY:	
STATE:		COUNTY:	
STATE:		COUNTY:	

11. FORM PREPARED BY

NAME AND TITLE:
Christopher Owens, Park Historian

ORGANIZATION
M-NCPPC

DATE
18 Mar 74

STREET AND NUMBER:
8787 Georgia Avenue

CITY OR TOWN:
Silver Spring

STATE
Maryland

12. State Liaison Officer Review: (Office Use Only)

Significance of this property is:

National ☐ State ☐ Local ☐

Signature

SEE INSTRUCTIONS

M#14-27

MARYLAND HISTORICAL TRUST WORKSHEET

NOMINATION FORM
for the
NATIONAL REGISTER OF HISTORIC PLACES, NATIONAL PARKS SERVICE

SEE INSTRUCTIONS

1. NAME

COMMON: CEDAR GROVE, Md./STORE/BAPTIST CH. AREA

AND/OR HISTORIC: Oliver Watkins House

2. LOCATION

STREET AND NUMBER: Ridge Road (Rte. 27)

CITY OR TOWN: Cedar Grove

STATE: Maryland

COUNTY: Montgomery

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☒ Building ☐ Site ☐ Structure ☐ Object	☐ Public ☒ Private ☐ Both	Public Acquisition: ☐ In Process ☐ Being Considered	☒ Occupied ☐ Unoccupied ☐ Preservation work in progress	Yes: ☐ Restricted ☐ Unrestricted ☒ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☒ Private Residence	☐ Other (Specify)	
☐ Educational	☐ Military	☐ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY

OWNER'S NAME:

STREET AND NUMBER:

CITY OR TOWN: STATE:

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Montgomery County Courthouse

STREET AND NUMBER:

CITY OR TOWN: Rockville STATE: Maryland

Title Reference of Current Deed (Book & Pg. #):

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: None

DATE OF SURVEY: ☐ Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS:

STREET AND NUMBER:

CITY OR TOWN: STATE:

M:14-27

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☐ Good	☒ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☒ Altered	☐ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE

The house is a two-story, frame structure, built in two parts. The north end is a three-bay unit with a central doorway and flanking windows. The south end is two bays, with the doorway, the north bay. The openings are almost equally spaced across the facade and a one-story, shed-roofed porch covers the three center bays; this gives the house more unity of appearance than most other "added-onto" houses in the area.

The chimneys are positioned at the north end, the south end of the north wing (thus slightly off center). Windows are all 6/6 double hung sash. The boxed cornice is returned into the gable end.

SEE INSTRUCTIONS

M:14-27

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

- ☐ Pre-Columbian
- ☐ 15th Century
- ☐ 16th Century
- ☐ 17th Century
- ☐ 18th Century
- ☒ 19th Century
- ☐ 20th Century

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

- ☐ Aboriginal
  - ☐ Prehistoric
  - ☐ Historic
- ☐ Agriculture
- ☐ Architecture
- ☐ Art
- ☐ Commerce
- ☐ Communications
- ☐ Conservation
- ☐ Education
- ☐ Engineering
- ☐ Industry
- ☐ Invention
- ☐ Landscape Architecture
- ☐ Literature
- ☐ Military
- ☐ Music
- ☐ Political
- ☐ Religion/Philosophy
- ☐ Science
- ☐ Sculpture
- ☐ Social/Humanitarian
- ☐ Theater
- ☐ Transportation
- ☐ Urban Planning
- ☐ Other *(Specify)* _____

STATEMENT OF SIGNIFICANCE

SEE INSTRUCTIONS

M:14-27

9. MAJOR BIBLIOGRAPHICAL REFERENCES

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY						OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES					
CORNER	LATITUDE			LONGITUDE				LATITUDE			LONGITUDE	
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	°	'	"	°	'	"		°	'	"	°	'	"
NE	°	'	"	°	'	"							
SE	°	'	"	°	'	"							
SW	°	'	"	°	'	"							

APPROXIMATE ACREAGE OF NOMINATED PROPERTY:

Acreage Justification:

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:		COUNTY	
STATE:		COUNTY:	
STATE:		COUNTY:	
STATE:		COUNTY:	

11. FORM PREPARED BY

NAME AND TITLE:
Christopher Owens, Park Historian

ORGANIZATION
M-NCPPC

DATE
18 Mar 74

STREET AND NUMBER:
8787 Georgia Avenue

CITY OR TOWN:
Silver Spring

STATE
Maryland

12. State Liaison Officer Review: (Office Use Only)

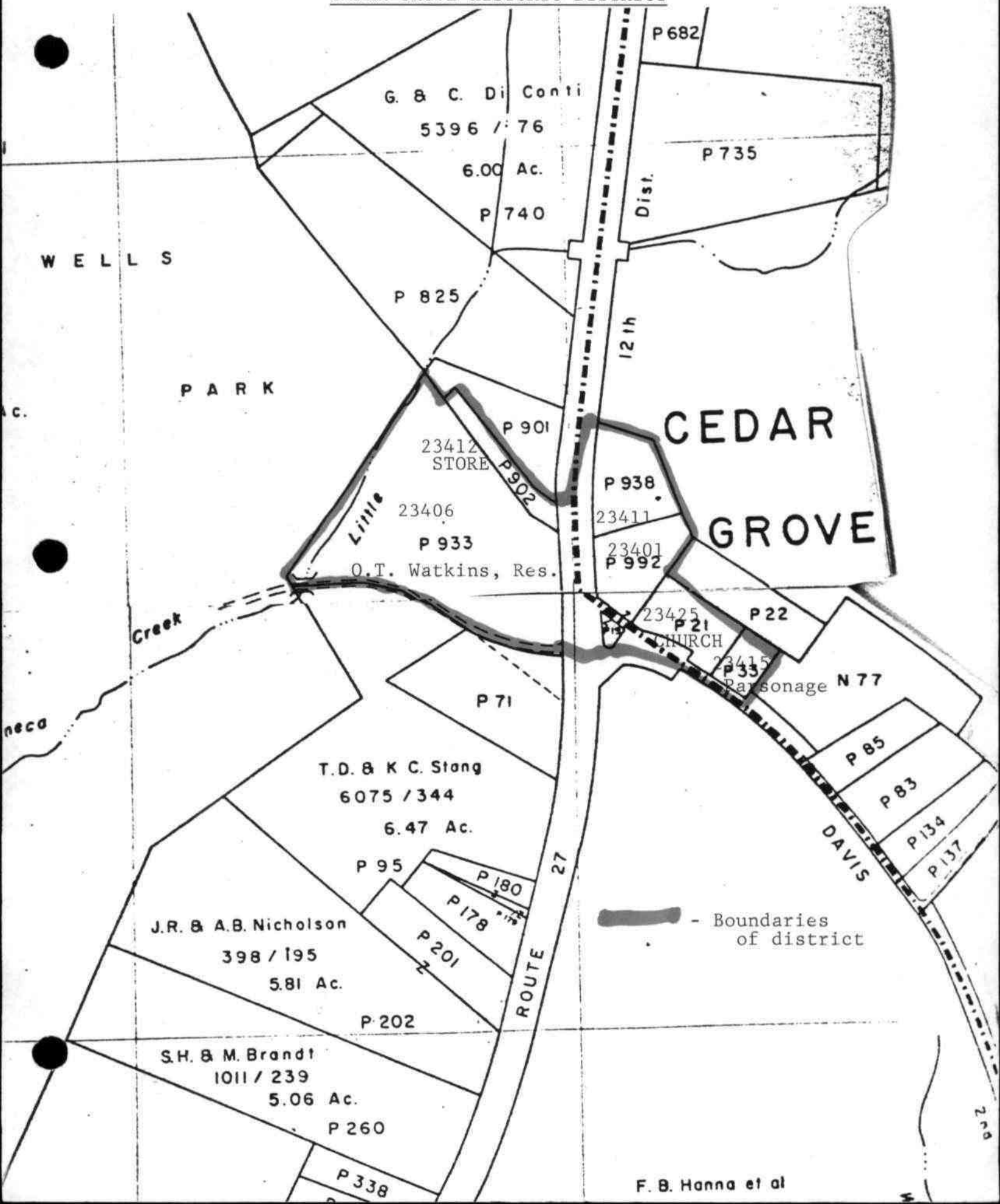
Significance of this property is:

National ☐ State ☐ Local ☐

Signature

SEE INSTRUCTIONS

CEDAR GROVE HISTORIC DISTRICT



5562 IV SE (URBANA)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Gaithersburg Quad
M: 14-27

77°15'
39°15'
307000m.E.
9.1 MI. TO U.S. 40
DAMASCUS 3.5 MI.
309
12'30"
4346000m.N.
4345
4344
4343
4342
4341
12'30"

Cedar Grove
Little Seneca Creek
DAMASCUS REGIONAL PARK
Wildcat Branch
GOSHEN REGIONAL PARK
Great
Brink
PIPELINE
FREDERICK 18 MI.
CLARKSBURG 2.4 MI.
355
27
GSP
GRP


Cedar Grove Store

#14-27 CEDAR GROVE HISTORIC DISTRICT
CEDAR GROVE STORE
23412 RIDGE RD.
5/86

#14-27 CEDAR GROVE HISTORIC DISTRICT

23401 RIDGE RD.

5/86

H14-27 CEDAR GROVE HISTORIC DISTRICT

23411 RIDGE RD.

5/86

#14-27 CEDAR GROVE HISTORIC DISTRICT
UPPER SENECA BAPTIST CHURCH
2345 DAVIS MILL RD.
5/96


Cedar Grove Store
Meat, Groceries
Coca-Cola
Cedar Grove Store
Ice - Hot Coffee

M:14-27

Cedar Grove Store
23412 Ridge Road
Cedar Grove, MD
Andrea Rebeck 1987
South (front) elevation

NAME #14-27 CEDAR GROVE / UPPER SENECA BAPTIST

LOCATION DAVIS MILL Rd & Rt 27 DAMASCUS, Md

FACADE SE

PHOTO TAKEN 3/18/74 MOWYER


CEDAR GROVE STORE

M:141-27
Cedar Grove

J. K. Cosham
C. 1996


Cedar Grove Store
Coca-Cola
STORE
BEER·WINE·DELI
23412
Budweiser
OPEN 7 DAYS
Beer-Wine-Deli
Ice - Hot Coffee

M: 141 27
Cedar Grove

J.K Cosham
©1996


DOUBLE DIAMOND
WINNERS
KEEP MARYLAND BEAUTIFUL
LONGSHOT
THIS SATURDAY'S LOTTO JACKPOT
1.5 MILLION

M. 14-27
Cedar Grove

JK Cosham
C 1996


BACK TO YOUR PAD!
Life Is Good
WORK WINNERS WEAR SHIT THEIRS!

M:14-27
Cedar Grove

JK Cosham
C.1996


Coca-Cola
Bud
Bud
Bud

M:14-27
Cedar Grove

JK Cosham
C.1996

J K Cosham
C. 1996

M: 14-27
Cedar Grove

Form No 10-306 (Rev. 10-74)

M: 12-46
F-2-11
WA-VI-048

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY AL-I-B-086

RECEIVED

DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
Chesapeake and Ohio Canal

AND/OR COMMON
Chesapeake and Ohio Canal National Historical Park

2 LOCATION

STREET & NUMBER The District of Columbia and Maryland bank of the Potomac River from Georgetown, D.C., to Cumberland, Maryland

__NOT FOR PUBLICATION

CITY, TOWN

__ VICINITY OF

CONGRESSIONAL DISTRICT
D.C.; 6th and 8th of Maryland

STATE
DC (11), MD (24)

CODE

COUNTY
D.C. (001), Montgomery (031), Frederick (021), Washington (043) Allegany (001)

CODE

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
X DISTRICT	__PUBLIC	X OCCUPIED	__AGRICULTURE	__MUSEUM
__BUILDING(S)	__PRIVATE	__UNOCCUPIED	__COMMERCIAL	X PARK
__STRUCTURE	X BOTH	__WORK IN PROGRESS	__EDUCATIONAL	__PRIVATE RESIDENCE
__SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	X IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	X YES: UNRESTRICTED	__INDUSTRIAL	__TRANSPORTATION
		__NO	__MILITARY	__OTHER

4 AGENCY

REGIONAL HEADQUARTERS *(If applicable)*
National Park Service, National Capital Region

STREET & NUMBER
1100 Ohio Drive, S.W.

CITY, TOWN
Washington

__ VICINITY OF

STATE
D.C. 20242

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC. Land records in courthouses of above jurisdictions. C&O Canal Company records in Record Group 79, National Archives.

STREET & NUMBER

CITY, TOWN

STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE Historic American Buildings Survey*
Historic American Engineering Record*
NPS List of Classified Structures**
Prentice-Hahn Survey**

DATE __FEDERAL __STATE __COUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS Library of Congress* National Capital Region Headquarters**

CITY, TOWN
Washington

STATE
D.C.

M: 12-46

7 DESCRIPTION

CONDITION		CHECK ONE	CHECK ONE
_EXCELLENT	X_DETERIORATED	_UNALTERED	XORIGINAL SITE
XGOOD	X_RUINS	XALTERED	_MOVED DATE_____
XFAIR	_UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

This documentation of the historic resources of the Chesapeake and Ohio Canal National Historical Park is limited to the canal proper (including prism, locks, lockhouses, aqueducts, culverts, dams, weirs) and other visible historic features in the park contemporary with the period of the canal's operation. Because a comprehensive survey of prehistoric and historic archeological resources in the park has not yet been undertaken, such resources will be the subject of an addendum or separate nomination at a later date.

Built between 1828 and 1850, the canal ran 184.5 miles from Georgetown, D.C., to Cumberland, Maryland. During its active operation until 1924 it suffered periodic damage from floods, war, and other causes which, together with normal deterioration, required the repair and replacement of many structural components. Such periodic damage has continued to the present (the 1972 "Agnes" flood being the most notable recent contributor). Since the canal company property was acquired by the Federal Government in 1938, the National Park Service has repaired or rebuilt the towpath in many places to maintain its continuity for recreational purposes. The Service has also restored or stabilized many of the badly deteriorating locks, culverts, and other structures. The canal today thus reflects considerable reworking during and since its historic period (1828-1924) while retaining its essential element of continuity from Georgetown to Cumberland.

Accompanying sheets numbered 1 to 163 and photographs provide a detailed description of the historic and present appearance of the canal and related and contemporary historic structures and sites. Known park properties not covered in this documentation are not considered historic and do not contribute to the significance of the park for National Register purposes. It is possible that additional features of contributing value may be disclosed in future park investigations, at which times they may be documented in addenda to this submission.

All historic objects and documents original to or historically associated with the property described herein and in National Park Service ownership and control are also defined as components of this property for the National Register. Included are artifacts and specimens associated directly with the canal and associated structures, with other historic structures in the park, and with people and events connected with the history of the canal from 1828 to 1924. Such objects are listed and described in the park's museum catalog, maintained at the park headquarters at Sharpsburg, Maryland.

M:12-416

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
_PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	_RELIGION	
_1400-1499	_ARCHEOLOGY-HISTORIC	X CONSERVATION	_LAW	_SCIENCE	
_1500-1599	_AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE	
_1600-1699	X ARCHITECTURE	_EDUCATION	X MILITARY	_SOCIAL HUMANITARIAN	
_1700-1799	_ART	X ENGINEERING	_MUSIC	_THEATER	
X 1800-1899	X COMMERCE	_EXPLORATION SETTLEMENT	_PHILOSOPHY	X TRANSPORTATION	
X 1900-	_COMMUNICATIONS	_INDUSTRY	_POLITICS/GOVERNMENT	_OTHER (SPECIFY)	
		_INVENTION			

SPECIFIC DATES 1828-1924 BUILDER/ARCHITECT Benjamin Wright et al.

STATEMENT OF SIGNIFICANCE

The Chesapeake and Ohio Canal, today largely unwatered and overgrown and with most of its structural features in varying states of deterioration, is yet one of the most intact and impressive survivals of the American canal-building era. While recognizable segments of other early-19th-century canals exist and while a few other canals of the period have been rebuilt for modern shipping, the C&O Canal is unique in that it remains virtually unbroken and without substantial modification affecting its original character for its entire length of some 185 miles. Such physical changes as have occurred since the canal ceased operation in 1924 have been largely dictated by nature: a softening of prism contours, extensive vegetative overgrowth, widespread decay and collapse of wood and stone structures. Beyond the restored and rewatered 22-mile portion from Georgetown to Violet's Lock, much of the canal now has the character of a ruin. Yet the fact that the entire towpath to Cumberland may still be traveled and the survival--in whole or part--of most of the principal canal structures afford the many hikers and bicyclists who follow the route a fine opportunity to appreciate the magnitude of this historic engineering achievement.

History

The Chesapeake and Ohio Canal Company was chartered in 1825 to construct a shipping canal connecting tidewater on the Potomac River in the District of Columbia with the headwaters of the Ohio River in western Pennsylvania, thereby providing an economical trade route between the eastern seaboard and the trans-Allegheny West. The company acquired the rights of the Potomac Company, formed by George Washington and associates after the Revolution to improve navigation on the Potomac. That venture had attempted to achieve its objective by deepening the channel and cutting skirting canals around impassable rapids, but the flow of the river proved too erratic to make these measures successful. This experience led the C&O Canal promoters to adopt plans for a separate canal paralleling the river.

The company began operations in 1828 with a subscribed capital of about $3.6 million. Among the stockholders were the Federal Government, the states of Maryland and Virginia, and the cities of Washington, Georgetown, and Alexandria, D.C. Estimates of the total cost of the eastern section of the canal from Georgetown to Cumberland, Maryland, ranged from $4.5 to $8 million. As engineers the board of directors selected men with experience on northern and foreign canals. Chief Engineer Benjamin Wright of New York had been actively involved with the Erie Canal and was then chief engineer on the Chesapeake and Delaware Canal. Other members of the board of engineers included John Martineau, a close associate of Wright, and Nathan S. Roberts,

(continued)

M:12-46

Form No. 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

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DATE ENTERED

another noted New York engineer. Charles B. Fisk of Connecticut served as chief engineer from 1835 to 1852.

President John Quincy Adams turned the first spadeful of earth in ceremonies at Little Falls, Maryland, on July 4, 1828. On the same day, construction of the Baltimore and Ohio Railroad westward from Baltimore was begun--a move that would have significant implications for the ultimate fate of the canal and the canal era generally.

From the start, numerous difficulties retarded the progress of canal construction. An acute labor shortage forced the company to campaign for workers from other states and abroad. Numerous disputes arose with landowners who resisted efforts to purchase the right-of-way. A protracted legal controversy with the B&O Railroad involving the right-of-way between Point of Rocks and Harpers Ferry impeded construction of both the canal and the railroad there until 1832. Increased costs of labor, materials, and land during the inflationary period of the late 1820s and 1830s caused construction expenses to rise sharply and far exceed the original estimates. The State of Maryland came to the rescue of the financially troubled company in the mid-1830s by purchasing over $5 million more in stock, thus becoming the majority stockholder. But difficulties continued, augmented by labor unrest among the predominantly Irish workers and the financial Panic of 1837. Between 1842 and 1847 construction was at a standstill. The canal was finally completed to Cumberland in 1850, bringing the total cost of the project to over $11 million. The original plans to extend the waterway over the Alleghenies had long before been abandoned.

Boats began to appear on the canal soon after the first short section between Little Falls and Seneca was completed in 1831. As water was admitted to the upper divisions reaching out into western Maryland, trade on the waterway increased as cargos of flour, grain, building stone, and whiskey began to move down to Georgetown. Not until the canal reached Cumberland, however, did the tonnage transported reach an appreciable figure. Large quantities of coal from the rich mines of the Georges Creek region west of Cumberland then began to be transported to the tidewater. During the years following the Civil War the coal trade increased rapidly until in 1871, the peak year, some 850,000 tons were carried down the canal. In some years of this period the canal company made a considerable operating profit, which was quickly applied to improving the waterway and to the payment of back interest on the tremendous debt. During these few profitable years more than 500 boats were in frequent operation on the canal.

In the late 1870s the canal trade began to decline as many of the Allegheny coal operators began to ship over the B&O Railroad, the canal's greatest competitor. This development, together with the effects of the nationwide economic depression in the mid-1870s and major floods in 1877 and 1886, again put a severe strain on canal company finances. In 1889 an enormous flood forced the canal company into receivership, and the B&O

Railroad emerged as the majority owner of the company's bonds. In 1924, by which time the railroad had captured almost all of the carrying trade of the canal in addition to its ownership, another damaging flood struck. This time the repairs necessary to resume operation were not made, and the active era of the canal came to an end.

In 1938 the railroad, hurt by the Depression, sold the entire canal to the U.S. Government for approximately $2 million, which was applied to the railroad's debt to the Reconstruction Finance Corporation. The canal was placed under the National Park Service, and some restoration was carried out under Depression work relief programs. In 1961 President Eisenhower proclaimed it a national monument. An act of Congress in 1971 authorized the acquisition of additional land and establishment of the Chesapeake and Ohio Canal National Historical Park.

The principal areas of the canal's historical significance may be summarized as follows:

Architecture and Engineering. The canal survives as an excellent illustration of 19th-century canal-building technology. The magnitude of the engineering achievement is exemplified by the 184.5-mile length of the canal, its 74 lift locks to accommodate a rise of 605 feet, the 11 stone aqueducts spanning major Potomac tributaries, 7 dams supplying water to the canal, hundreds of culverts carrying roads and streams beneath the canal, and a 3,117-foot tunnel carrying the canal through a large shale rock formation. Many of the canal structures, notably the aqueducts, the tunnel portals, the culvert face walls, and the early lockhouses, were also architecturally treated with such aesthetic features as pilasters, belt courses, and variations in stone texture added for visual enhancement.

Commerce and Transportation. The canal served as the major commercial artery in the Potomac Valley above tidewater during the mid-19th century. Along it were conveyed significant quantities of the food, fuel, and building materials required by the growing National Capital. The canal influenced the creation and expansion of numerous businesses along it, many of which tapped the canal water as a power source as well as using the waterway for shipping.

Conservation. Although the builders of the canal could hardly have forseen it, their creation has led today to the preservation of a large portion of the Maryland bank of the Potomac in a relatively unspoiled state. Natural growth reclaimed much of the canal property after 1924, and the transfer of this land to the National Park Service in 1938 resulted in its conscious preservation for its historical, natural, and recreational values. The canal company land now serves as the nucleus of a still-expanding park enlarged by the acquisition of much additional land on both sides of the original right-of-way.

Non-Canal Historic Resources

The Chesapeake and Ohio Canal National Historical Park includes a number of historic features that are not primarily canal-related. These have been treated along with the resources of the canal proper in the descriptive and photographic documentation accompanying Section 7. Virtually all of them are significant today as elements of the canal's historic scene, i.e., the cultural environment existing during the period of the canal's operation. In addition, some of them possess historic architectural, engineering, military, or commercial significance. Those features whose significance transcends their contribution to the canal's historic scene are covered below.

Fort Duncan and Associated Earthworks (mile 62.5). Fort Duncan and its associated batteries are significant as well preserved remnants of the Union defenses of Harpers Ferry during the Civil War.

The Union forces occupying Harpers Ferry in 1862 failed to erect more than elementary defenses, an omission contributing to the successful Confederate siege and assault leading to the surrender of 12,693 Federal soldiers on September 15, 1862. The Union Army of the Potomac soon reoccupied the town and the commanding heights across the Potomac and Shenandoah Rivers, and the Union high command decided to fortify the position to avoid repetition of the costly experience. Between October 1, 1862, and June 1863 Maryland Heights and Loudoun Heights were converted to fortresses of great strength.

The present documentation covers only those defensive works within the present Chesapeake and Ohio Canal National Historical Park. Others exist within the boundaries of Harpers Ferry National Historical Park and on private land.

Ferry Hill Plantation House (mile 72.82). This property is significant for its association with the early ferry across the Potomac River and as the boyhood home of Henry Kyd Douglas, a Confederate officer on Stonewall Jackson's staff.

The house was begun in 1812 by Henry Thomas Swearingen, of the family of Thomas Van Swearingen who began operation of the Potomac ferry to Shepherdstown in 1765. In 1816 the property was sold to John Blackford, who operated the ferry and the plantation until his death in 1839. His son Henry sold the property to Robert Douglas in 1848. Henry Kyd Douglas, son of Robert, spent his boyhood at Ferry Hill. In 1862 Federal troops occupied the house after the battle of Antietam and confined Robert because of his Confederate sympathies. During that battle the house had served as a small hospital for several Confederate officers, including the son of Robert E. Lee. The house was used by Confederate Major General Edward Johnson on his route to Pennsylvania

in 1863.

The architectural significance of the house has been impaired by extensive alterations and modifications.

Burnside House (mile 89.21). The house is architecturally significant as a good surviving example of a mid-18th century house of unusual configuration. The property included a distillery in the 18th century, and it is likely that the three adjoining but unconnected portions of the structure housed distillery employees. An unconfirmed story that Lord Fairfax sent young George Washington here to purchase whiskey warrants further investigation.

Bollman Bridge, Williamsport (mile 99.65). Built in 1879, the Bollman Bridge at West Salisbury Street is a significant engineering resource because of its association with Wendell Bollman, one of the pioneers who ushered in the modern era of structural engineering by introducing iron as a primary structural material. As the first civil engineer to evolve a system of bridging in iron to be consistently used on an American railroad (the Baltimore and Ohio), Bollman made a significant contribution to the history of civil engineering.

Although Bollman used the iron Pratt bridging design in erecting the bridge at Williamsport rather than the iron truss system he had patented in 1852, the structure is significant as one of his few surviving works and as his only bridge over the canal.

Cushwa Warehouse, Williamsport (mile 99.72). The Cushwa Warehouse, dating from the early 19th century, is a significant historic commercial resource because of the role it played in trade on the canal and in the economic development of Williamsport. Operated by the principal firm wholesaling and retailing coal, flour, iron, cement, and plaster in Williamsport for more than a century, the warehouse business had an important impact on the regional development of commerce and transportation arteries in the Williamsport-Hagerstown vicinity and surrounding Washington County.

Williamsport Power House (mile 99.75). The Williamsport Power House was built by the Hagerstown Railway Company in 1896 as the first power source for the new electric trolley line running from Williamsport to Hagerstown. It survives to represent the beginnings of a transportation era in Washington County lasting until 1954. Electricity generated here was also sold for lighting and other purposes, so that this first power house in the county also represents the beginnings of the electric utilities industry in the area.

With the rapid extension of the trolley lines, the Williamsport Power House soon became inadequate and was replaced around 1900 by a new facility in Hagerstown. In 1911 the abandoned structure was conveyed back to the Cushwa family, the original owner of the property, and was used thereafter for the storage of coal, sand, and other materials. The National Park Service acquired the property in 1974.

Adaptive Use of Buildings

The primary significance of virtually all buildings included in this documentation lies in their exterior appearance and their contribution to the historic scene. Continued or adaptive use of habitable or otherwise functional buildings has occurred without detriment to their primary values and is encouraged as a means to their preservation.

M:12-46

9 MAJOR BIBLIOGRAPHICAL REFERENCES

See accompanying continuation sheet. A comprehensive bibliography is on file in the office of Professional Services, National Capital Region.

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 20,239

UTM REFERENCES See continuation sheets.

	ZONE	EASTING	NORTHING		ZONE	EASTING	NORTHING
A				B			
C				D			

VERBAL BOUNDARY DESCRIPTION

The National Register boundary is that authorized for the Chesapeake and Ohio Canal National Historical Park by Public Law 91-664, which makes reference to five boundary map sheets numbered CHOH 91,000. Copies of the sheets accompany this documentation. The boundary has been carefully reproduced in larger scale on the accompanying U.S.G.S. quadrangles. The riverbank generally constitutes the southern edge of the park; the inland edge varies widely in distance from the canal prism.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
District of Columbia (11); Maryland (24)		counties of Montgomery (031), Frederick (021),	
STATE	CODE	COUNTY	CODE
Washington (043), Allegany (001).			

11 FORM PREPARED BY

NAME / TITLE

Philip S. Romigh, Architect, 12/76; Barry Mackintosh, Historian, 3/79

ORGANIZATION — DATE

National Capital Region, National Park Service — (202) 426-6660

STREET & NUMBER — TELEPHONE

1100 Ohio Drive, S.W.

CITY OR TOWN — STATE

Washington — D.C.

12 CERTIFICATION OF NOMINATION (Park automatically listed in National Register upon authorization by Congress.)

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES____ NO____ NONE____

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is __X__ National ____ State ____ Local

FEDERAL REPRESENTATIVE SIGNATURE

TITLE — DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST — DATE

KEEPER OF THE NATIONAL REGISTER

M.12-46

Form No. 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

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*Unpublished National Park Service research studies available in the office of Professional Services, National Capital Region.

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CONTINUATION SHEET ITEM NUMBER 10 PAGE 1

UTM References

UTM references are keyed by numbers in parentheses. The numbered points run from Georgetown to Cumberland along the river side of the park and return along the inland side.

Point No.	UTM Reference	Quadrangle
(1)	18/321650/4307935	Washington West
(2)	18/321610/4307370	"
(3)	18/318190/4308380	"
(4)	18/314080/4314370	Falls Church
(5)	18/304880/4316660	"
(6)	18/305380/4322660	Rockville
(7)	18/297940/4326460	Seneca
(8)	18/289520/4326910	Sterling
(9)	18/281650/4334090	Waterford
(10)	18/282540/4338070	"
(11)	18/288100/4344370	Poolsville
(12)	18/285520/4347380	"
(13)	18/281050/4349180	Pt. of Rocks
(14)	18/278820/4352680	"
(15)	18/272520/4354350	Harpers Ferry
(16)	18/269430/4355830	"
(17)	18/265030/4335940	"
(18)	18/262100/4357840	"
(19)	18/263760/4360520	"
(20)	18/263020/4362700	Sheperdstown
(21)	18/264600/4363210	Keedysville
(22)	18/262900/4367760	Sheperdstown
(23)	18/258940/4368600	"
(24)	18/259540/4373910	"
(25)	18/261950/4374760	"
(26)	18/255000/4375420	"
(27)	18/256030/4377980	Williamsport
(28)	18/253900/4377600	"
(29)	18/251590/4382870	Hedgesville
(30)	18/256420/4383190	Williamsport
(31)	18/256720/4387560	"
(32)	18/252280/4388680	Hedgesville
(33)	18/252850/4386740	"
(34)	18/247840/4388250	Hedgesville
(35)	18/247520/4385530	"
(36)	17/756880/4387730	Big Pool
(37)	17/751520/4394400	Cherry Run
(38)	17/747710/4396430	"
(39)	17/742000/4397700	Hancock
(40)	17/734820/4390060	Bellegrove
(41)	17/734830/4388910	"
(42)	17/733140/4389040	"
(43)	17/727980/4390900	"
(44)	17/725190/4387250	Paw Paw
(45)	17/721060/4389100	"
(46)	17/724430/4383680	"
(47)	17/718360/4384900	"
(48)	17/721970/4380600	"
(49)	17/717480/4376920	"
(50)	17/709220/4377160	Oldtown
(51)	17/704380/4379030	"
(52)	17/700850/4378510	Patterson Creek
(53)	17/694510/4382220	"
(54)	17/691540/4385190	Cresaptown
(55)	17/694600/4387320	Patterson Creek
(56)	17/690540/4388150	Cresaptown
(57)	17/691840/4391050	Cumberland
(58)	17/692000/4390670	"
(59)	17/691140/4388170	Cresaptown
(60)	17/693040/4388730	Cumberland
(61)	17/696040/4387830	Patterson Creek
(62)	17/692370/4384530	Cresaptown
(63)	17/694740/4384400	Patterson Creek
(64)	17/695040/4382830	"
(65)	17/700620/4379240	"
(66)	17/703990/4379840	"

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Point No.	UTM Reference	Quadrangle
(67)	17/711540/4378040	Oldtown
(68)	17/717180/4377460	Paw Paw
(69)	17/718000/4385960	"
(70)	17/723140/4384700	"
(71)	17/719480/4387460	"
(72)	17/720410/4389540	"
(73)	17/722980/4388680	"
(74)	17/727780/4391780	Bellegrove
(75)	17/734120/4389120	"
(76)	17/737100/4395080	Hancock
(77)	17/741600/4398050	"
(78)	17/748000/4396720	Cherry Run
(79)	17/751980/4394400	"
(80)	18/243300/4388030	Hedgesville
(81)	18/246840/4389720	"
(82)	18/251730/4389270	"
(83)	18/257910/4387740	Williamsport
(84)	18/257120/4383010	"
(85)	18/252560/4381910	Hedgesville
(86)	18/257570/4379430	Williamsport
(87)	18/257490/4375990	"
(88)	18/262820/4376130	Williamsport
(89)	18/260820/4368580	Shepherdstown
(90)	18/264070/4367750	Keedysville
(91)	18/264900/4363550	"
(92)	18/264460/4356900	Harpers Ferry
(93)	18/269580/4356590	"
(94)	18/279260/4354090	Pt. of Rocks
(95)	18/281280/4350250	"
(96)	18/289440/4345180	Poolesville
(97)	18/285300/4337680	"
(98)	18/282890/4338140	Waterford
(99)	18/282730/4333540	"
(100)	18/286160/4332790	Sterling
(101)	18/287640/4328940	"
(102)	18/293240/4327000	"
(103)	18/297160/4328120	Seneca
(104)	18/300590/4326820	"
(105)	18/306770/4322160	Rockville
(106)	18/305680/4317630	Falls Church
(107)	18/314740/4315290	"
(108)	18/318960/4308380	Washington West

Buildings 1-4, 4E, & 4S (David Taylor Model Basin)
NSF Carderock
MIHP # M:29-47
Montgomery County
West Bethesda
1938/1944-1946
Public

Buildings 1-4, 4E, and 4S are located in the central portion of the 183.6-acre Naval Support Facility (NSF) Carderock, formerly known as the Naval Surface Warfare Center Carderock Division (NSWCCD). Located approximately 12 miles northwest of Washington, D.C., near Bethesda, Maryland, NSF Carderock is situated north of the Potomac River and is bordered by the Clara Barton Parkway to the south and MacArthur Boulevard to the north and east. The installation is composed of 123 buildings and structures that function as research laboratories, administration facilities, and operations and utility structures. At the center of the installation is the David Taylor Model Basin (Buildings 1-4), a group of interconnected buildings that include a model basin, an administration building, a shop building, and a laboratory. The David Taylor Model Basin was listed in the NRHP in 1985. In 1996 a Historic District at NSF Carderock was determined eligible for the NRHP, and 44 of the 116 identified built resources were recognized as contributing. Buildings 1-4, 4E, and 4S are contributing resources in the NSF Carderock Historic District (MIHP # M:29-52).

The David Taylor Model Basin is a complex of four interconnected buildings that were the first built at what is now NSF Carderock. The buildings were constructed to house experimental, shop, and office facilities for research and development in ship design. When the Navy constructed the facility in 1938, it was the best of its kind in the world. The Bureau of Yards and Docks designed the buildings under the direction of Cdr. Ben Moreell, who later became the chief of the Bureau. Although the buildings are utilitarian, they also reflect aspects of the Art Deco style, which was popular in the design of federal buildings during the 1930s and early 1940s. Although the facilities at NSF Carderock have expanded since 1936 with the construction of many new buildings, Buildings 1-4 still stand as the centerpiece of the campus. Building 4, the model basin, was expanded in 1944-1946 and at that time Buildings 4E and 4S were built on the east end of Building 4.

Buildings 1-4 were the first and most important buildings constructed on the NSF Carderock campus. The buildings are significant under Criterion A for their association with the contemporary United States Navy and under Criterion C as unique scientific facilities of distinctive design.

Maryland Historical Trust
Maryland Inventory of
Historic Properties Form

Inventory No. M: 29-47

1. Name of Property (indicate preferred name)

historic Buildings 1-4, 4E, and 4S (David Taylor Model Basin)
other

2. Location

street and number Naval Support Facility Carderock, 9500 MacArthur Blvd. __ not for publication
city, town West Bethesda __ vicinity
county Montgomery

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

name United States Navy
street and number 9500 MacArthur Blvd. telephone
city, town West Bethesda state zip code 20817

4. Location of Legal Description

courthouse, registry of deeds, etc. Montgomery County Courthouse liber folio
city, town Rockville tax map tax parcel tax ID number

5. Primary Location of Additional Data

_____ Contributing Resource in National Register District
_____ Contributing Resource in Local Historic District
_____ Determined Eligible for the National Register/Maryland Register
_____ Determined Ineligible for the National Register/Maryland Register
_____ Recorded by HABS/HAER
_____ Historic Structure Report or Research Report at MHT
__X__ Other: Listed on the National Register

6. Classification

Category
_____district
__X__building(s)
_____structure
_____site
_____object

Ownership
__X__public
_____private
_____both

Current Function
_____agriculture
_____commerce/trade
__X__defense
_____domestic
_____education
_____funerary
__X__government
_____health care
_____industry
_____landscape
_____recreation/culture
_____religion
_____social
_____transportation
_____work in progress
_____unknown
_____vacant/not in use
_____other:

Resource Count

Contributing	Noncontributing	
4	_____	buildings
_____	_____	sites
_____	_____	structures
_____	_____	objects
4	0	Total

Number of Contributing Resources previously listed in the Inventory
4

7. Description

Inventory No. M: 29-47

Condition

X excellent	___ deteriorated
___ good	___ ruins
___ fair	___ altered

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

Buildings 1-4, 4E, and 4S are located in the central portion of the 183.6-acre Naval Support Facility (NSF) Carderock, formerly known as the Naval Surface Warfare Center Carderock Division (NSWCCD). Located approximately 12 miles northwest of Washington, D.C., near Bethesda, Maryland, NSF Carderock is situated north of the Potomac River and is bordered by the Clara Barton Parkway to the south and MacArthur Boulevard to the north and east. The installation is composed of 123 buildings and structures that function as research laboratories, administration facilities, and operations and utility structures. At the center of the installation is the David Taylor Model Basin (DTMB) (Buildings 1-4), a group of interconnected buildings that include a model basin, an administration building, a shop building, and a laboratory. The DTMB (Buildings 1-4) was individually listed in the National Register of Historic Places in 1985. In 1996 a Historic District at NSF Carderock was determined eligible for the National Register, and 44 of the 116 identified built resources were recognized as contributing. Buildings 1-4, 4E, and 4S are contributing resources in the NSF Carderock Historic District (M: 29-52).

The DTMB is a complex of four interconnected buildings that were the first built at what is now NSF Carderock. The buildings were constructed to house experimental, shop, and office facilities for research and development in ship design. When the Navy constructed the facility in 1938, it was the best of its kind in the world. The Bureau of Yards and Docks designed the buildings under the direction of Cdr. Ben Moreell, who later became the chief of the Bureau. Although the buildings are utilitarian, they reflect aspects of the Art Deco and Art Moderne styles, both of which were popular in the design of federal buildings during the 1930s and early 1940s. The facilities at NSF Carderock have expanded since 1938 with the construction of many new buildings; however, Buildings 1-4 still stand as the centerpiece of the campus. Buildings 4E and 4S were constructed between 1944 and 1946 during an expansion of the model basin.

Buildings 1-3

Buildings 1-3 (1938) form an interconnected rectangular building that measures approximately 960 feet in length. The exterior walls of the masonry building are faced with a layer of quartz aggregate and white cement that gives the building a streamlined facade. Building 2 comprises the center eight bays of the building and is three stories high. Buildings 1 and 3 flank Building 2 and are each two stories high and 16 bays long. Although the buildings are decidedly horizontal, their verticality is accentuated by recessed bays with reeded surrounds that break up the façades and by four projecting towers, which are located at the entrances to each building. The most prominent feature is the center tower of Building 2, which provides a visual focus and serves as a unifying feature of the three buildings. The multi-leveled tower features vertical bands of windows and a geometric cut-out motif. The centered segmental-arched entrance holds a double-leaf metal and glass door with glass sidelights and a transom that create an entrance vestibule. The large original doors are metal and glass. The decorative metal frame of the door features a square and circular panel motif with the letters "USN" for United States Navy in the center panels. The entrance to Building 2 is fronted by concrete stairs that are accented by two large metal lamps designed with an Art Deco motif. The windows of the building are set in recessed openings ornamented with concrete reeded surrounds. The windows are multi-light metal sash awning with concrete sills. Between the first- and second-story windows on Building 1 and Building 3 are concrete spandrels with an undulating V motif. On Building 1 the metal spandrels are located between the windows on the second and third stories, with a similar motif along with a diamond pattern along the top of each spandrel.

Building 1 is currently being used as the Marine Systems Integration Facility. On the ground floor is the model and machine shop, which fabricates the models for use in the model basin. The shop consists of a large open space. The second floor is used for offices. A temporary floor currently divides the second floor to create a third level of office space.

Building 2 is the Command Research, Development, Test and Evaluation (RDT&E) Command Facility and the Hydromechanics Department. The building provides three floors of office space. The double loaded corridors contain the original door frames and transom windows. The spacious main lobby features terrazzo floors with a center mosaic compass. Art Deco-style sconces and chandeliers light the lobby. Segmental arched openings separate the central portion of the lobby from two smaller, flanking rooms.

The intrados of the arches are decorated by a dart motif. A ceremonial Art Deco-style staircase is located in the west room of the entrance lobby and originally led up to a museum on the second floor, which is currently used as the main conference room. The dogleg stair has a curved chrome balustrade and rail, and the treads are also covered with chrome. The back wall of the lobby is decorated with a mural of the model basin.

Building 3 serves as the Research, Development, and Evaluation Facility (RD&E) for the Ship Signatures Department. The ground floor of the building originally held a large open space, used as a lab, that is now partitioned. The second floor of the building holds offices and has been divided with a temporary floor to add a third level of office space.

Buildings 4, 4E, and 4S

Building 4 (1938), the model basin, stands north of Buildings 1-3; the buildings are connected by an enclosed passage. The model basin is approximately 3,150 feet long, extended from its original length of 1,300 feet in 1944-1946, and has a three-hinge barrel vault roof that is covered in asphalt shingles. The building rests directly on bedrock, and the walls of the basin are constructed of reinforced concrete. The model basin has no windows or skylights, to control temperature, lighting, and bacteria growth. The basin houses three separate towing facilities for model testing, including hull resistance, self-propulsion, and flow measurement experiments. The three towing facilities are the Shallow Water Basin, used to test tugboats and barges; the Deep Water Basin, for large model testing; and the High Speed Basin, used to test patrol boats, motor boats, and similar watercraft. The High Speed Basin has both a deep water section and a shallow water section. Wavemaking capabilities are also available in the High Speed Basin. Each of the three basins has a towing carriage. The rails that line the length of the edge of the basin to support the carriages were shaped and positioned to parallel the curvature of the earth and allow the carriages to maintain precise contact speed with towing ship models during experimental tests (Allison 1984; Melhuish 1995)

Buildings 4E and 4S are attached to the east end of Building 4 (the model basin) and were constructed as part of the 1944-1946 expansion. Building 4E comprises the southern half and Building 4S the northern half.

Building 4E is two stories high above a concrete foundation. The site slopes downward to the east and the basement is exposed on the south elevation. The building is constructed of poured concrete and is capped with a flat roof. A concrete watertable separates the basement from the first story. A metal roll-up loading door is located on the basement level of the south elevation. The first and second stories of the south elevation are pierced by two rows of multi-light metal-sash windows set in vertical recessed panels that are adorned with concrete reeded surrounds. The east elevation is pierced by two roll-up metal doors and a single-leaf metal door on the first story. The northeast corner of the east elevation has a single multi-light metal-sash window set in a vertical recessed panel that is adorned with concrete reeded surrounds. The east elevation is primarily unfenestrated on the second story and features large blue lettering the reads "David Taylor Model Basin."

Building 4S is two stories high and is divided into two sections on the east and west. The east section is slightly shorter in height than the west. Building 4S is constructed of poured concrete and has a flat roof. The east elevation is pierced by bands of multi-light metal-sash windows on the first and second stories. A single-leaf metal door is located on the north end of the second story and is accessible by a metal stair. The north elevation of the east section is fenestrated by bands of multi-light metal-sash windows on the first and second stories. The west section has five large multi-light windows with a continuous concrete sill. The window openings on the west section are flanked by concrete reeded surrounds.

8. Significance

Inventory No. M: 29-47

Period	Areas of Significance	Check and justify below		
__ 1600-1699	__ agriculture	__ economics	__ health/medicine	__ performing arts
__ 1700-1799	__ archeology	__ education	__ industry	__ philosophy
__ 1800-1899	X architecture	__ engineering	__ invention	__ politics/government
X 1900-1999	__ art	__ entertainment/ recreation	__ landscape architecture	__ religion
__ 2000-	__ commerce		__ law	__ science
	__ communications	__ ethnic heritage	__ literature	__ social history
	__ community planning	__ exploration/ settlement	__ maritime history	__ transportation
	__ conservation		X military	__ other: ____

Specific dates	1938-1970	**Architect/Builder**	U.S. Navy, Bureau of Yards and Docks
Construction dates	1938, 1944-1946		

Evaluation for:

_____ National Register _____Maryland Register ___X___not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

Significance Summary

Buildings 1-4 are individually listed in the National Register and are considered contributing resources in the National Register-eligible historic district (M:29-52). Buildings 4E and 4S, which are part of Building 4 and were built during the 1944-1946 expansion of the model basin, should also be treated as contributing to the district. In 1996 the NSF Carderock Historic District was found to possess the qualities of exceptional importance defined under National Register Criterion Consideration G in the historic context of military research, design, testing, and evaluation. NSF Carderock also meets eligibility Criteria A and C, as it is associated with events that have made a significant contribution to the broad patterns of military technology (Criterion A) and retains an intact collection of research, design, testing, and evaluation buildings and facilities (Criterion C).

Historic Context

The David Taylor Model Basin (1937 to 1952)

The United States Navy constructed its first laboratory for studying ship construction and technology in 1898 at the Washington Navy Yard. The United States Experimental Model Basin, as it was called, was built under the auspices of Rear Adm. David Watson Taylor. Initial research involved a basin and a carriage that towed wooden ship models. In 1912, as the Navy moved toward aeronautical endeavors, the facility explored wind tunnel technology. The Navy's first wind tunnel was operational by 1914. The Navy soon outgrew these facilities as ship and aircraft testing evolved and no space at the Navy Yard was available for expansion.

In May 1936 Congress appropriated $3.5 million for land acquisition and construction of a new facility. The site at Carderock was chosen for its location near Washington, D.C., and the Navy headquarters, its access to the Potomac River in order to fill the basins, and its bedrock foundation that would support the massive testing mechanisms. In addition, the site was large enough for a 100 percent expansion in 50 years (Carlisle 1998:140).

Construction started at the Carderock campus on September 8, 1937, and it was dedicated on November 4, 1939 (Carlisle 1998:145). It was named the David Taylor Model Basin in honor of Rear Adm. David Watson Taylor. Cdr. Ben Moreell is credited with the design of the new basin. The initial buildings constructed on the campus included an interconnecting administration building, shop, and laboratory building (Nos. 1, 2, and 3) arranged in a linear pattern. These support buildings reflect the influence of the Art Deco and streamlined Art Moderne style favored by the federal government during the 1930s and 1940s. The model basin was constructed parallel to the three structures and housed a deep water basin, a shallow water and turning basin, and a high speed basin. The main entrance to the interconnecting office buildings, shop, and lab was designed to face south, toward the Potomac River. A large, grassy "meadow" fronted the centered main entrance of Building 2 and extended south toward the river. This vast south lawn added to

the open and campus-like feeling of the facility but also allowed for future expansion. In 1985 the DTMB and associated buildings were listed in the National Register.

The primary mission of the DTMB, as defined by Congress, was to investigate and determine the most suitable and desirable shapes and forms for naval vessels and aircraft (Melhuish 1996). During its first year of operation, the DTMB was mostly involved in design work, but at the outset of World War II, activities at the DTMB were focused on war-related topics. Research became a major directive, and new facilities and staff were added to support research activities. New facilities added to the installation included a *research pit* for explosion testing (1941), wind tunnels and associated buildings (1942), a pentagonal test pond to test underwater explosives (1943), the Circulating Water Channel to test the angles and drag of submerged towed devices (1942), and two supersonic wind tunnels that had been dismantled in Germany and installed at Carderock (1946) (Melhuish 1996).

During this rapid expansion, careful consideration was given to the overall physical planning and growth of the installation. Under the direction of Capt. H.S. Howard, the installation grew with the addition of 47 acres in 1943 and 55 acres in 1946. Howard wrote in 1945, "Having in mind the architecture of the main building, I visualize something in the nature of a college campus or graduate school grown up around and in front of the main building. A row of buildings might well grow to the east and to the west of the main building toward the south but the central area should be kept free of building so that eventually a U-shaped group is formed with the open end toward the Highway" (Carlisle 1998:192). The campus of buildings created at Carderock during this period was determined eligible for the National Register as the Naval Surface Warfare Center Carderock Division Historic District in 1996.

The "Golden Age of Research" (1952 to 1970)

Expansion of the aerodynamics facilities at Carderock after World War II coincided with a "drastic realignment" of mission that inaugurated a "Golden Age of Research" at DTMB (McCarthy 1993:30, 34). In 1952 the Navy established the Applied Mathematics Department at Carderock and introduced computer-based research, beginning with a Universal Automatic Computer in 1953 and the Livermore Atomic Research Computer in 1960. The basin itself was also improved after World War II: construction began on a new 36-inch water tunnel in 1955 and on a maneuvering basin and a large rotating arm basin (under one roof and called the Maneuvering and Seakeeping [MASK] facility) in 1956. The MASK facility was ready for calibration and use in 1961, and the water tunnel was completed the following year (Brownell 1962:2-3).

Facilities at Carderock expanded again in 1964 with the Acoustics and Vibration Laboratory, which brought together scientists and engineers from several other departments to play a lead Navy role in measurement and diagnosis of full-scale radiated noise signatures from ships and submarines, which was an area of inquiry of paramount importance to the Navy's submarine warfare programs (McCarthy 1993:32). Four years later the Structural Mechanics department obtained a major new facility featuring five high-pressure deep submergence tanks for testing the hulls of underwater vehicles and a test bed for stressing large model ship structures under loads up to 250,000 pounds. On March 31, 1967, the Marine Engineering Laboratory at Annapolis and the Carderock facilities were merged to form the David Taylor Naval Ship Research and Development Center.

By 1970 the acoustics department had significantly expanded its capabilities with the addition of acoustic ranges off Washington and California, plus, at Carderock, completion of an Anechoic Data Analysis Center and an anechoic flow facility consisting of a subsonic wind tunnel equipped with an anechoic chamber. That same year the Systems Development Department was created "with the intention of providing a total ship systems, hardware-oriented focus" (McCarthy 1993:32-36). The "Golden Age" of research at DTMB came to an end in the 1970s, as funding declined and the staff was reduced from 3,122 to 2,482 (McCarthy 1993:33).

NSF Carderock (1971 to present)

When funding resumed under the Reagan Administration (1981 to 1989) in the 1980s, it was on a very different basis, as most of the Center's annual budget was contracted to private industry. The Center was increasingly involved in both design and hardware demonstration phases of vehicle development, and there was much less support for "fundamental research, exploratory development, and advanced development investigations" (McCarthy 1993:37, 40). The NSF Carderock was established in January 1992 under the U.S. Navy's Laboratory Consolidation Plan. The division was formed by the merger of DTMB and the Naval Ship Systems Engineering Station, Philadelphia.

In 1985 the DTMB and associated buildings (Buildings 1-4) were listed in the National Register (M: 29-47). The campus of buildings created at Carderock from 1938 to 1958 was determined eligible for the National Register as the Naval Surface Warfare Center Carderock Division Historic District (NSWCCD) in 1996. The determination of eligibility stated that NSF Carderock possesses the qualities of exceptional significance under Criterion G "within the historic context of military research, design, testing, and evaluation." It also stated that NSF Carderock meets Criteria A for its events that that have made a significance contribution to military technology and Criterion C for its intact collection of RDT&E buildings and facilities. The period of significance for the historic district was determined as beginning in 1938 when the model basin was constructed and ending in 1958, the end date of physical model testing and the official mission change to include computer research and testing. In 1996, 116 built resources were recorded at NSF Carderock and 44 were determined as contributing to the historic district (Melhuish 1996).

In 2006 Berger updated the ICRMP for NSF Carderock. In October-November 2005 Buildings 16 and 18 were re-evaluated and found to be eligible for the National Register as contributing elements in the NSF Carderock Historic District. This evaluation also recommended that the period of significance for the historic district (originally 1938 to 1958) warranted expansion to 1970, marking the completion of the Anechoic Test facility and the close of the 20 "Golden Years of Research" at DTMB (Bowers 2005).

Buildings 1-4

Buildings 1-4 were built in 1938 as the first and most significant buildings constructed on the NSF Carderock campus. The buildings are significant under Criterion A for their association with the contemporary United States Navy and under Criterion C as unique scientific facilities of distinctive design (Allison 1984). Buildings 4E and 4S, which are part of Building 4 and were built during the 1944-1946 expansion of the model basin, should be treated as contributing as part of Buildings 1-4.

9. Major Bibliographical References

Inventory No. M: 29-47

See continuation sheet.

10. Geographical Data

Acreage of surveyed property	less than 0.5 acres		
Acreage of historical setting	less than 0.5 acres		
Quadrangle name	Falls Church	Quadrangle scale:	1:24000

Verbal boundary description and justification

The boudary of the property is the footprint of the buildings within NSF Carderock located in West Bethesda.

11. Form Prepared by

name/title	Patti Kuhn, Architectural Historian		
organization	The Louis Berger Group, Inc.	date	4/4/2011
street & number	1250 23rd Street, NW	telephone	202-303-2665
city or town	Washington	state	DC

The Maryland Inventory of Historic Properties 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
Maryland Department of Planning
100 Community Place
Crownsville, MD 21032-2023
410-514-7600

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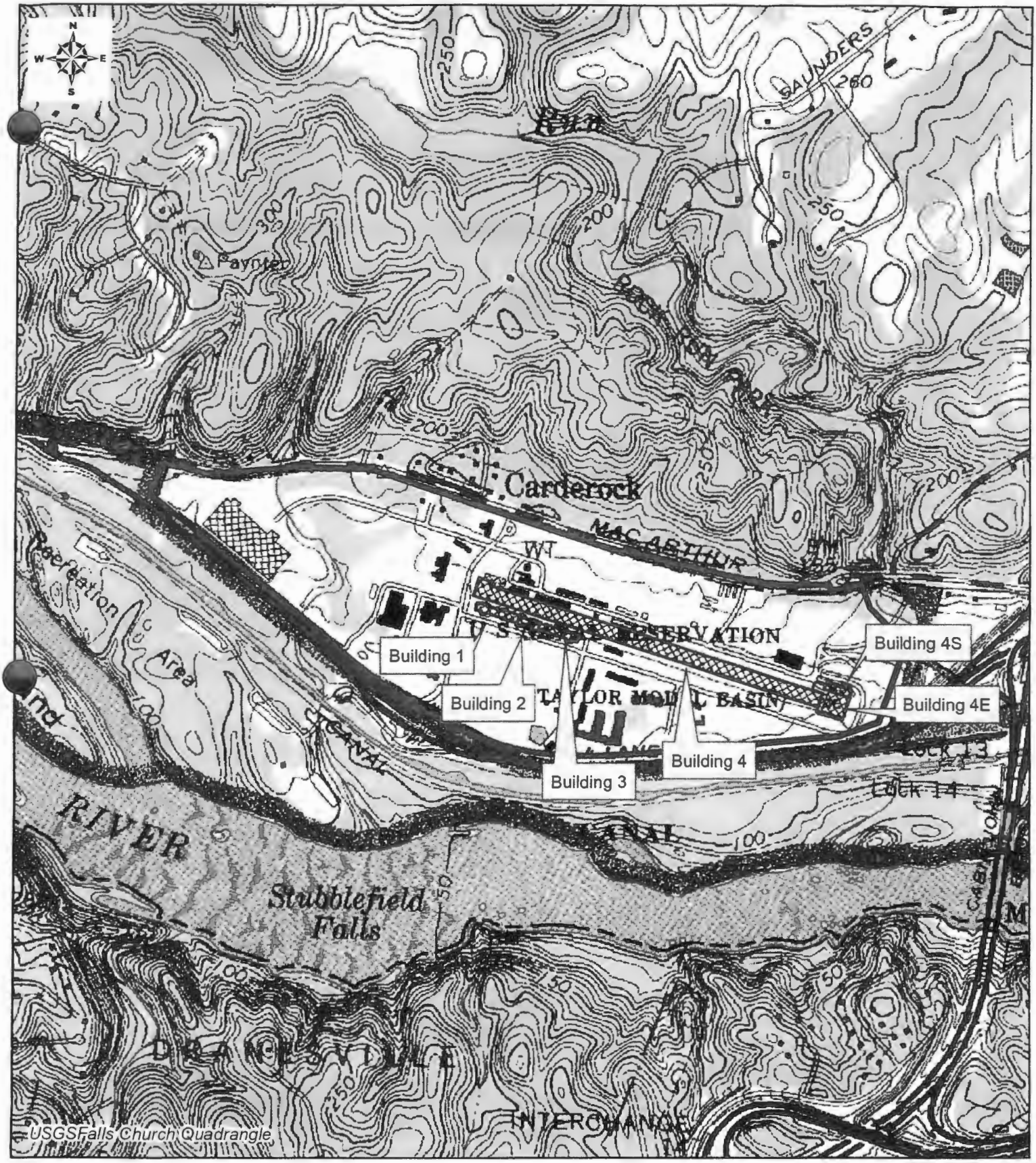
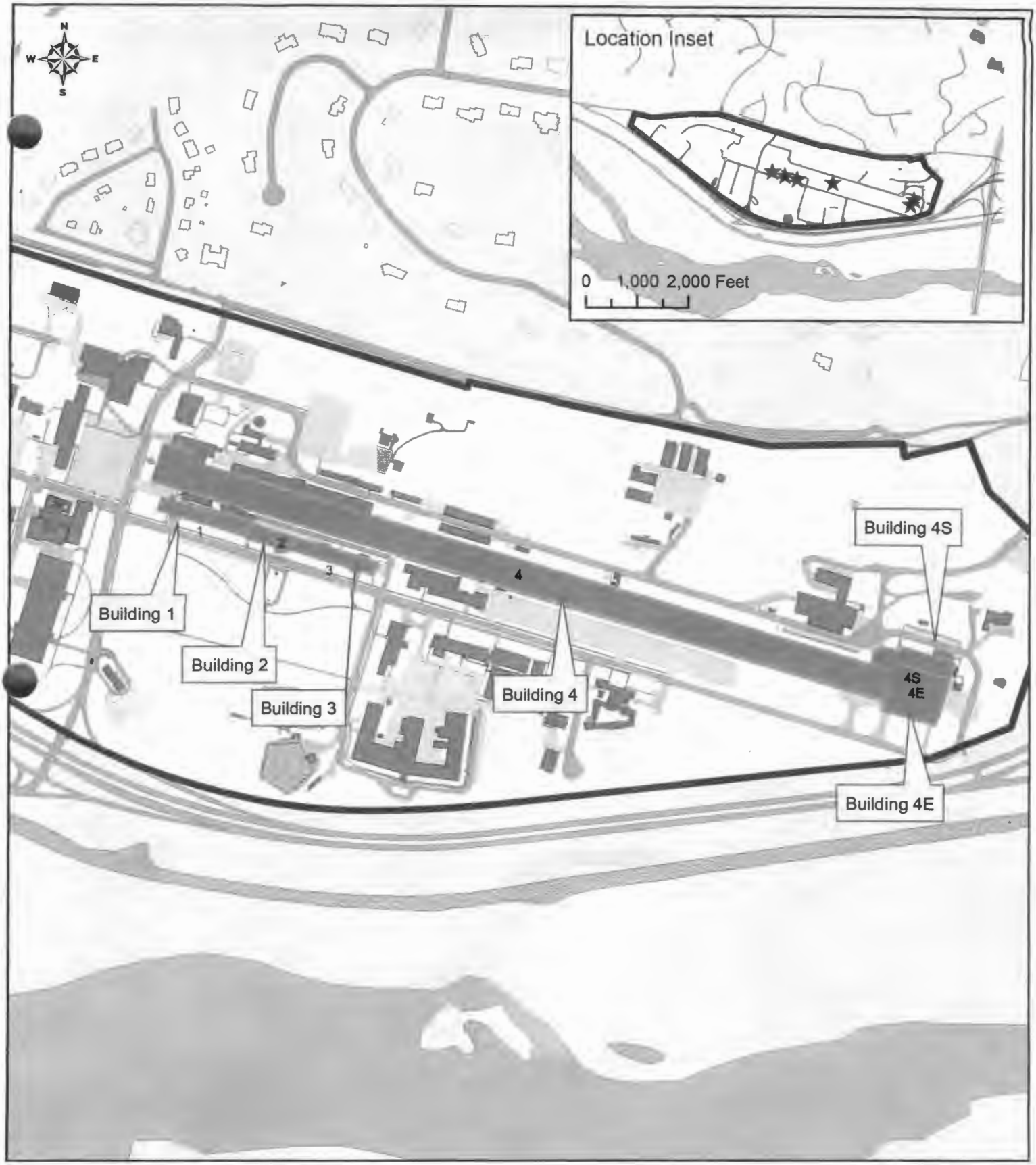


Historic District

500 0 500 Feet

Naval Support Facility, Carderock
NSWCCD Historic District (MIHP No. M:29-47)

Building Numbers 1, 2, 3, 4, 4E, and 4S



Historic District
Structures

50 0 50 Feet

Naval Support Facility, Carderock
NSWCCD Historic District (MIHP No. M:29-47)

Building Numbers 1, 2, 3, 4, 4E, and 4S

M:29-47

NSF CARDEROCK

BUILDINGS 1-3. SHOP, OFFICE, AND LABORATORY BUILDINGS

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MD SHPO

SOUTH ELEVATION, LOOKING NORTHWEST

PHOTO 1 OF 8

M: 29-17

NSF CARDEROCK

BLDG 2. OFFICE BUILDING

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MDSHPO

SOUTH ELEVATION, LOOKING NORTH

PHOTO 2 OF 8

M: 29-47

NSF CANDEROCK

BLDGS 1 AND 2

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MDSHPO

SOUTH ELEVATION, LOOKING WEST

PHOTO 3 OF 8

M:29-47

NSF CARDEROCK

BLDG 1. SHOP BUILDING

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MDSHPO

NORTHWEST CORNER, LOOKING SOUTHEAST

PHOTO 4 OF 8

M:29-47

NSF CARDEROCK

BLDG 4. MODEL BASIN

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MD SHPO

SOUTH ELEVATION, LOOKING NORTHWEST

PHOTO 5 OF 8

M:29-47

NSF CARDEROCK

BLDG 4E

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MDSHPO

SOUTHWEST CORNER, LOOKING NORTHEAST

PHOTO 6 OF 8


DAVID TAYLO
MODEL B

M: 29-47

NSF CARDEROCK

BLDGS 4E AND 4S

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MD SHPO

EAST ELEVATIONS, LOOKING SOUTHWEST

PHOTO 7 OF 8

M: 29-47

NSF CARDEROCK

BLDG 45

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MDSHPO

NORTH ELEVATION, LOOKING SOUTHEAST

PHOTO 8 OF 8

Form No. 10-306 (Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR FEDERAL PROPERTIES

FOR NPS USE ONLY
RECEIVED SEP 3 1985
DATE ENTERED OCT 17 1985

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC
David W. Taylor Model Basin

AND/OR COMMON
David W. Taylor Model Basin, David W. Taylor Naval Ship Research + Developmer Ctr

2 LOCATION

STREET & NUMBER
David W. Taylor NSRDC, Carderock Laboratory — N/A NOT FOR PUBLICATION

CITY, TOWN
Bethesda, — n/a VICINITY OF — CONGRESSIONAL DISTRICT 8th

STATE
Maryland — CODE 24 — COUNTY Montgomery — CODE 03

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
X DISTRICT	X PUBLIC	X OCCUPIED	AGRICULTURE	MUSEUM
X BUILDING(S)	PRIVATE	UNOCCUPIED	COMMERCIAL	PARK
STRUCTURE	BOTH	WORK IN PROGRESS	EDUCATIONAL	PRIVATE RESIDENCE
SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	ENTERTAINMENT	RELIGIOUS
OBJECT	IN PROCESS	X YES: RESTRICTED	GOVERNMENT	SCIENTIFIC
	BEING CONSIDERED	YES: UNRESTRICTED	INDUSTRIAL	TRANSPORTATION
	X N/A	NO	X MILITARY	OTHER:

4 AGENCY

REGIONAL HEADQUARTERS: *(If applicable)*
U. S. Navy

STREET & NUMBER
David W. Taylor NSRDC, Carderock Laboratory

CITY, TOWN
Bethesda — n/a VICINITY OF — STATE Maryland

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Land Records Office

STREET & NUMBER
Montgomery County Courthouse

CITY, TOWN
Rockville — STATE Maryland

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
David W. Taylor NSRDC Archeological Survey

DATE
1984 — X FEDERAL — STATE — COUNTY — LOCAL

DEPOSITORY FOR SURVEY RECORDS
Maryland Historical Trust

CITY, TOWN
Annapolis — STATE Maryland 21401

ENCL (1)

7 DESCRIPTION

M:29-47

CONDITION	CHECK ONE	CHECK ONE
X EXCELLENT	_UNALTERED	X ORIGINAL SITE
_GOOD	X ALTERED	_MOVED DATE_____
_FAIR		
_DETERIORATED		
_RUINS		
_UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

Summary Description

The David W. Taylor Model Basin is an interconnected complex of the 4 original buildings of the current David W. Taylor Naval Ship R&D Center. The buildings house experimental, shop, and office facilities for research and development in ship design. When constructed, the facilities were the best of their kind in the world. Their design won "First Award of Class A" and a special commendation from the Jury in the Sixth Annual Exhibition of the Association of Federal Architects, 1937. Although many other buildings have been erected at the Center's Carderock Laboratory over the years, these original four still serve as its visual and administrative heart. The buildings immediately north of building 4 are considered intrusions and are not included in this nomination.

Except for an extension of building 4 and limited internal refurbishing, the complex is in its original state. Buildings 1-3, which are actually a single, rectilinear structure, measure approximately 960 feet in length. Building 4, connected to the others by an enclosed passage, stands parallel and behind them. Originally, it measured 1300 feet in length, but has since been extended to 3150 feet.

General Description

The David W. Taylor Model Basin is located in the rock gorge of the Potomac River, some twelve miles from the center of the city of Washington. It is bordered by the George Washington Memorial Parkway and MacArthur Boulevard. Although the Center's mailing address is Bethesda, the nearest towns are Cabin John and Potomac, Maryland. The site was selected to fulfill four basic requirements. First, bedrock had to be close to the surface to support foundations for the tracks of the towing carriages of the model basin. Second, an ample supply of fresh water to supply the basins had to be available. Third, the establishment had to be near the Navy Department Headquarters in Washington. Finally, the site had to be as free as possible from noise, ground vibration, smoke, and dirt. The location at Carderock, selected after a long search, met all these qualifications.

The buildings were designed by the Bureau of Yards and Docks under the direction of Commander Ben Morell, who later became Chief of the Bureau. They were to be utilitarian, but also dignified and modern. As is typical of the Federal Architectural style of the period, a strong influence of art deco is apparent. Note, for instance, the strong vertical lines, the ornamentation, and the central tower. The external surface of the main building group is faced with a layer of quartz aggregates and white cement that give it a diffuse white aspect. According to an early description, the design was "intended to express a clarity of line, thought, and purpose

See Continuation Sheet Number 1

David W. Taylor Model Basin
Montgomery County, Maryland

GENERAL DESCRIPTION (continued)

typifying the nature and function of the establishment." (Saunders and Hodtwalker, 1947) This motif was also significant for the structural plan, which was among the earliest applications of modern principles of analysis of continuous frames in buildings of its size and loading. (Ibid).

The central tower of building 2 provides a visual focus unifying the three buildings. Its large, ornamented main doors are approached by a broad staircase flanked by tall, classically styled lamps. The doors open to the spacious main lobby, whose floor is ornamented by a mosaic compass. Mosaics on the walls and the lighting fixtures reemphasize the art deco style of the exterior. Steps lead from the lobby to what was originally designed as a museum, but now serves as the Center's main conference room. Its walls are decorated with mosaics of six historic ships chosen to illustrate the evolution of Navy ship design from the mid 19th century to the 1930's. Alcoves of the lobby have historical displays about Rear Admiral David W. Taylor, the Center's namesake, and Captain Harold Saunders, who was principally responsible for its technical design and later served as its director.

In contrast, buildings 1 and 3 are two-story buildings with a large open bay workspace on the ground level and research spaces on the second floor. Both buildings were originally designed to provide the support space needed for ship design research. Although identical in construction and exterior design to building 2 these support wings were absent of decorative interior finishes and the deco motifs found in the main building.

The exteriors of all three buildings and the significant interior spaces of building 2 have survived intact primarily because the buildings still serve as the administrative and research center for the base.

Building 4 is essentially a housing for two long tow basins: one for high speed and the other for low speed carriages. The arched ceilings, low lighting to prevent plant growth in the basins, and commanding presence of the

See Continuation Sheet No. 2

David W. Taylor Model Basin
Montgomery County, Maryland

GENERAL DESCRIPTION (continued)

basins themselves give the interior of the building a unique charcter. Technical requirements for the basins determined the building's special design. The arches that support the roof are reinforced concrete and every pier, footing, and wall rests directly on bedrock. Special concrete construction joints poured along the length of the basin maintain a tight seal during all seasons of the year. The rails that run along the length of the edges of the basin to support the carriages were shaped and positioned to parallel the curvature of the earth (and thus of the water in the basin). This allows the carriages to maintain precisely constant speed when towing ship models during experimental tests. Special techniques were used to install the rails so they would meet required tolerances. The model basin was extended to its present length in the late 1940's. The design and style of the extension, however, matched those of the original structure. (Saunders and Hodtwalker, 1947; Saunders, 1941).

The significant parts of this building are its arched, concrete exterior and the towing basins themselves. They embody the innovative design that makes the structure significant from an engineering and architectural viewpoint, and the technical features that make it one of the Navy's leading experimental facilities.

Sources

Saunders, H. E., and Hodtwalker, M., "The David W. Taylor Model Basin: A Manual for Vistors to the David W. Taylor Model Basin," (Washington: David Taylor Model Basin Report 569, April 1947).

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8 SIGNIFICANCE

M:29-47

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
_PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	_RELIGION
_1400-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	_LAW	X SCIENCE
_1500-1599	_AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE
_1600-1699	X ARCHITECTURE	_EDUCATION	X MILITARY	_SOCIAL/HUMANITARIAN
_1700-1799	_ART	X ENGINEERING	_MUSIC	_THEATER
X 1800-1899	_COMMERCE	_EXPLORATION/SETTLEMENT	_PHILOSOPHY	_TRANSPORTATION
X 1900-	_COMMUNICATIONS	_INDUSTRY	_POLITICS/GOVERNMENT	_OTHER (SPECIFY)
		X INVENTION		

SPECIFIC DATES 1937-1939, 1944-1945 BUILDER/ARCHITECT United States Navy,Bur. of Yards+D Turner Construction Company,New Yo

STATEMENT OF SIGNIFICANCE

Significance Summary

The historical significance of the David Taylor Model Basin lies in its association with important events (criterion A), i.e. the design of the contemporary American Navy; its distinctive design; and its unique scientific facilities (criterion C). Although the buildings are slightly less than 50 years old, their continuing importance to the history of the Navy during the last 4 decades warrants their addition to the National Register.

History and Support

In the late 19th Century, William Froude, a British Naval Architect, established scaling relationships that allowed the correlation of experimental results from tests of ship models to the performance of full sized ships. His work led to the creation of towing basins for scientific experimenting with ship models by all the major maritime nations of the world. The U. S. Navy built its first model basin at the Washington Navy Yard in 1898-1899. David W. Taylor was its principal designer and served as its director for its initial 14 years of operation.

By the 1930's, the original basin was obsolete, and plans were laid to build a larger and more capable facility. These plans ultimately led to the establishment of the David Taylor Model Basin at Carderock Maryland. Admiral Emory S. Land, Chief of the Bureau of Construction, secured Congressional approval for the institution, and at his suggestion, President Franklin Roosevelt personally approved naming it for David W. Taylor.

When built, the model basin was the best facility of its type in the world. Due to the extension of the basin in the late 1940's and upgrades of equipment over the years, it remains the best model basin in the Western world.

See Continuation Sheet Number 3

David W. Taylor Model Basin
Montgomery County, Maryland

HISTORY AND SUPPORT (continued)

Having opened in 1940, the model basin was heavily used during World War II. Model tests were employed to determine the characteristics of new ship designs; to measure the effects of structural modifications; to show how stability could be maintained after damage from attack; and to document the hydrodynamic characterictics of torpedoes, depth charges, and towed bodies. After the war, model basin engineers turned to exploratory development of new types of ships. They designed the Navy's first true submarines: shaped to perform better underwater than on the surface. They developed hydrofoil ships, surface effect ships, catamarans, and air cushioned vehicles. They solved problems related to towing long antenna wires and acoustic arrays. They answered such questions as "At what speeds can a submarine safely launch a ballistic missile?" They developed super-cavitating and controllable pitch propellers. For all these programs, plus more routine determinations of the performance of new components and designs under a variety of conditions, they relied on experiments in the towing basins.

The varied uses of the basin over the years have demonstrated the soundness of its basic design and its unique significance to the Department of the Navy. For over forty years, it has served as the preeminent research facility for U. S. Navy Ship Design.

(For additional historical documentation, see Section 7)

9 MAJOR BIBLIOGRAPHICAL REFERENCES

M:29-47

See Block 7 Description (continuation sheet 2)

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 32

Falls Church, VA - MD Quadrangle
Quadrangle Scale: 1:24,000

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	18	309860	4316200
B	18	310840	4315905
C	18	310800	4315800
D	18	309140	4316010

VERBAL BOUNDARY DESCRIPTION

The David W. Taylor Model Basin is located within the David W. Taylor Naval ship Research and Development Center, Bethesda, Maryland. The Model Basin complex is shown on the accompanying map entitled "The David W. Taylor Naval Ship Research and Development Center".

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
N/A			

11 FORM PREPARED BY

NAME / TITLE
David K. Allison, Historian of Navy Laboratories

ORGANIZATION
David W. Taylor Naval Ship R&D Center

DATE
7/17/84

STREET & NUMBER

TELEPHONE
(301) 227-1407

CITY OR TOWN
Bethesda

STATE
Maryland 20084

12 CERTIFICATION OF NOMINATION

STATE HISTORIC PRESERVATION OFFICER RECOMMENDATION

YES ✓ NO ___ NONE ___

STATE HISTORIC PRESERVATION OFFICER SIGNATURE

In compliance with Executive Order 11593, I hereby nominate this property to the National Register, certifying that the State Historic Preservation Officer has been allowed 90 days in which to present the nomination to the State Review Board and to evaluate its significance. The evaluated level of significance is X National ___ State ___ Local.

FEDERAL REPRESENTATIVE SIGNATURE F. S. STERNS

TITLE Director, Installations & Facilities, OASN(S&L) DATE 8-26-85

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE 10/17/85

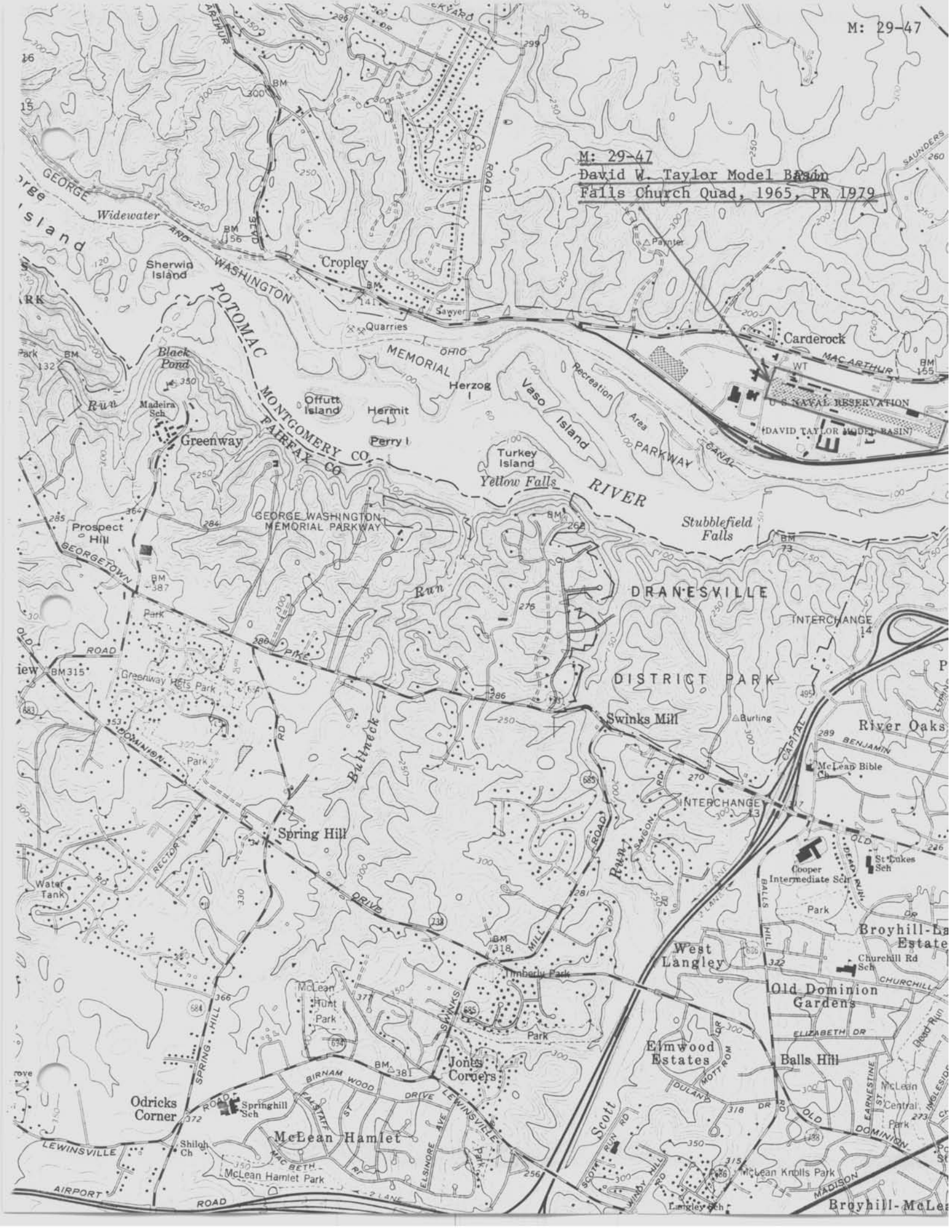
DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

ATTEST: DATE

KEEPER OF THE NATIONAL REGISTER

GPO 899-214

M: 29-47


M: 29-47
David W. Taylor Model Basin
Falls Church Quad, 1965, PR 1979
Widewater
Sherwin Island
Cropley
Sawyer
Quarries
Painter
Carderock
MAC ARTHUR
U.S. NAVAL RESERVATION
(DAVID TAYLOR MODEL BASIN)
Black Pond
Madeira Sch
Greenway
Offutt Island
Hermit
Perry I
Herzog
Vaso Island
Recreation Area
PARKWAY
CANAL
Turkey Island
Yellow Falls
RIVER
Stubblefield Falls
Prospect Hill
GEORGE WASHINGTON MEMORIAL PARKWAY
GEORGETOWN PIKE
Run
DRANESVILLE
INTERCHANGE 14
DISTRICT PARK
Swinks Mill
Burling
River Oaks
McLean Bible Ch
INTERCHANGE 13
Greenway Hts Park
Bullneck Run
Spring Hill
Water Tank
Cooper Intermediate Sch
St Lukes Sch
Broyhill-La Estate
West Langley
Churchill Rd Sch
Old Dominion Gardens
Timberly Park
McLean Hunt Park
Jones Corners
Elmwood Estates
Balls Hill
Odricks Corner
Springhill Sch
McLean Hamlet
Shiloh Ch
McLean Hamlet Park
McLean Central Park
McLean Knolls Park
Langley Sch
Broyhill-McLe
AIRPORT ROAD
LEWINSVILLE
SPRING HILL ROAD
BIRNAM WOOD DRIVE
OLD DOMINION DRIVE
MADISON
SCOTT RUN RD
WINDY HILL RD
ELIZABETH DR
CHURCHILL
BENJAMIN
DOMINION
RECTOR
SAUNDERS
ARTHUR
GEORGE WASHINGTON MEMORIAL PARKWAY
POTOMAC
MONTGOMERY CO
FAIRFAX CO

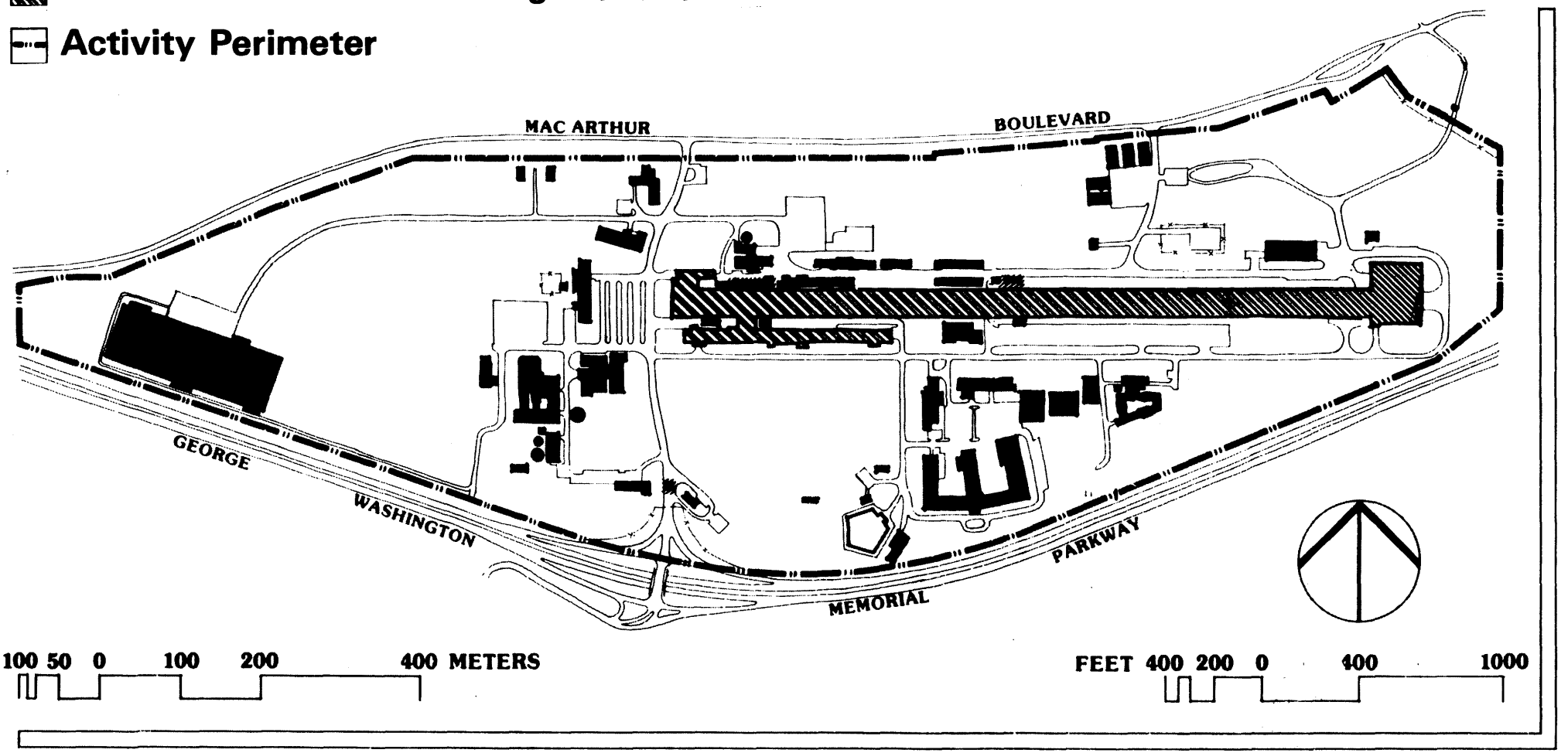
M:29-47

M.29-47

The David W. Taylor Naval Ship Research and Development Center

Extent of Nomination (Bldgs 1, 2, 3, and 4)

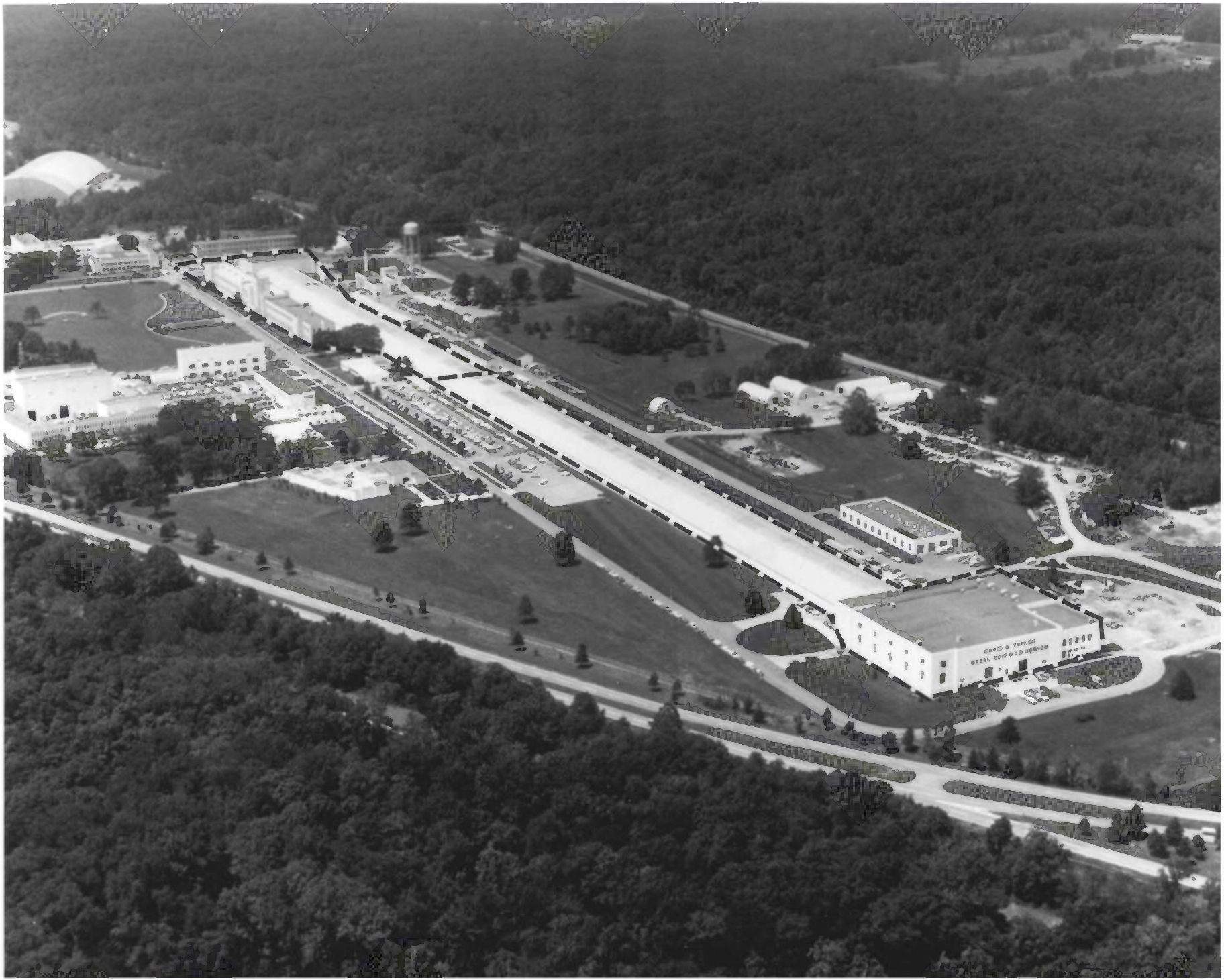
Activity Perimeter



David W. Taylor Model Basin, USN
Bethesda, Maryland
Main Entrance, Building 2, looking north
September 1984
Photograph No. 1

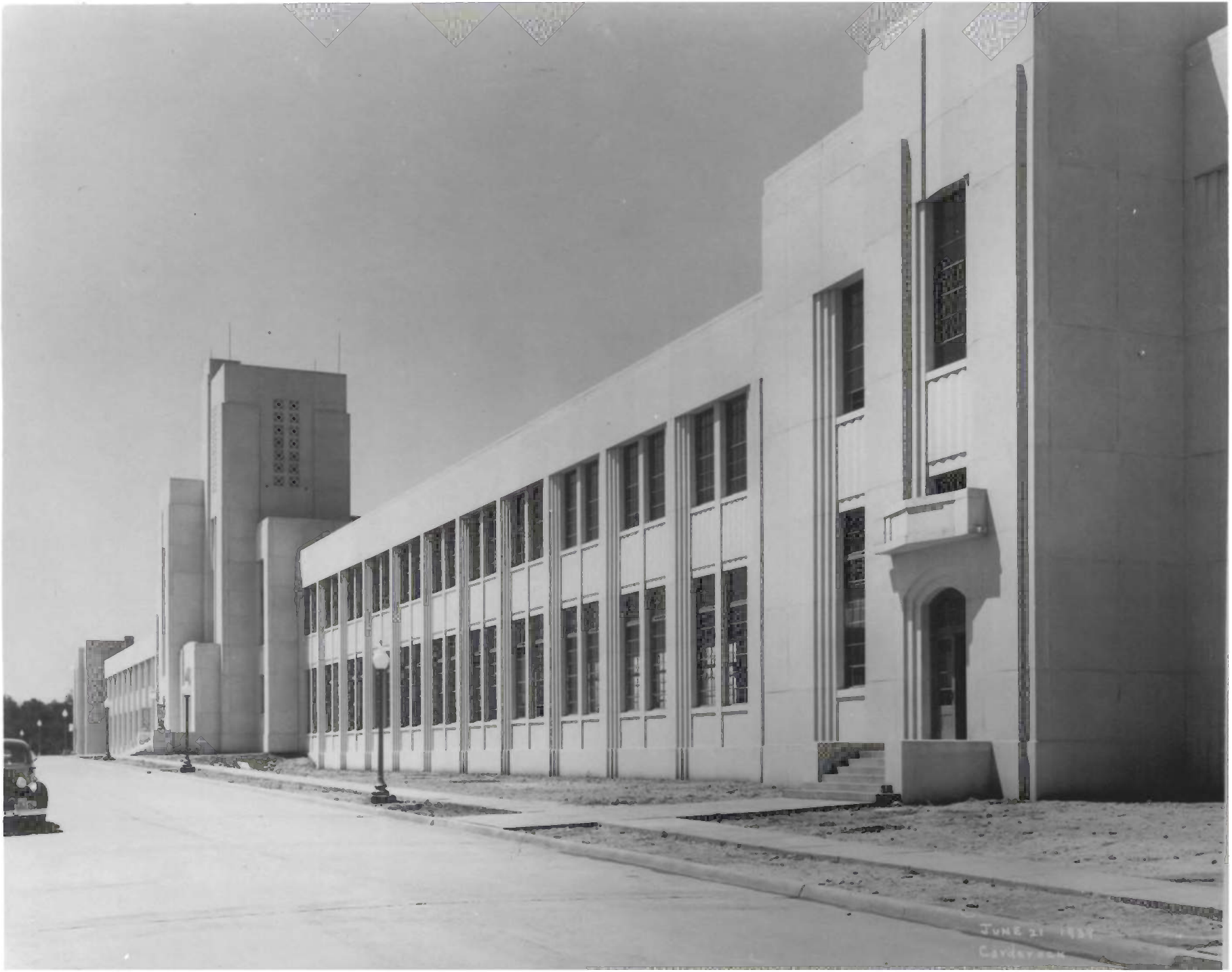
David W. Taylor MODEL Basin, USN
Behtesda, Maryland
David W. Taylor Naval Ship R & D Center
Building 1, 2, and 3 looking east
September 1984
Photograph No. 2

David W. Taylor Model Basin, USN
Bethesda, Maryland
Buildings 2 and 3 looking west
September 1984
Photograph No. 3



David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Aerial view of Model Basin complex, looking ssw
September 1984 west
Photograph No. 4

David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Main Entrance, Building 2, looking north
June 1939
Photograph No. 5


JUNE 21 1937

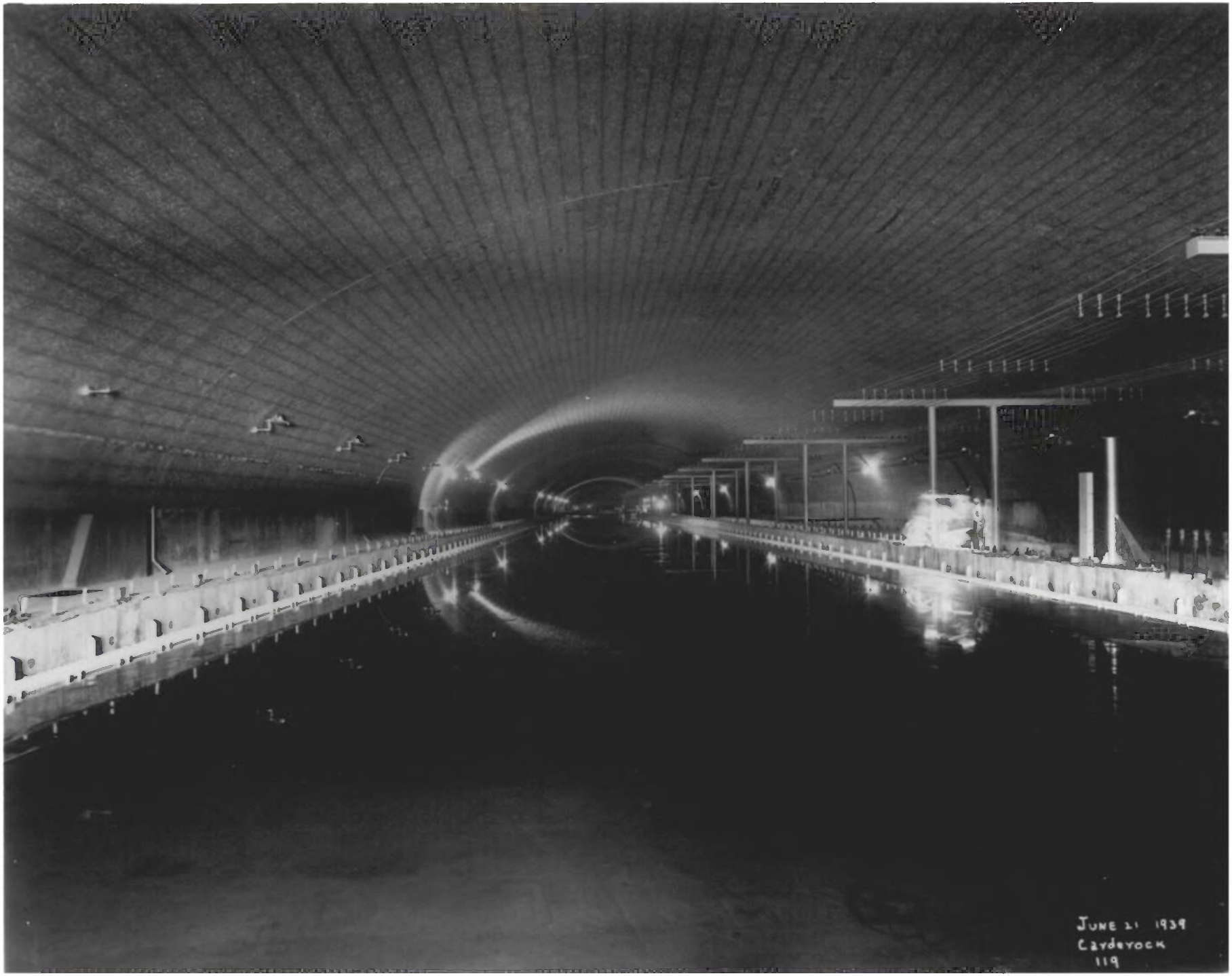
David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Buildings 1, 2, and 3 looking west
June 1939
Photograph No. 6


JUNE 21 1939
Carderock
102

David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Building 4, looking west
June 1939
Photograph No. 7


JUNE 21 1939
Carderock
113

David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Building 4, looking east
June 1939
Photograph No. 8


JUNE 21 1939
CLYDEDOCK
119

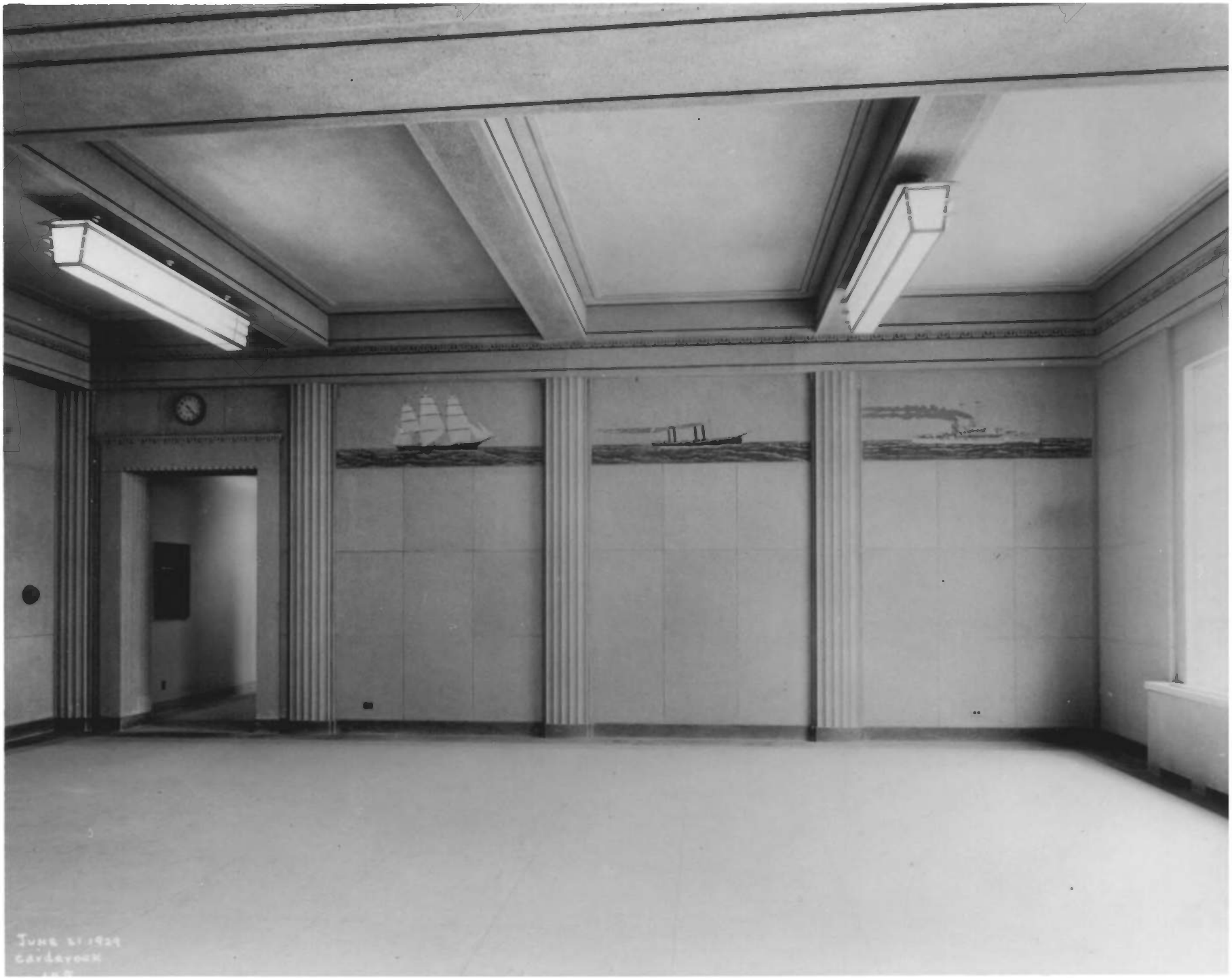
David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Interior of Building 4
June 1939
Photograph No. 9


JUNE 21 1939
CARDSTOCK
104

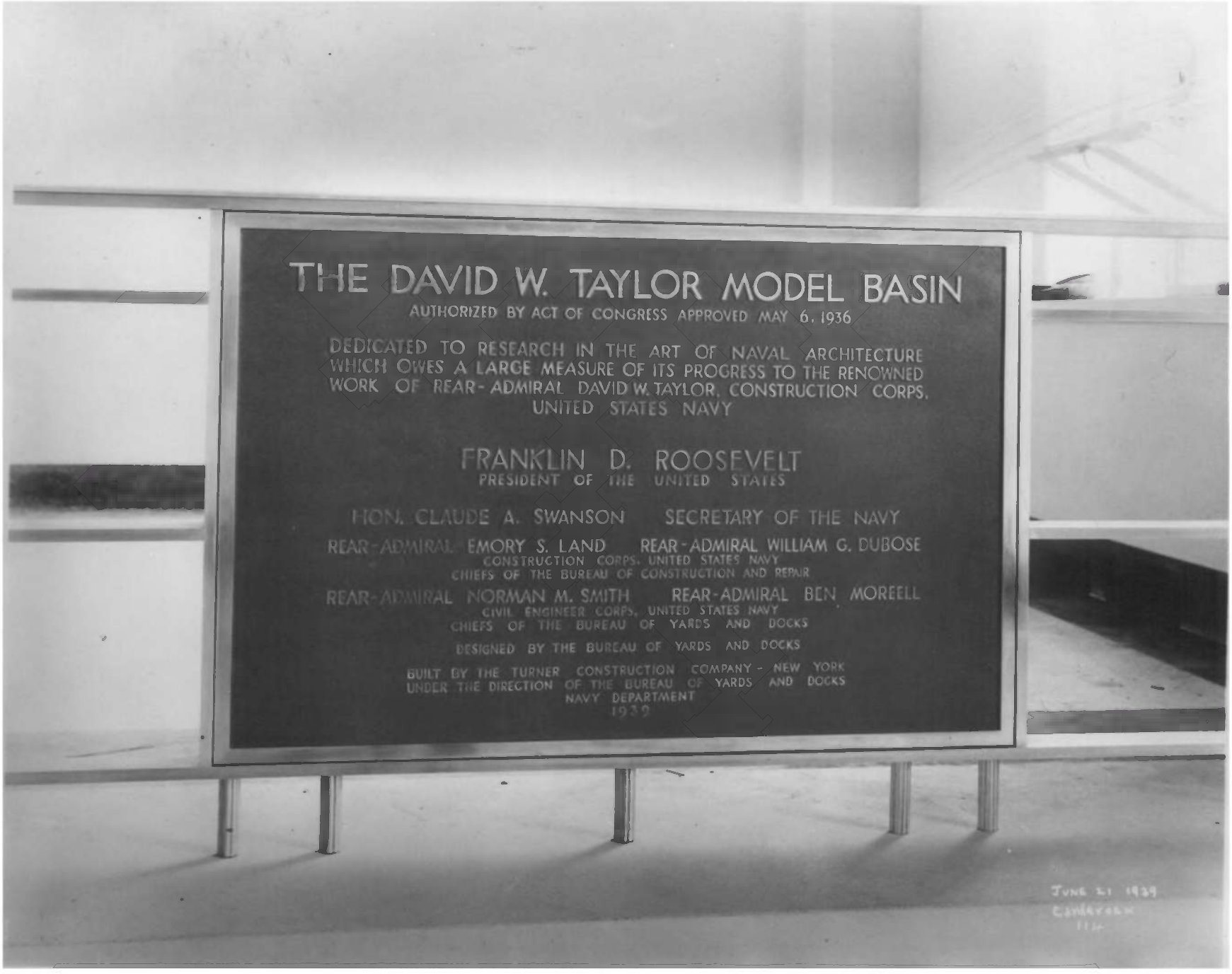
David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Main Entrance Lobby, Building 2
June 1939
Photograph No. 10


JUNE 21 1939
CARDLOCK
106

David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Main Entrance Lobby, Building 2
June 1939
Photograph No. 11


June 21 1929
Cardavon

David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Main Entrance Lobby, Building 2
June 1939
Photograph No. 12


THE DAVID W. TAYLOR MODEL BASIN
AUTHORIZED BY ACT OF CONGRESS APPROVED MAY 6, 1936
DEDICATED TO RESEARCH IN THE ART OF NAVAL ARCHITECTURE WHICH OWES A LARGE MEASURE OF ITS PROGRESS TO THE RENOWNED WORK OF REAR-ADMIRAL DAVID W. TAYLOR, CONSTRUCTION CORPS, UNITED STATES NAVY
FRANKLIN D. ROOSEVELT
PRESIDENT OF THE UNITED STATES
HON. CLAUDE A. SWANSON SECRETARY OF THE NAVY
REAR-ADMIRAL EMORY S. LAND REAR-ADMIRAL WILLIAM G. DUBOSE
CONSTRUCTION CORPS, UNITED STATES NAVY
CHIEFS OF THE BUREAU OF CONSTRUCTION AND REPAIR
REAR-ADMIRAL NORMAN M. SMITH REAR-ADMIRAL BEN MOREELL
CIVIL ENGINEER CORPS, UNITED STATES NAVY
CHIEFS OF THE BUREAU OF YARDS AND DOCKS
DESIGNED BY THE BUREAU OF YARDS AND DOCKS
BUILT BY THE TURNER CONSTRUCTION COMPANY - NEW YORK
UNDER THE DIRECTION OF THE BUREAU OF YARDS AND DOCKS
NAVY DEPARTMENT
1939

David W. Taylor Model Basin, USN
Bethesda, Maryland
David W. Taylor Naval Ship R & D Center
Dedication plaque, Entrance lobby of
June 1939 Building 2
Photograph No. 13

MARYLAND HISTORICAL TRUST

M: 18/15
MAGI#

INVENTORY FORM FOR STATE HISTORIC SITES SURVEY

1 NAME

HISTORIC
Friends Advice or Walldene

AND/OR COMMON

2 LOCATION

STREET & NUMBER
19001 Bucklodge Road

CITY, TOWN
Boyds

__ VICINITY OF

CONGRESSIONAL DISTRICT
8

STATE
Maryland

COUNTY
Montgomery

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
__DISTRICT	__PUBLIC	X OCCUPIED	__AGRICULTURE	__MUSEUM
XX BUILDING(S)	X PRIVATE	__UNOCCUPIED	__COMMERCIAL	__PARK
__STRUCTURE	__BOTH	__WORK IN PROGRESS	__EDUCATIONAL	X PRIVATE RESIDENCE
__SITE	PUBLIC ACQUISITION	ACCESSIBLE	__ENTERTAINMENT	__RELIGIOUS
__OBJECT	__IN PROCESS	__YES: RESTRICTED	__GOVERNMENT	__SCIENTIFIC
	__BEING CONSIDERED	__YES: UNRESTRICTED	__INDUSTRIAL	__TRANSPORTATION
		X NO	__MILITARY	__OTHER:

4 OWNER OF PROPERTY

NAME
General and Mrs. A.C. Wedemeyer Telephone #: 428-8088

STREET & NUMBER
Same

CITY, TOWN

__ VICINITY OF

STATE, zip code
20720

5 LOCATION OF LEGAL DESCRIPTION

Liber #: 1524
Folio #: 359

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Montgomery County Courthouse

STREET & NUMBER

CITY, TOWN
Rockville

STATE

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
Locational Atlas of Historic Sites in Montgomery County 18/15

DATE
1975

__FEDERAL __STATE XCOUNTY __LOCAL

DEPOSITORY FOR SURVEY RECORDS
M-NCPPC

CITY, TOWN
Silver Spring

STATE
Maryland

7 DESCRIPTION

M:18-15

CONDITION		CHECK ONE	CHECK ONE
X EXCELLENT	__DETERIORATED	__UNALTERED	X ORIGINAL SITE
__GOOD	__RUINS	X ALTERED	__MOVED DATE_____
__FAIR	__UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

This T-shape, two and a half story, five bay by nine bay, house is in excellent condition. It is hidden from the road and sits at the end of a driveway lined by maple and elm trees facing west.

Built in several stages, the original structure built on this site was a two room, two story log cabin erected about 1757. About 1795-1810 a two story sandstone section was added to the west of the original log structure. In 1880 a two story Victorian frame addition was built to the west of the sandstone middle section. In 1932 a Williamsburg architect rebuilt the Victorian frame structure in sandstone with distinctively Williamsburg colonial features. More recently, the frame storage area east of the original log house has been converted into a small apartment.

Over the years the log section of this house has been so thoroughly renovated and altered by the addition of windows and modern facilities to make this a kitchen that its early log condition is virtually obliterated. It has white aluminum siding.

The middle sandstone section was built on fieldstone foundations. It is three bays across and two and a half stories high. It faces south. On the north elevation this section of the house has a screened porch with a quarter hipped roof supported by wooden posts. The north and south doors are wooden paneled and are surmounted by eight light transoms.

The 1932 sandstone section was built on fieldstone foundations. It is f e bays across and two bays deep and faces west. There is an open two story porch on this west elevation. Three fieldstone steps lead up to the fieldstone porch where the west (front) door is a wide wooden paneled door flanked by traceried sidelights and surmounted by a traceried fan light. At the southeast and northeast corners of the east elevation of the 1932 section there are paired French doors; each door is surmounted by a five light transom. Four gigantic columns support a pedimented gable roof.

There are six over six double hung windows throughout the house. In the two stone sections these windows have stone lintels and sills. On the west and north elevations there are three gabled dormer windows; on the east and south elevations there are two gabled dormer windows; all are six over six double hung windows. On the south elevation of the east frame/log section there is a modern one story bay window.

The house has a gable roof covered by asbestos shingles. There are north and south gable end chimneys in the 1932 stone section. There is an interior brick chimney between the frame/log section and the middle stone section. Finally, there is an exterior brick stove chimney on the south elevation.

The 1932 stone section is the most elaborate, inside and out. When entering on the west elevation one comes into a wide central hallway to to the north is the parlor and to the south is the living room. There are random width floor boards in this section. The hallway has wood paneled wainscotting. The hall and its flanking rooms have plaster over lath walls and ceilings. In each of these two front rooms there are ornate plaster molded cornice lines of egg and dart, acanthus, and dentil designs. The south (living) room has built in bookcases on the east and south walls. The deep window reveals here and in the parlor are wooden paneled. The north (parlor) room has a fireplace with an ornate Victorian fireplace

(See Attachment Sheet A)

ATTACHMENT SHEET A

surround composed of flanking attached columns, a denticulated mantle surmounted by a gilded ornate mirror. There is a full entablature over the entrances to the living room and parlor and in each case there are double wooden paneled doors. The one run, open string, bracketed stairway ascends from west to east along the north interior wall. The carved hand rail is supported by square wooden balusters.

The middle stone section has a side hall on the east which extends the full north-south width of that section. To the west is the dining room, this also extends the full north-south width of the section. At the south end there is a defined area which is also used as a second informal dining area. The entire area is open. The floor here has narrow floorboards and the wall and ceilings are plaster over lath. The fireplace has a decorative inlaid marble design. There are bullseye door frames and paneled doors. The three run, open string, bracketed stairway ascends from north to south along the east interior wall.

The log/frame section has been considerably altered. On the north side there is a small breakfast room separated from the L-shaped kitchen. East of this section is a more recent frame storage section that has been turned into a small apartment with a living room and kitchen and unheated storage area on the first floor.

Friend's Advice has lovely landscaped grounds. North of the house is a stone garage that has offices. It has a gable roof and is constructed of the same sandstone materials as the 1932 section. A sandstone wall defines the rear, service area of the house and garage from the front. South of the house is a terrace with a swimming pool. Beyond that is a large pond.

8 SIGNIFICANCE

M:18-15

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW			
_PREHISTORIC	_ARCHEOLOGY-PREHISTORIC	_COMMUNITY PLANNING	_LANDSCAPE ARCHITECTURE	_RELIGION
_00-1499	_ARCHEOLOGY-HISTORIC	_CONSERVATION	_LAW	_SCIENCE
_1500-1599	_AGRICULTURE	_ECONOMICS	_LITERATURE	_SCULPTURE
_1600-1699	X_ARCHITECTURE	_EDUCATION	X_MILITARY	_SOCIAL/HUMANITARIAN
X_1700-1799	_ART	_ENGINEERING	_MUSIC	_THEATER
X_1800-1899	_COMMERCE	X_EXPLORATION/SETTLEMENT	_PHILOSOPHY	_TRANSPORTATION
X_1900-	_COMMUNICATIONS	_INDUSTRY	X_POLITICS/GOVERNMENT	_OTHER (SPECIFY)
		_INVENTION		

SPECIFIC DATES c.1807 with additions BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

Friends Advice, built by the Rev. Townshend Dade in the early 19th century, has been owned & lived in continuously by his descendants. Today it is the home of one of America's most distinguished soldiers, General Albert C. Wedemeyer & his wife, Elizabeth Dade Wedemeyer, a 5th generation descendant of the Rev. Mr. Dade.

The history of our country is told in miniature here at Friends Advice. Townshend Dade, born in 1742, was the son of Townshend Dade & Parthenia Alexander of Virginia. Sponsored by George Mason of Gunston Hall & Colonel George Washington of Mount Vernon, he was one of the first American-born Episcopal priests to be ordained in London. In 1765 he returned to America to serve in two Virginia churches, Falls Church & Christ Church in Alexandria.[1] When his career was interrupted by the hostility ~ard the clergy during the Revolution, he left Virginia with one servant[2] ~ crossed the Potomac River only to find that ministers of the Church of England were equally unpopular in Maryland at that time.[3] He turned to the study of medicine and farming.

By 1793, he had married Polly Simmons of Piney Hill (near present day Boyds) and had two children, Robert age 7, & Elizabeth age 5.[4] He purchased land in Montgomery County, 325 acres of the Resurvey on Friends Advice from James Magruder for 630 pounds, & moved with his family into a house on the property. In May 1800, he purchased 115 acres from Benjamin White, parts of Friends Advice, Liberty & Elizabeth; & two small pieces called the Resurvey on Albany.[5]

As he cleared the fields for farming & the piles of red sandstone grew higher & higher, he began planning to build a new house. A spring house was constructed with some of the stones in 1806, the date cut in a stone for all to see, & dry walls, so typical of Maryland, enclosed his property. He also built tobacco barns & other necessary farm buildings.

As his son Robert grew older he took complete responsibility for the building of the new stone house. It faced south with a wide hallway & two large, high-ceilinged parlors on the west side. The dining room & kitchen were in the original house, & were joined to the east side of the hall by a covered walkway. There were six bedrooms on the 2nd & 3rd floors, as Robert now had 3 sisters,[6] and he was making plans to be married.

As soon as the house was completed, Robert married Ruth Simmons at her home, Mountain Top, near Jefferson, December 27, 1808.[7]

In 1812 there was war with England & again the lives of the Dades were e~wined with the history of our country. Twenty-eight-years-old Robert, w~h Cramer's Detachment of the Maryland Milita, took part in the disasterous Battle of Bladensburg, & in the victory at Baltimore.[8] He returned

~~CONTINUE ON SEPARATE SHEET IF NECESSARY~~ home with the rank of Colonel, a title he retained for the rest of his life.[9]

(Continued on Page 2)

M:18-15

Townshend Dade died in 1822 without leaving a Will. Dr.Nicholas Brewer, of Montgomery County, described him as "the late Rev. Townshend Dade, D.D.,M.D., an eminent divine of the Protestant Episcopal Church, and an able and distinguished physician of this county."[10]. That the house was completely furnished can be seen in the inventory of his effects at the time of his death. He appears to have prospered as he also left a large assortment of livestock and nine slaves.[11]. His desk is still in the library. (For amusement he had a backgammon table and four fighting cocks.) The huge barn that is still standing was being built at that time.

By 1832, Col. Robert Dade and Ruth had eleven children,[12]. and when their son, Lee Massey, and his wife both died in 1844, their four children were brought home to Friends Advice. It was now Robert's property as he explains in a letter written in 1856:

> I have got along in the world as well as my neighbors. I own 1200 acres of land, the first bought, after paying my mother and sisters, was 212 acres of Robert Wilson's place. I got the best of it. I made about eleven hundred dollars worth of tobacco the first year I bought it. I bought Col. Vinson's farm of 525 acres. I own three other small places, having twenty blacks, and have given my children nine or ten. My last years crop brought me almost $3000...I have served my county three sessions in the legislature...I have cleared my place of stones, and put up a good deal of fence, built a large three-story stone house.[13].

Col. Dade voted against Maryland seceding from the Union in 1861.[14]

At the time of his death in 1873, he willed Friends Advice to the children of his son Robert, who was then living in Baltimore.[15]. Robert lived at Friends Advice only six years, and after his death it became the property of his daughter Mary Catharine Dade Wall and her husband, William Edward Wall.[16]. Mary's husband was away much of the time on business, returning home on the newly built B&O railway and arriving at Buck Lodge station, about a mile from Friends Advice. Mary had the full responsibility of running the large farm, and would ride out in her horse-and-buggy to oversee the work in the fields. Under her supervision, the kitchen and dining room were rebuilt and modernized according to 1880 standards. She then had a west wing added to Townshend Dade's stone house.

In 1932, Mary Wall died and Friends Advice passed to her son, Guy Wall, who in 1936 rebuilt his mother's addition to the early stone house. He engaged an outstanding architect[17]. who created the Williamsburg-type dwelling as we see it today, with its vast hallway, broad stairs, and beautiful large rooms to the right and the left. The stone exterior walls were erected to match those of the older stone house.

Col. Guy Wall, as the history of the house and its owner continued to parallel that of America, had served in the Spanish American War and World War I.[18]. Having no children of his own, he left instructions

M:18-15

that Friends Advice was to be given to one of his nieces or nephews.[19] All of them were well established in homes of their own except Elizabeth Dade Wedemeyer, the daughter of Ethel Wall Embick and the granddaughter of Mary Dade Wall. Since her marriage in 1926, she had been moving to different parts of the world with her husband, General Albert C. Wedemeyer. During World War II, it was decided by the heirs that the Wedemeyers with their two sons, Capt. Albert Dunbar Wedemeyer of the U.S. Army and Lieut. Robert Dade Wedemeyer of the Air Corps, should make Friends Advice their first permanent home. They moved into the house in 1951.

Today the stone house built by the Rev. Townshend Dade in the early nineteenth century is the center of Friends Advice, and the older part, although altered, is the busy kitchen where friends and family gather.

Dorothy Troth Muir

M:18-15

FOOTNOTES

1. Historical Sketch of Old Christ Church by the Rev. Randolph H. McKim, page 13

Letters to Dorothy Troth Muir
...from William W. Manross, Professor of Church History and Librarian, Philadelphia Divinity School, July 20, 1967
...from E.G.W.Bill, Librarian, Lambeth Palace Library, London, February 23, 1967
...from The Rev. Robert Troth Gribbon, The General Theological Seminary, New York, February 22, 1967

2. CENSUS 1782, Virginia Room, Alexandria Library, Virginia.

3. Maryland's Established Church by Nelson Waite Rightmyer, page 164,re/banishment of Episcopal clergy.

4. Marriages of Some Virginia Residents, 1607-1800, Virginia reference 929.3, National Archives, D.C.

4. The Forebears of Colonel Robert Townshend Dade by Elizabeth Dade Wedemeyer (hereafter E.D.W.) page 26.

5. 1760..Elisha Williams patented 224 acres as Friends Advice
1763..Williams had increased his holdings to 1253 acres, Resurvey on Friends Advice. The same year he sold 400 acres to Edward Owens, Jr.
1783..Edward Owen,Jr's widow and her new husband, James Magruder,are owners of the property.
1788, May 20..James Magruder sold all his wife's dower rights, parts of Friends Advice, Elizabeth and Liberty, 115 acres to William Nicholls. Liber D,folio 775
1793,.May 11..James Magruder sold 325 acres of the Resurvey on Friends Advice to the Rev. Townshend Dade for 630 pounds. Liber E, folio 328
1800, June 2..Benjamin White, who now possessed the 115 acres formerly the widow Owen's dower right, sold the same to the Rev. Dade, plus 2 parts of the Resurvey on Albany, one-tenth of an acre and eight and one-quarter acres. Liber I, folio 191.

6. E.D.W., page 59

7. Ibid, page 31
Recorded at Frederick County Court House.

8. E.D.W.,pages 31 and 32

9. Upton Darby's Day Book for the Seneca Mill, 1863-1867
1865 Map of Montgomery County...Martenet
1878 Real Estate Atlas...Hopkins

10. E.D.W. page 28

11. Inventory of Townshend Dade, Hall of Records, Annapolis.

12. E.D.W., page 59
James T. Dade married Eliza Wyse in 1836
Lee Massey Dade married Ann E. Viers, January 1834
Serena E. Dade married Robert Sellman
Mary R. Dade married Christian T. Hempstone, Dec.19, 1839
Robert Dade married Catharine Grimes , Dec. 19, 1844
John H. Dade married Sarah E. Jones, March 20, 1851
Drusilla Dade married Henry S. Davis, Nov. 17, 1846
Sarah A. Dade married Robert Sellman, Dec.21, 1840
Alexander Dade married Susan A. White, Jan. 4, 1851
William F. Dade
Columbus Dade married Ann Mary Jones, Jan. 22, 1856

13. E.D.W., page 33

14. History of Montgomery County by Roger Farquhar, page 28

15. From conversations with Elizabeth Dade Wedemeyer

16. Ibid.

17. Unfortunately, no one can recall his name, but all agree he was in some way connected with the Williamsburg Restoration.

18. From conversations with Elizabeth Dade Wedemeyer

19. Montgomery County Land Records, Liber 1524, Folio 359, May 9, 195
Grantee, Elizabeth D. E. Wade; Grantor, Helen W. Wall.
Deed states that under the will of William Guy Wall, in compliance with Item 4, Robert Earle Wall, Katherine W. Taylor and Ethel W. Embrick, Trustees, shall unanimously give the property to a descendant of Townshend Dade and Wall. Wedemeyer, niece of the Testator, is chosen, and granted title to Walldene of 156 acres plus 36.253 acres and 24 square perches, with all buildings and improvements, and all other rights. Helen Wall is given life tenancy.

Dorothy Troth Muir

M:18-15

9 MAJOR BIBLIOGRAPHICAL REFERENCES

See Page 6

CONTINUE ON SEPARATE SHEET IF NECESSARY

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 36.253 acres and 24 square perches

VERBAL BOUNDARY DESCRIPTION

Route 28 from Rockville, North on Route 117 about 2 miles to entrance on right.

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	COUNTY
STATE	COUNTY

11 FORM PREPARED BY

NAME / TITLE
Dorothy Troth Muir

ORGANIZATION
Sugarloaf Regional Trails

DATE
9/78

STREET & NUMBER
Box 87

TELEPHONE
926-4510

CITY OR TOWN
Dickerson

STATE
Maryland 20753

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
The Shaw House - 21 State Circle
Annapolis, Maryland 21401
(301) 267-1438

SUGARLOAF REGIONAL TRAILS
Box 87, Stronghold
Dickerson, Md. 20753
(301) 926-4510

BIBLIOGRAPHY M:18-15

Roger Farquhar...Historic Montgomery County Maryland, Old Homes and History, Privately printed, 1952

The Rev. Randolph H McKim...Historic Sketch of Old Christ Church, The Ladies Sewing Guild, Alexandria, 1894

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The Diaries of George Washington, Vol. II, 1771-1785, edited by John C. Fitzpatrick, A.M., Houghton Mifflin Company, Boston & New York, 1925

Elizabeth Dade Wedemeyer...The Forebears of Colonel Robert Townshend Dade, privately printed, 1968

The Montgomery County Story, Vol. I, No.4, Published by the Montgomery County (Maryland) Historical Society, 1958

Montgomery County Land Records, Liber 1524, Folio 359, May 9, 1951.

Dorothy Troth Muir

NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name: FRIENDS ADVICE
other names/site number: Walldene M: 18-15

2. Location

street & number: 19001 Bucklodge Road N/A [ ] not for publication
city, town: Boyds [X] vicinity
state: Maryland code: MD county: Montgomery code: 031 zip code: 20841

3. Classification

Ownership of Property	Category of Property
[X] private	[ ] building(s)
[ ] public-local	[X] district
[ ] public-State	[ ] site
[ ] public-Federal	[ ] structure
	[ ] object

Number of Resources within Property		
Contributing	Noncontributing	
9	7	buildings
1		sites
3		structures
		objects
13	7	Total

Name of related multiple property listing: N/A

Number of contributing resources previously listed in the National Register: 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this [X] nomination [ ] request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property [X] meets [ ] does not meet the National Register criteria. [ ] See continuation sheet.

Signature of certifying official: STATE HISTORIC PRESERVATION OFFICER Date: 9/16/92

State or Federal agency and bureau

In my opinion, the property [ ] meets [ ] does not meet the National Register criteria. [ ] See continuation sheet.

Signature of commenting or other official Date

State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

[ ] entered in the National Register.
[ ] See continuation sheet.
[ ] determined eligible for the National Register. [ ] See continuation sheet.
[ ] determined not eligible for the National Register.
[ ] removed from the National Register.
[ ] other, (explain:) _____

Signature of the Keeper Date of Action

6. Function or Use

M: 18-15

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
DOMESTIC/single dwelling	DOMESTIC/single dwelling
DOMESTIC/secondary structure	DOMESTIC/secondary structure
AGRICULTURAL/animal facility	AGRICULTURAL/animal facility

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)	
FEDERAL	foundation	STONE
COLONIAL REVIVAL	walls	STONE
		WEATHERBOARD
	roof	SLATE
	other	ALUMINUM

Describe present and historic physical appearance.

DESCRIPTION SUMMARY:

Part of a working farm since its inception and created over a period of two centuries, Friends Advice is an estate set in the rolling farmland of upper western Montgomery County, Maryland. The estate is dominated by a main house of local sandstone in the impressive overall image of a Georgian plantation house. It incorporates and blends a Colonial Revival-style block constructed in 1939-40, a Federal style block of the first quarter of the 19th century, and a frame block constructed in 1882 on the foundation of an 18th century log structure. The main house is the centerpiece to a setting which includes farm and estate buildings and structures as well as landscape features, dating from the major periods of development.

[X] See continuation sheet No. 1
For GENERAL DESCRIPTION

8. Statement of Significance

M: 18-15

Certifying official has considered the significance of this property in relation to other properties:
[X] nationally [ ] statewide [X] locally

Applicable National Register Criteria [X] A [X] B [ ] C [ ] D

Criteria Considerations (Exceptions) [ ] A [ ] B [ ] C [ ] D [ ] E [ ] F [X] G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
Community Planning and Development	c.1806-1951	1806
Military		1939-1940

Cultural Affiliation: N/A

Significant Person: General Albert C. Wedemeyer

Architect/Builder: Milton Grigg, architect

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

SIGNIFICANCE SUMMARY:

From the first quarter of the twentieth century to about the start of World War II, Montgomery County, which borders Washington, D.C., experienced a phase of country estate development. Mostly located along the main arteries leading into the city, these properties were generally grand in scale, with buildings of historicized design basis, and architect designed. Often, they incorporated existing buildings and landscape features, as is the case here, to create a romantic and bucolic stage set in which to live. Some were developed as weekend retreats, but many, with Friends Advice as an excellent example, were developed as permanent residences. This phase of Montgomery County history represents a significant change in the county's history; from a rural agricultural county bordering the city, to a suburbanized affluent county responding to the rapid growth of Washington in population and importance. Washington was becoming a center of influence and expanding government, and with that came new office workers and wealthy people drawn to power. With its present appearance created in 1939-1941, Friends Advice represents the last phase of country estate development in the county. In this phase, architectural precedents generally came from American vernacular origins, particularly rural Pennsylvania and Virginia, though often mixed with high style Georgian and Federal elements and usually with a smaller scale than the earlier phases. Friends Advice is believed to be the last example developed. Significance is also derived from association with General Albert C. Wedemeyer (1897-1989), a person significant in American military history. General Wedemeyer is the architect of the plan used by the Allied forces during World War II to defeat the German forces. General Wedemeyer and his wife, whose family owned this property since the eighteenth century, used Friends Advice as their permanent home throughout his military career and after his retirement in 1951 until his death in 1989. The period of significance extends from 1806, the date of the earliest building on the property which contributes to its character, to 1951 when General Wedemeyer retired from military service.

[X] See continuation sheet No. 11
For HISTORIC CONTEXT and MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN data.

9. Major Bibliographical References

M: 18-15

Montgomery County, Maryland. Land, will, and assessment records.

Drawings for 1939-40 block, Grigg & Johnson, 1938 (overall, cross-section, details).

Wedemeyer, Elizabeth Dade, The Forebears of Colonel Robert Townshend Dade, privately printed, 1968.

Dade, Wall, and Wedemeyer families: family papers, newspaper articles, photos, and recollections.

A.I.A. files, information on Milton Grigg.

Correspondence with Floyd E. Johnson, 1991.

Who's Who in America, Vol. 21, A.N. Marquis Co., Chicago, Illinois, 1940.

Fiske Kimball, "The American Country House," in Architectural Record, October 1919, Vol. XLVI, No. 4.

Hubbard, H.V. An Introduction to the Study of Landscape Design, Hubbard Educational Trust, 1967 reprint (originally published 1917).

Maryland Inventory of Historic Properties, Montgomery County. Maryland Historical Trust, Crownsville, Maryland.

☐ See continuation sheet

Previous documentation on file (NPS):

- ☐ preliminary determination of individual listing (36 CFR 67) has been requested
- ☐ previously listed in the National Register
- ☐ previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings
  Survey # _____
- ☐ recorded by Historic American Engineering
  Record # _____

Primary location of additional data:

- ☐ State historic preservation office
- ☐ Other State agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☐ Other

Specify repository: _____

10. Geographical Data

Acreage of property Approximately 38 acres

USGS Quad: Germantown, Maryland

UTM References

	Zone	Easting	Northing
A	18	296510	4373850
B	18	296340	4373740
C	18	295920	4374100
D	18	296140	4373970

☐ See continuation sheet

Verbal Boundary Description

The nominated property includes approximately 38 acres and is bounded on the west by Bucklodge Road (state route 117), on the north by the southern boundary of the PEPCO right-of-way, on the south by a line 340 yards distant and parallel to the south side of the main block of the main house, and on the east by a line 160 yards east of and parallel to the section of Bucklodge Road directly in front of the main house.

☒ See continuation sheet No. 20

Boundary Justification

These boundaries were selected to include the extent of the property which has always been considered as the "formally" landscaped section of the property. Here stand the manmade resources which characterize the country estate qualities of Friends Advice. Surrounding this area are fields generally under cultivation.

☐ See continuation sheet

11. Form Prepared By

name/title Eileen S. McGuckian (with assistance from Roy H. Gauzza, Jr.)

organization _____ date January 1992

street & number 11807 Dinwiddie Drive telephone (301) 762-0096

city or town Rockville state Maryland zip code 20852

GENERAL DESCRIPTION:

Characterized by a gracious setting, Friends Advice includes an array of estate "composition" elements. Having evolved, not as one collection of a particular era, but as structures and buildings added through the cycle of the estate's two hundred year history, these elements each ornament the setting. While the historic function of some elements, such as the dairy house and spring, is no longer active, historical association and aesthetic value maintain their importance as elements of the setting. Others from the latest eras, such as the pond, serve a practical as well as an aesthetic purpose. See Resource Sketch Map.

1. **Main House** (Contributing Building)

Exterior

Rambling and spacious, the main house represents the grand style of the Colonial Revival architectural style of the first third of the 20th century. Although it incorporates sections built in the 19th century, and was constructed in several stages as needs and styles changed over a period of 200 years, its dominant appearance projects the image of the 18th century Georgian house as defined by the alterations and additions undertaken between 1939 and 1940. These features are carried on a T-shaped plan, oriented to the west. The oldest existing section, a three-bay central block of sandstone, is flanked on the east by a frame late 19th century two-part block, and on the west by a large 20th century sandstone main block. The structure is in good condition. Its architectural elements from the Colonial Revival era are pure recreations of the originals, while its scale, in both the 1939-40 section and the altered early 19th century section, reflects the adaptation toward the grand country house so pervasive in the "country house era."

1939-40 Block

The main sandstone block faces west, and is situated at the keystone of a semi-circular drive lined with maple and linden trees. From architect-designed plans, elevations, and sections, dated August 1938 and October-December 1938, the actual construction of alterations and additions was begun presumably in the spring of 1939, lasting into 1940. This work greatly transformed the structure and included razing of the west 1880s frame section and removal of the stucco finish from the early 19th century block to expose the original sandstone walls. In place of the 1880s section, the 1939-40 block of locally quarried, rose-brown colored sandstone, matching that of the early 19th century block, was built on a sandstone-faced concrete foundation; steel I-beams run east-west. The white mortar joints protrude into a V shape, as do those reworked in the earlier block. The sandstone is uncoursed and roughly squared.

The 1939-40 block's entrance facade (west elevation) is five bays wide. The one-story pedimented portico sheltering the entrance doorway is supported by four Doric columns with pilasters. The entrance doorway has a raised, eight-panelled door with original brass hardware, and is flanked by fluted Doric pilasters, each of which is flanked by leaded glass, traceried sidelights. The

See Continuation Sheet No. 2

doorway is surmounted by an elliptical arched fanlight. The deck is flagstone. The gabled roof, originally covered in wood shingle (although the plans called for slate) but now covered in asbestos shingles, at this elevation features three clapboard gabled dormers and a cornice.

The south elevation is two bays wide, gable-ended, with an interior chimney. The north elevation is three bays wide, gable-ended, with an interior chimney. A screened porch, with square chamfered columns, roof of asbestos shingles, and flagstone deck, is attached; this appears to be contemporary with the porches attached to other sections of the house on this elevation. The central bay is a doorway of French doors.

The 19th century stone block joins the 1939-40 addition at the center of the latter's east elevation. On this elevation to the north, are two bays, one a doorway with six-light panelled door; to the south, is a doorway of French doors surmounted by a transom. The roof of the east elevation features two clapboard dormers and a cornice.

On the south, west, and north elevations, windows are six over six double-hung sash, with molded concrete lintels and sills. The east elevation windows are two over two on the second floor, and four over four on the first floor below.

Early 19th Century Stone Block (first quarter century)

The central block is the oldest remaining section of the house, constructed in the first quarter of the 19th century. Of local sandstone quarried at nearby Seneca, it is three bays across and faces south. The 2½ story Federal-style block sits on a stone foundation, surmounted by a gable roof with gabled dormers (altered slightly in 1939-40 to match those of the new addition). The exterior stone has been scored, presumably done in the late 19th century to hold a stucco-like finish compatible with the west frame section; only the top floor east exterior wall section and portions of the basement wall retain the stucco and white paint. To match the 1939-40 block, the mortar of this section was repointed to match the v-shaped mortar joints and the roof covered with the same wood shingle. About 1970, the west brick end chimney was roofed over, and the roofs of the entire house were covered with asphalt shingles.

Windows in this block are six-over-six double-hung sash, with sandstone lintels. On the north elevation, there is a shallow open porch with a shed roof supported by square posts. The south (formerly main) doorway from the exterior has been altered, and the deep inset now holds a glass and wood paneled door surmounted by an 8-light transom. The older, wood paneled north door retains its original interior hardware.

Late 19th Century Frame Block

The frame east block of the house has been considerably altered since its construction in the 1880s, on the fieldstone foundation of the original log house to which the original family owner came in 1792. It is composed of two sections. To the west is a three bay by two bay, 2½ story gable-roofed frame block. On the

See Continuation Sheet No. 3

south facade, there is a central door with stone stoop; one of the six over six sash windows was converted into a bay window in the 1960s. On the west, there is an interior brick chimney at this block's juncture with the middle stone block. On the north facade, all window openings are six over six.

The two frame sections of the east block are divided visually on the south facade by an exterior brick chimney. The east section of this block is two bays by two bays; it sits on a cinderblock foundation reworked in the 1930s. The gable roof of this section slopes dramatically to the south, making the block two stories on that side. The entire east block was sheathed in aluminum siding in the 1960s.

Interior - Entrance Hall, Library, Sitting Room, Bedrooms (1939-40 Block)

The interior of the 1939-40 section illustrates an adaptation of 18th century Georgian architecture in room arrangement and ornamentation. The first floor plans feature a center hall flanked by two main living areas or public spaces, and each is highly ornamented with characteristic detail.

The entrance hall, aligned west to east, is two stories high. The ceiling is a rough-textured finish plaster, surrounded by a wood cornice of ogee and cyma moldings; at its center is an oval medallion of plaster with scalloped edges and a center of wheat shafts and a hanging globe light of metal and translucent amber glass. The walls are plaster with wainscoting of applied wood molding and with original wallpaper above. The floor is of random width oak planks, with original dark stain, resembling walnut. The eight-panelled entrance door with original brass hardware is flanked by fluted pilasters; the ellipse of its fanlight is repeated in the ellipse of the archway dividing the entrance hall. Fluted, Doric styled pilasters support the coffered arch, and its architrave is inset with a wood keystone.

Beyond the archway (on the east wall) is a doorway, with a pair of raised, dark-stained three-panelled doors opening to the dining room and surmounted with a full entablature with a cornice and bolection molding, and on the north wall a doorway to a smaller hallway leading to a study and powder room. Preceding the archway, doorways to the flanking rooms are surmounted with full entablatures having cornice and bolection molding.

The focal point of the entrance hall is the open string staircase of one run, ascending from west to east along the north wall. Its treads are old floor planks, and it has rectangular wooden balusters and a railing of pieced, carved walnut. The balusters, walnut newel post, and scrolled stepends are copies of those features found on the staircase of the early 19th century section.

The library, to the south of the entrance hall, stretches the full width of the 1939-40 section. The ceiling, with the same finish as the entrance hall, is surrounded by a carved wood cornice of talon ornament, modillions with acanthus leaf enrichment, and dentils. The plaster walls have panelling and wainscoting of applied wood molding. The floor is regular-width fir with the original dark stain as in the entrance hall. On the north wall are two doorways, one with a pair of raised, three-panelled doors opening to the entrance and the

See Continuation Sheet No. 4

second with a single raised, six-panelled door opening to the rear hall. Each is pine with an original dark stain resembling walnut, and each has original brass hardware in the style of 18th century locks, knobs, and keyhole escutcheons. The west wall has two windows, and on the east wall is a set of French doors with a bookcase. The focal point of the library is the south wall. At its center is a wall projection featuring a fireplace with a wood mantelpiece of a shelf of cyma molding above dentils above a flush panel flanked by scrolls above a bolection molding. The facing is slate, and the hearth is brick. Two hanging lights of brass, crystal pendants, and translucent glass are original to the room. The fireplace is flanked by windows with panelled reveals above window seats, which in turn are flanked by semi-circular arched, recessed bookcases surmounted by keystones.

The sitting room, to the north of the entrance hall, stretches two-thirds of the width of the 1939-40 section. The ceiling, with the same finish as in the entrance hall and library, is surrounded by a plaster, full entablature of cyma molding, bead ornament, egg-and-dart ornament, and a frieze of anthemion-palmette adaptation. At the ceiling's center is a brass and crystal chandelier. The plaster walls are unpanelled, and the floor is regular width with original dark stain. On the west wall are two windows, flanking a floor-to-entablature gilded and painted frame mirror. On the south wall is a doorway, with a pair of raised, three-panelled doors with original dark stain, opening into the entrance hall. The focal point of the sitting room is the north wall. At its center is a wall projection featuring a fireplace with a wood mantelpiece of a shelf with dentil ornament supported by two pairs of colonnettes with Corinthian capitals and plinths. The facing is grey-veined marble. The overmantel, which is painted over gilding, has a mirror framed with a molding of geometric shapes and patterns which is uncharacteristic of the rest of the 18th century design. The mantel, overmantel, and chandelier were relocated from the Jacob Wall house in Baltimore and reinstalled during the 1939-40 construction.

At the second floor level, a central hall overlooks the entrance hall, with a bowed balcony overhang and skirt of scrolls. Four doorways with elliptical archways, keystones, and panelled doors open to bedrooms, a rear hallway, and a staircase to the third floor. The second floor contains two bedrooms, each with its own bath and each with a wood mantelpiece of fluted pilasters and shelf. The third floor contains two bedrooms, each with the rough texture finish plaster of the first floor for walls, and each with a fireplace without mantelpiece; there are two bathrooms on this floor.

Interior - Rear Hall, Dining Room, Bedrooms (early 19th century block)

This section has a floor plan similar to that of the contemporary Beall-Dawson house in Rockville. What originally served as a side hall on the east, and now serves as the rear hall for the entire main house, extends the full 28' north-south width of the block. To the west is the dining room, a large room which now extends the full north-south width, but which originally was two rooms of unequal size; the front parlor was 15' x 17', the back parlor 13' x 17'. There are incised black stone surrounds for the two fireplaces on the west wall (from the Jacob Wall house in Baltimore). In the 19th century there were wood paneled folding doors dividing the two rooms, but the entire area is now open,

See Continuation Sheet No. 5

united visually with an arch added in the 1939 construction. The defined area at the north end is used as a second, informal dining area.

The three-run, open string, bracketed stairway ascends from south to north along the east interior wall. Dark-stained floorboards in this block vary in size, and the wall and ceilings are plaster over lath. In the late 19th century, when Mary Catharine Dade Wall built additions to the east and west, she made a number of interior changes in the central sandstone block; these include bullseye door frames, panelled doors, a large gilded mirror and cornice installed on the south wall first floor (from the Jacob Wall house in Baltimore), and the two fireplaces on the first floor.

The second and third floors originally contained three rooms each. On the second floor there are now two bedrooms and a bath; the third floor contains one large and one small room, both used for storage. One mantle with tiled surround, in the second floor north bedroom, appears to be original. Most of the random-width floors in this block are stained dark. The interior decorative detailing of this section includes original woodwork and late nineteenth century woodwork and possibly some c.1939 trim.

Interior - Kitchen, Pantry, Laundry, and Apartment (late 19th century east block)

The first floor serves as a huge open kitchen, pantry, and laundry, and there are bedrooms and baths above. 1880s interior features remain in some bullseye window moldings; others are fluted similar to woodwork in the old stone section. However, the interior was altered dramatically in the 1960s when the area was converted into a small apartment. There is a living room, kitchen and dining area on the first floor, and two bedrooms and bath on the second.

Secondary Buildings and Structures

Secondary buildings and structures of Friends Advice were constructed and developed from the early 19th century to the present, during two centuries of family ownership.

2. **Dairy House and Spring** (Contributing Building)

The earliest secondary building is a sunken stone spring and dairy house, located southwest of the main house. It has rough wooden openings on three elevations, and a wood-pedimented and shingled, gable roof supported by wooden square posts extending beyond the north (front) facade over a small spring. "F.S. 1806" is incised on the front of the building. There is a U-shaped trough inside, which transports water from the spring and empties through a drain into the adjacent stream. At one time there was a square enclosed cupola on the ridge line of this building.

3. **Ice House** (Contributing Building)

Built in the late 19th century, the ice house is covered with rough wood clapboards, with a fieldstone foundation and gable roof covered with asphalt shingles. It is located east (rear) of the main house in a close grouping with

See Continuation Sheet No. 6

the meat house and well.

4. **Meat House** (Contributing Building)

The meat house, built in the late 19th century, is covered with novelty wood siding, with a fieldstone foundation and gable roof covered with asphalt shingles. It is located east (rear) of the main house.

5. **Garden Shed** (Contributing Building)

The garden shed, built in the late 19th century, is covered with novelty siding and has a shed roof. It is located to the southeast of the main house.

6. **Bank Barn** (Contributing Building)

The large cross-gabled frame bank barn, built in the late 19th century, is five bays by four bays. It has a sandstone foundation, standing seam tin roof, and a large gable facing in each direction. The barn, which faces north is located approximately 175 feet east of the house. Its large wooden structural members are pegged. The lower level, which opens into the barnyard, is divided into stalls and storage areas. The upper level is divided into thirds, all of which are used for storage.

7. **Tenant House** (Contributing Building)

The center gable vernacular frame tenant house, built in the late 19th century, is located north of the main house and garage, facing northwest. It is three bays by three bays, 2½ stories, L-shaped with the center of the L now enclosed. It has a standing seam tin roof, interior brick chimney, and fieldstone foundation. The building retains its bracketed front porch columns and two over two sash windows, but was sheathed in aluminum siding in the 1960s. There are four rooms on each floor of the house.

8. **Garage** (Contributing Building)

North of the house stands a stone and frame garage with slate cross-gable roof. It was built in the 1930s as two double garage bays flanking a tack room which was indented about four feet from the facade. The walls are stone on three sides; the south (front) facade is vertical weatherboard with a second-story gable of stone. The north facade reverses the stone and weatherboard, and has a brick exterior chimney behind the tack room. In 1976 the west garage was converted to an office, and the tack room and second floor into a small apartment; at that time the south facade central indentation was filled in, a brick exterior chimney was added on the north facade, and the north weatherboard was sheathed in aluminum siding. In 1991, the office was incorporated into the apartment.

9. **Bathhouse** (Contributing Building)

The bathhouse, built in the 1930s, is of frame construction. It is located south of the main house, adjacent to the pool, and is now used for storage.

See Continuation Sheet No. 7

10. **Non-contributing Buildings**

There are five non-contributing outbuildings east of the stone garage, including a cinderblock garage and a series of small frame buildings. The boathouse near the pond is also non-contributing.

11. **Pool** (Contributing Structure)

The pool, built in the 1930s, is of concrete construction. It is located south of the main house.

12. **Well No. 1** (Contributing Structure)

Well number 1, built in the late 19th century, has a fieldstone wall and is covered with a roof of a later period. It is located in the ice house/meat house grouping to the east of the main house.

13. **Well No. 2** (Contributing Structure)

Well number 2 was built in the 1930s, and is located between the tenant house and the garage.

14. **Landscape** (Contributing Site)

Evolving through the two centuries of Dade-Wall-Wedemeyer ownership, the overall setting of Friends Advice is that of an estate within a rural environment. The 38+ acres nominated with the built historic resources maintains that setting, with farm messuage and pond. The immediate setting of the main house at Friends Advice reveals extant landscape elements from the early 19th century to the present, forming estate-like pleasure grounds of some six acres.

The hardscape elements of Friends Advice, located south and west of the main house, consist of sandstone walkways, steps, and retaining walls; iron gates and posts purchased in England by General Wedemeyer; a pair of carved stone lions imported from England by William Edwards Wall; stone bench and urns; and a sundial dated 1723, brought back from Italy in 1900 by Mary Catharine Dade Wall. A brick terrace runs along the south elevation of the early 19th century block, and a creation of sandstone boulders, set on end in grotto-like fashion in the late 1890s by William Guy Wall and his brothers and termed by them "The Rockery," borders Bucklodge Road. Entrance gates of iron with stone pillars mark the north entrance from Bucklodge Road. The entrance drive traverses the creek across a bridge with wooden balustrade. An important hardscape element north of the main house, added by William Guy Wall, is a sandstone screen wall forming a garage court entrance.

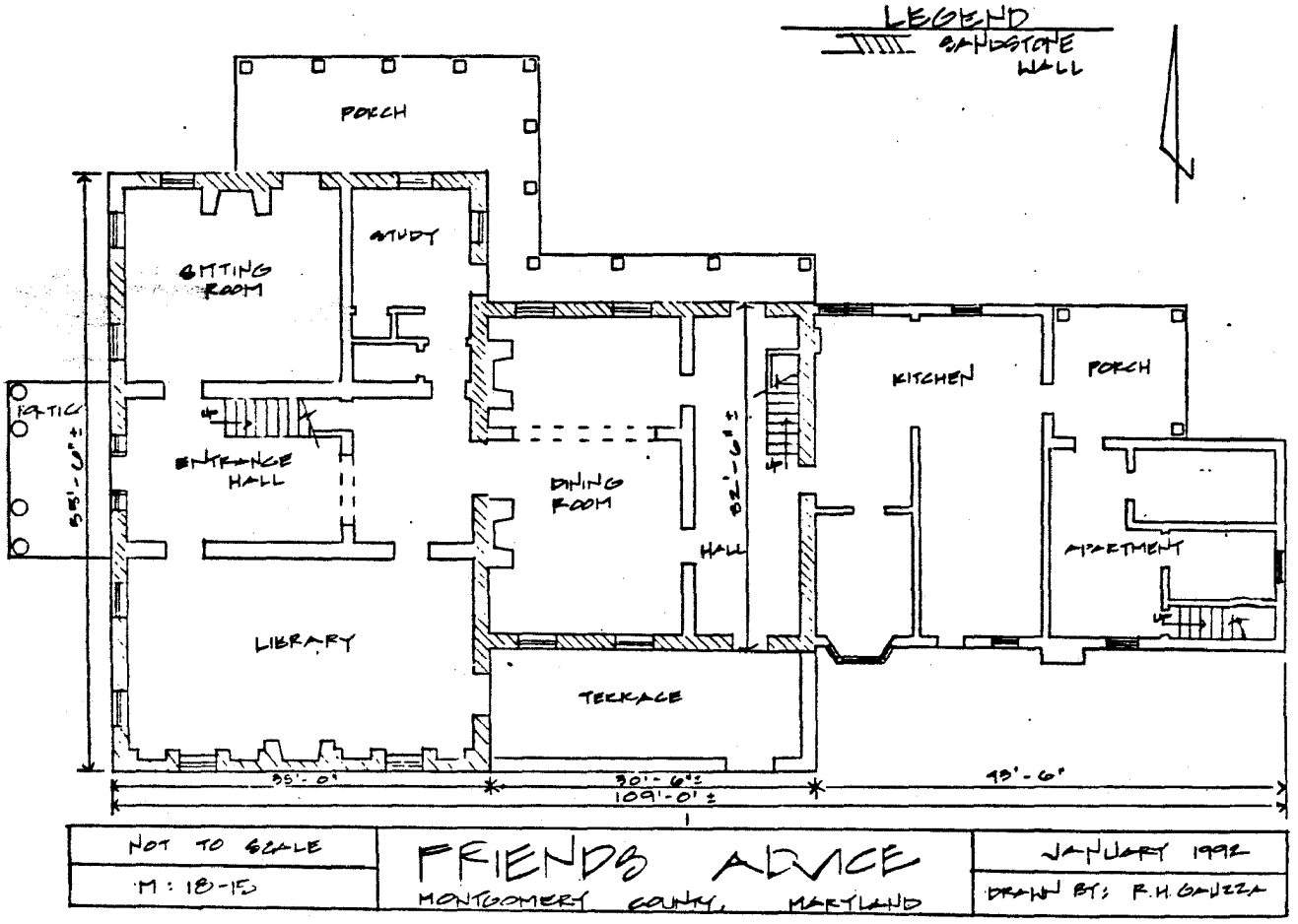
Landscape features include maples and lindens flanking the semi-circular entrance drive. Sandstone retaining walls create a cutting garden, terraced at the west elevation. There are English boxwood bordering walkways, a copse of American holly, rhododendron, flowering dogwood, and a specimen Ginkgo tree of champion size and age, borders of hydrangea and peonies, and hedge of common lilac. Mature specimen plantings include native and exotic trees and shrubs,

See Continuation Sheet No. 8

such as Norway and Serbian spruce, Kentucky coffee tree, American sweetgum, American holly, American linden, tulip poplar, southern magnolia, American and English boxwood, white pine, and wisteria.

During their tenure, General and Mrs. Wedemeyer added a large flagstone patio and a pond to the south of the main house.

See Continuation Sheet No. 9



main house

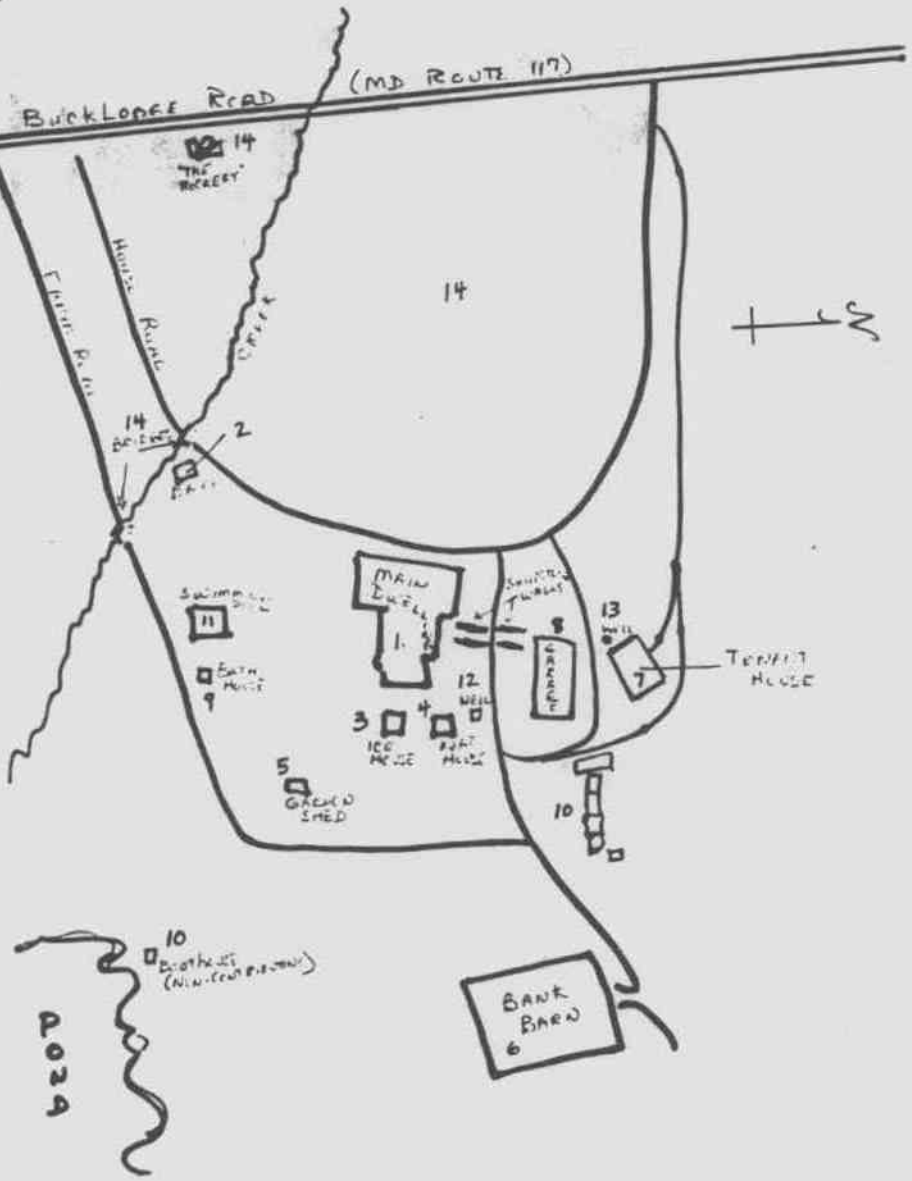
first floor

1992

See Continuation Sheet No. 10

See Section 7 for explanation of numbers.

RESOURCE SKETCH MAP 1992



HISTORIC CONTEXT:

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA

Geographic Organization: Piedmont

Chronological/Developmental Period(s):

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

Prehistoric/Historic Period Theme(s):

Architecture/Landscape Architecture/Community Planning
Military

Resource Type:

Category: Building

Historic Environment: Rural

Historic Function(s) and Use(s):

DOMESTIC/single dwelling
DOMESTIC/secondary structure
AGRICULTURAL/animal facility

Known Design Source: Architect/Milton Grigg

See Continuation Sheet No. 12

HISTORIC CONTEXT:

The evolution of Friends Advice, also known at one time as Walldene, is a reflection of its association with the members of a prominent Montgomery County family whose achievements became part of the chronicles of American history and who inevitably anchored their lives there, to carry, through one era after another, an ambitious cycle of development - improving, changing, adding to, altering, and redefining Friends Advice until it reached its present level as an authentic American country seat. Beginning in 1792 with the Reverend Townshend Dade, the history of Friends Advice has been highlighted by the biographies of his son Robert Townshend Dade, great great grandson William Guy Wall, and his great great great grandson-in-law General Albert C. Wedemeyer.

Reverend Townshend Dade (1742-1822)

Two hundred years of Dade family ownership of Friends Advice began in 1792, when the Reverend Townshend Dade purchased 345 acres of "Resurvey on Friends Advice" for £630.[1] Reverend Dade's residency in Montgomery County came after three decades of religious and revolutionary activities in Virginia. In 1765 the 23-year-old Dade, whose ordination had been sponsored by family friend George Washington, became the rector of Falls Church and of a small Episcopal chapel of ease near Alexandria, Virginia. When the congregation completed Christ Church in Alexandria in 1773, Reverend Dade became its first rector.

Reverend Dade was an active participant in early revolutionary events. With his father, he signed the "Resolutions of the Patriots of the Northern Neck of Virginia," drawn up by Richard Henry Lee to protest the Stamp Act; in 1774 he was recorded as a member of the Fairfax County committee.[2] In 1778, Reverend Dade resigned and relocated in Loudoun County, Virginia. Visits to relatives and occasional preaching led Reverend Dade to Maryland, where his marriage in 1784 to Polly Simmons of Piney Hill (present-day Boyds) settled them in Montgomery County by 1792.[3]

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[1] Friends Advice had been patented in 1760 and resurveyed in 1772; Patents BC & GS #13, BC & GS #43, Maryland Hall of Records.

[2] From a paper given by Mrs. Robert J. Boyd, Past Historian of Chevy Chase Chapter DAR, on the occasion of placing a DAR marker on the grave of Reverend Townshend Dade, October 7, 1951, in Monocacy Cemetery.

[3] Montgomery County Land Records, E/328 (recorded May 11, 1793); Elizabeth Dade Wedemeyer, The Forebears of Colonel Robert Townshend Dade, privately printed, 1968, p. 20-26.

See Continuation Sheet No. 13

By 1792, the Dades had two children and twice that number of slaves. Reverend Dade practiced medicine and occasionally married couples upon request, but was not affiliated with any church. To the original acreage, he added 120+ more, as well as a stone spring and dairy house (1806), tobacco barns, and other buildings necessary to a growing plantation.[4] He continued to live at Friends Advice until his death in 1822.

Robert Townshend Dade (1786-1873)

Colonel Robert Townshend Dade, only son of Townshend and Polly, brought his bride Ruth Simmons to Friends Advice in 1808. This event probably occasioned the need for improvements to the original five-room log house on the property. Robert Townshend Dade "cleared my places of stones, and put up a good deal of fence, built a large three-story stone house." The three-bay Federal-style block made of local Seneca sandstone faced south, featured front and back parlors on the west side, a spacious hall, and six bedrooms on two floors above, and was joined to the earlier building by a covered arch or breezeway.[5]

Robert served as a captain in Cramer's Detachment of the Maryland Militia during the War of 1812, taking part in the disastrous Battle of Bladensburg and in the victory at Baltimore. Setting a family military tradition, he was known as Colonel Dade for the remainder of his life. At his death in 1822, Reverend Dade left his son a substantial estate, including cattle, hogs, horses, turkeys, ducks, geese, furniture, nine slaves, crops of wheat, rye, corn, and tobacco.[6] Robert continued to live at Friends Advice with his wife and children, mother, and two unmarried sisters. He added other farms and slaves to the holdings, by 1856 owning 1200 acres and 20 slaves. A democrat, Dade served three terms in the Maryland Legislature, beginning in 1832, and in 1861 represented Montgomery County at the convention held to determine the State's role in the impending conflict. During the war, the Dade family sided with the south, as did most of their neighbors.[7]

Robert Townshend Dade died in 1873 at age 86, a few months before the B&O Railroad Company opened its Metropolitan Branch through Montgomery County. His son Robert and daughter Anna, who remained at Friends Advice, took advantage of being located one mile from Bucklodge station.

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[4] U.S. Census, 1790; Land Records, I/191 (1800).

[5] Wedemeyer, Forebears, p. 26-27; letter from Robert Townshend Dade to his uncle James Simmons, October 14, 1856, quoted in Forebears, p. 33-34.

[6] Inventory, 1822, entered in Docket 2/61, recorded in Montgomery County Will Records at N401.

[7] 1856 letter quoted in Forebears, p. 33-34; Roger B. Farquhar, Old Homes and History of Montgomery County, 1965, p. 31.

See Continuation Sheet No. 14

Mary Catharine Dade Wall (1849-1932)

After the death of her father Robert in 1881, Colonel Dade's granddaughter Mary Catharine Dade Wall, with her husband William Edwards Wall, took over operations of the farm.[8] The Walls moved into the house with their six children, governess, and friend Laura Kendall. William Wall, a selling agent for the B.B. & R. Knight cotton mills, best known for Fruit of the Loom cottons, remained based in New York City. He traveled extensively on business and came to the Boyds farm on holidays and many weekends. Before her husband retired from active business in 1920, Mary Wall was responsible for overseeing the farm. She hired a professional farm manager and constructed a frame house for him and his family.

Mrs. Wall razed the original log house to the east of the stone Federal-style section, building a kitchen on the old foundation and adding a tiny porch south of where the former breezeway had been. About 1882, she constructed a large frame addition to the west of the stone section, effectively reorienting the main entrance of the house from the south to the west side. The south-facing sandstone section was scored, "stuccoed," and painted white on the exterior to blend with the flanking frame blocks, and its first floor became two adjoining dining rooms.

The new west orientation was reinforced with a semi-circular tree-lined drive and statuary, including carved stone lions. In addition to the tenant house, Mrs. Wall built an icehouse, meathouse, well, water tower, and large bank barn on the estate she now called "Walldene." Before the turn of the century, the young men of the family, including her son William Guy Wall, moved large sandstone boulders to the road frontage of the property.[9]

William Guy Wall (1876-1941)

At Mary Wall's death in 1932, the property was inherited by William Guy Wall. colonel Wall was an automotive engineer and a graduate of VMI and MIT and veteran of the Spanish-American War. By 1900 he moved to Indianapolis, center of activity for the budding automobile industry. He was the founder, vice president, and chief engineer of the National Motor Car and Vehicle Corporation, and in 1917 was one of the first automotive engineers to be called upon by the U.S. government to assist in wartime. For two years he headed the Ordnance Department section charged with design, construction and maintenance of armored cars, tanks, ammunition trucks and artillery tractors, playing an important part

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[8] Land Records, EBP27/173 (recorded October 24, 1882); Mary Catharine Dade had attended Vassar College in 1865, the school's opening year.

[9] Recollections of Elizabeth Dade Wedemeyer, to Dorothy Troth Muir, 1960s-70s; family photographs of early 20th century.

See Continuation Sheet No. 15

in the motorization of the American army.[10]

After WWI, he returned to Indianapolis, and became the consulting engineer for several prominent automobile companies. Colonel Wall in 1928 was president of the Society of Automotive Engineers, a professional standards organization for the automobile industry. His first wife died in 1931. Three years later, he married Helen Wessel of Washington, D.C. The couple maintained homes in Indianapolis and in Boyds at Walldene.[11]

The 1930s, when the Walls lived at Walldene, was a decade of dramatic contrasts in Montgomery County. In the last two decades of the 19th century and first three of the 20th, the jurisdiction had gained a reputation as one of the nation's most affluent and desirable residential areas. This was most notable in the landscape of the southern portion of the county, which had shifted from rural to suburban residential patterns as a result of its location on the outskirts of Washington, D.C. The transformation was influenced by the wealth and taste of a group of people whose image of life led them to a country setting while maintaining contact with the city for professional reasons. This image placed them in the role of clients who commissioned architects to create one country house after another, demanding and receiving the symmetry, simplicity, detail, and classical lines of the late 18th and early 19th centuries, and perhaps sparked by renewed interest in early American history and architecture. It was this perception of the American country life which influenced William Guy Wall to commission Charlottesville, Virginia architect Milton Grigg to design additions and alterations to the main house at his family property in Boyds. And, like generations of his family before and after, Guy Wall came home to Friends Advice.

In the hands of Wall and Grigg, Friends Advice in 1939-40 became an "American country house." While family ownership and agricultural operations had never changed, Friends Advice had evolved from its origins as a rustic and isolated farmstead in the 18th century to a country estate in the 20th century, intended for leisure, amusement, beauty, luxury, and entertaining. In this transformation, the main dwelling house came to dominate the image of the property and to inspire corresponding amenities.

Although incorporating two earlier periods of 19th century rural vernacular construction, the main dwelling house at Friends Advice projects the character of a country house of the first half of the 20th century as defined by the additions and alterations of 1939-40. Transformed at a time when the lavish

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[10] Montgomery County Will Records, PEW20/365; Indianapolis Star, March 13, 1919.

[11] Who's Who in America, Vol. 21, 1940-41, A.N. Marquis Co., Chicago, 1940, p. 2663. Founded in 1906, SAE sets standards for the auto industry; for example the viscosity of oil carries SAE rating of 10W-40.

See Continuation Sheet No. 16

revival of historical styles was the vogue in conservative circles, it provides a rich illustration of an era when architectural design and society's building aspirations were greatly inspired by the teachings of the Ecole des Beaux Arts in Paris. It belongs to a class of architectural undertakings in the counties bordering the nation's capital that became suburban estates and country retreats; these were characterized by large land tracts, dwellings of ample or grand scales, revivals of European and American historical house types, and dates of construction within the first half of the 20th century; the earliest being built in the teens. It was a "country house era" defined in Montgomery County by notable examples such as Woodend (M: 35-12) and the Corby Estate (M: 30-12), recreations of 18th century English manor house (John Russell Pope, Chevy Chase, 1920s, and Charles Barton Keen, North Bethesda, 1914), Glen View (M: 26-17-1), a recreation of an 18th century Pennsylvania farmhouse (Porter and Lochie, Rockville, 1920s), and Marwood, a recreation of an 18th century French chateau (John J. Whelan, Potomac, 1931).[12] The majority were located along established transportation routes from Washington, D.C., such as the Rockville Pike, which became known at the time as an estate-bordered boulevard.

Within this context, Friends Advice stands unique. While the inspirational historical styles led to a majority of country houses being built as revivals of colonial and antebellum American house in brick, clapboard, and stone, the main house at Friends Advice is the only known example built with a masonry of sandstone, a stone of rose colors and locally quarried from Seneca since the 18th century. While its use in the 1939-40 section was inspired by the desire to match the same sandstone used in the early 19th century section, the impression of a unique local material gives it a strong sense of place, emphasizing its revival of the antebellum stone houses of upper western Montgomery County. In addition, while the majority of country house were built in the 1920, with some construction extending into the early 1930s, the 1939-40 additions and alterations of the main house represent the last phase of the "country house era." It caps an era as the last country house of this level known to be developed in Montgomery County.

In the interpretation of a style, the main house at Friends Advice illustrates a recreation of a late 18th century Georgian plantation house of the inland valleys of the Mid-Atlantic region. As seen in the 1939-40 block, the proportions are well-executed, the architectural details are academic, and the craftsmanship is excellent, all the product of the designs of architect Milton Grigg in response to the desires of his client.

Milton Grigg, who attended the University of Virginia engineering and architectural schools in the 1920s, entered private practice in Charlottesville in 1933. At the time he designed the additions and alterations to Walldene, Grigg was in partnership with Floyd E. Johnson, an association which continued through 1941. Grigg then formed Grigg, Brown & Associates, opening branch offices in Alexandria in 1949 and in New York in 1940. He was with the Corps of

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[12] Woodend (M: 35-12) is listed in the National Register, and the Corby Estate (M: 30-12) has been nominated.

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Engineers in Washington, as Chief of Design for the Washington Engineer District, from 1942 to 1945. His career included writing numerous articles in popular and professional journals, lecturing at George Washington University and the University of Virginia extension department, serving on various civic boards and commissions in the Charlottesville area, and involvement in restorations of the Thomas Jefferson Memorial and Colonial Church. Grigg was active in the American Institute of Architects, serving on various committees and as president, vice president, secretary, and treasurer of the Virginia Chapter.

Grigg's architectural accomplishments include the Thomas Jefferson Inn (Charlottesville); Grace Church, First Church of Christ, Scientist, Parish House of Old Christ Church, and Juvenile Court Building (Alexandria); and Chapel of the Atonement (Washington, D.C.). His restoration work includes Monticello and Hollymead (Charlottesville); Edgemont (North Garden); Glen Echo (Proffitt); and the Dulaney House (Alexandria). The influence over Grigg of the first stage of the restoration work at Williamsburg (which began capturing the imagination of American architects, particularly those in the region, by the early 1930s), is indicated by a house he designed for Richard B. English in Bell Haven (Alexandria) in 1935 in "the 18th Century Virginia style."[13]

Through the 1939-40 additions and alterations, the interior spaces of the main house evolved into a typical arrangement of the "country house era," with a display of 18th century ornament. The entrance hall, library, and sitting room reveal a "pattern book" approach in decoration. Design motifs include modillions with acanthus leaf decoration to the frieze of anthemion-palmette decoration and scrolls in the library mantelpiece and the ceiling medallion of the entrance hall.

Colonel and Mrs. Wall worked with Grigg to intertwine generations of family history at Walldene. They removed the west frame section Colonel Wall's mother had constructed in the 1880s, replacing it with the new sandstone addition. In addition to echoing the earlier stone house in the new construction, they incorporated interior architectural features from Colonel Wall's father's home in Baltimore. They added touches to make the earlier sections more compatible with the new, on the exterior repointing the old stone block with mortar to match the 1939-40 addition, and on the interior reusing a gilded mirror, mantel, and overmantel. They also worked on the east block, enclosing the tiny south kitchen porch and reinforcing the foundation. On the grounds, the Walls added a stone and frame garage with tack room, brick terrace, boxwood plantings, stone walls, iron gates and posts, a swimming pool and bathhouse, and removed the old water tower at the rear of the house.

The transformation of Friends Advice in the 1930s from a family farm to a family country estate created a unique array of components and functions. The estate "composition" included support for the workings of the estate and farm, as well as for aesthetics and recreation. It also assimilated the historical

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[13] Information from A.I.A. files and from correspondence with Floyd E. Johnson (1991); Architecture, June 1936, p. 81.

See Continuation Sheet No. 18

components, some of which became ornaments to the landscaped setting. While the original functions of the dairy house and spring, ice house, meat house, and garden shed have long since become obsolete, they reinforce the historical integrity of the estate while reflecting the evolutionary layers of farm and buildings. Thus, by the middle of the 20th century, the estate was an amalgam of barns and sheds for the working gentlemen's farm, garage and tenant house for the luxuries of its inhabitants and upkeep of the property, stables, tack room, pool and bathhouse for active recreation, and landscape features (terraces, walkways, and plantings) for visual pleasure and passive recreation.

The Walls like to entertain, and the two bedrooms in the new addition were often filled with guests. Colonel Wall's membership in several prestigious Washington clubs and his position as master of the Potomac Hunt, a county institution, solidified their local social connections.

Colonel Wall died in 1941. Helen Wall continued to live at Walldene for another decade. To conserve costs, she used the rear north room on the first floor of the new stone addition as her kitchen. As he had no children of his own, Colonel Wall's will directed his surviving siblings to elect among his nieces and nephews the Dade descendant who should inherit the ancestral home upon Helen's death. They chose Elizabeth Dade Wedemeyer, granddaughter of Mary Dade Wall, who since her marriage in 1925 had lived in different parts of the world with her husband, General Albert C. Wedemeyer.

Albert C. Wedemeyer (1897-1989)

General Albert C. Wedemeyer played a significant role in the American conduct of World War II. A West Point graduate, he was the first American to attend (1936-1938) the Kriegsakademie, the German general staff college. It was he who formulated the grand strategy later adopted by the Allies to win World War II. Known as the "Victory Program" upon its presentation to President Roosevelt in September of 1941, it proposed defeating Germany with ground forces and relegating war against Japan to a secondary role. After Pearl Harbor, this plan served official Washington as the basic guide for deploying the Allied forces.

In October 1943, General Wedemeyer became deputy Chief of Staff to Britain's Admiral Lord Louis Mountbatten, commander in chief of the Southeast Asia Command. A year later, when General Stillwell was recalled and China-Burma-India operations reorganized, General Wedemeyer was placed in command of the separate China theater. As Chief of Staff to Generalissimo Chiang Kai-shek, leader of the Chinese Nationalists, and as American commander in China through 1946, General Wedemeyer participated in the early stages of the Chinese civil war.

General Wedemeyer's subsequent career included commands of the Second and Sixth armies, a mission to the Far East for President Truman, and to the Pentagon. He received the Distinguished Service Medal with Oak Leaf Cluster and Distinguished Flying Cross.

Throughout their married life, the Wedemeyers lived in Army quarters and, as they moved from one assignment to another, had no permanent home. The family

See Continuation Sheet No. 19

farm in Boyds was the constant thread in their lives, as they returned to spend summers and lengthy vacations between overseas military assignments. The Wedemeyers entertained military and civilian guests at Friends Advice, and General Wedemeyer worked and wrote there.

Upon his retirement in 1951, General and Mrs. Wedemeyer made the Walldene estate their permanent home, renaming it "Friends Advice." General Wedemeyer was promoted to full general in 1954. In retirement, he served as a director of several corporations, and also published a book of memoirs entitled Wedemeyer Reports.[14]

General and Mrs. Wedemeyer lived at Friends Advice from 1951 until the General's death in 1989. During that period, they purchased two adjoining farms and renovated the farmhouses, added a pond, rebuilt the hoghouse into a bathhouse, rebuilt bridges, remodeled the tenant house, and added a new septic system, well, iron gates and posts brought from England, and large flagstone patio. In the main dwelling, the Wedemeyers concentrated on updating the rear frame section; they modernized the back kitchen, installed a hot water heating system, developed the back apartment, and sheathed the frame exterior in aluminum siding.

During their 38-year tenure, the Wedemeyers made few alterations to the 1939 stone section; Helen Wall's front kitchen was replaced with an office, and a small back hall area became a coat closet with trap door over the cellar steps. In the 1970s, they re-roofed the entire house with asphalt shingle. In 1974 General Wedemeyer moved his secretary Elaine Hill from their Washington, D.C. office to the newly-converted west (frame) section of the garage. Soon after, the Wedemeyers converted the east section of the late 19th century frame block into a two-story apartment for Ms. Hill, and she moved there.

Since 1989, General and Mrs. Wedemeyer's son, Albert D. Wedemeyer, and his wife Dorothy have lived at Friends Advice, on the property purchased by Mr. Wedemeyer's family 200 years and six generations ago.

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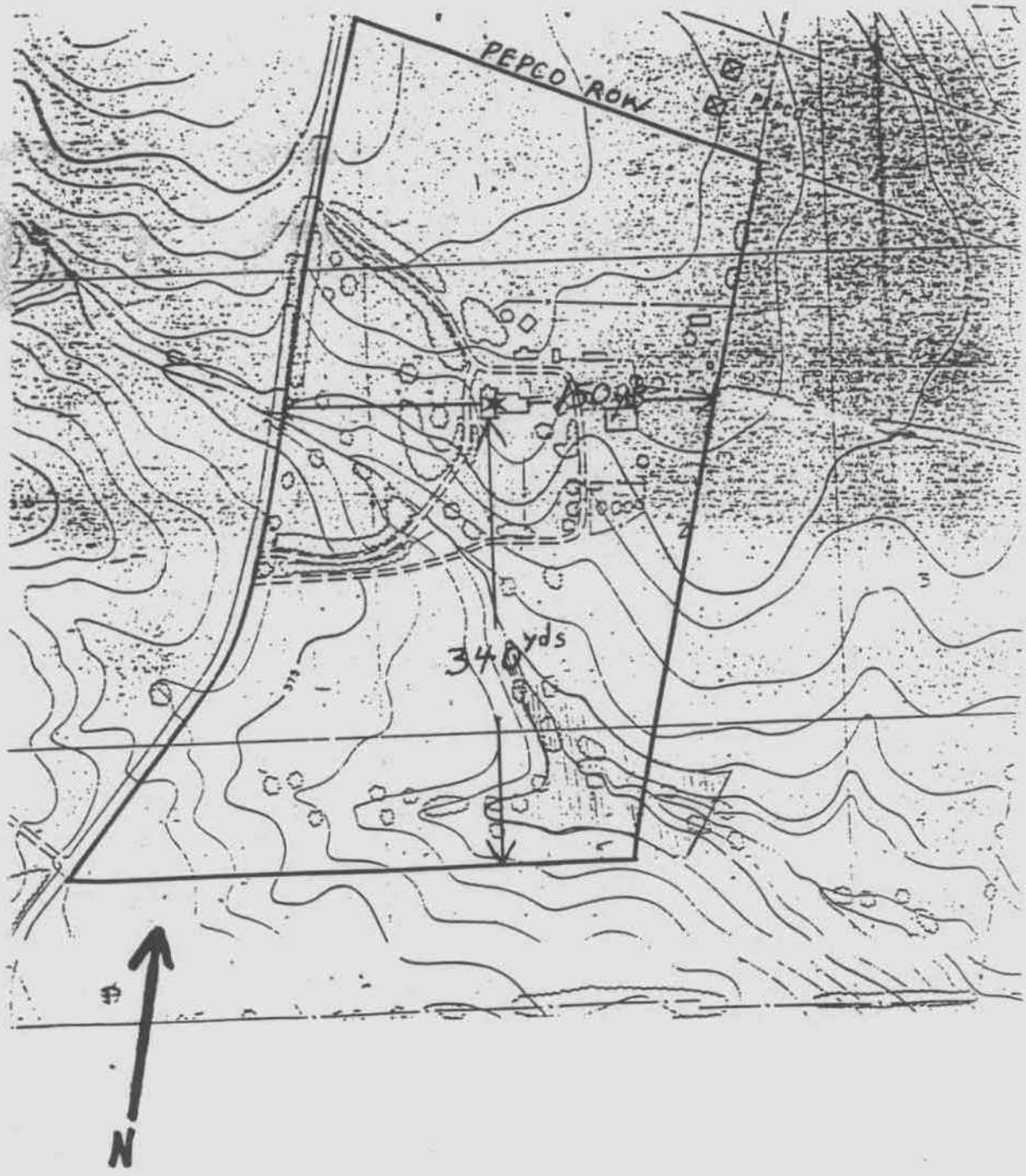
[14] Wedemeyer obituary, Washington Post, December 20, 1989; Land Records, 1524/359 (May 9, 1951); and Keith Eiler, Wedemeyer on War and Peace (Stanford, California: Hoover Institution Press, 1987).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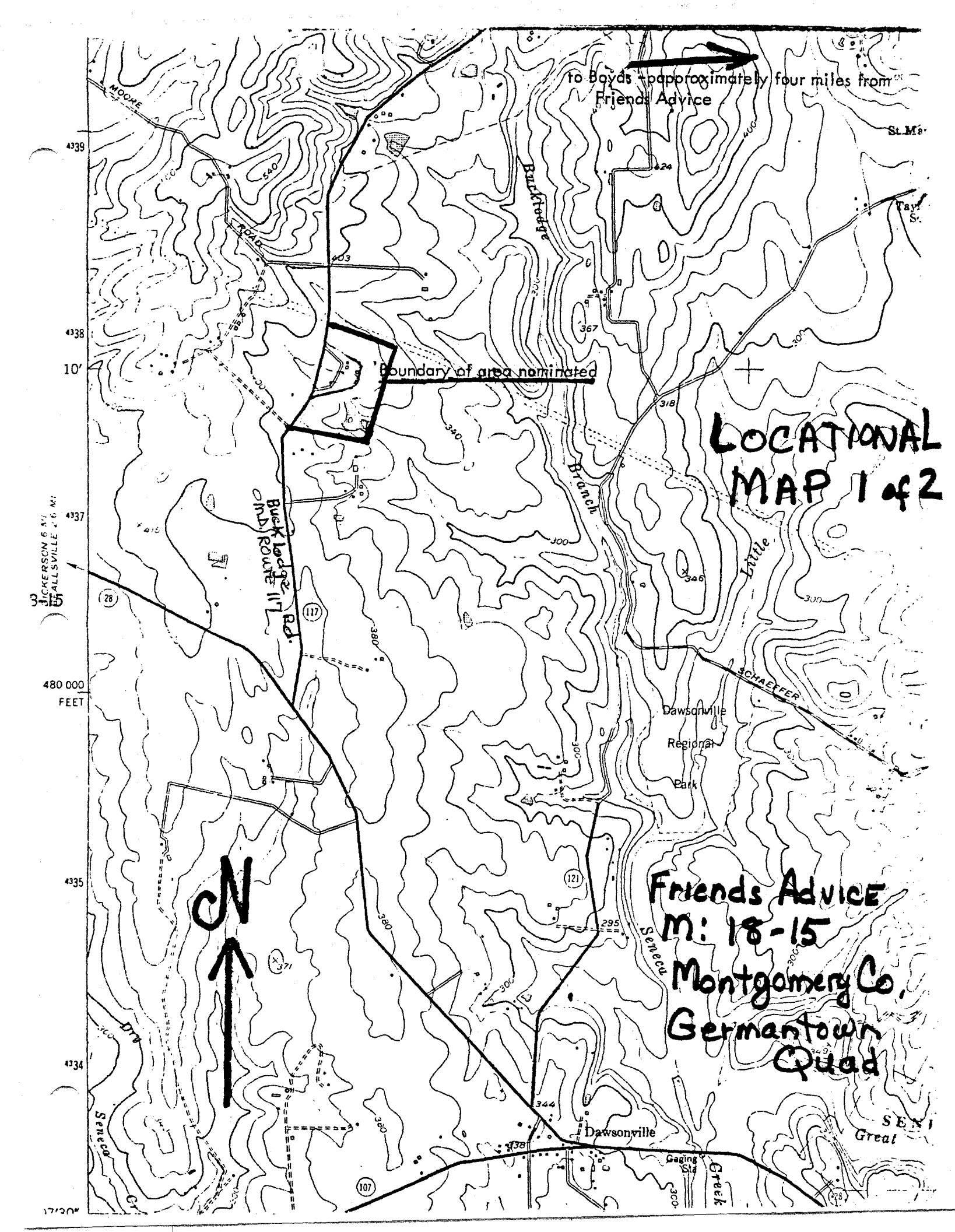

to Boyds - approximately four miles from Friends Advice
Boundary of area nominated
LOCATIONAL MAP 1 of 2
Friends Advice
M: 18-15
Montgomery Co.
Germantown
Quad
N
Buck Lodge Rd.
Old Route 117
Dawsonville
Regional
Park
Dawsonville
Gaging Sta
Seneca Creek
Great Seneca Creek
Little Seneca Creek
Bartlett Branch
SCHAEFFER
MOORE ROAD
4339
4338
4337
4335
4334
480 000 FEET
10'

Milton Grigg, A.I.A.
1930s
Source: AIA Archives

m: 18-15
Friends Advice

ACHS SUMMARY FORM M: 18-15

1. Name Friends Advice

2. Planning Area/Site Number 18/15 3. MNCPPC Atlas Reference Map 6; B-18

4. Address 19001 Bucklodge Road, Boyds, 20720

5. Classification Summary

Category buildings
Ownership private
Public Acquisition NA
Status occupied
Accessible no
Present use private residence
Previous Survey Recording M-NCPPC Federal ___ State X County X Local ___
Inventory of Historical Sites 1976

6. Date early 1800s 7. Original Owner Rev. Townshend Dade

8. Apparent Condition

a. excellent c. original site

b. altered

9. Description

This T-shaped, two and a half story, five bay by nine bay house is hidden from the road at the end of a driveway lined by maple and elm trees. The house was built in sections and now faces west. The original (1757) two room two story log house faced north. A two story sandstone structure was added to west of the log structure about 1795-1810. In 1880 a two story Victorian frame house was built westof the sandstone structure. In 1932 a Williamsburg architect rebuilt the Victorian frame section in sandstone with distinctively Williamsburg colonial features.

10. Significance: Friends Advice has been owned by 5 generations of the Dade famil since its construction, & the lives of the owners tell the history of U.S. in iniature.The Rev. Townshend Dade, once the minister of George Washington's Christ Church in Virginia, purchased the land for Friends Advice in 1800. He cleared the fields, and piled up red sandstone to be used in the construction of his 3-story house, spring house, and enclosing fences. Townshend furnished the interior, and his desk is still in the library. The house has been owned by descendants of the Rev. Townshend Dade ever since; his son, Robert, served in the War of 1812 with the rank of Colonel and a later descendant, Guy Wall, was a Colonel in the Spanish-American War. Currently Elizabeth Dade Wedemeyer resides there with her husband, World War II General Albert C. Wedemeyer.

11. Date researched and researcher 1978 Dorothy Troth Muir, Candy Reed - Architectural Description

12. Compiler Peg Coleman 13. Date Compiled 11/78 14. Designation Approval ___

15. Acreage 36.253

M#18-5

1603985304

MARYLAND HISTORICAL TRUST WORKSHEET

NOMINATION FORM
for the
NATIONAL REGISTER OF HISTORIC PLACES, NATIONAL PARKS SERVICE

SEE INSTRUCTIONS

1. NAME

COMMON:

AND/OR HISTORIC: Friend's Advice

2. LOCATION

STREET AND NUMBER: Slidell Road

CITY OR TOWN: Boyds

STATE: Maryland | COUNTY: Montgomery

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☒ Building	☐ Public	Public Acquisition:	☒ Occupied	Yes:
☐ Site ☐ Structure	☒ Private	☐ In Process	☐ Unoccupied	☐ Restricted
☐ Object	☐ Both	☐ Being Considered	☐ Preservation work in progress	☐ Unrestricted
				☒ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☒ Private Residence	☐ Other (Specify)	
☐ Educational	☐ Military	☐ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY

OWNER'S NAME: Gen. A. C. Wedemeyer

STREET AND NUMBER: Slidell Road

CITY OR TOWN: Boyds | STATE: Maryland

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Montgomery County Courthouse

STREET AND NUMBER:

CITY OR TOWN: Rockville | STATE: Maryland

Title Reference of Current Deed (Book & Pg. #):

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: None

DATE OF SURVEY: ☐ Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS:

STREET AND NUMBER:

CITY OR TOWN: | STATE:

M:18-15

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☒ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☒ Altered	☐ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (*If known*) PHYSICAL APPEARANCE

The old house is now the rear wing for a large, five-bay, stone house. It has a three-bay, main (south) facade with the doorway in the east bay. The transom light has eight lights set in a 4/4 pattern. The windows, which are 6/6 double hung sash, have stone lintels and sills. There are two clapboard, A-roofed dormers. In plan, the house has an end hall and parlor.

East of the house there are two frame meat houses. The framed bankbarn sits on a stone foundation. It is of cross-gable design. The sawn members are mortised, tenoned, and pegged. West of the house is a springhouse with an A-roof projecting forward to form a canopy and supported on the outer end by square posts. The gable end is bracketed along the slope of the eaves.

SEE INSTRUCTIONS

M:18-15

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

- ☐ Pre-Columbian
- ☐ 15th Century
- ☐ 16th Century
- ☐ 17th Century
- ☐ 18th Century
- ☒ 19th Century
- ☐ 20th Century

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

- ☐ Aboriginal
  - ☐ Prehistoric
  - ☐ Historic
- ☐ Agriculture
- ☐ Architecture
- ☐ Art
- ☐ Commerce
- ☐ Communications
- ☐ Conservation
- ☐ Education
- ☐ Engineering
- ☐ Industry
- ☐ Invention
- ☐ Landscape Architecture
- ☐ Literature
- ☐ Military
- ☐ Music
- ☐ Political
- ☐ Religion/Philosophy
- ☐ Science
- ☐ Sculpture
- ☐ Social/Humanitarian
- ☐ Theater
- ☐ Transportation
- ☐ Urban Planning
- ☐ Other *(Specify)* _____

STATEMENT OF SIGNIFICANCE

SEE INSTRUCTIONS

M:18-15

9. MAJOR BIBLIOGRAPHICAL REFERENCES

10. GEOGRAPHICAL DATA

LATITUOE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY						OR	LATITUDE AND LONGITUOE COORDINATES OEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES					
CORNER	LATITUDE			LONGITUOE			LATITUOE			LONGITUDE		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	°	'	"	°	'	"	°	'	"	°	'	"
NE	°	'	"	°	'	"						
SE	°	'	"	°	'	"						
SW	°	'	"	°	'	"						

APPROXIMATE ACREAGE OF NOMINATEO PROPERTY:

Acreage Justification:

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:		COUNTY	
STATE:		COUNTY:	
STATE:		COUNTY:	
STATE:		COUNTY:	

11. FORM PREPARED BY

NAME AND TITLE:
Christopher Owens, Park Historian

ORGANIZATION
M-NCPPC

DATE
8 May 74

STREET AND NUMBER:
8787 Georgia Avenue

CITY OR TOWN:
Silver Spring

STATE
Maryland

12. State Liaison Officer Review: (Office Use Only)

Significance of this property is:

National ☐ State ☐ Local ☐

Signature

SEE INSTRUCTIONS

purchase a lot not to exceed four and one-half acres upon which to build a court house. In 1763 he was one of the "visitors" to the schools of the then Lower Frederick County.

It is believed that the original or lower left part of the house was built before 1800, and it is reliably reported to have been built by a contractor named Jack Braddock for Jesse Willcoxon, who paid for, but did not occupy the house at any time. Jesse was on the Levy Court of the County for six terms, from 1814 through 1819, and was an extensive dealer in real estate.

In 1890, Francis Fraley, whose wife was Margaret Hargett, came to Flint Hill from Frederick County, buying the place which then contained about 400 acres from a Hyatt family. They stated that the high front frame part of the house had at that time been built, apparently by the Bowies, before they sold Flint Hill in 1875.

Harry Fraley, Sr., the next owner, whose widow, Lulu Duvall Fraley, still lives in a nearby home, bought the place in 1914 or 1915 from Margaret Fraley, widow of Francis Fraley, Sr., and they lived there together until the death of Harry, Senior in 1938. In 1941, Mrs. Harry Fraley (Sr.), sold the farm with about 275 acres to a Washington man, Richard Davis. In 1949 the Fraleys were very happy to repossess the old home, which they purchased with 225 acres, and young Harry Fraley, Jr., and his wife moved back into the house the first part of 1950.

The lower left part of the house with stone chimney and high porch columns, built before 1800, is of logs "nogged" with brick and has the characteristic details of a house of the Colonial period. The first floor of this part has a large living or dining room, entered either from the rear porch or from the front hall. It has a large fireplace, a prominent feature. There is one other room in this original part and two rooms on the second floor.

Friends Advice

AT what date is it considered necessary for a settler from across the seas to have come to Virginia to qualify as an F.F.V.? "First Family of Virginia." In the Provincial period 1620-1700, or Early Colonial 1700-1750? [1] It seems to the author that 300 years should meet every requirement for one to be included in that charming circle of blue blooded gentry of the Old Dominion.

The photograph shows a house, part of which was believed to have been built about 180 years ago by a Virginian whose forebears came to the Old Dominion in 1651. The family remained there for five generations before one member of it "crossed the river" into Maryland and established himself in Montgomery County. He and his descendents have had the satisfaction of owning that plantation north of the Potomac River also for five generations.

Francis Dade came from Suffolk, England to Virginia in 1651 and his great, great grandson, the Rev. Townshend Dade, Jr. coming to Montgomery County about 1768 named his plantation "Friends Advice." He acquired a tract of several hundred acres in the upper part of the county near Boyds by marriage and the house shown above stands on that land.

Townshend Dade, Jr., was a son of Townshend Dade and Parthenia Alexander Massey, and was born in January, 1742. He was ordained at a very early age in 1765 and became Rector of Fairfax Parish, which included Alexandria. He thus had had several years experience in the ministry before becoming Rector of Christ Church in Alexandria, which was completed in 1773. While serving in that pulpit his salary was 17,280 pounds of tobacco, with an additional 2,500 pounds for maintenance of the glebe.[2] During his term a substantial Glebe House was built there.

The Rev. Dade had a half brother, Lee Massey, a son of Dade Massey and Parthenia Alexander Massey. Dade Massey died before he was thirty years old leaving the young son and his widow soon thereafter married Townshend Dade, Sr. According to traditions in the family these two young men giving great promise were sent to England at the suggestion of George Washington, a friend of the family. After their education abroad they returned to Virginia and were among the earliest American born ministers to be assigned to parishes.

[1] White Pillars, by J. Frazer Smith. Chart p. 212.
[2] The History of Alexandria, Virginia, by Mary G. Powell.

M:1845

When Christ Church was completed George Washington in his own hand wrote a memo on his diary as follows: "January 17, 1773, sale of pews in Alexandria Church:—

"*No. Purchaser*

4 Mr. Townshend Dade, 28 pounds.

5 Colo. G. Washington, 36 pounds, 10 shillings."

Washington, before Christ Church was opened, was a regular parishoner at Pohick Church.

The Rev. Dade continued in that position until 1778 when, according to family traditions and Mrs. Powell's history, he resigned under advice of friends in the parish. He had lost the confidence and support of his parishoners. In this he was no different from other Anglican clergymen at the time of the Revolution. As an example, the Rev. "Parson" Williamson of Hayes Manor had the same thing happen to him. The disturbances of the Revolutions meant changes in the personnel and the sentiments of the parishoners toward the rectors. The sporting mode of life of the Anglicans in taking part in fox hunting, horse racing, cock fighting, and games of chance, was not compatible with the ideas of the parishoners during and after the Revolution.

When Rev. Dade "went over the river" it is believed that he built a small stone house and a spring house on the tract he named "Friends Advice," the present site of Walldene. The original house is that part of the photograph shown which includes the front hall, and two bedrooms above, with a bath added. To the right of this part which it is believed the Rev. Dade built, was a breezeway, now a kitchen. West of the hall is a double dining room with two fireplaces.

In 1784, Townshend Dade married Miss Mary, usually called "Polly" Simmons, daughter of Samuel and Elizabeth Simmons of Piney Hill, near Boyds. Reverend Townshend Dade died on February 6, 1822, aged eighty years, and in 1951, the Chevy Chase Chapter D.A.R. placed a bronze marker, over his grave in Monocacy Cemetary at Beallsville, with the words "Revolutionary Patriot" cast therein and two dates, 1775-1783. The ceremonies on this occasion were under the direction of Mrs. Frank P. Wilcox, Chapter Regent, who was Miss Ruth Elizabeth Davis, a great-great-granddaughter of the Reverend Townshend Dade. Polly Dade moved to Kentucky after his death, and was interred there.

To follow the successive owners of Walldene we find that the place passed to Col. Robert Townshend Dade, a son of the Clergyman. It is believed that he built the large two-story frame structure to the left or west of the stone part during his ownership. Colonel Robert Dade was an officer in the War of 1812, and the legend about him is that he was a very picturesque and unique character, and a rather charming country gentleman. He is said to have worn knee breeches, buckled shoes and a stock, continuing the dress of former days long after others had discarded such habiliments for more modern apparel.

Colonel Dade, born 1786, died at Walldene in 1873 at the age of eighty-six, and there is a substantial monument in Monocacy Cemetery, to his memory. His wife Ruth Simmons Dade, born 1790, died in 1864, and lies buried beside her husband. Robert Jr. was born November 11, 1817, and his wife was eighteen months younger. He died May 3, 1881, his wife had passed on in December 1859, and both lie buried in Monocacy Cemetery. After his death Mary daughter of Robert and Catharine inherited Friends Advice, which was thereafter called "Walldene."

Mary Dade in 1870 married William E. Wall of Baltimore and they were the parents of four sons and two daughters. Wall was for many years a successful cotton broker in New York. For over forty years he travelled back and forth on the Baltimore and Ohio Railroad from New York to Walldene, twice each month. His wife very successfully managed the farm which then contained 300 acres. In her will probated in 1932 she left the farm to her eldest son Guy. She died three years after her husband, who

NO. 129 D-4 REV. TOWNSHEND DADE
CA. 1780 STONE

died in July 1929. They were interred in Monocacy Cemetery.

The oldest child of William and Mary Wall was Katharine, who married Jacqueline Taylor, of a distinguished Virginia family. In 1920 the Taylors moved to Richmond where he died in September, 1950. His widow continues to live in Richmond spending her summers at the ancestral home of her husband dating from Revolutionary days located at Orange.

Katharine Wall went to the Rockland School and was extremely popular in the Sandy Spring neighborhood. She was of slight build, of a most vivacious and charming personality and greatly loved by both young and old. Anna Farquhar, her devoted friend and school mate, was quoted as having often strolled along F Street with Katharine and noticed people actually pausing in the street to turn and look at her charming companion who was apparently utterly oblivious of the attention she attracted.

"A form more fair, a face more sweet,
Ne're hath it been my lot to meet."[1]

The oldest son, William Guy Wall inherited Walldene under the will of his mother. He graduated at Virginia Military Institute in 1894 and later received a C.E. degree at the Massachusetts Institute of Technology. He died in 1941, and his will was probated in February of that year. His first wife was Minnie Tyndall who died in 1931, and his second wife was Helen Wessel who survived him. They left no heirs. He attained the rank of Lt. Colonel in World War I.

The next child was Ethel Wall, an equally attractive young lady, now the charming widow of the late Lt. General S. Dunbar Embick. Laurence D. Wall, another son, born 1881, died in 1927 and lies interred in Monocacy Cemetery, near the grave of his own son, Lieutenant Laurence D. Wall, U.S.A., who was killed in action in Luzon, P. I., in February 1945.

The will of Colonel Guy Wall provided that upon the death of his wife Helen the farm should go to one of the nephews or nieces, "deemed most competent and worthy" to receive the inheritance, said recipient to be selected by a committee of three composed of the two sisters, Katharine and Ethel, and Robert Wall, the brother of the Colonel.

In 1952 Mrs. Helen Wessel Wall decided to give up the large estate and by the decision of the committee it was transferred to Mrs. Albert C. Wedemeyer, the wife of Lt. General Wedemyer, and she is now the owner of the handsome property. Before her marriage Mrs. Wedemeyer was Elizabeth Dade Embick, a daughter of General Embick and Ethel Wall Embiek. General Wedemeyer, now retired, had a brilliant military career, having graduated from the U. S. Military Academy in 1918. He became a Major General in 1943, a Lt. General in 1945 and served in China and in Europe and was on the War Department General Staff from 1941 to 1943. He was Chief of Staff to Generalissimo Chiang Kai-shek during the second World War and was recently sent on a mission to China by President Truman to make a report on the conditions there. General and Mrs. Wedemeyer have two sons, Captain Albert Dunbar of the U. S. Army and Robert Dade Wedemeyer, a Lieutenant in the Air Corps, who are of the seventh generation from the Reverend Townsend Dade.

The front of the original stone part of the house is shown in the photograph and faces the south. On the first floor there is a lovely double dining room to the west, with wide double door and two fireplaces, on the west wall of each room. To the east of the hall there was originally a breezeway. Part of this has been remodelled into a modern kitchen, which includes a recent addition, still further to the east.

In 1961, General and Mrs. Albert C. Wedemeyer seem to be enjoying greatly country life and dispensing hospitality at the fine old home which they have renamed "Friends' Advice"

[1] These lines are to be found in poem "MAUD MULLER," by JOHN GREENLEAF WHITTIER.

M: 18-15

FOR ADDITIONAL INFORMATION

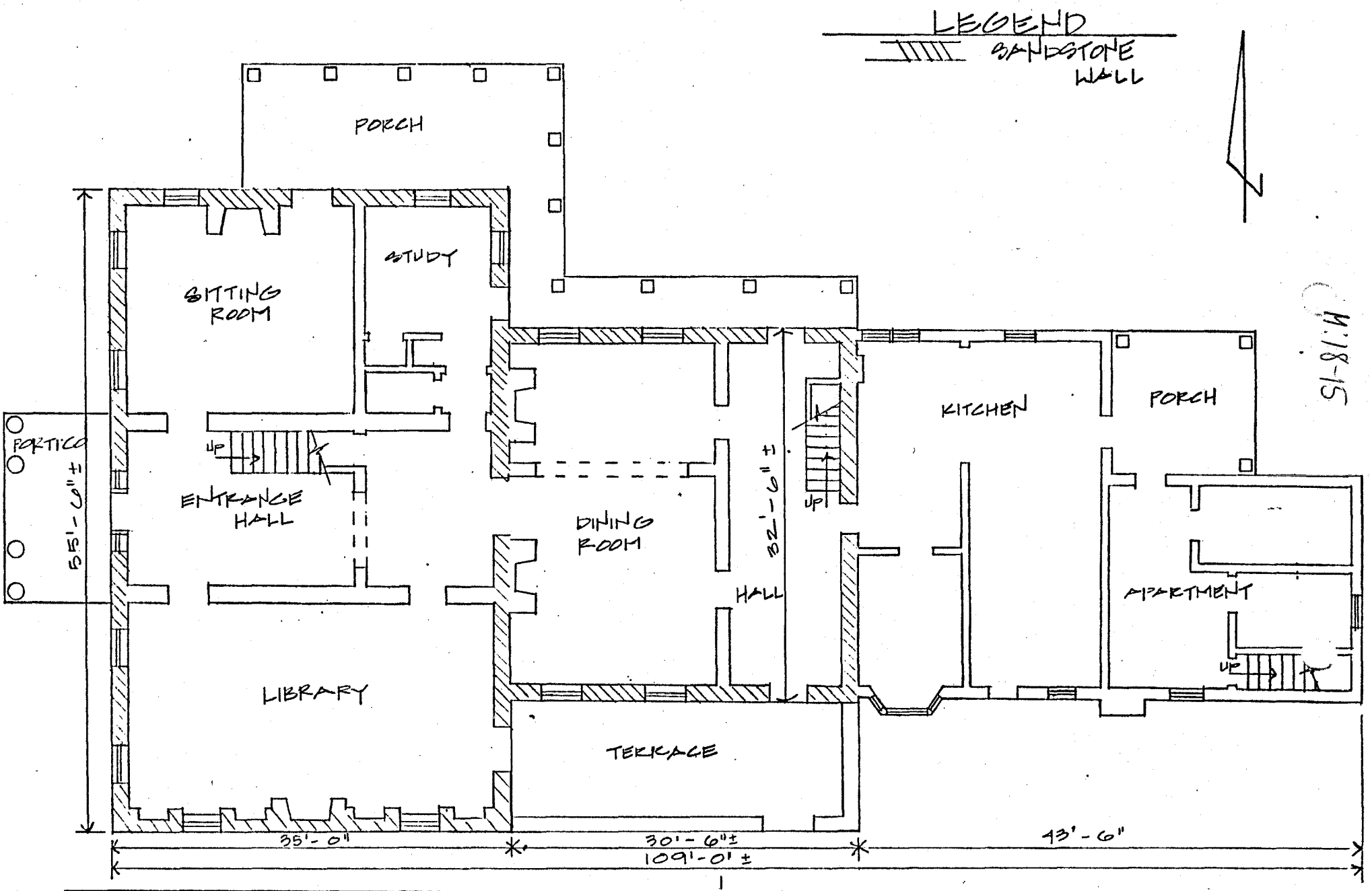
See correspondence dated May 9, 1988

ACTION TAKEN

THE AMENDMENT

The purpose of this Amendment is to designate the following sites on the Master Plan for Historic Preservation thereby extending to them the protection of the County's Historic Preservation Ordinance, Chapter 24A of the Montgomery County Code.

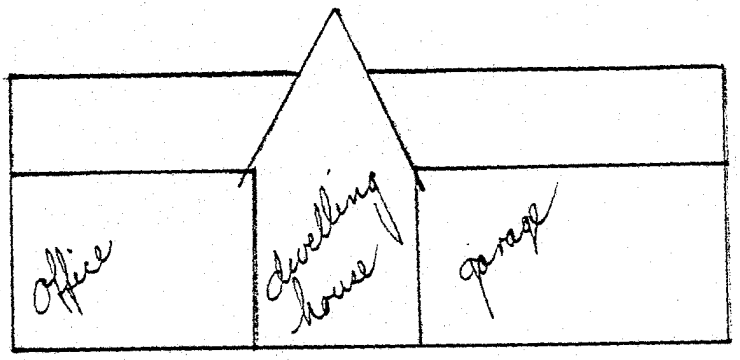
M: 17-01	Beallsville H.D.
M: 17-02	Charline Manor/Hanover
M: 17-24	East Oaks
M: 17-26	Stoney Castle
M: 17-58	Montevideo
M: 17-61	Upton Darby House
M: 17-62	Pooles General Store
M: 18-13	White/Turner Farm
M: 18-14	Joseph White House
M: 18-15	Friends Advice
M: 18-17	Greenwood/Day House
M: 18-19	Hilary Pyles Farm

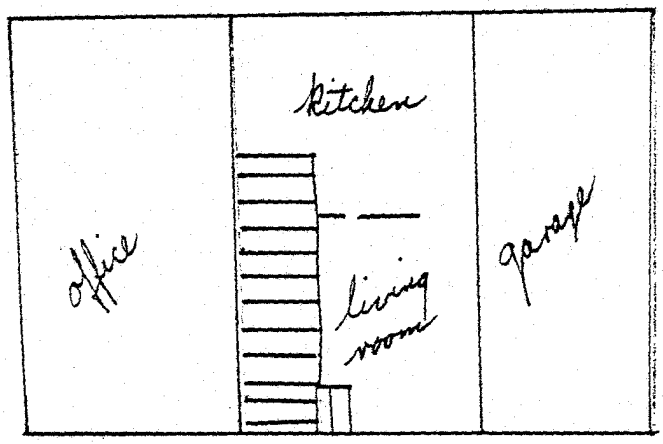


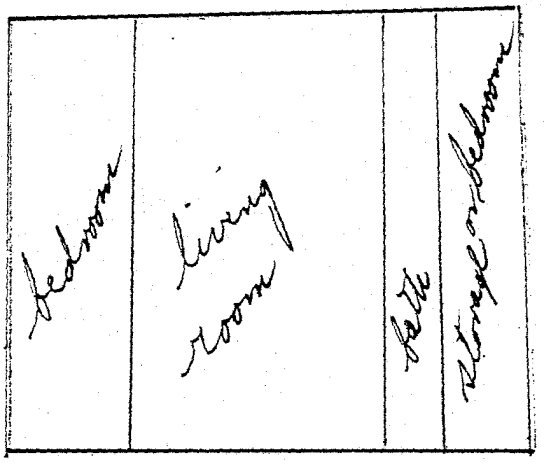
M:18-15

NOT TO SCALE	FRIENDS ADVICE	JANUARY 1992
M: 18-15	MONTGOMERY COUNTY, MARYLAND	DRAWN BY: R.H. GAUZZA

M:18-15


office
dwelling house
garage

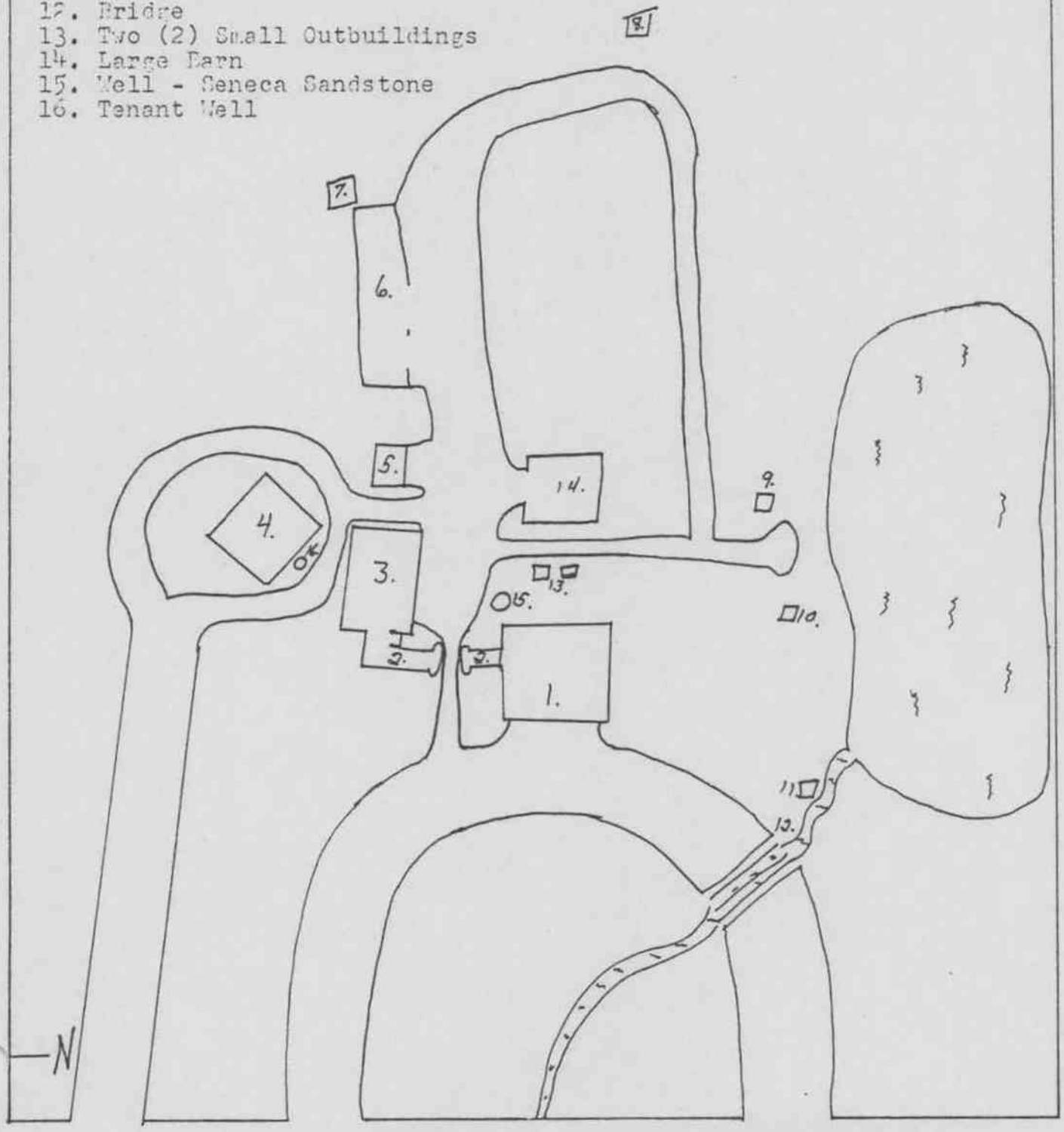

kitchen
office
living room
garage

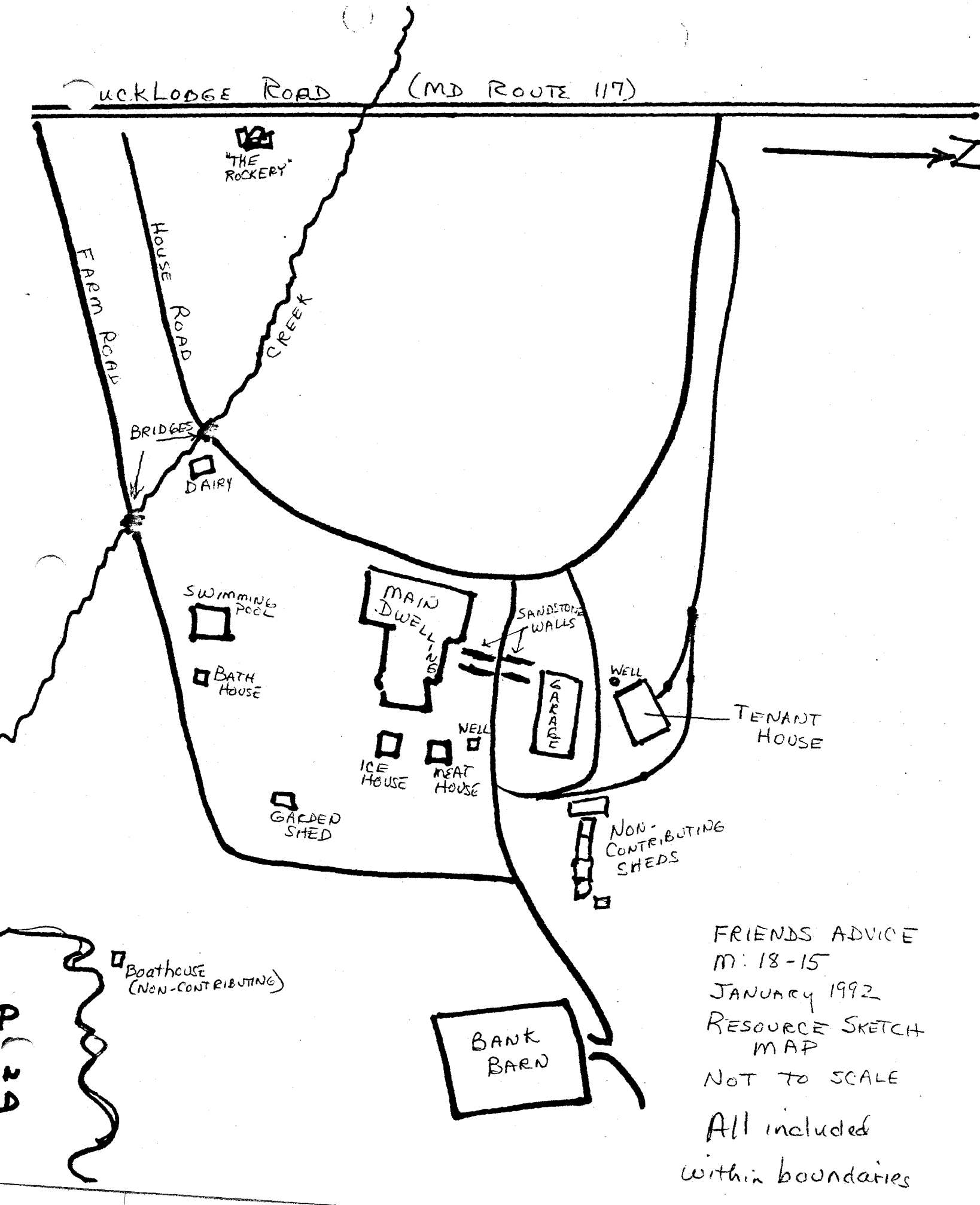

bedroom
living room
bath
storage or bedroom

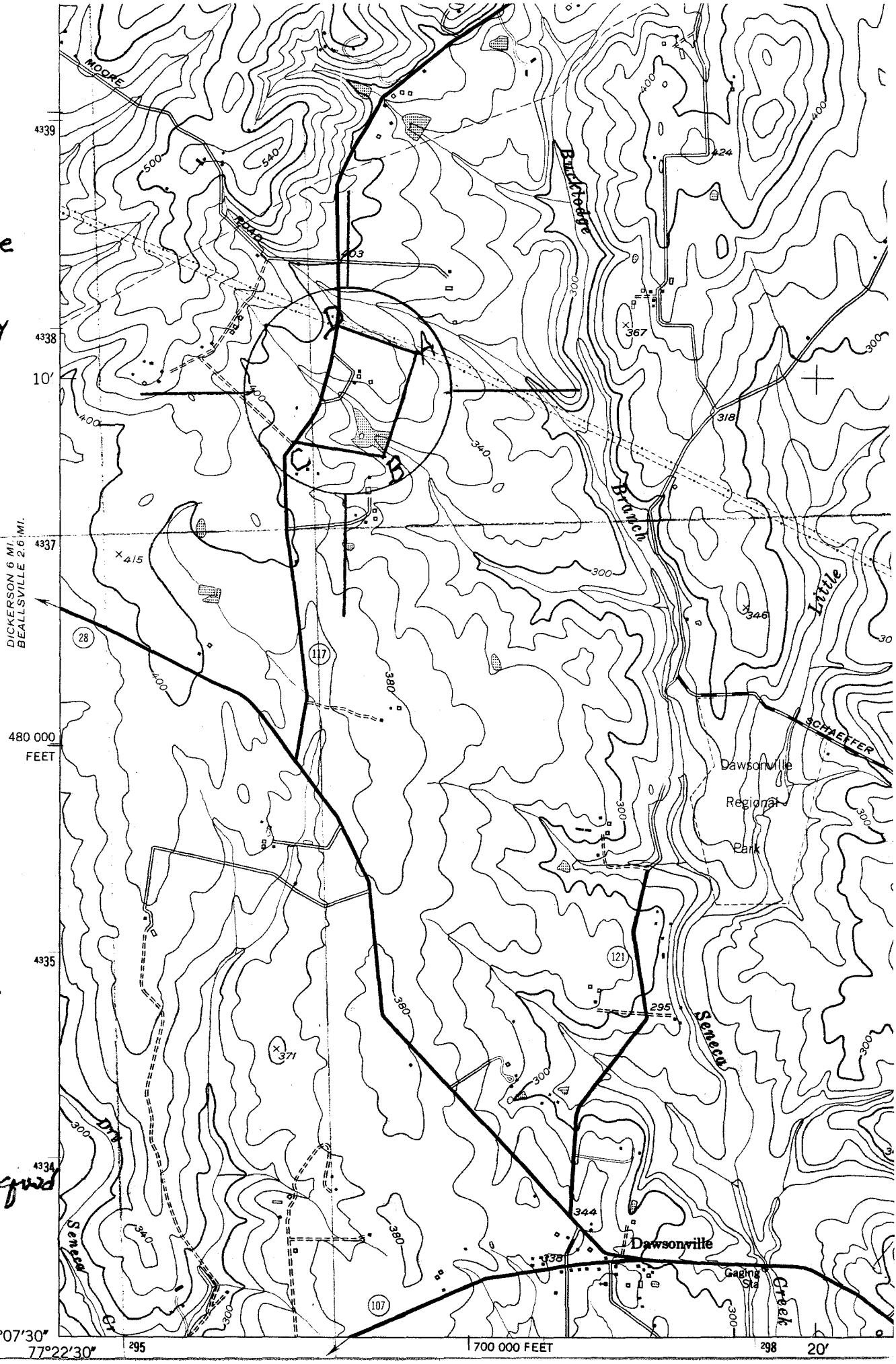
N

M: 18-15

1. Main House
2. Red Seneca Sandstone Wall
3. Former Carriage House
4. Tenant House
5. Garage
6. Shed
7. Small New House
8. Shed
9. Shed
10. "Boathouse"
11. Springhouse
12. Bridge
13. Two (2) Small Outbuildings
14. Large Barn
15. Well - Seneca Sandstone
16. Tenant Well




UCKLODGE ROAD (MD ROUTE 117)
"THE ROCKERY"
HOUSE ROAD
FARM ROAD
CREEK
BRIDGES
DAIRY
SWIMMING POOL
BATH HOUSE
MAIN DWELLING
SANDSTONE WALLS
GARAGE
WELL
TENANT HOUSE
WELL
ICE HOUSE
MEAT HOUSE
GARDEN SHED
NON-CONTRIBUTING SHEDS
Boathouse (NON-CONTRIBUTING)
BANK BARN
FRIENDS ADVICE
M: 18-15
JANUARY 1992
RESOURCE SKETCH MAP
NOT TO SCALE
All included within boundaries



Friend Advice
M: 18-15
Montgomery Co.
Maryland

A 18/296310/
4337850

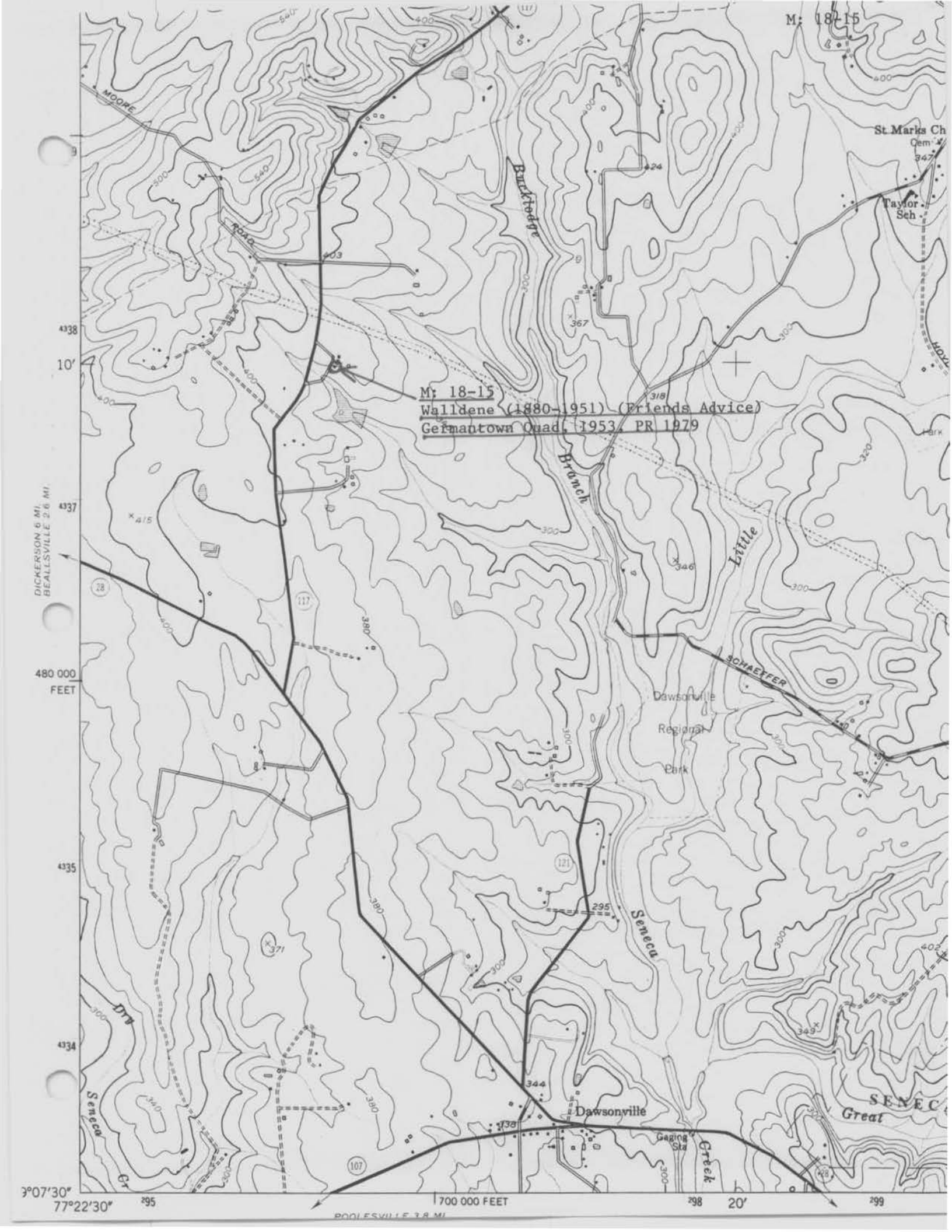
B 18/296340/
4337340

C 18/295920/
4337410

D 18/296140/
4337970

Germantown quad

M: 18-15
Walldene (1880-1951) (Friends Advice)
G.M. Hopkins Atlas, 1879


M: 18-15
M: 18-15
Walldene (1880-1951) (Friends Advice)
Germantown Quad, 1953, PR 1979
St Marks Ch
Cem
Taylor Sch
Buckridge
Branch
Little
SCHAEFER
Dawsonville Regional Park
Dawsonville
Gaging Sta
Seneca Creek
Great
SENEC
MOORE ROAD
DICKERSON 6 MI.
BEALLSVILLE 2.6 MI.
480 000 FEET
700 000 FEET
10'
20'
4338
4337
4335
4334
77°22'30"
POOLESVILLE 3.8 MI.

M: 18-15
Friends Advice
Montgomery County

Photograph of 1882 Addition, c. 1905

Northwest Facade

(The 1939-40 stone entrance (west) facade replaced this section of the main dwelling house.)

Source of Photograph: Wedemeyer family, Friends Advice

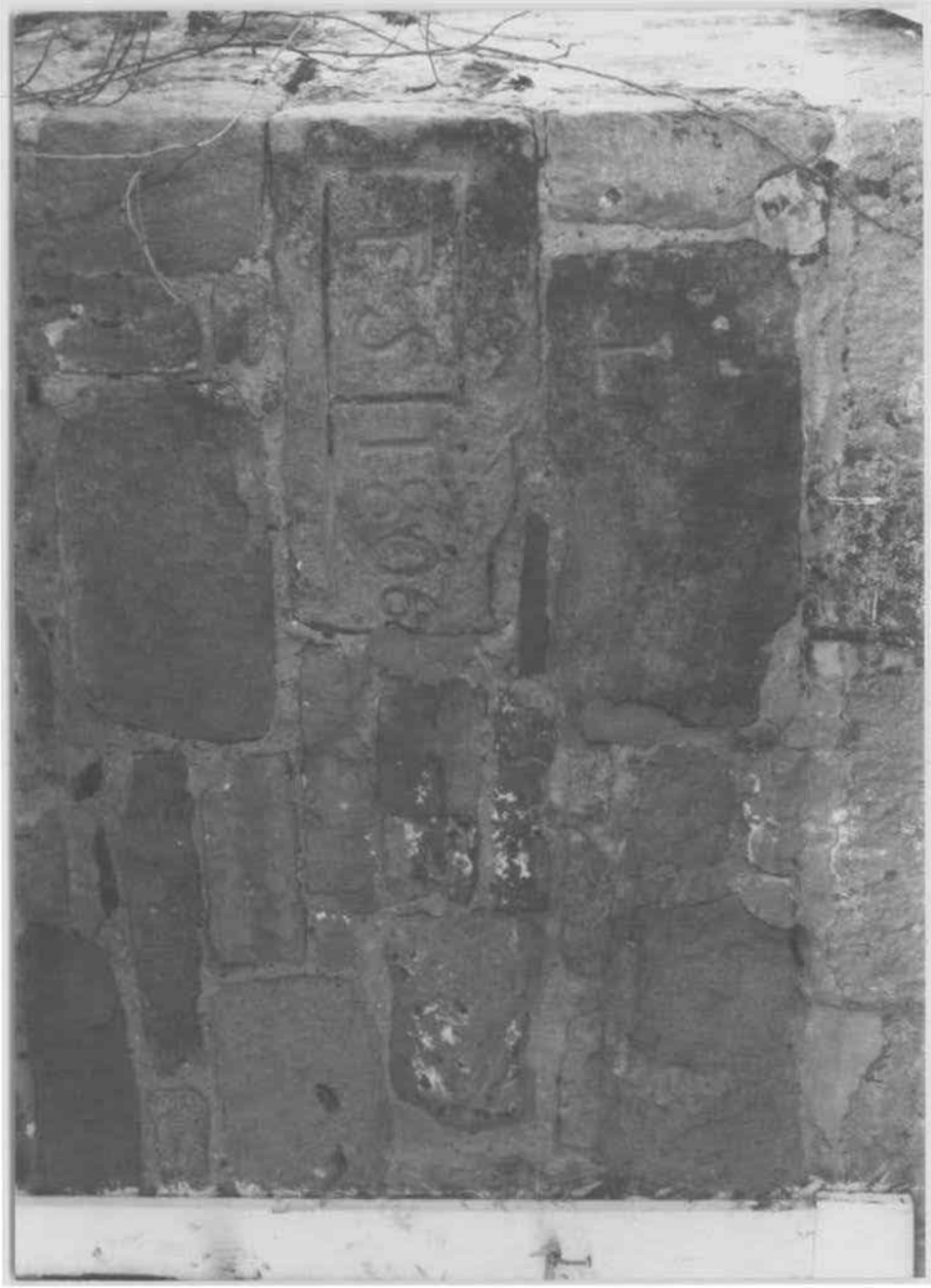
Friends Advice M: 18/15
Montgomery, MD.
Roy Gauzza April 1992
View from Route 117 (W) 1/32
(Neg. - prop. owner)

FRIELDS ADVICE MM-18/5
MONTGOMERY MD.
CAROL HUMPHRIES 17 MARCH 1988

VIEW FROM FARM ROAD 2/32

(neg. - prop. owner)

Friends Advice M:18/15
Montgomery, MD
Roy Gauzza April 1992
Dairy/Spring House (NE) 3/32
(Neg. - prop. owner)



FRIENDS ADVICE M. 18/15
MONTGOMERY, MD.
CAROL HUMPHRIES 17MARCH 1988

DATE ON DAIRY (1806)(NW) 4/32
(neg. - prop. owner)

FRIENDS ADVICE M-18/15
MONTGOMERY, MD
CAROL HUMPHRIES 17 MARCH 1988

MAIN HOUSE (S) 5/32

(neg. - prop. owner)

FRIENDS ADVICE m. 18/15
MONTGOMERY, Md.
CAROL HUMPHRIES 17 MARCH 1988

BANK BARN (s) 6/32

(neg. - prop. owner)

Friends Advice M: 18/15
Montgomery, MD
Roy Cauzza April 1982
Bank Barn (NW) 7/32
(neg. - prop. owner)

FRIENDS ADVICE M.18/15
MONTGOMERY, MD.
CAROL HUMPHRIES 17 MARCH 1988

HOUSE, DEPENDENCIES (E) 5/32

(neg. - prop. owner)

FRIENDS ADVICE M 16/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1988

TENANT HOUSE (SE) 9/32

(neg. - prop. owner)

Friends Advice M:18/15
Montgomery, MD
Roy Gauzza April 1992

Tenant House (NW) 10/32
(neg.-prop. owner)

Friends Advice M:18/15
Montgomery, MD
Roy Gauzza April 1992
Main House (N) 11/32
(neg. - prop. owner)

FRIENDS ADVICE M 19/5
MONTGOMERY, MD.
CAROL HUMPHRIES 17 MARCH 1988

GARAGES/APARTMENT (5) 12/32

(neg. - prop. owner)

FRIENDS ADVICE m. 18/5
MONTGOMERY, MD.
CAROL HUMPHRIES 17 MARCH 1968

NELL, : MEATHOUSE, ICE HOUSE (NVI) 13/32

(neg. – prop. owner)

FRIENDS ADVICE M. 18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17MARCH 1988

FRONT PORTICO (W) 14/32

(neg. - prop. owner)

FRIENDS ADVICE M 18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1969

ORIGINAL FRONT ENTRANCE (S) 15/32
Early 19th c. block

(neg. - prop. owner)

FRIENDS ADVICE m. 18/5

MONTGOMERY, MD.

CAROL HUMPHRIES 17MARCH 1988

Central + East blocks (S) 16/32

(neg. - prop. owner)

FRIENDS ADVICE M. 18/15
MONTGOMERY, MD.
CAROL HUMPHRIES 17MARCH 1988

FRONT DOOR INTERIOR
EARLY 19th C. block 17/32

(neg. - prop. owner)

FRIENDS ADVICE M-18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1988

STAIR DETAIL; EARLY
19th C. block 18/32

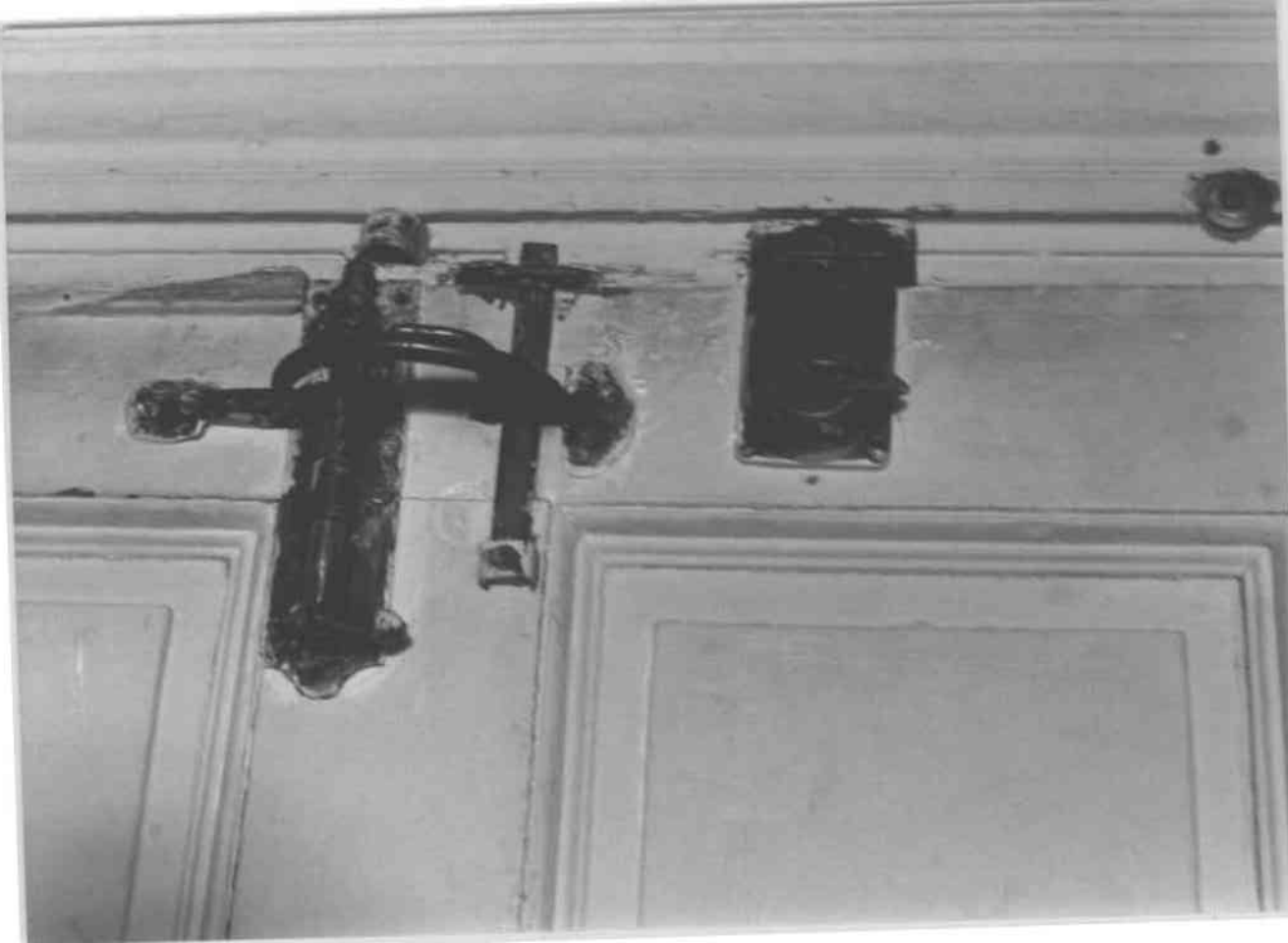
(neg. - prop. owner)

FRIENDS ADVICE M.18/5
MONTGOMERY, M.D.
CAROL HUMPHRIES, 17MARCH 1988

STAIR HALL, 19th C BLOCK
(FROM THIRD FLOOR)

19/32

(neg. - prop. owner)



FRIENDS ADVICE M. 18/15

MONTGOMERY, M.D.

CAROL HUMPHRIES 17 MARCH 1968

HARDWARE, BACK DOOR (IN) 29/32
EARLY 19th C. BLOCK

(neg. - prop. owner)

FRIENDS ADVICE M. 18/5

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1968

DOUBLE ROOM, 1ST FLOOR (N) 21/32
EARLY 19th C. BLOCK

(neg. - prop. owner)

FRIENDS ADVICE M. 18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1988

DOUBLE ROOM, 1ST FLOOR (5) 22/32
EARLY 19th C. block

(neg. - prop. owner)

FRIENDS ADVICE M. 18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1988

FIREPLACE S. ROOM, 1st floor 23/32
EARLY 19th C. BLOCK

(neg. - prop. owner)

FRIENDS ADVICE M. 18/15
MONTGOMERY, MD.
CAROL HUMPHRIES 17MARCH 1988

MANTLE + CLOSETS N. Room, 1st floor 24/32
Early 19th c. BLOCK

(neg. - prop. owner)

FRIENDS ADVICE M·18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1988

ENTRANCE HALL 1939 BLOCK(M) 25/32

(neg. - prop. owner)

FRIENDS ADVICE M.18/5
MONTGOMERY, MD.
CAROL HUMPHRIES 17 MARCH 1988

FRONT STAIRS 1939 BLOCK
(neg. – prop. owner)

26/52

FRIENDS ADDICE M. 18/5

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1988

LIBRARY 1939 black (W) 27/32

(neg. - prop. owner)

FRIENDS ADVICE M. 18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1984

LIBRARY 1939 BLOCK
(SE) 28/32

(neg - prop. owner)

FRIENDS ADVICE M. 18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1968

PARLOR 1939 BLOCK (SW) 29/32

(neg. - prop. owner)

FRIENDS ADVICE M.18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 12 MARCH 1968

PARLOR 1939 BLOCK (NE) 30/32

(neg. – prop. owner)

FRIENDS ADVICE M. 18/15-

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1988

2nd floor hallway,
Early 19th c Block

31/32

(Neg - prop. owner)

FRIENDS ADVICE M. 18/15

MONTGOMERY, MD.

CAROL HUMPHRIES 17 MARCH 1988

NORTH

BEDROOM FIREPLACE (W) (2nd FLOOR) 32/32

Early 19th c. block

(NEG – prop. owner)

#18-15

NAME FRIENDS ADVICE

LOCATION Rt 117 BOYDS, Md

FACADE W

PHOTO TAKEN 5/8/74 MFB

#18-15

NAME FRIENDS ADVICE - SPGHSE.

LOCATION Rt 117 BOYDS, Md.

FACADE W

PHOTO ~~TAKEN~~ 5/8/74 M.DWYER

#18-15

NAME FRIENDS ADVICE

LOCATION Rt. 117 BOYDS. Md

FACADE S

PHOTO TAKEN 5/8/74 M.DWYER

#18-15

NAME FRIENDS ADVICE

LOCATION Rt. 117 BOYDS, Md

FACADE S

PHOTO TAKEN 5/8/74 MFD

#18-15

NAME FRIENDS ADVICE – BANK BARN

LOCATION Rt. 117 BOYDS, Md

FACADE NW

PHOTO TAKEN 5/8/74 M. DWYER

NPS Form 10-900
(Rev. 8/93)

VLR 10/8/91
NRHP 6/2/95

OMB No. 1024-0018

RECEIVED
APR 19
INTERAGENCY RESOURCES DIVISION
NATIONAL PARK SERVICE
NATIONAL REGISTER BRANCH

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name: George Washington Memorial Parkway #029-0228

other names/site number: N/A

2. Location

location: George Washington Memorial Parkway

street & number: Turkey Run Park [ ] not for publication

city or town: McLean, VA [ ] vicinity

state: Maryland, Virginia, DC counties: Montgomery, Arlington, Fairfax, DC; code: 031, 013, 059, 001

zip code: 22101

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this [✓] nomination [ ] request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property [✓] meets [ ] does not meet the National Register Criteria. I recommend that this property be considered significant [✓] nationally [ ] statewide [ ] locally. [ ] See continuation sheet for additional comments.

Signature of certifying official — Date: 4.24.95

NPS

State or Federal agency and bureau

In my opinion, the property [✓] meets [ ] does not meet the National Register criteria. [ ] See continuation sheet for additional comments.

Signature of commenting or other official — Date: 1-18-95

Virginia Department of Historic Resources

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

[✓] entered in the National Register — Patrick Andrus — 6/2/95
[ ] See continuation sheet.

[ ] determined eligible for the National Register
[ ] See continuation sheet.

[ ] determined not eligible for the National Register

[ ] removed from the National Register

[ ] other (explain): _____

Signature of Keeper — Date of Action

5. Classification

ownership of property (check as many boxes as apply): [ ] private [ ] public-local [ ] public-State [x] public-Federal

category of property (check only one box): [ ] building(s) [x] district [ ] site [ ] structure [ ] object

number of resources within property:

contributing	noncontributing
____ structures	____ buildings
5.21 miles retaining walls	____ sites
12.49 barrier walls	4 structures
35 culverts	____ objects
973 drop inlets	____ Total

number of contributing resources previously listed in the National Register:

name of related multiple property listing: Parkways of the National Capital Region, 1913-1965

enter "N/A" if property is not part of a multiple property listing: N/A

6. Function or Use

historic functions (enter categories from instructions)

category: transportation/vehicle-road related

subcategory: transportation/parkway

current functions (enter categories from instructions)

category: parkway subcategory:

7. Description

architectural classification (enter categories from instructions)

category: other/parkway

other/National Park Service Landscape Architecture

materials (enter categories from instructions)

foundation

roof

walls

other steel, concrete, asphalt, stone, native vegetation

narrative description (describe the historic and current condition of the property on one or more continuation sheets)

tatement of Significance

applicable National Register criteria (mark "x" in one or more boxes for the criteria qualifying the property for National Register listing

[ ] A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
[x] B. Property is associated with the lives of persons significant in our past.
[x] C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
[ ] D. Property has yielded, or is likely to yield information important in prehistory or history.

criteria considerations (mark "X" in all the boxes that apply)

[ ] A. Property is owned by a religious institution or used for religious purposes.
[ ] B. Property has been removed from its original location.
[ ] C. Property is a birthplace or a grave.
[ ] D. Property is a cemetery.
[ ] E. Property is a reconstructed building, object,or structure.
[ ] F. Property is a commemorative property.
[x] G. Property is less than 50 years of age or achieved significance within the past 50 years.

areas of significance (enter categories from instructions)
transportation/vehicle-road related
landscape architecture
other/person

period of significance
1930-1966

significant dates
1930, 1966

significant person
(complete if criterion B is marked above)
George Washington

cultural affiliation
N/A

architect/builder
NPS and Bureau of Public Roads
(Federal Highway Administration)

narrative statement of significance (explain the significance of the property on one or more continuation sheets)

9. Major Bibliographical References

references (cite the books, articles, and other sources used in preparing this form on one or more continuation sheets)

previous documentation on file (NPS)

[ ] preliminary determination of individual listing (36 CFR 67) has been requested
[ ] previously listed in the National Register
[ ] previously determined eligible by the National Register
[ ] designated a National Historic Landmark
[ ] recorded by Historic American Buildings Survey #
[ ] recorded by Historic American Engineering Record #

primary location of additional data

[ ] State Historic Preservation Office
[ ] other State agency
[x] Federal agency
[ ] local government
[ ] university
[x] other

name of repository: National Archives and Records Service, Federal Highway Administration

10. Geographical Data

acreage of property: NPS - 7,146

UTM References (place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	xxx	xxxxxxx	xxxxxxx	3	xx	xxxxxxx	xxxxxxx
2	xxx	xxxxxxx	xxxxxxx	4	xx	xxxxxxx	xxxxxxx

[x] See continuation sheet.

verbal boundary description: The boundary of the nominated district is delineated by an elongated polygon whose vertices are marked by the UTM coordinate points A-Z for the George Washington Parkway (south side of Potomac River) and Points AA-OO for the Clara Barton portion (north side of the Potomac River) ;of the George Washington Memorial Parkway.

boundary justification: The boundary is coterminous with the original right-of-way determined by the Bureau of Public Roads (Federal Highway Administration) and maintained by the National Park Service, the District of Columbia, Virginia, and Maryland. It encompasses numerous features: bridges, culverts, landscape architectural elements, and the natural topographic features.

11. Form Prepared By

name/title: Jere L.Krakow

organization: National Park Service, Denver Service Center — date: November 1993

street & number: 12795 W. Alameda Parkway, PO Box 25287 — telephone: (303)969-2909

city or town: Denver — state: Colorado — zip code: 80225-0287

Additional Documentation

submit the following items with the completed form:

[ ] continuation sheets

[X] maps
- one USGS map (7.5 or 15 minute series) indicating the property's location
- one sketch map for historic districts and properties having large acreage or numerous resources

[X] photographs
- representative black and white photographs of the property

[ ] additional items (check with the SHPO or FPO for any additional items)

Property Owner

(complete this item at the request of the SHPO or FPO)

name: National Park Service

street & number: Turkey Run Park — telephone: (703) 285-2600

city or town: McLean — state: VA — zip code: 22101

Paperwork Reduction Act Statement

This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement

Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-00 Washington, DC 20503.

SUMMARY DESCRIPTION

As one of the nation's premier parkways, George Washington Memorial Parkway (GWMP) comprises 7,146 acres and extends 38.3 miles in association with the Potomac River. The initial or southern section of the parkway, Mount Vernon Memorial Highway, which opened in November 1932, extends 15.2 miles from the Arlington Memorial Bridge to the Gateway to President George Washington's at home at Mt. Vernon. The parkway commemorates the first president, preserves the natural setting, and provides a quality entryway for visitors to the nation's capital.

The northern section of the parkway runs on opposite sides of the Potomac River from Arlington Memorial Bridge to the Capital Beltway/Interstate 495, a distance of 9.7 miles in Virginia, and the 6.6 mile Clara Barton Parkway (renamed - 1989) in Maryland. This portion protects scenic vistas, contains numerous historical and archeological resources, and serves as another quality entryway into Washington, D.C. All but a small portion of the parkway north of Chain Bridge, in the District, opened during late 1965 on land acquired by the cooperating states, the National Capital Park and Planning Commission (NCP&PC), and the National Park Service. The portion to Chain Bridge reached completion in 1968.

For purposes of this parkway nomination the multiple property nomination historic context statement, "Parkways Of The National Capital Region, 1913 to 1965," is attached to this document.

HISTORY OF THE PARKWAY

...y references to a system of parks connected by parkways, in Washington, D.C., and surrounding area, laid the groundwork ...implementation of the McMillan Plan proposed in 1902. Members of the McMillan Commission envisioned "drives along the palisades of the Potomac above Georgetown to Great Falls and down the River to Mount Vernon."[1] These drives had certain definitions:

> Parkways or ways through or between parks; distinguished from highways or ordinary streets by the dominant purpose of recreation rather than movement; restricted to pleasure vehicles, and arranged with regard for scenery, topography and similar features rather than for directness.[2]

Preserving the palisades had been advocated for a number of years as part of a design to protect the entire Potomac corridor past the capital to Great Falls. The McMillan Commission report stated the landscape should be "safeguarded in every way."[3] It went on to add that scenic vistas, and historic sites and "the uncultivated hilltops of the Virginia Palisades," along the route, could be viewed better by travelers and local residents from a parkway on the Maryland side.[4]

For Charles Eliot, NCP&PC official, the 28-mile corridor along the Potomac would capture many "inspirational values." He believed "no area in the United States combine[s] so many historical monuments in so small a district as the Potomac River Valley in the Washington region."[5] The proposed parkway would link with Mount Vernon Memorial Highway, which began as an idea in Alexandria, Virginia, in 1886, but did not receive authorization until May 1928. Urgency because of the approaching bicentennial of Washington's birth in 1932, however, finally prompted action leading to the opening of the parkway in that year. In the midst of this GWMP obtained strong endorsement from the Capper-Cramton Act of 1930. Before passage of that act, various threats to the scenic values of the proposed route surfaced regularly. Representative Cramton urged the nation to protect the area because

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1. Charles W. Eliot II, "Preliminary Report, PARK SYSTEM FOR DISTRICT OF COLUMBIA, Submitted in Accordance with Program of Work Adopted August, ...6," December, 1926, p. 1. National Archives, Record Group 79, Box 4.

...bid., p. 20.

3. *Potomac Palisades Task Force Final Report*, Arlington County Virginia, August 1990, p. 4-13.

4. Ibid.

5. Charles W. Eliot II, "The George Washington Memorial Parkway," *Landscape Architecture*, Vol. XXII, April 1932, p. 191.

> the palisades of the Potomac are daily being blasted, serious industrial encroachments threaten, wooded areas are being destroyed, and power interests have seriously urged replacement of the unique and outstanding natural beauties of Great Falls and the gorge of the Potomac with man-made reservoirs of much more commonplace, artificial beauty.[6]

Proponents spoke in the broadest of terms, linking the area sought to the desire of the populace at large, and the overwhelming role of President Washington in the history of the United States. To do less, went the argument, would be to ignore the wishes of the American people. Several organizations also lobbied for the bill, including the American Society of Landscape Architects, the American Institute of Architects, the General Federation of Women's Clubs, the Garden Society of America, and the American Civic Association.[7] In May 1930, the bill became law (see the section on "Legislation") with a sizable (given the economic condition of the United States) appropriation of $33.5 million.

To acquire the land, Congress authorized $7.5 million to the NCP&PC, to be matched by the bordering states of Virginia and Maryland in money or in long-term, interest-free loans. Half of the cost of acquiring the land was the basic arrangement necessary with state governments or "political subdivisions thereof." Assistance came from two organizations formed specifically for the parkway project: the George Washington Memorial Parkway Association, Inc., and the George Washington Memorial Parkway Fund, Inc. The former group supported the effort by forming state chapters that, in turn, "impress[ed] upon the people the necessity of guarding the beauty of the Nation's Capital by preserving its historic river and enlisting their aid in forwarding the proposed parkway."[8] Aid for the association came from the latter (fund) group, which took temporary title to recently acquired land. Both groups, however, had little to do during the Great Depression.

Early estimates for the cost of land came to $5.5 million in Maryland and Virginia. By the summer of 1933, 390 c estimated 6,100 acres had been acquired.[9] Money for such purchases stemmed from formal agreements drafted between the National Capital Park and Planning Commission and the state government's subscribing monies.[10] That same summer, the Commonwealth of Virginia allocated $25,000 with the presumption that Arlington and Fairfax counties would pledge similar amounts. The NCP&PC budgeted $50,000 for matching monies. Once the United States secured title to lands acquired, the cost of development would be borne by the federal government.

Because land acquisition moved slowly, interested parties made various attempts to speed things along. One such effort came from a proposal by Secretary of the Interior Harold L. Ickes to President Franklin D. Roosevelt. After explaining the background of planning for a parkway along the river and reiterating the amount of land in government ownership, Ickes stated what land needed to be acquired. Finally, he asked:

> Would you be willing to authorize the purchase of the foregoing areas? Their acquisition is needed for the work of the Emergency Conservation Work Camps and would seem to be in line with your policy to buy additional lands in the south for that purpose.[11]

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6. Press Release, Congressman Louis C. Cramton, January 27, 1930, p. 1, National Archives, Record Group 79, Box 2774.

7. Ibid., p. 2.

8. *Washington Evening Star*, February 17, 1933, National Archives, Record Group 79, Box 3.

9. Memorandum from Demaray (Acting Director, National Park Service) to the Secretary of the Interior, July 22, 1933, National Archives, Record Group 79, Box 2774. As of April 1988, George Washington Memorial Parkway covers 7,146 acres.

10. "Agreement Between The National Capital Park And Planning Commission, The Board Of Commissioners Of Arlington County, Virginia, An Governor Of Virginia," July 28-29, 1933, National Archives, Record Group 79, Box 12. The Agreement comprises five pages of text, including several sections from the Capper-Cramton Act of 1930.

11. Ickes to President (Franklin D. Roosevelt), November 1933, National Archives, Record Group 79, Box 2774.

President Roosevelt had more than a passing interest in the project. Earlier, in the spring of 1933, he had made an inspection trip to the Great Falls area, evidenced by the NCP&PC preparing a briefing package for him after the tour.[12] This suggests that key members of the administration carried the day as a first unit of the parkway received authorization, and $280,000 was made available in mid-summer 1934.

To begin the parkway project, a working arrangement suggested by C. Marshall Finnan, superintendent of the National Capital Parks, initiated an interbureau agreement.[13] The Bureau of Public Roads assumed the lead, doing studies and planning for the parkway; review and approval was reserved for the National Capital Parks.

The director of the National Park Service in conjunction with the Bureau of Public Roads, the Fine Arts Commission, and the Planning Commission shared the final decision on the location of the road.[14] Conceptualization of the design took form, through the efforts of all the organizations and, especially, from the advice of Gilmore D. Clarke. He persuaded members of a delegation touring the proposed areas that the parkway should be designed with two lanes in each direction: "the rugged terrain lends itself more suitably for the construction of two narrow roads rather than one wide one."[15] Clarke also advanced the idea that such a design would preserve the landscape (see section on "Design").

Private utility interests remained an important issue of the parkway project. In 1928, after protracted debate, Congress legislated a requirement that "no permit should be issued to any private interests for the development of water power in the Potomac River below the pool above Great Falls until further action of Congress."[16] Again in 1930, Congress passed similar legislation while awaiting reports on the feasibility of private power development along the Potomac. Private utilities ned property on the river, principally Great Falls Power Company, which in 1904, bought land there for $600,000. It owned 870 acres outright and half interest in another 82 acres.[17] The company had "refused to sell unless the U.S. would agree never to develop hydro-electric power at the falls."[18] Other property owners included Great Falls Farm Corporation, Washington and Old Dominion Railway, and the C&O Canal; they owned an additional 1,000 acres.[19] Taking lines for the parkway corridor cut across the privately owned property, and in 1934, a request of $3 million was made to the Bureau of the Budget for the purchase of many of these tracts.

Depression-era concerns and federal and state (Maryland and Virginia) programs precluded much activity in buying land and constructing the parkway. Times were hard, programs had short-term objectives, and the planning commission lost influence in overseeing orderly growth and development in the nation's capital. Several factors combined to delay the construction. Of course, land prices rose as land in the corridor changed hands and speculation added value to properties.

Various means of raising public consciousness about the project came from a variety of articles. In May 1935, *Review of Reviews* published an article written by Arno B. Cammerer, director of the National Park Service, exhorting Americans to support the George Washington Memorial Parkway and the preservation of much of the Potomac River corridor to Great

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12. National Capital Park and Planning Commission, "The George Washington Memorial Parkway From Mount Vernon to Great Falls along the Potomac River," April 1933, Franklin D. Roosevelt Library, Photo Album # 202. This is a 119-page briefing report specially prepared for President Roosevelt, including numerous maps and photographs and an excellent summary section on the competing interests for the Great Falls of the Potomac: water power versus park interests. (Hereafter referred to as Franklin D. Roosevelt Library Album.)

13. Finnan to Demaray, July 21, 1934, National Archives, Record Group 328, Box 130.

14. Ibid.

15. Fine Arts Commission Chairman to National Capital Park and Planning Commission, June 1, 1934, National Archives, Record Group 328, Box 130. he time the chairman was Charles Moore.

16. Nolen to Cammerer, September 22, 1934, p. 1, National Archives, Record Group 79, Box 475.

17. Ibid., p. 2.

18. Ibid.

19. Ibid.

Falls.[20] In late September 1936, a series of articles by W.A.S. Douglas in the *Washington Herald* advocated the same.[21] The series presented thoughtful reasons for setting aside the Potomac River from Great Falls to Mount Vernon as a memorial to the first president. Douglas sought to mold opinion to "make it [the Potomac] the most beautiful waterway in America," and remove the neglect he observed along its course.[22] Much of the appeal of Douglas's reasoning derived from the fact that congressmen looked after their respective state agendas to the neglect of the District of Columbia, which lacked a champion and proponent. It seemed clear to Douglas that the nation's capital needed to become the national masterpiece envisioned by key advocates through the years.

Working toward the same objective of raising public awareness, Max S. Wehrly, Commission Landscape Architect, completed two reports for the NCP&PC in 1937.[23] In these reports, he sought to move the project forward through informing the planning commission about the status. Arguments propounded took note of recreation and preservation of open space, and orderly and systematic urban development instead of sprawl. Wehrly underscored "the potential of a scenic parkway entrance to the Nation's Capital from the West."[24] He discussed the impact of a "high speed parkway" into the proposed park area and noted the road "may eventually form a major connection with a National parkway system" from northern Georgia to Maine.[25]

The reports crystallized arguments for the parkway, its physical and historical setting, its role in the region, and the urgency of acquiring land at existing instead of mounting prices. Passages from the reports found their way into print and became a topic of conversation as the planning and design effort proceeded toward the construction phase. Wehrly also wrote a report on improving Conduit Road (present MacArthur Boulevard) in Washington, D.C., and Maryland as one corridor for the parkway.[26]

In the summer of 1935, an important section of George Washington Memorial Parkway obtained funding in the amou $224,236. The National Park Service singled out 1-1/4 miles from the Francis Scott Key Bridge to Columbia Island for construction, though it meant acquiring an expensive piece of property.[27] A powerhouse of the Washington and Old Dominion Railway had to be purchased, though by agreement the commonwealth of Virginia had responsibility for half of the cost. Director Cammerer's justification stated, "the immediate need for this particular section of the Parkway is to eliminate the heavy traffic flow and congestion from the District of Columbia through M Street to Georgetown."[28] He thought traffic would use the Arlington Memorial Bridge and the parkway thereby alleviating congestion on Francis Scott Key Bridge. Moreover, Cammerer convincingly argued for the need to obtain the railway property to prevent having to raise the eastbound lane to permit access for Rosslyn Plaza traffic.[29] Secretary Harold L. Ickes concurred, though he did insist that $26,000 be expended for plantings to screen an "unsightly view of the railroad yards" just north of the Circle on the Mt. Vernon Highway at Alexandria.[30]

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20. Arno B. Cammerer, "Push The Washington Parkway," *Review of Reviews*," May 1935, National Archives, Record Group 79, Box 2774.

21. *Washington Herald*, September 20 to September 28, 1936, National Archives, Record Group 328, Box 17.

22. Ibid., September 21, 1936.

23. Max S. Wehrly, "National Capital Park & Planning Commission, Summary Report, George Washington Memorial Parkway – Virginia Side," September 16, 1937, unpublished; Max S. Wehrly, "National Capital Park & Planning Commission, General Report on George Washington Memorial Parkway, Upper Potomac," December 1937, unpublished; National Archives, Record Group 328, Box 17.

24. Wehrly, ". . . Upper Potomac," p. 8.

25. Wehrly, ". . . Virginia Side," p. 1.

26. Max S. Wehrly, "Brief of the Improvement of Conduit Road as it Relates to the George Washington Memorial Parkway District Line to Great Falls, Md., 1927-1937," unpublished report, National Archives, Record Group 328.

27. Cammerer to Ickes, June 26, 1935, National Archives, Record Group 79, Box 475.

28. Ibid.

29. Ibid.

30. Tolson to Burlew, July 31, 1935, National Archives, Record Group 79, Box 475.

That same year the Interior Department Appropriation Act made $7.5 million available to the National Park Service for use on roads and trails. Of this amount the National Capital Parks secured nearly $270,000, most of which it earmarked for the George Washington Memorial Parkway.[31] The focus of work continued to be from Key Bridge to Columbia Island, though $21,100 was designated for a survey from Arlington Memorial Bridge to Great Falls.[32]

During the summer of 1937, parkway construction continued apace. Key figures in prioritizing the construction were drawn from the Bureau of Public Roads, National Park Service, and National Capital Park and Planning Commission. Key Bridge and a connector from Rosslyn Plaza Parkway to the bridge were designated to receive a portion of the $270,000 remaining in the account of the Bureau of Public Roads.[33] Management also sought an appropriation in 1939 for a new span to permit the parkway to pass beneath Key Bridge to Spout Run.

Throughout the depression, members of the NCP&PC expressed concern about the nonparticipation of state and local governments in matching funds or buying and donating land for the parkway corridor. Such assistance had been specified in the Capper-Cramton Act of 1930. Writing in 1938, J.C. Nichols, member of the NCP&PC and real estate developer from Kansas City, went on record, "I feel the time has come when we should discontinue cooperation with Maryland unless these authorities will cooperate with us in a reasonable way on their part of the George Washington Memorial Parkway."[34] He added that only projects of "local benefit" were funded, whereas the greater objective of a parkway to Great Falls was neglected. The latter, according to Nichols, had both national and local significance. Furthermore, he advocated that the Maryland legislature act with "reasonable cooperation" soon, or he, like other commission members, would not vote for any other local projects.

This did not move the state of Maryland to action. It did, however, cause Prince Georges County to proceed, no doubt at the prodding of the Maryland National Capital Park and Planning Commission, which in tum had been pressured by the NCP&PC. The county did not anticipate any participation by the state and inquired about passing legislation of its own to match monies for land acquisition. T.S. Settle, secretary of the NCP&PC responded that a county could do just that and sent along copies of legislation passed by Virginia in 1930.[35] That act gave recognition to the parkway project and authorization to "the political subdivisions along the route to cooperate with the National Government and make contributions for same."[36]

Virginia appropriated $25,000 in 1932, with the provision that county governments do the same. Arlington County complied, and the $50,000 total, after a like amount of matching federal funds, was used to buy land of unit No. 1 – Key Bridge area.[37] Again in 1938, the Virginia general assembly appropriated $50,000 with the same caveat for local governments.[38] Finally, in 1939, Maryland began to move toward participation when the legislature passed an act permitting Montgomery County "to issue and sell $150,000 worth of bonds to match a similar amount from the National Capital Park and Planning Commission."[39] They designated this money for purchase of land in Montgomery County between the District line and Great Falls. That same year, the NCP&PC sought a supplemental appropriation from Congress for a like amount. A

31. Demaray to Burlew, February 8, 1938, National Archives, Record Group 79, 2774.

32. Ibid.

33. Superintendent to Director, September 20, 1937, National Archives, Record Group 79, Box 2774. C. Marshall Finnan was Superintendent of the National Capital Parks at that time.

34. Nichols to Delano, December 22, 1938, National Archives, Record Group 328, Box 126.

35. Settle to Duckett, March 9, 1939, National Archives, Record Group 328, Box 126.

36. Ibid.

37. Ibid.

38. Ibid.

39. 76th Congress, 1st Session, House of Representatives, Document No. 437, p. 2, National Archives, Record Group 79, Box 2835.

rationale in the House document points to the urgency of moving to acquire the land because of the rising values and continued development in the parkway corridor.[40]

Before World War II, planning for the parkway to extend all the way to Great Falls continued. In fact, an estimate of $1 million for purchase of land above the falls underscored the need to acquire the land quickly before land values rose even more.[41] The estimate, based upon $265,000 per mile, reflected a road on both sides of the river for about 2 miles to a bridge site proposed above the falls.

A problem that surfaced during World War II for the Maryland portion to Great Falls dampened the parkway efforts. Writing to the Park Service director, Associate Director A.E. Demaray pointed out that the Capper-Cramton Act contained a provision that stated "no money shall be expended by the United States for the construction of said highway on the Maryland side of the Potomac except as part of the Federal Aid Highway Program."[42] Under that program, monies could not be used to construct a highway on lands owned by the United States. Because much land had already been purchased, an act had to be passed to permit the parkway to continue. Therefore, Demaray had an amendment drawn to allow monies to be expended so that when World War II ended, work could continue. The amendment eventually passed and became law in August 1946, though by April 1945 Acting Superintendent Harry T. Thompson, National Capital Parks, reported that all the land needed had been purchased.[43]

Until final passage, various schemes kept the project from losing momentum. The strategy interpreted that Federal Aid Highway Program funds could be expended for planning and surveys, but not for construction.[44] It proved to be an approach whereby management would proceed until told to do otherwise, even to the point of not seeking the opinion of the comptroller general of the United States.[45] Concurrent with this activity, the project slowed considerably on the Virginia side because of a lack of funds for property acquisition. Only a small section of land above Key Bridge and near [illegible] Highway had been obtained.

In late October 1946, a summary of parkway activities to date reached Congressman Hatton W. Sumners of Texas.[46] U.S. Grant, III chairman of the NCP&PC, reported a "50 percent completion as to land acquisition," but little construction other than that for Mount Vernon Memorial Highway. Land procurement above Key Bridge was to be completed in the winter and construction scheduled "up the valley of Spout Run" in 1947.[47] Over three-fourths of the land for the parkway in Montgomery County, Maryland, had been acquired by late 1946, but Prince Georges County had so little interest that it could not raise enough money to make the necessary match.

Chairman Grant of the NCP&PC summarized activity in Virginia, too. He believed that Fairfax County had made the least progress and that the outlook was bleak despite some of the most outstanding "high bluffs and tributary stream valleys on the Virginia side."[48] The better views of the gorge and falls also could be seen from the heights noted. Grant added that

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40. Ibid., p. 3.

41. Nolen to Keddy, February 19, 1940, National Archives, Record Group 79, Box 2774.

42. Associate Director to Director, September 7, 1944, National Archives, Record Group 79, Box 2835.

43. Acting Superintendent, National Capital Parks to Chief Landscape Architect, April 4, 1945, National Archives, Record Group 79, Box 2835.

44. Associate Director to Director, September 13, 1945, National Archives, Record Group 79, Box 2835.

45. Ibid.

46. Grant to Sumners, October 28, 1946, National Archives, Record Group 328, Box 130.

47. Ibid.

48. Ibid., p. 2.

he hoped renewed local interest might return to pre-war levels. At the end of his report Grant expressed optimism that participation would begin and construction would continue on both sides of the Potomac.

During 1948, the Virginia Legislature made $125,000 available for acquiring land in the corridor stretching from Spout Run to the Fairfax-Arlington county line. The area sought had become very active with real estate developers since the end of World War II, and the need to act on parkway matters seemed urgent. Grant hoped Arlington County would put up money soon to match that from the state and that already in hand from the federal government.[49] Surveys needed to be completed soon, given the rapidity of development in the area.

Persuasion about development did not always carry the day and other strategies to obtain matching funds were resorted to in the years to follow. A device used by Maryland permitted bonds to be issued and signed by the Maryland National Capital Park and Planning Commission and by Montgomery and Prince Georges counties. When matured, these bonds could be redeemed by certified checks that permitted the release of dollars from the NCP&PC for the purchase of land. The commission sought to persuade Virginia to use the same approach and wrote an amendment to the Capper-Cramton Act permitting such.[50]

At the 1952 session of the Virginia general assembly, $150,000 was appropriated for matching federal funds on the parkway. This enabled Fairfax County to begin its first unit of the George Washington Memorial Parkway extending from the Arlington County line and Old Georgetown Road. The roadway moved slowly up the Potomac as governments observed advantages to the facility and money became available in the postwar economy.

reakthrough of sorts for the National Park Service came with the 1954 Federal Aid Highway Act. Given the difficulty of programming construction in advance, the act allowed contract authorization for national parkways for three fiscal years running. For the Park Service this meant being able to program construction in advance; for the parkway it portended more systematic progress toward completion. To coordinate with the change, other aspects of the project had to be advanced as a result, including the acquisition of land, which meant obtaining funding quickly.
As the Washington, D.C., area grew following World War II, development began to disperse around the suburban perimeters, affecting each of the parkways. In the course of seeking more money from Congress in 1956 to extend the GWMP parkway toward American Legion Bridge (Cabin John Bridge), the proposed move of the Central Intelligence Agency (CIA) to the Langley, Virginia, area above Chain Bridge Road, became an issue. In a letter to CIA Director Allen W. Dulles, a National Park Service official elaborated on the time schedule and costs of extending the parkway above Spout Run. E.T. Scoyen placed the estimate at $8.5 million for the 6 miles, including grading, structures, paving, and land acquisition costs.[51] A timetable projected the section from Spout Run to Chain Bridge to be under contract by July I, 1956, and that from Chain Bridge to Langley by June 1, 1957; paving for these sections would be underway during the fall of 1957 and 1958, respectively.[52] Assisting these anticipated schedules were sizable commitments of money from Virginia governments. The commonwealth of Virginia and Fairfax County approved large sums of money for land purchases: $100,000 in 1955, from the county line to the old Georgetown Road; $400,000 for land between the county line and the CIA; and the NCP&PC anticipated $325,000 more for land between the CIA and American Legion Bridge crossing of the Potomac.[53] These efforts related to other significant actions.

One such important effort, begun in 1955, sought to bring parks up to requirements of increased demand during the term of National Park Service Director Conrad L. Wirth. "Mission 66" as it came to be known, held promise for the parkway. Writing in 1956, Wirth anticipated completing the parkway to Great Falls "with the possible exception of the bridge across

49. Grant to MacDonald, April 1, 1948, National Archives, Record Group 328, Box 545/100.
Settle to Nolen, April 24, 1950, National Archives, Record Group 328, Box 545/100.
51. Scoyen to Dulles, May 4, 1956, National Archives, Record Group 328, Box 545/100.
52. Ibid.
53. Finley to President, June 8, 1959, National Archives, Record Group 328, Box 545/100.

the Potomac."[54] He determined that it would be best to finish the section to the falls first and below Washington, D.C., last. Fiscal year construction programs for 1957-1959 included $7,150,000 for work in Maryland and $900,000 for Virginia. In addition, Director Wirth indicated that "$8,000,000 of CIA funds will shortly become available for the sections in Virginia from Spout Run to the CIA site near Langley."[55] The estimate of the funds needed for the federal share of the land acquisition costs to complete the parkway came to $2 million, which Wirth urged be programmed soon.

An obstacle to construction between the CIA offices and the capital beltway arose in 1959 when the agencies involved recommended a different alignment. This was due to increased costs caused by land that had steep slopes and several small creeks that needed bridging. Modifications sought by the National Park Service and the Bureau of Public Roads necessitated the Department of Commerce transfer land better suited for the parkway.[56] The request was negotiated at the secretarial level, and completion of the parkway section was set for 1961, providing "a continuous parkway facility from the American Legion Bridge to downtown Washington."[57]

During the late 1950s, the Senate Appropriations Committee closely scrutinized requests for the parkway's "desirability and need." This resulted in the National Capital Park and Planning Commission contracting with Charles W. Eliot II, at a cost of $5,000, to review plans for the Fairfax and Prince Georges counties' portions of the parkway still to be completed.[58] Eliot, a renowned landscape architect and professor at Harvard University, had a long and intimate association with the parkway project. For seven years (1926-1933), he had served as city planner and director of the NCP&PC, during which time he wrote a report supporting a park system for the nation's capital.

Specific directions given to Eliot focused on whether to extend the parkway to Great Falls and Fort Washington. Land acquisition issues and the difficulties in engineering a parkway near the river in the vicinity of the gorge and Great Falls implied considerable expenditure of money, as would the design for a road on each side, plus a bridge over the Potomac above the falls. The Prince Georges issue was basically one of land acquisition difficulties from the District line to Fort Washington. After considerable study, Eliot concluded that the plans should move forward in Fairfax County so that the falls and palisades might be protected and preserved. He also concluded that the land to be acquired should more nearly approximate that of the original 1927 plan "in order to avoid any road construction, now or in the future, on the bluffs facing the river, and to safeguard the valleys of the side streams."[59] The 1939 plan had called for road building that would affect scenic areas and cost more. From the new beltway (circumferential highway), Eliot believed an adaptation of Route 193 (Old Georgetown Pike) might be used with an additional two lanes; at the top of Prospect Hill, traffic might be separated onto Old Dominion Drive, with a new parkway entrance to the area of Great Falls.[60] He went on to advocate preservation of areas through special-use permits or scenic easements, lifetime estates to some larger landowners, and a delay in recreational developments. Eliot believed the value for much that had been done, "depends on control of the bluffs and valleys on the Virginia side of the river."[61]

Regarding the section below the District to Fort Washington on the Maryland side, Eliot especially underscored the need to change the alignment because of buildings and subdivisions that had sprung up. Such development "will compel other

54. Wirth to Bartholomew, July 18, 1956, National Archives, Record Group 328, Box 545/100.

55. Ibid.

56. Assistant Secretary to Secretary, June 3, 1959, National Archives, Record Group 328, Box 545/100.

57. Ibid.

58. Charles W. Eliot, "Statement For Senate Committee On Interior And Insular Affairs, George Washington Memorial Parkway, July 11-12, 1957, National Archives, Record Group 328, Box 545/100.

59. Ibid., p. 5.

60. Ibid.

61. Ibid.

revisions to the great loss of the project unless acquisition can proceed at an early date."[62] He also argued for a wider right-of-way near Oxon Run and Fort Foote plus riparian rights around Broad Creek Bay and Swan Creek near Fort Washington.[63] Eliot concluded with a plea to build the parkway to Fort Washington as originally planned. He said this would be an integral part of a metropolitan system for preserving, protecting, and making resources accessible for those seeking recreational opportunities in the Washington, D.C., area. "The cooperation of the State and County authorities is assured. The building and subdivision activities along the way make early and vigorous action most desirable."[64]

Despite Eliot's report, funding did not become available for extending the parkway to Fort Washington nor to Great Falls. Lack of cooperation among local, state, and federal governments prevented the parkway from reaching proposed limits, but other factors also contributed. Opposition surfaced from the real estate interests seeking profit from development, from the environmental community who wished to preserve resources along the corridor, and from proponents of the Interstate Highway Act, which gave motorists a means to travel great distances, as opposed to scenic drives. The amount of land used and the changes to the landscape in laying down the parkway from Spout Run upriver alarmed local residents who foresaw similar encroachment by the parkway up to Great Falls. These factors combined to prevent the construction of the parkway on both sides of the river to Great Falls and Mount Vernon.

Parkway development ultimately extended along both sides of the Potomac – a small portion on the Maryland side but most on the Virginia side. Sections reaching completion were opened for use, such as from Spout Run to the CIA in 1959, the westernmost Maryland section in 1965 at the junction with MacArthur Boulevard. Today, George Washington Memorial Parkway has probably reached its limits, given the extensive development in the urban area and the escalating land values preclude further land acquisition.

It should be noted that within the historic boundaries of the parkway are a number of other resources. Ones of major significance include the United States Marine Corps War (Iwo Jima) Memorial, the Netherlands Carillon, the former communities of New Philly and Little Italy, Lyndon Baines Johnson Memorial Grove, Memorial Avenue and the Hemicycle, Arlington House, Theodore Roosevelt Island, Great Falls Park, and Fort Marcy. On the Maryland side are the Clara Barton National Historic Site, and Glen Echo Park.

Legislation

Even before construction of Mount Vernon Memorial Highway could begin, legislation was introduced in Congress expanding upon the concept of a public project memorializing George Washington. The new plan complemented a 1924 act that called for the "comprehensive development of the park and playground system of the National Capital."[65]

Early in 1929, H.R. 15524, the first measure legislating development of the parkway, was presented by the House Committee on Public Buildings and Grounds. This legislation, as amended, specified that $7 million be spent for acquisition and development of lands on both sides of the river – half of this cost to be reimbursed within five years by the states of Virginia and Maryland. The bill, drafted by the National Capital Park and Planning Commission, the commissioners of the District of Columbia, and the Bureau of the Budget, called for a route extending from Mount Vernon along the Virginia side of the Potomac River to Great Falls, except where the road passed through the city of Alexandria. Similarly, on the

62. Charles W. Eliot, "National Capital Planning Commission Report, Review Of Fairfax County And Prince Georges County Sections George Washington Memorial Parkway," July 8, 1957, p. 16, National Archives, Record Group 328, Box: Planning Files 1924-1967.

63. Ibid., pp. 16-17.

64. Ibid., p. 17.

65. U.S. Congress, House, *Acquisition, Establishment, and Development of the George Washington Memorial Parkway.* H. Rept. No. 2523, 70th Cong., 2nd sess., 1929, pp. 1, 3.

Maryland side the proposed route would extend from Fort Washington to Great Falls.[66] "This parkway, taking control of the banks of the Potomac from Mount Vernon where Washington lived, through the Capital which he founded, to Great Falls where he had his industrial dreams, has tremendous possibilities for scenic enjoyment and recreation on land and water."[67]

Although H.R. 15524 passed the House of Representatives unanimously on February 27, 1929, the measure was not finally approved. Instead, an identical bill, H.R. 26, cosponsored by Senator Arthur Capper (R. Kansas), and Representative Louis C. Cramton (R. Michigan), chairmen of the District committee, was introduced in the next Congress late in 1929. The measure authorized $33.5 million for establishment of a comprehensive park, parkway, and playground area near the capital.[68] In April 1930, the Senate Committee on the District of Columbia reported favorably on the bill, specifying that certain details be changed, but that the "prime objects" of the legislation remain intact. The purpose of the parkway was to develop and protect "scenic values of the National Capital," which were threatened by encroachment of residential and commercial interests. Enactment of the bill promised to "afford public control of the banks of the Potomac from Mount Vernon, where Washington lived, through the National Capital, which he founded, to Great Falls, where the old canal is a valuable relic of his work as an engineer."[69] Further, the parkway would "be a striking and suitable tribute to the Father of our Nation, and one in which the people of America will take just pride and enjoyment."[70] The bill won wide endorsement from sundry institutions and individuals who urged its passage, and on May 29, 1930, it became law.[71]

The Capper-Cramton Act provided for development of the specified route in Virginia and Maryland, calling for the preservation and protection of both natural and historic resources, including the gorge and Great Falls of the Potomac, the old Patowmack Canal, and a part of the Chesapeake and Ohio Canal. Besides the roadway, the project included construction of access roads to Great Falls and a bridge over the river. Further, forts Washington, Foote, and Hunt were to become part of the parkway once they were no longer needed for military purposes. Administration of the completed parkway would be the responsibility of the director of Public Buildings and Public Parks of the national capital. In a related act passed the same day, Congress provided $1 million (increased to $4 million the following year) to cover expenses incurred by the National Capital Park and Planning Commission in implementing the project.[72] Subsequent House and Senate proposals called for clarifying the language of the act as it pertained to the transfer of Mount Vernon Memorial Highway and for providing adequate funding for the purchase of property deemed immediately essential for the parkway.[73]

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66. Ibid., pp. 3-4. For the views of the National Capital Park and Planning Commission, the Commissioners of the District of Columbia, and the Bureau of the Budget, see ibid., pp. 5-8.

67. Ibid., p. 4.

68. U.S. Congress, House, *Acquisition, Establishment, and Development of the George Washington Memorial Parkway*, H. Rept. No 55, 71st Cong., 2d sess., 1929; U.S. Congress, Senate, *Washington, the National Capital*, prepared by H.P. Caemmerer, S. Doc. No. 332, 71st Cong., 3rd sess., 1932, p. 122.

69. Ibid., pp. 4-5.

70. Ibid.

71. Ibid., pp. 8-9; U.S. *Statutes at Large*, XLVI, pp. 482-485.

72. Ibid., pp. 483, 484-485, 864, 1367; U.S. Congress, House, *National Capital Park and Planning Commission. Communication from the President of the United States transmitting Supplemental Estimate of Appropriation for the National Capital Park and Planning Commission, in the Sum of $1,000,000.* H. Doc., No. 458, 71st Cong., 2nd sess., 1930, pp. 1-2; Frederick Gutheim, *Worthy of the Nation: The History of Planning for the National Capital* (Washington: Smithsonian Institution Press, 1977), p. 198.

73. U.S. Congress, House, *Amend the Act for the Acquisition, Establishment, and Development of the George Washington Memorial Parkway*. H. Rept. No. 2628, 71st Cong., 3d sess., 1931; U.S. Congress, Senate, *To Amend Act Relating to George Washington Memorial Parkway*, S. Rept. No. 1658, 71st Cong., 3d sess., 1931. For discussion of these measures, especially H.R. 16218, see U.S. Congress, House, *Hearings Before the Committee on Public Buildings and Grounds, House of Representatives*, January 28 and February 4 and 11, 1931, 71st Cong., 3d sess., *passim*.

In the 1940s and 1950s, several measures were introduced to modify provisions of the act to permit additional land acquisition and land exchange.[74]

PRESENT CONDITION

The George Washington Memorial Parkway extends through the coastal plain and Piedmont physiographic provinces. Upon leaving the coastal plain near the Francis Scott Key Bridge, the parkway dips and rises above the bluffs of the Potomac River palisades and on toward Great Falls. Hardwood forest dominates the route with an understory of laurel and holly. The median between the lanes is a grassy strip containing sparse shubbery and mature trees which is regularly mown.

Residential and commercial development along the parkway corridor has been regulated to the extent that above Key Bridge little evidence is identified from the roadway, though developments exist, including the Central Intelligence Agency headquarters and the Federal Highway Administration offices. The impact is greatest at Rosslyn, on the Virginia side of the parkway, principally between Key and Roosevelt bridges where a considerable amount of commercial high-rise development has occurred.

Bridges

When construction extended the parkway above the Arlington Memorial Bridge in Virginia, the Federal Highway Administration constructed a total of 25 bridges: 12 road bridges. One pedestrian bridge (built in 1989) crosses the parkway from the parking lot access to Theodore Roosevelt Island; two others cross the Clara Barton portion. Along the corridors he George Washington Memorial Parkway in Virginia, above the Arlington Memorial Bridge, 17 bridges cross one or both lanes of the parkway or the parkway crosses on them (see inventory which follows). Three of them were built in the late 1940s, but most between 1959 and 1964. The majority are of the continuous girder and floor-beam design, made of steel and concrete, with some stone clad abutments and pediments.

On the Clara Barton Parkway are eight bridge structures constructed between 1961 and 1968. Two pedestrian bridges cross it. Most are steel and concrete of the continuous box or tee-beam design.

Culverts

There are approximately 35 culverts along the George Washington Memorial Parkway, including the Clara Barton Parkway portion. Construction of these occurred in conjunction with bridge contracts or as part of a section of roadway proper. Most, such as the one at Minnehaha Creek on the Clara Barton Parkway, have stone cladding similar to bridges on the parkway, and are contributing elements to it. A variety of forms may be identified: small tubes, multiple tubes, and some box culverts.

Walls and Miscellaneous Structures

There are 3.67 miles of retaining walls and 12.05 of barrier walls along the Virginia side of the parkway upriver from Memorial Bridge, and 1.54 miles of retaining walls and .44 miles of barrier walls along the Clara Barton Parkway. Upriver from the Francis Scott Key Bridge are several stretches of walls between the north and southbound lanes, and along the

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[74] U.S. Congress, Senate, *Development of the George Washington Memorial Parkway and the Comprehensive Park, Parkway, and Playground System the National Capital*, S. Rept. No. 1766, 79th Cong., 2d sess., 1946; U.S. Congress, House, *Providing for an Addition to the George Washington Memorial Parkway by the Transfer from the Administrator of General Services to the Secretary of the Interior of the Tract of Land in Arlington County, Va., Commonly Known as the Nevius Tract*, H. Rept. No. 1601, 82d Cong., 2d sess., 1952; U.S. Congress, House *Authorizing Land Exchanges for Purposes of the George Washington Memorial Parkway in Montgomery County*, Md. H. Rept. No. 2597, 85th Cong., 2d sess., 1958; U.S. Congress, Senate, *Land Exchanges, George Washington Memorial Parkway, Montgomery County, Md.* S. Rept. No. 2210, 85th Cong., 2d sess., 1958.

outside lanes. Walls also delimit the overlooks along the parkway. Numerous drop inlets are found along the various lanes of the parkway. Some 798 are along the Virginia side and 175 on the Maryland side.

Several portions of the parkway have guardrail made of concrete, wood, or steel. And some stone clad or concrete lined ditches may be located along the routes. Stone clad retaining walls are used in several locations, especially on the Clara Barton Parkway.

A portion of the Clara Barton Parkway near Lock 8 of the Chesapeake and Ohio Canal is cantilevered to accommodate north and southbound lanes in an area of topographical constraints.

Landscape

The landscape values for the George Washington Memorial Parkway have always been the preservation of scenic and esthetic qualities associated with the Potomac River valley. Extending from the coastal plain past the fall line to the piedmont, the valley area is of continuing concern including the palisades and the tree covered slopes, flowering understory, steep-sided creek valleys (runs), and hilltop vistas. The latter provides a glimpse of the monumental core of Washington, D.C., a central purpose for the establishment and continuing protection of the parkway.

In general, references to the design concepts used for George Washington Memorial Parkway are difficult to locate. The most succinct statement about design was made by Charles W. Eliot II, who described it as containing "grade separations, few entrances, border roads for service of abutting property, and a right-of-way never less and often much more than two hundred feet."

Planting plans exist for the Mount Vernon portion, the interchanges from Route 123 to Turkey Run, and the area near the David Taylor Naval Ship Research and Development Center of the Clara Barton Parkway. The CIA funded the planting plan for the upper portion on the Virginia side and it consists of plotting hardy native plant stock: shrubs, flowering trees, and deciduous trees.

Opinions by designers pointed out American elm should not be mixed in a "border plantation," and while pine might overpower other plantings, it would be satisfactory for use along the parkway. Of special concern seemed to be the need for taking lines on the slopes which would control the skyline and serve as opportunities for vistas of Washington's monumental core and skyline.

INVENTORY OF STRUCTURES

* = noncontributing

The order of listing for the structures in Virginia is the same as the Federal Highway Administration parkway bridge inspection reports (mileage distances given upstream from structure location to the Interstate 495 (Capital Beltway) interchange with the George Washington Memorial Parkway). Initial referent points are given in mileage from Interstate 495; further downstream the referent point is Interstate 395 (Shirley Highway); and for Spout Run Parkway the referent point is the junction of Interstate 66 (Custis Memorial Parkway) and U.S. Route 29 (Lee Highway).

Virginia

Dead Run (3300-001P): Built 1963; 0.5 miles to Interstate 495 (Capital Beltway); steel, continuous girder and floor-beam system; four lanes, three spans, 308 feet; carries parkway over Dead Run.

Turkey Run (3300-002P): Built 196l; 1.4 miles to Interstate 495; continuous girder and floor-beam system; four lanes, four spans, 405 feet; carries parkway over Turkey Run and access road.

*CIA Overpass (3300-003P): Built 1959; 2.2 miles to Interstate 495; prestress concrete, stringer/multi-beam or girder; two lanes, three spans, 167 feet; carries CIA entrance ramp over parkway.

Route 123 Overpass (3300-004P): Built in 1959; 3.8 miles to Interstate 495; concrete stringer, multi-beam or girder; five lanes, three spans; 169 feet; carries Virginia Route 123 over parkway.

Pimmit Run (3300-005P): Built in l959; 4.6 miles to Interstate 495; steel continuous girder and floor beam; four lanes, three spans, 353 feet; carries parkway over Pimmit Run.

Glebe Road (3300-006P): Built in l959; 5.0 miles to Interstate 495; steel continuous girder and floor-beam system; four lanes, four spans, 544 feet; carries parkway over Glebe Road.

Gulf Branch (3300-007P): Built in l959; 5.4 miles to Interstate 495; steel continuous girder and floor beam; four lanes, three spans, 424 feet; carries parkway over Gulf Branch.

Donaldson Run (3300-008P): Built in 1959; 5.8 miles to Interstate 495; steel, continuous girder and floor-beam system; four lanes, three spans, 429 feet; carries parkway over Donaldson Run.

Windy Run (3300-009P): Built in 1959; 7.1 miles to Interstate 495; steel continuous, girder and floor-beam system; four lanes, four spans, 387 feet; carries parkway over Windy Run.

Spout Run Arch (3300-010P): Built in 1959; 7.8 miles to Interstate 495; concrete, arch-deck; two lanes, one span, 335 feet; carries parkway eastbound lanes over Spout Run and Spout Run Parkway.

Spout Run (3300-0llP): Built in 1958; 7.8 miles to Interstate 495; concrete, frame; two lanes, one span, 32 feet; carries parkway westbound lanes over Spout Run.

Rosslyn Circle Ramp (3300-012P): Built in 1959; 8.4 miles to Interstate 495; steel, stringer/multi-beam girder; two lanes, one span, 134 feet; carries parkway westbound over eastbound parkway.

Little River Inlet (3300-013P): Built in 1964; 1.7 miles from Interstate 395; steel, stringer/multi-beam girder; four lanes, one span, 193 feet; carries parkway westbound over the Boundary Channel.

Route 50 Westbound over Parkway (3300-014P): Built in 1946; 1.6 miles from Interstate 395; steel, girder and floor-beam system; two lanes, three spans, 365 feet; carries Arlington Boulevard and Route 50 over eastbound parkway.

Southbound Spout Run Parkway (3300-(029P): Built in l949; 0.9 miles to Route 29/Interstate 66; concrete, arch-deck; two lanes, one span, 35 feet; carries southbound Spout Run Parkway over Spout Run.

Northbound Spout Run Parkway (3300-039P): Built in 1947; 0.5 miles from Route 29/Interstate 66; concrete, continuous box culvert; two lanes, one span, 20 feet; carries northbound Spout Run Parkway over Spout Run.

*Pedestrian Overpass (042-T): Built in 1989 by Arlington County; 0.34 miles upstream from the Theodore Roosevelt Memorial Bridge; carries pedestrians across parkway.

Other noncontributing resources, though several are already on the National Register of Historic Places, include: Theodore Roosevelt Memorial Bridge, Francis Scott Key Bridge, Chain Bridge, the pedestrian bridge near Theodore Roosevelt Island, and the Interstate 495 bridges and exchange complex on both sides of the Potomac River at the northern end of the parkway.

The order of listing for the Clara Barton Parkway follows that noted above and the referent point again is Interstate 495 (Capital Beltway). All structures are listed in downstream sequence along the Potomac River except the first one, Carderock. It is upstream from the Interstate 495 interchange.

Maryland

Carderock (3300-030P): Built in 1962; 0.63 miles upstream from Interstate 495; prestress concrete, stringer/multi-beam girder; two lanes, one span, 120 feet; carries Carderock access connection over parkway.

79th Street Cabin John (3300-031P): Built in 1961; 0.7 miles to Interstate 495; concrete, frame; four lanes, one span, 31 feet; carries parkway over 79th Street.

Cabin John Overpass (3300-032P): Built in 1962; 1.3 miles to Interstate 495; prestress concrete, stringer/multi-beam girder; two lanes, one span, 120 feet; carries Ericsson Road over parkway.

Cabin John Creek/Cabin John Parkway (3300-033P): Built in 1963; 1.6 miles to Interstate 495; concrete continuous, box beam/multiple girders; four lanes, three spans, 378 feet; carries parkway over Cabin John Creek.

Westbound Lane (3300-034P) : Built in 1961; 2.5 miles to Interstate 495; concrete, continuous tee beam; two lanes, three spans, 217 feet; carries future westbound parkway over westbound parkway.

*Sycamore Island Pedestrian (3300-035T): Built in 1968; 2.8 miles to Interstate 495; concrete, continuous box, single girder; six spans, 221 feet; carries pedestrians across parkway.

*Brookmont Pedestrian (3300-036T): Built in 1967; 4.3 miles to Interstate 495; concrete, continuous, box, single girder; nine spans, 375 feet; carries pedestrians across parkway.

Little Falls Branch (3300-037P): Built in 1961; 4.5 miles to Interstate 495; prestress concrete, stringer multi-beam girder; two lanes, one span, 59 feet; carries parkway over Little Falls Branch.

HISTORICAL SIGNIFICANCE

George Washington Memorial Parkway (and the portion now named the Clara Barton) should be included in the National Register of Historic Places as nationally significant under criteria (listed in priority order) (C) landscape architecture and (B) commemoration of George Washington, and Clara Barton. One of the last parkways completed among the many in the eastern United States, GWMP preserves a sizable amount of territory once familiar to George Washington.

Beginning with the McMillan Plan of 1902, planners discussed a roadway linking Mount Vernon with Great Falls on the Potomac. This continued to be an issue, though somewhat downplayed, during the early discussions of Mount Vernon Memorial Highway. It rose again with the Capper-Cramton Act of 1930 however, which set in motion the means to make the parkway a reality. Well-known landscape architects, Frederick Law Olmsted, Jr., Charles W. Moore II, and Gilmore D. Clarke (heavily involved in Westchester County parkways, Mount Vernon Memorial Highway, and Blue Ridge Parkway) invested much time and energy in the parkway. These individuals together with the National Park Service, the Bureau of Public Roads, the National Capital Park and Planning Commission, Maryland National Capital Park and Planning Commission, the Commission of Fine Arts, and several local governments kept the idea alive, shepherded it through, and assisted in completion of the parkway. Efforts took on more significance with the opening of Mount Vernon Memorial Highway in 1932 when the public could see the value of such a roadway. As a parkway, GWMP has several areas of significance: community planning and development, landscape architecture, transportation, commemoration, and preservation.

One of the reasons George Washington Memorial Parkway is nationally significant is that it is associated with a long and continuous planning effort for the Washington, D.C., region. Though a direct linkage to L'Enfant's plan cannot be established, his plan laid the basis for subsequent planning efforts. In 1898, the Permanent System of Highways Plan (Highway Act of 1898) established a systematic plan to complete in orderly fashion what L'Enfant had begun. Specific efforts incorporating GWMP were then included in the Park Improvement Commission of the District of Columbia, commonly known as the McMillan Plan of 1902. The principal landscape architect of that plan, Frederick Law Olmsted, Jr., pushed for parks that would be intensively used, a democratic approach. He urged connections between parks including a road network that would extend parks to the perimeters of the regional city, in particular to Mount Vernon, and along both sides of the Potomac to Great Falls.

In the 1927 National Capital Park and Planning Commission report, Eliot and Olmsted stated the importance of parks and linkages between them and gave a strong endorsement to the McMillan Commission's findings for a parkway along the Potomac. Despite opposition from the public utilities at Great Falls, the planning commission vigorously promoted a parkway, by the Capper-Cramton Act of 1930. This act established the funding and planning for the parkway, creating the means for design and construction between 1930 and 1966. Intended as a cooperative venture among various levels of government, the Capper-Cramton Act accomplished most of what had been set in motion at the turn of the century.

Another major reason for the GWMP's significance involves George Washington's association with the Potomac River corridor. His enterprising efforts to tap the hinterlands of the new country through canals along the Potomac are still evident around Great Falls (Patowmack Canal), and the route to and from his Mount Vernon home often took him along the Virginia shore of the parkway route.
Likewise, the selection of the site for the nation's new capital was his, as was the selection of L'Enfant to design the capital. Like the older Mount Vernon section, the upper parkway commemorates the life of Washington. It provides unparalleled views of the city he founded and the river he traveled.

The commemoration of Clara Barton, for whom a portion of the parkway was named on November 28, 1989 by an act of Congress, is notable as well. A key figure on battlefields during the Civil War, she founded the American Red Cross, and her home at Glen Echo overlooks the Maryland side of the parkway.

The planning and design of GWMP has associative significance as well. The vision of McMillan, Capper, and Cramton was put into plans and designs by Olmsted, Eliot, and Clarke. Clarke remained especially involved in the Mount Vernon

Memorial Highway project, as well as the Baltimore-Washington and Blue Ridge parkways. At the same time, he served as chairman of the influential Commission of Fine Arts. Previously, Olmsted and Eliot had extensive planning and design experience in Boston and Washington, D.C., and long public service careers as landscape architects.

Another significant aspect is the function of GWMP as a designed entryway into the nation's capital: part of a strong effort over the years to provide visitors with entries appropriate to the important role played by Washington, D.C., in the national and international community. As such, it provides a picturesque approach to the monumental core of the capital, dipping and rising with the landscape, providing glimpses of the Potomac River, the monuments, and the federal city beyond.

Finally, the GWMP has significance as an instrument of conservation and protection of scenic and recreational resources. By its very existence, it prevents development along the river corridor, and removes development potentially detrimental to the natural resources. Great Falls and the palisades are the prime recipients of this protection, which prevented them from becoming hydroelectric sites. Other areas that have received protection include the resources associated with the Chesapeake and Ohio Canal, Patowmack Canal, and even the viewsheds in a variety of locales along the length of the upper parkway.

Today, burgeoning commuter traffic provides the heaviest use of the parkway. Unfortunately, commuters experience it unlike that intended by the originators. The fit of an essentially rural setting with a developing regional urban community is difficult at best.

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George Washington Memorial Parkway
Photographic Index
National Register of Historic Places

George Washington Memorial Parkway

Photographer: Jere L. Krakow

Dates: June 1990, September 1990

Negatives: Denver Service Center, National Park Service
12795 W. Alameda Parkway
P.O. Box 25287
Denver, Colorado 80225-0287

No.	Subject	Direction Camera Pointing
George Washington Memorial Parkway		
1	culvert headwall/Arlington County VA	S
2	overlook #1/Arlington County VA	WNW
3	rock retaining wall detail/ Arlington County VA	NE
4	overlook #1/Arlington County VA	NE
5	parkway landscape/Fairfax County VA	E
6	bridge to CIA/Fairfax County VA	W
7	drop drain grate/Fairfax County VA	N/A
Clara Barton Parkway		
1	parkway landscape/Montgomery County Maryland	WNW
2	parkway landscape & retaining wall/Montgomery County MD	ENE

GEORGE WASHINGTON MEMORIAL PARKWAY
(South of Potomac River)

	ZONING/EASTING	NORTHING	USGS QUAD
A	18/311180	4315470	Falls Church, VA - MD
B	18/313920	4315040	Falls Church, VA - MD
C	18/315160	4313440	Falls Church, VA - MD
D	18/315340	4311840	Falls Church, VA - MD
E	18/316280	4311290	Washington West, DC - MD
F	18/318460	4308240	Washington West, DC - MD
G	18/320680	4307570	Washington West, DC - MD
H	18/321200	4305800	Washington West, DC - MD
I	18/320930	4305680	Washington West, DC - MD
J	18/320720	4306130	Washington West, DC - MD
K	18/320230	4306110	Washington West, DC - MD
L	18/320220	4306640	Washington West, DC - MD
	18/320730	4306600	Washington West, DC - MD
N	18/320520	4307320	Washington West, DC - MD
O	18/318200	4307250	Washington West, DC - MD
P	18/318680	4307640	Washington West, DC - MD
Q	18/317240	4309000	Washington West, DC - MD
R	18/317000	4309840	Washington West, DC - MD
S	18/314910	4311330	Falls Church, VA - MD
T	18/314430	4313560	Falls Church, VA - MD
U	18/314080	4313860	Falls Church, VA - MD
V	18/313620	4312570	Falls Church, VA - MD
W	18/312840	4312800	Falls Church, VA - MD
X	18/312640	4314580	Falls Church, VA - MD
Y	18/311410	4314300	Falls Church, VA - MD
Z	18/310840	4314700	Falls Church, VA - MD

CLARA BARTON PARKWAY
(George Washington Memorial Parkway)

	ZONING/EASTING	NORTHING	USGS QUAD
AA	18/309120	4316490	Falls Church, VA - MD
BB	18/309980	4315790	Falls Church, VA - MD
CC	18/310710	4315850	Falls Church, VA - MD
DD	18/310840	4316220	Falls Church, VA - MD
EE	18/312860	4315760	Falls Church, VA - MD
FF	18/314180	4315760	Falls Church, VA - MD
GG	18/316440	4312940	Washington West, DC - MD
HH	18/317000	4310910	Washington West, DC - MD
II	18/316890	4310910	Washington West, DC - MD
JJ	18/316000	4312000	Washington West, DC - MD
KK	18/315320	4313630	Falls Church, VA - MD
LL	18/314030	4315300	Falls Church, VA - MD
MM	18/311650	4315670	Falls Church, VA - MD
NN	18/309830	4315550	Falls Church, VA - MD
OO	18/308430	4316580	Falls Church, VA - MD

29-
228

GEORGE WASHINGTON MEMORIAL PARKWAY

TURKEY RUN PARK

UTM REFERENCES:

A. 18/311180/4315470
B. 18/313920/4315040
C. 18/315160/4313440
D. 18/315340/4311840
S. 18/314910/4311330
T. 18/314430/4313560
U. 18/314080/4313860
V. 18/313620/4312570
W. 18/312840/4312800
X. 18/312640/4314580
Y. 18/311410/4314300
Z. 18/310840/4314700

AA. 18/309120/4316490
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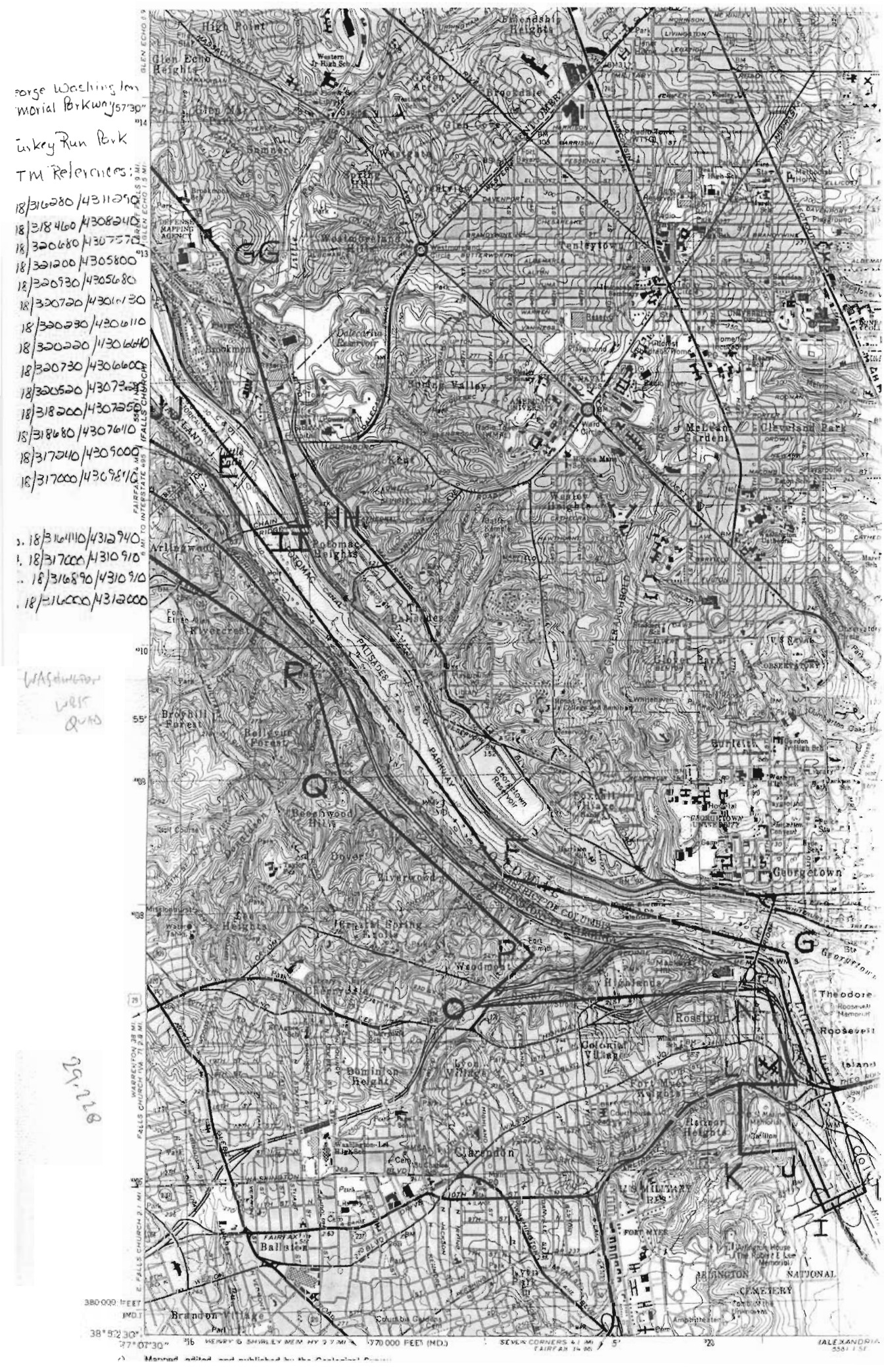

George Washington Memorial Parkway/57'30"

Turkey Run Park

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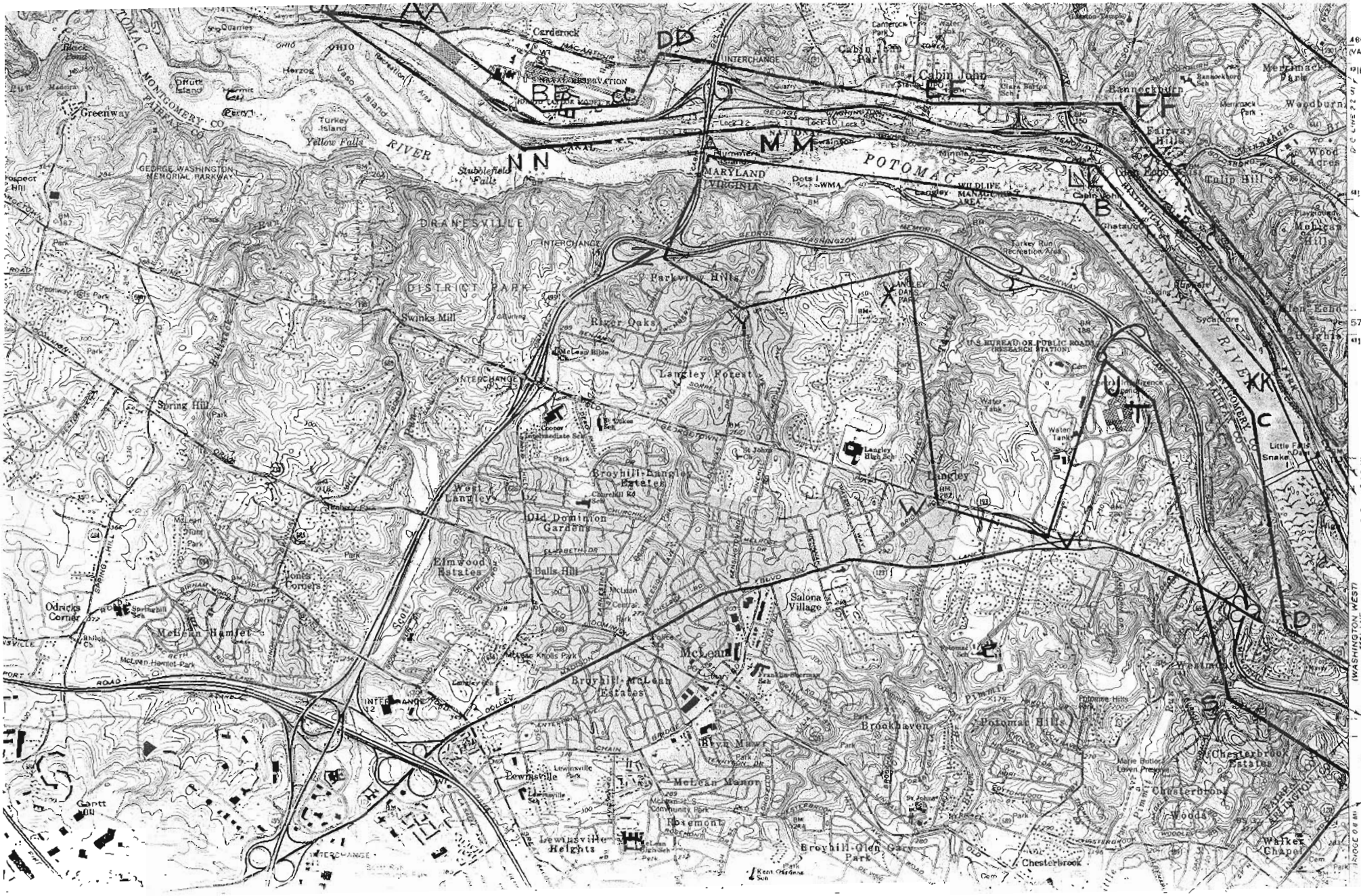
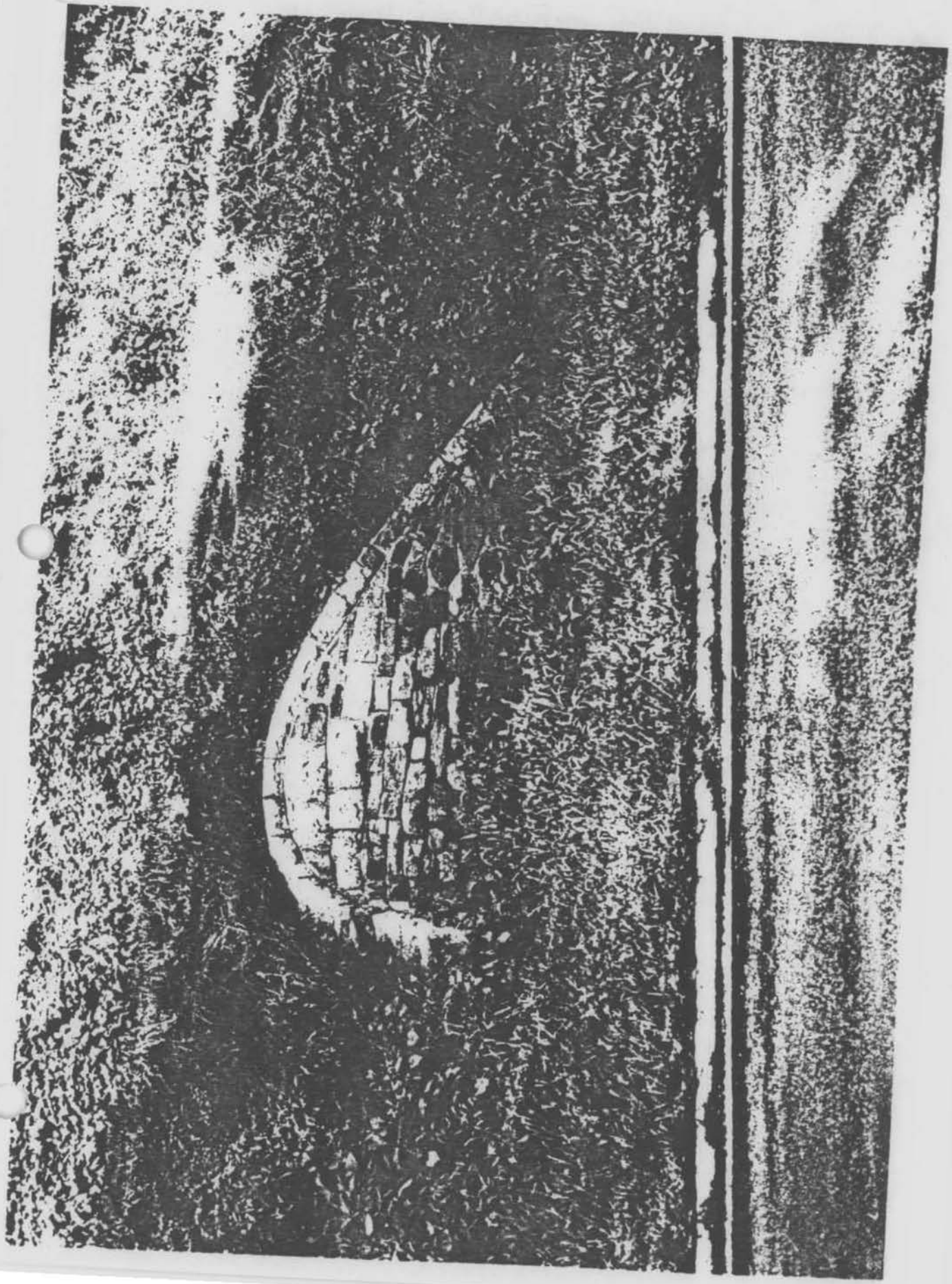
WASHINGTON WEST QUAD

29,220


Carderock
Cabin John
Bannockburn
Fairway Hills
Wood Acres
Tulip Hill
Mohican Hills
Glen Echo
Greenway
Turkey Island
Yellow Falls
Stubblefield Falls
GEORGE WASHINGTON MEMORIAL PARKWAY
MARYLAND
VIRGINIA
POTOMAC RIVER
Dots I WMA
WILDLIFE MANAGEMENT AREA
Turkey Run Recreation Area
DRANESVILLE
DISTRICT PARK
Parkview Hills
Swinks Mill
River Oaks
Langley Forest
Spring Hill
Broyhill-Langley Estates
West Langley
Old Dominion Gardens
Elmwood Estates
Balls Hill
Jones Corners
Odricks Corner
McLean Hamlet
Salona Village
McLean
Broyhill-McLean Estates
Langley
Brookhaven
Potomac Hills
Chesterbrook Estates
Chesterbrook
Woods
Walker Chapel
Broyhill Glen Gary Park
Lewinsville
Lewinsville Heights
McLean Manor
Idylmont
Gantt
Little Falls Park
Snake
MONTGOMERY CO.
FAIRFAX CO.
ARLINGTON
(WASHINGTON WEST)
460 000 FT (VA.)
57'30"
29.27
FALLS CHURCH QUAD

M: 35-61



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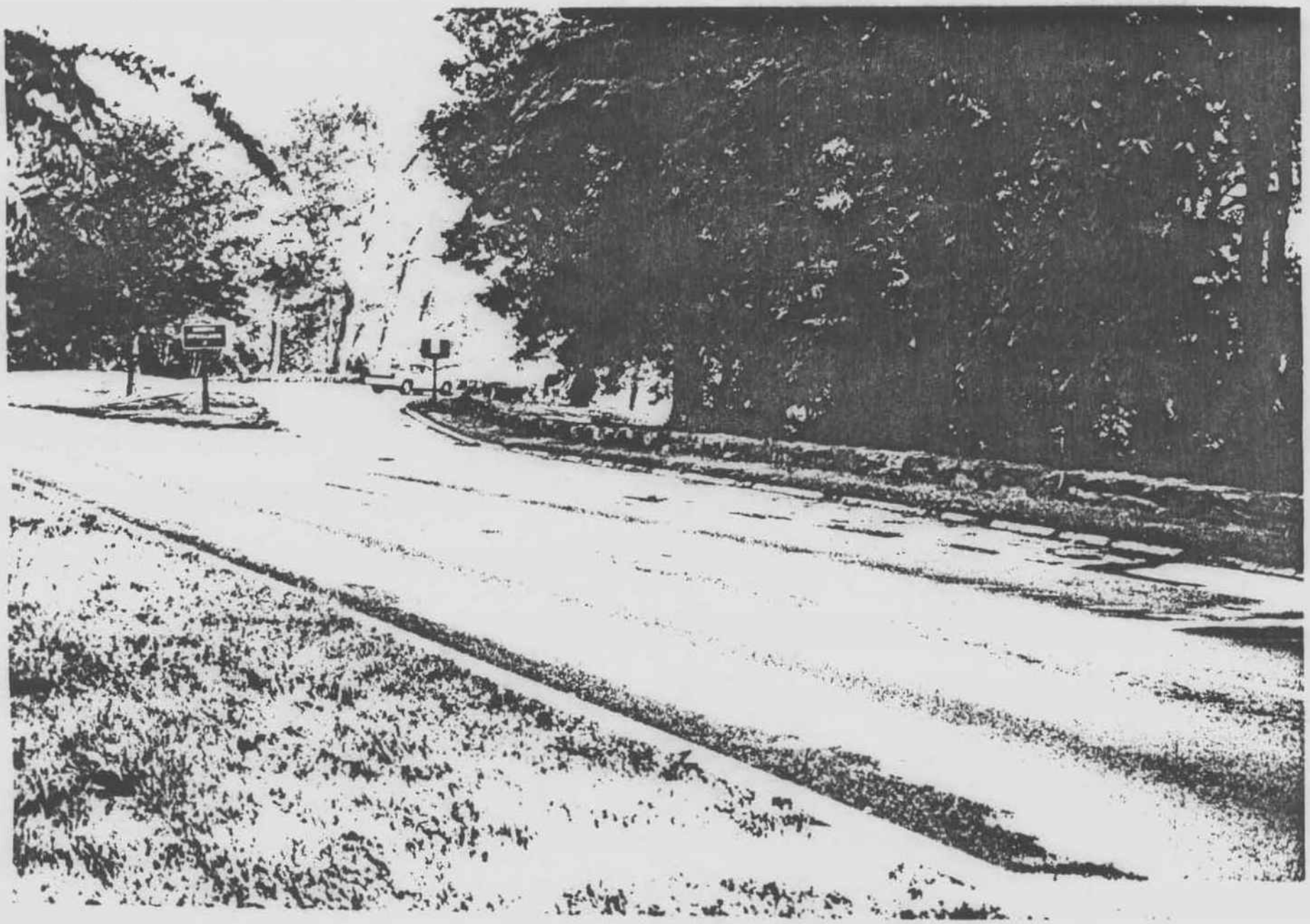

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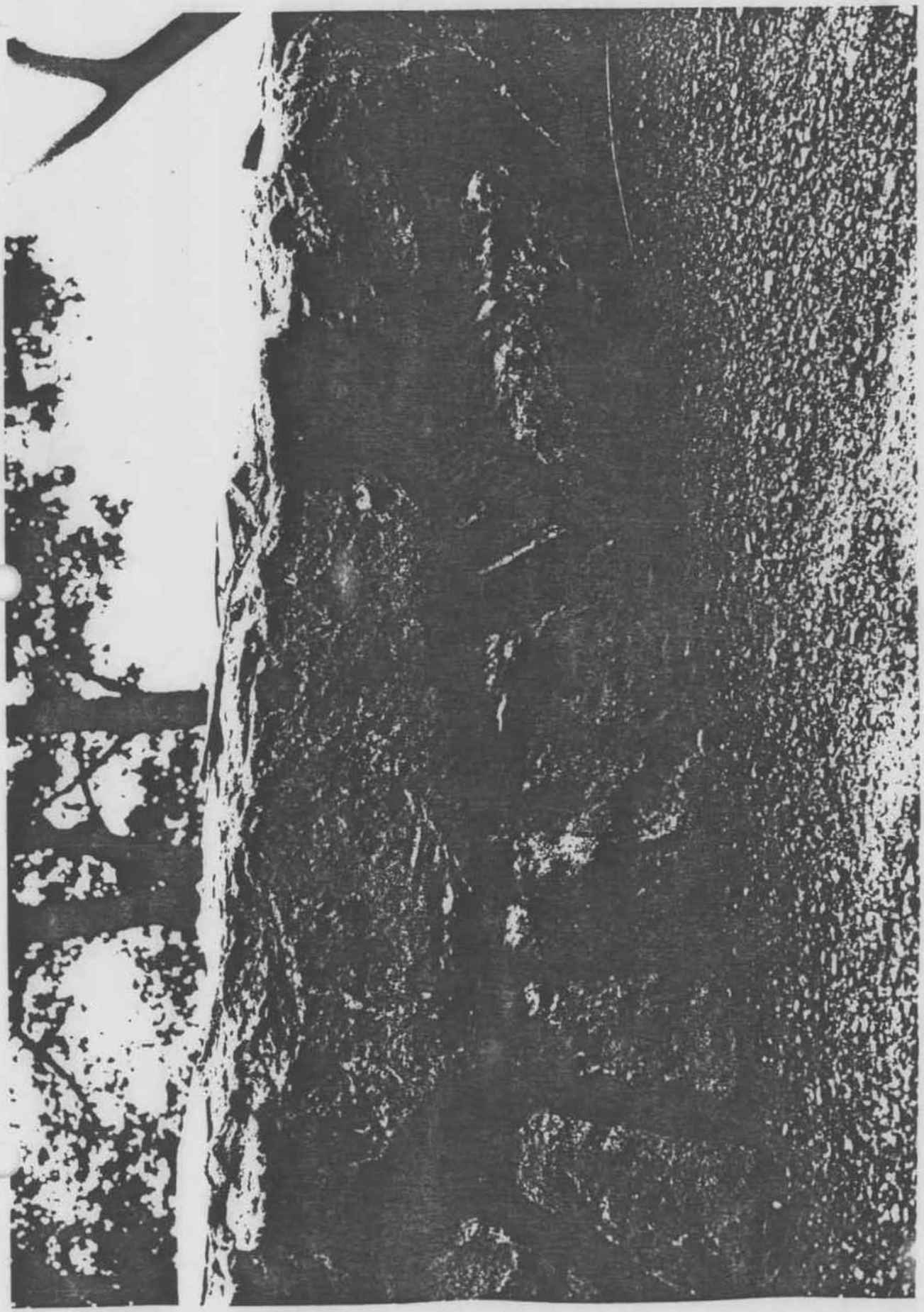

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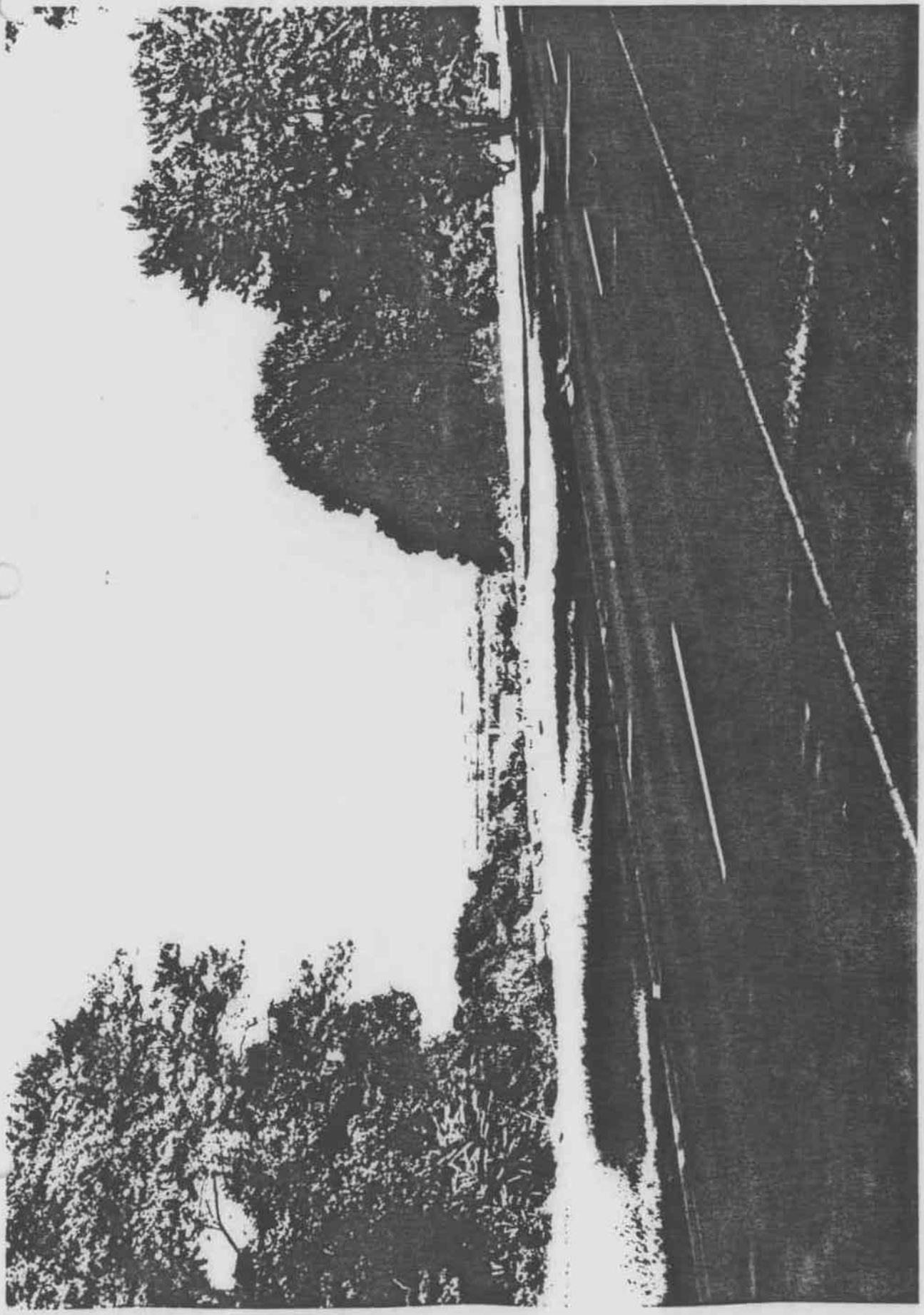

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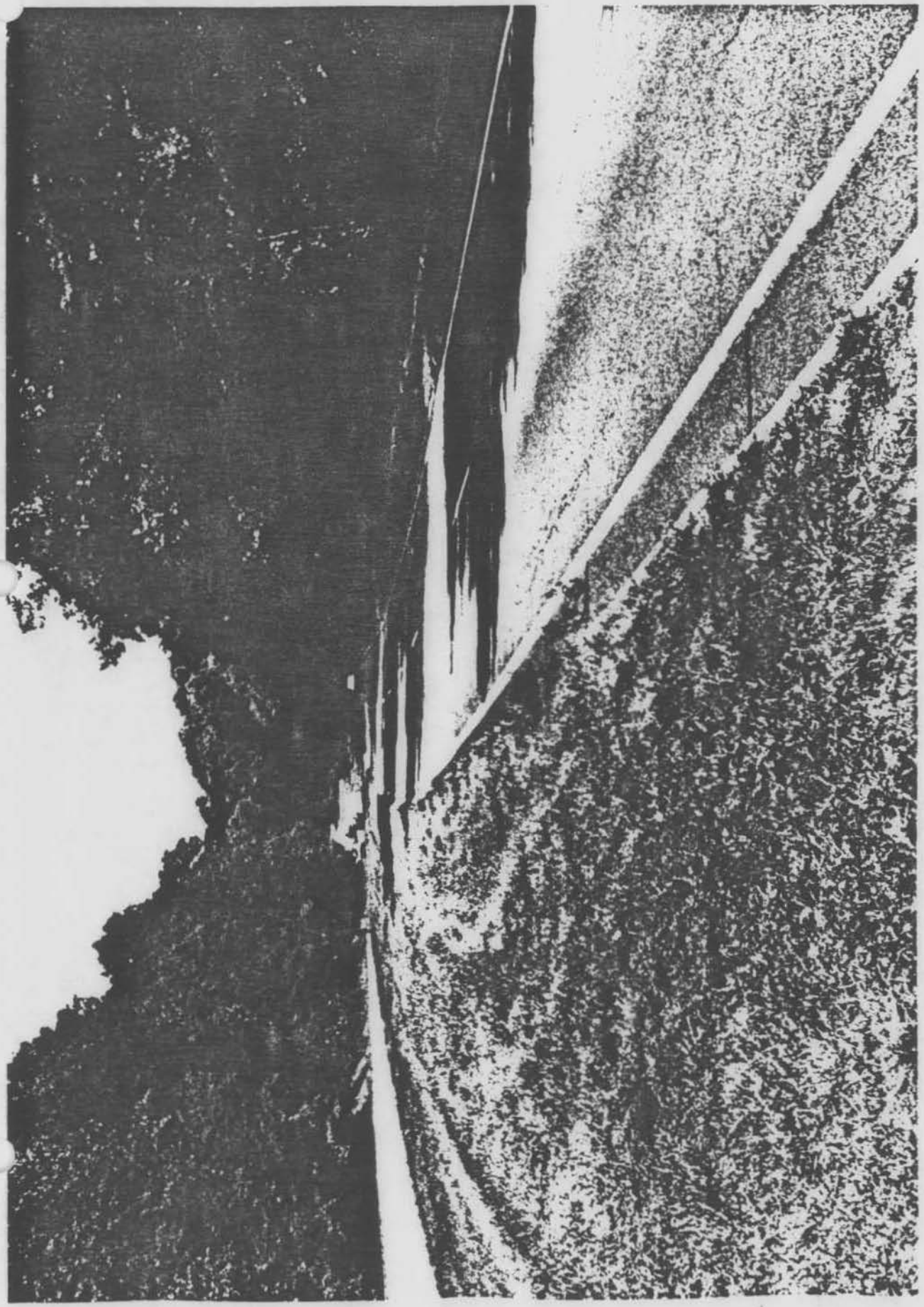

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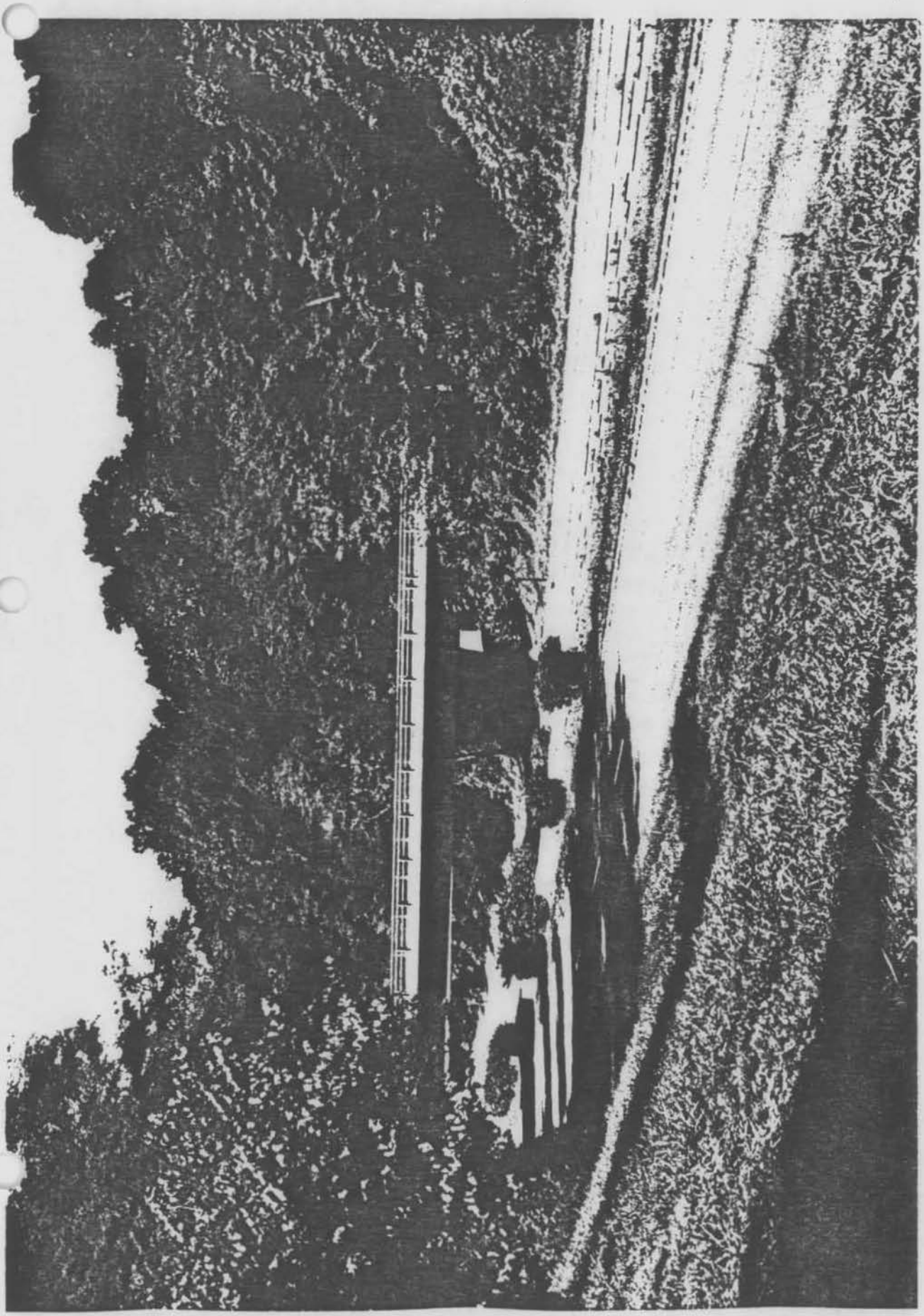

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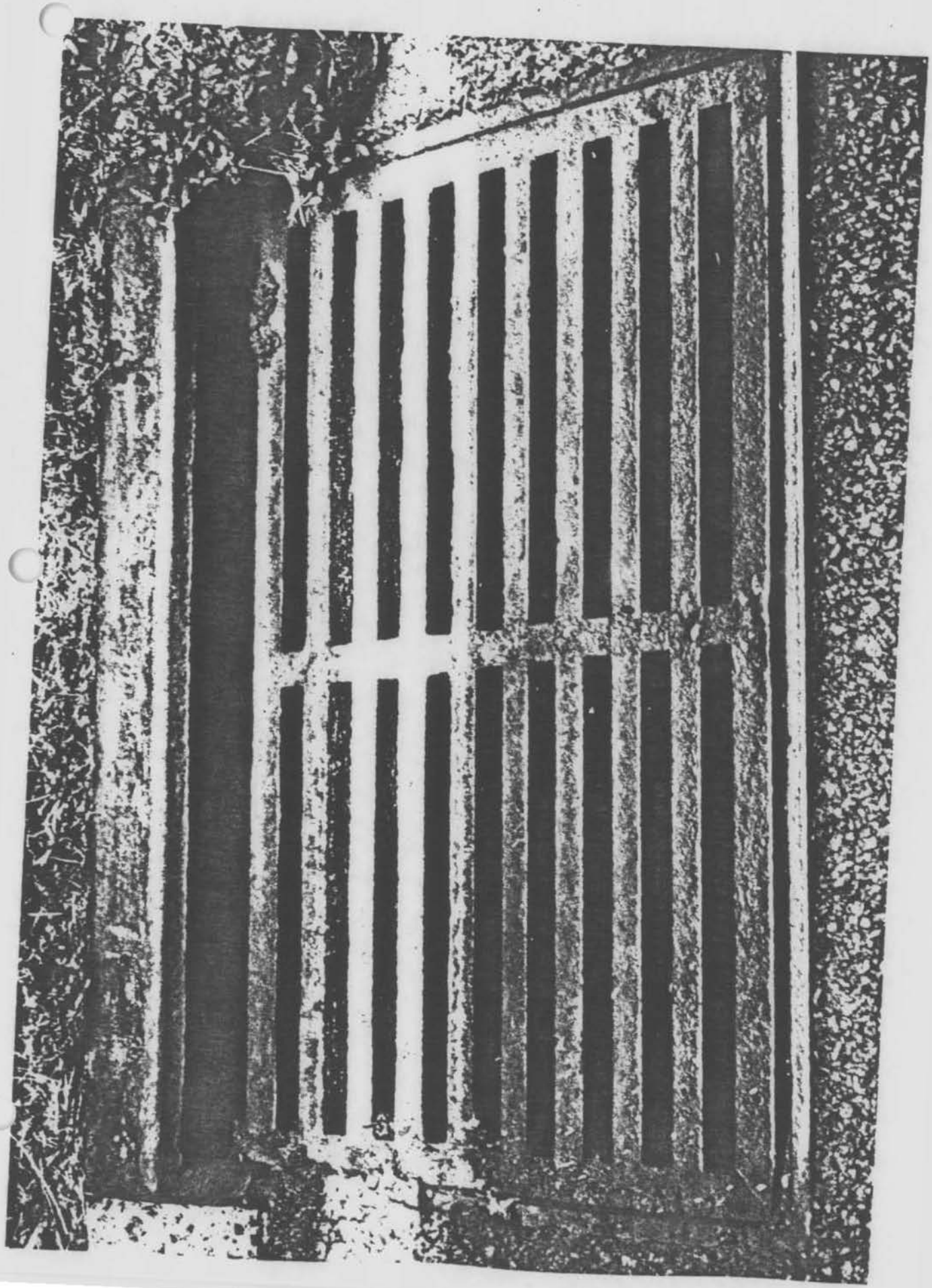

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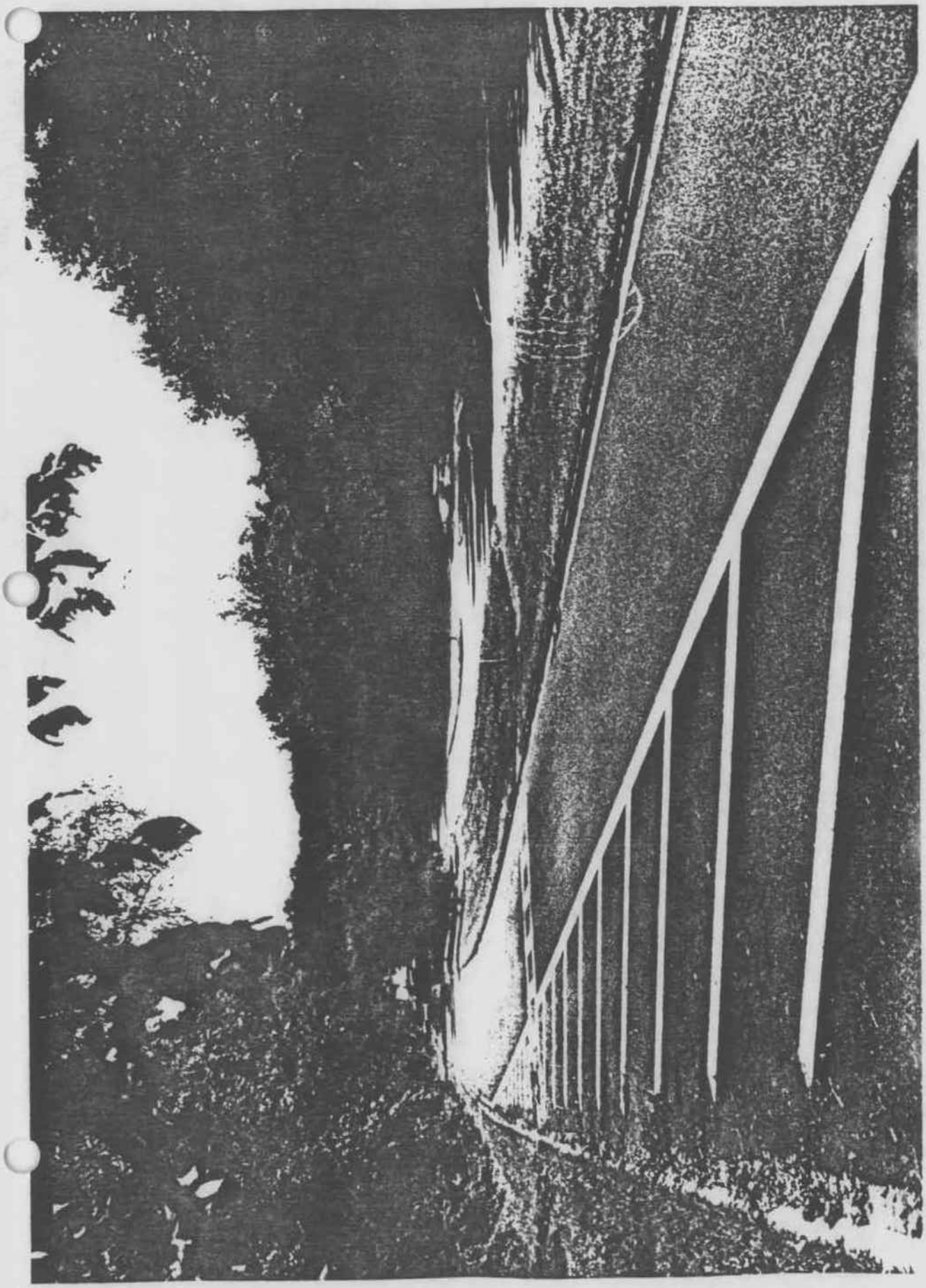

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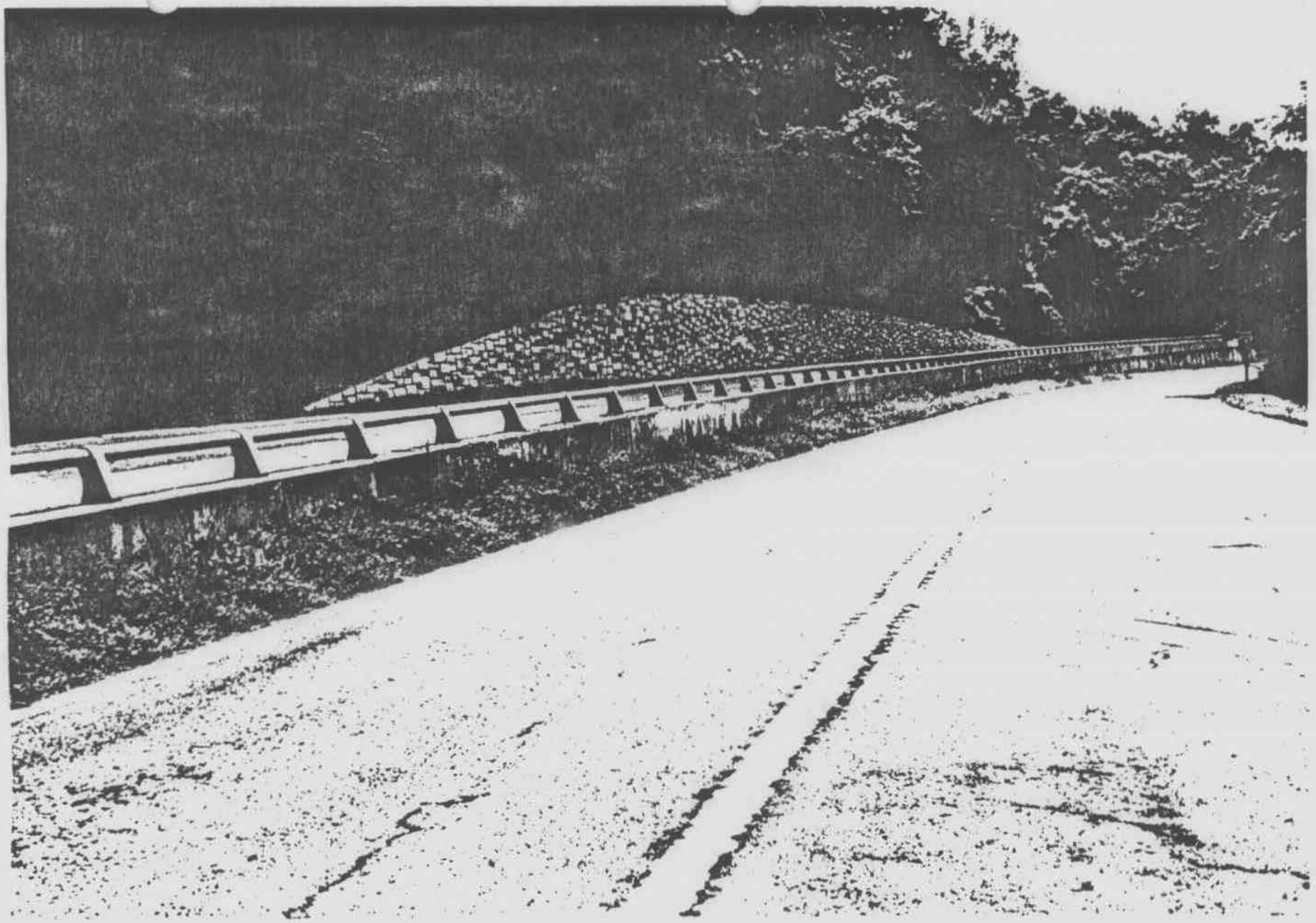

M-35-61

2 Chava Barton Parkway

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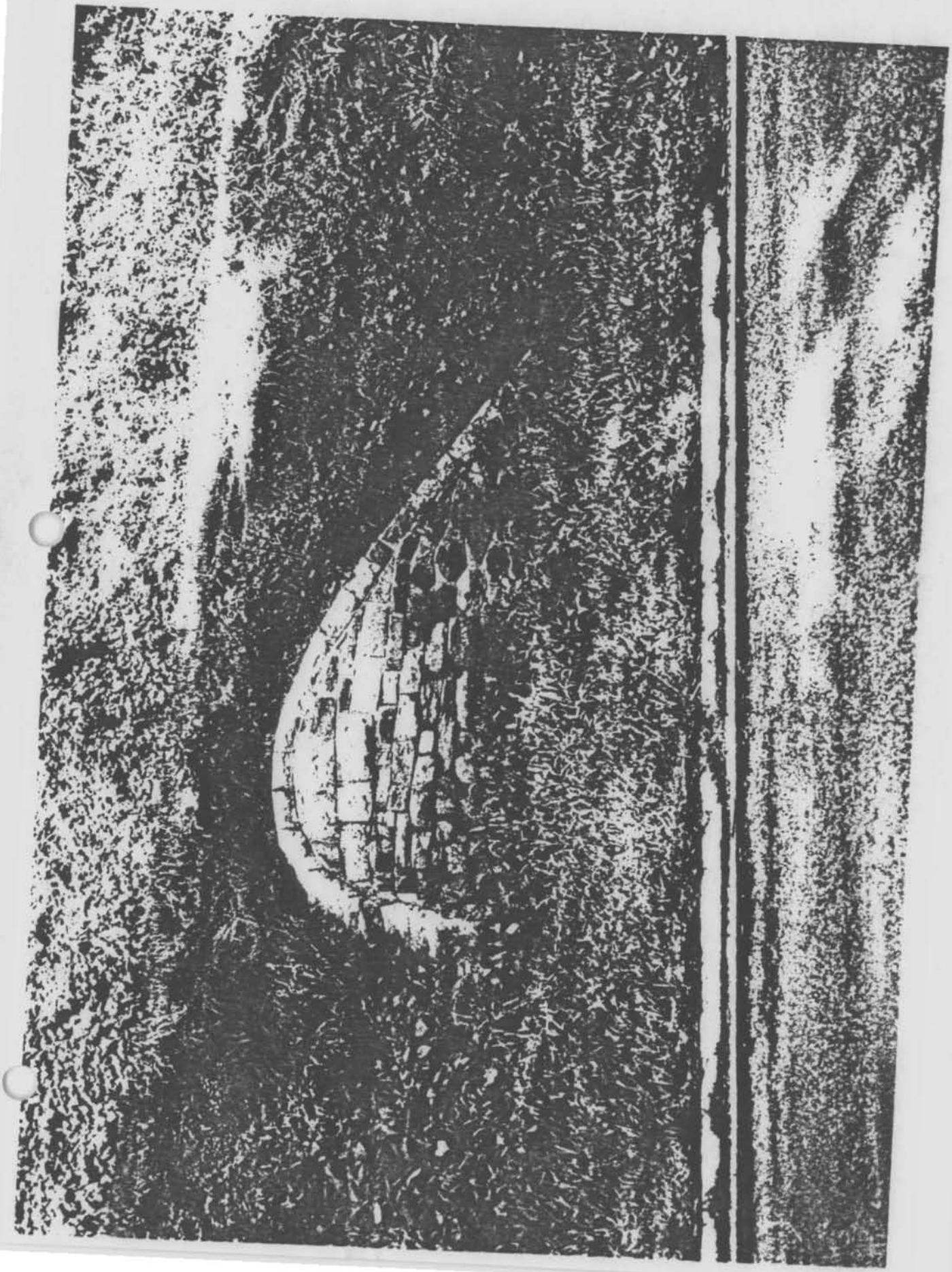

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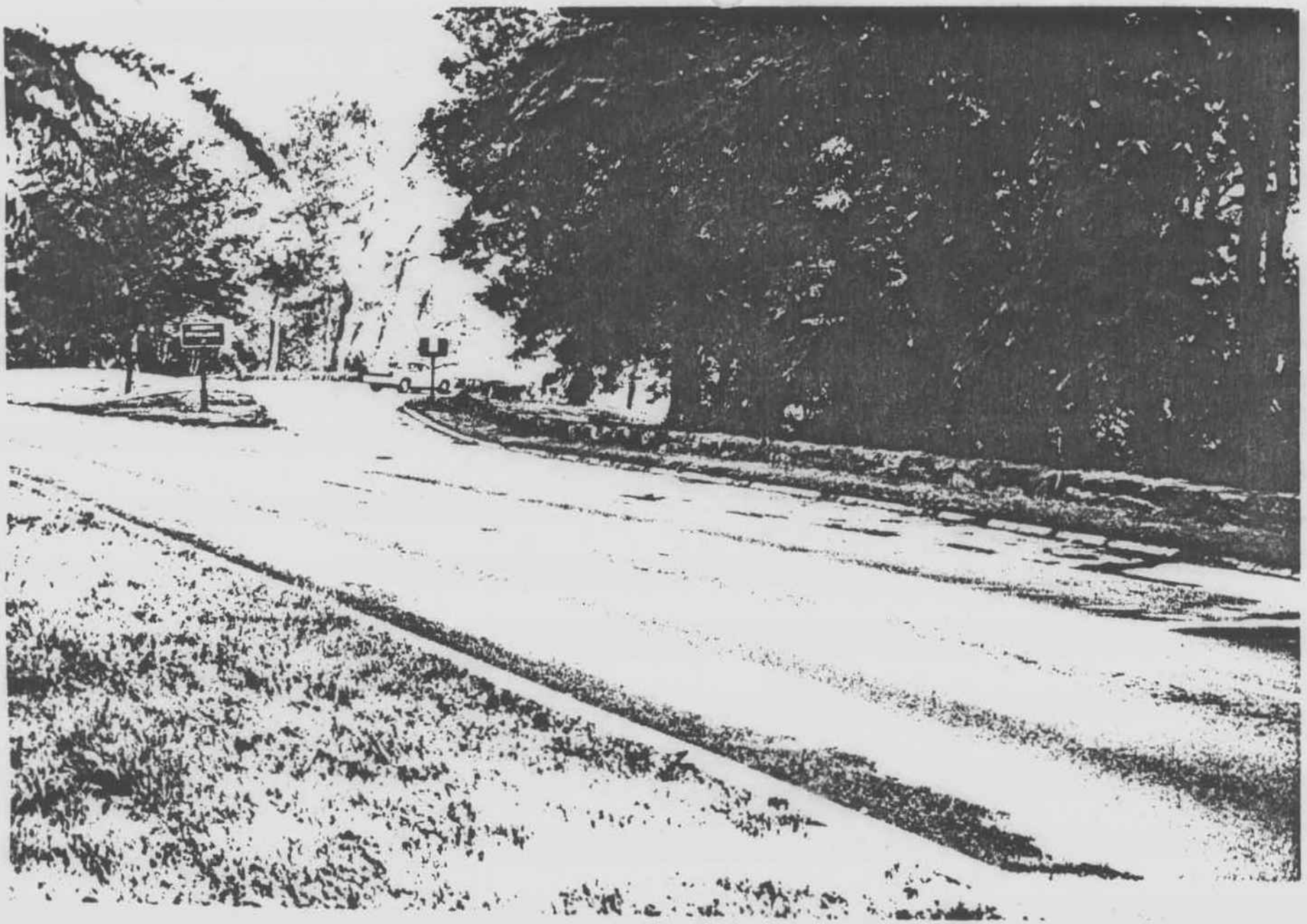

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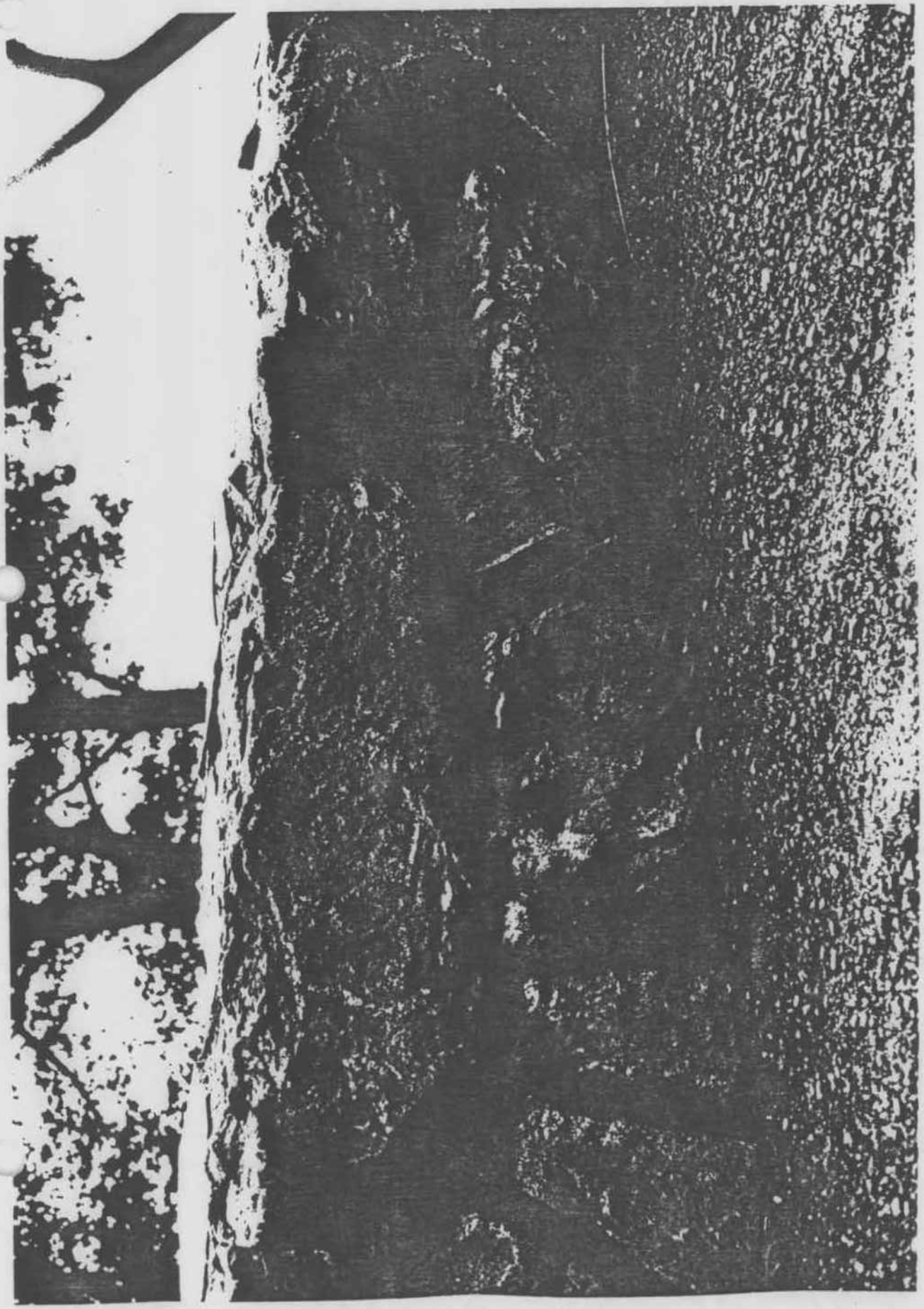

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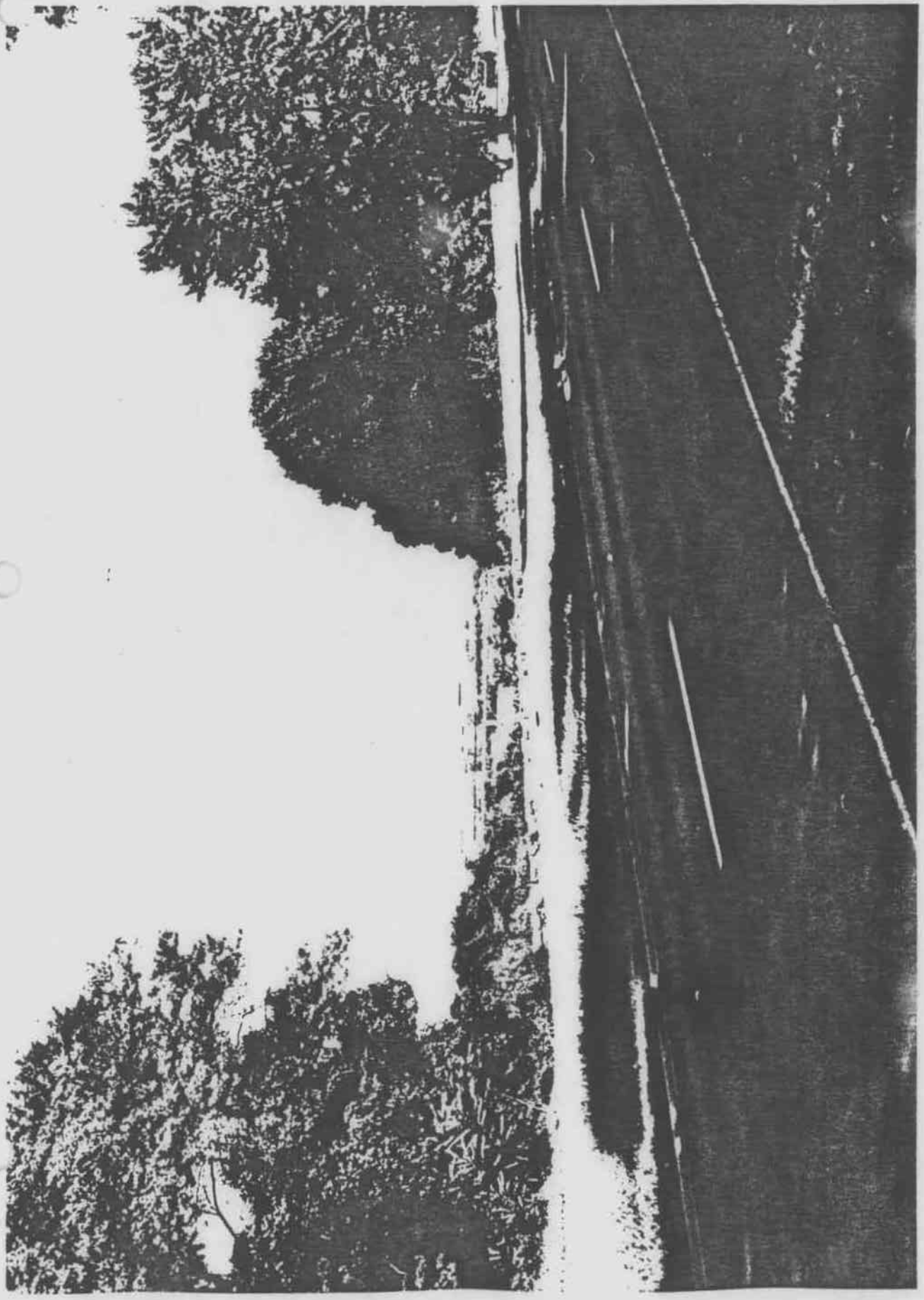

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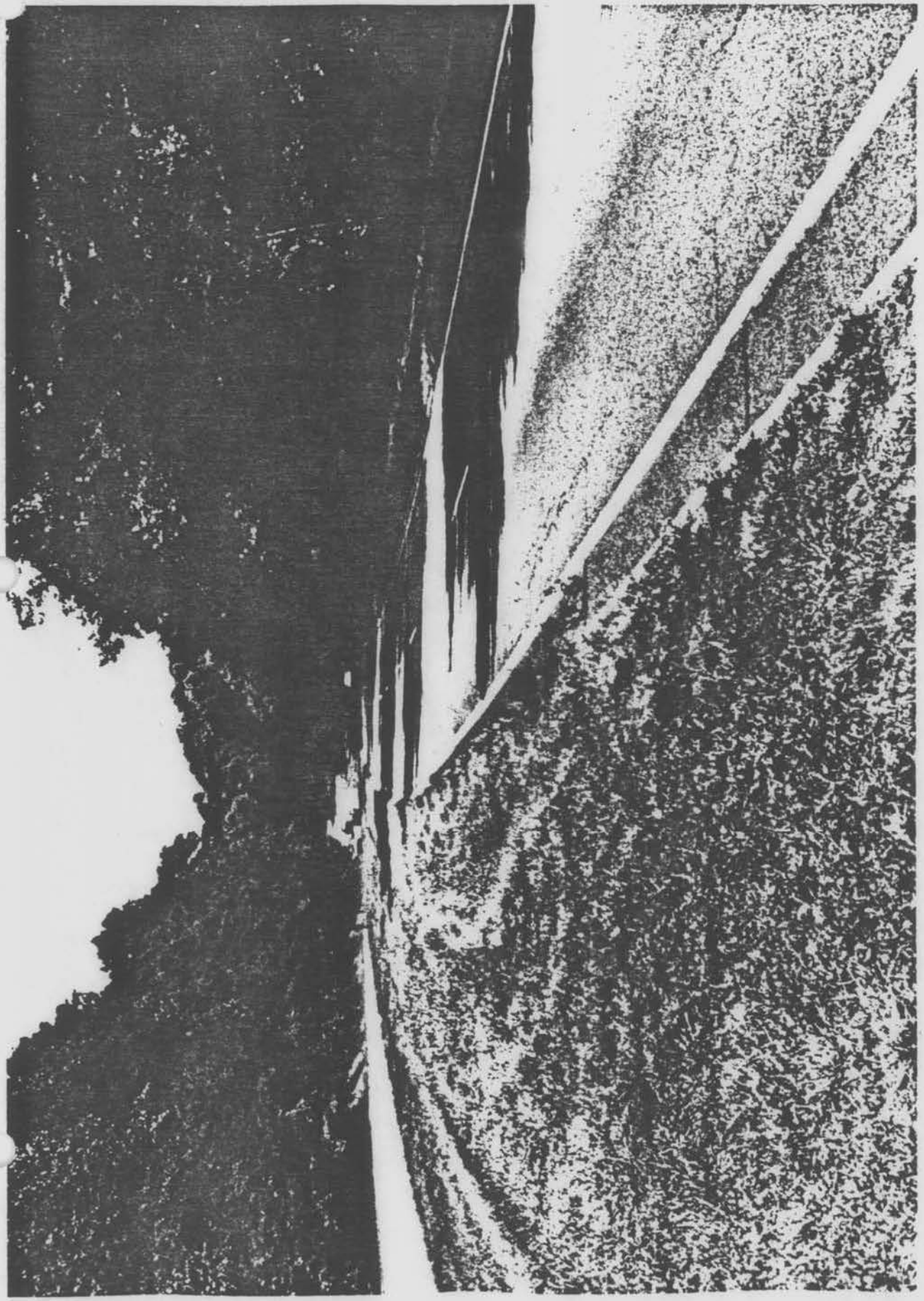

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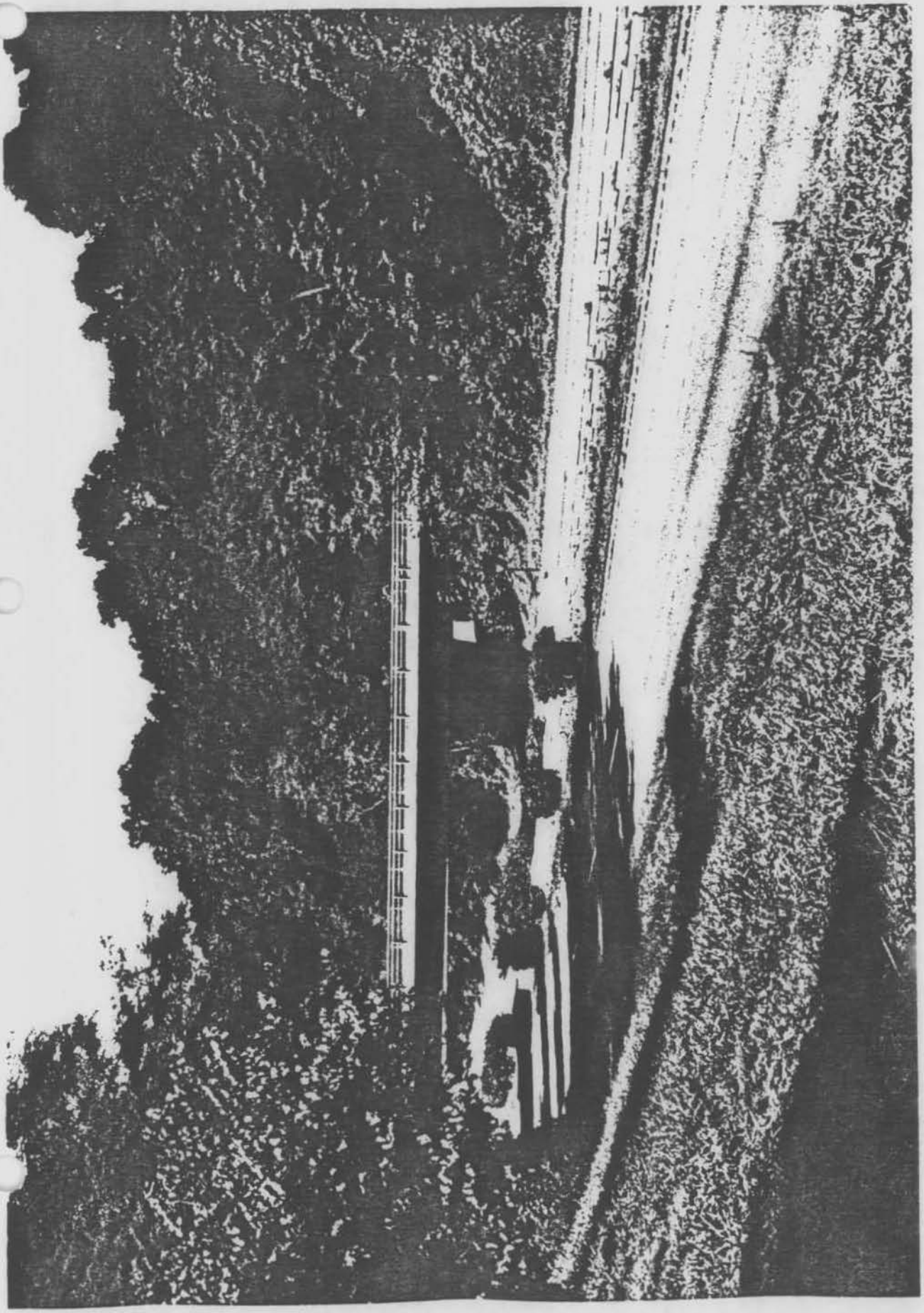

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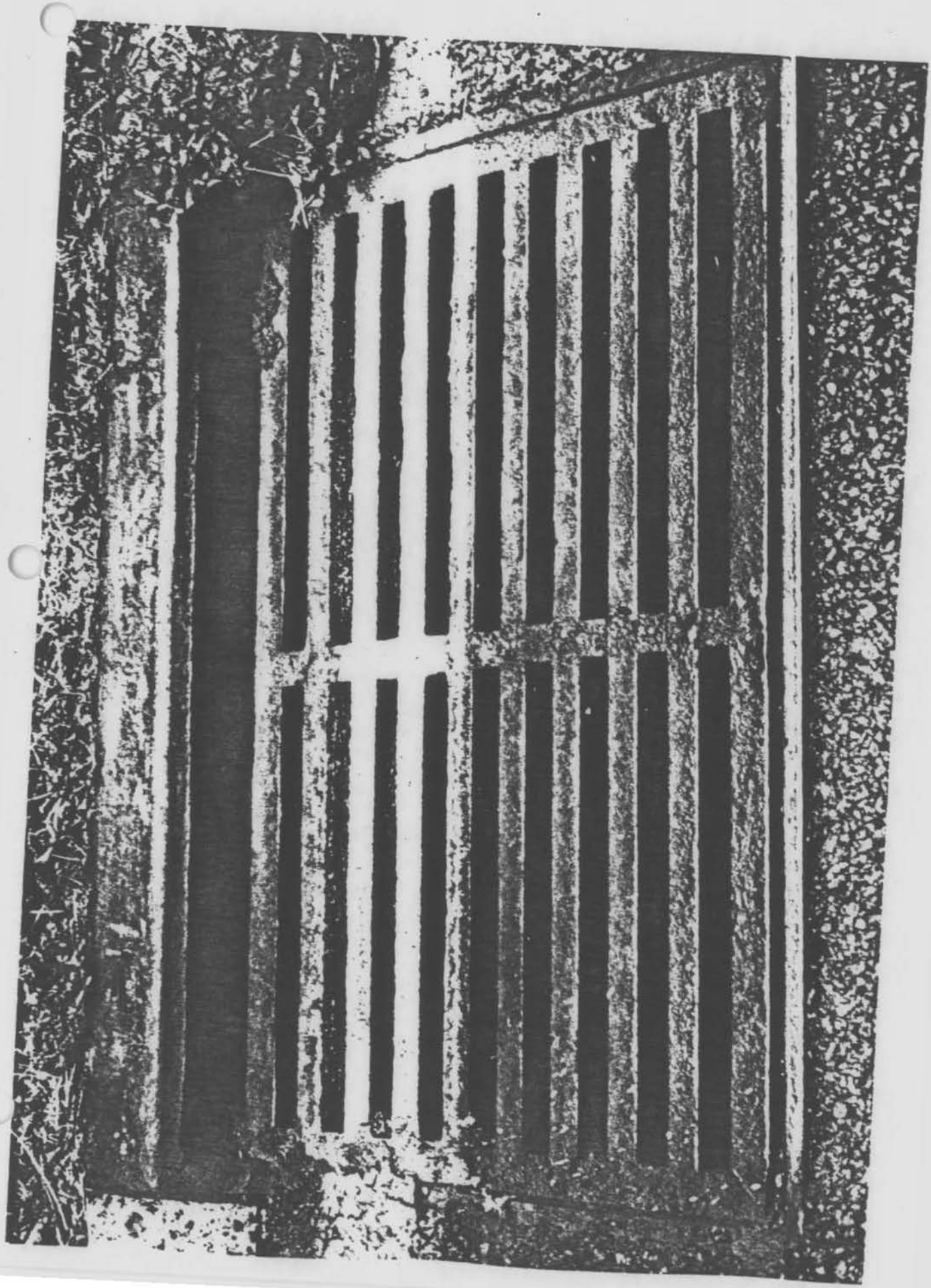

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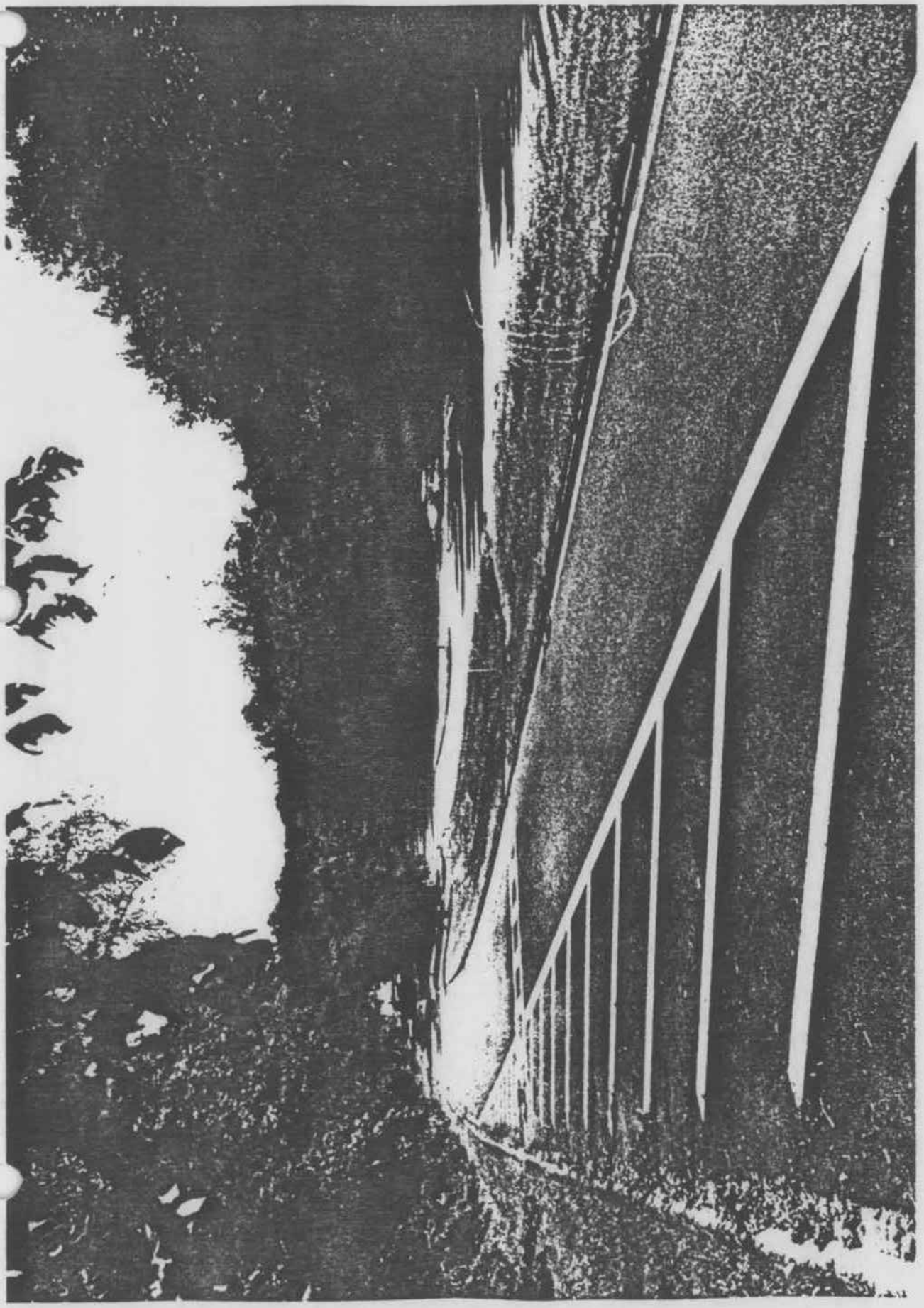
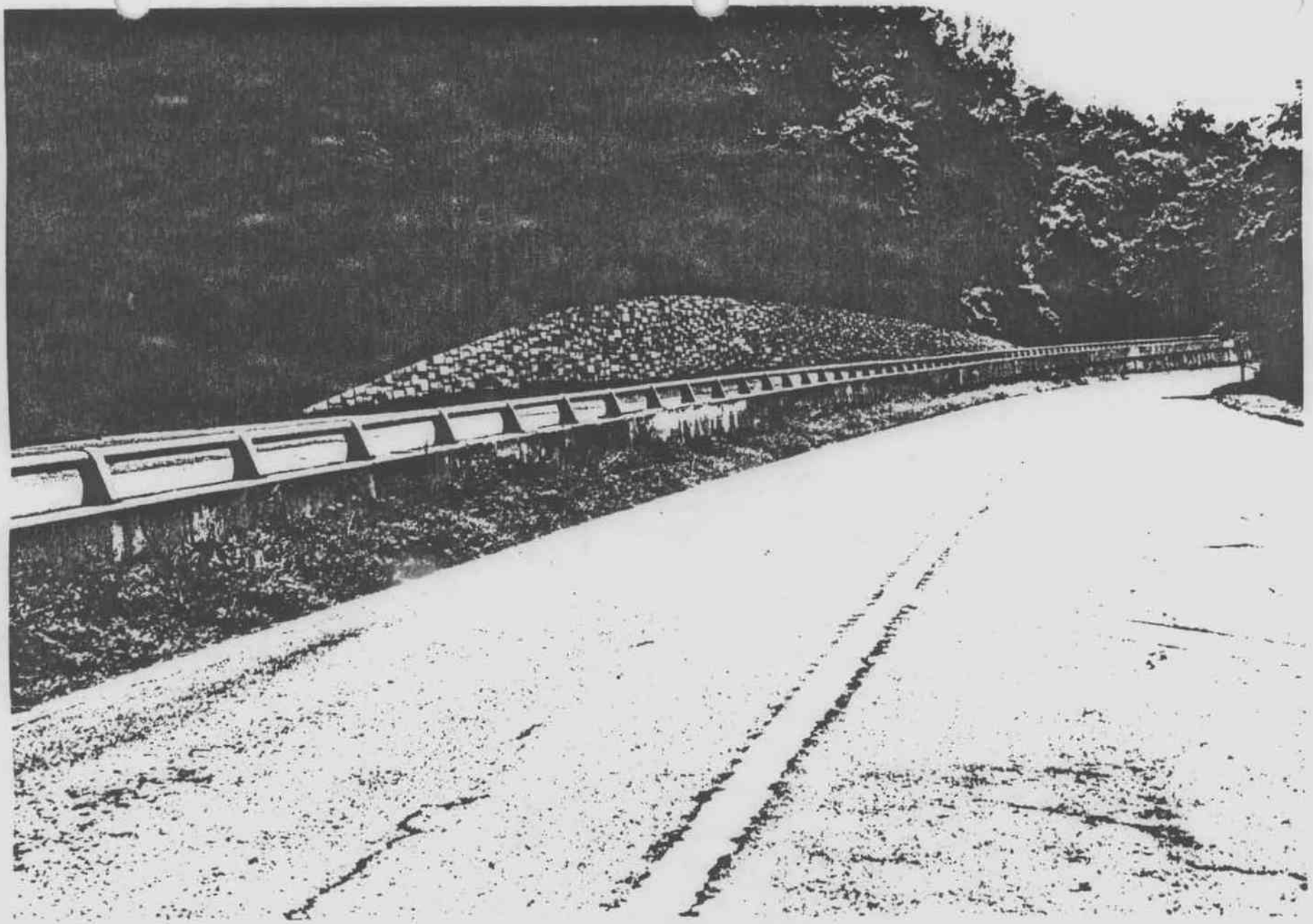


1 Clara Barton Parkway



M-35-61

2 Clara Barton Parkway

MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM

Property Name: Gibson Grove A.M.E. Zion Church Inventory Number: M:29-39

Address: 7700 Seven Locks Road, Bethesda, Montgomery County, Maryland 20817-4572

Owner: Snowden Dove Trustees

Tax Parcel Number: P361 Tax Map Number: GN122

Project: I-495/I-95 Capital Beltway Corridor Transportation Improvement Study Agency: State Highway Administration

Site visit by: _____ Staff: ☐ No ☐ Yes Name: _____ Date: _____

Eligibility recommended: X Eligibility not recommended: _____

Criteria: ☒ A ☐ B ☐ C ☐ D Considerations: ☒A ☐B ☐C ☐D ☐E ☐F ☐G ☐ None

Is property located within a historic district? ☒No ☐Yes Name of District: _____

Is district listed? ☐No ☐Yes

Documentation on the property/district is presented in: I-495/I-95 Capital Beltway Corridor Transportation Improvement Study Historic Resources Survey and Determination of Eligibility Report

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*:

The Gibson Grove A.M.E. Zion Church was previously surveyed by Michael Dwyer of the M-NCPPC in 1975 and Robert Rivers of the M-NCPPC in 1992. The church is a small, wood-frame structure set on a hill overlooking Seven Locks Road, immediately north of the beltway. An excellent example of early 20th-century vernacular ecclesiastical design, it includes an entry vestibule, the sanctuary, and a small side and rear 1970s addition that houses the pastor's office, restrooms, and a kitchen/dining/meeting room.

Gibson Grove A.M.E. Zion Church is eligible for the National Register of Historic Places under Criterion A and Criteria Exception A. The church derives its significance from its association with the African American settlement of Gibson Grove that was founded in the 1880s by former slaves. The original church was a log structure that was replaced with the current edifice in 1923. It is the only remaining structure associated with the African-American Gibson Grove community, and as such it qualifies for listing in the National Register under Criterion A and Criterion Consideration A. It retains integrity of location, design, setting, feeling, and association. The property was listed in the Montgomery County Master Plan for Historic Preservation in 1993. The property is not eligible under Criterion B as historic research indicates that the property has no association with persons who have made specific contributions to history. Finally, investigations have not been conducted to determine whether the property has the potential to yield information important in history or pre-history, therefore, National Register Criterion D can not be assessed at this time.

Prepared by: Julianne Mueller, KCI Technologies, Inc., January 2000

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended: XX Eligibility not recommended:

Criteria: ☒ A ☐ B ☐ C ☒ D Considerations: ☒A ☐B ☐C ☐D ☐E ☐F ☐G ☐ None

Comments: _____

Reviewer, Office of Preservation Services 9/11/00 Date

Reviewer, NR Programs 10/12/00 Date

MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM

Property Name: Gibson Grove A.M.E. Zion Church Inventory Number: M:29-39

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: Building

Historic Environment: Rural

Historic Function(s) and Use(s): Religious

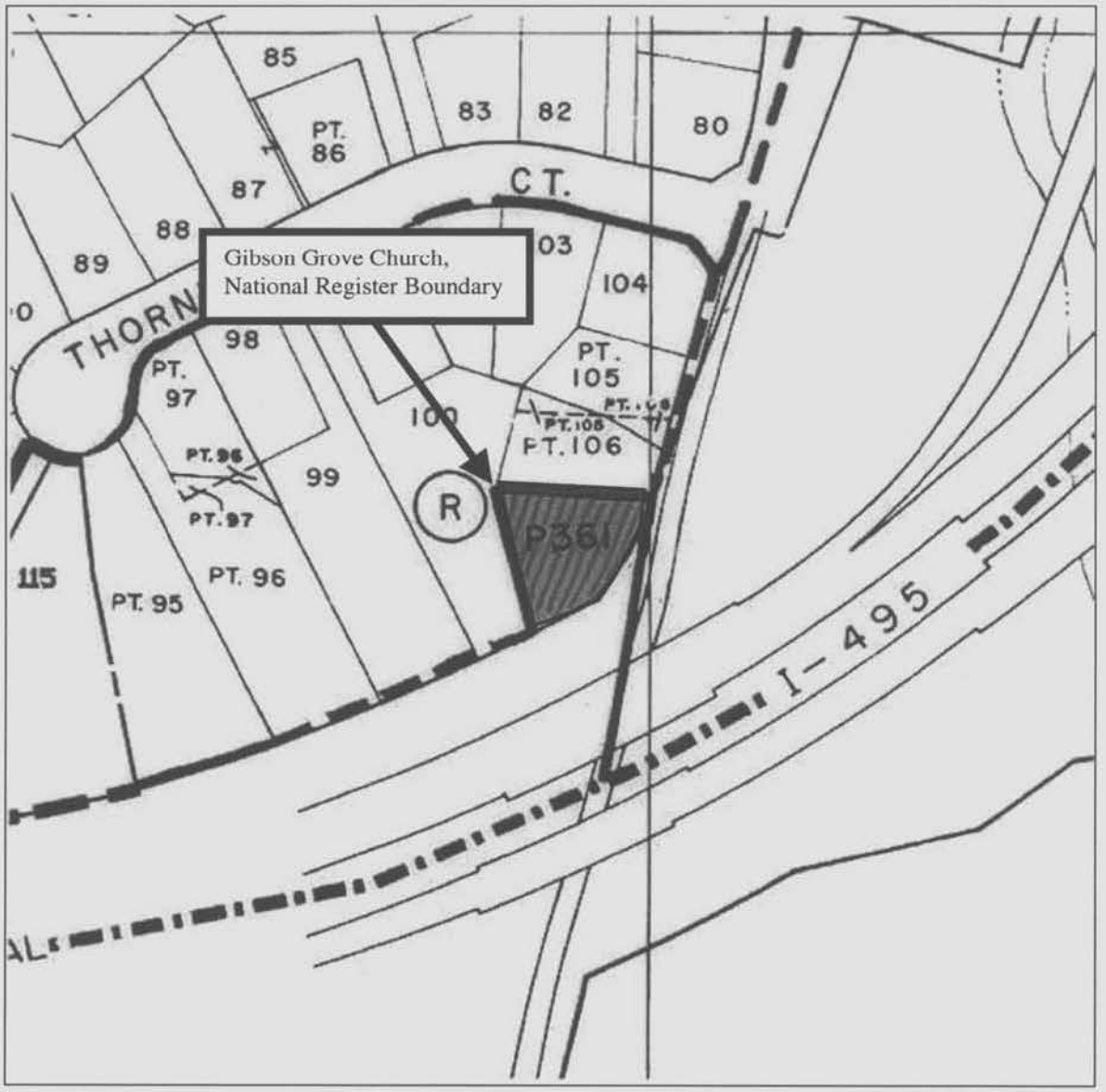
Known Design Source: None

MARYLAND HISTORICAL TRUST
NR-ELIGIBILITY REVIEW FORM

Property Name: Gibson Grove A.M.E. Zion Church Inventory Number: M:29-39

National Register Boundary Map:

Montgomery County Tax Map GN122, Parcel P361



Survey No. M:29/39

MARYLAND INVENTOR. OF HISTORIC PROPERTIES

Magi No.

DOE __yes __no

Maryland Historical Trust
State Historic Sites Inventory Form

1. Name (indicate preferred name)

historic Gibson Grove A.M.E. Zion Church

and/or common

2. Location

street & number 7700 Seven Locks Road ___ not for publication

city, town Cabin John ___ vicinity of **congressional district** 10

state MD **county** Montgomery

3. Classification

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

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

name Gibson Grove A.M.E. Zion Church

street & number 7700 Seven Locks Road telephone no.:

city, town Cabin John state and zip code MD 20731

5. Location of Legal Description

courthouse, registry of deeds, etc. Montgomery County Courthouse liber

street & number 51 Monroe Street folio

city, town Rockville **state** MD

6. Representation in Existing Historical Surveys

title Locational Atlas and Index of Historic Sites in Montgomery County Maryland

date ___ federal ___ state X county ___ local

depository for survey records Zm Montgomery County Historic Preservation Commission

city, town Silver Spring **state** MD

7. Description

Survey No. M:29/39

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.

The Gibson Grove A.M.E. Zion Church is located atop a hill overlooking Seven Locks Road, approximately 1/2 mile south of River Road. The church is immediately north of the Route 495 overpass.

The Gibson Grove church is an extremely good example of early twentieth century vernacular church architecture. Its design is quite simple: a one-room, gabel-roofed main block with a small gabeled entry vestibule on its east facade. A small belfry with a shallow hip roof is located on the south slope of the roof. It is a frame structure, clad in asbestos shingles, and sits atop a concrete block foundation. The roof is covered in asphalt shingles.

Aside from a cross at the peak of the roof, and panelled doors and a moulded lintel on the main entry, the church has no ornamentation. All windows are 6/6 double-hung sash, with the lone exception of the six-pane, single fixed sash window in the front gable end, above the entry vestibule. An exterior brick chimney is located on the north elevation.

A 1978-9 addition is located on the south side of the original building. This one-story, concrete block structure houses a kitchen, dining and closet space, a furnace room and a pastor's study. A deck and a wooden shed are located to the rear of the church.

8. Significance

Period	Areas of Significance—Check and justify below			
___ prehistoric	___ archeology-prehistoric	___ community planning	___ landscape architecture	X religion
___ 1400–1499	___ archeology-historic	___ conservation	___ law	___ science
___ 1500–1599	___ agriculture	___ economics	___ literature	___ sculpture
___ 1600–1699	X 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 1923 **Builder/Architect** UNKNOWN

check: Applicable Criteria: XA __B XC __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 Gibson Grove A.M.E. Zion Church is significant due to its association with the early black settlement of Gibson Grove. The church, which was built in 1923, is the second church used by its congregation, which was organized in 1898. Architecturally, the church retains much of its original character, and is a good example of early twentieth century vernacular church architecture.

History and Support.

The Gibson Grove A.M.E. Zion Church was first organized by ex-slaves in 1898. The Gibson Grove community, with which the church was associated, grew out of land sales in the 1880s to black farm workers in the area. Much of the surrounding area prior to this time was owned by J.D.W. Moore and called "Glen More." Moore's daughter, Lilly Stone, was the founder of the Montgomery County Historical Society and an early owner of the Stoneyhurst Quarries. Around 1885, Moore sold a number of five-acre lots to the families which had worked his farm. Some of the families included in these early sales were the Scotts, the Carters and the Jacksons. The community that developed between these families came to be known as Gibson Grove.

The name of the community came from another early resident, Sarah Gibson. Sarah Gibson was an extremely religious woman who felt that blacks should have the opportunity to worship and be educated near their homes. With that in mind, she donated a portion of her property to establish the Gibson Grove Church in a log cabin, located immediately south of its present location. Gibson also built a one-room school house next to the church, for local black children. Eventually, this school was turned over to the school commissioners of Montgomery County and relocated.

(Continued)

The present church was built in 1923 by the Gibson Grove congregation, under the direction of Rev. N.G. Stevenson, to replace the original log building. The new church, though still modest, was larger than its predecessor. Its design follows a "one room with tower" formula, similar to many vernacular churches of the time. This arrangement was most commonly found in rural areas of the east coast. In this case, the main, one-room block is topped with a gabled roof and features a gabeled vestibule as its main entry. A small belfry is located on the south slope of the roof.

The church has been altered over the years. The original siding has been replaced with asbestos shingles and the roof has been clad with asphalt shingles. In 1978-9, a one-story annex was built on the southwest side of the church to incorporate a kitchen and dining room, a pastor's study, closet space and a furnace room. A deck an wooden shed are located to the rear of the church.

9. Major Bibliographical References

Survey No. M:29/39

See attached sheet

10. Geographical Data

Acreage of nominated property _____

Quadrangle name Falls Church, VA-MD **Quadrangle scale** 1:24000

UTM **References** do NOT complete UTM references

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

Verbal boundary description and justification

Montgomery County Tax Map GN122, Parcel P361

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 Robert D. Rivers, Historic Preservation Planner

organization M-NCPPC **date** July, 1992

street & number 8787 Georgia Avenue **telephone** 301-495-4570

city or town Silver Spring **state** MD

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

MARYLAND HISTORICAL TRUST
DHCP/DHCD
100 COMMUNITY PLACE
CROWNSVILLE, MD 21032-2023
514-7600

PS-2746

1. Clarke, Nina Honemond, History of the Nineteenth-Century Black Churches in Maryland and Washington, D.C., Vantage Press, 1983.

2. Dwyer, Michael F., Maryland Historical Trust Historic Sites Survey Form - "#M:29-39, Gibson Grove A.M.E. Zion Church," 1975.

3. Robinson & Associates, Locational Atlas Historical Survey of 400 Resources Survey Form - "Gibson Grove A.M.E. Zion Church," 1989.

4. Greenhorne & O'Mara, Inc., "Early Twentieth Century Ecclesiastical Resources in Montgomery County," 1990.

Continuation Sheet
M: 29-39 - Gibson Grove A.M.E. Zion Church

HISTORIC CONTEXT

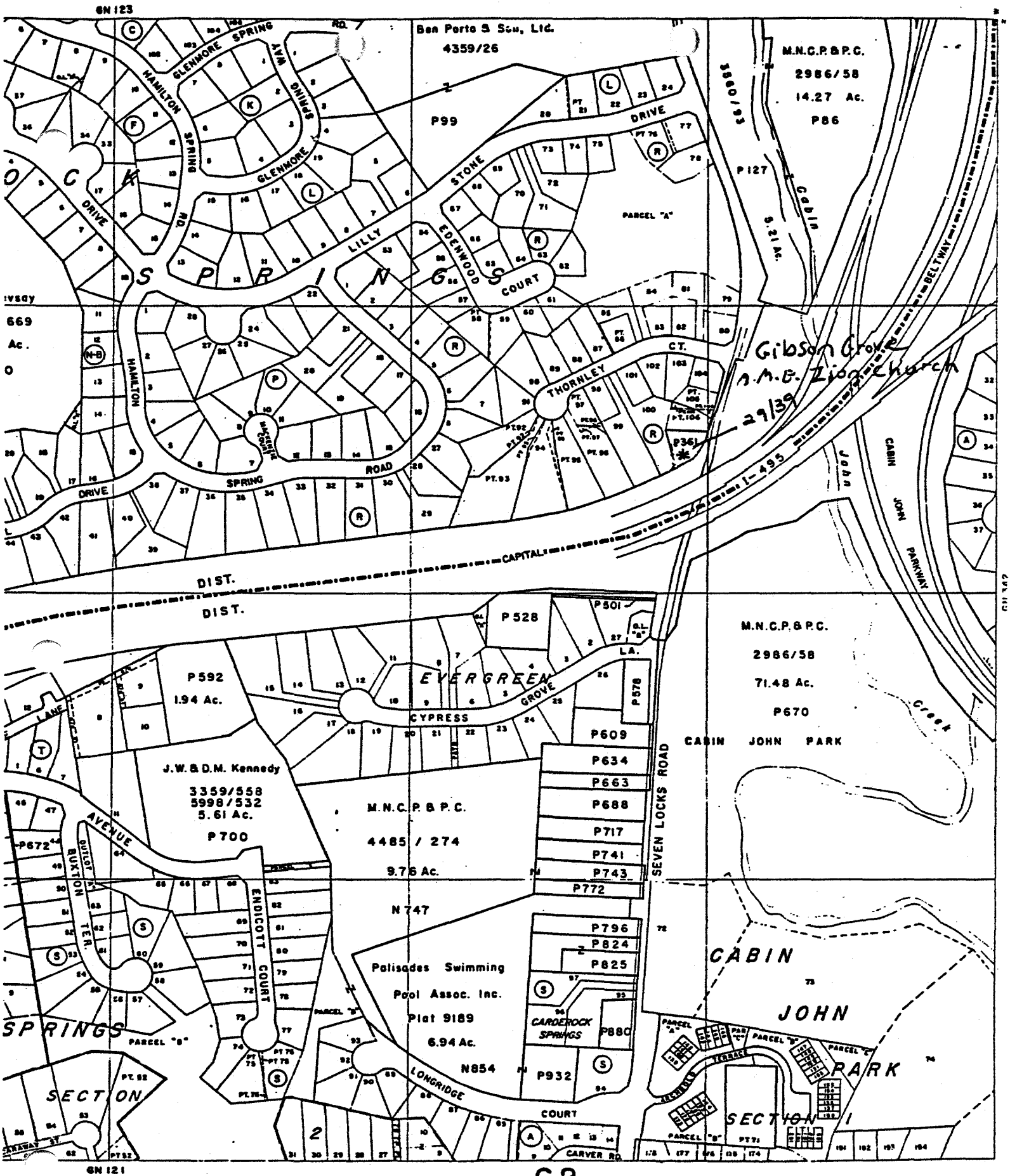
MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA

Geographical Organization:
3) Piedmont

Chronological/Developmental Period:
11) Industrial/Urban Dominance

Historic Period Themes:
2) Architecture, Landscape Architecture and Community Planning
6) Religion
7) Social/Education/Cultural

Resource Type:
Category: Building
Historic Environment: Village
Historic Functions and Uses: Church
Known Design Source: None



NORTH

DIST.	CURRENT TO
7	7-1-88
10	7-1-88

SCALE 1" = 200'

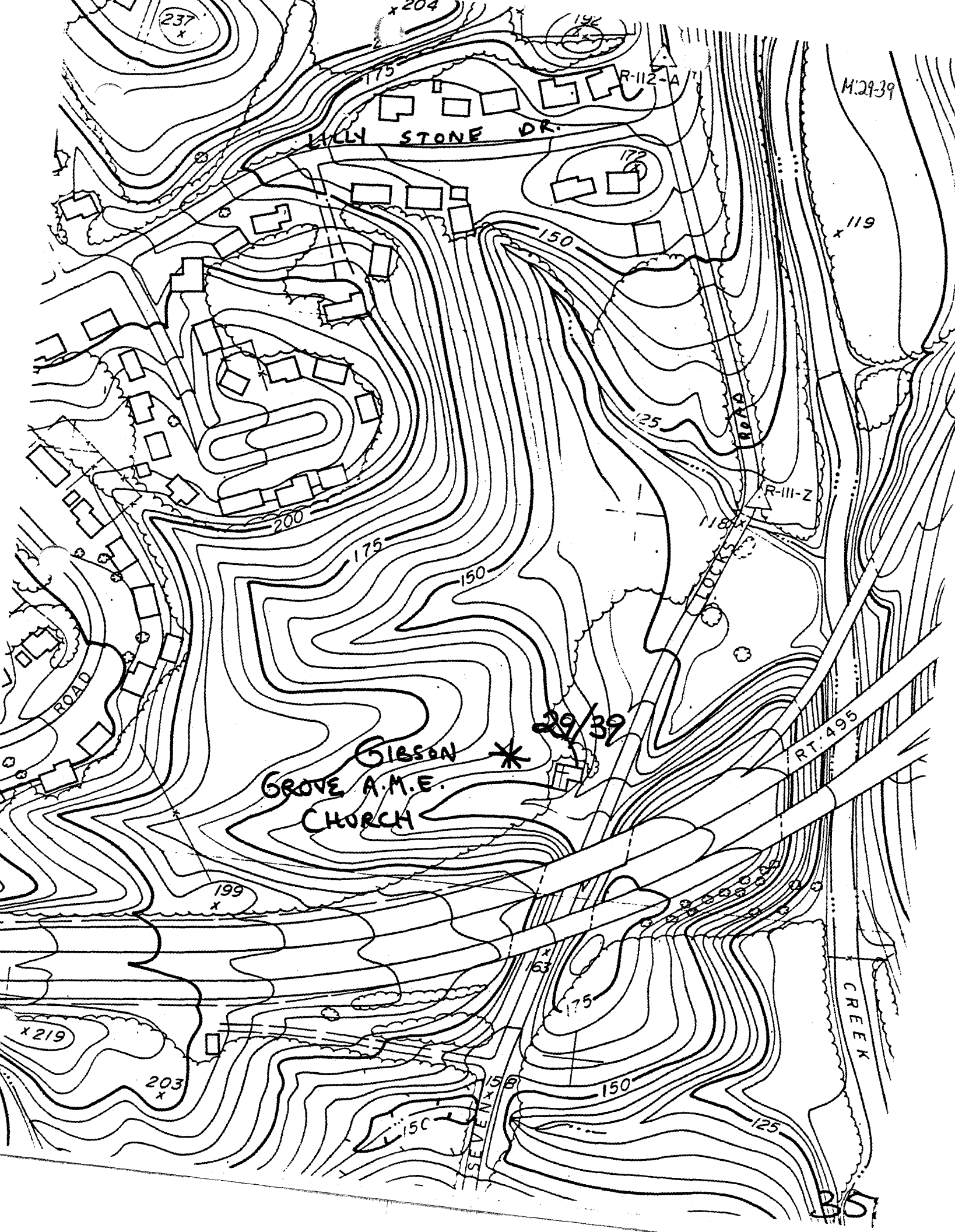
200 0 200 400 600

Map GN 122

W.S.S.C. 209 NW 8

Location: CARDEROCK SPRINGS

M:29-39

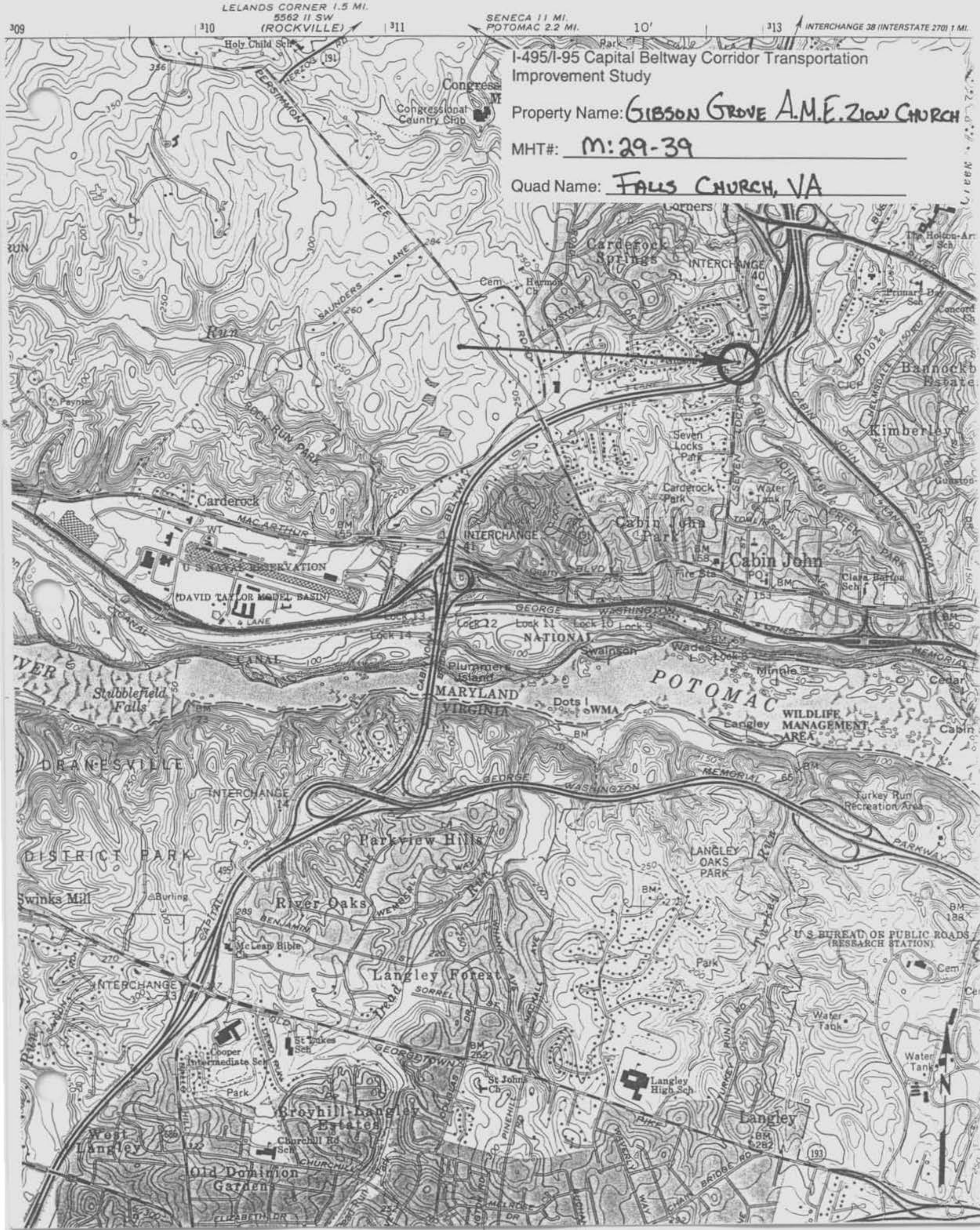

M:29-39
HALLY STONE DR.
R-112-A
R-111-Z
GIBSON GROVE A.M.E. CHURCH
29/39
RT. 495
ROAD
CREEK
237
204
192
175
172
119
150
125
200
118
199
163
219
203
158
B5

I-495/I-95 Capital Beltway Corridor Transportation Improvement Study

Property Name: GIBSON GROVE A.M.E. ZION CHURCH

MHT#: M: 29-39

Quad Name: FALLS CHURCH, VA


LELANDS CORNER 1.5 MI.
5562 II SW
(ROCKVILLE)
SENECA 11 MI.
POTOMAC 2.2 MI.
INTERCHANGE 38 (INTERSTATE 270) 1 MI.
Holy Child Sch
Congressional Country Club
Carderock Springs
INTERCHANGE 40
Cem
Hermon Ch
SAUNDERS LANE
Seven Locks Park
Carderock Park
Cabin John Park
Cabin John
Carderock
MACARTHUR
U S NAVAL RESERVATION
(DAVID TAYLOR MODEL BASIN)
INTERCHANGE 41
BELTWAY
GEORGE WASHINGTON
NATIONAL
CANAL
Plummers Island
MARYLAND
VIRGINIA
POTOMAC
WILDLIFE MANAGEMENT AREA
Stubblefield Falls
DRANESVILLE
DISTRICT PARK
INTERCHANGE 14
MEMORIAL
PARKWAY
Turkey Run Recreation Area
Parkview Hills
LANGLEY OAKS PARK
River Oaks
Swinks Mill
McLean Bible
INTERCHANGE 13
Langley Forest
U S BUREAU OF PUBLIC ROADS (RESEARCH STATION)
Cooper Intermediate Sch
St Lukes Sch
St Johns Ch
Langley High Sch
Langley
Broyhill-Langley Estates
West Langley
Churchill Rd Sch
Old Dominion Gardens
Clara Barton Sch
Kimberley
Bannockburn Estates

1. M: 29-39
2. GIBSON GROVE A.M.E. ZION CHURCH
3. MONTGOMERY COUNTY, MD
4. JULIE MUELLER
5. 12/99
6. MD SHPO
7. 7700 SEVEN LOCKS ROAD
8. 1 OF 10


Glasse Grove A.M.E. Zion Church

1. M-NCPPC
2. GIBSON GROVE A.M.E. ZION CHURCH
3. MONTGOMERY COUNTY, MD
4. JULIE MUELLER
5. 12/99
6. MDSHPO
7. 7700 SEVEN LOCKS RD, VIEW W, FRONT ELEVATION
8. 2 OF 10

1. MP 29.39
2. GIBSON GROVE A.M.E. ZION CHURCH
3. MONTGOMERY COUNTY, MD
4. JULIE MUELLER
5. 12/99
6. MD SHPO
7. 7700 SEVEN LOCKS RD, VIENNA VA
8. 3 OF 10

1. M 29-39
2. GIBSON GROVE A.M.E. ZION CHURCH
3. MONTGOMERY COUNTY, MD
4. JULIE NUELLER
5. 12/99
6. MD SHPO
7. 7700 SEVEN LOCKS RD, VIEW SE, ADDITION
8. 4 OF 10

1. M:29-39
2. GIBSON GROVE A.M.E. ZION CHURCH
3. MONTGOMERY COUNTY, MD
4. JULIE MUELLER
5. 12/99
6. MD SHPO
7. 7100 SEVEN LOCKS RD, VIEW E, REAR ELEVATION
8. 5 OF 10

1. MI 31-39
2. GIBSON GROVE A.ME. ZION CHURCH
3. MONTGOMERY COUNTY, MD
4. JULIE MUELLER
5. 12/99
6. MD SHPO
7. 7700 SEVEN LOCKS RD. VIEW SE, OUTBUILDING
8. 6 OF 10

1 MI: 29-39
2. GIBSON GROVE A.M.E ZION CHURCH
3. PRINCE GEORGES COUNTY, MD
4. JULIE MUELLER
5. 12/99
6 MD SHPO
7 7700 SEVEN LOCKS RD.
8 7 OF 10

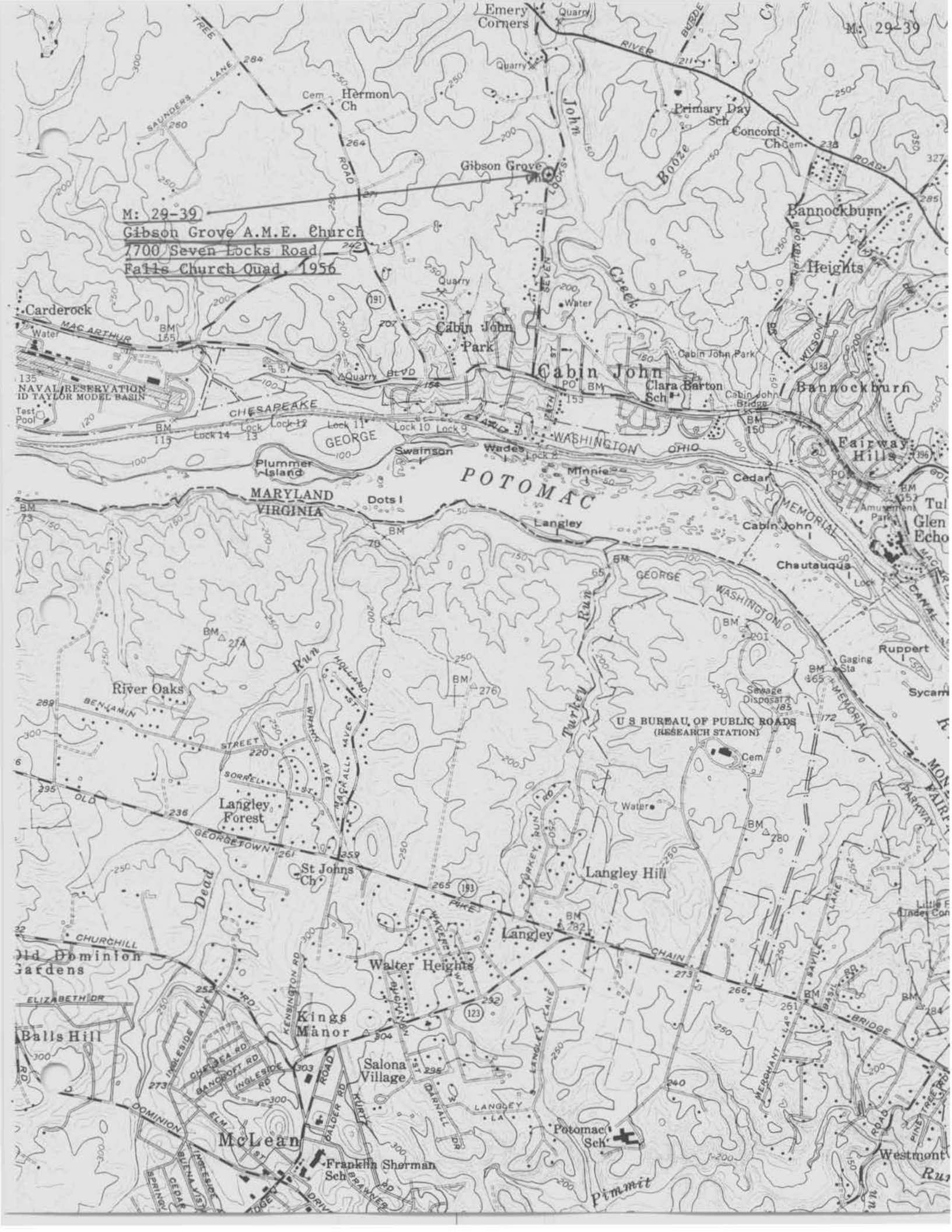
1. M: 29-39
2. GIBSON GROVE A.M.E. ZION CHURCH
3. PRINCE GEORGES COUNTY, MD
4. JULIE MUELLER
5. 12/99
6. MD SHPO
7. 7700 SEVEN LOCKS RD.
8. 8 OF 10

1. M: 29-39
2. GIBSON GROVE A.M.E. ZION CHURCH
3. PRINCE GEORGE'S COUNTY, MD
4. JULIE MUELLER
5. 18 KA
6. MD SHPO
7. 7700 SEVEN LOCKS RD
8. 9 OF 10

1. M: 29 - 39
2. GIBSON GROVE A.M.E. ZION CHURCH
3. PRINCE GEORGE'S COUNTY, MD
4. JULIE MUELLER
5. 12/99
6. MD SHPO
7. 7700 SEVEN LOCKS RD
8. 10 OF 10

M: 29-39

M: 29-39
Gibson Grove A.M.E. Church
7700 Seven Locks Road
Falls Church Quad. 1956



M #29-39
1007864708

MARYLAND HISTORICAL TRUST WORKSHEET

NOMINATION FORM
for the
NATIONAL REGISTER OF HISTORIC PLACES, NATIONAL PARKS SERVICE

SEE INSTRUCTIONS

1. NAME

COMMON:

AND/OR HISTORIC:
Gibson Grove A.M.E. Zion Church

2. LOCATION

STREET AND NUMBER:
Seven Locks Rd. at Rte. 495

CITY OR TOWN:
Cabin John

STATE: Maryland

COUNTY: Montgomery

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☐ Building ☐ Site ☑ Structure ☐ Object	☐ Public ☑ Private ☐ Both	Public Acquisition: ☐ In Process ☐ Being Considered	☐ Occupied ☐ Unoccupied ☐ Preservation work in progress	Yes: ☑ Restricted ☐ Unrestricted ☐ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☐ Private Residence	☐ Other (Specify)	
☐ Educational	☐ Military	☑ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY

OWNER'S NAME:
Trustees of Church (phone: 299-2209)

STREET AND NUMBER:
Seven Locks Rd.

CITY OR TOWN: Cabin John

STATE: Maryland

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC:
Montgomery County Courthouse

STREET AND NUMBER:

CITY OR TOWN: Rockville

STATE: Maryland

Title Reference of Current Deed (Book & Pg. #):

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY:

DATE OF SURVEY: ☐ Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS:

STREET AND NUMBER:

CITY OR TOWN:

STATE:

M:29-39

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☐ Good	☑ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☑ Altered	☐ Unaltered	☐ Moved	☑ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL *(If known)* PHYSICAL APPEARANCE

This is a small, frame country church that sits on a hillside above 7 Locks Rd., almost underneath the Capital Beltway (Rte. 495.) The door is in the east facade, and there is a small bell-tower above the entrance vestibule. The building is now covered with asphalt-type shingles.

SEE INSTRUCTIONS

M:29-39

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

☐ Pre-Columbian	☐ 16th Century	☐ 18th Century	☑ 20th Century
☐ 15th Century	☐ 17th Century	☐ 19th Century	

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

Aboriginal	☐ Education	☐ Political	☐ Urban Planning
☐ Prehistoric	☐ Engineering	☐ Religion/Philosophy	☐ Other *(Specify)*
☐ Historic	☐ Industry		_____
☐ Agriculture	☐ Invention	☐ Science	_____
☐ Architecture	☐ Landscape Architecture	☐ Sculpture	_____
☐ Art	☐ Literature	☐ Social/Humanitarian	_____
☐ Commerce	☐ Military	☐ Theater	_____
☐ Communications	☐ Music	☐ Transportation	_____
☐ Conservation			

STATEMENT OF SIGNIFICANCE

The church has long been associated with the Negro settlement here along Seven Locks Rd. According to Armstrong's CABIN JOHN COMMUNITY, the land here was originally owned by J.D.W. Moore (father of the late Lilly Stone.) The map of 1878 shows him living near here at "Glen More" (there was no Gibson Grove community shown on this map then.) Reportedly, Mr. Moore began selling 5 acre lots here (in 1885) to the families that worked on his farm. The 1894 map shows several families living here. Names included were Scott, Carter, Jackson, etc. Where the church stands today was the Gibson house-apparently the reason the area became known as Gibson Grove.

SEE INSTRUCTIONS

M:29-39

9. MAJOR BIBLIOGRAPHICAL REFERENCES

1) Armstrong, Edith. CABIN JOHN COMMUNITY. Paper written in the 1950's; at Montgomery Co. Historical Society.
2) Hopkins' Maps of 1878 & 1894.

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY						OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES					
CORNER	LATITUDE			LONGITUDE				LATITUDE			LONGITUDE	
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	°	'	"	°	'	"		°	'	"	°	'	"
NE	°	'	"	°	'	"							
SE	°	'	"	°	'	"							
SW	°	'	"	°	'	"							

APPROXIMATE ACREAGE OF NOMINATED PROPERTY:

Acreage Justification:

SEE INSTRUCTIONS

11. FORM PREPARED BY

NAME AND TITLE: Michael F. Dwyer, Senior Park Historian

ORGANIZATION: M-NCPPC

DATE: 4/23/75

STREET AND NUMBER: 8787 Georgia Ave.

CITY OR TOWN: Silver Spring

STATE: Maryland

12. State Liaison Officer Review: (Office Use Only)

Significance of this property is:

National ☐ State ☐ Local ☐

Signature

MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: yes ___
no ___

Property Name: National Institute of Standards and Technology (NIST) Inventory Number: M:20-47

Address: 100 Bureau Drive City: Gaithersburg Zip Code: 20899

County: Montgomery USGS Topographic Map: Gaithersburg and Rockville

Owner: United States of America Is the property being evaluated a district? X yes

Tax Parcel Number: P440 Tax Map Number: FT31 Tax Account ID Number: 00777838

Project: N/A Agency: N/A

Site visit by MHT Staff: X no ___yes Name: ___ Date: ___

Is the property located within a historic district? ___yes X no

If the property is within a district District Inventory Number: ___

NR-listed district ___yes Eligible district ___yes District Name: ___

Preparer's Recommendation: Contributing resource ___yes ___no Non-contributing but eligible in another context ___

If the property is not within a district (or the property is a district)

Preparer's Recommendation: Eligible X yes ___no

Criteria: X A ___B X C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Documentation on the property/district is presented in:

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*

Property Description

The National Institute of Standards and Technology (NIST) encompasses approximately 578 acres in the City of Gaithersburg, in Montgomery County, Maryland (National Institute of Standards and Technology [NIST] 2014a). The campus comprises multiple buildings located on a formally landscaped campus organized by a grid network of internal roads. Large-scale, multi-story, monumental buildings separated by expansive parking areas and mowed lawn define the campus. The internal road network consists of roads running in north/south and east/west directions. The publically-restricted road network creates large superblocks occupied by research buildings. The primary research areas are clustered around the Administrative Building (Building 101) and the General Purpose Laboratories (GPLs).

Principal north/south roads include East, West, and Center drives. Center Drive provides access to the southern portion of the campus. North and South drives provide east/west access. Access to the support buildings is via Sound, Research, and Steam drives, and Service Drive, which runs in a north/south direction. No

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended X **Eligibility not recommended** ___

Criteria: X **A** ___ **B** X **C** ___ **D** **Considerations:** ___**A** ___**B** ___**C** ___**D** ___**E** ___**F** ___**G** ___**None**

Comments: Eligible area encompasses the full extent of the NIST institution complex (578 acres +/-)

Jonathan Sager — **Reviewer, Office of Preservation Services** — 10/29/15 **Date**

P Krutz — **Reviewer, NR Program** — 10/26/15 **Date**

Revised Oct 25, 2014

distinction in terms of design, landscaping, or road width is made between the service roads and the principal roads.

Summary History

Since its creation in 1901 as the National Bureau of Standards (NBS) in 1900, NIST has been at the cutting edge of scientific standardization and measurement. Work by NIST scientists has resulted in the standardization and measurement of nearly every facet of scientific inquiry. A small sampling of the testing and evaluation conducted by NIST scientists includes the development of standards for firefighting equipment; electricity and public utilities; and materials such as paints, cements, ceramics, rubber, paper, and leather products. The standards developed by NIST scientists have been widely adopted by private-sector industry. NIST also is an important research facility and scientists at the Gaithersburg campus conduct research and publish on a wide variety of topics. Selected areas of scientific investigation include fire research, environment and climate, physics, and law enforcement. NIST scientists continuously have made important contributions advancing scientific inquiry. Agency scientists have been recognized through numerous awards, including a number of Department of Commerce Gold Medals, an Emmy, and four Nobel Prizes.

NIST established an architectural identity for the agency when it constructed a research campus in Gaithersburg, Maryland, beginning in 1961. The agency selected the nationally preeminent architectural firm in the design of research and corporate campuses for the Gaithersburg campus. The firm of HLW International is recognized as national experts in the design of postwar research campuses.[1] The agency, in collaboration with the architects, participated in thoughtful and intensive architectural programming to design a campus that met the agency's needs and those of its scientists. The result was a research campus similar in design to campuses constructed for the public and private sectors during the 1950s and 1960s, but unique to the demands of the NIST mission. The existing campus was constructed during three major periods of development: Initial Construction (1961-1969), Second Period (1970-1999), and Third Period (2000-2015). Buildings completed during the Initial Construction period were designed in the International Style. Character-defining features of the style include curtain-wall construction, ample use of glass, clean monolithic forms, and minimal ornamentation. Buildings constructed in support of the NIST mission and representative of buildings constructed for postwar research campuses include administrative/laboratory buildings, special purpose laboratories, and support buildings. Recreational resources and an example of postwar domestic architecture also are included in the NIST inventory.

Additional information on the history of NIST can be found in the accompanying Maryland Inventory of Historic Properties (MIHP) form and in the technical report, *Historic Assessment, National Institute of Standards and Technology*, prepared by R. Christopher Goodwin & Associates, Inc. (2015).

Evaluation Results

A total of 74 buildings, structures, objects, and landscapes were documented under the current investigation. Analysis of archival and architectural data applying the National Register of Historic Places (NRHP) Criteria for Evaluation (36 CFR 60.4[a-d]) identified a cohesive collection of buildings, structures, and landscapes that represent a recognizable entity united by design and historical association within the Initial Construction period of the NIST campus (1961 – 1969).

---

[1] The architectural firm that designed the Gaithersburg campus, Voorhees Walker Smith Smith & Haines, underwent a number of name changes since it was established. Name changes also occurred during the design and construction of the facility. For simplification and to avoid confusion, HLW International (the firm's current name" will be used for all future references to the original design team.

At the time of its construction, the NIST Gaithersburg campus incorporated current innovations and approaches to the design of research campuses. Its suburban setting; formal landscape; greenspace; ample parking; large-scale, monumental buildings; and, general and specialized laboratories are hallmarks of postwar research campus design. Importantly, the GPLs included modular administrative/laboratory space, which maximized flexibility and ensured that the buildings were easily adaptable to changing research needs. Movable or demountable walls were an easy, quick, and cost effective way to modify laboratory space based on project need and requirements. Spatial flexibility was important to an agency devoted to scientific evaluation, testing, and experimentation. By the time HLW International designed the NIST campus, the firm had almost 30 years of experience designing research facilities. It had developed protocols and best practices for close client involvement. These practices included surveying scientists to ascertain needs, design review and development using scaled models, and building-specific programming for specialized laboratories.

The buildings constructed between 1961 and 1969 exhibit many of the hallmarks of postwar research campus design. These character-defining features include flexible workspaces that could be configured in a variety of different ways to suit current research/laboratory needs regardless of the research discipline. The buildings were constructed incorporating administrative/laboratory modules. The buildings are linear in plan, housing modules across a double-loaded hallway. The back-to-back laboratories were across from the exterior-facing administrative spaces. Long hallways would encourage spontaneous discussions among colleagues. In this manner, scientists could collaborate and discuss research problems in informal settings. The acreage afforded by the suburban site was acquired, in part, to facilitate expansion, as necessary. Greenspace with formal landscaping was held to be conducive to scientific inquiry and created a working environment reminiscent of an academic campus.

Following the construction of the original buildings in accordance with the plans prepared by HLW International, few large-scale buildings were constructed. The majority of construction projects completed during the Second Period of development expanded earlier buildings through major additions. Smaller-scale new buildings also were added during the period. Construction of the AML complex during the first decade of the twenty-first century initiated a major new building campaign.

Building 101 is the central focus of the campus and is a representative of the International Style applied to a principal building within a research complex. Similar to many private-sector research campuses of the period, the principal building was the primary focus for public space and architectural elaboration; Building 101 became an icon for the agency. Curtain-wall construction, generous use of windows, and minimal ornamentation, hallmarks of the style, are employed on the building. Public space is incorporated in the large lobby and cafeteria, spaces designed to encourage social interaction. Other public spaces include auditoriums that provide forums for professional presentations.

A comprehensive site plan was designed and implemented for the campus. A grid street system provides access to the research laboratories. Lawn, mature specimen and deciduous trees, hardscapes, and storm water management ponds were incorporated in the landscape. The cohesive area capturing the design and operation of the campus during its initial period of development is defined by nine contributing resources, including the Administration Building, seven GPLs, and Building 304, encompassed by the area generally defined by East Drive to the east, the AML complex to the south, and Research Drive to the west. The northern edge of the historic district extends 205 feet from the north elevation of Building 226, which is the distance between the existing GPLs. The AML complex comprising Buildings 215, 216, 217, 218, and 219 are excluded from the proposed historic district. The interconnected buildings, while incorporating similar building materials as the GPLs, were designed as a complex unique from the general purpose labs architecturally, structurally, and in sophistication of the environmental controls systems. Two of the buildings are entirely underground.

Additionally, the buildings were constructed during the past thirteen years. Insufficient time has elapsed to enable evaluation of the complex under National Register Criteria A and C. The complex does not appear to rise to the level of exceptional significance as defined under Criteria Consideration G.

The proposed NIST historic district is significant under Criterion A for its association with events that have made important contributions to the broad patterns of history under the theme of Science and Technology and under Criterion C as a recognizable entity that embodies the characteristics of Postwar Research Campus design. Buildings in the historic district were designed by an architecture and engineering firm with an established national practice specializing in research campuses. HLW International was the acknowledged expert in designing research laboratories and was a design innovator in the field. The NIST campus is representative of the firm's body of work.

Thirteen resources are included in the NRHP-eligible historic district; two of the resources (Building 227 and the Entrance Gates) are non-contributing. The designed landscape, including the Newton apple tree, is a contributing resource to the district. In addition to contributing to the NRHP, Building 101 individually is eligible for listing in NRHP for the quality of its architectural design as the campus administrative headquarters (Criterion C). All contributing resources in the proposed NIST historic district were completed between 1965 and 1966. Contributing buildings the NRHP-eligible historic districted are identified in the attached table.

Resources excluded from the historic district generally comprise support and utility buildings, such as Buildings 301 and 302, which did not directly support the agency's scientific mission, recently constructed buildings, or buildings with major recent additions. The NRHP-eligible historic district is depicted in on the attached maps. Campus-wide resource evaluations are presented in the accompanying tables.

Summary and Conclusion

The resources contained with the NIST Gaithersburg campus were analyzed applying the NRHP Criteria for Evaluation (36 CFR 60.4[a-d]). Site investigation and resource evaluation indicated that resources at the Gaithersburg campus are significant within the themes of Science and Technology and Postwar Research Campus Design (Criterion A). The facility also represents a significant and distinguishable entity whose components may lack individual distinction (Criterion C). Additionally, Building 101 individually possesses the significance and integrity for NRHP consideration under Criterion C as a representative example of the International Style.

Kirsten Peeler
Senior Project Manager
R. Christopher Goodwin &
Associates, Inc.
241 East Fourth Street
Prepared by: Frederick, MD 21701

Prepared: Date June 2015

Contributing and Non-Contributing Resources – NIST Historic District*

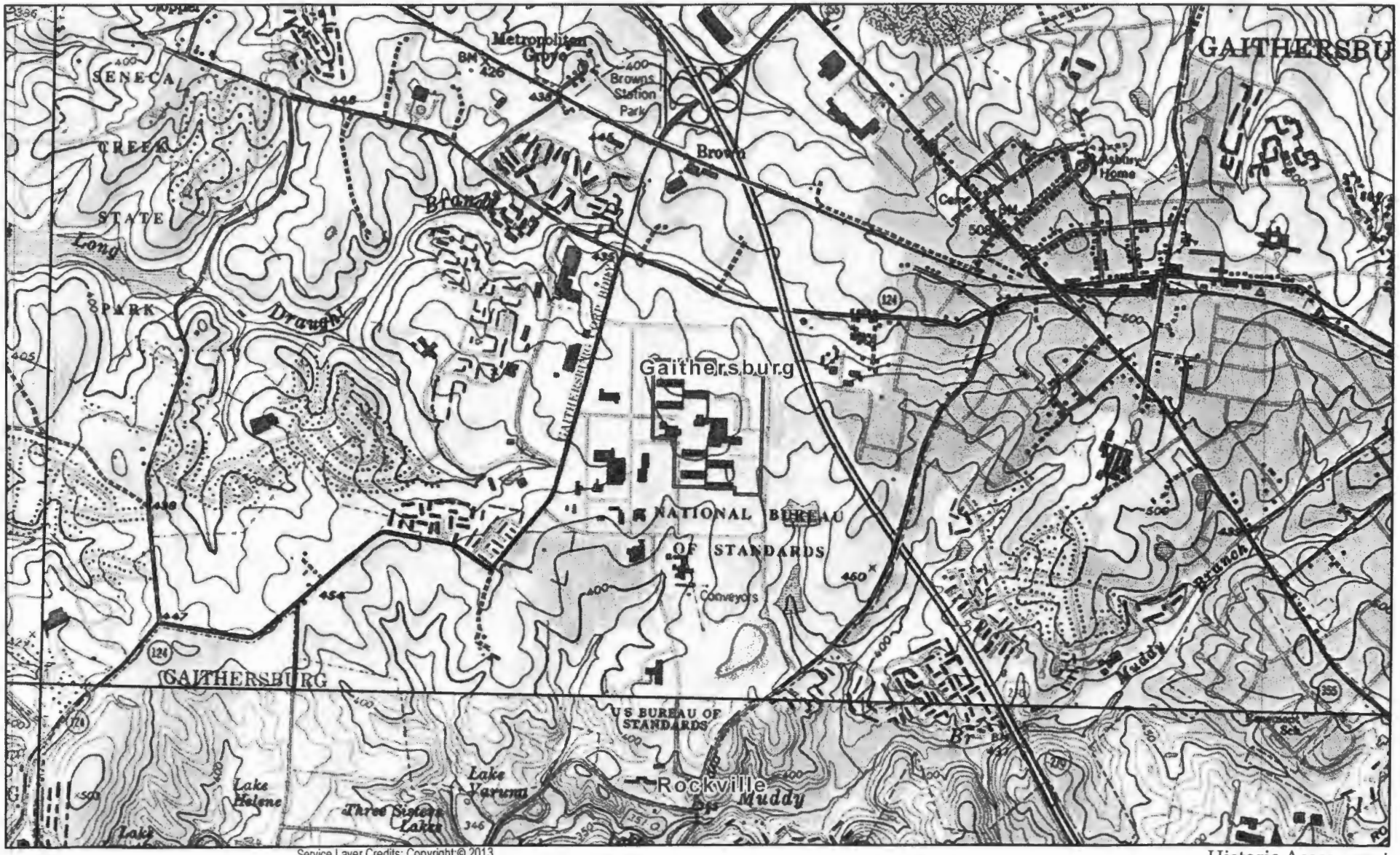
Building Number	Building Name	Construction Date	Resource Evaluation
101	Administration Building	1962-1965	Contributing and individually eligible under A and C
220	Metrology	1963-1966	Contributing
221	Physics	1963-1966	Contributing
222	Chemistry	1963-1966	Contributing
223	Materials	1963-1966	Contributing
224	Polymer	1963-1966	Contributing
225	Technology	1963-1966	Contributing
226	Building Research	1963-1966	Contributing
227	Advanced Chemical Sciences Laboratory	1999	Non-contributing
304	Shops	1962-1964	Contributing
Campus Landscape Plan (including Newton Apple Tree)		1961-1969; 1966	Contributing
Flag Pole		1965	Contributing
Entrance Gates		1976	Non-contributing

*MHT does not concur with these recommendations, All pre-1970 buildings contribute per Elizabeth Hughes's 10/29/15 letter

National Register Eligibility – NIST Gaithersburg Campus

Building Number	Building Name	Construction Date	Resource Evaluation
103	Visitor's Center and Gate House	2009	Not eligible
B	Gate House	ca. 2009	Not eligible
C	Gate House	ca. 2009	Not eligible
F	Gate House	ca. 2009	Not eligible
202	Engineering Mechanics	1961-1963	Not eligible
203	Standard Reference Materials Facility	2012	Not eligible
205	Large Fire Facility	1973-1975; 2014	Not eligible
205E	Emissions Control Electrical	ca. 2000	Not eligible
205M	Emissions Control Mechanical	ca. 2000	Not eligible
205E#2	Emissions Control Electrical	ca. 2014	Not eligible
205M2	Emissions Control Mechanical	ca. 2014	Not eligible
2	Hopper	ca. 2014	Not eligible
3	Hopper	ca. 2000	Not eligible
206	Concrete Materials	1966-1968	Not eligible
207	Robot Test Facility	2012	Not eligible
208	Net-Zero Energy Residential Test Facility	2012	Not eligible
215	Nanofabrication Facility	2002-2004	Not eligible under Criteria or Criteria Consideration G
216	Center for Nanoscience and Technology (Instrument East)	2001-2002	Not eligible under Criteria or Criteria Consideration
217	AML Instrument West	2002-2004	Not eligible under Criteria or Criteria Consideration
218	AML Metrology East	2000-2004	Not eligible under Criteria or Criteria Consideration
219	AML Metrology West	2000-2004	Not eligible under Criteria or Criteria Consideration
230	Fluid Mechanics	1967-1969	Not eligible
231	Industrial	1966-1968	Not eligible
233	Sound	1965-1968	Not eligible
235	NCNR	1963-1967	Not eligible
236	Hazards	1966-1968	Not eligible
237	Non-magnetic Laboratory	1964-1968	Not eligible
238	Non-magnetic Laboratory	1964-1968	Not eligible
245	Radiation Physics	1962-1964	Not eligible

Building Number	Building Name	Construction Date	Resource Evaluation
301	Supply and Plant	1962-1964; 2013	Not eligible
302	Steam and Chilled Water Generation Plant	1961-1964; ca. 1990s; ca. 2010	Not eligible
303	Service	1962-1964	Not eligible
305	Cooling Tower	1961-1964;2011	Not eligible
306	Potomac Electric Power Company (PEPCO) Electrical Substation	ca. 1970	Not eligible
306A	PEPCO	1961-1964	Not eligible
306B	PEPCO	1961-1964	Not eligible
307	Hazardous Chemical Waste Storage	1970-1971	Not eligible
308	Bowman House	1952-1953	Not eligible
309	Grounds Maintenance	1974-1978	Not eligible
310	Hazardous Materials Storage	1986-1987	Not eligible
311	Grounds Storage Shed	1990	Not eligible
312	Materials Processing Facility	1996	Not eligible
313	Site Effluent Neutralization	1996	Not eligible
314	Backflow Preventer Building	1998	Not eligible
315	Backflow Preventer Building	1998	Not eligible
316	Electrical Service Building	1998	Not eligible
317	Cooling Tower	2010	Not eligible
1	Building associated with 317	2010	Not eligible
318	ES Consolidated Facility	2014	Not eligible
319	ES Storage Building	2014	Not eligible
320	CCC	2013	Not eligible
321	Liquid Helium Recovery Facility	Under construction	Not eligible
Baseball Field 1		Late 1990s	Not eligible
Baseball Field 2		Late 1990s	Not eligible
Volley Ball Court		ca. 2009	Not eligible
Picnic Area		Late 20th century	Not eligible
Stormwater Management Pond 1		ca. 1965	Not eligible
Stormwater Management Pond 2		ca. 1965	Not eligible
Stormwater Management Pond 3		ca. 2006	Not eligible
Masonry Test Wall		1977	Not eligible



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SRS: UTM Zone 18 / NAD 83
MSR: 1:24,000

KILOMETERS
0 0.25 0.5 0.75 1

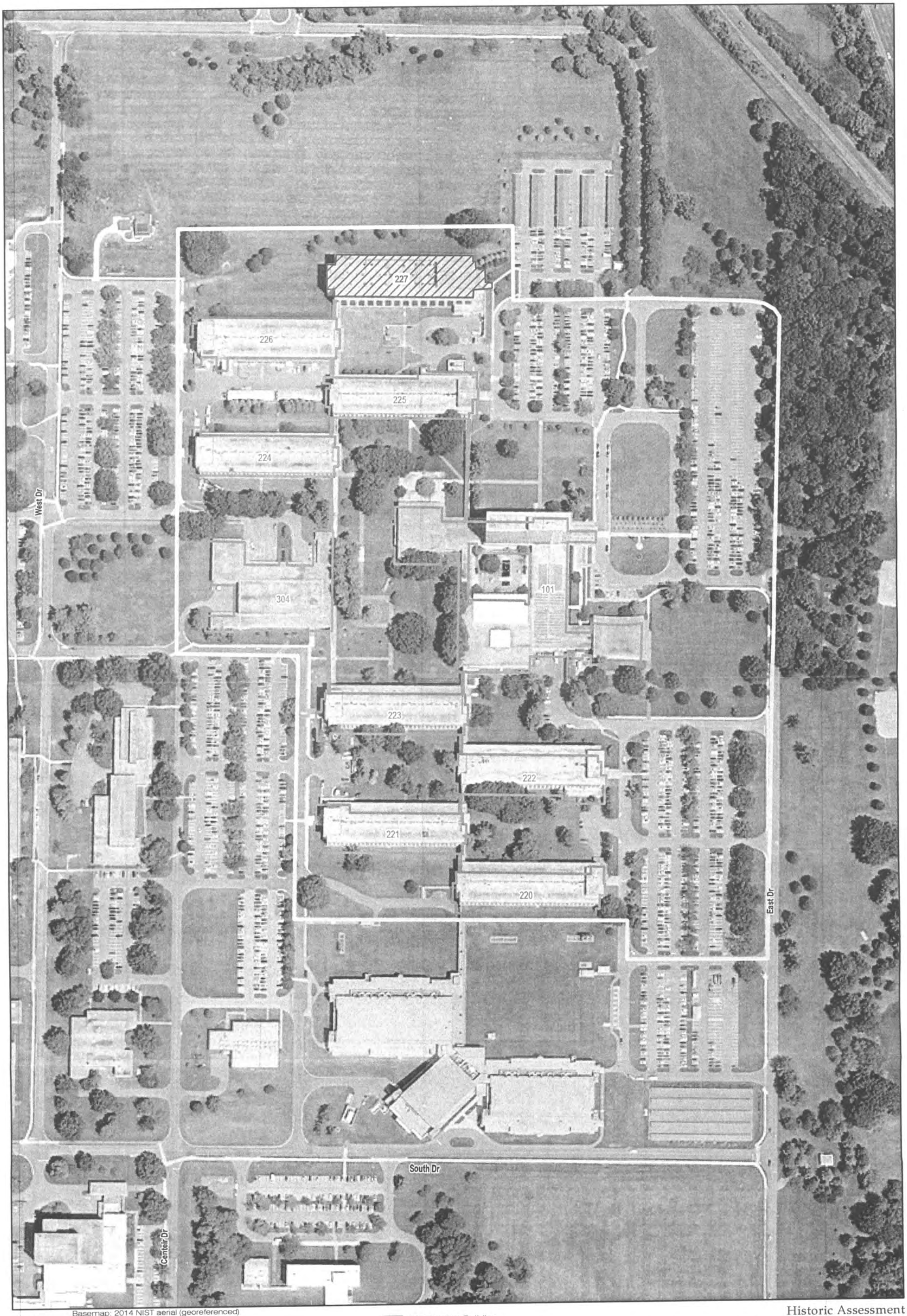
MILES
0 0.25 0.5 0.75 1

Historic District Boundary
USGS 24k Topo Map Boundaries

Historic Assessment
National Institute of Standards and Technology
Gaithersburg, Maryland
Quad Locator Map

M:20-44

R. Christopher Goodwin & Associates Inc. | 241 East Fourth Street, Suite 100 | Frederick, MD 21701 | Prepared By: KFM | Date: 6.3.2015



Basemap: 2014 NIST aerial (georeferenced)
MSR: 1:2,800
SRS: UTM Zone 18 / NAD 83
Meters
0 10 20 30
Feet
0 50 100 150

Contributing Building
Non-contributing Building
Proposed Historic District Boundary
NIST Campus Boundary

Historic Assessment
National Institute of Standards and Technology
Gaithersburg, Maryland
Proposed Historic District

M:20-47

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MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: yes ___
no ___

Property Name: National Institute of Standards and Technology Headquarters (Survey District) Inventory Number: M: 20-47

Address: 100 Bureau Drive City: Gaithersburg Zip Code: 20899

County: Montgomery USGS Topographic Map: Gaithersburg and Rockville

Owner: United States of America Is the property being evaluated a district? X yes

Tax Parcel Number: P440 Tax Map Number: FT31 Tax Account ID Number: 00777838

Project: Corridor Cities Transitway Bus Rapid Transit Project Agency: Maryland Transit Administration

Site visit by MHT Staff: X no ___yes Name: _____ Date: _____

Is the property located within a historic district? ___yes X no

If the property is within a district District Inventory Number: _____

NR-listed district ___yes Eligible district ___yes District Name: _____

Preparer's Recommendation: Contributing resource ___yes ___no Non-contributing but eligible in another context ___

If the property is not within a district (or the property is a district)

Preparer's Recommendation: Eligible X yes ___no

Criteria: X A ___B X C ___D Considerations: ___A ___B ___C ___D ___E ___F ___G ___None

Documentation on the property/district is presented in: Enoch Pratt Library--Maryland Room, Historicaerials.com, Montgomery County Historical Society, National Institute of Standards and Technology website and library, ProQuest Historical Newspaper Database, and Streetsofwashington.com

Description of Property and Eligibility Determination: *(Use continuation sheet if necessary and attach map and photo)*

Architectural Description

The National Institute of Standards and Technology (NIST) headquarters, previously known as the National Bureau of Standards (NBS), is located at 100 Bureau Drive in Gaithersburg, Montgomery County, Maryland. The 579.5 acre property was originally constructed in five phases from 1961 to 1969, with additional buildings and other elements added during subsequent decades. The campus is surrounded by West Diamond Avenue starting from the north, Interstate 270 to the northeast, Muddy Branch Road to the southeast, Conservation Lane to the south, a neighborhood of early 1970s townhouses to the southwest, and Quince Orchard Road to the northwest. The primary entrance is located on Bureau Drive off of W. Diamond Avenue at the north end of the campus. The individual buildings and other elements identified below are located at the NIST headquarters and together make up a district. None have been previously documented individually at the Maryland Historical Trust.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended X **Eligibility not recommended** ___

Criteria: X **A** ___**B** X **C** ___**D** **Considerations:** ___**A** ___**B** ___**C** ___**D** ___**E** ___**F** ___**G** ___**None**

Comments: _____

John VanDerwerker 12/18/2014
Reviewer, Office of Preservation Services **Date**

[signature] 12/18/14
Reviewer, NR Program **Date**

20140566

National Institute of Standards and Technology Headquarters (M: 20-47)

Buildings

The 67 buildings at the NIST headquarters are listed in order of the NIST building numbers below, most keyed into the Site Plan and shown in attached photographs. Twenty-four of the buildings were part of the original complex, constructed between 1961 and 1969, except for one single-family residence built in the early 1950s (308-Bowman House) that predates NIST; NIST plans to demolish this building, and three adjacent buildings: building 419 and two sheds. The 24 original buildings in the district are identified below with an asterisk and described in greater detail after this list:

(101) Administration Building (constructed 1962-65)*
(103) Visitor's Center (completed 2009)
(104) Gate House (completed 2009) There are also four additional gate houses on the property located along Quince Orchard Road and at the southern end of the campus. They are small, recently constructed prefabricated buildings with no NIST numbers.
(202) Engineering Mechanics (constructed 1961-63)*
(203) Standard Reference Materials Facility (constructed 2012)
(205) Large Fire Facility (constructed 1973-75) (major addition constructed 2011-14)
(205E) Emissions Control Electrical (constructed late 1990s or early 2000s)
(205M) Emissions Control Mechanical (constructed late 1990s or early 2000s)
(206) Concreting Materials (constructed 1966-68)*
(207) Robot Test Facility (constructed 2012)
(208) Net-Zero Energy Residential Test Facility (constructed 2012)
(215) Advanced Measurements Laboratory (AML) Clean Room (constructed 2000-04)
(216) AML Instrument East (constructed 2000-04)
(217) AML Instrument West (constructed 2002-04)
(218) AML Metrology East (underground) (constructed 2000-04)
(219) AML Metrology West (underground) (constructed 2000-04)
(220) Metrology (constructed 1963-66)*
(221) Physics (constructed 1963-66)*
(222) Chemistry (constructed 1963-66) (Information Technology since 2006 when the building was gutted and renovated)*
(223) Materials (constructed 1963-66)*
(224) Polymer (constructed 1963-66)*
(225) Instrumentation (constructed 1963-66) (called Technology since about 1993)*
(226) Building Research (constructed 1963-66)*
(227) Advanced Chemical Sciences Laboratory (ACSL) (completed 1999)
(230) Fluid Mechanics (constructed 1967-69)*
(231) Industrial (constructed 1966-68)*
(233) Sound (constructed 1965-68)*
(235) NIST Center for Neutron Research (NCNR) (constructed 1963-67)*
(236) Hazards (constructed 1966-68) (later renamed Special Projects)*
(237) Non-Magnetic Laboratory (constructed 1964-68)*
(238) Non-Magnetic Laboratory (constructed 1964-68)*
(245) Physics (constructed 1962-64)*
(301) Supply and Plant (constructed 1962-64 with an addition completed in 2013 at the south end)*
(302) Steam and Chilled Water Generation Plant (SCWGP) (constructed 1961-64 with 1990s and early 2010s additions at the west end)*
(303) Service (constructed 1962-64 with an addition under construction at the north end)*
(304) Shops (constructed 1962-64)*
(305) Cooling Tower (constructed 2011) (replaced one built in 1992-93 which replaced the original constructed 1961-64; also an adjacent circa early 1990s one-story brick building)
(306) Building 306 (constructed 1961-64)*
(307) Hazardous Chemical Waste Storage (constructed 1970-71) (today called Materials Processing Storage)
(308) Bowman House (constructed 1952-53)*
(309) Grounds Maintenance (constructed 1974-76)

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(310) Hazardous Materials Storage (constructed 1986-87) (today called Plant Storage)
(311) Grounds Storage Shed (completed 1990)
(312) Materials Processing Facility (completed 1996)
(313) Site Effluent Neutralization (completed 1996)
(314) Backflow Preventer Building East (completed 1998)
(315) Backflow Preventer Building West (completed 1998)
(316) Electrical Service Building (completed circa 1998)
(317) Cooling Tower West and with an adjacent one-story brick building (constructed 2010)
(318) ES Consolidated Facility (constructed 2014)
(319) ES Storage Building (constructed 2014)
(320) CCC (completed circa 2013)
(321) Liquid Helium Recovery Facility (not yet completed)
(411) Temporary Relocatable Facility (constructed 1989-90)
(412) Temporary Relocatable Facility (constructed late 1990s)
(413) Temporary Relocatable Facility (constructed late 1990s)
(414) Janitorial Storage Building (constructed late 1990s or early 2000s)
(418) NCNR Storage Building (constructed circa late 1990s or early 2000s)
(419) Temporary Building (constructed late 1990s) (located next to Bowman House along with two sheds)
(420) Storage Building (constructed 1996, moved to current location in 2011)
(421) Physics Storage Building (constructed 1980s)
(422) Concrete Materials Storage Building (constructed sometime between 2002 and 2005)
(423) Indoor Environment and Ventilation Test House (constructed sometime between 1993 and 2002) (and two small buildings behind it)
(425) NCNR Storage Building II (constructed 2007)
(426) NCNR Trailer 2 (constructed circa 2008)
(427) NCNR Trailer 1 (constructed circa 2008)
(428) Facilities Building (constructed circa 2009)

Descriptions of Original Buildings

The following describes 22 of the original buildings and corridors at the NIST headquarters. Nine buildings, 101-Administration Building; seven general purpose laboratories (220-Metrology, 221-Physics, 222-Chemistry, 223-Materials, 224-Polymer, 225-Technology, and 226-Building Research); and 304-Shops, are located at the campus center and are connected by corridors. Nine special purpose laboratories (housed in ten buildings) are located to the west and south of the core campus area: 202-Engineering Mechanics, 206-Concreting Materials, 230-Fluid Mechanics, 231-Industrial, 233-Sound, 235-NCNR, 236-Hazards, 237 and 238-Non-Magnetic Laboratory, and 245-Physics. Four maintenance and service buildings are located at the west end of the campus. These are 301-Supply and Plant, 302-Steam and Chilled Water Generation Plant, 303-Service, and 306-Building 306. Two original NIST buildings have been demolished and replaced with newer versions: 102-Gate House (constructed 1969-70) and 305-Cooling Towers (constructed 1961-64).

Connected Buildings

Nine of the original buildings located at the campus center (listed in the second sentence of the paragraph above) are connected by north and south oriented above ground corridors. 101-Administration Building and 304-Shops are connected by an underground corridor. Newer laboratories have been added, namely 227-Advanced Chemical Services Laboratory connected to 226-Building Research at the north end and 215-219-Advanced Measurement Laboratories to 220-Metrology at the south end. These newer buildings are also connected via enclosed corridors.

(101) Administration Building
The Administration Building was constructed between 1962 and 1965 in the International Style. It is located near the center of the campus and accessed by a rectangular drive, with landscaping and a flagpole in the center, situated between the building and its parking lot to the east. The drive and parking lot are accessed by East Drive located further east.

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Oriented east to west, the building has an irregular plan and an east-facing, asymmetrical façade. Most of the Administration Building is one-story tall, punctuated at the northeast end by an 11-story, slab administrative offices tower, making this the tallest building on the campus. The building retains original features such as offices, a research library, a museum, a cafeteria, two auditoriums, and lecture rooms arranged around a landscaped inner courtyard. A glass-enclosed corridor leads from the main building to the cafeteria and small auditorium. The library has a mezzanine level and extends west from the administrative tower via a connecting wing with fixed single sash metal windows. The tall one-story large auditorium extends east from the south end of the east elevation of the main building via a connecting wing with glass exterior walls and entrances at its north and south elevations. Most of the courtyard surfaces are clad with granite with two U-shaped granite planters with trees and bushes bordering the outer edge; the courtyard also has a mature weeping beech tree (*Fagus sylvatica* 'Pendula') and a rectangular pond, crossed by a rectangular granite slab.

The Administration Building has a poured reinforced concrete foundation. Its walls are concrete, clad primarily with stretcher bond glazed beige bricks on the first floor level, and the east and west elevations of the tower. There are also two vertical beige brick bands on the south elevation of the tower that extend to the roofline; these mark the location of the tower's elevator. Marble clads the area of the façade flanking the primary entrance, the west elevation of the area below the tower facing the inner courtyard, and many of the building's rectangular columns. Rectangular marble panels, laid against a backdrop of the same marble, clad the east and west elevations of the large auditorium, which otherwise has limestone walls.

The main entrance at the façade has a cantilevered flat-roof covered portico supported by polished metal and marble posts leading to metal and glass sliding doors accessing the lobby; the doors are surrounded by five lights. An additional entrance is on the north elevation of the lobby, with double metal and glass doors surrounded by lights. The north elevation of the library has a full-story covered patio supported by marble rectangular columns that leads down to steps and a rectangular hardscaped plaza. The Newton apple tree and the 1916 cornerstone from the chemistry laboratory of the old District of Columbia NBS campus are located in the plaza. The entrances into the inner courtyard from the tower are sheltered by the tower itself, supported by marble-clad rectangular columns. Windows are generally fixed aluminum sash. Those at the north and south elevations of the tower are single windows flanked above and below by smooth metal spandrel panels and divided vertically by slender aluminum mullions. The east and west elevations of the tower have no openings. The fixed single windows of the library have adjacent smooth metal spandrel panels. The building also incorporates large areas of floor to ceiling glass separated by slender metal mullions, such as at the main entrance lobby, where the cafeteria faces onto the inner courtyard, and where the library faces towards its adjacent plaza. Most of the Administration Building's stepped roofs are flat, and covered with bituminous material and gravel. The cafeteria, however, has a wave-shaped concrete roof, and the large auditorium has a flat roof. The tower is topped with a rectangular enclosure on the east end of the roof. A portion of the roof south of the tower has a solar panel array.

The north elevation of the Administration Building is connected to the east end of 225-Instrumentation via an open poured concrete walkway sheltered by a concrete roof with a zigzag-shape supported by simple, slightly tapered concrete rectangular posts. It is connected to 223-Materials at the west end of its south elevation by an elevated corridor with walls made of glass panels divided by slender mullions; the corridor is supported by metal post supports and has a flat roof.

(304) Shops
The Shops building was constructed between 1962 and 1964 in the International Style. This building is located between Sound Drive to the north and Research Drive to the south, just south of 224-Polymer. 414-Janitorial Storage Building was built onto the Shops' north (rear) elevation. The Shops building faces onto parking lots to the south and there is a service yard to the north. Otherwise, the building is surrounded by lawns, trees, and bushes on generally level terrain.

The Shops building is irregular in plan and oriented east to west, with a south-facing, asymmetrical façade. The building center is two-stories, and the rest is either a one- or tall one-story height. The building was constructed on a concrete foundation. While most of the exterior is red brick laid in the common bond pattern, the upper story of the façade has vertically ribbed metal paneling separated by metal siding with a horizontal pattern. Located at the façade, the primary entrance consists of double aluminum and glass doors surrounded by five lights. The entrance is flanked by limestone rectangular columns and sheltered by a flat roof bordered with aluminum gravel stops. A limestone date block engraved with "1962" is to the east of the entrance. At the façade, the lower story has fixed, metal sash windows flanked above and below with smooth metal spandrel panels. The north elevation has fixed metal sash windows at the loading docks and ribbon

windows, bordered by smooth metal spandrel panels below, located at its east end. The stepped roofs of the building are flat, covered with bituminous material and gravel, and bordered with aluminum gravel stops.

This building is connected to 223-Materials by a one-story enclosed corridor with flat roof located at the east end of the south elevation; this corridor has walls made of glass panels divided by slender mullions, bordered at the bottom by smooth metal spandrel panels. The east end of the Shops building's north elevation is connected to 224-Polymer via a one-story corridor with flat roof; its west elevation wall is made of glass panels with slender metal mullions, bordered at the bottom with smooth metal spandrel panels. At the east elevation, only the top section of a red brick wall is visible.

(220-226) General Purpose Laboratories
The seven general purpose laboratories are nearly identical to each other, particularly 220-225. Immediately below is a general description that applies to all seven buildings, while the buildings are then described individually in the ways they are different.

These buildings were constructed between 1963 and 1966 in the International Style. All seven have a nearly rectangular-plan and are oriented east to west with asymmetrical façades. The buildings are three-stories, and arranged in a staggered fashion; the laboratories are in the center of each building and offices are on the outside next to the windows. These laboratory buildings are built on poured reinforced concrete foundations with exterior walls made of concrete clad in stretcher bond glazed beige bricks. Each of the shorter east and west elevations has a symmetrical bump-out that also punctuates beyond the roofline. The projection is taller at the façades that have the main entrances. Each of these entrances is within a glass enclosed portico sheltered by a one-story dropped secondary flat roof that is supported by brick rectangular walls and wraps around to the adjacent elevation. Its double doors are made of aluminum and glass. The façades also have granite date blocks engraved with "1963." There is an asphalt-paved service yard between facing general laboratory buildings. Windows are primarily metal sash, flanked above and below by smooth metal spandrel panels; these vertical bands alternate with the brick walls to create regular vertical patterns. The roofs are flat with bituminous, graveled surfaces; the stepped rooflines are bordered by gravel stops.

(220) Metrology
The Metrology building façade faces east onto its adjacent parking lot, accessible from East Drive located further east. Its L-shaped, one-story portico roof extends from the north end of the façade and wraps around to the north elevation. There is an asphalt-paved driveway off East Drive. The west end of the building's north elevation is connected to 221-Physics via a three-story corridor with flat roof; the walls are made of glass panels with slender mullions.

(221) Physics
The Physics building façade faces west onto Research Drive, with its associated asphalt-paved parking lot located further west. Its L-shaped, one-story portico roof extends from the north end of the façade and wraps around to the north elevation. This building is connected to 220-Metrology at the east end of its south elevation and to 222-Chemistry at the east end of the north elevation by three-story corridors with flat roofs; the walls are made of glass panels with slender mullions.

(222) Chemistry
The Chemistry building was gutted and renovated in 2006 (Martin & Silcox, p. 87) and today houses Information Technology. The building façade faces east onto its adjacent parking lot, accessible from East Drive located further east. Its L-shaped, one-story portico roof extends from the south end of the façade and wraps around to the south elevation. This building is connected at the west end of the south elevation to 221-Physics and west end of the north elevation to 223-Materials by three-story corridors with flat roofs; the walls are made of glass panels with slender mullions.

(223) Materials
The Materials building façade faces west onto Research Drive, with its associated asphalt-paved parking lot located further west. Its L-shaped, one-story portico roof extends from the south end of the façade and wraps around to the south elevation. It is connected to 101-Administration Building at the east end of its north elevation by an elevated corridor with walls made of glass panels divided by slender mullions; the corridor is supported by metal post supports and has a flat roof. The Materials building is connected at the east end of the south elevation to 222-Chemistry via a three-story corridor with flat roof; the walls are made of glass panels with slender mullions. The building is connected at the west end of the north elevation to 304-Shops

by a one-story corridor with flat roof at the east end of the south elevation; this corridor has walls made of glass panels divided by slender mullions, bordered at the bottom by smooth metal spandrel panels.

(224) Polymer
The Polymer building façade faces west onto its adjacent parking lot, accessible from West Drive located further west. Its L-shaped, one-story portico roof extends from the north end of the façade and wraps around to the north elevation. The building is connected at the east end of the north elevation to 225-Instrumentation via a corridor with glass panel walls and a flat roof that is two stories on its east elevation and three stories on its west elevation. The Polymer building is also connected to 304-Shops at the east end of its south elevation via a one-story corridor with flat roof; its west elevation wall is made of glass panels with slender metal mullions, bordered at the bottom with smooth metal spandrel panels. At the east elevation, only the top section of a red brick wall is visible.

(225) Instrumentation
The Instrumentation building was renamed Technology in circa 1993. Its façade faces east onto its adjacent parking lot, accessible from East Drive located further east. Its L-shaped, one-story portico roof extends from the north end of the façade and wraps around to the north elevation. The building connects to the 101-Administration Building at the east end of its south elevation via an open poured concrete walkway sheltered by a concrete roof with a zigzag-shape supported by simple, slightly tapered concrete rectangular posts. The roof is covered by bituminous material and gravel, and bordered by metal gravel stops. The building also connects at its west end via glassed corridors to 226-Building Research to the north and 224-Polymer to the south. The corridors with glass panel walls and flat roofs are two-story on their east elevations and three-story on their west elevations.

(226) Building Research
The Building Research building façade faces west onto its adjacent parking lot, accessible from West Drive located further west. Its L-shaped, one-story portico roof extends from the south end of the façade and wraps around to the south elevation. A basement level door is at the east (rear) elevation. Building Research differs from other general purpose laboratories at its south elevation, where ground level is dedicated to loading bays facing onto an asphalt-paved service yard. A small, square utility building, with sled roof and clad with glazed beige brick, extends from the west end of this elevation. On this elevation, light blue metal panels divided by slender mullions clad the second and third floor walls, with the first floor clad with gray metal panels. Only the third floor of this elevation has windows, which are single and fixed. The building connects at the south elevation of its east end via glassed corridors to 225-Instrumentation via a corridor with glass panel walls and flat roof; the corridor is two-story on its east elevation and three-story on its west elevation.

Special Purpose Laboratories

Seven of the special purpose laboratories are described below:

(202) Engineering Mechanics
The Engineering Mechanics building was constructed between 1961 and 1963 in the International Style. It is located near the center of the campus, at the southwest corner of the Center and South Drives intersection. The 203-Standard Reference Materials Facility was recently constructed to the southwest. Asphalt-paved driveways connect the roads to asphalt-paved parking areas and service yards located to the north, west, and east of the building. The area around the building is also landscaped with a lawn, trees, and bushes.

This building has an irregular plan made up of several sections of varying heights. The two-story section contains the offices and has a rectangular utility-mechanical enclosure on its roof; to its north is a tall one-story garage section. Most of the laboratory section to the west is one-story in height. Oriented north to south, the Engineering Mechanics building rests on a concrete foundation and has an east-facing asymmetrical façade. The shorter east and south sections of the building have exterior walls made of red brick laid in a common bond pattern. A limestone date block engraved with "1961" is embedded into south end of the façade wall. The tall steel-framed laboratory section has walls made of concrete blocks clad with glazed beige brick laid in the stretcher bonding pattern. The east elevation of the utility-mechanical enclosure has a concrete decorative screen. Located at the façade, the main entrance consists of double metal and glass doors surrounded by five lights. The entrance is flanked by limestone columns and sheltered by a flat roof bordered with aluminum gravel stops. A concrete

pedestrian walkway connects the entrance to the adjacent parking lot, then continues north to concrete steps with metal handrails. The windows at the façade of the two-story office section are fixed, single aluminum sash with smooth metal spandrel panels between the windows. The second story windows at the north and west elevations of the office section have single, aluminum double-hung sashes. The other windows have plain, fixed aluminum sashes. The laboratory section of the building has no windows. The stepped, flat roofs are covered with bituminous gravel, with rooflines bordered by aluminum gravel stops.

(206) Concreting Materials
The Concreting Materials building was constructed between 1966 and 1968 in the International Style. It is located at the south-central portion of the NIST campus, on the south of South Tip Drive located west of Center Drive. The building is flanked by 236-Special Projects to the west and three small storage buildings (307, 310, and 422) to the east, and faces onto an asphalt-paved service yard. The north elevation of the Concrete Materials building is built into a hillside and against a retaining wall, with a series of concrete steps with metal railing descending along the elevation.

This tall one-story building has an L-shaped plan and is oriented east to west with a south-facing asymmetrical façade. The west section steps down from the rest of the building. The building has a poured reinforced concrete foundation and concrete walls clad in glazed beige brick laid in the stretcher bonding pattern. A "1966" engraved limestone date block is embedded into the wall. Located at the façade, the main entrance is unsheltered, consisting of double steel doors with an adjacent light fixture. The building has no windows. The roofline of the flat, stepped bituminous graveled roof is bordered by metal gravel stops.

(230) Fluid Mechanics
The Fluid Mechanics building was constructed between 1967 to 1969 in the International Style. It is located near the center of the NIST campus, with West Drive to the west, South Drive to the south, and Center Drive to the east. There is an asphalt-paved parking lot located to the north that is shared with 231-Industrial; an asphalt-paved service yard is to the south. The building is also surrounded by lawns and trees, and is located on a slightly elevated level from West Drive.

The tall one-story and two-story building has an irregular plan and is oriented north to south with an asymmetrical east-facing façade. The foundation is made of poured reinforced concrete. Most of the concrete exterior walls are clad with glazed beige brick laid in the stretcher bonding pattern, although there is vertical gray metal paneling at the west and part of the south elevations. The "1967" engraved limestone date block is located at the north end of the façade. Situated at the north end of the façade, the main entrance consists of double aluminum and glass doors surrounded by three lights located within a recessed opening; the entrance is sheltered by a flat roof covered with bituminous material and gravel. Concrete pedestrian walkways and steps lead up to the adjacent parking lot. The two-story office windows at the north elevation are fixed aluminum single sash windows, flanked by smooth metal spandrel panels above and below. The building has no additional windows. The flat and stepped bituminous and gravel roofs are bordered with metal gravel stops. A structure, with a corrugated metal gabled roof top and concrete foundation, is located directly east of the Fluid Mechanics building; the structure houses a tank and pump for waste water in support of hydraulic testing for the building.

(231) Industrial
The Industrial building was constructed between 1966 to 1968 in the International Style. It is located near the center of the NIST campus, with West Drive to the west, Research Drive to the north, and Center Drive to the east. There is an asphalt-paved parking lot located to the south that is shared with 230-Fluid Mechanics; an asphalt-paved service yard is to the north and northwest. The building is also surrounded by lawns, trees, and bushes. It is located on an elevated level from West Drive, with two sets of concrete steps and metal handrails connecting the building's asphalt-paved parking lot and service yard to the road below.

The one-story and tall one-story building has an irregular plan and is oriented north to south with an asymmetrical east-facing façade. The foundation is made of poured reinforced concrete. Most of the concrete exterior walls are clad with glazed beige brick laid in the stretcher bonding pattern. The center section, however, is clad in vertical gray metal panels. Situated at the south end of the façade, the main entrance consists of double aluminum and glass doors located within a recessed opening with limestone panels above. A "1966" engraved limestone date block is located to the south of this entrance. The entrance connects to a concrete pedestrian walkway that goes to the adjacent parking lot to the south, Center Drive, and other parts of

the building. There are two sets of concrete stairs near the southwest side of the building. The office windows at the south elevation are paired fixed aluminum single sash windows, flanked by smooth metal spandrel panels above and below; each set of window and panels is framed by slender limestone mullions. Most of the east and west elevations have aluminum sash ribbon windows just below the rooflines. The roof is flat and covered in bituminous and gravel, with metal gravel stops bordering the rooflines.

(233) Sound

The Sound building was constructed between 1965 and 1968 in the International Style. It is located in the northwest area of the campus, at the northwest corner of West and Sound Drives. 320-CCC is located to the north, and the property line and Quince Orchard Road are to the west. There is an asphalt-paved parking lot located to the south of the building and an asphalt-paved service yard to the east; the building is also surrounded by lawns, trees, and bushes. The ground gently slopes down from north to south.

This one-story and tall one-story building has an irregular-shaped plan and is oriented east to west. The asymmetrical façade faces south. The main rectangular section of the building has taller boxy wings located at each opposite long elevation end. The foundation is made of poured reinforced concrete and most of the concrete exterior walls are clad with glazed beige brick laid in the stretcher bonding pattern. The center section of the main building, however, is clad in vertical gray metal panels. The "1966" engraved limestone date block is located at the east end of the south elevation. The main entrance located at the façade consists of double aluminum and glass doors located within a recessed opening framed with limestone panels. The entrance connects to a masonry pedestrian walkway that leads to the parking lot to the south. The façade and north elevation have mostly paired and one single, fixed aluminum single sash windows, flanked by smooth metal spandrel panels above and below; each set of window and panels is framed by slender limestone mullions. The tall wings at each end have no fenestration. The roof is flat and covered in bituminous and gravel, with metal gravel stops bordering the rooflines.

(236) Hazards

The Hazards building was constructed between 1966 and 1968 in the International Style. It is located in the south-central portion of the NIST campus, at the south side of South Tip Drive, west of Center Drive. 206-Concreting Materials, and three small storage buildings (307, 310, and 422) are located to the east of the Hazards building. The east section of the north elevation is built into a hillside and retaining wall; this section also has two linear rectangular underground structures with flat roofs which extend north side by side into the hillside, transitioning to open concrete shafts. A concrete stairway descends from the hillside and retaining wall adjacent to the northeast elevation. The southeast section of the building faces onto an asphalt-paved area; the rest of the building is generally surrounded by lawns, trees, bushes, and rolling terrain.

This one-story and tall one-story building has an irregular-shaped plan oriented east to west. The south-facing façade is asymmetrical. The foundation is made of poured reinforced concrete. Most of the building is made of reinforced concrete and clad in glazed beige brick laid in a stretcher bond pattern. The concrete walls of the south and west elevations of the west wing, however, are exposed. The building's north (rear) elevation has both glazed beige brick and exposed concrete walls. The main entrance is located in a recessed section near the east end of the asymmetrical facade. It consists of double aluminum and glass doors flanked by side lights and a light above. Above the lights is a limestone slab. A "1966" engraved limestone date block is located to the west of this entrance, which faces onto a granite landing that connects to a concrete pedestrian pathway leading to the asphalt-paved area. The office section near the west section of the façade has several recessed paired, single sash aluminum-framed windows with smooth metal spandrel panels above and below divided by slender aluminum mullions. Most of the north elevation consists of blow out panels. The stepped roof is flat bituminous and gravel and is bordered with gravel stops.

(237 and 238) Non-Magnetic Laboratory

The Non-Magnetic Laboratory consists of two buildings connected by a covered walkway, all constructed between 1964 and 1968. Together, they are oriented north to south. Building 237 is at the south end and built in the International Style and building 238 to the north with no architectural style. The buildings are located west of building 235-NCNR, which in turn is west of Center Drive. The surrounding terrain is generally flat, with lawns and a few trees.

Building 237 is one-story tall with an irregular plan and south-facing asymmetrical façade. The building has a poured reinforced concrete foundation and concrete walls clad in glazed beige brick laid in the stretcher bonding pattern. Located at

the asymmetrical south-facing façade, the main entrance is unsheltered, consisting of double aluminum and glass doors with an adjacent light fixture and metal panel mounted above. The windows at the façade, and east and north elevations are single, fixed aluminum sashes, flanked above and below by smooth metal spandrel panels with slender aluminum mullions. The west elevation has no windows. The roofline of the flat bituminous graveled roof is bordered by metal gravel stops.

Building 238 is three-stories tall with a rectangular plan with an asymmetrical south-facing façade. The building has a poured reinforced concrete foundation and exterior walls clad with vinyl siding. Located at the façade, the main entrance is sheltered by the covered walkway. It consists of double metal doors. Single and paired aluminum windows, with a tall fixed sash paired with a smaller moveable sash below, are at the second and third floors. The west elevation has no fenestration. The roofline of the flat bituminous graveled roof is bordered by metal gravel stops. The covered walkway is built over a concrete path. It is supported by simple rectangular posts as well as several vinyl siding-clad angled braces. The sides of the flat walkway roof are clad with vinyl siding, and the top has bituminous material and gravel. Ducts going between the two buildings are mounted onto the underside of the roof.

Maintenance and Service Buildings

The following are the four maintenance and service buildings:

(301) Supply and Plant
The Supply and Plant building was constructed between 1962 and 1964 in the International Style, with a 2013 addition at the south end. It is located at the northwest side of the campus, between Research, West, Steam, and Service Drives. 303-Service, 420-Storage Building, and 428-Facilities Building are located to the west of the supply and plant building. There is an asphalt-paved parking area to the north of the building next to Research Drive; to the southwest is an asphalt-paved service yard. The surrounding terrain is generally flat, with lawns, trees, and bushes.

This one-story building has an irregular-shaped plan and is oriented north to south. The east-facing façade is asymmetrical. The east-facing section of the building contains the offices, while the others are service sections with loading bays. The original part of the building has a poured reinforced concrete foundation and exterior walls made of red brick laid in a common bond pattern. There is a concrete decorative screen at the part of the north (rear) elevation between the office and service sections. The main entrance is located at the central part of the façade. It consists of double aluminum and glass doors located within a recessed opening clad with limestone; the entrance is sheltered under a short overhanging flat roof with aluminum gravel stops. Most of the office section windows are single, fixed aluminum sashes, flanked above and below by smooth spandrel panels with aluminum mullions. There are also fixed aluminum sash ribbon windows with smooth metal spandrel panels at this section. The roofline of the building's flat, stepped bituminous graveled roof is bordered by metal gravel stops. The addition at the south end consists of two wings; one is one-story and the other a tall one-story height. The exterior walls of the addition are clad with metal panels and red brick. The addition has no other fenestration, and its roof is flat.

(302) Steam and Chilled Water Generation Plant (SCWGP)
The Steam and Chilled Water Generation Plant building was constructed between 1961 and 1964 in the International Style with 1990s and early 2010s additions at the west end. It is located at the northwest side of the campus, at the southwest corner of Steam and West Drives. 305-Cooling Tower and 317-Cooling Tower West are located to the west of the SCWGP building. There is an asphalt-paved parking area to the north of the building and next to Steam Drive; to the south is an asphalt-paved service yard accessed via an asphalt-paved driveway connecting to South Drive. The surrounding terrain is generally flat, with lawns, trees, bushes, and a low retaining wall at the recessed portion of the east elevation.

This building has a nearly L-shaped plan and is oriented east to west, with a north-facing asymmetrical façade. The office section in the middle of the building is one-story and the rest is a tall one-story height. The building has a poured reinforced concrete foundation. The exterior walls are made of red bricks laid in a common bond pattern; there are concrete decorative screens just below the roofline on the east elevation. The main entrance is located at the east section of the façade. It consists of double aluminum and glass doors located within a recessed opening clad with bricks, with a single light located above the door. A "1961" engraved limestone date block is embedded into the wall to the west of the entrance. . The office section is setback and has several aluminum-frame fixed windows flanked above and below by smooth metal spandrel panels. There are

no other window openings. The rooflines of the building's flat, stepped bituminous graveled roof are bordered by metal gravel stops.

(303) Service
The Service building was constructed between 1962 and 1964 in no architectural style, and has an addition under construction at its north end. It is located at the northwest side of the campus, at the northeast corner of Service and Steam Drives. 301-Supply and Plant, 420-Storage Building, and 428-Facilities Building are located to the north and east. The building is surrounded by an asphalt-paved service yard and parking area, with some minimal landscaping involving lawns and trees. The terrain is generally flat.

This one-story building has an irregular plan and is oriented north to south, with a south-facing asymmetrical façade. The building has a poured reinforced concrete foundation. Most of the exterior walls are made of red brick laid in a common bond pattern; a small section in the middle appears to be metal clad. The main entrance is located at the façade. It consists of single metal doors located within a glass enclosed portico with a single light above the door. Another similar entrance, also within a glass enclosed portico, is located at the west elevation. These entrances are sheltered by a wide flat roof that wraps around the façade and west elevation; the roof is supported by simple metal posts. The bituminous graveled roof also shelters some parking spaces at the façade. The façade and west elevation of the office area have single double-hung sash aluminum windows. The other elevations have a few other double-hung as well as fixed aluminum sash windows with smooth metal spandrel panels. The rooflines of the building's flat, stepped bituminous graveled roof are bordered by metal gravel stops. The one-story addition has concrete block walls clad with red bricks.

(306) Building 306
Building 306 was constructed between 1961 and 1964 in no architectural style. It is located at the west side of the campus, at the northwest corner of Service and South Drives. 309-Grounds Maintenance and 311-Grounds Storage Shed are located to the north, and the property line and Quince Orchard Road are to the west. The area within the fencing is asphalt-paved, but there are also lawns, most at the west side. The terrain is generally flat. The substation buildings are located at the east end and consists of an indoor component of the substation connected at its west elevation to an outdoor component. There is one metal rectangular plan gable roof building and two small, metal enclosed open equipment areas at the west section of the enclosure.

The indoor substation component is one-story tall, rectangular in plan, and has no architectural style. It is oriented north to south, and has an east-facing symmetrical façade. The building has a poured reinforced concrete foundation. The concrete walls are clad with red brick laid in a stretcher bond pattern. The building has no windows. The roofline of the bituminous graveled roof is bordered by metal gravel stops. The outdoor substation component is also oriented north to south. It has exposed transformers and other visible elements, and includes two red brick enclosures, one with one room and the other with two, that are open at the west elevation.

Building Predating Campus

(308) Bowman House
The Bowman House was constructed between 1952 and 1953 in the Minimal Traditional style as a single-family residence. The building is located at the west end of the campus, at the southwest end of Bowman Drive leading directly into the asphalt-paved parking lot located west of the house. A driveway circles the house and connects to asphalt-paved pedestrian walkways that lead to the house. Most of the building is surrounded by a wooded area, except on the west side where there are two single-family residences built in 1948 that are located outside the NIST property. There are two wood sheds sheltered by gambrel roofs located near the house, as well as 419-Temporary Building. The Bowman House was originally used by NBS for Building Research Division experiments, and was a daycare center by 1983. It is today vacant. There is a significant 1988 addition at the south (rear) elevation that doubled the size of the building.

The one-story tall house is oriented east to west and has an irregular plan. The asymmetrical façade faces north. The foundation is poured reinforced concrete and the exterior of this wood-framed house is clad with vinyl siding. The primary entrance at the façade consists of a single replacement door, flanked on either side by narrow side lights and paneling. The entrance is sheltered by the primary roof; a concrete ramp with metal hand rails connects the entrance to the adjacent asphalt-paved area. There are several other single door entrances at other elevations. These include one located within an original

enclosed porch and another leading into the basement level, both at the south (rear) elevation of the original house. The windows are all vinyl sash and flanked by fixed vinyl shutters. The multi-gabled roof is clad with asphalt shingles.

Other Elements at the NIST Headquarters

1. *Flagpole* (circa 1966): Mounted east of the Administration Building in a landscaped setting surrounded by a rectangular drive, the circular base of this metal flagpole is inscribed with a quote from George Washington to the Constitutional Convention, 1787: "Let us raise a standard to which the wise and the honest can repair."
2. *Sundial* (first mounted at the original NBS campus in 1948 and moved to Gaithersburg in circa 1966): This bronze sundial on a masonry base is located at the north end of the Administration Building's inner courtyard
3. *Newton apple tree* (planted April 1966): Taken off a cutting from the original tree at the old NBS District of Columbia campus and planted in a plaza located north of the research library in the Administration Building; labeled with a metal plaque with the inscription "Science has its traditions as well as its frontiers"
4. *District of Columbia NBS chemical laboratory 1916 cornerstone*: Placed in 2007 in a plaza located north of the research library in the Administration Building
5. *District of Columbia NBS gates and gateposts* (first constructed at the original NBS campus and moved to Gaithersburg in 1976): Metal gates mounted onto gateposts made of ashlar stone; a bronze "National Bureau of Standards" plaque is mounted on the north side of each post. They are located on North Drive, and are north of the drive leading to the Administration Building
6. *Carbon dioxide tank enclosure*: located between buildings 221-Physics and 223-Materials, just north of an asphalt-paved service yard
7. *Test exposure wall* (first built at the original NBS campus in 1948 and moved to Gaithersburg in 1977): Located north of the west end of Conservation Lane at the south end of the campus
8. *Two baseball fields* (1997-98): Located at the east end of the campus, east of East Drive near the Administration Building
9. *Picnic area with picnic benches and a playground* (established circa 1966, but fixture replacements in the circa early 2000s): Located within a wooded area at the east end of the campus, east of East Drive and west of the baseball fields
10. *Two concrete culverts* (constructed circa 2000): Poured concrete box culverts with wing walls for a swale leading to Long Draught Branch
11. *Stormwater management pond* (constructed sometime between 2002 and 2014)
12. *Aboveground utilities features*: Such as sewer line access
13. *Vinyl coated chain link fencing* (installed circa 2000s and 2010s)
14. *Property signage* (installed circa 1990 to present): Includes 1) circa 1990 and modern metal signs mounted on metal poles located at building primary entrances and 2) modern signs located at the primary entrance at Bureau Drive, at the southeast corner of W. Diamond Avenue and Quince Orchard Road, and along Quince Orchard Road
15. *Campus roads* (1962-65, except for Bowman Drive-circa 1990s): Bureau Drive, North Drive, South Drive, Research Drive, Service Drive, Steam Drive, West Drive, Center Drive, East Drive, South Tip Drive, Conservation Lane, and Bowman Drive
16. *Various parking lots* (mostly 1962-65) associated with buildings
17. *Designed and natural landscaping* (circa 1965-66) including two wooded areas at the southwest section of the property and two sizeable ponds at the east end. The property also consists of a good portion of the landscaping planted by 1966 based on a detailed basic planting plan that included more than 3,000 trees and shrubs (*National Bureau of Standards: Technical News Bulletin*, p. 205) The trees include large deciduous, small and flowering, and coniferous/evergreen ("Materials Planted on N.B.S. Site, pp. [1]-[3]).

Historic Context

The Agency in the District of Columbia

The Gaithersburg location has been headquarters for the National Institute of Standards and Technology (NIST) since the mid-1960s, a Federal agency originally known as the National Bureau of Standards (NBS). The agency's history goes back to March 3, 1901, when NBS was chartered by the United States Congress, replacing the Office of Standard Weights and Measures, a small agency staffed by a small number of employees. The Office of Standard Weights and Measures had been founded in 1836 as part of Coast and Geodetic Survey, that was in turn part of the U.S. Treasury Department (Cochrane, p. 27),

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to ensure standards measures were being used to calculate customs duties on imported goods ("The Lost Hilltop Home of the National Bureau of Standards"). However, the Office's abilities were limited, with no national standards set even while the United States was a leader in scientific and commercial developments; instruments needed to be sent to European laboratories for recalibration. It became increasingly imperative to establish a national standardizing laboratory in the United States (Cochrane, p. 38).

Like the Office of Standard Weights and Measures, NBS was originally part of the Treasury Department and was the first physical science research laboratory for the U.S. Federal government. NBS oversaw scientific and engineering standards for measurements such as length and mass, but also temperature, light and time (*Celebrating our Centennial*, "The Founding"). The agency also conducted tests to establish safety and quality standards for manufactured goods. NBS was founded during a critical time when technology was rapidly changing and products of the industrial age, such as the telephone, airplane, automobile, and electric light bulb, required standardization ("The Lost Hilltop Home of the National Bureau of Standards"). NBS's first director was Samuel W. Stratton, a physicist who held that position until 1923. Stratton was instrumental in initiating and promoting the establishment of the agency, finding and planning a permanent home for the new agency, and continuing to successfully shape its growth (Cochrane, p. 49).

In 1901, NBS temporarily occupied the old Office of Standards Weights and Measures in the Coast and Geodetic Survey building at New Jersey Avenue and B Street in the southeast quadrant of Washington, D.C. (Cochrane, p. 56). However, the facility was limiting, since NBS required a location where there would be no noise, electrical, and light disturbance from traffic, streetcars, and city lights. In addition, the buildings needed to be solid, using twice the number of construction materials as an ordinary office building, with complex and extensive plumbing, heating, and wiring. Ancillary buildings were also needed for engines, pumps, heavy machinery, and fabricating sensitive scientific instruments (Cochrane, p. 45).

In 1903, NBS moved to a new permanent District of Columbia location at Connecticut Avenue and Upton Street in the northwest quadrant. The area was still semi-rural at the time. Reminiscent of a college campus, Neoclassical Revival was its predominant architectural style ("The Lost Hilltop Home of the National Bureau of Standards"). This would be the NBS home for the next six decades, expanding so that its original 7.46 acre size grew to about 70 acres by the 1950s (Kluttz, p. B1). The NBS became part of the newly formed Department of Commerce and Labor in 1903 (Cochrane, p. 68). When these two departments split in 1913, NBS came under the jurisdiction of the Department of Commerce (Cochrane, p. 153).

The NBS campus was showing its age by the end of World War II, after decades of heavy use, lack of proper maintenance, and random growth, especially during the war (Cochrane, p. 503). By 1955 there were 89 buildings, of which 53 were temporary; the average age of the permanent buildings was 30 years and many of the temporary ones had surpassed their life expectancies. Research divisions would often be divided up because there was no area that could accommodate them in their entirety; the average division was housed in eight buildings (Passaglia, p. 475). Attic, cellar, and even hallway and stairwell spaces were used for laboratory work ("New Center for U. S. Standards," p. 27).

In addition to the aging infrastructure, science and technology had changed tremendously since the turn of the twentieth century when the NBS facility was constructed, a time when the space and computer age was still in the distant future. Because of World War II era developments in nuclear physics, atomic energy, electronics, mathematics, aviation, and missile research, NBS was at the American forefront of a post-war scientific revolution (Cochrane, p. 510). The importance of science and technology for national welfare and the Federal government's role in it became clear, bringing an urgent demand for new and more accurate standards, better measurement methods, and greater availability of data on materials' properties (*National Bureau of Standards: Technical News Bulletin*, p. 198).

New space was also needed for the mechanical engineering laboratory for thrust measurements for new missiles; the radiation laboratory, for safety studies of radiation exposure; and a building, for programs on neutron and fission physics measurements, radiation damage, and radioisotopes applications. All of these were applications no longer practical or possible in the Washington, D.C. laboratories (Cochrane, pp. 507-08). NBS's growth during this time was also reflected in its establishment of a laboratories facility in Boulder, Colorado, in 1954 (Cochrane, p. 472).

Modernizing the existing District of Columbia property was initially considered, but its limitations were soon apparent. For one, the former pastoral lands surrounding NBS were now developed with residential neighborhoods, creating the same

mechanical, electric, and atmospheric disturbances the agency had escaped decades earlier (Cochrane, p. 504). Vulnerability to an atomic attack during this nuclear age was also a consideration, being only a few miles away from the center of the nation's capital (Passaglia, p. 475). In addition, the existing property would not be able to accommodate much needed newer technology such as a 12 million pound force machine (*National Bureau of Standards: Technical News Bulletin*, p. 201).

Move to Gaithersburg

Led by its Director Dr. Allen V. Astin, NBS began approaching the U.S. Congress in 1956 for funding to move to a new location. Austin served as Director from 1951 to 1969, after coming to NBS as a scientist during the early 1930s. He became chief of the Bureau's electronics and ordnance division. He would play a leading role in the development of the proximity fuse, a critical invention for the allies during World War II (Schooley, *NIST Culture of Excellence Article #2* and Sullivan). While the House Appropriations Committee denied a $2.75 million request to buy land and draft plans for a new facility, the Senate Appropriations Committee recommended $930,000 to begin the process, but only if NBS selected a site. In addition to following their own requirements of a property at least 20 miles away from the center of the District of Columbia and not in the Washington-Baltimore corridor, the General Services Administration (GSA) searched for a site based on NBS requirements that the property must be at least 400 acres; relatively level and reasonably high; accessible by highway; and convenient to the homes of most of the NBS scientists.

The current Gaithersburg site was formerly called Bellevue, a farm owned by the Diamond family (The City of Gaithersburg, p. 28); it was the first choice for both GSA and Dr. Astin (*National Bureau of Standards: Technical News Bulletin*, p. 201). Many of the NBS professional staff lived nearby at the Maryland and District of Columbia border, and the property was readily accessible to Interstate 70S/U.S. 240 (later renamed Interstate 270).

Purchased on July 6, 1956, the new location was about 20 miles northwest of the existing NBS facility, and the 579.5-acre size allowed for its buildings to maintain isolation while the property could accommodate future growth (*National Bureau of Standards: Technical News Bulletin*, pp. 198 and 204). Similar moves to rapidly growing District of Columbia bedroom communities were also being made at the time by the Atomic Energy Commission, another Federal agency, to nearby in Germantown, as well as large corporations such as IBM, Fairchild Industries, and Comsat (Bredemeier, p. A8).

With the Gaithersburg location selected, Congress approved funds for preliminaries such as the site survey, purchase of the land, and preparation of plans and specifications (Passaglia, pp. 477). The property was located in an agricultural setting with the same quiet and vibration-free appeal the Connecticut Avenue location once had. NBS worked with Montgomery County Council to ensure no unrestricted industrial zoning would take place within a mile of the new facility (Anderson, p. B1). The property cost about $750,000, with expenses to be about $70 million for the buildings and $45 million for special facilities and equipment (Cochrane, p. 505).

Voorhees, Walker, Smith, and Smith, a New York City-based architectural firm was awarded the GSA contract in late 1956. Their extensive experience with post-World War II large research laboratory design included laboratories for Dupont, General Electric, Ford, IBM, and Bell Telephone Laboratories. Staff from NBS and the architectural firm visited many of the newer laboratories, and also welcomed NBS staff recommendations. Voorhees, Walker, Smith, and Smith worked closely with the Public Buildings Service division of GSA for several months making studies of feasible configurations for the new headquarters, including one which would have resulted in a single building with a hexagon-shaped plan. It was determined, however, that a single building could not work because some of the activities were not compatible, and the facility would be more economical as several buildings. Therefore, a multi-structure campus was designed (*National Bureau of Standards: Technical News Bulletin*, pp. 201-02). The architects presented a model of the proposed facility in June 1960, six months after the construction budget was approved by the U. S. Congress for fiscal year 1961. The model was released to the public in the newspapers (Passaglia, p. 483).

The campus was built in five phases, beginning with initial site work (including fencing, paving, and utility installation), a central boiler plant for the complex, and an engineering mechanics laboratory. GSA awarded the first construction phase to the Paul Tishman Company based in New York City. Ground was broken for the engineering mechanics laboratory on June 14, 1961, officiated by Secretary of Commerce Luther M. Hodges who used the same gold-plated shovel used for the 1915 chemistry building groundbreaking ceremony at the original NBS location (Passaglia, p. 483).

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The second phase began in 1962 by the Blake Construction Co., Inc. of Washington, D.C., constructing the administration building, a radiation physics laboratory, shops, a service building, and supply and plant buildings. Site and road work and outside utilities installation were also done during this phase. J. W. Bateson Co. of Dallas, Texas, was the construction company for the third and fourth phases. The third phase began in 1963 and added seven general purpose laboratories. The fourth phase started three years later to include special purpose laboratories (sound, hazards, industrial, and concreting materials). The fifth phase included a fluid mechanics building, nonmagnetic laboratory, and gatehouse. The sound, hazards, industrial, concreting materials, and non-magnetic buildings were completed in 1968, with fluid mechanics in the following year (Passaglia, p. 489). When finished, the new NBS facility would have 26 buildings. It also appears an additional ten acres were acquired between 1966 and 1970 to make the campus its current 579.5 acre size (Schooley, *Responding to National Needs*, p. 876).

The first permanent employees, part of a skeleton crew for the plant division, started work at the new location on March 27, 1962. By October 1963, staff continuously maintained the steam and chilled water generation plant. The first scientific staff moved in during May 1963. Office of Weights and Measures and Engineering Mechanics Section staff moved in during October of that same year. The administration building and physics building were occupied by 1965 (Passaglia, p. 488), with the general purpose laboratories staff and library relocated in 1966 (Passaglia, p. 489).

A March 3, 1966, ceremony commemorated the move to Gaithersburg of the two key measurement standards, the meter bar and the kilogram weight, taken from the vault of the old NBS location; NBS had obtained the standards in 1901 when the agency was established (Browning). The new NBS headquarters was dedicated on November 15, 1966, at the courtyard facing the library, followed by self-conducted tours of the laboratories. By then, the labs had already been in use for about three years (Kelly). The dedication was followed by a two-day symposium on "Technology and World Trade" (*National Bureau of Standards: Technical News Bulletin*, p. 198).

NBS was designed to be like a university campus with its multiple individual buildings, intended to be attractive to scientists and engineers and stimulate scientific productivity (Passaglia, p. 480 and "Summary of Files on Gaithersburg," p. [1]). The central administration building was the tallest with its eleven-story tower, housing all activities that were office-related only. It had the Director's office, most of the administrative support offices, meeting rooms, two auditoriums, a library, a small museum, and dining facilities, and was surrounded by a shops building and seven general purpose laboratory buildings (*National Bureau of Standards: Technical News Bulletin*, pp. 203-04). These buildings, housing metrology, physics, chemistry, materials, polymers, instrumentation and building research, were connected via enclosed above ground corridors. The general purpose laboratories were built to be nearly identical to one another, at three stories in height (Passaglia, p. 487). The labs were staggered so that each could receive maximum light, with offices on the outside and labs on the inside (*National Bureau of Standards: Technical News Bulletin*, p. 207). Construction was modular, with the basic office at 11 ft. x 16 ft. and laboratory module at 11 ft. x 24 ft, meant to promote flexibility (Passaglia, p. 487).

The Gaithersburg campus included the capability for basic research into the composition of matter and how radiation affects the basic properties of materials (*National Bureau of Standards: Technical News Bulletin*, p. 199). A one million pound dead weight machine, built into the engineering mechanics building, was an important new tool critical for the United States space program to measure the weight and thrust of satellites. This equipment allowed scientists to more accurately check force-measuring devices such as those used by NASA to measure rocket thrust. Before the move to the new facility, thrust was being measured by equipment from the 1920s which had a 100,000 pound capability ("New Center for U. S. Standards," p. 27). The engineering mechanics building would also house a 12 million pound force machine, too large to be located at the old location. The one million pound dead weight machine is still located at the NIST headquarters; the 12 million pound force machine is as well, although it has been mothballed (Hayes).

The linear electron accelerator (linac), no longer in place, was another highlight of the new facility. The device sprayed a beam of electrons, producing the densest electron beam of any machine known at that time. Used in the fast growing industrial field of radiation processing, the device was used to sterilize pharmaceuticals, cure plastics, vulcanize rubber, and pasteurize food ("New Center for U. S. Standards," p 27). NBS determined the accurate levels of radiation for this processing.

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Additional responsibilities were given to NBS in 1965 as the central repository for Federal government unclassified scientific reports at the Clearinghouse for Federal Scientific and Technical Information and make them available to private industry. The new National Standard Reference Data System was used to centralize the data ("Expanded Role Assigned to Bureau of Standards," p. A10).

With its rural setting, the new location was similar to how the original facility was when it was first established. However, this facility was significantly larger, 575 acres as compared to the 70 acres of the original location (Kluttz, p. B1). The grounds were carefully planned, with a detailed basic planting plan including more than 3,000 trees and shrubs that had already been planted by 1966 (*National Bureau of Standards: Technical News Bulletin*, p. 205). The plantings on the graded former farm land included large deciduous, small and flowering, and coniferous/evergreen trees; evergreen and flowering shrubs; azaleas and rhododendron; ground covers; and daffodil and narcissi bulbs. Trees with large numbers planted include red maple, red oak, white dogwood, white pine, and Scots pine ("Materials Planted on N.B.S. Site"). Ponds were also created at the east end of the headquarters, although the two wooded areas already existed. The larger wooded area to the southwest was preserved as an open, flowering wooded area with winding paths, with azaleas planted in the sunny areas. The other smaller wooded area at the east end of the property was kept as a glade with light shade, grass, and picnic benches (*National Bureau of Standards: Technical News Bulletin*, p. 205). Landscape planning was important; as an NBS committee formed during property planning indicated, "The grounds must possess the kind of pleasant garden-type atmosphere that we have come to associate with a campus ("Summary of Files on Gaithersburg," p. 2)." In 1992, the property boasted 400 acres of lawn, 67 acres of wooded area, two four-acre ponds with mallards, black ducks, and Canada geese. During that same decade, the azaleas and rhododendrons were replaced with deer-resistant shrubs, plants, and ground covers. The groves between the two ponds were planted between 1965 and 1978 with the 53 officially designated trees of the states, the District of Columbia, Puerto Rico, and the Virgin Islands (Passaglia, p. 490 and Hayes).

During this era of the U.S. Interstate Highway System and the dominance of the automobile, each building had its own parking area connected to a system of roads within the campus. Electricity was furnished by an on-site substation owned and operated by the Potomac Electric Power Company (*National Bureau of Standards: Technical News Bulletin*, pp. 203-04). One existing building was retained in the final facility and continues to stand today, the Bowman House, constructed in the early 1950s. The former residence was originally used for experiments by NBS's Building Research Division to test the effectiveness of insulation in older homes. In 1983 it was converted to a daycare center, with an addition built onto it five years later (Schooley, *Responding to National Needs* pp. 180-81). The building is today vacant and is under contract to be demolished.

The apple tree planted in the Administration Building courtyard in April 1966 is reputed to be a direct descendant of the tree attributed to Sir Isaac Newton and gravity. It grew from a cutting taken from the tree at the old NBS location in the District of Columbia; while this original tree has since died, a cutting was taken from the Gaithersburg apple tree to grow another tree at the Washington location (Martin).

Another feature of the original campus brought over to the new location at that time was the 1948 sundial originally installed by staff in honor of Lyman J. Briggs, who was NBS Director from 1932-45 (*Celebrating our Centennial*, "From NBS to NIST"). The original sundial designer, R. Newton Mayall, provided advice during the move to the new administration building courtyard. To celebrate NBS's 75th anniversary in 1976, the main entrance gates and pillars of the District of Columbia campus were moved to the Gaithersburg location (Passaglia, p. 485); a section of pillars and fencing still remains in Washington (Martin). In the following year, a test exposure wall, constructed at the Washington NBS location in 1948, was also moved to Gaithersburg (Passaglia, p. 491). Except for the Newton apple tree and sections of pillars and fencing, all other elements associated with the old facility have been demolished (Martin). The agency was renamed the National Institute of Standards and Technology in 1988, and continues to occupy this Gaithersburg location as its headquarters.

The General Services Administration

The GSA was established in reaction to the significant expansion of the Federal government during the Great Depression and World War II, a growth trend that did not end after the war (Robinson and Foell, p. 28). The Federal agency was established as the result of the Federal Property and Administrative Services Act of 1949 (63 Stat. 377). Section 210 of this act (40 USC 490) gave the GSA administrator authority to operate, maintain, and protect Federal buildings. This person was also authorized to acquire land, contract for the preparation of plans and specifications for Federal facilities, and construct and equip these

buildings. The Public Buildings Service division was created to handle all real-property operations (Robinson and Foell, p. 29). Passage of the Public Buildings Act of 1959 meant GSA was responsible for Federal building construction (Robinson and Foell, p. 11). Following this act, design and construction rates increased dramatically (Robinson and Foell, p. 41). The 1950s, 60s, and 70s were decades of extensive Federal government expansion, with the number of Federal employees and budget, and GSA buildings greatly increasing. Between 1960 and 1976, GSA had more than 700 building projects across the country (Robinson and Foell, p. 6). The 1960s was especially an especially busy decade for construction, with 285 projects completed, although this was followed by a period of decreased building due to budget constraints, inflation, and military action in Vietnam (Robinson and Foell, p. 52).

The more common practice of hiring architects and designers from the private sector, rather than using a Federal government architect, was an important change that came about during the early years of the GSA (Robinson and Foell, p. 36). Employing Voorhees, Walker, Smith, and Smith to design the NIST campus is reflective of this trend. It was becoming harder to see the differences between public and private buildings, and an increasingly pro-business American climate saw the government as a business. GSA oversaw and managed the work being conducted by the architectural and engineering firms (Robinson and Foell, pp. 36-37).

International Style

The International Style began in Western Europe during the 1920s, with buildings designed by such iconic architects as Walter Gropius, Ludwig Mies van de Rohe, Richard Neutra, and Rudolf Schindler. The style was originally coined in a book by Henry-Russell Hitchcock and Philip Johnson entitled *The International Style* that accompanied an exhibition held at the Museum of Modern Art in New York City in 1932 (Robinson and Foell, p. 12). The style did not become popular in the United States, however, until the decades after World War II when heavy building demands in both the public and private sectors helped make economy and functionality priorities over architectural and physical distinction (Robinson and Foell, pp. 9 and 31). The style was commonly applied to office skyscrapers and other high rise buildings. Popular building materials included concrete, plastics and aluminum, which were extremely economical and well-suited to meet this era's austere architectural trends (Robinson and Foell, p. 31). Austerity was in fact a goal during planning to decide the general motif of the new NIST campus (Passaglia, p. 480). The minimal architectural ornamentation of Modern era Federal government buildings was in sharp contrast to the opulent examples from earlier generations (Robinson and Foell, p. 9).

The International Style is characterized by the absence of ornamentation, box-shaped buildings, expansive windows, smooth wall surfaces, and cantilevered building extensions (Robinson and Foell, p. 14). These character-defining features are present at the NIST buildings built during the original 1960s construction phases. Their flat roofs, lack of ornament, and interlocking rectangular wings enhance their box-shaped characteristics. Spandrel panels at the windows are smooth and unadorned, and together help to identify the office spaces located behind them. While brick was used for the exterior wall surfaces of the buildings, including the administration building and general purpose laboratories, most of it was a glazed beige color laid with a mortar mix that matched the brick color; this helped to create the illusion of smooth wall surfaces.

The administration building is the most representative example of the International Style at the NIST headquarters, with its tall rectangular tower resting on a one-story boxy base, and a visually prominent cantilevered rectangular portico projecting out from the primary entrance. Even its courtyard pond and the low, simple bridge that crosses over it are rectangular forms. The administration building makes extensive use of floor to ceiling glass surfaces to connect exterior and interior spaces, such as at the north wall of the lobby, wall of the cafeteria facing onto the courtyard, and library wall facing onto a plaza. These glass walls connected the interiors to these prominent exterior spaces. The corridors connecting the central buildings on the campus, namely the administration building, general purpose laboratories, and the shops, were also built with glass wall surfaces. It was also common practice to continue the exterior wall surfaces and planters into the interior through transparent surfaces, as can be seen at the entrances into the administration building lobby where the white marble walls continue from outside to inside the building. The building has, however, two nods to the more fanciful Googie style, with the zigzag-shaped roofline of the covered walkway connecting to building 225 and the wave-shaped cafeteria roof. By applying compression and tension, engineers had discovered different shapes can give extra strength to a thin concrete shell (Hess, p. 195).

Modern era public spaces like entrances and lobbies were less grand compared to their predecessors. While the primary entrance into the NIST administration building has a prominent portico, it is located below a narrow side elevation of the tower

with a blank brick wall and no fenestration. Instead, public areas like entrances and lobbies were often finished in higher quality materials as compared to the general office spaces for a subtle means of distinction (Robinson and Foell, p. 85). The administration building has granite paving and steps at the primary entrance; and marble applied to the columns supporting the cantilevered portico, exterior walls flanking the entrance, and the lobby interior wall surfaces. The presence of the large auditorium inside is identified on the exterior through the use of limestone-clad walls and rectangular marble panels on its east elevation.

While the new NBS facility would meet much needed technological expectations, its architectural design was perhaps less impressive to contemporary critics. Wolf Von Eckardt, noted art and architecture critic for *The Washington Post*, stated in his 1966 review of the new Gaithersburg complex that "little of the excitement and glamor of technological progress [is] reflected in the building's architecture," and that it "sets a standard only for another low in bureaucratic architecture (Eckardt, p. B1)." Federal buildings of this time were considered massive, severe, and disengaged from their surroundings, "debased, reductive" versions of the Modern aesthetic. Instead of being welcoming gathering spaces, the outdoor plazas often incorporated into them were seen as barren and inhospitable (Robinson and Foell, p. 9). However, a recent assessment of GSA buildings from the 1950s, 60s, and 70s notes that while many of these buildings lack architectural ornamentation and grandeur from previous eras, many have noteworthy qualities that should be evaluated as products of their time (Robinson and Foell, p. 16). In addition, Federal buildings from the 1960s were considered to be successful, with higher design quality as compared to those immediately prior and during later eras. Many mid-1960s buildings were seen as containing excellent juxtaposition of materials and forms. This includes the practice of placing a long, low building next to a tall office tower set on a landscaped plaza, a general imitation of the United Nations Headquarters in New York City (Robinson and Foell, p. 51); this is a design seen with the administration building at the NIST headquarters.

Significance Evaluation

The NIST headquarters complex was evaluated for significance under National Register of Historic Places (NRHP) Criteria A, B, C, and D using the guidelines set forth in Section VI of National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation*. The Modern building evaluation guidelines and GSA eligibility assessment tool in *Growth, Efficiency, and Modernism: GSA Buildings of the 1950s, 60s, and 70s* were also used during the evaluation.

Criterion A

The NIST headquarters in Gaithersburg is the culmination of the growth of a government agency that has played an important role in the development of American science and industry through standardizations of measurements, temperature, light, and time. The campus is also noted for tests to establish safety and quality standards for manufactured goods. By the mid-twentieth century, a new location was much needed for an agency that had outgrown its previous home in the District of Columbia. The Gaithersburg facility met the challenges of the explosive developments in science and technology during that time, which included America's role as a leader in the space program. The new headquarters was carefully planned to achieve important goals; it was built to be like a university campus, with buildings arranged in a spacious, park-like setting, together conducive for creative work and teamwork by scientists and engineers. Original planners of the campus found it important to have a pleasant garden-type atmosphere associated with a campus. The property as a whole has integrity to convey significance under this criterion because it retains its original campus layout and design, and the character-defining features of individual buildings. The property also retains characteristics reflective of its scientific work. For example, six of the seven general purposes laboratories still have offices on the outside perimeters of the building with laboratories inside, along with their original steel modular walls. Some important equipment, such as the one million pound dead weight machine, remain intact from their original installations. In addition, the campus is a significant symbol of the Federal presence in the city of Gaithersburg; NIST has also helped spur the city's successful development and growth in recent decades. Therefore, the NIST headquarters is eligible under Criterion A for its association with these patterns of events.

The period of significance under this criterion for this nationally significant historic district is from 1963, when the first scientific staff moved to the facility, to 1969 because this is the end year based on the common cultural resource management practice of lowering the age limit for NRHP eligibility from 50 years to 45 years to account for lead-time between the preparation of environmental documentation and actual project construction.

National Institute of Standards and Technology Headquarters (M: 20-47)

Criterion B
Allen V. Astin was Director of NIST from 1951 to 1969, during the critical time when the Gaithersburg headquarters was being planned and established. However, this association with the property alone does not make him a significant individual in the past. Therefore, the property is not eligible under Criterion B.

Criterion C
Original construction of the NIST headquarters in Gaithersburg began in 1961 and ended in 1969 with 26 buildings, most designed in the International Style. The practical, scientific nature of the NIST Federal agency is highly compatible with the equally functional characteristics of the architectural style. The NIST headquarters buildings lack ornamentation; even while design elements are present, these also serve practical purposes. For example, while the cantilevered portico at the primary entrance to the Administration Building is visually striking, its main purpose is to provide shelter between the building and the adjacent driveway. The layout of buildings (Administration Building, general purpose laboratories, and Shops) linked by connectors, and interlocking wings of individual buildings emphasize the boxy shapes of the International Style. The floor to ceiling glass-enclosed connectors also visually link interior spaces with the exterior. The Administration Building's relationship to the courtyard and library's relationship with its adjacent plaza are other examples of this outside/inside connection. While much of the exterior walls of the original buildings are made of brick, the bricks were glazed, beige in color, and laid in matching mortar to create the illusion of smooth wall surfaces. Because this campus is a mature product of the automobile age, the buildings are readily accessible to parking lots which are in turn connected to roads on the property. The carefully planned landscaping was part of a detailed basic planting plan meant to enhance the property's university campus-like qualities. At an expansive 579.5 acres, the landscaped buffer protects the laboratories from potentially disruptive sounds and vibrations coming from their surroundings.

While new buildings have been constructed throughout the property, many at the south and western ends, the campus is largely intact both in terms of size, layout, and the original pre-1970 building design. In their generally unaltered state, the buildings and property still retain their character-defining features. Therefore, the NIST campus exemplifies the GSA's interpretation of the Modernist design philosophy, making effective use of Modern materials, components, and site design; together with the carefully planned landscaping, the buildings created an atmosphere conducive to creative thinking. The Administration Building is also individually eligible as a successful example of the GSA's application of the International Style; it is substantially intact with regard to its original architectural design, period of significance, and historic character, preserving its significant qualities of integrity. Therefore, the NIST headquarters is eligible under Criterion C.

The period of significance under this criterion for this nationally significant historic district is 1969 when the last original building (202-Fluid Mechanics) was finished and therefore the original campus was completed. The Administration Building is also nationally significant and has a period of significance of 1965 when it was completed and first occupied.

Criterion D
The buildings on the property were constructed by commonly known techniques, tools, and materials and are unlikely to contribute any additional information to our understanding of human history or prehistory, so the NIST headquarters is not eligible under Criterion D.

Based on the evaluated criteria and the designation guidelines set forth in *Growth, Efficiency, and Modernism*, the NIST headquarters complex is eligible for listing in the NRHP under Criteria A and C.

Integrity Assessment

The NIST headquarters was evaluated against the seven aspects of integrity, namely location, design, setting, materials, workmanship, feeling, and association, as outlined in Section VIII of National Register Bulletin 15, *How to Apply the National Register Criteria for Evaluation.*

The property retains its integrity of location.

The NIST headquarters was established in the mid-1960s when it was still surrounded by farms. Since that time, the surroundings have changed rapidly to include suburban developments such as townhouses and shopping centers. However, the

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evaluated property's landscaped buffer, between its buildings and any outside development, has helped the campus retain its original characteristics. While new buildings and other elements have been added during subsequent decades, they have not changed the original visual characteristics of the property, at least in part due to the large size of the campus. The general layout and design of the headquarters, including the streets and parking areas, and of the individual original buildings retain their historic characteristics. Therefore, the property retains an excellent to good level of its setting, feeling, and association.

The property retains 24 of the 26 buildings original to the campus; these were mainly constructed during the 1960s, but includes one early 1950s single-family residence. The original gate house and cooling tower have been demolished. The remaining individual buildings have generally been unaltered, maintaining their character-defining features, including glazed brick exterior walls, original metal windows and doors, and flat roof design. While the exterior of the chemistry building remains intact, its interior was completely renovated in 2006. The other original buildings, however, generally retain their interior features. The most architecturally notable building on the campus, the Administration Building, retains high exterior and interior integrity that includes some notable spaces as the courtyard, lobby, auditoriums, cafeteria, and library. The property as a whole retains its overall original design, including its landscape design, parking lot and street configurations, and placement of individual buildings. Regarding the landscaping, a comparison of a 1970 aerial photograph against current aerials makes it apparent that while some plants may have been removed or added since the original planting, the overall landscaping design has been maintained, with many lawn areas, and mature trees intact. While there has been modern construction on the property, its presence does not substantially diminish the NIST headquarters' integrity, partially due to the large size of the property. Therefore, the property retains an excellent to good level of its design, materials, and workmanship.

Boundary Description and Justification

The eligible boundary for the NIST headquarters is the same as the property's current parcel lines and contains 579.5 acres. This is the land on which the campus stood on when it was originally completed.

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Prepared by: Christeen Taniguchi, RK&K, LLP Date Prepared: July 28, 2014

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100 Bureau Drive
Gaithersburg, Maryland

Contributing and Non-Contributing Elements

The following are the contributing and non-contributing elements of the National Register of Historic Places (NRHP)-eligible National Institute of Standards and Technology (NIST) headquarters, located within the area of potential effects (APE) for the Corridor Cities Transitway Bus Rapid Transit Project. They are generally listed from north to south. The eligible historic district is 575 acres and with periods of significance ranging from 1963 to 1969. Elements extant during the periods of significance and retaining integrity are considered contributing to the NRHP significance of the historic district:

National Institute of Standards and Technology
Contributing (C) and Non-Contributing Elements (NC)

#	Bldg#	Element	Build Year	Integrity	C/NC
1	103	Visitors Center	Completed 2009	Yes	NC
2	104	Gate House	Completed 2009	Yes	NC
3	320	CCC	Completed circa 2013	Yes	NC
4	233	Sound	Constructed 1965-68	Yes	C
5	318	ES Consolidated Facility	Completed circa 2014	Yes	NC
6	319	ES Storage Building	Completed circa 2014	Yes	NC
7	301	Supply and Plant	Constructed 1962-64 with an addition completed in 2013 at the south end	Yes	C
8	428	Facilities Building	Constructed circa 2009	Yes	NC
9	420	OFPM Storage Building	Constructed 1996, moved to current location in 2011	Yes	NC
10	303	Service	Constructed 1962-64	Yes	C
11	309	Grounds Maintenance	Constructed 1974-76	Yes	NC
12	311	Grounds storage shed	Completed 1990	Yes	NC
13	306	Building 306	Constructed 1961-64	Yes	C
14	307	Materials Processing Storage	Constructed 1970-71	Yes	NC
15	N/A	Two concrete culverts for a swale	Constructed circa 2000	Yes	NC
16	N/A	Stormwater management pond	Constructed sometime between 2002 and 2014	Yes	NC
17	N/A	Vinyl coated chain link fencing	Installed circa 2000s and 2010s	Yes	NC
18	N/A	Property signage at street side and at building primary entrances	Installed circa 1990 to present	Yes	NC
19	N/A	Hardscape including Bureau Drive, North Drive, Sound Drive, Research Drive, Steam Drive, South Drive, Service Drive, West Drive, driveway to building 306, parking lots, and service yards	Constructed circa 1962-65	Yes	C
20	N/A	Bowman Drive	Constructed circa 1990s	Yes	NC
21	N/A	Designed and natural landscaping, including lawns and trees: Within the APE, most of the original NIST landscaping remains, including a wooded area that pre-existed the campus and was incorporated into the campus design. The	Established circa 1965-66	Yes	C

National Institute of Standards and Technology
Contributing (C) and Non-Contributing Elements (NC)

#	Bldg#	Element	Build Year	Integrity	C/NC
		APE includes lawn areas, as well as mature trees such as various oaks and pines, red maple, crab apple, and America linden that were part of the original planting. A few clusters of trees are newer: at the southeast corner of W. Diamond Drive and Quince Orchard Road; on the NIST side of the fence near Quince Orchard Road and North Drive; near the stormwater management pond; the northern portion of trees west of Building 320; and trees north of Building 309.			

Summary of findings:

6 Contributing elements
15 Non-contributing elements

National Institute of Standards and Technology Headquarters (M: 20-47)
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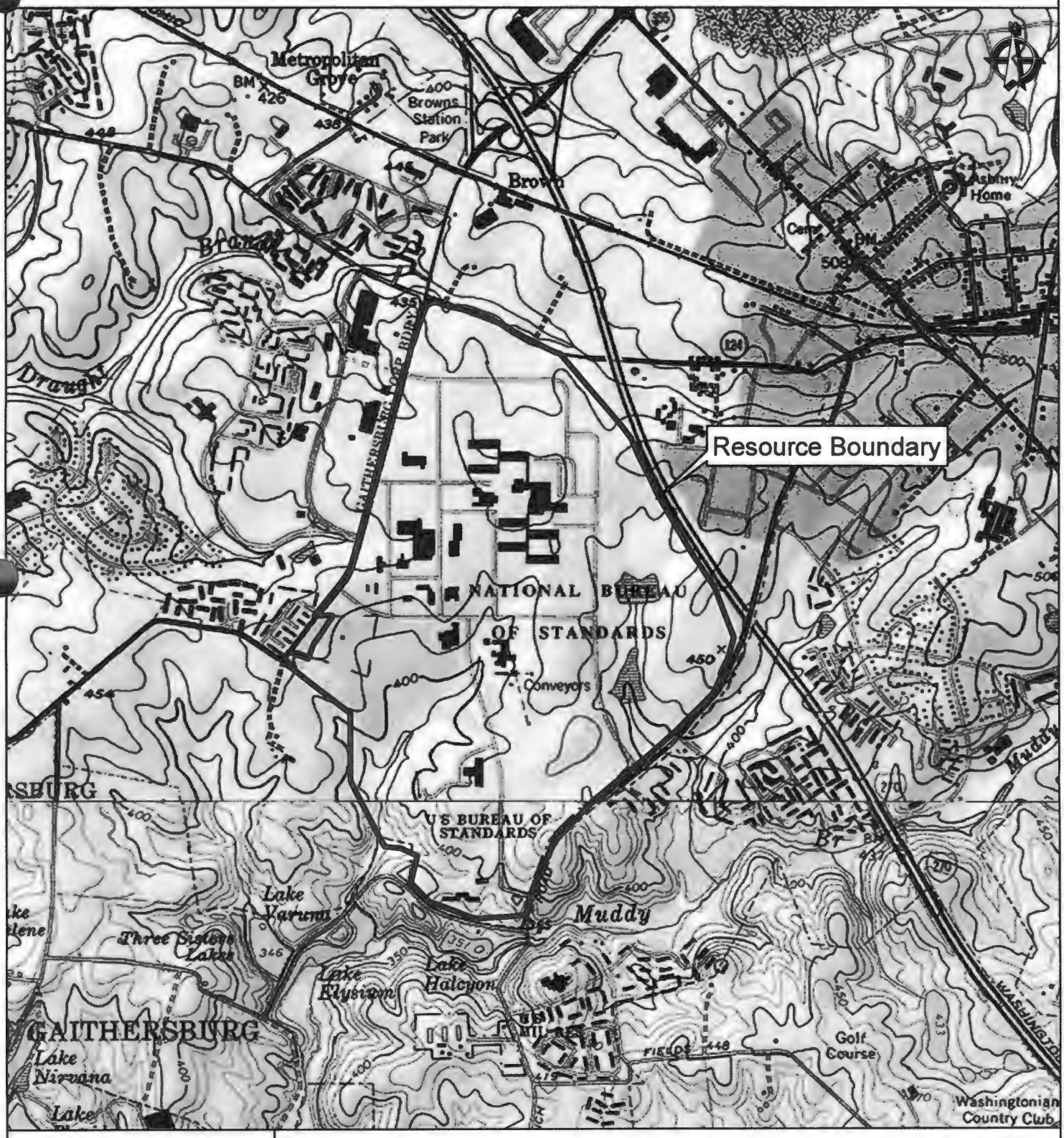
Gaithersburg, Maryland



MTA Maryland

CCT Corridor Cities Transitway

Location Map

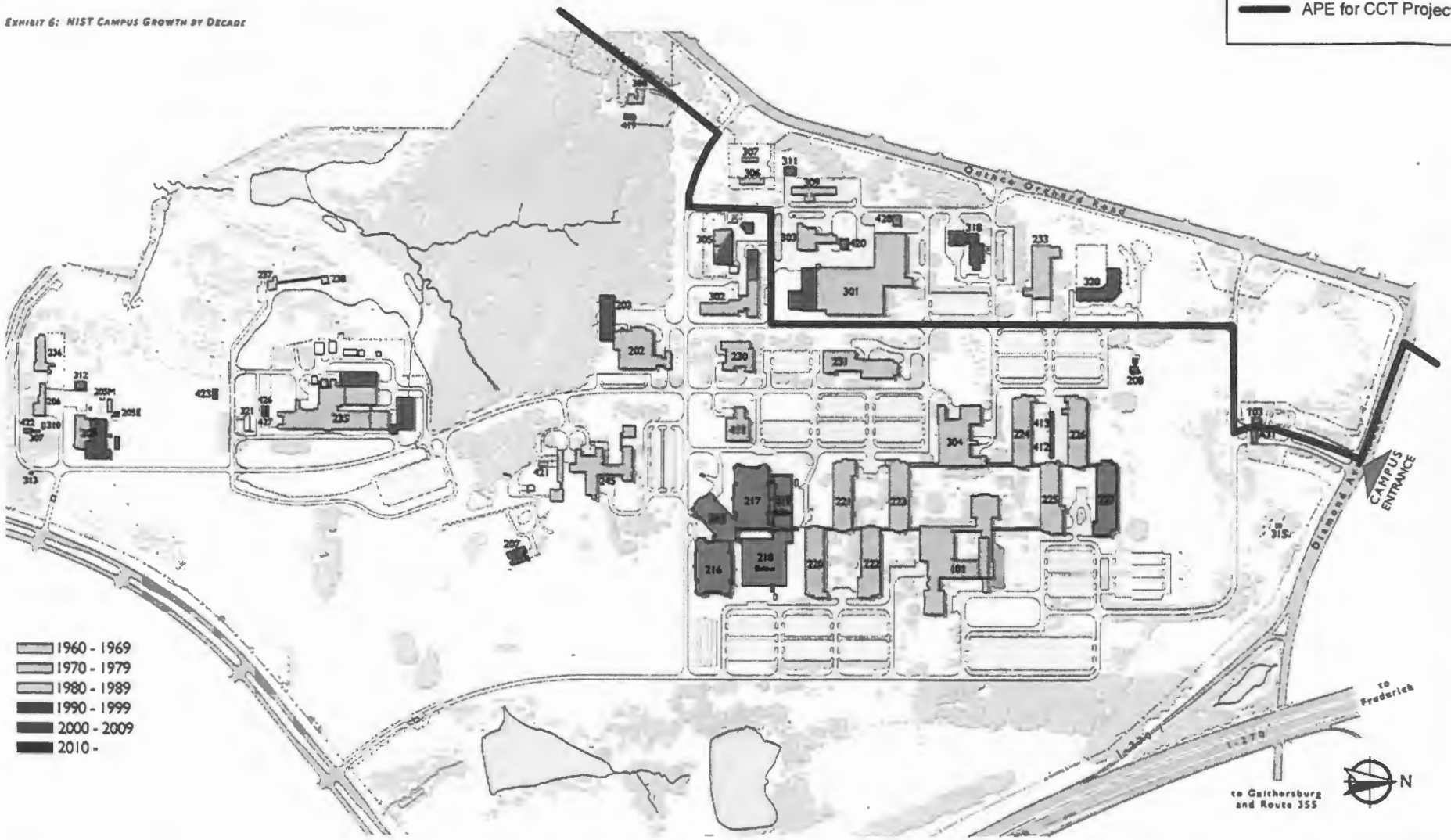
September 2014

0 500 1,000 2,000 3,000 4,000 Feet

Source: Gaithersburg and Rockville USGS 7.5' DRG

National Institute of Standards a Technology Headquarters (M: 20-47)
100 Bureau Drive, Gaithersburg, Maryland

EXHIBIT 6: NIST CAMPUS GROWTH BY DECADE



The National Institute of Standards and Technology
Facilities Planning and Associated Studies for NIST Facilities
NB193000-A-04282

MTA Maryland
CCT Corridor Cities Transitway

Site Map

July 2014

National Institute of Standards and Technology Headquarters (M: 20-47)
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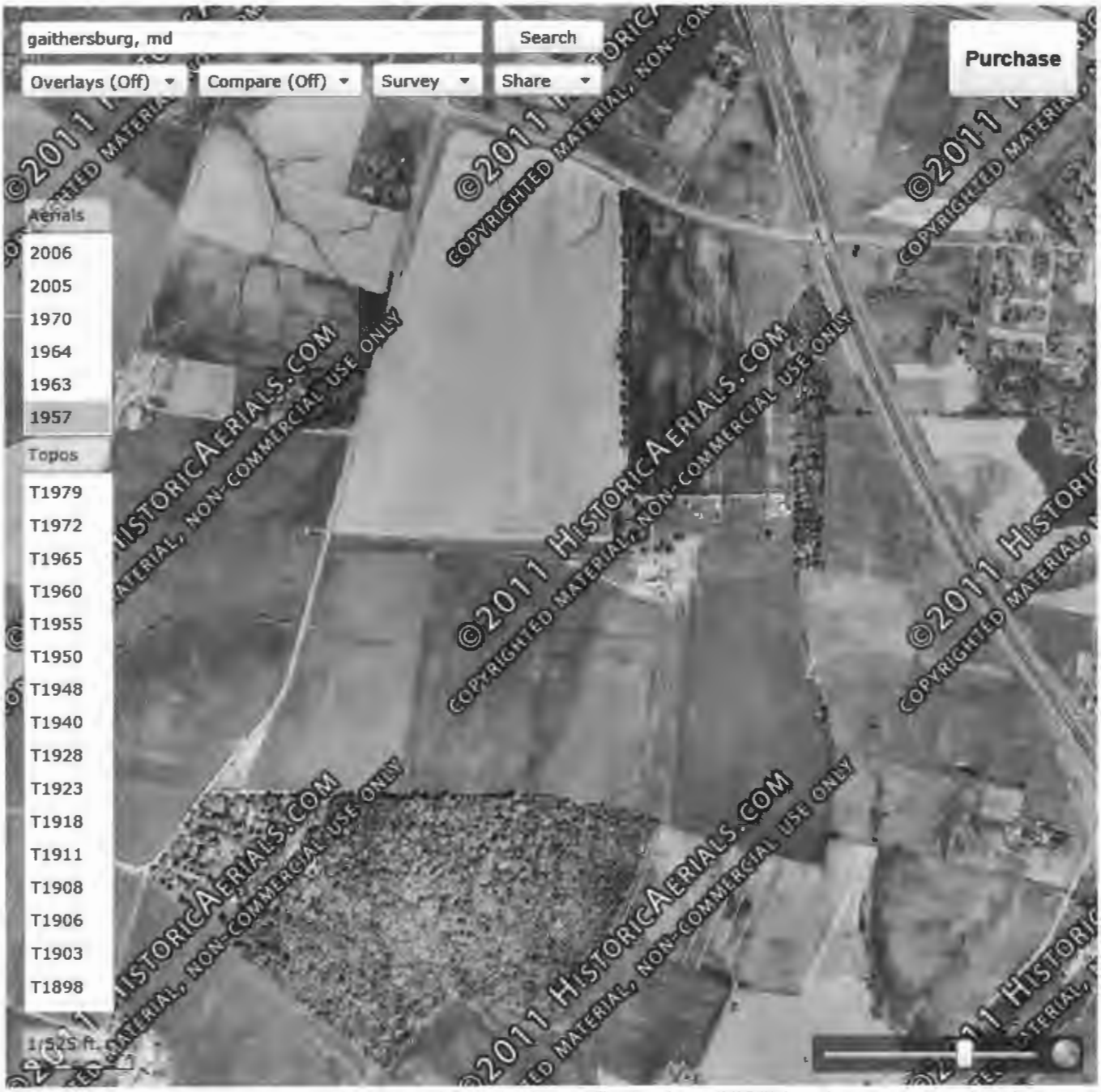

1957 aerial photograph of the National Institute of Standards and Technology (NIST) headquarters area (northern portion) when it was still Bellevue, a farm owned by the Diamond family (www.historicaerials.com)

National Institute of Standards and Technology Headquarters (M: 20-47)
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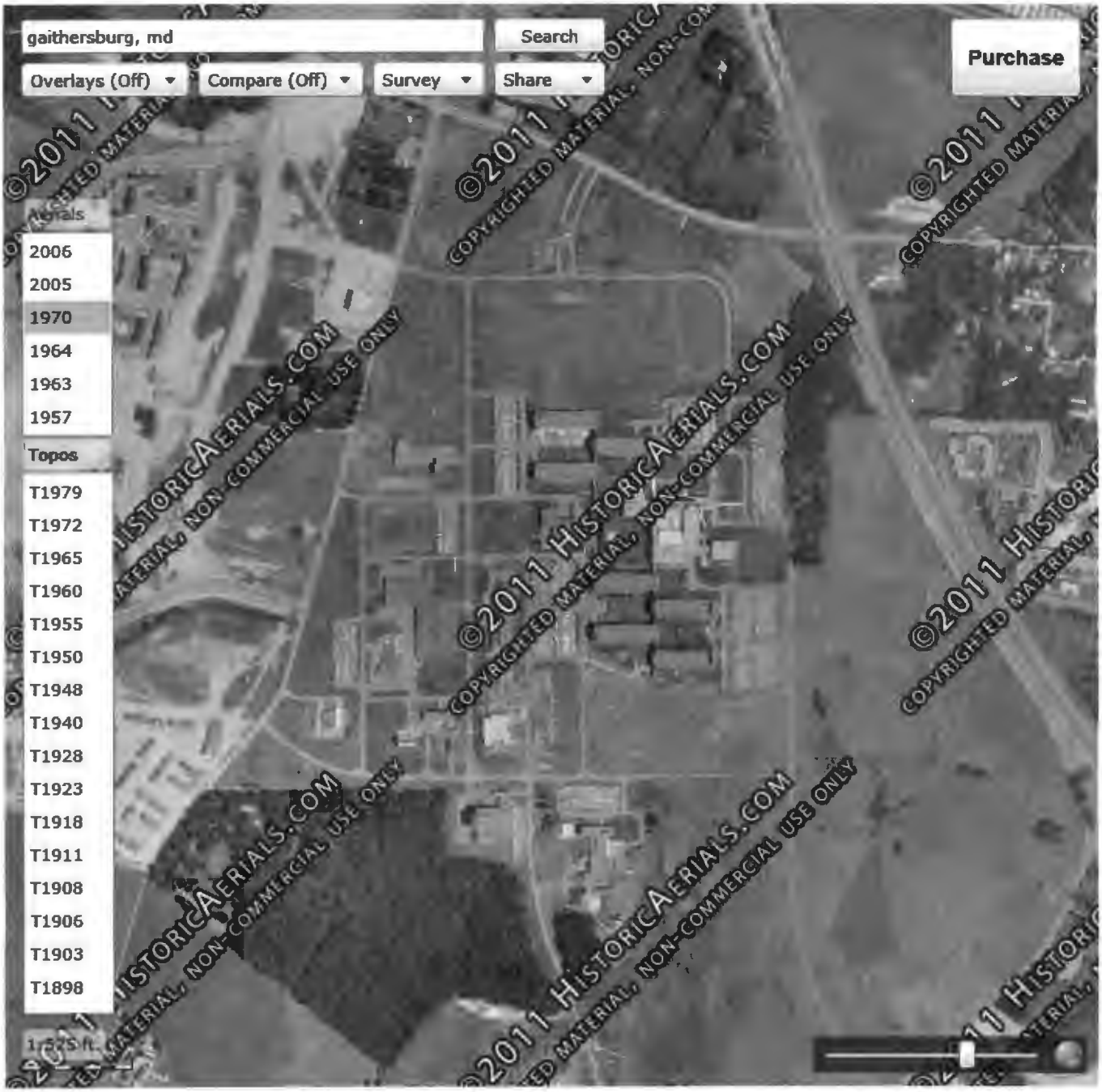
1963 aerial photograph of the NIST headquarters (northern portion) while under construction (www.historicaerials.com)



1970 aerial photograph of the NIST headquarters (northern portion) soon after original construction was completed (www.historicaerials.com)

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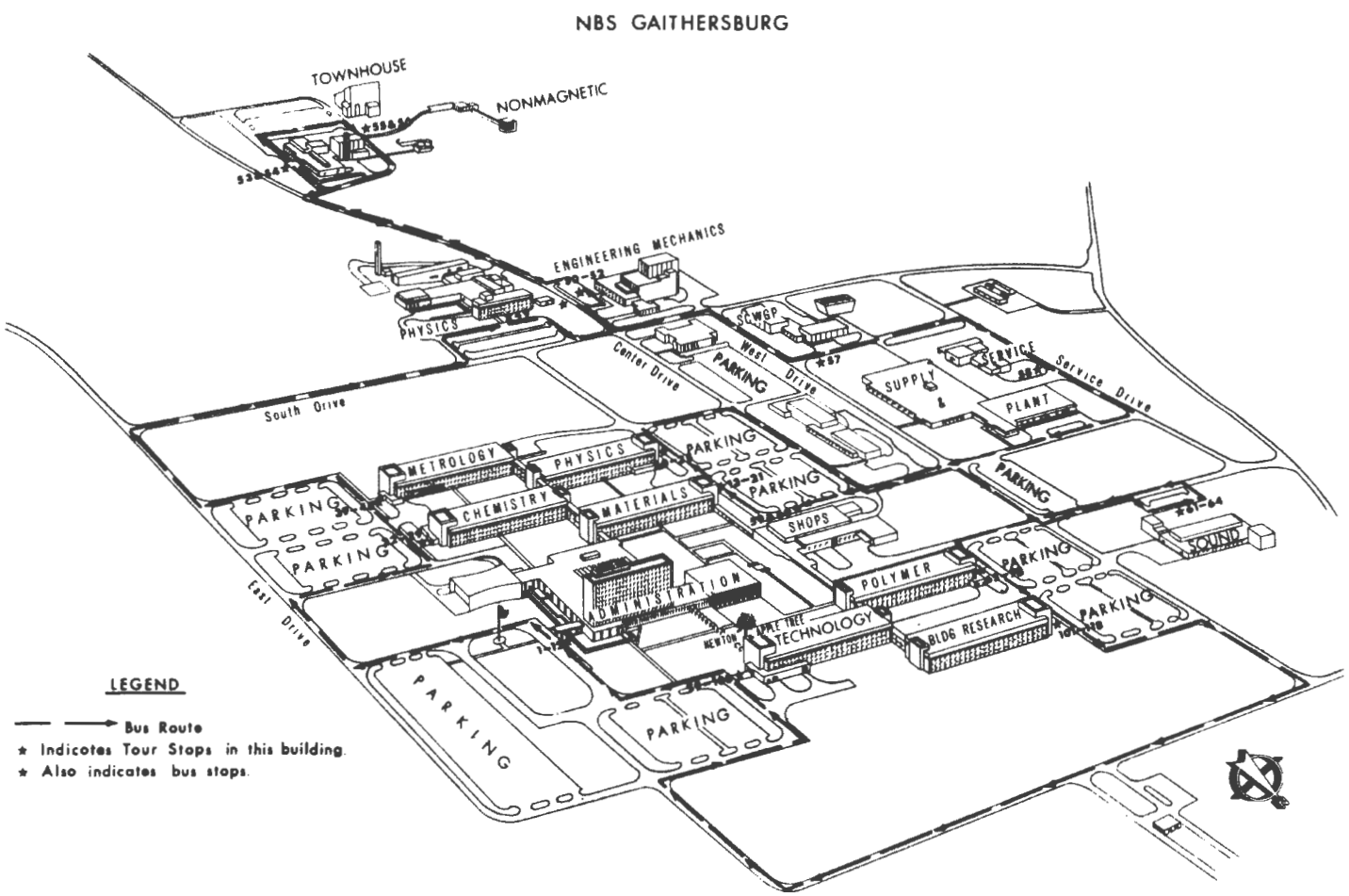

1973 campus map with north arrow inserted by author (courtesy of the National Institute of Standards and Technology Research Library)

National Institute of Standards and Technology Headquarters (M: 20-47)
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Circa early 1970s campus aerial photograph with north arrow inserted by author (courtesy of the National Institute of Standards and Technology Research Library)

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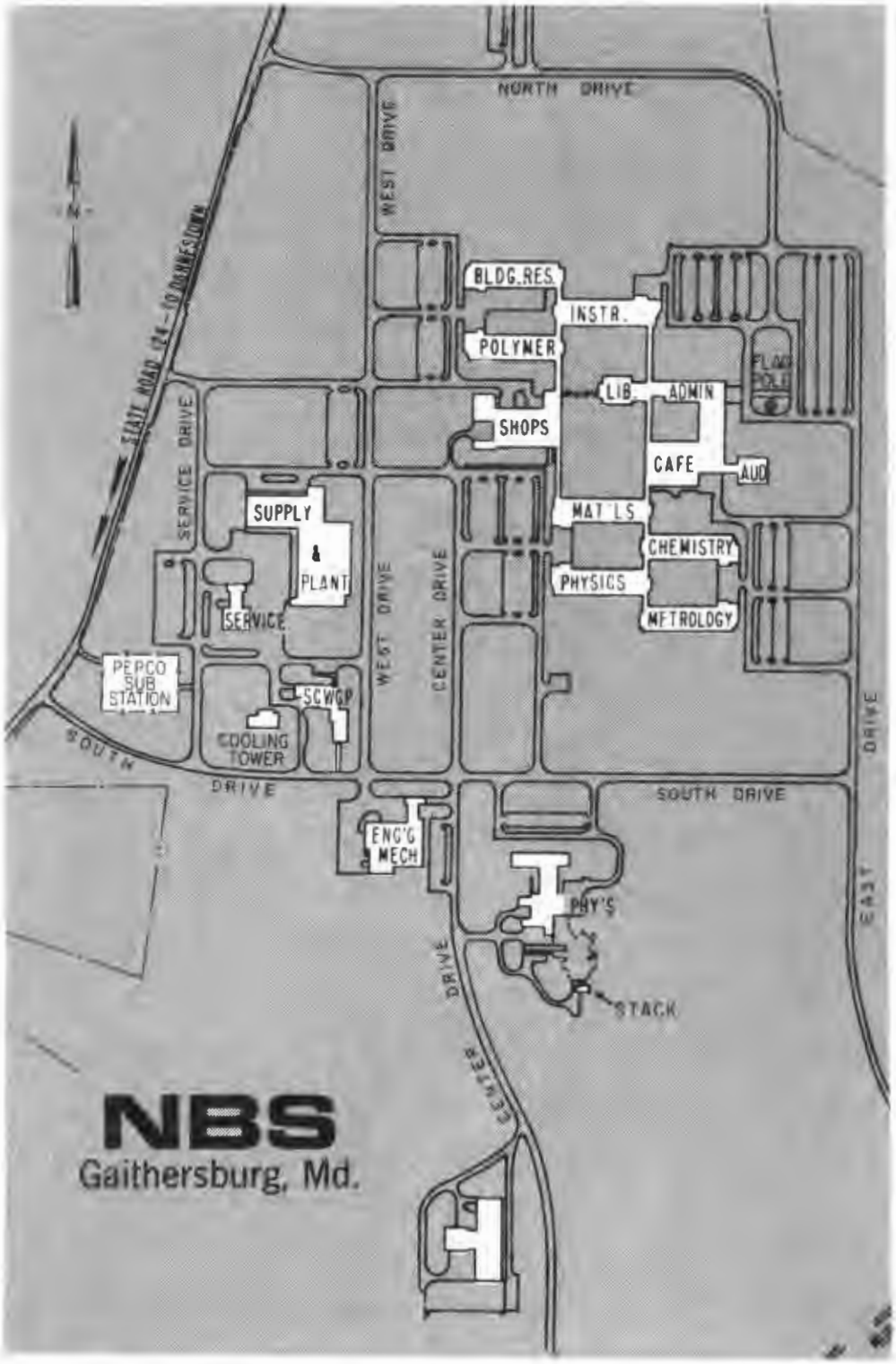
Gaithersburg, Maryland



Map of the campus at the time of the November 15, 1966 dedication; note of the original buildings, 102-Gate House (demolished), 206-Concreting Materials, 230-Fluid Mechanics, 231-Industrial, 233-Sound, 236-Hazards, and 237 and 238-Non-Magnetic Laboratory, have not yet been completed (National Bureau of Standards. *National Bureau of Standards: Technical News Bulletin.* vol. 50, no. 11 [November 1966]. p. *203*)

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Circa 1962 view southwest at building 202-Engineering Mechanics under construction (courtesy of the National Institute of Standards and Technology Research Library)

Circa 1966 view of the newly completed administration building research library (courtesy of the National Institute of Standards and Technology Research Library)

Photo Log
MIHP# M: 20-47
National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, Maryland
Photographers: Christeen Taniguchi
Date: July 16, 2014 and August 22, 2014

#	Digital Image File Name	Description of View
1	M; 20-47_2014-07-16_01.tif	*Building 101* – view southwest at the north elevation
2	M; 20-47_2014-07-16_02.tif	*Building 101* – view southwest at the primary entrance at the east elevation
3	M; 20-47_2014-08-22_03.tif	*Building 101* – view southwest at the walkway connecting to building 225; the library is visible in the background
4	M; 20-47_2014-07-16_04.tif	*Building 101* – view northeast at the pond in the courtyard
5	M; 20-47_2014-07-16_05.tif	*Building 101* – view southwest at the pond in the courtyard
6	M; 20-47_2014-07-16_06.tif	*Building 101* – view southeast at the entrance at the library's north elevation
7	M; 20-47_2014-07-16_07.tif	*Building 101* – view south at the large auditorium (left) and the corridor to the rest of Building 101 (right)
8	M; 20-47_2014-07-16_08.tif	*Building 101* – view southwest at the large auditorium
9	M; 20-47_2014-07-16_09.tif	*Building 101* – view east at a plaque in the lobby
10	M; 20-47_2014-07-16_10.tif	*Building 101* – view northwest at engravings on a wall in the lobby
11	M; 20-47_2014-07-16_11.tif	*Building 101* – view northwest at the helical staircase in the library
12	M; 20-47_2014-07-16_12.tif	*Building 101* – view northeast at the museum
13	M; 20-47_2014-07-16_13.tif	*Building 101* – view south along the corridor leading to the cafeteria
14	M; 20-47_2014-07-16_14.tif	*Building 202* – view northwest at the east elevation
15	M; 20-47_2014-07-16_15.tif	*Buildings 202 and 203* – view southeast at the north and west elevations
16	M; 20-47_2014-07-16_16.tif	*Building 206* – view northwest at the east elevation
17	M; 20-47_2014-07-16_17.tif	*Building 206* – view northeast at the south elevation
18	M; 20-47_2014-07-16_18.tif	*Building 207* – view southeast at the façade and west elevation
19	M; 20-47_2014-07-16_19.tif	*Building 208* – view northeast at the façade and west elevation
20	M; 20-47_2014-07-16_20.tif	*Buildings 215-219* – view southwest at the side facing the parking lot adjacent to East Drive; most of building 218 in the foreground is underground
21	M; 20-47_2014-07-16_21.tif	*Building 220* – view northwest at the façade
22	M; 20-47_2014-07-16_22.tif	*Buildings 221 (left), 220 (right background), and 219*

#	Digital Image File Name	Description of View
		(right foreground) – view northeast at the south and west elevations; most of building 219 is underground
23	M; 20-47_2014-07-16_23.tif	*Building 221* – view southeast at the primary entrance of the façade
24	M; 20-47_2014-07-16_24.tif	*Building 222* – view northwest at the façade
25	M; 20-47_2014-07-16_25.tif	*Building 222* – view west at the date stone at the façade
26	M; 20-47_2014-07-16_26.tif	*Building 222* – view northwest at the south elevation
27	M; 20-47_2014-07-16_27.tif	*Building 223* – view southwest at the east elevation, along with the corridor to building 101 to its right and corridor to building 222 to the left
28	M; 20-47_2014-07-16_28.tif	*Building 223* – view southeast at the north elevation
29	M; 20-47_2014-07-16_29.tif	*Buildings 225 (left) and 224 (right), and corridor* – view east
30	M; 20-47_2014-07-16_30.tif	*Building 225* – view north at the south elevation
31	M; 20-47_2014-07-16_31.tif	*Building 225* – view southwest at the primary entrance of the façade
32	M; 20-47_2014-07-16_32.tif	*Buildings 225 (left) and 226 (right), and corridor* – view southwest
33	M; 20-47_2014-07-16_33.tif	*Building 226 (left), corridor, building 225 (right), and buildings 412 and 413* – view northeast
34	M; 20-47_2014-07-16_34.tif	*Building 226* – view northeast at the south elevation
35	M; 20-47_2014-07-16_35.tif	*Building 226* – view southeast at the north elevation and corridor to building 227
36	M; 20-47_2014-08-22_36.tif	*Building 230* – view west at the façade
37	M; 20-47_2014-08-22_37.tif	*Building 230* – view southeast at the north and west elevations
38	M; 20-47_2014-08-22_38.tif	*Building 230* – view west at the primary entrance of the façade
39	M; 20-47_2014-08-22_39.tif	*Building 231* – view southeast at the west elevation
40	M; 20-47_2014-07-16_40.tif	*Building 233* – view northeast at the façade
41	M; 20-47_2014-07-16_41.tif	*Building 233* – view north at the date stone at the façade
42	M; 20-47_2014-07-16_42.tif	*Building 236* – view northwest at the façade and east elevation
43	M; 20-47_2014-07-16_43.tif	*Building 236* – view southeast at the north and west elevations
44	M; 20-47_2014-07-16_44.tif	*Building 236* – view north at the primary entrance at the façade
45	M; 20-47_2014-07-16_45.tif	*Buildings 237 (left) and 238 (right), and corridor* – view northwest

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#	Digital Image File Name	Description of View
46	M; 20-47_2014-07-16_46.tif	*Building 238* – view northeast at the south elevation and corridor to building 237
47	M; 20-47_2014-07-16_47.tif	*Building 238* – view southwest at the north and east elevations
48	M; 20-47_2014-07-16_48.tif	*Building 301* – view west at the façade
49	M; 20-47_2014-08-22_49.tif	*Building 301* – view southwest at the north elevation
50	M; 20-47_2014-07-16_50.tif	*Building 301* – view northeast
51	M; 20-47_2014-07-16_51.tif	*Building 302* – view southwest at the north and east elevations
52	M; 20-47_2014-08-22_52.tif	*Building 302* – detailed view southwest at the east elevation
53	M; 20-47_2014-07-16_53.tif	*Buildings 303 (foreground) and 420 (background)* – view northwest at the south and east elevations
54	M; 20-47_2014-07-16_54.tif	*Building 304* – view north at the façade
55	M; 20-47_2014-07-16_55.tif	*Building 304* – view north at the primary entrance of the façade
56	M; 20-47_2014-07-16_56.tif	*Corridor between buildings 224 (left) and 304 (right)* – view east
57	M; 20-47_2014-07-16_57.tif	*Buildings 305 (left) and 317 (right)* – view southeast
58	M; 20-47_2014-08-22_58.tif	*Buildings 306 and 307* – view southeast
59	M; 20-47_2014-07-16_59.tif	*Building 308* – view southeast at the façade and west elevation
60	M; 20-47_2014-07-16_60.tif	*Building 308* – view northwest at the south and east elevations
61	M; 20-47_2014-07-16_61.tif	*Building 309* – view northwest at the façade
62	M; 20-47_2014-07-16_62.tif	*Building 311* – view northwest at the façade
63	M; 20-47_2014-07-16_63.tif	*Building 318* – view southwest at the façade and east elevation
64	M; 20-47_2014-07-16_64.tif	*Building 320* – view southwest at the east and north elevations
65	M; 20-47_2014-07-16_65.tif	*Building 411* – view southwest at the façade and east elevation
66	M; 20-47_2014-07-16_66.tif	*Building 423* – view southwest at the façade and east elevation
67	M; 20-47_2014-08-22_67.tif	*Volleyball court, building 428, and building 301* – view northeast
68	M; 20-47_2014-07-16_68.tif	*Flagpole* – view east
69	M; 20-47_2014-07-16_69.tif	*Sundial* – view northeast
70	M; 20-47_2014-07-16_70.tif	*Newton apple tree* – view west
71	M; 20-47_2014-07-16_71.tif	*District of Columbia NBS chemical laboratory cornerstone* – view southeast

Photo Log
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#	Digital Image File Name	Description of View
72	M; 20-47_2014-07-16_72.tif	*District of Columbia NBS gates and gateposts* – view southeast
73	M; 20-47_2014-07-16_73.tif	*District of Columbia NBS gates and gateposts* – view south at the plaque on the east pillar
74	M; 20-47_2014-07-16_74.tif	*Carbon dioxide tank enclosure between buildings 221 and 223* – view northeast
75	M; 20-47_2014-07-16_75.tif	*Test exposure wall* – view northwest at the south elevation
76	M; 20-47_2014-07-16_76.tif	*Seba Park, Field 1* – view northeast
77	M; 20-47_2014-07-16_77.tif	*Seba Park, Field 2* – view southeast
78	M; 20-47_2014-07-16_78.tif	*Picnic area* – view northwest
79	M; 20-47_2014-08-22_79.tif	*Concrete culvert near Quince Orchard Road* –view north
80	M; 20-47_2014-08-22_80.tif	*Concrete culvert nearest Quince Orchard Road* – view west
81	M; 20-47_2014-08-22_81.tif	*NIST sign at Bureau Road* – view east
82	M; 20-47_2014-08-22_82.tif	*NIST sign at W. Diamond Avenue and Quince Orchard Road* – view east
83	M; 20-47_2014-07-16_83.tif	*Parking lot east of building 223* – view northeast
84	M; 20-47_2014-07-16_84.tif	*Parking lot northeast of building 227* – view northeast
85	M; 20-47_2014-07-16_85.tif	*Research Drive at Center Drive* – view southwest
86	M; 20-47_2014-07-16_86.tif	*South Drive and solar panels*– view northeast
87	M; 20-47_2014-07-16_87.tif	*North pond at east end of property* – view northwest from the western end of the pond
88	M; 20-47_2014-07-16_88.tif	*South pond at east end of property* – view northeast from the southern end of the pond
89	M; 20-47_2014-07-16_89.tif	*Landscaping* – view north from near the test exposure wall

Prints:
Processing – RA-4
Paper – Fujicolor Crystal Archive Professional Paper (Super Type CN)

DVD-R Gold:
Verbatim, UltraLife Gold, Metal Azo dye

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July 16, 2014

MD SHPO

Building 101 - view southwest at the north elevation

M; 20-47_2014-07-16_01.tif

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Administration
Building
101

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Building 101 - view southwest at the primary entrance at the east elevation

M; 20-47_2014-07-16_02.tif

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August 22, 2014
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Building 101 - view southwest at the walkway connecting to building 225; the library is visible in the background
M; 20-47_2014-08-22_03.tif
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Building 101 - view northeast at the pond in the courtyard
M; 20-47_2014-07-16_04.tif
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Building 101 - view southwest at the pond in the courtyard
M; 20-47_2014-07-16_05.tif
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Building 101 - view southeast at the entrance at the library's north elevation

M; 20-47_2014-07-16_06.tif

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MD SHPO
Building 101 - view south at the large auditorium (left)
and the corridor to the rest of Building 101 (right)
M;20-47_2014-07-16_07.tif
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DO NOT
ENTER
ONE WAY

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MD SHPO
Building 101 - view southwest at the large auditorium
M; 20-47_2014-07-16_08.tif
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U.S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
GAITHERSBURG, MARYLAND
DEDICATION NOVEMBER 15, 1966
SITE ACQUISITION JULY 6, 1956
GROUNDBREAKING JUNE 15, 1961
PROJECT DIRECTOR
ROBERT S. WALLEIGH
ARCHITECTS
SMITH HAINES LUNDBERG AND WAEHLER
GENERAL CONTRACTORS
PAUL TISHMAN COMPANY
BLAKE CONSTRUCTION COMPANY
BLOUNT BROTHERS CORPORATION
J. W. BATESON COMPANY
UNITED STATES OF AMERICA
LYNDON B. JOHNSON
PRESIDENT
JOHN T. CONNOR
SECRETARY OF COMMERCE
J. HERBERT HOLLOMON
ASSISTANT SECRETARY FOR
SCIENCE AND TECHNOLOGY
ALLEN V. ASTIN
DIRECTOR
NATIONAL BUREAU OF STANDARDS
LAWSON B. KNOTT, JR.
ADMINISTRATOR
GENERAL SERVICES ADMINISTRATION

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Building 101 - view east at a plaque in the lobby

M; 20-47_2014-07-16_09.tif

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"IT IS THEREFORE THE UNANIMOUS OPINION OF YOUR
COMMITTEE THAT NO MORE ESSENTIAL AID COULD BE
GIVEN TO MANUFACTURING COMMERCE THE MAKERS
OF SCIENTIFIC APPARATUS THE SCIENTIFIC
OF THE GOVERNMENT OF SCHOOL
UNIVERSITIES THAN BY THE
INSTITUTION PROPOSED

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Building 101 - view northwest at engravings on a wall in the lobby

M; 20-47_2014-07-16_10.tif

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Building 101 - view northwest at the helical staircase in the library

M; 20-47_2014-07-16_11.tif

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PRESSURE

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MD SHPO
Building 101 - view northeast at the museum
M; 20-47_2014-07-16_12.tif
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Building 101 - view south along the corridor leading to the cafeteria

M; 20-47_2014-07-16_13.tif

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Building 202 - view northwest at the east elevation

M; 20-47_2014-07-16_14.tif

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Buildings 202 and 203 - view southeast at the north and west elevations
M; 20-47_2014-07-16_15.tif
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M: 20-47
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Building 206 - view northwest at the east elevation
M; 20-47_2014-07-16_16.tif
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Building 206 - view northeast at the south elevation
M; 20-47_2014-07-16_17.tif
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MD SHPO
Building 207-view southeast at the façade and west elevation
M; 20-47_2014-07-16_18.tif
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NET-ZERO ACHIEVED
NET-ZERO ACHIEVED

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Building 208 - view northeast at the façade and west elevation
M; 20-47_2014-07-16_19.tif
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July 16, 2014
MD SHPO
Buildings 215-219 - view southwest at the side facing the parking lot adjacent to East Drive; most of building 218 in the foreground is underground
M; 20-47_2014-07-16_20.tif
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MD SHPO
Building 220 - view northwest at the façade
M; 20-47_2014-07-16_21.tif
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July 16, 2014
MD SHPO
Buildings 221 (left), 220 (right background), and 219 (right foreground) - view northeast at the south and west elevations; most of building 219 is underground
M; 20-47_2014-07-16_22.tif
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Congratulations
DAVID J. WINELAND
2012 Nobel Prize in Physics
Congratulations
JOHN L. HALL
2005 Nobel Prize in Physics
Congratulations
ERIC CORNELL
2001 Nobel Prize in Physics
Congratulations
WILLIAM D. PHILLIPS
1997 Nobel Prize in Physics
1963

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Building 221 - view southeast at the primary entrance of the façade
M; 20-47_2014-07-16_23.tif
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Building 222 - view northwest at the façade

M;20-47_2014-07-16_24.tif

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1963

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July 16, 2014
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Building 222 - view west at the date stone at the façade
M; 20-47_2014-07-16_25.tif
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MD SHPO
Building 222-view northwest at the south elevation
M; 20-47_2014-07-16_26.tif
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MD SHPO
Building 223 - view southwest at the east elevation, along with the corridor to building 101 to its right and corridor to building 222 to the left
M; 20-47_2014-07-16_27.tif
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Building 223 - view southeast at the north elevation
M; 20-47_2014-07-16_28.tif
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MD SHPO
Buildings 225(left) and 224(right), and corridor - view east
M; 20-47_2014-07-16_29.tif
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July 16, 2014
MD SHPO
Building 225-view north at the south elevation
M; 20-47_2014-07-16_30.tif
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1963

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Building 225 - view southwest at the primary entrance of the façade

M; 20-47_2014-07-16_31.tif

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July 16, 2014
MD SHPO
Buildings 225(left) and 226(right), and corridor-view southwest
M; 20-47_2014-07-16_32.tif
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July 16, 2014
MD SHPO
Building 226 (left), corridor, building 225 (right), and buildings 412 and 413 - view northeast
M; 20-47_2014-07-16_33.tif
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Building 226-view northeast at the south elevation
M; 20-47_2014-07-16_34.tif
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Building 226 - view southeast at the north elevation and corridor to building 227
M; 20-47_2014-07-16_35.tif
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Fluid Mechanics
Building
230

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August 22, 2014
MD SHPO
Building 230 - view west at the façade
M; 20-47_2014-08-22_36.tif
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August 22, 2014
MD SHPO
Building 230 - view southeast at the north and west elevations
M; 20-47_2014-08-22_37.tif
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Building 230 - view west at the primary entrance of the façade

M; 20-47_2014-08-22_38.tif

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August 22, 2014

MD SHPO

Building 231 - view southeast at the west elevation

M: 20-47_2014-08-22_39.tif

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July 16, 2014

MD SHPO

Building 233- view northeast at the façade

M; 20-47_2014-07-16_40.tif

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1966

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July 16, 2014
MD SHPO
Building 233- view north at the date stone at the façade
M;20-47_2014-07-16_41.tif
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July 16, 2014

MD SHPO

Building 236-view northwest at the façade and east elevation

M; 20-47_2014-07-16_42.tif

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July 16, 2014

MD SHPO

Building 236 - view southeast at the north and west elevations

M; 20-47_2014-07-16_43.tif

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1966

M: 20-47

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July 16, 2014

MD SHPO

Building 236 - view north at the primary entrance at the façade

M; 20-47_2014-07-16_44.tif

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NonMagnetic
Office & Lab
Building
237 & 238

M: 20-47
National Institute of Standards and Technology Headquarters
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Christeen Taniguchi
July 16, 2014
MD SHPO
Buildings 237 (left) and 238 (right), and corridor-
view northwest
M; 20-47_2014-07-16_45.tif
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July 16, 2014

MD SHPO

Building 238 - view northeast at the south elevation and corridor to building 237

M; 20-47_2014-07-16_46.tif

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July 16, 2014

MD SHPO

Building 238 – view southwest at the north and east elevations

M; 20-47_2014-07-16_47.tif

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Supply & Plant
Building
301

M: 20-47
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July 16, 2014
MD SHPO
Building 301- view west at the façade
M; 20-47_2014-07-16_48.tif
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ACE

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August 22, 2014
MD SHPO
Building 301 - view southwest at the north elevation
M;20-47_2014-08-22_49.tif
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M: 20-47
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100 Bureau Drive
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July 16, 2014
MD SHPO
Building 301 - view northeast
M; 20-47_2014-07-16_50.tif
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July 16, 2014
MD SHPO
Building 302-view southwest at the north and east elevations
M; 20-47_2014-07-16_51.tif.
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August 22, 2014

MD SHPO

Building 302 - detailed view southwest at the east elevation

M; 20-47_2014-08-22_52.tif

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July 16, 2014

MD SHPO

Building 303 (foreground) and 420 (background) - view northwest at the south and east elevations

M; 20-47_2014-07-16_53.tif

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July 16, 2014

MD SHPO

Building 304 - view north at the façade

M; 20-47_2014-07-16_54.tif

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National Institute of Standards and Technology Headquarters

100 Bureau Drive

Gaithersburg, Montgomery County, MD

Christeen Taniguchi

July 16, 2014

MD SHPO

Building 304 - view north at the primary entrance of the façade

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Corridor between buildings 224 (left) and 304 (right)
-view east

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Building 305(left) and 317(right)-view southeast
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100 Bowen Drive
Bldg. #100
Gaithersburg, MD 20878

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
August 22, 2014
MD SHPO
Buildings 306 and 307 - view southeast
M; 20-47_2014-08-22_58.tif
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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Building 308 - view southeast at the façade and
west elevation
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July 16, 2014

MD SHPO

Building 308 - view northwest at the south and east elevations

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MD SHPO

Building 309 - view northwest at the façade

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Building 311 - view northwest at the façade
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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Building 318 - view southwest at the façade and east elevation
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National Institute of Standards and Technology Headquarters

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MD SHPO

Building 320- view southwest at the east and north elevations

M; 20-47_2014-07-16_64.tif

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Building 411 - view southwest at the façade and east elevation
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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Building 423-view southwest at the façade and east elevation
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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
August 22, 2014
MD SHPO
Volleyball court, building 428, and building 301- view northeast
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July 16, 2014

MD SHPO

Flagpole - view east

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Sundial - view northeast
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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Newton apple tree - view west
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100 Bureau Drive

Gaithersburg, Montgomery County, MD

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July 16, 2014

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District of Columbia NBS chemical laboratory

Cornerstone - view southeast

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
District of Columbia NBS gates and gateposts - view
Southeast
M; 20-47_2014-07-16_72.tif
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NATIONAL
BUREAU
OF
STANDARDS

M: 20-47
National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
District of Columbia NBS gates and gateposts-view south at the plaque on the east pillar
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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Carbon dioxide tank enclosure between buildings 221 and 223 - view northeast
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Test exposure wall-view northwest at the south elevation

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Seba Park, Field 1 - view northeast

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Seba Park, Field 2 -view southeast
M; 20-47_2014-07-16_77.tif
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Picnic area - view northwest

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100 Bureau Drive

Gaithersburg, Montgomery County, MD

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August 22, 2014

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Concrete culvert near Quince Orchard Road -view north

M; 20-47_2014-08-22_79.tif

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Gaithersburg, Montgomery County, MD

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August 22, 2014

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Concrete culvert nearest Quince Orchard Road - view west

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NIST

M: 20-47

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100 Bureau Drive

Gaithersburg, Montgomery County, MD

Christeen Taniguchi

August 22, 2014

MD SHPO

NIST sign at Bureau Road - view east

M; 20-47_2014-08-22_81.tif

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NIST
NATIONAL INSTITUTE
OF STANDARDS AND
TECHNOLOGY
UNITED STATES DEPARTMENT OF COMMERCE

M: 20-47
National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
August 22, 2014
MD SHPO
NIST sign at W. Diamond Avenue and Quince Orchard Road - view east
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National Institute of Standards and Technology Headquarters

100 Bureau Drive

Gaithersburg, Montgomery County, MD

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July 16, 2014

MD SHPO

Parking lot east of building 223 - view northeast

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
Parking lot northeast of building 227- view
northeast
M; 20-47_2014-07-16_84.tif
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CENTER DR

M: 20-47

National Institute of Standards and Technology Headquarters

100 Bureau Drive

Gaithersburg, Montgomery County, MD

Christeen Taniguchi

July 16, 2014

MD SHPO

Research Drive at Center Drive - view southwest

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National Institute of Standards and Technology Headquarters

100 Bureau Drive

Gaithersburg, Montgomery County, MD

Christeen Taniguchi

July 16, 2014

MD SHPO

South Drive and solar panels - view northeast

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National Institute of Standards and Technology Headquarters

100 Bureau Drive

Gaithersburg, Montgomery County, MD

Christeen Taniguchi

July 16, 2014

MD SHPO

North pond at east end of property - view northwest from the western end of the pond

M; 20-47_2014-07-16_87.tif

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National Institute of Standards and Technology Headquarters
100 Bureau Drive
Gaithersburg, Montgomery County, MD
Christeen Taniguchi
July 16, 2014
MD SHPO
South pond at east end of property - view northeast from the southern end of the pond
M; 20-47_2014-07-16_88.tif
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National Institute of Standards and Technology Headquarters

100 Bureau Drive

Gaithersburg, Montgomery County, MD

Christeen Taniguchi

July 16, 2014

MD SHPO

Landscaping - view north from near the test exposure wall

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M:20-47
National Institute of Standards and Technology (NIST)
Montgomery County, Maryland
Gaithersburg
1961-2015
Public (Restricted Access)

Capsule Summary

Since its creation in 1901 as the National Bureau of Standards (NBS), the National Institute of Standards and Technology (NIST) has developed and maintained key standards for the Nation, a role that the U.S. Constitution assigns to the Federal government to ensure fairness in the marketplace. Work by NIST scientists has resulted in the standardization and measurement of nearly every facet of scientific inquiry and has placed NIST at the forefront of measurement science and research. NIST scientists have made many important contributions advancing scientific inquiry, and have been recognized through numerous awards including a number of Department of Commerce Gold Medal, an Emmy, and four Nobel Prizes.

NIST comprises multiple buildings located on a formally landscaped campus organized by a grid network of internal roads. Large-scale, multi-story, monumental buildings separated by parking areas and mowed lawn define the campus. The internal road network consists of roads running in north/south and east/west directions. The primary research areas are clustered around the Administrative Building (Building 101) and the General Purpose Laboratories (GPLs).

Building hierarchy is denoted through building materials. The Administration Building, GPLs, and Special Purpose Laboratories are executed in beige brick; support buildings are completed in red brick. The buildings are monumental in scale; occupy irregular, often complex footprints; and, terminate in flat roofs. Fixed-sash, single-light metal windows are common. With the exception of the Administration Building, public spaces and ornamentation, both interior and exterior, are absent.

Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M:20-47

1. Name of Property (indicate preferred name)

historic: National Institute of Standards and Technology (NIST)

other: N/A

2. Location

street and number: 100 Bureau Drive ___ not for publication

city, town: Gaithersburg ___ vicinity

county: Montgomery

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

name: United States of America (Department of Commerce)

street and number: 100 Bureau Drive telephone

city, town: Gaithersburg state: MD zip code: 20899

4. Location of Legal Description

courthouse, registry of deeds, etc.: Montgomery County Courthouse liber: 03859 folio: 00765

city, town: tax map: FT31 tax parcel: P440 tax ID number: 00777838

5. Primary Location of Additional Data

_____ Contributing Resource in National Register District
_____ Contributing Resource in Local Historic District
__X__ Determined Eligible for the National Register/Maryland Register
_____ Determined Ineligible for the National Register/Maryland Register
_____ Recorded by HABS/HAER
_____ Historic Structure Report or Research Report at MHT
_____ Other: Corridor Cities Transitway, Identification & Evaluation of Historic Architectural Properties Technical Report

6. Classification

Category
__X__ district
_____ building(s)
_____ structure
_____ site
_____ object

Ownership
_____ public
_____ private
_____ both

Current Function
_____ agriculture
_____ commerce/trade
_____ defense
_____ domestic
_____ education
_____ funerary
__X__ government
_____ health care
_____ industry
_____ landscape
_____ recreation/culture
_____ religion
_____ social
_____ transportation
_____ work in progress
_____ unknown
_____ vacant/not in use
_____ other:

Resource Count

Contributing	Noncontributing	
9	50	buildings
1	7	sites
0	4	structures
1	2	objects
11	63	Total

Number of Contributing Resources previously listed in the Inventory
0

7. Description

Inventory No. M:20-47

Condition

X excellent	___ deteriorated
___ good	___ ruins
___ fair	___ altered

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

Summary Description

The National Institute of Standards and Technology (NIST) is a Federal research campus located in Montgomery County, Maryland. The facility comprises 74 buildings, structures, objects, and sites on a landscaped campus. Resources include monumental, multi-story buildings housing laboratory and administrative spaces. Brick is the predominant construction material. Most laboratory buildings occupy complex footprints; however, rectangular footprints are not uncommon. Landscaping consists of mature coniferous and specimen trees. Large expanses of mowed lawn define the campus. Circulation networks consist of a grid-like street network and sidewalks.

Detailed Description

NIST is located in Gaithersburg, Maryland, a suburb of Washington, D.C. Major roads, consisting of I-270 to the east, Muddy Branch Road to the southeast, and Quince Orchard Road to the west, separate the campus from the surrounding commercial and residential development constructed during the late twentieth century. A single-family and townhouse neighborhood abuts the campus to the southwest. Commercial development consists of strip malls, big-box retailers, and office buildings. Residential neighborhoods are located adjacent to the campus.

NIST comprises multiple buildings located on a formally landscaped campus organized by a grid network of internal roads. Large-scale, multi-story, monumental buildings separated by parking and mowed lawn define the campus. The internal road network consists of roads running in north/south and east/west directions. The publically-restricted road network creates large superblocks occupied by research buildings. Parking is expansive. The primary research areas are clustered around the Administrative Building (Building 101) and the general purpose laboratories (GPL)s. Two smaller research areas south of the campus center are accessible from Center Drive.

Principal north/south roads include East, West, and Center drives. Center Drive provides access to the southern portion of the campus. North and South drives provide east/west access. Access to the support buildings is via Sound, Research, and Steam drives, and Service Drive, which runs in a north/south direction. No distinction in terms of design, landscaping, or road width is made between the service roads and the principal roads.

The main laboratory complex falls between North and South drives and East and West drives. Isolated laboratory complexes are located south of South Drive and are accessible from Center Drive. Service and support buildings generally are located along the west side of West Drive. The topography is relatively flat. Formal landscaping includes specimen trees and mature coniferous trees.

Building hierarchy is denoted through building materials. The Administration Building, GPLs, and Special Purpose Laboratories are executed in beige brick; support buildings are completed in red brick. The buildings are monumental in scale; occupy irregular, sometimes complex footprints; and terminate in flat roofs. Fixed-sash, single-light metal window are common. With the exception of the Administration Building, public space and ornamentation, both interior and exterior, are absent.

An extensive landscape plan prepared by HLW International was implemented for the NIST campus.[1] Large expanses of lawn buffer the campus from the main thoroughfares. A large wood preserve is located between Quince Orchard Road and Buildings 202 and 235. Three stormwater management ponds of various sizes are located along the eastern and southwestern edges of the campus. Specimen and ornamental trees are planted throughout the campus. The Newton apple

[1] The architectural firm that designed the Gaithersburg campus, Voohees Walker Smith Smith & Haines, underwent a number of name changes since it was established. A change in name also occurred during the design and construction of the NIST campus. For simplification and to avoid confusion, HLW International (the firm's current name) will be used.

tree, which is derived from cuttings of the Newton apple tree in England, is planted in the courtyard between Building 101 and Building 225. Building 101 features an inner courtyard with flowering shrubs and trees. A water feature, benches, and a sun dial also are located in the courtyard.

A review of architectural drawings and conversations with NIST staff suggest that the resources located at NIST have undergone a continuous program of modification and alteration. Changes to building interiors are particularly common as laboratory and testing spaces have been altered to make the spaces relevant in the face of ever-changing research needs. Other building modifications include the construction of additions. Again, such modifications are necessary in order for the buildings to meet contemporary research requirements. In some cases, the additions are larger than the original building.

The core campus reflects the unified campus design developed by HLW International. The firm designed many of the buildings and prepared the campus landscape plan. Other architectural and engineering firms with expertise in the design of specialized, scientific buildings also have contributed to the evolution of the campus.

A total of 74 buildings, structures, objects, sites, and landscapes were systematically surveyed in December 2014 and January and March 2015. The attached table identifies resources surveyed during this current investigation. The NIST campus is depicted on the accompanying maps.

Security protocols prohibited discussion and photography of certain buildings and building features. The following data were collected: building type, style, location, number of stories, plan shape and type, exterior wall materials, roof shape and materials, placement of building openings, and modifications over time. Summary resource descriptions, arranged by building type, are provided below. Summary resource descriptions, arranged by property type, are presented below. Property types are based on function at the time of building construction and not on current building use.

Administration/Laboratories

Building 101

The Administration Building, constructed to house the agency's executive offices, also contained computer, applied mathematics, and statistical engineering laboratories. The building occupies a complex footprint comprised of connecting masses (office tower, library, auditorium, and lobbies) of differing sizes and heights. The building was completed in 1965. A landscaped inner courtyard is a character-defining feature of the building.

The eleven-story administrative block occupies a rectangular footprint in the northeast portion of the complex. The metal-frame building is clad in beige-brick executed in stretcher bond. The mass terminates in a flat roof that features a penthouse. The roof over the cafeteria is scalloped. Fixed, single-light, metal-sash windows with metal spandrels above and below the window openings define the north and south elevations. The east and west elevations are blind. The primary entrance is found on the east elevation. A flat-roof canopy supported by stone posts projects into a driveway that leads to the building. A slightly projecting vestibule with double-leaf metal and glass doors provides access to the building's interior. A single-story, glass-enclosed corridor extends from the north elevation and leads to the library.

The three-story library occupies a square footprint, rests on a poured-concrete foundation, and terminates in a flat roof. Cladding materials are stone laid in a decorative pattern. The primary elevation faces north. A multi-bay integral porch runs the length of the north elevation. Large plate-glass windows with metal mullions characterize the elevation. The east elevation is blind; a multi-bay glass and stone projection is found on the west elevation. Single-light, fixed-sash ribbon windows are located at the basement level. The upper floors employ single-light, fixed-sash windows. The bays are divided

horizontally by metal spandrels and vertically by metal mullions. A patio with stone pavers is found on the north elevation. The minimally landscaped patio features the Newton apple tree and benches. A single-story brick and glass passage extends from the southeast corner of the library to connect Building 101 to Building 223.

A two-story, brick mass is located south of the library. Fixed, single-light windows define the west end of the south elevation. A loading dock is present on the elevation's east end.

A glass-enclosed passage, extending from the southeast corner of the tower block, leads to another glass enclosed-passage that connects to the auditorium, which consists of a single-story, limestone and marble mass resting on a poured-concrete foundation. The auditorium wing terminates in a flat roof.

The inner courtyard features stone pavers, flowering shrubs and trees, benches, a water feature, and a sundial. Large, plate-glass windows enclose the courtyard. A covered walkway extending from the southeast elevation of Building 225 connects to the north elevation of Building 101. The walkway has a poured-concrete foundation and a geometric roof supported by rectangular posts.

Interior public spaces are monumental in scale. The principal lobby is executed in marble. Ample seating is afforded in the main lobby and the adjacent smaller lobby. Both lobbies feature display and exhibit booths. The cafeteria, which looks out onto the inner courtyard, also is monumental in scale.

General Purpose Laboratories

Buildings 220, 221, 222, 223, 224, 225, 226, and 227 were constructed as GPLs. With the exception of Building 227, which was constructed in 1999, all the GPLs were completed in 1966. They are nearly identical in design, exhibiting a great degree of uniformity in materials and execution. Original drawings reference grey face brick suggesting building color might have changed between the time the drawings were prepared and the time the buildings were constructed. Buildings 220, 221, and 225 were constructed with basements to house specialized research spaces. Because of their similarity, a general description of the buildings is provided below. Descriptions of individual GPLs summarize key differences.

The GPL is a three-story building that occupies a rectangular footprint and terminates in a flat roof. The building rests on a poured-concrete foundation. Exterior cladding is beige brick executed in stretcher bond. The building is comprised of three masses: an office/laboratory block, a stairwell block, and a covered concourse connection to the adjacent building. The multi-bay office/laboratory block rises three stories with attic. The attic level is clad in metal panels. Windows are single-light, fixed-sash, metal units. Metal spandrels are located above the window openings. The stairwell intersects the office/laboratory block and projects above the roof of the office/laboratory block. The primary entrance, which is located within a projecting vestibule, is housed in the stairwell block. The entrance features double-leaf metal and glass doors. The doors are framed by paired, single-light, fixed-sash windows in metal frames. One single-light transom is found above each window bay and the doors. A projecting bay for facilitating the movement of large objects is located in the stair tower and is accessed from the secondary elevation. Each laboratory building has a covered concourse that connects to an adjacent building. The concourse terminates in a flat roof. Cladding materials are red brick completed in 5:1 common bond. Large, fixed-sash, single-light windows with metal sash divide the concourse into multiple bays. Metal spandrels are located below each window unit. Double-leaf metal and glass doors generally are centered in the elevation. Landscaping around the buildings is sparse. Mature coniferous trees and deciduous saplings are present.

Building 220 (Metrology Building)

Building 220 faces east. It is similar in design as described above in the general description.

Building 221

Building 221 faces west. It is similar in design as described above in the general description. The east elevation is blind. One covered concourse is found at the east end of each of the south and north elevations of the building. The concourse is comprised of fixed, single-light, metal-sash windows. The concourse connects Building 221 to Building 220 to the south and Building 222 to the north.

Building 222 (Chemistry Building)

Building 222 faces east. It is similar in design as described above in the general description; however, in 2008, the building was modified when the majority of lab spaces were converted to offices. The windows were replaced and the exterior walls were insulated at that time (Susan Cantilli personal communication 5/6/2015).

Building 223 (Materials Building)

Building 223 faces west. It is similar in design as described above in the general description. The east elevation is blind. A covered concourse is located at the east end of both the north and the south elevations. The concourse on the south elevation is comprised one three-story concourse featuring fixed, single-light, metal-sash windows. This concourse connects Building 223 to Building 222. The concourse on the north elevation is elevated and rises one story in height. The windows are similar to those found on the south concourse. A single-story covered concourse also is located at the west end of the north elevation. The concourse features fixed, single-light, metal sash windows above metal spandrels.

Building 224 (Polymer Building)

Building 224 faces west. It is similar in design as described above in the general description.

Building 225 (Technology Building)

Building 225 faces east. A covered walkway extends from the southeast corner of the building and connects to the north elevation of Building 101. Two projections are present on the north elevation. A single-story metal addition terminating in a flat roof and resting on a poured concrete foundation is located adjacent to the loading dock. An opening is present on the east elevation of the addition. A smaller, single-story brick addition terminating in a flat roof is located adjacent to the metal addition. The projection also rests on a poured-concrete foundation.

Building 226 (Building Research)

Generally, Building 226 retains the same materials and design as the other laboratory buildings; however, the south elevation is different than those of the other GPLs. According to original drawing, porcelain steel panels were installed at the second floor. A series of loading docks is present at the first floor of the south elevation. A one-story brick projection terminating in a flat roof extends from the elevation. Two metal doors are present on the projection's south elevation. The projection is original to the building and was constructed as a high bay. A covered concourse extends from the east end of the south elevation and connects to Building 225. This three-story concourse features fixed, single-light, metal-sash units similar to the windows found on Building 227. A brick-clad stairwell also is located on the building's east elevation (National Institute of Standards and Technology [NIST] Var.).

Building 227 (Advanced Chemical Sciences Laboratory)

Building 227 maintains the general massing and proportions as the GPLs constructed during the initial construction period at the Gaithersburg campus. Materials are similar to those used on the original GPLs. The building, which faces east, occupies a rectangular footprint and terminates in a flat roof. Metal paneling conceals equipment. Projecting stairwells are located at the east and west elevations. The primary entrance is located on the east elevation in a projecting stair tower. The

three-bay east elevation of the stair tower is defined by fixed-sash, single-light, metal-frame windows flanking a brick mass. The entrance is centered on the elevation and consists of double-leaf metal and glass doors. A single-story brick wall extends in a southerly direction from the entrance block. Large single-light, fixed-sash-metal windows with transoms are present on the first floor. The multi-bay north and south elevations also feature single-light, fixed-sash metal windows. A single-story brick projection on the south elevation houses a recessed loading dock. The brick mass on the west elevation houses the stairwell and projects from the plane of the principal block.

Special Projects Laboratories

Building 202 Engineering Mechanics

Building 202 is the Engineering Mechanics Laboratory designed by Voorhees Walker Smith Smith & Haines, the predecessor firm to HLW International and completed in 1963. The building is executed in two primary masses, a 5:1 common-bond, red-brick, two-story mass and a larger multi-story mass housing a high bay completed in beige brick. The building occupies a complex footprint and terminates in a flat roof. Roofing materials are not visible. The two-story portion of the building represents the building's administrative functions. The multi-bay, two-story mass includes the building's primary entrance, which is located on the east elevation. Fixed-single-light, metal-sash windows with spandrels below the second floor windows define the elevation. A flat roof-canopy supported by stone piers shelters the main entrance, which contains double-leaf glass doors in metal frames. Transoms and sidelights define the doors. A single-story ell extends from the north elevation. The east elevation of the ell contains four bays and an overhead garage door. The west elevation features a covered loading dock and openings. The multi-bay south elevation also features single-light, fixed-sash, metal windows as well as a single-story brick projection. Openings are found on the east and north elevations of the high bay.

Building 203 (Standard Reference Materials Facility)

Building 203 was completed in 2012. The single-story building abuts Building 202 to the north. The building occupies a rectangular footprint, rests on a poured-concrete foundation, and terminates in a flat roof. The building is clad in beige brick. A multi-bay covered loading dock defines the north elevation. Single-light, fixed-sash windows are found in the east and south elevations.

Building 205 (Fire Research Laboratory) and Support Facilities

Building 205, completed in 1975, was constructed as the Fire Research Laboratory designed by Gipe, Fry and Welch Associated Engineers and Architects. The south half of the current building is the original section. The original one-story building is constructed of poured concrete and faced with stretcher bond, beige brick. The multi-level building terminates in a flat roof with metal coping; roofing materials are not visible. Openings include double-leaf glass and metal doors, metal doors, and loading dock doors. The south elevation contains the main entry comprising double-leaf glass and metal doors with transom and sidelights in the southeast corner of the building. The doorway is sheltered by a projecting canopy. Three bays of narrow vertical windows separated by spandrels occupy the east elevation. The south elevation wall currently is blind; the opening that originally contained fixed windows has been infilled. In 2014, a major, two-story addition doubling the original building was completed along the north elevation. This new addition is faced in concrete and metal panels. A band of fixed windows is located along the southeast corner of the addition.

The fire research building is supported by two, two-story metal exhaust systems. The exhaust system located northwest of Building 205 was constructed by 2002. The metal structure rests on a concrete slab and has two circular metal air filters, a large rectangular metal hopper, and a stack. Two, one-story support buildings (Buildings 205E and 205M) are located near the base of the metal structure. Each building occupies a concrete slab and has a flat roof with concrete coping. The exterior walls are faced with stretcher bond, beige brick. Each building has one set of double-leaf metal doors. The other elevations are blind.

A second exhaust system, constructed as part of the 2014 addition, is located north of the addition. The metal structure rests on a concrete slab and has two circular metal air filters, a rectangular metal structure, and a stack. Two, one-story support buildings (Buildings 205E2 and 205M2) are located near the base of the metal structure. Each building occupies a concrete slab and has a flat roof with concrete coping. The buildings are constructed of concrete block. Each building contains single-leaf or double-leaf metal doors. The other elevations are blind.

Building 206 (Concrete Materials)

Building 206 was built as the Concrete Materials Building to house the equipment for batching, blending, and storing of aggregates used in the structural concrete programs, to produce standard samples of aggregates and sands, and in standard soil samples for the interstate highway program (NBS 1966a:22). The building was completed in 1968. Generally, the single-story building occupies an L-shaped footprint and rests on a poured-concrete foundation. Cladding materials consist of stretcher bond, beige brick on the south, east, and west elevations. The north elevation abuts a hill and is not visible. The multi-level building terminates in a flat roof with metal coping; roofing materials are not visible. No main entry is visible. Other openings comprise single-leaf and double-leaf metal doors and overhead garage doors. The southwest corner contains one pair of metal doors and three overhead metal garage doors. Four openings are located in the east elevation.

Building 207 (Robot Test Facility)

Building 207 was constructed in 2012. The building occupies a rectangular footprint with a one-and-half-story central high bay flanked by one-story bays on the east and west elevations. The building rests on a concrete-slab foundation. The exterior walls are constructed of metal panels. The lower walls are clad in red, horizontal ribbed paneling. The upper walls of the central bay are dark gray, vertical panels. The side bay walls are clad in light gray, vertical metal panels. The flat roof has metal coping. The main entry in the north elevation contains a single glass door off-set in a large fixed window with a transom. Large fixed-light glass walls are located in the bays on the south elevation. Glass openings set in light-colored square metal panel surrounds occupy the north and south elevations of the center bay. Bands of fixed-glass windows are located in the east and west elevations.

Building 208 Net-Zero Energy Residential Test Facility

Building 208 is the Net-Zero Energy Residential Test Facility constructed in 2012. The building is a five-bay, two-story house linked by a breezeway to a one-story garage. The house rests on a concrete slab. The exterior walls are clad in vinyl siding. The house has a side gable roof clad with composition shingles with three-bay shed dormers on the north and south elevations. The main entry is centered in the south elevation. The door has glass sidelights. The windows are six-over-six-light units set in metal frames. An integral porch supported by columns spans the south elevation.

Buildings 215, 216, 217, 218, and 219 were competed between 2002 and 2004 to support measurement research in a variety of different fields. Two of the buildings (Buildings 218 and 219) are below grade; above-grade entrance blocks provide exterior access to the below-grade buildings. The buildings in the complex employ similar materials and have a common design vocabulary. HDR Architecture, Inc. designed the buildings.

Building 215 (Nanofabrication Facility)

Building 215 was completed in 2004. Generally, the building occupies a rectangular footprint. The building plane is complex, with a variety of projecting and recessed masses. The building terminates in a flat roof; roofing materials are not visible. Primary access to the building is from the southeast elevation and is recessed from the principal mass. Double-leaf glass doors provide access to the building's interior. Cladding materials are beige brick completed in stretcher bond and preformed metal panels. Projecting bays of various sizes are a character-defining feature of the building. Fixed, single-light

metal windows are common. A wall of windows at the floor defines the southeast elevation and the second floor of the northeast elevation. A loading dock with flat roof is present on the northwest elevation.

Building 216 (Center for Nanoscale Science and Technology (Instrument East))

Completed in 2002, Building 216 was the first building in the AML complex to be constructed. The two-story building is executed in beige brick completed in stretcher bond and preformed metal panels. Metal coping defines the roof; roofing materials on the flat roof are not visible. Windows are single-light, fixed-sash, metal units. A double-leaf metal and glass door provides access to the building from the west elevation. Recessed and projecting bays divide the south and north elevations. Metal panels characterize the east and west elevations.

Building 217 (AML Instrument)

Completed in 2004, Building 217 occupies a generally rectangular footprint and terminates in flat roof. The multi-story building features a number of projecting and recessed bays. Cladding materials are stretcher bond beige brick and preformed metal panels. Fixed-light, metal-sash windows are employed throughout. The primary entrance is on the west elevation. Entrances are double-leaf metal and glass doors and single-leaf metal doors. The north and south elevations are divided into three projecting bays which are in turn are divided into eight bays featuring single-light, fixed sash windows. Each projecting bay also contains a projecting wall of fixed-sash windows. The building attaches to Building 215 at its southeast corner.

A single-story brick and glass corridor extends from the east end of the north elevation and connects to the south elevation of Building 220.

Building 218 (AML Metrology)

Completed in 2004, nearly all of Building 218 was constructed underground. Two above-ground projections provide access to the building's interior. The west entrance building terminates in a flat roof that slopes to the west elevation and is sheathed in metal panels. The foundation is not visible. The entrance is a metal-frame building clad in prefabricated metal panels. Access to the interior is by double-leaf metal and glass doors. A flat-roof canopy shelters the entrance. Windows are fixed, single-light, metal-sash units. The north, south, and west elevations are blind.

An east entrance also provides access to the below-ground portion of the building. This building is nearly identical to that employed for Building 219. The entry consists of a two-story building clad in brick and terminating in a flat roof. Access to the building is from the east elevation, which features double-leaf metal and glass doors and fixed, single-light windows in metal frames. The west elevation features a lower mass. Fixed, single-light ribbon windows are present on the north, south, and west elevations of the main block and the secondary mass.

Building 219 (AML Metrology)

Building 219 was completed in 2004. With the exception of the entry, the entire building is underground. The entry consists of a one and a-half-story building clad in brick and terminating in a flat roof. Access to the building is from the west elevation, which features double-leaf metal and glass doors and fixed, single-light windows in metal frames. The east elevation features a partially below-grade mass. Fixed, single-light ribbon windows are present on the north, south, and east elevations of the main block and the secondary mass. This building is very similar to the east entrance to Building 218.

Building 230 (Fluid Mechanics)

Building 230 is a two-story building clad in beige brick executed in stretcher bond. The building rests on a poured-concrete foundation and occupies a generally square footprint. The building terminates in a flat roof. Windows are fixed-single-light units with metal sash. Metal spandrels are found above and below the openings. The primary entrance is found at the north end of the east elevation and features a flat-roof metal canopy that shelters double-leaf metal and glass doors. The remainder of the elevation is blind. The north elevation is eight bays. A brick and metal mass extends from the west elevation. The projection's west elevation is clad in metal panels. The south elevation is completed in brick and metal panels; loading bays are found on the elevation. The building was constructed to calibrate large air and water meters, fluid meters, hydraulics, and aerodynamics.

Building 231 (Industrial)

Completed in 1968, Building 231 is a single-story beige brick building executed in stretcher bond. Building 231 was constructed to study papermaking and textiles. The footprint consists of two rectangular masses: one that is brick and the other that is clad in metal panels. Windows are paired single-light, fixed-sash units with metal spandrels above and below the openings. The primary elevation faces east and contains one set of recessed, double-leaf metal and glass doors with sidelights and transoms at the south end of the elevation. A two-story metal mass connects the principal block to a single-story brick projection with single-light, fixed-sash, metal ribbon windows are at the eave. Openings are found on the north elevation of the projecting mass. A single-story projection extends from the west elevation of the principal block. The north elevation of the projection is blind; the west elevation features metal ribbon windows at the eave. The west elevation connects to a metal-clad mass with a single-story brick projection. This brick projection is executed similarly to the one described above. The windows on the south elevation consist of paired units.

Building 233 (Sound)

Building 233 was completed in 1968 as the sound laboratory for acoustical research. The building was designed by Voorhees Walker Smith Smith & Haines. The building was built of heavier than normal masonry construction to reduce interference from sound and vibration from external sources. The one-story building rests on a concrete foundation and essentially has a rectangular footprint. Test chambers project from the north end and from the south end. The exterior masonry wall is faced in beige, stretcher bond brick. The roof is basically flat with a set-back monitor clad in gray insulated aluminum siding. The south elevation contains 19 bays of paired fixed-light windows. A central entry contains a pair of glass doors set in a concrete surround. The north elevation also contains multiple bays of paired fixed-light windows. The projections contain the anechoic and the reverberation chambers. These test chambers are built of concrete and faced with brick. The exterior walls of the chambers are blind. Each test chamber was built with an inner shell set on vibration isolators surrounded by a second shell of concrete (NBS 1966a:22).

Building 235 (NCNR)

Building 235, completed in 1965, was designed by Burns and Roe, Inc., Architect-Engineers from New York City. The original building occupied a T-shaped footprint. The building has a concrete frame. The east elevation has one and two-story sections that contain the offices and laboratories. The east wall has 14 bays of fixed-light windows set in metal frames separated by concrete framing. The main entry is centered in the east elevation and contains glass doors set in metal frames and surrounded by fixed lights. The doorway is sheltered by a slightly projecting concrete canopy. The upper wall of the south end of the building is faced in beige brick. The glass windows extend along a portion of the west elevation of the south end of the building. A three-story, poured-concrete wing devoid of openings projects from the west elevation.

The building has received multiple additions. In 1986, planning began for the construction of an addition to house expanded offices and laboratories. Completed in 1989-1990, construction comprised a one-story, six-bay office addition on

the north end of the east elevation and a two-story addition constructed on the north wall of the rear wing. The additions were constructed of insulated vertical metal panels with a band of fixed-light windows. Glass doors were installed near the center of the addition. In 2009, the building was extended again through additions on the north and west elevations. These multi-story additions were constructed of dark metal panels with fixed-light windows (NIST drawings files, Rush and Cappalletti 2011).

Building 236 (Hazards)

Building 236 was built as the Hazards Laboratory, later known as the Special Projects Building, completed in 1968. The building was constructed to house laboratories for work with the potential for hazardous accidents (NBS 1966a:22). Generally, the single-story building occupies an L-shaped footprint and rests on a poured-concrete foundation. Cladding materials consist of beige, stretcher bond brick on the south elevation and east elevations; poured-concrete walls are evident on the west and north elevations. The building terminates in a flat roof with a metal eave along the south elevation; roofing materials are not visible. Access to the building is from the south elevation, which features a recessed double-leaf glass door with glass sidelights. The south elevation contains six bays of paired narrow, metal-frame windows set in concrete frames near the southwest corner of the building. The north elevation features a collapsible wall facing a 40-foot high earth berm (NBS 1966a:22). The wall has 11-bays of poured-concrete framing containing plastic panels set in metal frames. A poured-concrete tower is located on the west elevation. The tower is blind on the south and west elevations; it is attached to the principal block on its east elevation. The north elevation of the tower contains plastic panels set in metal frames. Two, poured-concrete sections, both partially below grade, extend from the northeast corner of the north elevation. The east elevation features two sets of double-leaf metal doors.

Buildings 237 and 238 (Non-Magnetic Laboratories)

Building 237 and 238 were completed in 1968 as non-magnetic office and laboratory facilities designed by Voorhees Walker Smith Smith & Haines. The two buildings are linked by a long covered concrete walkway.

Building 237 is a one-story, concrete-block building constructed on a concrete-slab foundation. The building adopts an L-shaped footprint. The exterior walls are clad in beige, stretcher-bond brick. The flat roof has a metal eave. A pair of glass doors set in a metal frame is located in the south elevation. The window bays contain fixed glass-lights with dark panels above and below.

Building 238 is constructed with no metal components. The three-story building is wood-frame construction set on a concrete slab. The exterior walls are clad in vinyl siding. The roof is flat with vinyl coping. The windows are paired, two-light, wood-frame units with fixed lights. Wood doors are located in the north elevation. An external wood stair provides access to the upper floors.

Building 245 (Radiation Physies)

Building 245 was completed in 1964 for radiation physics research. The building occupies a complex footprint and rests on a poured-concrete foundation. Six masses comprise the building. Exterior cladding materials consist of beige brick executed in common bond, insulated metal panels, and poured concrete. The building changes in height from three stories to one depending on location and siting. Portions of the building are below grade.

The three-story principal mass fronts South Drive. The multi-bay north elevation features fixed, single-light, metal-sash windows with metal spandrels above and below the window openings. The off-center entrance is sheltered by a flat-roof canopy supported by brick piers. Doors are double-leaf metal and glass; transoms and plate-glass windows also define the entrance. The mass terminates in a flat roof. A metal-clad penthouse sits atop the roof. The east and west elevations are blind.

A single-story, beige-brick clad ell extends from the south elevation. The ell employs windows on its east and west elevations similar to those found on the principal block. A loading dock also is present on the ell's east elevation. The ell connects to a multi-story mass off its south elevation. Openings on the north and south elevations of the single-story eastern mass feature windows similar to those on the building's principal block. The east elevation features a one story-brick projection. One opening is found on the north and south elevations of the projection. A single-story brick ell extends from the west end of the south elevation of the east mass. A multi-story concrete mass extends from the brick ell.

A flat-roofed covered concourse with decorative glass block projects from the west elevation of the principal mass and connects to a one story, brick building terminating in a flat roof.

A detached, single-story metal building terminating in a flat roof is located south of Building 245. This building connects to Building 245 below grade. A brick tower is located south of the metal building.

Support Buildings

Support buildings comprise four primary building types: Personnel Support, Campus Support (i.e., shops, grounds maintenance, plant and supply, etc.,), Utility, and Storage. The buildings generally occupy rectangular footprints and are clad in red brick, metal, or a combination of brick and metal. Windows are single-light, metal sash; overhead garage doors are common. Building descriptions are grouped based on property type.

Personnel Support Buildings

Four types of personnel support buildings are present on the NIST campus. These include the Visitor's Center and gate house (Building 103), Security gate houses (B, C, and, F), the ES Consolidated Facility (Building 318), and the CCC (Building 320).

Building 103 (Visitor's Center and Gate H ouse)

Building 103, constructed in 2009, is the main visitor center. The one-story building occupies an irregular footprint. The building rests on a concrete foundation. The exterior walls are faced with beige, stretcher bond brick. The flat roof is ornamented in metal. The northeast corner of the building is chamfered. The lower wall of the northeast corner is faced with stone. The main entry in the north elevation contains double-leaf glass doors under a projecting metal canopy. A bay containing fixed lights set in a metal frame is located west of the door. The northeast corner contains a band of fixed-light windows. A brick pillar extends above the roof line and displays a digital clock and the letters "NIST" in metal. The west, south, and east walls are faced in beige, stretcher bond brick.

Gate House

The gate house, constructed in 2009, has a square footprint and rests on a concrete slab. The lower north wall is faced in stone, while the west, south, and east walls are faced in beige, stretcher bond brick. The upper wall of the north elevation is finished in metal. The flat roof has metal coping. Fixed-light windows are located on the east, north, and west elevations. Doors are located on the east and west elevations. A large metal canopy supported on metal columns extends over the driving lanes.

Security Gates (Gate B, C, and F)

All the security buildings are one story in height and terminate in flat roofs, with the exception of Gate B, which terminates in a pyramidal roof. The buildings rest on poured-concrete foundations. Openings are single-light, fixed-sash

windows, and metal and glass doors. The gates are constructed of metal. Gate F accommodates both entry and exit. Unlike Gates B and C, Gate F contains two gatehouses rather than one and a large canopy extends over the roadway.

Building 318 (ES Consolidated Facility)

Building 318 was completed in 2014 as the ES Consolidated Facility Building. The one-story building occupies an irregular L-shaped footprint. The exterior walls are faced in red, stretcher-bond brick. The roof is flat with metal coping. The main entry is located in the center of the north elevation. This area is clad in metal panels with large fixed-glass windows and contains paired glass doors set under a cantilevered canopy. The fire station is located in the southwest corner of the building, which contains four overhead garage doors. The south elevation is clad in metal panels and contains fixed windows and openings that access an outdoor patio.

Building 320 (CCC)

Building 320 was completed as the CCC in 2013. The building was designed by the Baltimore, Maryland-based firm of Colimore Thoemke Architects. The building rests on a concrete foundation and has an L-shaped footprint. Its exterior masonry walls are faced with beige and red, stretcher-bond brick. The east and north elevations are ornamented with projecting bays faced with red brick with horizontal bands of beige bricks and capped with grey stone. The bays contain fixed-glass windows set in metal frames. The main entry located in the northeast corner of the building is clad in red brick. The entry contains double-leaf glass doors with fixed-light transom and sidelights. The entry is sheltered by a projecting canopy supported on brick piers. The west elevation contains similar windows and multiple openings that access a playground.

Campus Support

Building 301 (Supply and Plant)

Building 301 is a single-story building occupying a complex footprint. The principal block is rectangular; an ell connects to the principal block at its northwest corner. The building rests on a poured-concrete foundation and terminates in a flat roof. Roofing materials are not visible. Exterior materials are 5:1 common-bond red brick. The multi-bay primary elevation faces east. Windows generally consist of single-light, fixed-sash, metal units, with spandrels above and below the openings. Double-leaf metal and glass doors provide access to the building. Sidelights and transoms frame the doors. Limestone piers support the flat-roofed metal canopy at the entrance. The north elevation of the principal block is defined by a long row of windows, similar to those found on the east elevation. The west elevation is comprised of a multi-bay loading dock.

The multi-bay east elevation of the ell extends from the northwest corner of the north elevation. A row of windows similar to those found on the east elevation are present on the east end of the north elevation; a multi-bay loading dock is found at the west end. One opening is found on the west elevation.

Additions were constructed in 2013. An addition was appended to the south elevation of the principal block. Metal-panel and brick east elevation is blind. A loading dock is present on the west elevation, which is defined by metal paneling. The metal and brick south elevation is blind. A single-story meta-frame addition with a flat roof was constructed on the addition's south elevation. Openings are present on the south and east elevations. The west elevation features a two-bay open garage.

Building 303 (Service)

Building 303 is a single-story 5:1 common-bond brick and metal building that occupies a complex footprint consisting of a metal wing with flanking brick blocks. The building terminates in a flat roof; roofing materials are not visible.

The building rests on a poured-concrete foundation. Openings generally consist of single-leaf metal doors, overhead garage doors, and one-over-one-light, double-hung, metal-sash windows. A flat-roof metal canopy defines the principal (south) elevation. Openings are present on the south, east, and west elevations.

Building 304 (Shops)

Building 304 is a single-story building that terminates in a flat roof. The building, completed in 1964, occupies an irregular footprint. A second story is found at the eastern end of the building. The building is clad in red brick executed in 5:1 common bond. Windows are single-light, fixed units in metal sash. Spandrels are found above and below the openings. The primary entrance is found on the south elevation and is sheltered by a flat-roof canopy supported by limestone pillars. The double-leaf metal and glass doors are framed by sidelights and transoms. Two, single-story brick masses project from the west elevation. Generally, these masses are blind. The north elevation contains fixed, single-light windows in metal sash and a loading bay. A covered concourse at the east end of the south elevation connects Building 304 to Building 223. A similar concourse at the east end of the north elevation connects to Building 224.

Building 309 – Grounds Maintenance Building

Building 309, constructed in 1976, is a single-story, 5:1-bond, red-brick and metal building occupying a rectangular footprint executed in two masses: a brick office and a brick-and-metal garage. The building terminates in a flat roof, the materials of which are not visible. The building rests on a poured-concrete foundation. Openings consist of single-light-fixed-sash metal windows, overhead garage doors, and single-leaf metal doors. The primary entrance is located on the east elevation. The recessed opening features a single-leaf metal and glass doors with flanking sidelights.

Building 312 (Materials Processing Facility)

Building 312 was completed in 1996 as the Materials Processing Facility. The one-story building occupies a square footprint. The exterior walls are faced in stretcher-bond, beige brick. The flat roof has metal coping and metal roof projections from the western side of the roof. Openings contain single and double-leaf metal doors and overhead garage doors in the south and east elevations. Window openings are located in the northeast corner of the east elevation and the west elevations. The openings contain multiple light plastic panels in metal frames.

Utility

Heating and Chiller Plant

The heating and chiller plant consists of five buildings and structures constructed between 1964 and 2010. The resources range in size and materials. The major components of the complex include Building 302, the steam boiler and chilled water generating plant, and Building 305 the chiller plant cooling tower.

Building 302 (Steam and Chilled Water Generation Plant)

Building 302 was completed as the steam boiler and chilled-water generating plant in 1964. The original building was designed by Voorhees Walker Smith Smith & Haines. The plant occupies an L-shaped footprint comprised of two, two-story brick sections that are linked by a one-story section at the northeast corner of the complex. The building rests on a concrete foundation. The two-story sections of the building exhibit brick walls faced in 5:1 common bond. All sections of the building have flat roofs. The south section of the building exhibits pronounced bay delineations, louvered openings along the foundation, and horizontal bands of ornamental geometric terra cotta panels on the east and west elevations. The west section of the building has plain brick walls. The south and west ends of the building have openings. The northeast corner of the complex contains offices with fixed-sash windows set in vertical metal spandrels. The main entry consists of double-leaf glass doors set in a metal frame on the north elevation. Additions have occurred to the section of the building along Steam Drive. The east and west ends of the building were extended during the 1990s. The west end was extended again since 2010.

Building 305 (Cooling Tower)

Building 305 is the chiller plant cooling tower completed in 1964. The rectangular metal structure rests on a reinforced-concrete basement. The exterior walls are partially enclosed by metal sheathing. The roof is flat. The building was rebuilt on the existing foundations in 1993 and expanded in 1995. The building was again rebuilt and expanded to the south ca. 2011 (Susan Cantilli personal communication 5/6/2015).

Building 316 (Electrical Service Building)

Building 316 is a one-story electrical service building located near the northeast corner of Building 305 completed in 1998. The building occupies a rectangular footprint, rests on a concrete slab, and terminates in a flat roof with a metal eave. The exterior walls are faced in red, stretcher-bond brick. The east elevation contains a large overhead garage door.

Building 317 (Cooling Tower)

Building 317 was constructed in 2010. The metal structure occupies a rectangular footprint and rests on a reinforced-concrete basement. The exterior walls are partially enclosed by metal sheathing. The roof is flat.

Building 1 (Building number assigned by RCG&A)

A one-story support building is located south of the new chiller cooling tower (Building 317). The one-story building occupies a rectangular footprint and terminates in a flat roof with metal coping. The exterior walls are faced in red, 5:1 common-bond brick. The south elevation contains a set of double-leaf metal doors. The north, east, and south elevations are blind.

Building 306 PEPCO

This complex contains three buildings constructed for Potomac Electric Power Company (PEPCO). Although three buildings are present, the complex shares one building number. The buildings sit within an enclosure with limited access. The complex features a single-story building occupying a rectangular footprint. The building terminates in a front-gable roof and faces north. The building rests on a poured-concrete foundation. Cladding and roofing materials are prefabricated metal panels. Openings consist of single-leaf and double-leaf metal doors. The east elevation is blind; no access was available to the south and west elevations.

A single-story 5:1 common-bond brick building occupying a rectangular footprint and resting on a poured-concrete foundation also is present in the complex. The building comprises two brick masses with a metal framing system connecting both masses to one another. Openings on the eastern block consist of an overhead garage door, single-leaf metal doors, and louvered openings. The two-bay building faces north. The east elevation is four bays. The south elevation is similar to the north elevation. The connecting west block also is one story in height. The multi-bay west elevation is open and houses transformer equipment. The north, east, and south elevations are blind.

Buildings 313, 314, and 315 are similar in design. The primary difference is size; Buildings 314 and 315 are larger than Building 313.

Building 313 (Site Effluent Neutralization)

Building 313, constructed in 1996 as a site effluent neutralizer building, occupies a rectangular footprint and terminates in a flat roof with a metal eave. A metal projection extends from the roof. The exterior walls are clad in red, stretcher-bond brick. The west elevation contains a set of double-leaf metal doors. The north, east, and south elevations are blind.

Buildings 314 and 315 (Backflow Preventer Building)

Completed in 1998, both buildings are executed in stretcher-bond red brick and terminate in flat roofs with metal eaves. On Building 314, double-leaf metal doors are present on the north and south elevations. East and west elevations are blind. On Building 315, the openings are present on the east and west elevations, whereas, the north and south elevations are blind.

Storage

Building 307 (Hazardous Waste Chemical Storage)

Building 307, constructed in 1970-1971, occupies a rectangular footprint and terminates in a flat roof with a metal eave. The exterior walls are clad in beige, stretcher-bond brick. The west elevation is divided into three bays featuring one single-leaf metal door in each bay. The north, east, and south elevations are blind.

Building 310 (Hazardous Waste Chemical Storage)(With 307)

Building 310 is a storage building constructed in 1986-1987 and faces south. The north elevation is constructed into a poured-concrete retaining wall. The single-story building occupies a rectangular footprint and terminates in a flat roof with metal coping. The exterior walls are faced with beige, stretcher-bond brick. The three-bay south elevation features three large openings. The center opening contains chain link doors, while the flanking openings also are enclosed with chain link. A small window opening is found near the eave on the west elevation.

Building 311 (Grounds Storage Shed)

Building 311 is single-story, metal-frame building occupying a rectangular footprint. Prefabricated metal panels are used for the cladding and roofing materials. The four-bay principal (south) elevation features three overhead garage doors and one single-leaf metal door. An opening also is present on the north elevation. The east and west elevations are blind.

Building 319 (ES Storage Building)

Building 319, constructed in 2014, occupies a rectangular footprint and terminates in a flat roof with metal coping. The exterior walls are clad in red, stretcher-bond brick. The west elevation contains a metal door and an overhead door. The north, east, and south elevations are blind.

Building 321 (Liquid Helium Recovery Facility)

Building 321 is a one-story metal-frame building clad in prefabricated metal panels. The building, which occupies a rectangular footprint, rests on a poured-concrete foundation and terminates in a side-gable roof. The roof is partially clad in metal panels. A pedestrian door opening is located at the northeast corner of the north elevation; no door is present. An opening also is located on the west elevation. The building currently is unfinished.

Residential Resources

Building 308, known as the Bowman House, was constructed in 1952-1953 and transferred to NIST through a land purchase in 1969. The one-story, wood-frame house is clad in vinyl siding. The side-gable roof is sheathed in composition shingles. The main entry located in the north elevation is slightly recessed and contains a plywood door. The windows are all

modern replacement units comprising fixed picture windows flanked by four-over-four-light, double-hung sash units; and, six-over-six-light units. The windows have modern louvered shutters. A massive square brick chimney projects from the south side of the roof. A screen porch is located on the southwest corner of the building. A major rectangular addition was constructed along the south elevation of the house. The addition is clad in vinyl siding with a composition-shingled gable roof. All doors and windows are modern units. NIST acquired the house with the property in 1969. Between 1969 and 1983, the Building Research Division used the house to study insulation in older homes. In 1976, the house served as the human factors laboratory to "provide a realistic and comfortable setting in which to study people using ordinary consumer products in a natural way" (NBS 1976:22). In 1983, the house was adapted into a daycare center. The addition was added in 1988 (Schooley 2000:180-181, 876).

Landscape

A comprehensive landscape and site plan was prepared for the campus. Vehicular and pedestrian circulation networks, parking lots, and building setbacks were developed holistically. The natural environment, such as the existing woodlot located south of Building 202, was integrated into the design of the campus. In addition, an extensive plant schedule was prepared. The landscape also includes the Newton apple tree, which was planted in 1966. The tree is located between Building 101 and Building 225.

Flagpole

A flagpole erected in 1965 is located east of Building 101. The metal pole is set into a circular granite base incised with the following words from George Washington "Let us raise a standard to which the wise and honest can repair" (Passaglia 1999:488).

Masonry Test Wall

A masonry test wall is located northwest of Building 236. The wall originally was built in 1948 at the NBS campus in Washington, D.C., to study weathering agents on structural materials. The wall is faced in 2,059 stone samples on the front face and 293 samples of the rear and ends. Stones from 48 states number 2,032, while 320 stones are from foreign countries. The wall was moved to its current location in 1977 (Passaglia 1999:491).

Entrance Gate

Two stone entrance gate posts with gate were relocated to the Gaithersburg campus from the Washington, D.C. campus in 1976. The posts are executed in random ashlar. Visual observation suggests the posts rest on granite bases and have sandstone caps. Each post has a bronze plaque reading "National Bureau of Standards". A metal gate is attached to each post. The gate and posts are located on North Drive, north to the entrance to Building 101.

Landscape Features

Three stormwater management ponds, two east of East Drive, and one west of Buildings 237 and 238 also are present The two ponds adjacent to East Drive are large; mature coniferous trees and grasses define the edges of the ponds. Limited seating, i.e., picnic tables, are found at the northernmost pond. A small footbridge is located adjacent to the southern pond. A review of historic aerial photography suggests the ponds were installed in ca. 1965 (Historic Aerials var.). A lack of access prohibited survey of the pond located west of Building 235. The pond located near Building 235 was constructed in 1995 in preparation for the construction of the AML complex (Susan Cantilli personal communication 5/6/2015).

Recreational Facilities

Baseball Fields

The two baseball fields are located east of East Drive. Each field includes a chain link fence behind the catcher's box. Chain link fences also shield the seating for the home and visiting players. The seating consists of one plastic bench for each team. Facilities for trash, recycling, and storage also are present. The fields were constructed during the late 1990s (Susan Cantilli personal communication 5/6/2015).

Picnic Area

The picnic area is sited east of East Drive and adjacent to the baseball fields. Mature trees define the eating area. Grills, stone trashcans, and wood and plastic picnic tables are present. The picnic area also includes a playground. Visual observation suggests the playground equipment and the picnic tables were installed during the late twentieth century or early twenty-first century.

Volley Ball Court

A volley ball court is located behind Building 301, on the west side of Service Road. The court features a net and sand pit. The volley ball court was installed ca. 2009 (Susan Cantilli personal communication 5/6/2015).

8. Significance

Inventory No. M:20-47

Period	Areas of Significance	Check and justify below		
__ 1600-1699	__ agriculture	__ economics	__ health/medicine	__ performing arts
__ 1700-1799	__ archeology	__ education	__ industry	__ philosophy
__ 1800-1899	__ architecture	__ engineering	__ invention	__ politics/government
X 1900-1999	__ art	__ entertainment/ recreation	__ landscape architecture	__ religion
__ 2000-	__ commerce		__ law	X science
	__ communications	__ ethnic heritage	__ literature	__ social history
	__ community planning	__ exploration/ settlement	__ maritime history	__ transportation
	__ conservation		__ military	__ other: ____

Specific dates 1961-1969 **Architect/Builder** Voorhees Walker Smith Smith & Haines (HLW International)

Construction dates 1961-1969, 1970-1999, 2000-2015

Evaluation for:

__X__ National Register _____Maryland Register _____not evaluated

Prepare a one-paragraph summary statement of significance addressing applicable criteria, followed by a narrative discussion of the history of the resource and its context. (For compliance projects, complete evaluation on a DOE Form – see manual.)

Summary

NIST is the only Federal agency charged with establishing national measurement standards and keeping them uniform, compatible, and reliable. Basic measurements include mass, length, time, temperature, electric current, resistance, and chemical composition. The 12 bureaus, including NIST, that fall under the Department of Commerce, collectively assist that Federal department with fulfilling its mission of encouraging and prompting the economic growth of the United States. NIST's location within the Department of Commerce helps ensure that new products and services are developed and improved for use in commercial applications. Further, NIST assists the department by facilitating development of new technologies and innovations that can be adopted by the private sector (U.S. Department of Commerce 2014).

This MIHP form presents an historic context on the establishment of NIST and the agency's move from its Washington, D.C. headquarters to its current location in Gaithersburg, Maryland. The themes of science and technology and postwar research campus design also are explored. The documentation concludes with an assessment of the Gaithersburg campus as an historic property applying the National Register Criteria for Evaluation (36 CFR 60.4[a-d]).

Establishment of the National Bureau of Standards and Administrative Overview

The U.S. Congress chartered the National Bureau of Standards (NBS) in March 1901 (Public Law 177-56th Congress, 2d Session quoted in Cochrane 1966:541). The NBS took over the duties of the Office of Standard Weights and Measures founded in 1836 as part of the Coast and Geodetic Survey. The original purpose of the Office of Standard Weights and Measures was to provide the states with standardized weights and measures to support the collection of taxes by ensuring uniform shipment of goods across state lines and internationally. The work of the office was focused on the measurements of length, volume, and weight (Cochrane 1966:20-21, 29).

By the late nineteenth century, the Federal and state governments had no legislated standards for weights and measurements. Wide variations existed from state to state for the most basic of measurements. In addition, new standards were required for electrical measurements; for building materials, such as the tensile strength for concrete and the composition of steel; and, for consumer products to avoid chaos in the market place (Cochrane 1966:37, 38).

In 1900, Secretary of the Treasury Lyman J. Gage proposed the formation of a national standards laboratory in the United States. He selected Samuel W. Stratton to draft a bill establishing such an agency and to become its first director (Cochrane 1966:39-40). The NBS originally was placed in the Department of the Treasury. In 1903, the NBS was assigned to the Department of Commerce and Labor. After the two departments were split in 1913, the NBS remained in the Department of Commerce. In 1903, the NBS moved from downtown Washington to a new laboratory located on the west side of the

intersection of Connecticut Avenue and Van Ness Street in northwest Washington, D.C. The NBS remained in this location until the agency moved to Gaithersburg in 1966.

Between 1920 and 1940, the NBS continued to grow and mature as an organization. Projects undertaken during this time reflected political priorities. During the 1920s, NBS staff worked more closely with projects designed to benefit industry under the leadership of Secretary of Commerce Herbert Hoover. During the 1930s, the Great Depression directly impacted the agency. The agency's basic scientific programs returned to prominence.

The beginning of World War II ushered in a period of explosive growth for NBS. From a staff numbering below 1,000 in 1939, the personnel level rose to 1,204 and was supported by a budget of $3.37 million by December 1941. By 1945, the staff had increased to 2,206 and the budget had risen to $9.7 million (Passaglia 1999:16; Cochrane 1966: 558, 563).

NBS scientists were involved in many significant projects, such as the radio proximity fuse, which contained a tiny radio that transmitted waves towards a target and controlled detonation to inflict maximum damage. This development increased the effectiveness of antiaircraft shells, rockets, and bombs (Briggs and Colton 1951:770). NBS scientists also developed a fully automated guided missile, known as the "Bat," that was used in the last months of the war against Japanese land and sea targets (Sangster 1975:D-23; National Institute of Standards and Technology [NIST] 2000:n.p.). Radio research focused on improving radio direction finders, studying radio propagation phenomena, and supporting aerial navigation, radio-telephony, radio-telegraphy, and radar. NBS investigations also were conducted to develop methods to conserve petroleum, to manufacture optical glass, and to investigate a broad range of substitute materials, such as synthetic rubber, quartz crystals, and plastics (Sangster 1975:D-23).

The experiences of World War II resulted in a dramatically changed scientific landscape. Technological advances made during the war posed the potential for immense changes in all areas of life. The development of the atomic bomb ushered in the atomic age, followed, in 1957, by the beginning of space age with the launch of Sputnik by the U.S.S.R. The role of NBS in this new world of science and technology was a topic of discussion during the late 1940s.

In 1950, the Secretary of Commerce proposed new enabling legislation to codify activities assigned to the NBS by "supplementary legislation, executive orders and customary procedure" (Passaglia 1999:149-150). During the late 1950s and throughout the 1960s, NBS administrators made concerted efforts to maintain consistent standards, while keeping the agency's scientific research programs relevant to meeting national needs. By the late 1970s and early 1980s, the NBS administrators led the agency to "undertake programs to foster the delivery of technology to the industrial, intergovernmental and international sectors" (Schooley 2000:452).

In 1988, the Omnibus Trade and Competitiveness Act (Public Law 100-418) redefined the roles and mission assigned to the NBS. The NBS was renamed the National Institute of Standards and Technology (NIST) to reflect its new responsibility: to play a major role in revitalizing U.S. trade in the face of Japanese and German technological superiority. The drafters of Public Law 100-148 both acknowledged the traditional NIST research areas and defined its important future role.

In 2010, the NIST's research programs again were realigned from a laboratory-based to a mission-based structure fostering interdisciplinary research groups collaborating on projects. The new organization replaced a single deputy director with three associate directors and reduced the number of laboratories to six. The laboratories comprised Material Measurement Laboratory, Physical Measurement Laboratory, Engineering Laboratory, Information Technology Laboratory,

Center for Nanoscale Science and Technology, and NIST Center for Neutron Research (NIST 2010). By 2014, the Communications Technology Laboratory in Boulder became the seventh operating unit (NIST 2014c).

Historic Context: NIST's Move to Gaithersburg

By the 1950s, the NBS had outgrown its Washington, D.C. facilities. The D.C. campus comprised over 90 buildings on a 68-acre campus. Many of the buildings were ill suited to conducting the research needed to fulfill the agency's mission. In addition, the expanding residential areas of Washington, D.C., had encroached on the NBS campus, resulting in interference with some areas of research work. The agency was in desperate need of room and modern facilities.

A campaign to relocate the NBS began during the mid-1950s when James Worthy, Assistant Secretary of Commerce for Administration, approached NBS regarding relocation as part of an effort to disperse Federal agencies outside the District of Columbia, which, during the height of the Cold War, was considered a high potential target area. NBS director A.V. Astin accepted the offer, and thus began the multi-year NBS relocation process. Director Austin coordinated with the GSA to prepare a construction budget, which was submitted to Congress for approval, and ultimately, the appropriation of funds. While the GSA acted in a construction management capacity, the agency did not assume operational and management responsibility for the buildings once they were completed. Rather, the new campus and buildings became part of the NBS real property inventory.

Many factors were considered in site selection. Agency requirements for acreage and distance from the nation's capital established basic criteria for potential locations. The new site needed to encompass a large area, ideally 500 or more acres, and to be located approximately 15 to 20 miles outside the District of Columbia, but not in the Baltimore-Washington corridor. Future expansion also was a key consideration in site selection. The site of the new home for the NBS needed to be large enough to accommodate the construction of additional buildings.

Isolation from population centers and the associated mechanical, electrical, and atmospheric disturbances that could interfere with the agency's precise scientific measurement and research programs was paramount. In addition, the site needed to be accessible to NBS scientists; access to downtown Washington, D.C., and proximity of the site to where NBS scientists lived were imperative (Voorhees Walker Smith Smith & Haines 1961b:1). Like with other research facilities constructed during the period, project planners sought a site that was located outside the city center in a suburban location that would be convenient for NBS employees. In addition, NBS maintained strong working relationships with research institutions and other government agencies. The ability to continue those relationships from the new location was important to administrators and scientists.

In May 1956, Director Astin was shown a site that appeared to meet the agency's requirements. The Gaithersburg, Maryland, location comprised 575 acres in rural Montgomery County and was accessible by rail and road. Final site selection set in motion land acquisition and the preparation of plans and cost estimates.

In selecting a firm to design the new campus, the Federal government sought an established company experienced in the design of research facilities meeting exacting requirements. Specifically, NBS officials wanted a team with: "the experience, competence, and the size necessary to accomplish the planning for a large research facility like the National Bureau of Standards" (National Bureau of Standards [NBS] 1966a:3). The selected firm, Voorhees Walker Smith Smith & Haines, had extensive technical expertise in designing laboratory space. Indeed, the decision to select the design team was well-considered. Since World War II, the firm had designed and constructed approximately 10 million square feet of laboratory space for such clients as DuPont, Ford, General Electric, and IBM, in addition to the Bell Telephone Laboratories

(NBS 1966a:3). The firm concurrently designed research laboratories for NASA's Goddard Space Flight Center in nearby Greenbelt, Maryland.

In December 1956, GSA contracted with the New York City-based architectural firm to initiate preliminary studies for the new NBS facility. Their assignment was "to determine the number, size and type of structures required, to develop a fundamental site development plan as a basis for final designs, and to prepare cost estimates. Basic requirements for the exploratory study were to consolidate NBS' various operating divisions into the smallest practicable number of buildings; to provide mechanical and electrical facilities that would serve the laboratories…; to plan the buildings for a limited increase in the future work load and site addition of further research facilities as required" (Voorhees Walker Smith Smith & Haines 1961a:1). HLW International was awarded the architectural design contract in 1959 (U.S. Department of Commerce 1961; NBS 1966a:6).

Design of the new campus was conducted simultaneously with the land acquisition process. The first land acquisition was completed during 1958. Additional parcels were acquired between 1959 and 1962. In all, 565.3 acres were acquired from nine owners. The smallest parcel was 1.7 acres, while the largest parcel was 260.2 acres. The remaining 14.6 acres were purchased from four owners between 1967 and 1986 (NIST n.d.).

When the Gaithersburg campus was planned, three institutes were scheduled to move to the new facility: the Institute for Basic Standards, the Institute for Materials, and the Institute for Applied Technology. Public and private-sector employees participated in discussions regarding the new campus (NBS 1966a:1). The new campus would house the world's largest physical science laboratories "designed to meet the varied environmental and space requirements of many kinds of specialized equipment and delicate, highly precise measuring instruments" (NBS 1966a:3).

Designing the Gaithersburg Campus

Upon selection of the design team, the first major decision confronting the designers was the issue of the type of research facility envisioned: a single-structure plan versus a multiple-building campus. The GSA preferred a single building option as a measure to contain construction costs. NBS administrators and scientists preferred a campus setting with multiple buildings and landscaped grounds, reminiscent of the D.C. campus. The architects prepared a variety of options, submitting one multiple-building plan and three single building plans. Ultimately, the architects recommended the multiple-building plan because it offered maximum flexibility and minimal restriction in planning the varied research programs conducted at NBS (Voorhees Walker Smith Smith & Haines 1961b:1-2; NIST 1958:3:21-1-2). Additionally, the nature of some testing required isolation from other laboratories to eliminate environmental interference. The architects determined that the one-building scenario for accommodating all of the employees slated to move to Gaithersburg and that could also meet the necessary required vibration and noise tolerances was not practical. Two types of laboratories would be needed: one type of laboratory for general purposes and another type that would be isolated from other buildings for highly technical testing to minimize environmental interference.

Once the decision on the type of facility was resolved, design of the new facility began in earnest. An intense collaborative relationship developed between NBS scientists, administrators, and the architectural design team. As part of this collaboration, a multi-pronged approach to the design process was developed. This process included site visits to other research laboratories for comparative research into similar facilities, the creation of a planning committee, and the construction of scale models.

Part of the collaborative design philosophy included input from scientists at other research institutions. To accomplish that goal, NBS administrators and scientists and representatives from the architecture firm visited many of the

The need for two types of laboratories, general laboratories and facilities for highly-technical research, was recognized early in the design process. The highly-specialized nature of some of the research programs required the construction of purpose-built buildings isolated from the general laboratories. However, the overwhelming majority of scientific investigation would occur in the GPLs, which were intended to "be suitable for most of the work performed within NBS laboratories" (NBS 1966a:5). The GPLs were easily adaptable. A chemistry lab easily could be converted for use as an electronics laboratory (NBS 1966a:7).

Buildings for highly-specialized research also were designed. Some of the work completed by the NBS required very specialized facilities that could not be accommodated in the GPLs. (Voorhees Walker Smith Smith & Haines 1961b:3). Special purpose laboratories were those that required laboratory space larger than the standard module; precise temperature control; special ventilation; or, excessive floor loading (Voorhees Walker Smith Smith & Haines 1961b:3). Due to the nature of the testing and experimentation that was to be conducted in the buildings, these laboratories could not be designed with adaptability and flexibility in mind (NBS 1966a:7).

Applying the knowledge gained through collaboration with the NBS, the architects developed a design concept. A scale model of the multi-building Gaithersburg campus was unveiled at the Project Design Review Meeting on 1 June 1960. The model was viewed by representatives of GSA, NBS, U.S. Department of Commerce, and the Bureau of the Budget. Photographs of the model appeared in local newspapers shortly thereafter (Passaglia 1999:483; *The NBS Standard*, June 1960). Once the basic design of the campus and individual buildings had been completed, the NBS issued a document akin to design guidelines, which outlined basic building provisions (NBS 1961). The document codified construction materials for the GPLs and established the dimensions of the demountable steel partitions used for the configuration of the interior modules. Flooring materials were specified and air conditioning, exhaust systems, and mechanical and electrical service were identified (NBS 1961).

Construction of the Campus

The final design of the Gaithersburg campus incorporated prevailing architectural design theories and tenets for successful research campuses. These tenets included: suburban siting; general research labs and highly specialized laboratories; flexibility in design to facilitate reorganization of spaces; and, adequate acreage to accommodate future expansion. Productive collaboration among colleagues was among the goals in the construction of postwar research campuses. Creating an environment conducive to collaborative interaction among scientists was also was a key consideration in the design of the NBS facilities.

The site plan for the Gaithersburg campus grouped the administrative, service, and special laboratory buildings into three general areas. The GPLs and the principal administration building were grouped together. Service and support functions generally were located west of the GPLs and the specialized, special purpose buildings generally were located south of South Drive. The architects planned to incorporate extensive landscaping (Voorhees Walker Smith Smith & Haines 1961b:6). They intended that most of the roads would be tree lined (Voorhees Walker Smith Smith & Haines 1961b:6).

The central focus and dominant building of the complex was the Administration Building (Building 101), which was linked by concourses to low scale buildings, including seven GPLs and the Instrument Shops Building (Building 304). The Administration Building housed all common facilities and public spaces, such as a variety of dining facilities; a library; and meeting rooms of various sizes, including an 800-seat auditorium, a 300-seat auditorium, three 100-seat, one 50-seat, one 25-seat, and two 12-seat lecture rooms (NBS 1966a:5). The executive offices for the agency director also were housed in the building.

The GPLs were identical in exterior design with minor differences. Three of the seven buildings were constructed with basements. All seven buildings rise three stories above the ground level. The GPLs were designed to house approximately 1,500 scientists, engineers, and support staffs. The seven GPLs represented a consolidation of research activities (NBS 1966a:7). The siting of the GPLs allowed for the construction of up to seven additional buildings, while retaining the original hierarchical plan of connected buildings.

The plant support area was located west of the Administration Building and the GPLs and contained the boiler and refrigeration plant, the Potomac Electrical Power Company substation, the supply and plant warehouse, and the motor pool. The other buildings in this area were specialized laboratories, such as the Engineering Mechanics Laboratory and the Radiation Physics Laboratory. A group of laboratories constructed for the Building Research Division were located at the south end of the property. These laboratories contained fire research and concrete material testing. These facilities were isolated from the main administration and laboratory complex due to the type of work conducted, the size of the equipment, and specialized research requirements. Exterior materials were used to delineate function in the design. Primary research buildings typically were faced in light beige brick, while support buildings were faced in red brick (Voorhees Walker Smith Smith & Haines 1961b:6; NBS 1966a:6; Susan Cantilli personal communication 12/3/2014).

New research projects assigned to NBS required adjustments to the overall campus design. For instance, the Engineering Mechanics Laboratory (Building 202) was not included in the initial plans for the research campus. The Engineering Mechanics Laboratory was designed to house several compression and tension testing machines, including a 12 million-pound universal testing machine and a 1 million-pound deadweight force-calibrating machine. The urgency for research requiring these new machines was due to the new emphasis on space sciences in response to the U.S.S.R. launch of its sputnik satellite in 1958. NASA enlisted NBS assistance to calibrate a load cell capable of measuring up to 1.5 million lbs to support the man-in-space project. NBS did not possess the machinery to accomplish the task. Buildings at the D.C. campus could not accommodate the massive testing equipment and no additional acreage was available at the facility to construct a purposely designed building. Consequently, a new building at the Gaithersburg campus was designed and constructed to house this important new program (NBS 1966a:18-22; Passaglia 1999:482).

Two additional buildings also were planned to accommodate special research requirements. These were a specialized physics building (Building 245) and the neutron studies building (Building 235). The physics building was specifically designed to house high-energy particle accelerators, specifically the linear accelerator (LINAC) (no longer extant), two Van de Graaff accelerators, and X-ray machines for use in "developing radiation standards and measurement methods and by obtaining basic data on the interaction of radiation with matter" (NBS 1966a:14). The neutron studies building was used to test the effects of neutron beams on materials of all kinds, including the structure of solids and liquids, aspects of crystal structure, and generating radioisotopes (NBS 1966a:11). Funding to construct the neutron studies building was a separate Congressional appropriation (U.S. Department of Commerce 1961).

Architectural Vocabulary Employed in the Construction of the NIST Campus

The Modern architectural style was adopted extensively by the Federal government during the mid-twentieth century for the construction of new buildings. The Modern style blurred or redefined public and private space. Public spaces, such as grand lobbies and entrances often were eliminated in favor of sweeping plazas, and functionalism became the prevailing consideration (General Services Administration [GSA] 2005:30). Extensive use of new materials and technologies was key. Steel, reinforced concrete, plastic, and glass were used in innovative ways (GSA 2005:30). Style was expressed through the use of innovative materials and the exposure of structural systems that previously were hidden beneath a decorated skin. Government agencies, with their desire to minimize taxpayer expense, readily embraced the Modern style because it was cost effective to construct (GSA 2005:31).

While Modern buildings had cheaper initial construction costs than buildings constructed in earlier styles, their expected service life was considerably shorter. Gordon Bunshaft of Skidmore, Owings & Merrill, a leading practitioner of the Modern movement, stated:

> It seems to me that the greatest change that is occurring in this country is that buildings are no longer being built to last five hundred years.... Today the economics of our civilization and the increasing requirements of comfort demanded by the people are making buildings obsolete in twenty to twenty-five years...As far as the technical aspects of development, there is no question that we must develop a method of building these buildings precisely, lightly, and quickly, and this, of course, leads to prefabrication (GSA 2005:31).

The GSA developed design standards for the construction of Federal buildings. The Public Buildings Service, charged with overseeing design and construction management activities for Federal agencies, issued guidelines in 1959. Private-sector architects and engineers could be retained to design Federal projects. However, such firms were required to complete projects within fixed government estimates. These estimated costs included site acquisition; design, construction, and interior design and furnishings for the buildings; as well as the administrative and supervisory costs incurred by the government (GSA 2005:62). A policy on material, systems, and equipment selection was developed. The GSA prescribed buildings that were "functionally efficient and economical in construction, operation, and maintenance" (GSA 2005:62).

In 1962, the GSA again issued guidelines for the construction of Federal buildings under its management. The new guidelines encouraged maximization of net useable space, flexibility in space assignment, and economy. The guidance also encouraged designs that would promote employee morale and that were conducive to the protection of life and property (GSA 2005:62). The GSA continued to modify its guidelines and issue revisions throughout the 1960s and early 1970s. The 1962 GSA guidelines were issued after the design and construction of the NBS campus was underway. In an effort to be prudent with taxpayer funds, the GSA emphasized economy and expediency in Federal construction projects. NBS management, in contrast, were concerned that too great an emphasis was placed on minimizing costs at the potential expense of long term functionality. The timing of the issuance of the first formal GSA guidelines in 1959, some of which codified requirements that NBS officials found objectionable, suggests the guidelines may have been in development during the design phase of the NBS project and did not apply to the Gaithersburg project.

When designing the NBS campus, the architects selected the International Style, a substyle of the Modern aesthetic movement and which was then-popular for the construction of commercial buildings. Coined in 1932 in *The International Style* by Henry-Russell Hitchcock and Philip Johnson, which was published in conjunction with the "Modern Architecture: International Exhibition" at the Metropolitan Museum of Art, the style did not gain in popularity in the United States until after World War II. The work of European architects, including Le Corbusier, Walter Gropius, and Mies van der Rohe

introduced the style to an American audience. Hitchcock and Johnson identified three characteristics of the style: "architecture as volume, regularity, and voiding the application of ornament" (McAlester 2013:617).

A major feature of the style was the use of curtain-wall construction. The postwar increase in the availability of steel resulted in the construction of light-weight buildings that were taller than their predecessors and that could incorporate an abundance of windows. Cladding materials were smooth and unadorned. Additional character-defining features include clean geometrical forms, flat roofs, a lack of ornamentation, asymmetrical facades, and cantilevered projections (Pennsylvania Historical & Museum Commission n.d.).

While its use was not uncommon in residential applications, the style more commonly was applied to commercial office buildings. Indeed, it became popular in the design of skyscraper office towers and corporate and research campuses, as well as low-scale commercial buildings. In some cases, such as the General Motors Technical Center in Warren, Michigan, and the Seagram's Building in New York City, the style became an expression of corporate image.

Campus Landscape Design

A contemplative environment was seen to support productive scientific research and investigation. Postwar research campuses frequently were located in suburban environments and an abundance of well-designed and manicured greenspace was common. Formal landscape designs were used to enhance research "campuses" by defining vehicular and pedestrian circulation patterns, reinforcing connectivity between buildings, creating informal gathering points for professional interaction, and establishing an idyllic environment with minimal urban distractions that was conducive to focused scientific investigation.

The GPLs and the Administration Building are clustered at the eastern edge of the campus. Covered concourses connect the laboratory buildings to one another. The buildings are aligned along an east/west access with mowed lawn between the buildings. Parking lots, which are arranged along a north/south access, are relegated to the periphery of the GPL complex. In general, parking lots were sited to allow for future building expansion (Voorhees Walker Smith Smith & Haines 1961b:6).

The support buildings and some of the special purpose laboratories generally are located west of Research Drive. Buildings requiring isolation are sited south of South Drive. The buildings at the southern end of the campus are isolated from the main concentration of buildings clustered north of South Drive as well as isolated from each other. Large expanses of mowed lawn define the southern end of the campus. Roads generally are aligned along a north/south access. The road network provides efficient vehicular circulation; sidewalks accommodate pedestrian circulation.

Landscaping to support the campus site plan at Gaithersburg was extensive. By 1966, 3,000 trees and shrubs had been planted (NBS 1966a:6). Two existing wood lots were integrated into the design. One was converted into a glade with grass and light shade; the other wood lot was an "open flowering woods with winding paths and azaleas" (NBS 1966a:6). The interior courtyard of Building 101 was landscaped extensively and included benches, specimen trees, and a water feature.

A well-developed landscape plan was not a unique feature to NIST. Many Federal agencies constructing buildings during the postwar years took landscape design into consideration in comprehensive site development. Indeed, "the landscapes of Federal buildings and complexes were also prominent components of many Modern buildings. Landscaped plazas and courtyards were often executed as part of original building plans" (GSA 2005:9).

Architect and Engineering Firms Working at NIST

Architectural and engineering firms experienced in designing extremely specialized buildings generally were selected to design the research campuses. The design teams working at NIST had particular expertise in the design of laboratories, research facilities, and research campuses. For example, HLW International, the principal architects for the campus, were nationally known for their specialization in research campuses, whereas Burns and Roe Associates, the firm responsible for the initial design of Building 235, had particular experience in designing energy facilities for public and private-sector clients.

Construction at the Gaithersburg campus was initiated after Congress appropriated $23.5 million in 1961 (U.S. Department of Commerce 1961). The new NBS campus was a major undertaking and construction activities were divided among numerous builders. Funds to build the HLW International-designed campus in its entirety were not appropriated in a single funding package. Consequently, buildings included in the original campus design were completed in phases as funds were appropriated and construction contracts were awarded. Annual funding and the agency's prioritization of building need dictated construction order. HLW International designed all the buildings completed under the initial construction period (1961-1969).

Development of the campus can be divided into three broad periods: Initial Construction (1961-1969), Second Period (1970-1999), and Third Period (2000-2015). The first period of construction (Initial Construction) is further divided into five phases coinciding with Congressional funding and the awarding of construction contracts. Twenty-six buildings were constructed during this period. Twelve buildings were constructed during the Second Period of construction. Two buildings, Building 102 (the original gatehouse) and Building 310 (a townhouse), were demolished. The current gatehouse replaced the original when the existing building was constructed in 2009. The date of demolition for Building 310 is unknown. Sixteen buildings were constructed during the Third Period of construction. One building, Building 308, predates the campus. Building 308 is a dwelling constructed during the early 1950s. Select projects are discussed in additional detail below.

Initial Construction Period (1961-1969)

Phase I of the Initial Construction Period comprised initial site work and construction of the Engineering Mechanics Laboratory (Building 202) and the power plant (Buildings 302 and 305). The contractor for Phase I was Paul Tishman Co., Inc., from New York, New York (Voorhees Walker Smith Smith & Haines 1961c:2). Official groundbreaking ceremonies were held at the actual site of the engineering mechanics laboratory on June 14, 1961.

Phase II construction comprised the Radiation Physics Laboratory (Building 245), Administration Building (Building 101), Supply and Plant Building (Building 301), Automotive Service Building (Building 303), and the Instrument Building (Building 304). The contractor for Phase II was Blake Construction Company, Inc., from Washington, D.C. A neutron testing facility (Building 235) was constructed during Phase III. The construction contractor for the building was Blount Brothers Corporation (NBS 1966a:6).

Phase IV construction comprised the seven general purpose laboratories: Metrology (Building 220), Physics (Building 221), Chemistry (Building 222), Materials (Building 223), Polymers (Building 224), Technology (Building 225), and Building Research (Building 226). Phase V comprised the special purpose laboratories for Sound (Building 233), Hazards (Building 236), Industrial (Building 231), and Concrete Materials (Building 206). The contractor for both construction Phases IV and V was J.W. Bateson Co., Inc., from Dallas, Texas (NBS 1966a:6; Voorhees Walker Smith Smith & Haines Contract Kits 1961c; NIST 1997). The archival record is unclear regarding the end date of Phase V. Some sources include the construction of Buildings 230, 237, and 238 under Phase V, while others do not (Passaglia 1999:487).

HLW International was the architecture firm responsible for the overall design of the campus and the original buildings. Architects at the firm were noted specialists and national leaders in the design of postwar research campuses. The firm developed innovations in the design of research laboratories. Those innovations were applied to the NBS buildings.

In addition to HLW International, a second New York City-based firm also designed buildings constructed during the Initial Construction period. Burns and Roe Associates designed the original portion of Building 235, which was completed in 1965. Burns and Roe Associates was established in 1932 (Bloomberg Business n.d.a). As an engineering firm, Burns and Roe Group, Inc., as the company later was known, provided desalination, air quality and pollution control, and advanced nuclear technology services, among others, to private and public sector clients (Bloomberg Business n.d.a). POWER Engineers acquired Burns and Roe in 2014 (Rubin 2014).

NBS staff moved to the campus as the buildings were completed. Power plant personnel were the first staff to move to the campus in March 1962. In October 1963, the Office of Weights and Measures and the Engineering Mechanic Section staff occupied Building 202. The Administration Building was occupied in July 1965; NBS Director Astin moved into the completed headquarters building in September 1965. The GPLs were occupied during 1966. The formal dedication ceremonies were held in November of that year (Passaglia 1999:488-489).

Second Period (1970-1999)

The Second Period of development at the Gaithersburg campus was modest. Buildings constructed were associated with expanded missions or new assignments. Building 307 (completed in 1971), Building 205 (completed in 1975), Building 309 (completed in 1976), Building 311 (completed in 1990), and Building 312 (completed in 1996) were constructed during the time period. Additional chemistry facilities were added to the campus with the construction of Building 227 in 1999. However, the majority of major construction projects comprised improvements or additions to existing buildings. Buildings 205 and 235 were expanded during this period.

Building 205 was constructed to support new testing demands for the existing fire research program. The architectural form of Fry and Welch designed the building, which was completed in 1975. The firm was established in 1954 by Louis Fry, Sr. and John Welch (Tuskegee University 2010:3). Early during its history, the practice specialized in campus construction and was responsible for the design of buildings at Prairie View A & M University, Texas; Tuskegee University, Alabama; Lincoln University, Pennsylvania; Howard University, Washington, D.C., and Morgan State University, Maryland, among others (Fry and Welch Associates, P.C. n.d.). The firm also undertook government projects as well as commercial commissions (Fry and Welch Associates, P.C. n.d.). Company co-founder, John Welch, later became the Dean of the Tuskegee Architecture Program (Tuskegee University 2010:4). The firm is one of the oldest African-American architectural practices in the country. Building 205 was expanded in 2014.

Building 235 also was expanded in 1988 to accommodate the growing program in cold neutron research (Rush and Cappelletti 2011:27). The 1988 addition was designed by NUS Corporation. Originally Nuclear Utility Services, Inc. NUS Corporation was an engineering consulting firm specializing in nuclear engineering, water management, and environmental safety (Nelkin 1974:31). Today, the company, Halliburton Nus Corporation, is a subsidiary of Halliburton Company (Bloomberg Business n.d.b).

A major expansion to Building 301 was completed in 1996. The addition to the building was designed by the Cleveland, Ohio-based Austin Company. The Austin Company was an early pioneer in the design of corporate campuses. The firm, under the leadership of company founder, Samuel Austin, designed the industrial research campus for the National

Electric Lamp Association (NELA), a predecessor to General Electric in 1911 (The Austin Company n.d.:2). The company undertook the design of lamp manufacturing plants and other projects in the Midwest, as well as the east and west coasts (The Austin Company n.d.:2). During World War I, the Austin Company completed projects for the defense industry, designing the Curtiss Aeroplane and Motor Company's manufacturing facility (The Austin Company n.d.:3). The company again turned to designing airplane manufacturing facilities during World War II. Today, the firm provides design services for projects ranging from office and commercial development to health care and hospitals, to facilities for information processing and communications technology.

During the late 1980s, NIST administrators regularly requested Congressional appropriations for upgrades to the facility. To prioritize these requests, Congress directed NIST prepare a ten-year plan for anticipated capital improvement projects. This request was formalized under Public Law 102-245 enacted in 1992, which mandated that the NIST director submit a report on projected renovations and upgrades for the upcoming decade to the appropriate Congressional committees. The report was to prioritize facility needs, estimate costs, and include plans for meeting identified needs (United States Code 1992).

Third Period (2000-2015)

The agency's mission and priorities continued to evolve during the first decade of the twenty-first century. Additional buildings were constructed to meet changing needs. New additions were constructed to expand selected buildings during the time period.

A major construction program was initiated to erect a five-building complex to support the Advanced Measurements Laboratory (AML). This program included Buildings 215, 216, 217, 218. and 219, which were designed in 2000 by HDR Architecture, Inc. The firm was established in Omaha, Nebraska, in 1917 and expanded through the mid-twentieth century. HDR Architecture, Inc. originally specialized in municipal engineering services. Early commissions included designing water and sewer systems in the Midwest (HDR Inc. n.d.). By the 1960s, the firm expanded into the healthcare industry, designing serval medical facilities throughout the country. Engineering expertise was provided through HDR Engineering and HDR Architecture provided design services. The firm's range expanded during the late twentieth and early twenty-first centuries to include environmental, transportation, water, and science and technology services (HDR, Inc. n.d.). Buildings in the NIST complex designed by HDR Architecture feature state-of-the-art laboratories, NanoFab laboratory space, and a cleanroom (NIST 2013). The buildings offer rigorous air quality, temperature, vibration, and humidity control (NIST 2013). The complex was constructed to support measurement research in a variety of different areas, including measuring electrical current, "distances in increments tinier than the radius of an atom," and molecules (NIST 2013).

STV Architects, Inc. of Douglassville, Pennsylvania, designed the chiller addition to Building 302 in 2009. STV, Inc. is an engineering firm with a national practice with experience in multiple fields, including aviation, military, capital improvement programs, tunnels, and data centers, among others. The firm is a conglomeration of several engineering firms, the earliest of which, Elwyn E. Seeyle, was established in 1912. Major projects include renovations to Grand Central Terminal, design of the corporate headquarters for Shire Pharmaceuticals, rail transportation projects for municipalities across the country, the Nets Arena, the USAMRIID Containment Laboratory at Fort Detrick, Maryland, and RCA manufacturing facilities (STV, Inc. n.d.).

Smaller projects completed during the period include construction of Buildings 320 and 207. Designed by Colimore Thoemke, construction of the CCC (Building 320) was completed in 2010. Building 207 (Robot Test Facility) was designed by Colimore Architects and completed in 2012. Established in 1973 by John A. Colimore, Jr., Colimore Architects

specializes in commercial, industrial, educational, and institutional projects for public and private sector clients (Colimore Architects, Inc. n.d.).

Theme: Science and Technology

The NBS underwent a series of administrative reorganizations following the move from Washington, D.C. to its new Gaithersburg, Maryland, campus. The agency's mission also changed as a result of Congressional action. New missions often required the creation of new programs and the realignment of existing research programs to meet new national priorities. Major references consulted to compile this summary include *Responding to National Needs* by James F. Schooley (2000); the publication *NIST at 100* (2000); and the NIST website. Contributions of key scientists are identified.

Standards and Measurements

Advancing the science of metrology, the study of weights and measures, is central to the NIST mission. From its founding, NIST has established national measurement standards and safeguarded uniform, compatible, and reliable measurements. Basic measurements include mass, length, time, temperature, electric current, resistance, and chemical composition. Maintaining national measurement standards is not a static mission. Over time, requirements for measurements have become exacting and far exceed the level of precision previously accepted. For example, the original platinum-iridium bar that defined the meter was replaced by a more precise measurement based on the wavelength of krypton-86 in 1960. Large force measurements are required to support rockets for the space program or to measure large beams used in skyscrapers, while measurements of atoms are required for nanotechnology. Greater precision in measurement has led to the development of a variety of new and more rigorous measuring devices. Measurements are a requisite to new technologies, and scientific research is required to advance the precision of the science of measuring.

In 1968, NIST scientists Walter Hamer, Richard Davis, and Vincent Bower examined the basic measurement for the electric charge by testing five different solutions. The results of the testing led to improved measurement of the faraday, the basic unit of electric charge (Schooley 2000:83). In 1985, Clark Hamilton, Richard Kautz, and Frances Lloyd with the Electromagnetic Technology Division at Boulder succeeded in developing the world's first practical superconducting voltage standard for 1 volt. The team connected 1500 Josephson junctions in a series array. The new array remained stable despite temperature fluctuations. This achievement led to a variety of new and more precise voltage measurements. In 1986, a 10-volt standard was released using 20,000 Josephson junctions. (Schooley 2000:669; NIST 2014b; NIST 2000:n.p.). In 1989, Edwin R. Williams, P. Thomas Olsen, Marvin Cage, Ronald Dzuiba, John Shields, and Barry Taylor were awarded a Department of Commerce Gold Medal for their research on "the time-dependence of the NBS ohm and the ...volt representation, as well as the low-field proton gyromagnetic ratio." Their work was credited with contributing valuable information supporting the 1990 international adjustment of electrical units (Schooley 2000:525).

During the early 1970s, two groups of NIST scientists worked independently to advance precise measurement for the speed of light. Two teams, Roger Barger, Bruce Danielson, Gordon Day, Kenneth Evenson, John Hall, F. Russell Petersen, and Joseph S. Wells at Boulder and Gabriel Luther and Zoltan Bay at Gaithersburg, researched how to provide a more precise measurement for the speed of light. In Gaithersburg, Bay and Luther in the Quantum Metrology Section of the Optical Physics Division measured light based on the 633 nm line of a helium-neon laser using microwaves. The Boulder group used a methane-stabilized laser of known frequency and wavelength to measure the speed of light. The new measurement of the speed of light at 299,792,456.2 +/- 1.1 meters per second was 100 times more accurate than previous measurements. Both values were published in 1972 within months of each other (Schooley 2000:363-364, 369-370; NIST 2014b).

Between 1969 and 1971, NIST physicist Russell Young built the topografiner, a new type of microscope that scanned and mapped surfaces at a level approaching individual atoms. The topografiner demonstrated the operating principle used in the later scanning tunneling microscope. The IBM inventors of the scanning tunneling microscope based in Zurich were awarded the Nobel Prize in Physics in 1986. The Nobel committee noted the important contribution of Young to the work: "The first to succeed in doing this [building an instrument that operated on the principle of maintaining a small constant distance between the sample surface and a sharp mechanical stylus] was the American physicist Russell Young at the National Bureau of Standards in the USA. He used the phenomenon known as field emission...However, Young realized, that it should be possible to achieve better resolution by using the so-called tunnel effect" (Schooley 2000:423-434; Martin and Frederick-Frost 2014).

In 1979, NIST scientists issued a new measurement system with the first photomask linewidth standard. The tiny ruler was developed to measure integrated circuits for the semiconductor industry. NIST continued to refine accurate methods of measurements for smaller and smaller dimensions approaching one-tenth of a micrometer or less. Methods to measure the spacing between crystalline silicon atoms was under investigation in 2000 (NIST 2000:n.p.).

In 1984, NIST scientist John Cahn was among the team of scientists that announced the discovery of a new material, quasicrystals, comprised of metallic particles. Guest researcher Dan Shechtman of the Israel Institute of Technology grew the crystals in Building 231 at the Gaithersburg campus. In 2011 Dan Shechtman won the 2011 Nobel Prize in Chemistry for this discovery. John Cahn won the National Medal of Science for his lifetime contributions to the fields of materials science, solid-state physics, chemistry, and mathematics (NIST 2000:n.p.; Martin and Frederick-Frost 2014).

The production and distribution of standards and measurements for the general public, government, and industry have been ongoing NIST programs since the founding of the agency. Standards and measurements are distributed through calibration services for measuring equipment and devices and through publications, including Standard Reference Data, reports, journal articles, and conference materials. A popular standard reference data was the more than 1,000-page *Handbook of Mathematical Functions,* which was first published in 1964. The handbook was reprinted in 1965 and most recently in 1999. The handbook has been converted to a digital format (NIST 2000:n.p.).

One important means of distributing standards to the public is through the NIST Standard Reference Materials (SRMs) program. Under the SRM program, compounds, pure materials, chemicals, and other substances are certified for their physical properties and provided as standards to industry. This program originated in 1905 with the development of standard samples for the composition of steel, concrete, glass, and ceramics. The program has expanded exponentially over NIST's history. NIST has prepared over 4,900 SRMs. The current inventory contains approximately 1,300 SRMs and contains a wide variety of samples beyond the original physical master samples (Watters and Parrish 2006:1-7). A sample of SRMs that have been developed since 1966 includes SRMs to measure cholesterol and aerosols.

In addition, the NIST Office of Law Enforcement Standards produced several SRMs to support law enforcement agencies. In 1993, the Justice Department requested that NIST produce a SRM for DNA profiling. The study took two years and resulted in a SRM to test "every step of the restriction fragment length polymorphism analysis method" for forensic DNA analysis (NIST 2014b). In 1998, NIST started to develop a SRM for bullet casings, which was issued in 2006. Other SRMs developed to support law enforcement include materials for measuring blood-alcohol levels, for verifying drug detection in hair and urine, and for identifying residues in smokeless gunpowder and residues of ignitable liquids in arson (Watters and Parrish 2006:1-7).

The ongoing development of measurements and standards is central to NIST's current programs and is conducted at the Material Measurement Laboratory (MML) and the Physical Measurement Laboratory (PML); both laboratories have divisions in Gaithersburg and Boulder. The MML serves as the national reference laboratory in chemical, biological and material science. The divisions within the MML are Applied Chemicals and Materials, Biomolecular Measurement, Biosystems and Biomaterials, Chemical Services, Materials Measurement Science, and Materials Science and Engineering. The research conducted in this laboratory includes applied research on the composition, structure, and properties of environmental, industrial, and biological materials and processes, as well as development and distribution of tools and reference data. Areas of research include advanced materials; fossil and alternative fuels; measurement of environmental pollutants; food safety and nutrition; health care; infrastructure; manufacturing; and safety and forensics (NIST 2015a).

The PML "develops the national standards of length, mass, force and shock, acceleration, time and frequency, electricity, temperature, humidity, pressure and vacuum, liquid and gas flow, and electromagnetic, optical, microwave, acoustic, ultrasonic, and ionizing radiation." Divisions in the PML comprise Electromagnetics, Quantum Electronics and Photonics, Quantum Measurement, Quantum Physics, Radiation Physics, Semiconductor and Dimensional Metrology, Sensor Science, Time and Frequency, and the Office of Weights and Measures (NIST 2015b).

Two other shared-use facilities for measurement located at NIST Gaithersburg are the Center for Nanoscale Science and Technology and the NCNR, both established in 2007 (Martin and Silcox 2010:iii). The Center for Nanoscale Science and Technology supports the "U.S. nanotechnology enterprise from discovery to production" in diverse fields, including "electronics, computation, information storage, medical diagnostics and therapeutics, and national security and defense" (NIST 2014d). The NCNR, which encompasses previous NIST divisions associated with neutron research, offers a broad range of instruments and capabilities for the study of both hot and cold neutrons (NIST 2015c).

Testing and Evaluation

NIST scientists conduct research in several programs that support the Federal government and industry in testing and evaluation. Many of these programs are assigned to the current NIST Engineering Laboratory. As constituted in 2015, the Engineering Laboratory comprises six divisions: Materials and Structural Systems, Energy and Environment, Fire Research, Intelligent Systems, and Systems Integration and the offices of Applied Economics, the Smart Grid Program, the National Earthquake Hazards Reduction Program, and the National Windstorm Impact Reduction Program (NIST 2014e).

The following sample of NIST's testing and evaluation programs illustrates the agency's accomplishments since moving to the Gaithersburg campus. The discussion is not comprehensive, but selected from the research areas of fire, building materials, structure and building failures, energy, environment, and law enforcement.

Flammability and fire research is one important research area in the Engineering Laboratory. Fire research is a program historically associated with agency. NIST undertook fire research almost from its establishment. A major impetus for research into the flammable properties of clothing was the passage of the Flammable Fabrics Act of 1953, which was enacted following a series of children's deaths linked to highly flammable clothing, such as brushed rayon sweaters and cowboy outfits. Following passage of this legislation, NIST developed a standard flammability test. Any fabric that burned faster than the standard could not be sold and marketed between the states (Schooley 2000:497-499).

In 1967, Congress expanded the provisions of the Flammable Fabrics Act to include paper, plastic, and foam used in clothing and interior furnishings. The legislation instructed the Secretary of Commerce to conduct research into the flammability of products, fabrics, and materials; conduct feasibility studies to reduce the flammability of these items; and develop flammability test methods. The Secretary of the Department of Commerce assigned these tasks to NIST. Tasks

included research to determine the products of fabric combustion, calorimetry of fabric combustion, laboratory burning of fabrics, analysis of burn cases, study of flame retardants, controlled burning of full-scale household furnishing, and study of heat transfer from burning fabrics. Studies conducted at NIST investigated the flammability of carpets, mattresses, children's sleepwear, and blankets.

In 1972, the legal responsibility for continuing the mandates under the Flammable Fabrics Act was transferred to the Consumer Product Safety Commission. The commission continued to fund fire research at NIST. For example, NIST was requested to devise a test to minimize the probability of ignition in fabrics. Emil Braun, John Krasny, Richard Peacock, and Ann Stratton completed the project by 1975. Braun's group later evaluated the effectiveness of protective clothing worn by firefighters and industrial workers exposed to high temperatures. Vytenis Babrauskas and William Twilley developed a cone calorimeter to measure the changing mass of a specimen during fire tests. The cone calorimeter won an award in 1988 from *Research and Development Magazine* (Schooley 2000:497-500).

The Fire Research and Safety Act of 1968, followed by the Federal Fire Prevention and Control Act of 1974 resulted in the establishment of the Center for Fire Research. John Lyons was appointed the first Chief of the Division. The Secretary of Commerce was assigned the tasks of creating "a national fire research and safety program, including the gathering of comprehensive fire data; a comprehensive fire research program; fire-safety education and training program; demonstrations of new approaches and improvements in fire prevention and control; and, reduction of death, personal injury, and property damage" (Schooley 2000:225-226). Since its establishment, the Center for Fire Research has operated a robust research program into all aspects of fire, including fire retardants, smoke, soot formation, toxicology, materials combustion, and combustion of furnishings and room interiors. Scientists have been called into examine causes and effects of fire disasters (Schooley 2000:499-510). In 1997, NIST scientist Gregory Linteris traveled on the space shuttle to conduct a NIST-designed, low-gravity combustion experiment (Schooley 2000:519). The focus of the current research program is fire detection, fire-fighting technologies, fire materials research, fire measurements, and fire computer modeling (NIST 2014f).

Fire performance standards for smoke detectors were one valuable product resulting from the agency's fire research. Work in this area was begun in 1974 by Richard Bright. NIST also developed recommendations on the number, type, and locations for the installation of home smoke detectors. These recommendations were incorporated into building and fire codes and were credited with a 50 per cent reduction of death by fires in 1997. In 1980, Irwin Benjamin conducted a similar study of the design of smoke detectors used in large buildings (NIST 2000:n.p.; Schooley 2000:507).

In 1972, the Center for Building Technology was established at NIST at the direction of the Secretary of Commerce. The new center contained three divisions: Building Environment; Structures, Materials and Life Safety; and, Technical Evaluation and Applications. The new center had a staff of 250 and engaged in a wide range of projects. Some projects included the development of computer models to predict the dynamic thermal performance of houses in winter and summer weather cycles, investigations into failed heat pumps, development of a device to measure the dew point in sealed glass envelopes to evaluate the moisture content in double-pane glass, measurement of the thermal resistance of building insulation, development of a systematic method to predict the service lives of buildings materials, and development of standard test methods for solar energy collectors and thermal storage systems. Work also progressed towards developing a performance-based building code to specify desired attributes of building materials, components, or systems to satisfy the intended user (Schooley 2000:392-395). Building research continues at NIST in the research areas of construction integration and automation, cybernetic building systems, net-zero and high-performance buildings, and sustainable infrastructure materials (NIST 2015d).

Special studies were conducted into the causes of building and structure failure. In 1967, NIST scientists evaluated the collapse of the Silver Bridge in Point Pleasant, West Virginia. Their investigation revealed that the cause of the collapse was a microscopic pit in the surface of a single I-bar that connected the deck to the suspension chain. In 1982, investigations were undertaken to identify the cause of the collapse of suspended walkways in a hotel in Kansas City, Missouri. NIST scientists traced the failure to the box beam-hangar rod connections (NIST 2014b). NIST scientists have continued investigations of building failures to the present. One of the most high-profile cases was NIST's participation in the investigation into World Trade Center buildings 1, 2, and 7 conducted between 2001 and 2008. The purpose of the investigations was to "investigate the building construction, the materials used, and the technical conditions that contributed" to the collapse of the buildings following the initial impacts of the aircraft into Buildings 1 and 2 (NIST 2011). NIST scientists also routinely are called upon to evaluate damage to buildings and structures caused by hurricanes, tornadoes, and other natural disasters (NIST 2015d).

NIST scientists also researched and published design and evaluation criteria for energy conservation for the construction industry. Application of the criteria by the construction industry is voluntary. The design and evaluation criteria were designed to reduce energy consumption by over 50 per cent in new buildings. In a separate study, NIST scientists developed testing and rating procedures to evaluate energy consumption in household appliances (NIST 2000:n.p.). In 1976, NIST signed a Memorandum of Understanding with the Electric Power Research Institute to support the institute in the areas of equipment, power generation, measurement of electrical and electromagnetic quantities, evaluation of devices and control systems, and energy conservation (Schooley 2000:462). Ongoing NIST projects related to energy include the research areas of alternative energy; electric power metrology; energy conservation, energy conversion, storage, and transport; fossil fuels; and, sustainability (NIST 2015e).

NIST environmental research programs were developed to measure pollutants in air, water, and soil; and toxicity in organisms. New equipment was devised to measure pollutants, such as a portable meter to measure microscopic air particles. Standards were developed for fuel economy and automobile emissions. A computer model was developed to allocate salmon catches to support salmon fishery regulations. NIST, in cooperation with the U.S. Environmental Protection Agency (EPA), established a biomonitoring specimen bank that contains thousands of biological specimens preserved in liquid nitrogen to assist in the comparative study of chemical and pollutant exposure. As a result of the specimen bank, NIST scientists developed procedures and protocols for proper handling of environmental samples that have been adopted by environmental laboratories worldwide. One special project undertaken by NIST was the review of the organic chemical analysis in the 1982 EPA study of Love Canal. Another study was to characterize the damage to the earth's ozone layer caused by chloroflourocarbons from aerosol propellants and refrigerants (NIST 2000:n.p.). NIST current areas of research in the environmental field include climate science measurements, environmental technologies, marine health, and pollution/indoor air quality (NIST 2014g).

Testing and evaluation activities are conducted by NIST's Law Enforcement Standards Laboratory (LESL) established in 1971 to support law enforcement programs. NIST staff assigned to LESL identified problems with equipment and armament of police departments. LESL staff began studies that resulted in standards programs for vehicles, communications equipment, security systems, concealed-object detectors, protective equipment and clothing, emergency equipment, police weaponry, and building systems for law enforcement. Research projects carried out by NIST staff included improvements to body armor, helmets, and face shields; studies of the composition and color of paint for cars; gunpowder analysis; handcuffs; burglar alarms; and, window locks. LESL was not assigned its own laboratory but "purchased" research and development from existing NIST groups or outside contractors (Schooley 2000:266-267, 353-354, 355-357). Research to support law enforcement activities is an ongoing program in the MML. Current research areas include ballistics, biometrics, communications, forensics, and weapons and protective systems (NIST 2014h).

Technology

NIST has invested time and money to support improved technology in manufacturing and computers, both hardware and software. NIST built its first computer, known as SEAC, in 1950. Since that time, the agency has continued research into computer development. In 1965, a new Center for Computer Sciences and Technology was formed at NIST (NBS 1966b:2). Under the Brooks Act of 1972, NIST was charged with providing technical support to standardize the government use of computers and to increase the cost effectiveness of government expenditures for equipment. Currently, computer research is under the NIST Information Technology Laboratory. This laboratory has six divisions: Applied and Computational Mathematics, Advanced Network Technologies, Computer Security, Information Access, Software and Systems, and Statistical Engineering (NIST 2015f).

Software improvements included the development in 1966 of the Omnitab software, an early spread sheet. Omnitab was written to automate handling of data input and output, and the production of graphs. In 1977, NIST issued the first publicly available data encryption standard (DES). By 1997, approximately 50 per cent of U.S. cryptographic products implemented DES (NIST 2000:n.p.). In 2001, NIST released the Advanced Encryption Standard (NIST 2014b).

NIST scientists routinely developed computer applications for statistical analysis. In 1969, the Selective Service System requested assistance to make the 1970 military draft a truly random selection. Joan Rosenblatt and colleagues developed a methodology that used a selection of random calendars and priority permutations to accomplish the task. Her success on this and other projects earned Rosenblatt the Federal Woman's Award in 1971 (NIST 2014b).

Since the early 1970s, NIST scientists have been involved in automated manufacturing research through the design of computer-controlled manufacturing machines, or robots. Ernest Ambler, while Director of the Institute of Basic Standards, promoted the idea of automating the gear calibration process by combining the metrology division with the atomic physics program that linked three-dimensional coordinate measuring machines, mini-computers, laser interferometers, and robotics from the Institute for Computer Sciences and Technology. The result was the establishment of the Automated Manufacturing Research Facility in 1980 that operated until 1995. As part of the program Jim Albus, a leading robotics researcher, developed NIST's real-time control system, a system that "creates an efficient organization for knowledge-based intelligent control of complex systems" (NIST 2000:n.p.). In 1991, NIST unveiled a floor-cleaning robot that used the real-time control system. The system also was used in shipbuilding, hospitals, and in land mine clearance (Schooley 2000:618-621, 625; NIST 2000:n.p.; Zenzen 2001:1-8). A robotics program continues at NIST in 2015 under the NIST Engineering Laboratory. Research areas in this program comprise bomb-disposal robots, mobility, manipulation, and urban search and rescue robots (NIST 2015g).

Select NIST Scientists

Thousands of scientists have worked at NIST since the move to the Gaithersburg campus. Some scientists have made their careers at NIST; others have launched their careers at NIST, then transferred to work in academia or at industrial laboratories. NIST scientists have won recognition for their work from professional organizations in their respective fields, as well as from the Department of Commerce and NIST. The Department of Commerce Award program was begun in 1949 to recognize distinguished and exceptional performance. Three to four NIST scientists and one group routinely have won Department of Commerce Gold Medals in the years between 1966 and 2009.

Among the most prestigious award in science is the Nobel Prize. NIST scientists historically have made scientific advances and had executed experiments that have supported scientists in academia and other institutions in discoveries that

have won Nobel prizes. These contributions are discussed in the overall historic context and above. Between 1997 and 2012, four NIST scientists were awarded Nobel prizes for their work conducted at NIST:

- In 1997, William Phillips of NIST shared the 1997 Nobel Prize in Physics for successfully developing the technique of laser cooling and trapping of atoms. This technique has the potential to build a new kind of atomic clock that will be more accurate than what currently is used. This work was undertaken from 1985-1988 on the Gaithersburg campus. (Martin and Frederick-Frost 2014; NIST 2014b).

- In 2001, Eric Cornell of NIST/JILA and his colleagues shared the Nobel Prize in Physics for creating the first Bose-Einstein Condensate, "a new state of matter that emerges at just a few billionths of a degree above absolute zero." Scientists have incorporated this finding into their routine work to support research in quantum mechanics. This work partly took place on the Boulder campus from 1990-1995. (NIST 2000:n.d.; Martin and Frederick-Frost 2014; NIST 2014b).

- In 2005, John Hall of NIST/JILA shared the Nobel Prize in Physics for his "contributions to the development of laser-based precision spectroscopy, including the optical frequency comb technique." Frequency combs have the potential to increase the precision of a broad array of measurements in the future. This work partly took place on the Boulder campus around 1984 (Martin and Frederick-Frost 2014; NIST 2014b).

- In 2012, David J. Wineland of NIST shared the Nobel Prize in Physics for "ground-breaking experimental methods that enable measuring and manipulation of individual quantum systems." The research helped lay the groundwork towards building a computer using quantum physics and for a potential new time standard. This work took place between 1995-2005 on the Boulder campus (Martin and Frederick-Frost 2014; NIST 2014b).

NIST scientists have made important contributions to a broad variety of scientific and technological fields. Their cutting-edge work in measurement science and in the development and use of standards has led to great advances in science and technology that underpin the advances in U.S. industry and contributed to consumer safety. NIST scientists strive to continue to be a world leader in creating critical measurement solutions and promoting equitable standards.

Theme: Postwar Research Campus Design

Construction of the Gaithersburg campus of NIST followed a postwar trend in office development. A number of factors influenced the decisions of corporate leaders to relocate their headquarters or research divisions to suburban, if not rural, locations. The factors contributing to those trends and provides a framework for understanding the philosophies influencing the design of the NIST campus are explored below. Maximum flexibility in the configuration of research space and an aesthetically pleasing environment were hallmarks of the development pattern.

Early Precedents in Research and Corporate Campus Design

Two closely related property types developed during the years following the end of World War II: the corporate campus and the research campus. These property types emerged during the second quarter of the twentieth century as corporations began moving their research divisions out of central cities. Corporate headquarters soon joined the migration from urban areas. Corporations left the cities with their noise, congestion, buildings with small footprints, and challenges to expansion. Suburban settings were seen as affording greater amenities than their urban counterparts.

Corporate campuses differed from the research campuses in the amount of administrative space. The research campus, in contrast, provided facilities for corporate scientists to conduct experiments in rigidly controlled environments. Research and development branches emerged as distinctive entities from administrative and manufacturing arms of business and advanced technologies necessitated controlled environments. One building integrating management, research, and manufacturing functions, the common pattern during the nineteenth century, no longer was practical. By the early twentieth century, businesses increasingly began to separate the three functions into separate facilities.

Municipalities encouraged industry in the migration. Zoning ordinances that regulated land use were introduced during the first two decades of the twentieth century. As industry was reaching the pragmatic conclusion that research could not adequately be undertaken adjacent to heavy manufacturing due to noise, health, and safety reasons, local governments enacted legislation mandating the separation of manufacturing, commercial, and residential uses for some of the same reasons. In some cases, corporations seeking to keep its research functions in the center city were prohibited by zoning. Land use ordinances helped give rise to the construction of corporate and research campuses in suburban settings. These factors contributed to the development of the two types of campuses, which exhibited a common design aesthetic but differed in function.

The suburbs afforded space for the development of multi-building corporate and research campuses. In this new paradigm low-scale, sprawling buildings could be separated from one another by winding paths, lawn, and trees (Mozingo 2011:50). Zoning, however, was not the only impetus for corporations to move their administrative or research operations to the suburbs. Corporate management and academics felt that pastoral environments with designed landscapes emphasizing access to nature would improve scientific discovery and facilitate productivity.

The corporate and research campus was purpose-built and combined large, landscaped acreage with generally, low-rise buildings (Mozingo 2011:105). The design and quality of facilities of these pastoral campuses were used by business, industry, academia, and government to compete for a limited pool of scientists. Bucolic, tranquil landscapes were seen as key to attracting select qualified personnel. Aside from an idyllic environment, these new corporate campuses offered expansive parking and on-site cafeterias (Mozingo 2011:110). Other amenities included health facilities, gift shops, and walking trails (Dunham-Jones and Williamson 2011).

The research facilities developed for Bell Telephone Laboratories established an early precedent in the separation of research functions from manufacturing. The new facility, completed in 1939, introduced innovative ways of approaching the design of research facilities. Bell Telephone Laboratories set the standard for the design of postwar research campuses. The successful design of the facility established the reputation of its architectural designers, who eventually became leaders in the niche field of research campus design. NBS administrators and scientists selected demonstrated experts in the design of state-of-the-art institutions for the development of the Gaithersburg campus.

Research Campuses

Bell Telephone Laboratories was located on Manhattan's lower west side prior to the move to Murray Hill, New Jersey, in 1939. The company required additional space to conduct highly-sensitive research in strictly-controlled environments. Expansion within Manhattan was not feasible because urban noise, electrical intrusion, and traffic vibrations would interfere with the accuracy of experimental measurements (Mozingo 2011:54). The company's research needs led to the construction of the first corporate research campus. The design of the project was initiated in 1930 by the architectural firm, Voorhees, Gmelin and Walker; however, the Great Depression delayed realization of the plan until 1939. By that time, the architects of record were the reorganized firm of Voorhees, Walker, Foley, and Smith (now HLW International)

(Mozingo 2011:57). Historians have noted that "Bell Labs invented the fundamentals of the corporate campus." The integrated plan featured:

- green space, centrally located at the site;
- flexible laboratory space incorporating specialized utilities;
- ample parking and truck access;
- underground utilities;
- fenced property;
- three-story height limits; and
- generous landscape setbacks (Mozingo 2011:63).

Two key innovations of the Bell campus were generous site plans and the use of moveable walls in the laboratory spaces (Rankin 2013:54). As the largest of research facilities constructed during the period, the Bell facility became the prototype for future research laboratory construction. By the conclusion of World War II, the advantages of flexible space and site isolation had led to their adoption as accepted design practice. Architectural magazines, trade journals for the research-management field, and specialized laboratory-design handbooks extolled the benefits of the features first introduced at Bell Telephone Laboratories (Rankin 2013:54).

The vanguard architectural firm, HLW International, continued to integrate the innovations first introduced in the design of the Bell Telephone Laboratories in their commissions for the design of research campuses through the 1960s (Rankin 2013:54). The innovations first applied in the Bell campus were developed in direct response to the client's need for an economic solution and maximum flexibility (Haines 1951:337).

The resulting prototype for laboratory buildings integrated flexible laboratory space with common support space, such as cafeterias and libraries. Large-scale testing and research facilities, such as wind tunnels and nuclear reactors, were housed in separate, dedicated buildings (Rankin 2013:55). Laboratory buildings comprised flexible spaces, or modules, arranged in double-loaded corridor plans that could be modified, i.e., expanded or contracted, to suit research needs. The use of such flexible plans became universally accepted practice during the postwar period.

Notwithstanding the modular design standard for general research laboratories, research campuses were unique and sophisticated complexes requiring a broad-range of building types and specialized equipment. In addition, designs often included provisions for specialized service requirements and required sophisticated engineering to address such factors as fluctuating building loads. Safety features were major components of the design and might include safety showers, additional exits, and special grounding devices (McCulley 1968:10).

Modern laboratories necessitated increasingly sophisticated technical facilities and complex mechanical equipment. The sensitivity of testing equipment demanded buildings systems that controlled humidity, temperature, and air quality (McCulley 1968:65). Finishes that could be easily cleaned, yet were resilient to damage from testing or chemicals, were installed (McCulley 1968:66).

Corporate Campuses

By the 1940s, an architectural image emerged for corporate headquarters: sweeping entry drives, gently rolling grassy topography, and ample parking lots (Mozingo 2011:105). Changes in corporate architecture and setting were adopted for economic, as well as for aesthetic reasons. The exodus for the suburbs continued through the 1950s. As *Business Week* noted in an article published during the early 1950s, firms were leaving New York for exurban locales because of increasing

rent and a lack of office space in urban centers. The magazine article went on to state that it was increasingly difficult to attract "first class personnel to work in some of the more unsightly, congested New York areas" and "management thinks workers will be happier looking at trees instead of grimy buildings and listening to birds instead of honking taxis" (Mozingo 2011:105).

During the postwar period, many major corporations adopted the corporate campus as the architectural expression for new headquarters. Companies with household names including GE, GM, and IBM had adopted the model (Rankin 2013:52). Universities and government agencies quickly followed the precedent established by large corporations (Rankin 2013:52).

The rise in popularity of the corporate campus facilitated the postwar move of businesses from the traditional urban core to the suburbs. Businesses moved their research and development departments to suburban campuses; corporate headquarters soon followed suit (Mozingo 2011:98). One result of the move of corporations to the suburbs was the relocation of white collar jobs from the urban core to the outskirts of the city limits. Increased automobile ownership and the construction of the interstate highway system facilitated the rapid movement of employees from the central cities to jobs in the new suburbs (Dunham-Jones and Williamson 2011:n.p.). Sophisticated corporations chose well-known "celebrity" architects to design new corporate campuses. Principal buildings symbolized corporate status and prestige.

General Foods was the first Fortune 500 company to leave Manhattan for the suburbs. The company chose Voorhees, Walker, Foley, and Smith (HLW International) and Olmsted Brothers, landscape architects to design its new facility (Mozingo 2011:98; 107). The design and construction of the General Foods corporate headquarters in White Plaines, New York, in 1954, introduced design elements that were later seen in the NBS campus: "architectural restraint, central courtyard, and self-contained site planning" (Mozingo 2011:110). With its rural siting, the General Foods campus became an architectural focal point, visible to commuters traveling along the expressway (Mozingo 2011:111).

Innovations in Research and Corporate Campus Design

During the construction of postwar corporate and research campuses, architects and designers, in collaboration with administrators and scientists, undertook extensive architectural programming studies. Comparable research laboratories were explored and full-scale models of proposed designs were constructed and refined (Rankin 2013:56). Collaboration among the architects and the scientists on the design for research laboratories was not uncommon. The Bell Telephone Laboratories researchers played a prominent role in the design of the Murray Hill facility (Knowles and Leslie 2013:255). They provided insights and critiques regarding the pragmatic and functional proposed designs based on their experience and from observations after touring other research facilities (Knowles and Leslie 2013:255). The design developed for Bell Telephone Laboratories was presented in a full-scale, fully-functional model composed of five modules (Knowles and Leslie 2013:266). While critics faulted the Laboratory's austere and "bland" exterior, the facility received high praise for the then-novel use of movable panels (Knowles and Leslie 2013:256). As a Bell Telephone Laboratories executive later observed "It has been so successful a model that scarcely any large industrial laboratory has subsequently been built without taking ideas from it and some laboratories are fairly close copies of it" (Knowles and Leslie 2013:256). The long halls, at once derided by scientists, were also praised because they facilitated collaboration. Researchers, forced to walk long distances, would meet their colleagues in the halls and walk past laboratories and offices, and thereby would learn about projects in other departments (Knowles and Leslie 2013:259). This objective of using physical design to foster collaboration also was employed later for the new NBS campus.

In depth analysis conducted by the Nuffield Foundation, a British charitable organization, during the mid- and late 1950s presented findings on the designs of the most efficient laboratories. The organization's analysis concluded that

"requirements for space and services were found to vary only between scientists and assistants, not between disciplines" (Rankin 2013:57). In other words, the spatial needs for a chemist, biologist, or physicist were the same; however, the spatial requirements between the scientists and their assistants were different, with assistants requiring more space due to the nature of work they performed, i.e., less reading and writing than their scientist peers (Rankin 2013:57). The study also recommended that research campuses should include "amenities that would be used for only one percent of a researcher's tasks" (Rankin 2013:57). Designers and scientists agreed that high morale fostered scientific creativity; a properly designed work environment, one that encouraged collaboration, contributed to scientific productivity (Rankin 2013:58).

By 1951, Ralph Walker, principal in the New York City-based firm Voorhees, Walker, Foley & Smith, developed a methodology for designing corporate laboratories. Two steps he thought important included early discussions with key personnel regarding the location of mechanical and electrical services and the size of the module. Questionnaires also were a useful tool for soliciting feedback on design solutions and space allocation (McCulley 1968:11). In addition, Walker advocated the preparation of a full-scale model to help employees visualize the size and scale of the module, as well as to allow plumbing, electrical, and other contractors an opportunity to view the project before submitting an estimate (Walker 1951:149). The firm pioneered this approach with the design of Bell Telephone Laboratories and applied it later in the development of the NBS.

Key to the design of an effective laboratory was the incorporation of the "module." Walker's use of "module" was not to denote standardization; rather, he defined the module as "a unit of work space determined by human needs. It is dimensional only through its use factors. ... The character of the research carried on, the need for safety considerations in the width of aisles, for example, each determines the final result" (Walker 1951:149). He further stated, "In the development of a module's dimensions there is no general standard and each research group should indicate for itself the size and character of its working conditions" (Walker 1951:149). The module was an effective use of research and office space because "the chief advantage of the module system is the known repetitive position of services and therefore the lack of interference between one laboratory at work and another in preparation for a new project requiring special and additional services" (Walker 1951:150). Concepts that were considered novel during the 1950s (i.e., movable partitions) became accepted practice. By the mid-1960s, they had become industry standard, with the expectation that one fifth of the partitions in any laboratory would move once a year (McCulley 1968:15).

The necessity for windows also was discussed in a 1951 article by Walker. He noted that windows may have become superfluous during the age of modern air conditioning and fluorescent lighting; however, in spaces deeper than 15', their inclusion may be desirable as "a wholly psychological device permitting the mind to relax" (Walker 1951:150). The necessity for windows was the subject of heated debate during the design of the NBS campus. Walker acknowledged that workers may state that they did not want windows; however, in practice, this was not the case, especially as research facilities moved to rural settings in part, to provide esthetically pleasing environments (Walker 1951:150).

Profile of a Leading Architectural Firm in the Design of Corporate and Research Campuses

The architectural firm that designed the first period of construction at NBS was a leader in the field. Voorhees, Walker, Smith, Smith, & Haines, the firm that would become HLW International, had developed a specialization in the design of research campuses. The firm's first research campus was completed in 1941 for Bell Telephone Laboratories. Some of the firms' cutting-edge innovations included the design of laboratories with moveable partitions. Architect Ralph Walker, a partner in the firm, advocated the use of moveable partitions in numerous articles he wrote during the 1950s.

Throughout the 1930s, the firm designed a number of prominent buildings in New York City in the Art Deco style. These buildings included the Western Union Building (1930) and the Irving Trust (1932) (Vosbeck et al. 2008:86).

Additional works included projects completed for the Department of the Army and ten projects for the 1939 World's Fair in New York City. During World War I, the firm designed Army hospitals and during World War II, the firm designed military facilities in the United States and the Caribbean (Moore et al. 2010:142). The U.S. Army War College at Carlisle Barracks, Pennsylvania, and the Night Vision Laboratory at Fort Belvoir, Virginia, were designed during the Cold War period (Moore et al. 2010:142).

Walker found employment with the firm McKenzie, Voorhees & Gmelin upon his discharge from the army following the end of World War I. The firm's name changed to Voorhees, Gmelin & Walker in 1926 when he was made partner. The firm underwent another name change after 1939 when it became Voorhees, Walker, Foley and Smith. As Voorhees, Walker, Foley and Smith, the firm developed a national specialization in the design of corporate campuses. Selected projects included Bell Telephone Laboratories, Murray Hill, New Jersey; General Foods, White Plains, New York; IBM Research Center, Poughkeepsie, New York; and, Argonne National Laboratories, Chicago, Illinois (Vosbeck et al. 2008:86). Walker served as president of the American Institute of Architects between 1949 and 1951 (Vosbeck et al. 2008:85).

The firm continues today as HLW International. Established in 1974, the firm has offices in New York, New York; Madison, New Jersey; Los Angeles, California; London, England; and, Shanghai, China. In addition to architectural and engineering services, services expanded to include interior design, sustainability, and planning across a broad spectrum of sectors, such as, media and entertainment, hospitality and retail, and science and technology, among others (HLW International n.d.).

Evaluation Results

A total of 74 buildings, structures, objects, and landscapes were documented under the current investigation. Analysis of archival and architectural data applying the National Register NRHP Criteria for Evaluation identified a cohesive collection of buildings, structures, and landscapes that represent a recognizable entity united by design and historical association with the initial construction of NIST (1961 – 1969).

The buildings constructed between 1961 and 1969 exhibit many of the hallmarks of postwar research campus design. These character-defining features include flexible workspace that could be configured in a variety of different ways to suit current research/laboratory needs regardless of the research discipline. The buildings were constructed incorporating administrative/laboratory modules. The buildings are linear in plan, housing modules across a double-loaded hallway. The back-to-back laboratories were across from the exterior-facing administrative spaces. Long hallways would encourage spontaneous discussions among colleagues. In this manner, scientists could collaborate and discuss research problems in informal settings. The acreage afforded by the suburban site was acquired, in part, to facilitate expansion, as necessary. Greenspace with formal landscaping was held to be conducive to scientific inquiry and created a working environment reminiscent of an academic campus.

Building 101 is the central focus of the campus and is a representative of the International Style applied to a principal building within a research complex. Similar to many private sector research campuses of the period, the principal building was the primary focus for public space and architectural elaboration; Building 101 became an icon for the agency. Curtain-wall construction, generous use of windows, and minimal ornamentation, hallmarks of the style, are employed on the building. Public space is incorporated in the large lobby and cafeteria, spaces designed to encourage social interaction. Other public spaces include auditoriums, providing forums for professional presentations.

A comprehensive site plan was designed and implemented for the campus. A grid street system provides access to the research laboratories. Lawn, mature specimen and deciduous trees, hardscapes, and storm water management ponds were incorporated in the landscape. The cohesive area capturing the design and operation of the campus during its initial period of development is defined by nine contributing resources, including the Administration Building, seven GPLs, and Building 304, encompassed by the area generally defined by East Drive to the east, the AML complex to the south, and Research Drive to the west. The northern edge of the historic district extends 205 feet from the north elevation of Building 226, which is the distance between the existing GPLs. The AML complex comprising Buildings 215, 216, 217, 218, and 219 are excluded from the proposed historic district.

The resources contained with the NIST Gaithersburg campus were analyzed applying the NRHP Criteria for Evaluation (36 CFR 60.4[a-d]). Site investigation and resource evaluation indicated that resources at the Gaithersburg campus are significant within the themes of Science and Technology and Postwar Research Campus Design (Criterion A). The facility also represents a significant and distinguishable entity whose components may lack individual distinction (Criterion C). Additionally, Building 101 individually possesses the significance and integrity for NRHP consideration under Criterion C as a representative example of the International Style. The accompanying DOE provides a more in-depth evaluation of the NIST resources.

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Inventory No. M:20-47

See attached continuation sheet.

10. Geographical Data

Acreage of surveyed property	579.5		
Acreage of historical setting	57.89		
Quadrangle name	Gaithersburg	Quadrangle scale:	1:24,000

Verbal boundary description and justification

The cohesive area capturing the design and operation of the campus during its initial period of development is defined by nine contributing resources encompassing the area defined on the east by East Drive, the south by the AML complex, the west by Research Drive to Building 304. At this point, the boundary turns west to follow Research Drive until the intersection with Center Drive. The boundary turns north to align with the sidewalks along the west elevations of Buildings 224 and 226 and continues north to a point 205 feet from the north elevation of Building 226. The boundary then turns east to the west edge of the parking lot located northeast of Building 227. The boundary then turns south and connects to the access road leading to East Drive., which is the starting point. The choice of 205 feet represents the distance between the existing GPLs.

The boundaries are based on a specific time, visual barriers, and visual changes. Factors used to justify boundary delineation include the existing road network, which was implemented during the district's period of significance, and the presence of new construction. The AML complex serves as a visual barrier for the contributing resources in the historic district. The visual changes imposed by the AML complex represent a different architectural style and period from those resources included in the historic district. The proposed boundaries represent a significant concentration of resources from the district's period of significance while retaining the qualities of integrity that help convey the district's significance. The proposed historic district is contained within 57.89 acres.

11. Form Prepared by

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Surveyed Buildings at NIST

Building Number	Building Name	Construction Date	Resource Type
101	Administration Building	1962-1965	Building
103	Visitor's Center and Gate House	2009	Building (2)
B	Gate House	ca. 2009	Building
C	Gate House	ca. 2009	Building
F	Gate House	ca. 2009	Building
202	Engineering Mechanics	1961-1963	Building
203	Standard Reference Materials Facility	2012	Building
205	Large Fire Facility	1973-1975; 2014	Building
205E	Emissions Control Electrical	ca. 2000	Building
205M	Emissions Control Mechanical	ca. 2000	Building
205E#2	Emissions Control Electrical	ca. 2014	Building
205M2	Emissions Control Mechanical	ca. 2014	Building
2	Hopper	ca. 2014	Structure
3	Hopper	ca. 2000	Structure
206	Concreting Materials	1966-1968	Building
207	Robot Test Facility	2012	Building
208	Net-Zero Energy Residential Test Facility	2012	Building
215	Nanofabrication Facility	2002-2004	Building
216	Center for Nanoscience and Technology Instrument East	2001-2002	Building
217	AML Instrument West	2002-2004	Building
218	AML Metrology East	2000-2004	Building
219	AML Metrology West	2000-2004	Building
220	Metrology	1963-1966	Building
221	Physics	1963-1966	Building
222	Chemistry	1963-1966	Building
223	Materials	1963-1966	Building
224	Polymer	1963-1966	Building

Building Number	Building Name	Construction Date	Resource Type
225	Technology	1963-1966	Building
226	Building Research	1963-1966	Building
227	Advanced Chemical Sciences Laboratory	1999	Building
230	Fluid Mechanics	1967-1969	Building
231	Industrial	1966-1968	Building
233	Sound	1965-1968	Building
235	NCNR	1963-1967	Building
236	Hazards	1966-1968	Building
237	Non-magnetic Laboratory	1964-1968	Building
238	Non-magnetic Laboratory	1964-1968	Building
245	Physics	1962-1964	Building
301	Supply and Plant	1962-1964; 2013	Building
302	Steam and Chilled Water Generation Plant	1961-1964; ca. 1990s; ca. 2010	Building
303	Service	1962-1964	Building
304	Shops	1962-1964	Building
305	Cooling Tower	1961-1964; 2011	Structure
306	Potomac Electric Power Company (PEPCO) Electrical Substation	ca. 1970	Building
306A	PEPCO	1961-1964	Building
306B	PEPCO	1961-1964	Building
307	Hazardous Chemical Waste Storage	1970-1971	Building
308	Bowman House	1952-1953	Building
309	Grounds Maintenance	1974-1978	Building
310	Hazardous Materials Storage	1986-1987	Building
311	Grounds Storage Shed	1990	Building
312	Materials Processing Facility	1996	Building
313	Site Effluent Neutralization	1996	Building
314	Backflow Preventer Building	1998	Building
315	Backflow Preventer Building	1998	Building
316	Electrical Service Building	1998	Building

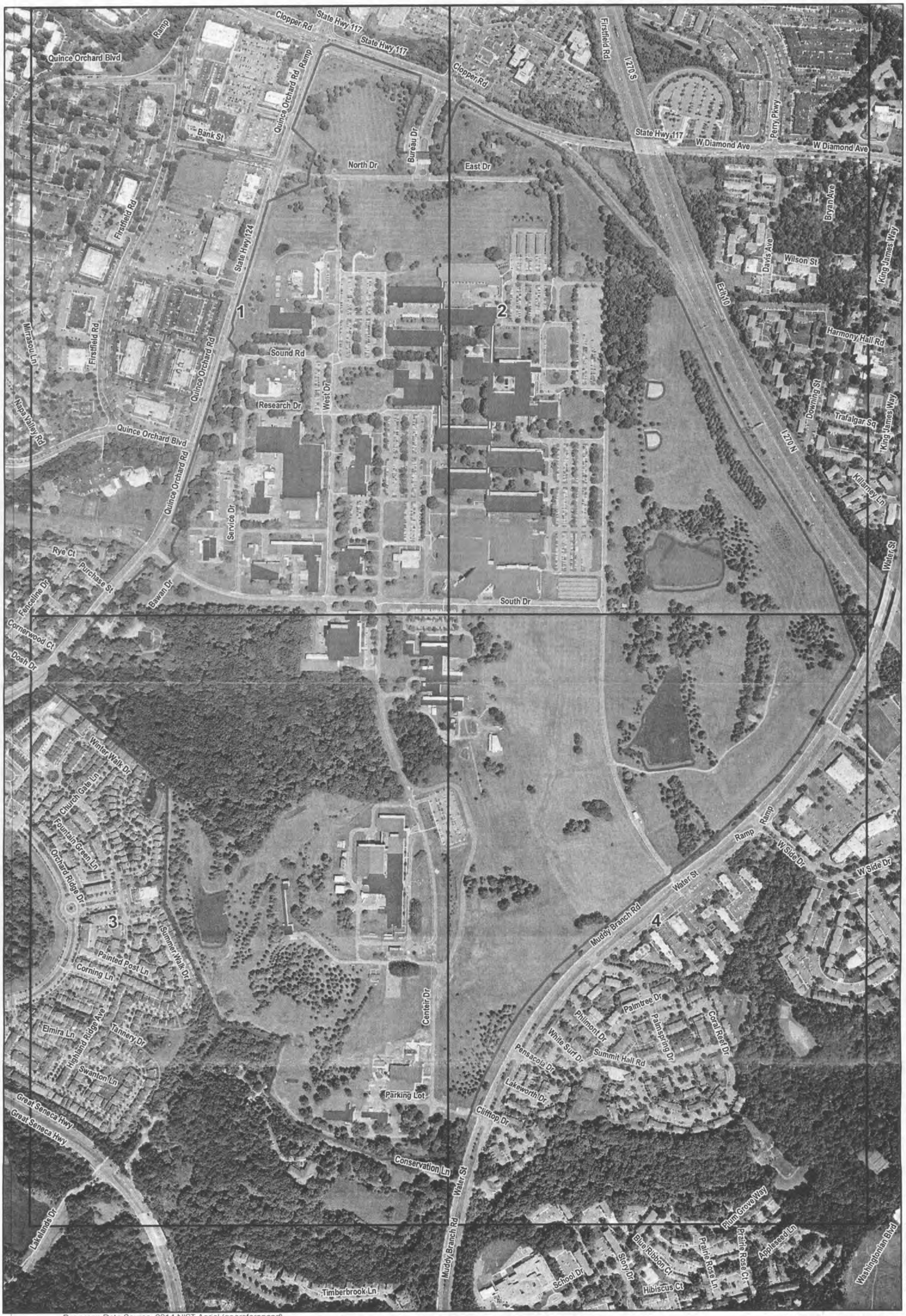
Building Number	Building Name	Construction Date	Resource Type
317	Cooling Tower	2010	Structure
1	Building associated with 317	2010	Building
318	ES Consolidated Facility	2014	Building
319	ES Storage Building	2014	Building
320	CCC	2013	Building
321	Liquid Helium Recovery Facility	Under construction	Building
Baseball Field 1		Late 1990s	Site
Baseball Field 2		Late 1990s	Site
Volley Ball Court		ca. 2009	Site
Picnic Area		Late 20th century	Site
Campus Landscape Plan (including Newtown Apple Tree)		1961-1969; 1966	Site (1)
Stormwater Management Pond 1		ca. 1965	Site
Stormwater Management Pond 2		ca. 1965	Site
Stormwater Management Pond 3		ca. 2006	Site
Flag pole		1965	Object
Entrance Gates		1976	Object (1)
Masonry Test Wall		1977	Object

Photo Log

MIHP# M:20-47
National Institute of Standards and Technology
Montgomery County, Maryland
Photos taken by: R. Christopher Goodwin & Associates, Inc.
Photos taken on: December 3 and 4, 2014; January 28, 2015; March 3, 2015, and May 14, 2015
Photo paper and ink: HP Vivera ink 97 Tri-Color cartridge, 101 Blue Photo cartridge, and 102 Gray Photo cartridge on Epsom Premium Photo Paper (high gloss)
Verbatim Ultralife Gold Archival Grade CD-R, PhthaloCyanine Dye

M_20_47_2014_12_03_001. Building 101, looking northwest
M_20_47_2014_12_03_002. Building 101, north elevation
M_20_47_2014_12_03_003 Building 101, library, north elevation
M_20_47_2014_12_03_004. Building 101, auditorium, south and east elevations
M_20_47_2015_05_14_005. Building 101, courtyard
M_20_47_2014_12_03_006. Walkway from Building 101 to Building 225, looking north
M_20_47_2014_12_04_007. Building 224, west and south elevations
M_20_47_2014_12_04_008. Building 227, east and south elevations
M_20_47_2014_12_04_009. Building 202, east elevation
M_20_47_2014_12_04_010. Building 203, north elevation
M_20_47_2015_01_28_011. Building 205, south elevation
M_20_47_2015_01_28_012. Building 206, west and south elevations
M_20_47_2015_01_28_013. Building 207, north and west elevations
M_20_47_2015_01_28_014. Building 208, south elevation
M_20_47_2014_12_04_015. Building 215, northwest elevation
M_20_47_2014_12_04_016. Building 216, west and south elevations
M_20_47_2014_12_04_017. Building 217, east and south elevations
M_20_47_2014_12_04_018. Building 219, looking east
M_20_47_2014_12_04_019. Building 230, east and north elevations
M_20_47_2014_12_04_020. Building 231, south and east elevations
M_20_47_2015_01_28_021. Building 233, south elevation
M_20_47_2015_01_28_022. Building 236, south elevation
M_20_47_2015_01_28_023. Building 237, south and east elevations
M_20_47_2015_01_28_024. Building 238, south and west elevations
M_20_47_2014_12_04_025. Building 245, north elevation
M_20_47_2014_12_04_026. Building 245, looking southwest
M_20_47_2015_03_03_027. Building 103, north elevation
M_20_47_2015_03_03_028. Building 318, north and east elevations
M_20_47_2015_05_14_029. Building 320, looking southwest
M_20_47_2014_12_03_030. Building 301, east elevation
M_20_47_2014_12_03_031. Building 301, south and east elevations
M_20_47_2014_12_03_032. Building 303, east and north elevations
M_20_47_2014_12_04_033. Building 304, south elevation
M_20_47_2014_12_03_034. Building 309, east elevation

M_20_47_2015_01_28_035. Building 312, east and south elevations
M_20_47_2015_05_14_036. Building 302, north elevation
M_20_47_2015_01_28_037. Building 305, north elevation
M_20_47_2015_01_28_038. Building 316, south and east elevations
M_20_47_2014_12_03_039. Building 306, north elevation
M_20_47_2015_01_28_040. Building 313, west and south elevations
M_20_47_2015_03_03_041. Building 315, east and south elevations
M_20_47_2015_01_28_042. Building 307, west elevation; Building 310, south elevation
M_20_47_2014_12_03_043. Building 311, north and east elevations
M_20_47_2015_01_28_044. Building 308, north elevation
M_20_47_2014_12_03_045. Newton apple tree, looking north
M_20_47_2014_12_03_046. Flagpole, looking southeast
M_20_47_2015_01_28_047. Masonry test wall, looking south
M_20_47_2014_12_04_048. Entrance gate, looking south
M_20_47_2015_05_14_049. Stormwater management pond,1 looking north
M_20_47_2015_05_14_050. Stormwater management pond 2, looking, northeast
M_20_47_2015_05_14_051. Baseball field 2, looking southeast
M_20_47_2015_05_14_052. Picnic area, looking northwest
M_20_47_2015_05_14_053. Volley ball court, looking northwest



M: 20-44

Basemap Data Source: 2014 NIST Aerial (georeferenced)
MSR: 1:7,500
SRS: UTM Zone 18 / NAD 83

N W E S

Meters
0 50 100 150

Feet
0 200 400 600

Building Construction Period
- 1960-1969
- 1970-1999
- 2000-2015
- Above Ground Walkway

- NIST Campus Boundary
- Map Sheet Boundary
- Landscape Feature

The landscape plan as a resource includes the original plan prepared by HLW International and incorporates the planting materials, objects, Building 101 courtyard, sidewalks, and road network.

Historic Assessment
National Institute of Standards and Technology
Gaithersburg, Maryland
NIST Campus Overview Map

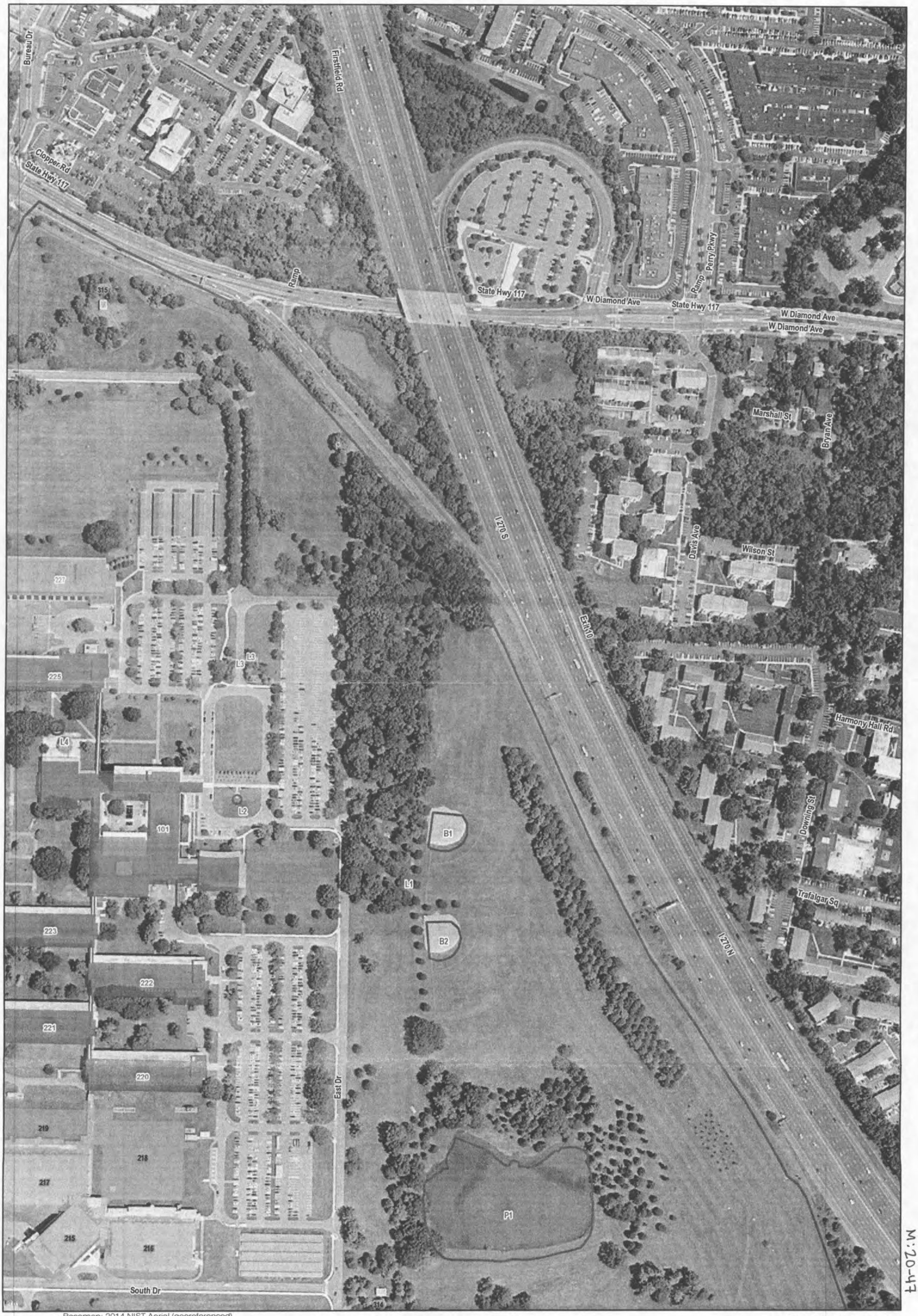
R. Christopher Goodwin & Associates Inc. | 241 East Fourth Street, Suite 100 | Frederick, MD 21701 | Prepared By: KFM | Date: 3.10.2015

M-20-44

Historic Assessment
National Institute of Standards and Technology
Gaithersburg, Maryland

NIST Campus
Map: 1

R. Christopher Goodwin & Associates Inc. | 241 East Fourth Street, Suite 100 | Frederick, MD 21701 | Prepared By: KFM | Date: 3.10.2015



Basemap: 2014 NIST Aerial (georeferenced)
MSR: 1:3,500
SRS: UTM Zone 18 / NAD 83

N
W E
S

Meters
0 25 50 75

Feet
0 100 200 300

Building Construction Period
- 1960-1969
- 1970-1999
- 2000-2015

- Above Ground Walkway
- NIST Campus Boundary
- Landscape Feature

The landscape plan as a resource includes the original plan prepared by HLW International and incorporates the planting materials, objects, Building 101 courtyard, sidewalks, and road network.

Historic Assessment
National Institute of Standards and Technology
Gaithersburg, Maryland
NIST Campus
Map: 2

M:20-44

R. Christopher Goodwin & Associates Inc. | 241 East Fourth Street, Suite 100 | Frederick, MD 21701 | Prepared By: KFM | Date: 3.10.2015

Basemap: 2014 NIST Aerial (georeferenced)
MSR: 1:3,500
SRS: UTM Zone 18 / NAD 83
Meters 0 25 50 75
Feet 0 100 200 300

Building Construction Period
1960-1969
1970-1999
2000-2015

Above Ground Walkway
NIST Campus Boundary
Landscape Feature

The landscape plan as a resource includes the original plan prepared by HLW International and incorporates the planting materials, objects, Building 101 courtyard, sidewalks, and road network.

Historic Assessment
National Institute of Standards and Technology
Gaithersburg, Maryland
NIST Campus
Map: 3

M:20-44

R. Christopher Goodwin & Associates Inc. | 241 East Fourth Street, Suite 100 | Frederick, MD 21701 | Prepared By: KFM | Date: 3.10.2015

Basemap: 2014 NIST Aerial (georeferenced)
MSR: 1:3,500
SRS: UTM Zone 18 / NAD 83
Meters 0 25 50 75
Feet 0 100 200 300

Building Construction Period
1960-1969
1970-1999
2000-2015

Above Ground Walkway
NIST Campus Boundary
Landscape Feature

The landscape plan as a resource includes the original plan prepared by HLW International and incorporates the planting materials, objects, Building 101 courtyard, sidewalks, and road network.

Historic Assessment
National Institute of Standards and Technology
Gaithersburg, Maryland
NIST Campus
Map: 4

M:20-44

R. Christopher Goodwin & Associates Inc. | 241 East Fourth Street, Suite 100 | Frederick, MD 21701 | Prepared By: KFM | Date: 3.10.2015

MUSP #: MI2147
BURGLARY
NIBR
MONTGOMERY COUNTY, MD
RCGT
12/03/2014
LOCUST NORTHWEST, MD 54PD
1 of 53

MIHP #: M: 21-49
BUILDING 101
NIST
MONTGOMERY COUNTY, MD
RLGA
12/03/2014
NORTH ELEVATION, MD SHPO

2 of 53

MHP #: M120 47
BUILDING 101
NIST
MONTGOMERY COUNTY, MD
PCBR
12/03/2014
LIBRARY, NORTH ELEVATION, MD SUPP

MMP #: M1:23714
BUILDING 601
NIST
MONTGOMERY COUNTY, MD
12/03/2024
RCGA | MD SHPO
AUDITORIUM, SOUTH + EAST ELEVATIONS

4 OF 53

MHP #1 M# 28-44
BUILDING LOT
NYST
MONTGOMERY COUNTY, MD
REGA
05/14/2015
COURTYARD / MD SHPO
5 of 53

MMPH: M; 21-47
WALKWAY FROM BUILDING 101
TO BUILDING 225
NIST
MONTGOMERY COUNTY, MD
REGA
12/03/2014
LOOKING NORTH, MD 5 Steps
6 OF 53

MHAP #: MC 20-47

BUILDING 224

NIOP

MONTGOMERY COUNTY, MD

RECEIVED

12/04/2020

WEST + SOUTH ELEVATIONS, MD SHPO

7 OF 53

PHOTO #: MD20-47
BUILDING 227
NIST
MONTGOMERY COUNTY, MD
RCRA
May/2004
EAST & SOUTH ELEVATIONS, AND STEPS
8 of 53

MHHP #: M:20-47
BUILDING 202
NIST
MONTGOMERY COUNTY, MD
RCVD: 12/04/2014
EAST ELEVATION, MD SHPO

9 OF 53

MHP #: M:20-47
BUILDING 203
NIOSH
MONTGOMERY COUNTY, MD
12/04/2014, READ
NORTH ELEVATION, MD SHPO
10 of 53

MHP #: M1-21-47
BUILDING 205
NIST
MONTGOMERY COUNTY, MD
01/28/2015
RCSA
SOUTH ELEVATION, MD STD
11 OF 53

MHP #: M:20-47
BUILDING 206
NIST
MONTGOMERY COUNTY, MD
REAS
01/28/2015
WEST & SOUTH ELEVATIONS, MD SHPO
12 of 53

MHRP #: M! 20-47
BUILDING 207
NIST
MONTGOMERY COUNTY, MD
RCBA
01/28/2015
NORTH + WEST ELEVATIONS, NO SHED

13 of 53

MMPH: M:21-47
BUILDING 208
NIH
MONTGOMERY COUNTY, MD
RLEPS
01/28/2015
SOUTH ELEVATION MD SHPO

14 OF 53

MAP #: M: 24-4T

BUILDING 215

NIST

MONTGOMERY COUNTY, MD

RCDS

12/04/2024

NORTHWEST ELEVATION, MD SHPO

15 OF 53

MHAP #: MI 21-44
BUCHANAN 210
NEC
MONTGOMERY COUNTY, MD
PLANS
12/01/2014
WEST & SOUTH ELEVATIONS, MD SHPO
16 OF 53

"WHP #: M: 24-97
BUILDING 27
NIH
MONTGOMERY COUNTY, MD
REGA
12/04/2014
EAST & SOUTH ELEVATIONS AND Steps

MAP #: M:20-47
BUILDING 219
NIST
MONTGOMERY COUNTY, MD
REGN
12/04/2014
LOOKING EAST, MD 5 SB
18 OF 53

MNCP #: M:20-47
BUILDING 230
NIST
MONTGOMERY COUNTY, MD
REGAS
12/04/2014
EAST AND NORTH ELEVATIONS, NO SCALE
19 OF 53

MULTI-A; MIXED USE
BUILDING 231
NIST
MONTGOMERY COUNTY, MD
REGA
12/04/2014
SOUTH & EAST ELEVATIONS, MD SHPO
20 OF 53

MHP #: MD0147
BUILDING 233
NIST
MONTGOMERY COUNTY, MD

RECAS
01/28/2015
SOUTH ELEVATION, MD SHPO
24 OF 53


Special Projects
Building
238

PHOTO # 1 14:20:47
BUILDING 236
NIST
MONTGOMERY COUNTY, MD
ROOF
01/28/2026
SHOT ELEVATION, NO SCALE

22 OF 53


NonMagnetic
Office & Lab
Building
237 & 238

MHAP #: M; 21-47

BOUNDING 237

NIST

MONTGOMERY COUNTY, MD

RECS

1/28/2015

SOUTH & EAST ELEVATIONS (NO SCALE)

23 OF 53

NIST Lot: M; 2047
BUILDING 236
NIST
MONTGOMERY COUNTY, MD
RCBA
01/28/2015
SOUTH + WEST ELEVATIONS, MD SHPO
24 OF 63

MHP #: M-20-41
BUILDING 115
NCSP
MONTGOMERY COUNTY, MD
REVIS
12/04/2014
NORTH ELEVATION - MD SHPO
25 of 53

MUSP #: MI2-44
BALLARD 245
NIST
MONTGOMERY COUNTY, MD
04/04/2014
LOOKING SOUTHWEST, MD SHPO
26 OF 53


NIST
1105
VISITOR CENTER
Visitors

MHAP #: MI2047
BUILDING 105
NIST
MONTGOMERY COUNTY, MD
RCSA
03/03/2015
NORTH ELEVATION & MD SHPO
27 OF 53

MIHP #: M:21-47
BUILDING 318
NIST
MONTGOMERY COUNTY, MD
PLATE
NORTH & ~~EAST~~ ELEVATIONS
28 OF 53

MHP #: MI2447
ROUTE 320
NIKE
MONTGOMERY COUNTY, MD
RCRA
05/14/2015
LOOKING SOUTHWEST (MD 5 SB)
29 OF 53

MHHP #: M:20-74
BUILDING 301
NIST
MONTGOMERY COUNTY, MD
ROAD
12/03/2014
EAST ELEVATION (MD SIDE)

30 OF 53

Mkup #: MI 28-714
BUILDING 301
NIST
MONTGOMERY COUNTY, MD
RCGAS
12/03/2014
SOUTH & EAST ELEVATIONS, MD STATE
31 OF 53

AHJP #: M128-11
BUILDING 308
NIST
MONTGOMERY COUNTY, MD
RCGA
12/03/2014
EAST AND NORTH ELEVATIONS, MD STYLE
32 OF 53

MAP #: H: 21-47
BULLDOG 304
NIST
MONTGOMERY COUNTY, MD
12/04/2014 : RCGA
SOUTH ELEVATION, MD SHPO
33 OF 53

MHT #: M: 24-47
BUILDING 309
NIST
MONTGOMERY COUNTY, MD
RCGA
12/03/2014
EAST ELEVATION, MD SHPO

34 OF 53

MHP #: M: 20-47
BURLINGTON 317
MAST
MONTGOMERY COUNTY, MD
REGT
01/28/2015
EAST & SOUTH ELEVATIONS, MD SHPO
35 OF 53


STEAM

MHP #: M# 20-47
BUILDING 302
NIST
MONTGOMERY COUNTY, MD
RCGA
05/14/2015
NORTH ELEVATION, MD SYPD

36 OF 53

MHHP #: M:21-47
BUILDING 305
NIST
MONTGOMERY COUNTY, MD
PLAT
01/28/2015
NORTH ELEVATION, MD SHPO
37 OF 53

MHP #: M:28-47
BUILDING 316
NIST
MONTGOMERY COUNTY, MD
RLB/K
01/28/2015
SOUTH & EAST ELEVATIONS, MD STATE
38 OF 53

MHP #: M:20-17
BUILDING 306
NIST
MONTGOMERY COUNTY, MD
RCBA
12/03/2014
NORTH ELEVATION (NO SHIP)
39 OF 53

MHP #: M-2014-
BALCONY 203
NEW
MONTGOMERY COUNTY, MD
REVISED
01/28/2015
SOUTH & WEST ELEVATIONS, MD SHPO
40 OF 53

MHAP #: M:20-47
BUILDING 315
NCSE
MONTGOMERY COUNTY, MD
RCGA
03/03/2015
EAST + SOUTH ELEVATIONS, MD SHPO

41 OF 53

MNTP #: M-2044
BUILDINGS 307 + 310 NIH
MONTGOMERY COUNTY, MD
RLGA
01/28/2015
WEST + SOUTH ELEVATION, MD SHPO
42 OF 53

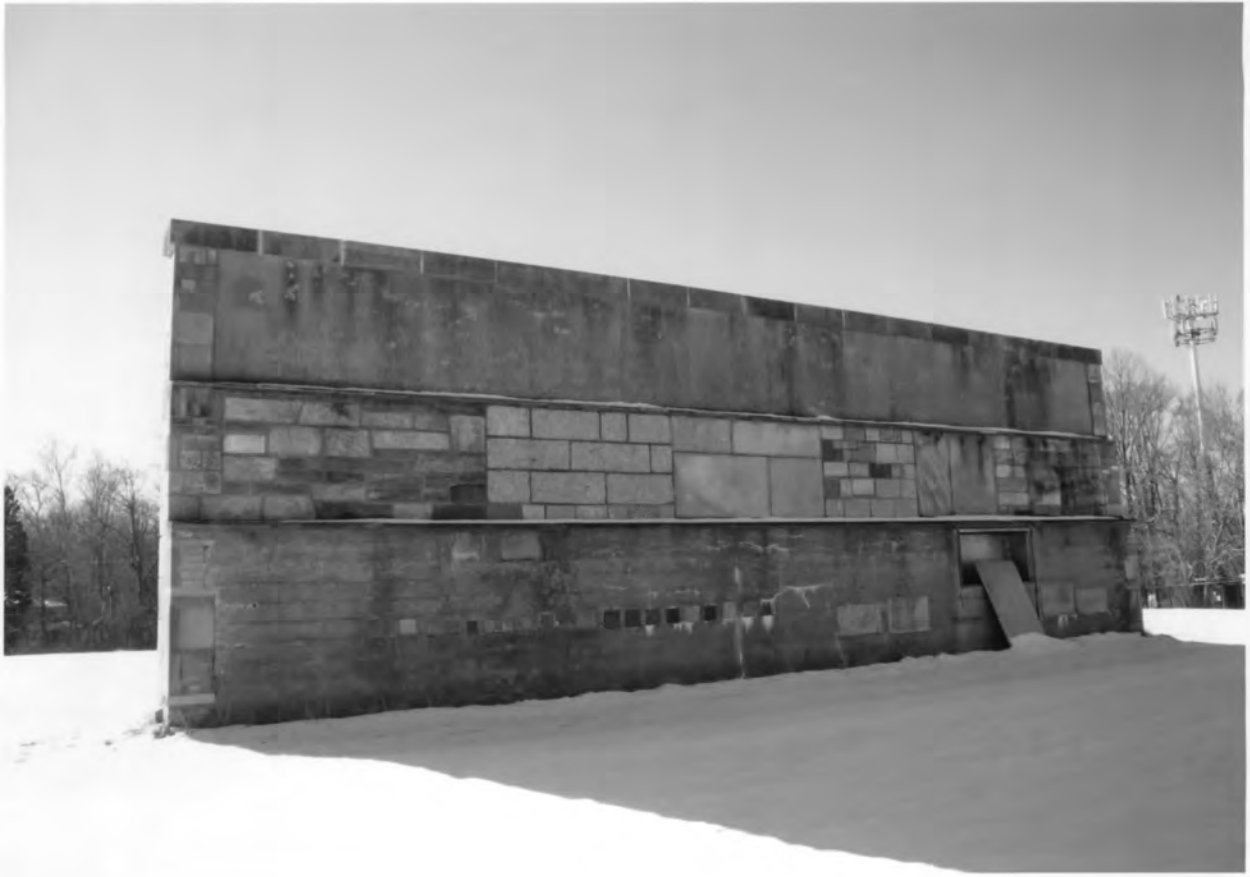
MHP #: M-20-4A
BUILDING 3A
NIST
MONTGOMERY COUNTY, MD
PLS15
2/03/2014
NORTH & EAST ELEVATIONS, MD STYLE

43 OF 53

MHP #: M:2047
BUILDING 308
NIST
MONTGOMERY COUNTY, MD
RCBA
01/28/2015
NORTH ELEVATION, MD 28PO
44 OF 53

MUP #: M-20-47
NEWTON APPLE TREES
MSP
MONTGOMERY COUNTY, MD
REGIS
12/03/2024
LOOKING NORTH, MD 355 (N)
45 OF 53

MHP#: MP2047
FLAG POLE
NIST
MONTGOMERY COUNTY, MD
PLAT
12/03/2014
LOOKING SOUTHEAST, MD 5430
46 OF 53



MHHP #: 14-20-47
MASONRY TEST WALL
NIST
MONTGOMERY COUNTY, MD
REGAS
01/28/2015
LOOKING SOUTH AND SHOP
47 OF 53


NATIONAL
BUREAU
OF
STANDARDS

MHSP #: MI 2404
ENTRANCE GATE
NIST
MONTGOMERY COUNTY, MD
REAPS
12/04/2024
WORKERS SOUTH, NO SHPD

MHHP #: M:20-47
STORMWATER MANAGEMENT POND 1
NIST
MONTGOMERY COUNTY, MD
RCGA
05/14/2015
LOOKING NORTHEAST, MD SHA
44 OF 53

MAP #: M-20-47
STORMWATER MANAGEMENT POND 2
NCST
MONTGOMERY COUNTY, MD
REAR
05/14/2015
LOOKING NORTHEAST (40 SHP)
50 OF 53

MLAA #: M-20-47
BASEBALL FIELD 2
NIST
MONTGOMERY COUNTY, MD
REGA
05/14/2015
LOOKING SOUTHEAST, MID SHOT

51 OF 53

MAP #: M:20-47
PICNIC AREA
NIST
MONTGOMERY COUNTY, MD
RCBA
05/14/2015
LOOKING NORTHWEST (MD SHPO)
52 OF 53

MHHP #: M:20-47
VALLEY BASE LOWER
NEG
MONTGOMERY COUNTY, MD
REGAS
05/14/2015
LOOKING NORTHWEST, (MD 547)

53 OF 53

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 20-47

Name of Property: National Institute of Standards and Technology (NIST)
Location: 100 Bureau Drive, Gaithersburg, MD 20899

Two previous determinations of eligibility have been made for the NIST Gaithersburg campus. Both the 2014 and 2015 determinations acknowledged that the entire 578 +/- campus is eligible for listing in the National Register of Historic Places under Criteria A and C. The purpose of this Addendum is to establish the current (2016) list of buildings, structures, landscapes and objects that contribute to the significance of the property. As stated by MD SHPO Elizabeth Hughes in October 2015, all pre-1970 buildings contribute to the significance of the NIST campus (Elizabeth Hughes letter dated 10/29/15). Below is a list of the contributing and non-contributing resources comprising the NIST Historic District:

Contributing Resources in the NIST Historic District		
Building Number	*Building Name*	*Construction Date*
101	101 Administration Building	1962-1965
202	202 Engineering Mechanics	1961-1963
206	206 Concrete Materials	1966-1968
220	220 Metrology	1963-1966
221	221 Physics	1963-1966
222	222 Chemistry	1963-1966
223	223 Materials	1963-1966
224	224 Polymer	1963-1966
225	225 Technology	1963-1966
226	226 Building Research	1963-1966
230	230 Fluid Mechanics	1967-1969
231	231 Industrial	1966-1968
233	233 Sound	1965-1968
235	NCNR	1963-1967; 1989-1990; 2009
236	236 Hazards	1966-1968
237	237 Non-magnetic Laboratory	1964-1968
238	238 Non-magnetic Laboratory	1964-1968
245	245 Radiation Physics	1962-1964
301	301 Supply and Plant	1962-1964; 2013
302	Steam and Chilled Water Generation Plant	1961-1964; ca. 1990s; ca. 2010
303	303 Service	1962-1964
304	304 Shops	1962-1964
306A	306A PEPCO	1961-1964
306B	306B PEPCO	1961-1964

Prepared by: Tim Tamburrino (MHT) **Date: February 12, 2016**

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 20-47

Name of Property: National Institute of Standards and Technology (NIST)
Location: 100 Bureau Drive, Gaithersburg, MD 20899

Contributing Resources in the NIST Historic District	
Campus Landscape Plan associated with the GPLs and Building 101, including vehicular and pedestrian circulation networks and parking lots	1961-1969; 1966
Flag pole	1965

Non-Contributing Resources in the NIST Historic District		
Building Number	*Building Name*	*Construction Date*
103	Visitor's Center and Gate House	2009
	Gate House associated with Visitor's Center	2009
B	Gate House ca. 2009	ca. 2009
C	Gate House ca. 2009	ca. 2009
F	Gate House ca. 2009	ca. 2009
203	Standard Reference Materials Facility	2012
205	Large Fire Facility	1973-1975; 2014
205E	Emissions Control Electrical	ca. 2000
205M	Emissions Control Mechanical	ca. 2000
205E#2	Emissions Control Electrical	ca. 2014
205M2	205M2 Emissions Control Mechanical	ca. 2014
2	Hopper	ca. 2014
3	Hopper	ca. 2000
207	Robot Test Facility	2012
208	Net-Zero Energy Residential Test Facility	2012
215	Nanofabrication Facility	2002-2004
216	Center for Nanoscience and Technology (Instrument East)	2001-2002
217	AML Instrument West	2002-2004
218	AML Metrology East	2000-2004
219	AML Metrology West	2000-2004
227	Advanced Chemical Sciences Laboratory	1999
305	Cooling Tower	1961-1964; 1993 (completely rebuilt); 1995 (expanded); ca. 2011 (completely rebuilt and expanded)
306	Potomac Electric Power Company (PEPCO)	
	Electrical Substation	ca. 1970

Prepared by: Tim Tamburrino (MHT) **Date: February 12, 2016**

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 20-47

Name of Property: National Institute of Standards and Technology (NIST)
Location: 100 Bureau Drive, Gaithersburg, MD 20899

Non-Contributing Resources in the NIST Historic District		
307	Hazardous Chemical Waste Storage	1970-1971
308	Bowman House	1952-1953
309	Grounds Maintenance	1974-1978
310	Hazardous Materials Storage	1986-1987
311	Grounds Storage Shed	1990
312	Materials Processing Facility	1996
313	Site Effluent Neutralization	1996
314	Backflow Preventer Building	1998
315	Backflow Preventer Building	1998
316	Electrical Service Building	1998
317	Cooling Tower	2010
	Building associated with 317	2010
318	ES Consolidated Facility	2014
319	ES Storage Building	2014
320	CCC	2013
321	Liquid Helium Recovery Facility	Under construction (2016)
	Baseball Field 1	Late 1990s
	Baseball Field 2	Late 1990s
	Volley Ball Court	ca. 2009
	Picnic Area	Late 20th century
	Stormwater Management Pond 3	ca. 2006
	Entrance Gates	1976
	Masonry Test Wall	1977

Prepared by: Tim Tamburrino (MHT)

Date: February 12, 2016

OMB Control No. 10240018 expiration date 03/31/2022

M: 20-47

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in National Register Bulletin, *How to Complete the National Register of Historic Places Registration Form.* If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions.

1. Name of Property

Historic name: **NIST Historic District**
Other names/site number: **National Institute of Standards & Technology Historic District**
Name of related multiple property listing**:**
N/A
(Enter "N/A" if property is not part of a multiple property listing

2. Location

Street & number: **100 Bureau Drive**
City or town: **Gaithersburg** State: **MD** 20899 County: **Montgomery**
Not For Publication N/A Vicinity: N/A

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended,

I hereby certify that this **X** nomination ___ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60.

In my opinion, the property **X** meets ___ does not meet the National Register Criteria. I recommend that this property be considered significant at the following level(s) of significance:

X national ___statewide ___local
Applicable National Register Criteria:

X A ___B X C ___D

Phillip W. Neuberg March 19, 2021

Signature of certifying official/Title: _Federal Date
Federal Preservation Officer / National Institute of Standards & Technology

State or Federal agency/bureau or Tribal Government

In my opinion, the property X meets ___ does not meet the National Register criteria.

Elizabeth Hughes

June 29, 2021

Signature of commenting official:	**Date**
Elizabeth Hughes, Director/SHPO	Maryland Historical Trust
Title :	**State or Federal agency/bureau or Tribal Government**

4. National Park Service Certification

I hereby certify that this property is:

X entered in the National Register

___ determined eligible for the National Register

___ determined not eligible for the National Register

___ removed from the National Register

___ other (explain:) _____

James Gabbert 8.5.2021

Signature of the Keeper Date of Action

5. Classification

Ownership of Property

(Check as many boxes as apply.)

Private:	☐
Public – Local	☐
Public – State	☐
Public – Federal	☒

Category of Property

(Check only **one** box.)

Building(s)	☐
District	☒
Site	☐
Structure	☐
Object	☐

Number of Resources within Property

(Do not include previously listed resources in the count)

Contributing	Noncontributing	
24	29	buildings
2	4	sites
1	1	structures
1		objects
28	34	Total

Number of contributing resources previously listed in the National Register 0

6. Function or Use

Historic Functions
(Enter categories from instructions.)
Government/ Research Facility

Current Functions
(Enter categories from instructions.)

Government/ Research Facility

7. Description

Architectural Classification
(Enter categories from instructions.)

Modern Movement/International Style
(other) Miesian

Materials: (enter categories from instructions.)
Principal exterior materials of the property: _
Brick;
Stone/ marble, granite, limestone;
Glass;
Metal/ Aluminum, Steel

Narrative Description
*(Describe the historic and current physical appearance and condition of the property. Describe contributing and noncontributing resources if applicable. Begin with **a summary paragraph** that briefly describes the general characteristics of the property, such as its location, type, style, method of construction, setting, size, and significant features. Indicate whether the property has historic integrity.)*

Summary Paragraph

The National Institute of Standards and Technology (NIST) is a Federal research campus located in Montgomery County, Maryland originally constructed in the early 1960s. The 579-acre Historic District is contiguous with the campus boundaries and is comprised of 74 buildings, structures, objects, and sites on a landscaped campus. Resources include monumental, multi-story buildings housing laboratory and administrative spaces. Brick, marble and granite are the predominant construction materials along with aluminum and glass. The predominant building type is that of multi-story rectilinear research laboratories complex, pin-wheel type footprints; footprints are not uncommon. This carefully planned government funded scientific research campus, built specifically for the National Bureau of Standards (as it was then called) features a rigorous orthogonal layout featuring mature specimen and coniferous trees. Large expanses of mowed lawn and meadow define the campus. Circulation networks reinforce the geometry with a grid-like street network and sidewalks. Original, historic and contemporary photographs attest to a remarkable level of architectural integrity.

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

National Institute of Standards & Technology
Name of Property Montgomery County, Maryland
County and State
Name of multiple listing (if applicable)

Detailed Description

NIST is located in Gaithersburg, Maryland, a suburb located about 25 miles north of Washington, D.C. Major roads, consisting of I-270 to the east, Muddy Branch Road to the southeast, Quince Orchard Road to the west, and West Diamond Road to the north separate the campus from the surrounding commercial and residential development constructed during the late twentieth century. A neighborhood of single-family homes and townhomes abuts the campus to the southwest. Commercial development to the west and north consist of strip malls, big-box retailers, and office buildings. Another residential neighborhood of three-story apartment blocks are located adjacent to the campus

NIST comprises of multiple buildings located on a formally landscaped campus organized by a grid network of internal roads. Large-scale, multi-story, monumental buildings separated by parking and grassy lawns define the campus. The internal road network consists of roads running in north/south and east/west directions. The publicly restricted road network creates large superblocks occupied by research buildings. Parking is expansive. The primary research areas are clustered around the Administrative Building (Building 101) and the seven connected General Purpose Laboratory (GPL) blocks, so called because of the broad and diverse nature of the scientific research conducted therein. Several other special purpose research facilities are located within the expansive southern acreage of the campus and are accessible from Center Drive. Support and Storage structures are predominantly located along the western edge of the campus bordering Quince Orchard Road.

Principal north/south roads include North, East, West, and Center drives. Center Drive provides access to the southern portion of the campus. North and South drives provide east/west access. Access to the support buildings is via Sound, Research, and Steam drives, and Service Drive, which runs in a north/south direction. No distinction in terms of design, landscaping, or road width is made between the service roads and the principal roads.

The central laboratory complex (GPLs) falls between North and South drives and East and West drives. Isolated special purpose laboratory facilities are located outside of this core grouping with many of them found south of South Drive and accessible via Center Drive. The topography is relatively flat except in the lower (Southern) region of the campus where gentle changes in natural topography are visible. By contrast, the northern section of the campus is organized by orthogonal network of roadways, broad lawns, surface parking lots and formal landscaping elements such as specimen hardwood and coniferous trees planted to reinforce the campus geometry.

Building hierarchy is denoted through building materials. The Administration Building, the tallest and most visually commanding building, is richly clad in marble, limestone and beige colored brick; the GPLs, and Special Purpose Laboratories are executed in beige brick; support buildings are finished in red brick. The buildings are monumental in scale; occupy rectangular and sometimes complex footprints; all terminating in flat roofs. Fixed-sash, single-light metal windows are common. With the exception of the Administration Building, public spaces and applied ornamentation, both interior and exterior, are scant.

An extensive landscape plan prepared by HLW International (the architects of record) was developed in-house and implemented for the NIST campus in a phased approach following construction of the respective buildings.[1] Large expanses of lawn buffer the campus from the main thoroughfares. The first-time visitor approaches the campus via the main gate located off West Diamond Road and then through a dense allee of that borders North and East drives. A large acreage of untouched wooded preserve is located at the western edge of the campus below which is one of three large stormwater management ponds. The other two ponds, which date to the time of the original campus construction are located near one another on the eastern edges of the campus. Specimen and ornamental trees are planted throughout the campus. The Newton apple tree, which is derived from cuttings of the tree purportedly belonging to Sir Isaac Newton in England, is planted next to the plaza north of Building 101. Building 101 also features an inner courtyard with flowering shrubs trees, a specimen weeping European Beech tree, a rectangular shaped reflecting pool, benches, and a sundial that was relocated from NIST's former campus in Washington DC.

A review of architectural drawings and conversations with NIST staff suggest that the resources located at NIST have undergone a continuous program of modification and alteration. Changes to building interiors are particularly common as laboratory and testing spaces have been altered to make the spaces relevant in the face of ever-changing research needs. Other building modifications include the construction of additions. Again, such modifications are necessary in order for the buildings to meet contemporary research requirements. In some cases, the additions are larger than the original building.

The core campus reflects the unified campus design developed by HLW International. The firm designed many of the existing buildings and prepared the campus landscape plan. Other architectural and engineering firms with expertise in the design of specialized, scientific buildings also have contributed to the evolution of the campus over the years after 1970.

A review of architectural drawings and conversations with NIST staff suggest that while the resources located at NIST have undergone a continuous program of modification and alteration, there remains a remarkable level of integrity to both the campus plan elements and the individual structures therein. Changes, however, to building interiors are particularly common as laboratory and testing spaces have been altered to make the spaces relevant in the face of ever-changing research needs. Other building modifications include the construction of additions. Again, such modifications were and are necessary in order for the buildings to meet mission and agency research requirements. In some cases, the additions are larger than the original building.

The core campus reflects the unified campus design developed by HLW International. * The firm designed many of the buildings and prepared the campus landscape plan. Other architectural and engineering firms with expertise in the design of specialized, scientific buildings also have contributed to the evolution of the campus.

[*] *The architectural firm that designed the Gaithersburg campus, Voorhees Walker Smith Smith & Haines, underwent a number of name changes since it was established. A change in name also occurred during the design and construction of the NIST campus. For simplification and to avoid confusion, HLW International (the firm's) current name) will be used henceforth.*

A total of 74 buildings, structures, objects, sites, and landscapes were systematically surveyed from 12/2014 to 3/2015. The campus is depicted on the accompanying maps The attached table identifies resources surveyed during this investigation as well as their status (*contributory or non-contributory*) to the Historic District. Contributory resources date to the period of significance (1962-69) except for the stone wall which predates the period of significance. Non-contributory resources are either outside the period of significance and/or small utilitarian structures (utility enclosures).

Security protocols prohibited discussion and photography of certain buildings and building features. The following data were collected: building type, style, location, number of stories, plan shape and type, exterior wall materials, roof shape and materials, placement of building openings, and modifications over time. Summary resource descriptions, arranged by building type, are provided below. Summary resource descriptions, arranged by property type, are presented below. Property types are based on function at the time of building construction and not on current building use.

ADMINISTRATION/LABORATORIES

Building 101 (Administration Building) - *contributory resource*

The Administration Building, constructed in 1965, to house the agency's executive offices, also contained computer, applied mathematics, and statistical engineering laboratories. The building occupies a pinwheel-like footprint comprised connecting masses of an eleven-story office tower, a two-story library, auditoria, a soaring cafeteria and glazed concourses all organized about an internal, open air courtyard.

The ever-visible office tower occupies a rectangular footprint in the northeast portion of the complex. The eleven-story steel-frame component is clad with sheer walls of beige-brick laid in stretcher bond along the east and west facades. The north and south facing curtain walls feature porcelainized spandrel panels above and below a series of fixed, single pane sash units. The mass terminates in a low parapet behind which is a flat roof interrupted by a rectangular penthouse, also with a flat roof. The roof over the cafeteria is scalloped. The primary entrance to the building is announced on the east side of the tower via an entry plaza featuring granite pavers and a modest stair both of which are covered by a sleek port cochere that almost seems to float above the marble and stainless steel clad column supports. A minimally projecting vestibule with double-leaf metal and glass doors provides access to the building's interior. The vast Lobby, facing east and north, is monumental in scale and features a black marble wall with a gold incised inscription. A single-story corridor with floor to ceiling glazing overlooking the internal courtyard connects the west end of the Lobby to the to the 101 complex Library.

The two-story library (plus full basement) block occupies a relatively square footprint, rests on a poured-concrete foundation, and terminates in a flat roof. Cladding materials are stone laid in a decorative pattern. While the primary access point from inside the 101 complex is on the west, the primary exterior elevation faces north. A lofty, flat roofed portico rests upon ten 30' high marble clad columns and a granite clad porch that runs the entire length of the north elevation. Large plate-glass windows with metal mullions form the north wall of the Library that features a mezzanine or second story. The mezzanine, or second story, is accessed by an "floating" spiral stair constructed of terrazzo and cast in place concrete. A horseshoe shaped plaza with granite stone pavers fronts the monumental North portico. The minimally landscaped plaza features an irregular assemblage of wood benches with the famed Newton Apple is located at its north edge

The west elevation of the Library block is clad in a simple grid of rectangular limestone panels from which, projecting westward is a lower extension is a lower flat roofed mass that features a series of metal framed large, fixed glass sash with corresponding porcelainized spandrels panels at the base. The South elevation of the Library similarly features an array of fixed glass sash units and corresponding porcelainized spandrel panels all set within a façade that, due to the change in topography, overhangs the basement below. The South elevation of the Library block abuts west facing glazed corridor or concourse that connects the 101 complex's Library block at the north to the Cafeteria Block at the south.

The Cafeteria is another lofty space with north facing floor to ceiling windows overlooking the internal courtyard and featuring a series of uniquely curved, pre-stressed concrete ceiling panels. Together these panels form a distinctive scalloped roof line, most notable as one of the only curvilinear features in an otherwise rigorously disciplined rectilinear aesthetic that characterizes every element of the NIST built environment.

To the south of the cafeteria are the original wood paneled executive dining rooms and assembly spaces. All these rooms feature window walls with attached *bris soleil*, an inventive solution to control the solar gain in these south facing rooms. The basement level, below these spaces contain the kitchen, mechanical spaces as well as a slightly recessed shipping and receiving dock.

East of the cafeteria block, the 101 complex features two auditoria of differing size. The larger one is called the Red Auditorium and extends from the main building block, both horizontally and vertically, forming one of the plan's "pin-wheel." The north and south walls of the red auditorium block are clad in large rectangular shaped limestone panels arranged in an alternating grid pattern. These opposing walls are not flat but subtly undulate to follow interior concrete block walls that are, in turn laid with a slight curved to enhance acoustics and control the perspective within the Red Auditorium.

Connecting the Red Auditorium on the east elevation to the main entrance port cohere under the eleven-story tower is another expansive floor to ceiling glazed corridor.

A two-story, brick mass is located south of the library. Fixed, single-light windows define the west end of the south elevation. A loading dock is present on the elevation's east end.

The inner courtyard features large rose-colored granite pavers with soft gray accent pieces. The centerpiece of the internal courtyard is the original Weeping European Beech which has the distinction of being named a Maryland State Champion Tree. East of the tree and to the north of the paved area, is the bronze sundial. The east portion of the courtyard features a rectangular reflecting pool that is spanned by a "floating bridge," essentially a ten-foot wide gray granite platform that serves as a handrail-less concrete foot bridge. Surrounding the perimeter of the courtyard, are low (approximately 18" high) gray granite faced retaining walls that serve as both benches and enclosures for the variety of shrubs and flower trees that define the edges. Other than the Beech, none of the plantings are original. Large, plate-glass windows with pairs of doors enclose the courtyard on all sides.

A poured concrete arcade with a distinctive sawtooth profile covers a concrete walkway extending from the southeast elevation of Building 225 connects to the north elevation of Building 101. The walkway has a poured-concrete foundation and a geometric roof supported by rectangular posts.

GENERAL PURPOSE LABORATORIES

Buildings 220, 221, 222, 223, 224, 225, 226, and 227 were constructed as GPLs. With the exception of Building 227, which was constructed in 1999, all the GPLs were completed in 1966. They are nearly identical in design, exhibiting a great degree of uniformity in materials and execution. Original drawings reference grey face brick suggesting building color might have changed between the time the drawings were prepared and the time the buildings were constructed. Buildings 220, 221, and 225 were constructed with basements to house specialized research spaces. Because of their similarity, a general description of the buildings is provided below. Descriptions of individual GPLs summarize key differences.

Each of the GPLs is a three-story building mass that occupies a rectangular footprint and terminates in a flat roof. The building rests on a poured-concrete foundation. Exterior cladding is beige brick veneer executed in stretcher bond. The building type is comprised three masses: an office/laboratory block, a stairwell block, and a covered concourse connection to the adjacent building. The multi-bay office/laboratory block rises three stories plus an attic (or mechanical) level. The attic level is clad in interlocking gray aluminum panels atop a continuous band of vertically oriented charcoal colored louvers. Windows are single-light, fixed-sash, metal framed units. Interlocking gray Metal spandrel panels are located directly above and below the window units. The glazing and associated spandrels are not set within the masonry apertures, but rather they project an inch from the surrounding beige brick walls. This design subtly creates a floating effect and offers a decidedly vertical counterpoint to the otherwise excessive horizontality of the north and south elevations. The stairwell intersects the office/laboratory block and projects above the roof of the office/laboratory block. The primary entrance, which is located to the east or west of the corresponding stairwell block. The entrance features double-leaf metal and glass doors. The doors are framed by paired, single-light, fixed-sash windows in metal frames. One single-light transom is found above each window bay and the doors. A secondary projecting bay to facilitate shipping and receiving of scientific equipment is located adjacent to the stair tower and is accessed from north or south off the undefined yards that separate the GPLs. Each of the seven original GPLs was connected to the adjoining structure (GPL or Building 101) by a glazed corridor or “concourse” that frequently is of one or more stories in height and like everywhere else, features a flat roof. Large, fixed-sash, single-light windows with metal sash divide each concourse into multiple bays. Metal spandrels are located below each window unit. Double-leaf metal and glass doors generally are centered in the elevation to facilitate pedestrian access and circulation in an east-west direction. Landscaping around the buildings is sparse. If existent, random conifers and hardwoods dot the various yards between the GPLs.

Building 220 (Metrology Building) - *contributory resource*
Building 220 faces east. It is similar in design as described above in the general description.

Building 221 (Physics Building) - *contributory resource*
Building 221 faces west. It is similar in design as described above in the general description. The east elevation is blind. One covered concourse is found at the east end of each of the south and north

elevations of the building. The concourse is comprised fixed, single-light, metal-sash windows. The concourse connects Building 221 to Building 220 to the south and Building 222 to the north.

Building 222 (Chemistry Building) *contributory resource*
Building 222 faces east. It is similar in design as described above in the general description; however, in 2008, the building was modified when several lab spaces were converted to offices. The windows were replaced, and the exterior walls were insulated at that time (Susan Cantilli personal communication 5/6/2015).

Building 223 (Materials Building) *contributory resource*
Building 223 faces west. It is similar in design as described above in the general description. The east elevation is blind. A covered concourse is located at the east end of both the north and the south elevations. The concourse on the south elevation is comprised one three-story concourse featuring fixed, single-light, metal-sash windows. This concourse connects Building 223 to Building 222. The concourse on the north elevation is elevated and rises one story in height. The windows are similar to those found on the south concourse. A single-story covered concourse also is located at the west end of the north elevation. The concourse features fixed, single-light, metal sash windows above metal spandrels.

Building 224 (Polymer Building)
Building 224 faces west. It is similar in design as described above in the general description.

Building 225 (Technology Building) *contributory resource*
Building 225 faces east. A covered walkway extends from the southeast corner of the building and connects to the north elevation of Building 101. Two projections into the yard are present on the north elevation. A single-story metal addition terminating in a flat roof and resting on a poured concrete foundation is located adjacent to the loading dock. An opening is present on the east elevation of the addition. A smaller, single-story brick addition terminating in a flat roof is located adjacent to the metal addition. The projection also rests on a poured-concrete foundation.

Building 226 (Research Building) *contributory resource*
Generally, Building 226 retains the same materials and design as the other laboratory buildings; however, the south elevation is different than those of the other GPLs. According to original drawing, porcelain steel panels were installed at the second floor. A series of loading docks is present at the first floor of the south elevation. A one-story brick projection terminating in a flat roof extends from the elevation. Two metal doors are present on the projection's south elevation. The projection is original to the building and was constructed as a high bay. A covered concourse extends from the east end of the south elevation and connects to Building 225. This three-story concourse features fixed, single-light, metal-sash units similar to the windows found on Building 227. A brick-clad stairwell also is located on the building's east elevation (National Institute of Standards and Technology [NIST] Var.).

Building 227 (Advanced Chemical Sciences Laboratory)

Constructed in 1999, Building 227 maintains the general massing and proportions as the GPLs constructed during the initial construction period at the Gaithersburg campus. Materials are similar to those used on the original GPLs. The building, which faces east, occupies a rectangular footprint and terminates in a flat roof. Metal paneling conceals equipment. Projecting stairwells are located at the east and west elevations. The primary entrance is located on the east elevation in a projecting stair tower. The three-bay east elevation of the stair tower is defined by fixed-sash, single-light, metal-frame windows flanking a brick mass. The entrance is centered on the elevation and consists of double-leaf metal and glass doors. A single-story brick wall extends in a southerly direction from the entrance block. Large single-light, fixed-sash-metal windows with transoms are present on the first floor. The multi-bay north and south elevations also feature single-light, fixed-sash metal windows. A single-story brick projection on the south elevation houses a recessed loading dock. The brick mass on the west elevation houses the stairwell and projects from the plane of the principal block.

SPECIAL PROJECTS LABORATORIES

Building 202 (Engineering Mechanics) - *contributory resource*
Building 202 is the Engineering Mechanics Laboratory designed by Voorhees Walker Smith Smith & Haines, the predecessor firm to HLW International and completed in 1963. The building is executed in two primary masses, a 5:1 common-bond, red-brick, two-story mass and a larger multi-story mass housing a high bay testing laboratory completed in beige brick. The building occupies a complex footprint and terminates in a flat built-up roof not visible due to the parapet. The two-story portion of the building was built to provide administrative office space for scientists. The multi-bay, two-story mass includes the building's primary entrance, which is located on the east elevation. Fixed-single-light, metal-sash windows with spandrels below the second-floor windows define the elevation. A flat roof-canopy supported by stone piers shelters the main entrance, which contains double-leaf glass doors in metal frames. Transoms and sidelights define the doors. A single-story ell extends from the north elevation. The east elevation of the ell contains four bays and an overhead garage door. The west elevation features a covered loading dock and openings. The multi-bay south elevation also features single-light, fixed-sash, metal windows as well as a single-story brick projection. Openings are found on the east and north elevations of the high bay.

Building 203 (Standard Reference Materials Facility) - *contributory resource*
Building 203 was completed in 2012. The single-story building abuts Building 202 to the north. The building occupies a rectangular footprint, rests on a poured-concrete foundation, and terminates in a flat roof. The building is clad in beige brick. A multi-bay covered loading dock defines the north elevation. Single-light, fixed-sash windows are found in the east and south elevations.

Building 205 (Fire Research Laboratory and Support Facilities) - *contributory resource*
Building 205, completed in 1975, was constructed as the Fire Research Laboratory designed by Gipe, Fry and Welch Associated Engineers and Architects. The southern portion of the current building is the original section, constructed of poured concrete and faced with stretcher bond, beige brick. The multi-level building terminates in a flat roof with metal coping; roofing materials are not visible. Openings include

double-leaf glass and metal doors, metal doors, and loading dock doors. The south elevation contains the main entry comprising double-leaf glass and metal doors with transom and sidelights in the southeast corner of the building. The doorway is sheltered by a projecting canopy. Three bays of narrow vertical windows separated by spandrels occupy the east elevation. The south elevation wall currently is blind; the opening that originally contained fixed windows has been infilled. In 2014, a major, two-story addition doubling the original building was completed along the north elevation. This new addition is faced in concrete and metal panels. A band of fixed windows is located along the southeast corner of the addition.

The Fire Research Building is supported by two, two-story metal exhaust systems. The exhaust system located northwest of Building 205 was constructed in 2002. The metal structure rests on a concrete slab and has two circular metal air filters, a large rectangular metal hopper, and a stack. Two, one-story support buildings (Buildings 205E and 205M) are located near the base of the metal structure. Each building occupies a concrete slab and has a flat roof with concrete coping. The exterior walls are faced with stretcher bond, beige brick. Each building has one set of double-leaf metal doors. The other elevations are blind.

A second exhaust system, constructed as part of the 2014 addition, is located north of the addition. The metal structure rests on a concrete slab and has two circular metal air filters, a rectangular metal structure, and a stack. Two, one- story support buildings (Buildings 205E2 and 205M2) are located near the base of the metal structure. Each building occupies a concrete slab and has a flat roof with concrete coping. The buildings are constructed of concrete block. Each building contains single-leaf or double-leaf metal doors. The other elevations are blind.

Building 206 (Concrete Materials) - *contributory resource*
Building 206 was built as the Concrete Materials Building to house the equipment for batching, blending, and storing of aggregates used in the structural concrete programs, to produce standard samples of aggregates and sands, and in standard soil samples for the interstate highway program (NBS 1966a:22). The building was completed in 1968. The single-story building occupies an L-shaped footprint and rests on a poured-concrete foundation. Cladding materials consist of stretcher bond, beige brick on the south, east, and west elevations. The north elevation is nestled in the adjacent low hillside. Multiple steel shafts projecting through the roof along the north wall allowed for easy delivery and dumping of various aggregates (needed for concrete mixes) from the top of the adjacent rise in land. The High bay building terminates in a flat roof with metal coping; roofing materials are not visible. No main entry is visible. Other openings comprise single-leaf and double-leaf metal doors and overhead garage doors. The southwest corner contains one pair of metal doors and three overhead metal garage doors. Four openings are located in the east elevation.

Building 207 (Robot Test Facility) - *non-contributory resource*
Building 207 was constructed in 2012. The building occupies a rectangular footprint with a one-and-half-story central high bay flanked by one-story bays on the east and west elevations. The building rests on a concrete-slab foundation. The exterior walls are constructed of metal panels. The lower walls are clad in red, horizontal ribbed paneling. The upper walls of the central bay are dark gray, vertical panels. The side bay walls are clad in light gray, vertical metal panels. The flat roof has metal coping. The main entry in the north elevation contains a single glass door off-set in a large fixed window with a transom. Large

fixed-light glass walls are in the bays on the south elevation. Glass openings set in light-colored square metal panel surrounds occupy the north and south elevations of the center bay. Bands of fixed-glass windows are in the east and west elevations.

Building 208 (Net-Zero Energy Residential Test Facility) - *non-contributory resource*
Building 208 is the Net-Zero Energy Residential Test Facility constructed in 2012 as both a laboratory and a LEED Platinum rated house to demonstrate that a residence can produce as much energy from renewable resources as it consumes on an annual basis. The building is a five-bay, two-story house linked by a breezeway to a one-story garage, which conceals all the computer and electrical controls. The house rests on a concrete slab. The wood framed one- and one-half story structure is clad with fiber cement clapboard siding. The gable roof clad is clad with composition shingles and features three-bay shed dormers on the north and south elevations. The south elevation features two windows on either side of a front door with sidelights, although primary entry by the research scientist is from the west facing door off the covered breezeway linking the house to the garage. The windows are six-over- six-light units set in metal frames. An integral porch supported by columns spans the south elevation.

Buildings 215, 216, 217, 218, and 219 were competed between 2002 – 2004 to support measurement research in a variety of different fields. Collectively they are referred to as the Advanced Measurement Laboratory (AML) complex. Two of the buildings (Buildings 218 and 219) are below grade; above-grade entrance blocks provide exterior access to the below-grade buildings. The buildings in the complex employ similar materials and have a common design vocabulary. HDR Architecture, Inc. designed the buildings.

Building 215 (Nanofabrication Facility) - *non-contributory resource*
Building 215 was completed in 2004. Generally, the building occupies a rectangular footprint. The building plane is complex, with a variety of projecting and recessed masses. The building terminates in a flat roof; roofing materials are not visible. Primary access to the building is from the southeast elevation and is recessed from the principal mass. Double-leaf glass doors provide access to the building's interior. Cladding materials are beige brick completed in stretcher bond and preformed metal panels. Projecting bays of various sizes are a character-defining feature of the building. Fixed, single-light-metal windows are common. A wall of windows at the floor defines the southeast elevation and the second floor of the northeast elevation. A loading dock with flat roof is present on the northwest elevation.

Building 216 (Center for Nanoscale Science and Technology (Instrument East) *non-contributory resource*
Completed in 2002, Building 216 was the first building in the AML complex to be constructed. The two-story building is executed in beige brick completed in stretcher bond and preformed metal panels.
Metal coping defines the roof; roofing materials on the flat roof are not visible. Windows are single-light, fixed-sash, metal units. A double-leaf metal and glass door provides access to the building from the west elevation. Recessed and projecting bays divide the south and north elevations. Metal panels characterize the east and west elevations.

Building 217 (AML Instrument) - *non-contributory resource*
Completed in 2004, Building 217 occupies a generally rectangular footprint and terminates in flat roof. The multi-story building features a number of projecting and recessed bays. Cladding materials are stretcher bond beige brick and preformed metal panels. Fixed-light, metal-sash windows are employed throughout. The primary entrance is on the west elevation. Entrances are double-leaf metal and glass doors and single-leaf metal doors. The north and south elevations are divided into three projecting bays which are in turn divided into eight bays featuring single-light, fixed sash windows. Each projecting bay also contains a projecting wall of fixed-sash windows. The building attaches to Building 215 at its southeast corner. A single-story brick and glass corridor extends from the east end of the north elevation and connects to the south elevation of Building 220.

Building 218 (AML Metrology) - *non-contributory resource*
Completed in 2004, nearly all of Building 218 was constructed underground. Two above-ground projections provide access to the building's interior. The west entrance building terminates in a flat roof that slopes to the west elevation and is sheathed in metal panels. The foundation is not visible. The entrance is a metal-frame building clad in prefabricated metal panels. Access to the interior is by double-leaf metal and glass doors. A flat-roof canopy shelters the entrance. Windows are fixed, single-light, metal-sash units. The north, south, and west elevations are blind.

An east entrance also provides access to the below-ground portion of the building. This building is nearly identical to that employed for Building 219. The entry consists of a two-story building clad in brick and terminating in a flat roof. Access to the building is from the east elevation, which features double-leaf metal and glass doors and fixed, single-light windows in metal frames. The west elevation features a lower mass. Fixed, single-light ribbon windows are present on the north, south, and west elevations of the main block and the secondary mass.

Building 219 (AML Metrology) - *non-contributory resource*
Building 219 was completed in 2004. With the exception of the entry, the entire building is underground. The entry consists of a one and a-half-story building clad in brick and terminating in a flat roof. Access to the building is from the west elevation, which features double-leaf metal and glass doors and fixed, single-light windows in metal frames. The east elevation features a partially below-grade mass. Fixed, single-light ribbon windows are present on the north, south, and east elevations of the main block and the secondary mass. This building is very similar to the east entrance to Building 218.

Building 230 (Fluid Mechanics) - *contributory resource*
Building 230 is a two-story building clad in beige brick executed in stretcher bond. The building rests on a poured- concrete foundation and occupies a generally square footprint. The building terminates in a flat roof. Windows are fixed- single-light units with metal sash. Metal spandrels are found above and below the openings. The primary entrance is found at the north end of the east elevation and features a flat-roof metal canopy that shelters double-leaf metal and glass doors. The remainder of the elevation is blind. The north elevation is eight bays. A brick and metal mass extend from the west elevation. The projection's west elevation is clad in metal panels. The south elevation is completed in brick and metal

panels; loading bays are found on the elevation. The building was constructed to calibrate large air and water meters, fluid meters, hydraulics, and aerodynamics.

Building 231 (Industrial) - *contributory resource*
Completed in 1968, Building 231 is a single-story beige brick building executed in stretcher bond. Building 231 was constructed to study papermaking and textiles. The footprint consists of two rectangular masses: one that is brick and the other that is clad in metal panels. Windows are paired single-light, fixed-sash units with metal spandrels above and below the openings. The primary elevation faces east and contains one set of recessed, double-leaf metal and glass doors with sidelights and transoms at the south end of the elevation. A two-story metal mass connects the principal block to a single-story brick projection with single-light, fixed-sash, metal ribbon windows are at the eave. Openings are found on the north elevation of the projecting mass. A single-story projection extends from the west elevation of the principal block. The north elevation of the projection is blind; the west elevation features metal ribbon windows at the eave. The west elevation connects to a metal- clad mass with a single-story brick projection. This brick projection is executed similarly to the one described above. The windows on the south elevation consist of paired units.

Building 233 (Sound) - *contributory resource*
Building 233 was completed in 1968 as the sound laboratory for acoustical research. The building was designed by Voorhees Walker Smith Smith & Haines. The building was built of heavier than normal masonry construction to reduce interference from sound and vibration from external sources. The one-story building rests on a concrete foundation and essentially has a rectangular footprint. Test chambers project from the north end and from the south end. The exterior masonry wall is faced in beige, stretcher bond brick. The roof is basically flat with a set-back monitor clad in gray insulated aluminum siding. The south elevation contains 19 bays of paired fixed-light windows. A central entry contains a pair of glass doors set in a concrete surround. The north elevation also contains multiple bays of paired fixed-light windows. The projections contain the anechoic and reverberation chambers. These test chambers are built of concrete and faced with brick. The exterior walls of the chambers are blind. Each test chamber was built with an inner shell set on vibration isolators surrounded by a second shell of concrete (NBS 1966a:22).

Building 235 (NCNR) -*contributory resource*
Building 235, completed in 1965, was designed by Burns and Roe, Inc., Architect-Engineers from New York City. The original building occupied a T-shaped footprint. The building has a concrete frame. The east elevation has one and two- story sections that contain offices and laboratories. The east wall has 14 bays of fixed-light windows set in metal frames separated by concrete framing. The main entry is centered in the east elevation and contains glass doors set in metal frames and surrounded by fixed lights. The doorway is sheltered by a slightly projecting concrete canopy. The upper wall of the south end of the building is faced in beige brick. The glass windows extend along a portion of the west elevation of the south end of the building. A three-story, poured-concrete wing devoid of openings projects from the west elevation.

The building has received multiple additions. In 1986, planning began for the construction of an addition to house expanded offices and laboratories. Completed in 1989-1990, construction comprised a one-story, six-bay office addition on the north end of the east elevation and a two-story addition constructed on the north wall of the rear wing. The additions were constructed of insulated vertical metal panels with a band of fixed-light windows. Glass doors were installed near the center of the addition. In 2009, the building was extended again through additions on the north and west elevations. These multi- story additions were constructed of dark metal panels with fixed-light windows (NIST drawings files, Rush and Cappalletti 2011).

Building 236 (Special Projects Building formerly known as the Hazards Laboratory) - *contributory resource*
Building 236 was built as the Hazards Laboratory, later known as the Special Projects Building, completed in 1968. The building was constructed to house laboratories for work with the potential for hazardous accidents (NBS 1966a:22). Generally, the single-story building occupies an L-shaped footprint and rests on a poured-concrete foundation. Cladding materials consist of beige, stretcher bond brick on the south elevation and east elevations; poured-concrete walls are evident on the west and north elevations. The building terminates in a flat roof with a metal eave along the south elevation; roofing materials are not visible. Access to the building is from the south elevation, which features a recessed double-leaf glass door with glass sidelights. The south elevation contains six bays of paired narrow, metal-frame windows set in concrete frames near the southwest corner of the building. The north elevation features a collapsible wall facing a 40-foot high earth berm (NBS 1966a:22). The wall has 11-bays of poured-concrete framing containing plastic panels set in metal frames. A poured- concrete tower is located on the west elevation. The tower is blind on the south and west elevations; it is attached to the principal block on its east elevation. The north elevation of the tower contains plastic panels set in metal frames. Two, poured-concrete sections, both partially below grade, extend from the northeast corner of the north elevation. The east elevation features two sets of double-leaf metal doors.

Buildings 237 and 238 (Non-Magnetic Laboratories) - *contributory resource*
Building 237 and 238 were completed in 1968 as non-magnetic office and laboratory facilities designed by Voorhees Walker Smith Smith & Haines. The two buildings are linked by a long covered concrete walkway.

Building 237 is a one-story, concrete-block building constructed on a concrete-slab foundation. The building adopts an L-shaped footprint. The exterior walls are clad in beige, stretcher-bond brick. The flat roof has a metal eave. A pair of glass doors set in a metal frame is located in the south elevation. The window bays contain fixed glass-lights with dark panels above and below.

Building 238 is constructed with no metal components. The three-story building is wood-frame construction set on a concrete slab. The exterior walls are clad in vinyl siding. The roof is flat with vinyl coping. The windows are paired, two- light, wood-frame units with fixed lights. Wood doors are located in the north elevation. An external wood stair provides access to the upper floors.

Building 245 (Radiation Physics Research Building) - *contributory resource*
Building 245 was completed in 1964 for radiation physics research. The building occupies a complex footprint and rests on a poured-concrete foundation. Six masses comprise the building. Exterior cladding

materials consist of beige brick executed in common bond, insulated metal panels, and poured concrete. The building changes in height from three stories to one depending on location and siting. Portions of the building are below grade.

The three-story principal mass fronts South Drive. The multi-bay north elevation features fixed, single-light, metal- sash windows with metal spandrels above and below the window openings. The off-center entrance is sheltered by a flat-roof canopy supported by brick piers. Doors are double-leaf metal and glass; transoms and plate-glass windows also define the entrance. The mass terminates in a flat roof. A metal-clad penthouse sits atop the roof. The east and west elevations are blind.

A single-story, beige-brick clad ell extends from the south elevation. The ell employs windows on its east and west elevations similar to those found on the principal block. A loading dock also is present on the ell's east elevation. The ell connects to a multi-story mass off its south elevation. Openings on the north and south elevations of the single-story eastern mass feature windows similar to those on the building's principal block. The east elevation features a one story-brick projection. One opening is found on the north and south elevations of the projection. A single-story brick ell extends from the west end of the south elevation of the east mass. A multi-story concrete mass extends from the brick ell.

A flat-roofed covered concourse with decorative glass block projects from the west elevation of the principal mass and connects to a one story, brick building terminating in a flat roof.

A detached, single-story metal building terminating in a flat roof is located south of Building 245. This building connects to Building 245 below grade. A brick tower is located south of the metal building.

SUPPORT BUILDINGS

Support buildings encompass four primary building types: Personnel Support, Campus Support (i.e., shops, grounds maintenance, plant and supply, etc.,), Utility, and Storage. The buildings generally occupy rectangular footprints and are clad in red brick, metal, or a combination of brick and metal. Windows are single-light, metal sash; overhead garage doors are common. Building descriptions are grouped based on property type.

PERSONNEL SUPPORT BUILDINGS

Four types of personnel support buildings are present on the NIST campus. These include the Visitor's Center and gate house (Building 103), Security gate houses (B, C, and, F), the ES Consolidated Facility (Building 318), and the Child Care Center (CCC, Building 320).

Building 103 (Visitor's Center and Gate House) - *noncontributory resource*
Building 103, constructed in 2009, is the main visitor center. The one-story building occupies an irregular footprint. The building rests on a concrete foundation. The exterior walls are faced with beige, stretcher bond brick. The flat roof is ornamented in metal. The northeast corner of the building is chamfered. The lower wall of the northeast corner is faced with stone. The main entry in the north elevation contains double-leaf glass doors under a projecting metal canopy. A bay containing fixed lights set in a metal frame is located west of the door. The northeast corner contains a band of fixed-light windows. A brick pillar extends above the roof line and displays a digital clock and the letters "NIST" in metal. The west, south, and east walls are faced in beige, stretcher bond brick.

Gate House *-non-contributory resource*
The gate house, constructed in 2009, has a square footprint and rests on a concrete slab. The lower north wall is faced in stone, while the west, south, and east walls are faced in beige, stretcher bond brick. The upper wall of the north elevation is finished in metal. The flat roof has metal coping. Fixed-light windows are located on the east, north, and west elevations. Doors are located on the east and west elevations. A large metal canopy supported on metal columns extends over the driving lanes.

Security Gates (Gate B, C, and F) *-non-contributory resources*
All the security buildings are one-story in height and terminate in flat roofs, with the exception of Gate B, which terminates in a pyramidal roof. The buildings rest on poured-concrete foundations. Openings are single-light, fixed-sash windows, and metal and glass doors. The gates are constructed of metal. Gate F accommodates both entry and exit. Unlike Gates B and C, Gate F contains two gatehouses rather than one and a large canopy extends over the roadway.

Building 318 (ES Consolidated Facility) *-non-contributory resource*
Building 318 was completed in 2014 as the ES Consolidated Facility Building. The one-story building occupies an irregular L-shaped footprint. The exterior walls are faced in red, stretcher-bond brick. The roof is flat with metal coping. The main entry is located in the center of the north elevation. This area is clad in metal panels with large fixed-glass windows and contains paired glass doors set under a cantilevered canopy. The fire station is in the southwest corner of the building, which contains four overhead garage doors. The south elevation is clad in metal panels and contains fixed windows and openings that access an outdoor patio.

Building 320 (CCC) *-non-contributory resource*
Building 320 was completed as the Child Care Center in 2013. The building was designed by the Baltimore, Maryland-based firm of Colimore Thoemke Architects (now called Colimore Architects). The building rests on a concrete foundation and has an L-shaped footprint. Its exterior masonry walls are faced with beige and red, stretcher-bond brick. The east and north elevations are ornamented with projecting bays faced with red brick with horizontal bands of beige bricks and capped with grey stone. The bays contain fixed-glass windows set in metal frames. The main entry located in the northeast corner of the building is clad in red brick. The entry contains double-leaf glass doors with fixed-light transom and sidelights. The entry is sheltered by a projecting canopy supported on brick piers. The west elevation contains similar windows and multiple openings that access a playground.

CAMPUS SUPPORT BUILDINGS

Building 301 (Supply and Plant) - *contributory resource*
Building 301 is a single-story building occupying a complex footprint. The principal block is rectangular; an ell connects to the principal block at its northwest corner. The building rests on a poured-concrete foundation and terminates in a flat roof. Roofing materials are not visible. Exterior materials are 5:1 common-bond red brick. The multi-bay primary elevation faces east. Windows generally consist of single-light, fixed-sash, metal units, with spandrels above and below the openings. Double-leaf metal and glass doors provide access to the building. Sidelights and transoms frame the doors. Limestone piers support the flat-roofed metal canopy at the entrance. The north elevation of the principal block is defined by a long row of windows, similar to those found on the east elevation. The west elevation is comprised a multi-bay loading dock. The multi-bay east elevation of the ell extends from the northwest corner of the north elevation. A row of windows similar to those found on the east elevation are present on the east end of the north elevation; a multi-bay loading dock is found at the west end. One opening is found on the west elevation.

Additions were constructed in 2013. An addition was appended to the south elevation of the principal block. Metal-panel and brick east elevation is blind. A loading dock is present on the west elevation, which is defined by metal paneling. The metal and brick south elevation is blind. A single-story metal-frame addition with a flat roof was constructed on the addition's south elevation. Openings are present on the south and east elevations. The west elevation features a two-bay open garage.

Building 303 (Service) - *contributory resource*
Building 303 is a single-story 5:1 common-bond brick and metal building that occupies a complex footprint consisting of a metal wing with flanking brick blocks. The building terminates in a flat roof; roofing materials are not visible. The building rests on a poured-concrete foundation. Openings generally consist of single-leaf metal doors, overhead garage doors, and one-over-one-light, double-hung, metal-sash windows. A flat-roof metal canopy defines the principal (south) elevation. Openings are present on the south, east, and west elevations.

Building 304 (Shops) - *contributory resource*
Building 304 is a single-story building that terminates in a flat roof. The building, completed in 1964, occupies an irregular footprint. A second story is found at the eastern end of the building. The building is clad in red brick executed in 5:1 common bond. Windows are single-light, fixed units in metal sash. Spandrels are found above and below the openings. The primary entrance is found on the south elevation and is sheltered by a flat-roof canopy supported by limestone pillars. The double-leaf metal and glass doors are framed by sidelights and transoms. Two, single-story brick masses project from the west elevation. Generally, these masses are blind. The north elevation contains fixed, single-light windows in metal sash and a loading bay. A covered concourse at the east end of the south elevation connects Building 304 to Building 223. A similar concourse at the east end of the north elevation connects to Building 224.

Building 309 (Grounds Maintenance Building) - *non-contributory resource*
Building 309, constructed in 1976, is a single-story, 5:1-bond, red-brick and metal building occupying a rectangular footprint executed in two masses: a brick office and a brick-and-metal garage. The building terminates in a flat roof, the materials of which are not visible. The building rests on a poured-concrete foundation. Openings consist of single-light-fixed- sash metal windows, overhead garage doors, and single-leaf metal doors. The primary entrance is located on the east elevation. The recessed opening features a single-leaf metal and glass doors with flanking sidelights.

Building 312 (Materials Processing Facility) - *non-contributory resource*
Building 312 was completed in 1996 as the Materials Processing Facility. The one-story building occupies a square footprint. The exterior walls are faced in stretcher-bond, beige brick. The flat roof has metal coping and metal roof projections from the western side of the roof. Openings contain single and double-leaf metal doors and overhead garage doors in the south and east elevations. Window openings are located in the northeast corner of the east elevation and the west elevations. The openings contain multiple light plastic panels in metal frames.

UTILITY

Heating and Chiller Plant

The heating and chiller plant consist of five buildings and structures constructed between 1964 and 2010. The resources range in size and materials. The major components of the complex include Building 302, the steam boiler and chilled water generating plant, and Building 305 the chiller plant cooling tower.

Building 302 (Steam and Chilled Water Generation Plant) *-contributory resource*
Building 302 was completed as the steam boiler and chilled water generating plant in 1964. The original building was designed by Voorhees Walker Smith Smith & Haines. The plant occupies an L-shaped footprint comprised two, two- story brick sections that are linked by a one-story section at the northeast corner of the complex. The building rests on a concrete foundation. The two-story sections of the building exhibit brick walls faced in 5:1 common bond. All sections of the building have flat roofs. The south section of the building exhibits pronounced bay delineations, louvered openings along the foundation, and horizontal bands of ornamental geometric terra cotta panels on the east and west elevations. The west section of the building has plain brick walls. The south and west ends of the building have openings. The northeast corner of the complex contains offices with fixed-sash windows set in vertical metal spandrels. The main entry consists of double-leaf glass doors set in a metal frame on the north elevation. Additions have occurred to the section of the building along Steam Drive. The east and west ends of the building were extended during the 1990s. The west end was extended again since 2010.

Building 305 (Cooling Tower) - *contributing resource*
Building 305 is the chiller plant cooling tower completed in 1964. The rectangular metal structure rests on a reinforced-concrete basement. The exterior walls are partially enclosed by metal sheathing. The roof is flat. The building was rebuilt on the existing foundations in 1993 and expanded in 1995. The building was again rebuilt and expanded to the south ca. 2011 (Susan Cantilli personal communication 5/6/2015).

Building 316 (Electrical Service Building) - *non-contributory resource*
Building 316 is a one-story electrical service building located near the northeast corner of Building 305 completed in 1998. The building occupies a rectangular footprint, rests on a concrete slab, and terminates in a flat roof with a metal eave. The exterior walls are faced in red, stretcher-bond brick. The east elevation contains a large overhead garage door.

Building 317 (Cooling Tower) - *non-contributory resource*
Building 317 was constructed in 2010. The metal structure occupies a rectangular footprint and rests on a reinforced-concrete basement. The exterior walls are partially enclosed by metal sheathing. The roof is flat.

Building 1 (Building number assigned by RCG&A) -*non-contribuory resource*
A one-story support building is located south of the new chiller cooling tower (Building 317). The one-story building occupies a rectangular footprint and terminates in a flat roof with metal coping. The exterior walls are faced in red, 5:1 common-bond brick. The south elevation contains a set of double-leaf metal doors. The north, east, and south elevations are blind.

Building 306 (Potomac Electric Power Company Building) - *contributory resource*
This complex contains three buildings constructed for Potomac Electric Power Company (PEPCO). Although three buildings are present, the complex shares one building number. The buildings sit within an enclosure with limited access. The complex features a single-story building occupying a rectangular footprint. The building terminates in a front-gable roof and faces north. The building rests on a poured-concrete foundation. Cladding and roofing materials are prefabricated metal panels. Openings consist of single-leaf and double-leaf metal doors. The east elevation is blind; no access was available to the south and west elevations. A single-story, 5:1 common-bond brick building occupying a rectangular footprint and resting on a poured-concrete foundation also is present in the complex. The building comprises two brick masses with a metal framing system connecting both masses to one another. Openings on the eastern block consist of an overhead garage door, single-leaf metal doors, and louvered openings. The two-bay building faces north. The east elevation has four bays. The south elevation is similar to the north elevation. The connecting west block also is one-story in height. The multi-bay west elevation is open and houses transformer equipment. The north, east, and south elevations are blind.

Buildings 313, 314, and 315 are similar in design. The primary difference is size; Buildings 314 and 315 are larger than Building 313.

Building 313 (Site Effluent Neutralization) - *non-contributory*
Building 313, constructed in 1996 as a site effluent neutralizer building, occupies a rectangular footprint and terminates in a flat roof with a metal eave. A metal projection extends from the roof. The exterior walls are clad in red, stretcher-bond brick. The west elevation contains a set of double-leaf metal doors. The north, east, and south elevations are blind.

Buildings 314 and 315 (Backflow Preventer Building) -*non-contributory*
Completed in 1998, both buildings are executed in stretcher-bond red brick and terminate in flat roofs with metal eaves. On Building 314, double-leaf metal doors are present on the north and south elevations.

East and west elevations are blind. On Building 315, the openings are present on the east and west elevations, whereas, the north and south elevations are blind.

Building 307 (Storage) - *non-contributory resource*
Building 307 (Hazardous Waste Chemical Storage), constructed in 1970-1971, occupies a rectangular footprint and terminates in a flat roof with a metal eave. The exterior walls are clad in beige, stretcher-bond brick. The west elevation is divided into three bays featuring one single-leaf metal door in each bay. The north, east, and south elevations are blind.

Building 310 (Hazardous Waste Chemical Storage) (With 307) - *non-contributory resource*
Building 310 is a storage building constructed in 1986-1987 and faces south. The north elevation is constructed into a poured-concrete retaining wall. The single-story building occupies a rectangular footprint and terminates in a flat roof with metal coping. The exterior walls are faced with beige, stretcher-bond brick. The three-bay south elevation features three large openings. The center opening contains chain link doors, while the flanking openings also are enclosed with chain link. A small window opening is found near the eave on the west elevation.

Building 311 (Grounds Storage Shed) - *non-contributory resource*
Building 311 is single-story, metal-frame building occupying a rectangular footprint. Prefabricated metal panels are used for the cladding and roofing materials. The four-bay principal (south) elevation features three overhead garage doors and one single-leaf metal door. An opening also is present on the north elevation. The east and west elevations are blind.

Building 319 (ES Storage Building) - *non-contributory resource*
Building 319, constructed in 2014, occupies a rectangular footprint and terminates in a flat roof with metal coping. The exterior walls are clad in red, stretcher-bond brick. The west elevation contains a metal door and an overhead door. The north, east, and south elevations are blind.

Building 321 (Liquid Helium Recovery Facility) - *non-contributory resource*
Building 321 is a one-story metal-frame building clad in prefabricated metal panels. The building, which occupies a rectangular footprint, rests on a poured-concrete foundation and terminates in a side-gable roof. The roof is partially clad in metal panels. A pedestrian door opening is located at the northeast corner of the north elevation; no door is present. An opening also is located on the west elevation. The building is currently unfinished.

LANDSCAPE
A comprehensive landscape and site plan were prepared for the campus. Vehicular and pedestrian circulation networks, parking lots, and building setbacks were developed holistically. The natural environment, such as the existing woodlot located south of Building 202, was integrated into the design of the campus. In addition, an extensive plant schedule was prepared. The landscape also includes the Newton apple tree, which was planted in 1966. The tree is located between Building 101 and Building 225.

Flagpole - *contributory resource*
A 90 foot high flagpole erected in 1965 is located east of Building 101. The metal pole is set into a circular granite base incised with the following words from George Washington, "Let us raise a standard to which the wise and honest can repair" (Passaglia 1999:488). Then Director Astin had even argued that the walkway and base be constructed of concrete in order to save money, but GSA had insisted on granite "to fit in with your building."

Masonry Test Wall - *contributory resource*
A masonry test wall measuring 30' by 11' in height is located northwest of Building 236. Over 70 years old, it is the world's longest-running weathering experiment for stone samples, as well as a reminder of the symbiotic relationship of science and industry. The polychromatic wall was built in 1948 at the NBS campus in Washington, D.C. to study weathering agents on structural materials, many of which were provided to NBS from the Smithsonian. The wall is faced in 2,059 rectangular stone samples on the front face and 293 samples of the rear and ends. Stones from 48 states number 2,032, while 320 stones are from foreign countries. The wall was moved as a single object to its current location in 1977 (Passaglia 1999:491). An exhaustive study and description of the wall was prepared in 2017 by of the Matthew Redabaugh, Director of Apprenticeship and training at the American Society of Testing & Materials (ASTM).

Entrance Gate - *non-contributory resources*
Two stone entrance gate posts with gate were relocated to the Gaithersburg campus from the Washington, D.C. campus in 1976. The posts are executed in random ashlar. Visual observation suggests the posts rest on granite bases and have sandstone caps. Each post has a bronze plaque reading "National Bureau of Standards." A metal gate is attached to each post. The gate and posts are located on North Drive, north to the entrance to Building 101.

Landscape Features
Allee - *contributory resource*
The visual approach to the gates along East Drive is framed by a formal allee of little leaf Linden trees. The mature specimen trees now form a graceful and lush canopy over the northern section of East Drive. According to the original landscape design drawings, the trees were planted about 30 feet apart from each other in pairs stretching from the 101 Parking Lot entry point northward along East Drive around the curve where East Drive terminates into North Drive.

Stormwater Management Ponds - *non-contributory resources*
Three stormwater management ponds, two east of East Drive, and one west of Buildings 237 and 238 also are present. The two ponds adjacent to East Drive are large; mature coniferous trees and grasses define the edges of the ponds. Limited seating, i.e., picnic tables, are found at the northernmost pond. A small footbridge is located adjacent to the southern pond. A review of historic aerial photography suggests the ponds were installed in ca. 1965 (Historic Aerials var.). Located between the two ponds and just east of the intersection of East and South Drive is the NIST State Tree Grove, an original design feature intended to include a tree from each of the 50 states and territories. The trees were given to NIST (then NBS) in thanks for having been delivered a new set of weights and measures. Nine of the trees have since been removed, because of disease or storm damage and have yet to be replaced. The Ohio

Buckeye; however, with a circumference of over 8 feet and measuring in excess of 38 feet height, was named a Maryland State Champion Tree in 2016. The small pond located near Building 235 was constructed in 1995 to offset anticipated runoff from the construction of the AML complex (Susan Cantilli personal communication 5/6/2015).

Recreational Facilities

Baseball Fields - *non-contributory resources*
The two baseball fields are located east of East Drive. Each field includes a chain link fence behind the catcher's box. Chain link fences also shield the seating for the home and visiting players. The seating consists of one plastic bench for each team. Facilities for trash, recycling, and storage also are present. The fields were constructed during the late 1990s (Susan Cantilli personal communication 5/6/2015).

Picnic Area - *non-contributory resource*
The picnic area is sited east of East Drive and adjacent to the baseball fields. Mature trees define the eating area. Grills, stone trashcans, and wood and plastic picnic tables are present. The picnic area also includes a playground. Visual observation suggests the playground equipment and the picnic tables were installed during the late twentieth century or early twenty-first century.

Volleyball Court - *non-contributory resource*
A volleyball court is located behind Building 301, on the west side of Service Road. The court features a net and sand pit. The volleyball court was installed ca. 2009 (Susan Cantilli personal communication 5/6/2015)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- [x] A. Property is associated with events that have made a significant contribution to the broad patterns of our history.
- [ ] B. Property is associated with the lives of persons significant in our past.
- [x] C. Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- [ ] D. Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark “x” in all the boxes that apply.)

- [ ] A. Owned by a religious institution or used for religious purposes
- [ ] B. Removed from its original location
- [ ] C. A birthplace or grave
- [ ] D. A cemetery
- [ ] E. A reconstructed building, object, or structure
- [ ] F. A commemorative property
- [ ] G. Less than 50 years old or achieving significance within the past 50 years

Areas of Significance
(Enter categories from instructions.)
__Architecture_____
__Science_____
_____
_____
_____
_____
_____

Period of Significance

_1962-1969_____
_____

Significant Dates
_____
_____

Significant Person
(Complete only if Criterion B is marked above.)

Cultural Affiliation
_____
_____
_____

Architect/Builder
_____
Voorhees Walker Smith Smith & Haines

Statement of Significance Summary Paragraph *(Provide a summary paragraph that includes level of significance, applicable criteria, justification for the period of significance, and any applicable criteria considerations.)*

The NIST historic district is significant under Criterion A for its association with events that have made important contributions to the broad patterns of history under the Science and Technology and Postwar Research Campus design themes.

The NIST historic district also meets National Register Criterion C as a significant and distinguishable entity whose components may lack individual distinction. The collection of resources comprising the NIST historic district achieves significance as an integrated campus associated with NIST history and the Science and Technology and Postwar Research Campus design themes. Resources in the historic district are related through function and design within the research campus. Buildings in the historic district were designed by an architecture and engineering firm with an established national practice in the design of research campuses. HLW International were acknowledged experts in designing research laboratories and were innovators in the field. They introduced such concepts as the modular laboratory. In addition, they worked collaboratively with scientists and administrators to ensure the buildings and the campus met their needs. Ample landscaping also was incorporated into the design of their campuses. A suburban setting and the use of the International Style are characteristics of their designs. The inclusion of such elements in research campuses became standard practice during the postwar years. The campus is representative of the firm's body of work.

The period of significance, 1962 -1969, corresponds to the initial build-out of the 579 acre campus following the government's amassing and purchase of the rural acreage in the late 1950's. The period of significance for the Historic District reflects therefore an association with scientific research events that took place following the initial construction. In addition to contributing to the NRHP, Building 101 individually is eligible for listing in the NRHP. Alterations to the buildings and landscape from the period of significance reflect this association and do not diminish integrity. The 24 contributory resources on the 579 acre campus all date from this period. The campus landscape plan, including the Newton Apple Tree, also is a contributing resource to the district. Contributing objects include the flagpole and a masonry test wall located on a remote part of the historic district. A table of contributory and on-contributory resources within the district follows.

Summary
NIST is the only Federal agency charged with establishing national measurement standards and keeping them uniform, compatible, and reliable. Basic measurements include mass, length, time, temperature, electric current, resistance, and chemical composition. The 12 bureaus, including NIST, that fall under the Department of Commerce, collectively assist that Federal department with fulfilling its mission of encouraging and prompting the economic growth of the United States. NIST's location within the Department of Commerce helps ensure that new products and services are developed and improved for use in commercial applications. Further, NIST assists the department by facilitating development of new technologies and innovations that can be adopted by the private sector (U.S. Department of Commerce 2014).

This NRHP form presents historic context on the establishment of NIST and the agency's move from its Washington, D.C. headquarters to its current location in Gaithersburg, Maryland. The themes of science and technology and postwar research campus design are also explored. The documentation concludes with an assessment of the Gaithersburg campus as an historic property applying National Register Criteria for Evaluation (36 CFR 60.4[a-d]).

Narrative Statement of Significance (Provide at least **one** paragraph for each area of significance.)

Establishment of the National Bureau of Standards and Administrative Overview

The U.S. Congress chartered the National Bureau of Standards (NBS) in March 1901 (Public Law 177-56th Congress, 2d Session quoted in Cochrane 1966:541). The NBS took over the duties of the Office of Standard Weights and Measures founded in 1836 as part of the Coast and Geodetic Survey. The original purpose of the Office of Standard Weights and Measures was to provide the states with standardized weights and measures to support the collection of taxes by ensuring uniform shipment of goods across state lines and internationally. The work of the office was focused on the measurements of length, volume, and weight (Cochrane 1966:20-21, 29).

By the late nineteenth century, the Federal and state governments had no legislated standards for weights and measurements. Wide variations existed from state to state for the most basic of measurements. In addition, new standards were required for electrical measurements; for building materials, such as the tensile strength for concrete and the composition of steel; and, for consumer products to avoid chaos in the marketplace (Cochrane 1966:37, 38).

In 1900, Secretary of the Treasury Lyman J. Gage proposed the formation of a national standards laboratory in the United States. He selected Samuel W. Stratton to draft a bill establishing such an agency and to be-come its first director (Cochrane 1966:39-40). The NBS originally was placed in the Department of the Treasury. In 1903, the NBS was assigned to the Department of Commerce and Labor. After the two de-partments were split in 1913, the NBS remained in the Department of Commerce. In 1903, the NBS moved from downtown Washington, D.C. to a new laboratory located on the west side of the intersection of Con-necticut Avenue and Van Ness Street in northwest Washington, D.C. The NBS remained in this location until the agency moved to Gaithersburg, M.D. in 1966.

The beginning of World War II ushered in a period of explosive growth for NBS. From a staff numbering below 1,000 in 1939, the personnel level rose to 1,204 and was supported by a budget of $3.37 million by December 1941. By 1945, the staff had increased to 2,206 and the budget had risen to $9.7 million (Passaglia 1999:16; Cochrane 1966: 558, 563).

NBS scientists were involved in many significant projects, such as the radio proximity fuse, which contained a tiny radio that transmitted waves towards a target and controlled detonation to inflict maximum damage. This development increased the effectiveness of antiaircraft shells, rockets, and bombs (Briggs and Colton 1951:770). NBS scientists also developed a fully automated guided missile, known as the “Bat,” that was used in the last months of the war against Japanese land and sea targets (Sangster 1975:D-23; National Institute of Standards and Technology [NIST] 2000:n.p.). Radio research focused on improving radio direction finders, studying radio propagation phenomena, and supporting aerial navigation, radiotelephony, radiotelegraphy, and radar. NBS investigations also were conducted to develop methods to conserve petroleum, to manufacture optical glass, and to investigate a broad range of substitute materials, such as synthetic rubber, quartz crystals, and plastics (Sangster 1975:D-23).

The experiences of World War II resulted in a dramatically changed scientific landscape. Technological advances made during the war posed the potential for immense changes in all areas of life. The development of the atomic bomb ushered in the atomic age, followed, in 1957, by the beginning of space age with the launch of Sputnik by the U.S.S.R. The role of NBS in this new world of science and technology was a topic of discussion during the late 1940s.

In 1950, the Secretary of Commerce proposed new enabling legislation to codify activities assigned to the NBS by “supplementary legislation, executive orders and customary procedure” (Passaglia 1999:149-150). During the late 1950s and throughout the 1960s, NBS administrators made concerted efforts to maintain consistent standards, while keeping the agency’s scientific research programs relevant to meeting national needs. By the late 1970s and early 1980s, the NBS administrators led the agency to “undertake programs to foster the delivery of technology to the industrial, intergovernmental and international sectors” (Schooley 2000:452).

In 1988, the Omnibus Trade and Competitiveness Act (Public Law 100-418) redefined the roles and mission assigned to the NBS. The NBS was renamed the National Institute of Standards and Technology (NIST) to reflect its new responsibility: to play a major role in revitalizing U.S. trade in the face of Japanese and German technological superiority. The drafters of Public Law 100-148 both acknowledged the traditional NIST research areas and defined its important future role.

In 2010, the NIST’s research programs again were realigned from a laboratory-based to a mission-based structure fostering interdisciplinary research groups collaborating on projects. The new organization replaced a single deputy director with three associate directors and reduced the number of laboratories to six. The laboratories comprised Material Measurement Laboratory, Physical Measurement Laboratory, Engineering Laboratory, Information Technology Laboratory, Center for Nanoscale Science and Technology, and NIST Center for Neutron Research (NIST 2010). By 2014, the Communications Technology Laboratory in Boulder became the seventh operating unit (NIST 2014c).

Historic Context: NIST's Move to Gaithersburg

By the 1950s, the NBS had outgrown its Washington, D.C. facilities. The D.C. campus comprised over 90 buildings on a 68-acre campus. Many of the buildings were ill suited to conducting the research needed to fulfill the agency's mission. In addition, the expanding residential areas of Washington, D.C., had encroached on the NBS campus, resulting in interference with some areas of research work. The agency was in desperate need of room and modern facilities.

A campaign to relocate the NBS began during the mid-1950s when James Worthy, Assistant Secretary of Commerce for Administration, approached NBS regarding relocation as part of an effort to disperse Federal agencies outside the District of Columbia, which, during the height of the Cold War, was considered a high potential target area. NBS director A.V. Astin accepted the offer, and thus began the multi-year NBS relocation process. Director Austin coordinated with the GSA to prepare a construction budget, which was submitted to Congress for approval, and ultimately, the appropriation of funds. While the GSA acted in a construction management capacity, the agency did not assume operational and management responsibility for the buildings once they were completed. Rather, the new campus and buildings became part of the NBS real property inventory.

Many factors were considered in site selection. Agency requirements for acreage and distance from the nation's capital established basic criteria for potential locations. The new site needed to encompass a large area, ideally 500 or more acres, and to be located approximately 15 to 20 miles outside the District of Columbia, but not in the Baltimore-Washington corridor. Future expansion also was a key consideration in site selection. The site of the new home for the NBS needed to be large enough to accommodate the construction of additional buildings.

Isolation from population centers and the associated mechanical, electrical, and atmospheric disturbances that could interfere with the agency's precise scientific measurement and research programs was paramount. In addition, the site needed to be accessible to NBS scientists; access to downtown Washington, D.C., and proximity of the site to where NBS scientists lived were imperative (Voorhees Walker Smith Smith & Haines 1961b:1). Like with other research facilities constructed during the period, project planners sought a site that was located outside the city center in a suburban location that would be convenient for NBS employees. In addition, NBS maintained strong working relationships with research institutions and other government agencies. The ability to continue those relationships from the new location was important to administrators and scientists.

In May 1956, Director Astin was shown a site that appeared to meet the agency's requirements. The Gaithersburg, Maryland, location comprised 575 acres in rural Montgomery County and was accessible by rail and road. Final site selection set in motion land acquisition and the preparation of plans and cost estimates.

In selecting a firm to design the new campus, the Federal government sought an established company experienced in the design of research facilities meeting exacting requirements. Specifically, NBS officials wanted a team with: "the experience, competence, and the size necessary to accomplish the planning for a large research facility like the National Bureau of Standards" (National Bureau of Standards [NBS] 1966a:3). The selected firm, Voorhees Walker Smith Smith & Haines, had extensive technical expertise in designing laboratory space. Indeed, the decision to select the design team was well-considered. Since World War II, the firm had designed and constructed approximately 10 million square feet of laboratory space for such clients as DuPont, Ford, General Electric, and IBM, in addition to the Bell Telephone Laboratories (NBS 1966a:3). The firm concurrently designed research laboratories for NASA's Goddard Space Flight Center in nearby Greenbelt, Maryland.

In December 1956, GSA contracted with the New York City-based architectural firm to initiate preliminary studies for the new NBS facility. Their assignment was "to determine the number, size and type of structures required, to develop a fundamental site development plan as a basis for final designs, and to prepare cost estimates." Basic requirements for the exploratory study were to consolidate NBS' various operating divisions into the smallest practicable number of buildings; to provide mechanical and electrical facilities that would serve the laboratories…; to plan the buildings for a limited increase in the future work load and site addition of further research facilities as required" (Voorhees Walker Smith Smith & Haines).

Smith Smith & Haines 1961a:1). HLW International was awarded the architectural design contract in 1959 (U.S. Department of Commerce 1961; NBS 1966a:6).

Design of the new campus was conducted simultaneously with the land acquisition process. The first land acquisition was completed during 1958. Additional parcels were acquired between 1959 and 1962. In all, 565.3 acres were acquired from nine owners. The smallest parcel was 1.7 acres, while the largest parcel was 260.2 acres. The remaining 14.6 acres were purchased from four owners between 1967 and 1986 (NIST n.d.).

When the Gaithersburg campus was planned, three institutes were scheduled to move to the new facility: The Institute for Basic Standards, The Institute for Materials, and The Institute for Applied Technology. Public and private-sector employees participated in discussions regarding the new campus (NBS 1966a:1). The new campus would house the world's largest physical science laboratories "designed to meet the varied environmental and space requirements of many kinds of specialized equipment and delicate, highly precise measuring instruments" (NBS 1966a:3).

Designing the Gaithersburg Campus

Upon selection of the design team, the first major decision confronting the designers was the issue of the type of research facility envisioned: a single-structure plan versus a multiple-building campus. The GSA preferred a single building option as a measure to contain construction costs. NBS administrators and scientists preferred a campus setting with multiple buildings and landscaped grounds, reminiscent of the D.C. campus. The architects prepared a variety of options, submitting one multiple-building plan and three single building plans. Ultimately, the architects recommended the multiple-building plan because it offered maximum flexibility and minimal restriction in planning the varied research programs conducted at NBS (Voorhees Walker Smith Smith & Haines 1961b:1-2; NIST 1958:3:21-1-2). Additionally, the nature of some testing required isolation from other laboratories to eliminate environmental interference. The architects determined that the one-building scenario for accommodating all the employees slated to move to Gaithersburg and that could also meet the necessary required vibration and noise tolerances was not practical. Two types of laboratories would be needed: one type of laboratory for general purposes and another type that would be isolated from other buildings for highly technical testing to minimize environmental interference.

Once the decision on the type of facility was resolved, design of the new facility began in earnest. An intense collaborative relationship developed between NBS scientists, administrators, and the architectural design team. As part of this collaboration, a multi-pronged approach to the design process was developed. This process included site visits to other research laboratories for comparative research into similar facilities, the creation of a planning committee, and the construction of scale models.

Part of the collaborative design philosophy included input from scientists at other research institutions. To accomplish that goal, NBS administrators and scientists and representatives from the architecture firm visited many of the nation's noted research laboratories to solicit advice and opinions from associates at similar laboratories. Facilities visited included DuPont, Bell Telephone Laboratories, Argonne National Laboratories, Midwest Research Institute, Lincoln Laboratories, Westinghouse Corporation, General Electric Research Laboratory, General Electric Measurements Lab, IBM, General Motors, National Carbon Company, and Franklin Institute (Passaglia 1999:481; Laboratory Planning Committee 1957:4). Two of the research campuses, Bell Telephone Laboratories and Argonne National Laboratories, were designed by HLW International. The purpose of these visits was to gather data on the functionality and organization of the physical plant that could be incorporated into the design of the new NBS headquarters (NIST 1958:3.21-4).

The Laboratory Planning Committee, comprising a cross-section of scientists, was created to seek input from NBS

colleagues, to liaise between the administration and the architects, to identify key laboratory requirements, and to offer feedback on the design of the campus in general, and laboratories specifically.

The Committee played a key and influential role in both the design of the campus and the inclusion of select features in the research buildings. The Committee advised on building programs and office/laboratory space parameters. Through the Committee, NBS scientists identified the following minimum uses to be housed on the campus: auditorium, shops, storerooms, library, and cafeteria (Laboratory Planning Committee 1957:5). Committee members provided suggestions for the location of campus services and building program. A review of the drawings prepared by the project architects indicates that some of the Committee's recommendations were integrated into the design. For example, the Committee recommended easy access to the library; siting it on the roof of the major administrative building, as depicted in preliminary designs, was discouraged (Laboratory Planning Committee 1957:5).

NBS scientists who were not members of the planning committee also influenced laboratory design. Examples of NBS scientists expressing design preferences include discussions on the inclusion of windows in laboratory buildings and the minimum size requirements for individual laboratory spaces. The merits of natural versus artificial lighting were debated intensely between scientists and the architects. While employees expressed little disagreement on the inclusion of windows in the office spaces, they expressed strong opinions on whether windows should be included in the laboratories. Each NBS division was asked to provide an opinion on whether windows should be included in the laboratories in an attempt to develop consensus. Many sections preferred windowless labs, particularly those sections engaged in projects requiring periods of darkness (Associate Director for Administration 1956:1). In other divisions, the decision to exclude windows generated widespread displeasure, with some scientists threatening to quit if windows were excluded from workspaces (Associate Director for Administration 1956:2). Ultimately, those who advocated for the exclusion of windows prevailed. The GPLs were designed without windows in the laboratory spaces.

Prospective design flexibility, both in the future development of the campus and in the interior configuration of individual buildings, was a programming priority. Workspace flexibility was paramount, generating significant discussion among the Committee, the administration, and the architects, and intense focus and study by the design team. The Committee strongly supported the concept of the "modular" laboratory. Scientists working at the Bell and Westinghouse laboratories cautioned their NBS colleagues that while modular design offered maximum flexibility in the configuration of research spaces, such design also resulted in "rigidity because of inevitable over standardization" (Laboratory Planning Committee 1957:11). Based on advice from Bell and Westinghouse scientists, the NBS Laboratory Planning Committee strongly recommended that the NBS avoid rules on the location of plumbing and electrical equipment to allow maximum flexibility in the reconfiguration of laboratory space (Laboratory Planning Committee 1957:11). Restrictions on the type and location of services could impact the size of laboratory modules and reduce flexibility.

The need for two types of laboratories, general laboratories and facilities for highly technical research, was recognized early in the design process. The highly specialized nature of some of the research programs required the construction of purpose-built buildings isolated from the general laboratories. However, the overwhelming majority of scientific investigation would occur in the GPLs, which were intended to "be suitable for most of the work performed within NBS laboratories" (NBS 1966a:5). The GPLs were easily adaptable. A chemistry lab easily could be converted for use as an electronics laboratory (NBS 1966a:7).

Buildings for highly specialized research also were designed. Some of the work completed by the NBS required very specialized facilities that could not be accommodated in the GPLs. (Voorhees Walker Smith Smith & Haines 1961b:3). Special purpose laboratories were those that required laboratory space larger than the standard module; precise temperature control; special ventilation; or, excessive floor loading (Voorhees Walker Smith Smith & Haines 1961b:3). Due to the nature of the testing and experimentation that was to be conducted in the buildings, these laboratories could not be designed with adaptability and flexibility in mind (NBS 1966a:7).

Applying the knowledge gained through collaboration with the NBS, the architects developed a design concept. A scale model of the multi-building Gaithersburg campus was unveiled at the Project Design Review Meeting on 1 June 1960. The model was viewed by representatives of GSA, NBS, U.S. Department of Commerce, and the Bureau of the Budget. Photographs of the model appeared in local newspapers shortly thereafter (Passaglia 1999:483; *The NBS Standard*, June 1960). Once the basic design of the campus and individual buildings had been completed, the NBS issued a document akin to design guidelines, which outlined basic building provisions (NBS 1961). The document codified construction materials for the GPLs and established the dimensions of the demountable steel partitions used for the configuration of the interior modules. Flooring materials were specified and air conditioning, exhaust systems, and mechanical and electrical service were identified (NBS 1961).

Construction of the Campus

The final design of the Gaithersburg campus incorporated prevailing architectural design theories and tenets for successful research campuses. These tenets included: suburban siting; general research labs and highly specialized laboratories; flexibility in design to facilitate reorganization of spaces; and, adequate acreage to accommodate future expansion. Productive collaboration among colleagues was among the goals in the construction of postwar research campuses. Creating an environment conducive to collaborative interaction among scientists was also was a key consideration in the design of the NBS facilities.

The site plan for the Gaithersburg campus grouped the administrative, service, and special laboratory buildings into three general areas. The GPLs and the principal administration building were grouped together. Service and support functions generally were located west of the GPLs and the specialized, special purpose buildings generally were located south of South Drive. The architects planned to incorporate extensive landscaping. They intended that most of the roads would be tree lined (Voorhees Walker Smith Smith & Haines 1961b:6).

The central focus and dominant building of the complex was the Administration Building (Building 101), which was linked by concourses to low scale buildings, including seven GPLs and the Instrument Shops Building (Building 304). The Administration Building housed all common facilities and public spaces, such as a variety of dining facilities; a library; and meeting rooms of various sizes, including an 800-seat auditorium, a 300-seat auditorium, three 100-seat, one 50-seat, one 25- seat, and two 12-seat lecture rooms (NBS 1966a:5). The executive offices for the agency director also were housed in the building.

The GPLs were identical in exterior design with minor differences. Three of the seven buildings were constructed with basements. All seven buildings rise three stories above the ground level. The GPLs were designed to house approximately 1,500 scientists, engineers, and support staffs. The seven GPLs represented a consolidation of research activities (NBS 1966a:7). The siting of the GPLs allowed for the construction of up to seven additional buildings, while retaining the original hierarchical plan of connected buildings.

The plant support area was located west of the Administration Building and the GPLs and contained the boiler and refrigeration plant, the Potomac Electrical Power Company substation, the supply and plant warehouse, and the motor pool. The other buildings in this area were specialized laboratories, such as the Engineering Mechanics Laboratory and the Radiation Physics Laboratory. A group of laboratories constructed for the Building Research Division were located at the south end of the property. These laboratories contained fire research and concrete material testing. These facilities were isolated from the main administration and laboratory complex due to the type of work conducted, the size of the equipment, and specialized research requirements. Exterior materials were used to delineate function in the design. Primary research buildings typically were faced in light beige brick, while support buildings were faced in red brick (Voorhees Walker Smith Smith & Haines 1961b:6; NBS 1966a:6; Susan Cantilli personal communication 12/3/2014).

New research projects assigned to NBS required adjustments to the overall campus design. For instance, the Engineering Mechanics Laboratory (Building 202) was not included in the initial plans for the research campus. The Engineering Mechanics Laboratory was designed to house several compression and tension testing machines, including a 12 million-pound universal testing machine and a 1 million-pound deadweight force-calibrating machine. The urgency for research requiring these new machines was due to the new emphasis on space sciences in response to the U.S.S.R. launch of its sputnik satellite in 1958. NASA enlisted NBS assistance to calibrate a load cell capable of measuring up to 1.5 million-pounds to support the man-in-space project. NBS did not possess the machinery to accomplish the task. Buildings at the D.C. campus could not accommodate the massive testing equipment and no additional acreage was available at the facility to construct a purposely designed building. Consequently, a new building at the Gaithersburg campus was designed and constructed to house this important new program (NBS 1966a:18-22; Passaglia 1999:482).

Two additional buildings also were planned to accommodate special research requirements. These were a Specialized Physics Building (Building 245) and the Neutron Studies Building (Building 235). The Physics Building was specifically designed to house high-energy particle accelerators, specifically the linear accelerator (LINAC) (no longer extant), two Van de Graaff accelerators, and X-ray machines for use in "developing radiation standards and measurement methods and by obtaining basic data on the interaction of radiation with matter" (NBS 1966a:14). The neutron studies building was used to test the effects of neutron beams on materials of all kinds, including the structure of solids and liquids, aspects of crystal structure, and generating radioisotopes (NBS 1966a:11). Funding to construct the neutron studies building was a separate Congressional appropriation (U.S. Department of Commerce 1961).

Architectural Vocabulary Employed in the Construction of the NIST Campus

The Modern architectural style was adopted extensively by the Federal government during the mid-twentieth century for the construction of new buildings. The Modern style blurred or redefined public and private space. Public spaces, such as grand lobbies and entrances were often eliminated in favor of sweeping plazas, and functionalism became the prevailing consideration (General Services Administration [GSA] 2005:30). Extensive use of new materials and technologies was key. Steel, reinforced concrete, plastic, and glass were used in innovative ways (GSA 2005:30). Style was expressed through the use of innovative materials and the exposure of structural systems that previously were hidden beneath a decorated skin. Government agencies, with their desire to minimize taxpayer expense, readily embraced the Modern style because it was cost effective to construct (GSA 2005:31).

While Modern buildings had cheaper initial construction costs than buildings constructed in earlier styles, their expected service life was considerably shorter. Gordon Bunshaft of Skidmore, Owings & Merrill, a leading practitioner of the Modern movement, stated:

> *It seems to me that the greatest change that is occurring in this country is that buildings are no longer being built to last five hundred years…. Today the economics of our civilization and the increasing requirements of comfort demanded by the people are making buildings obsolete in twenty to twenty-five years…As far as the technical aspects of development, there is no question that we must develop a method of building these buildings precisely, lightly, and quickly, and this, of course, leads to prefabrication (GSA 2005:31).*

The GSA developed design standards for the construction of Federal buildings. The Public Buildings Service, charged with overseeing design and construction management activities for Federal agencies, issued guidelines in 1959. Private-sector architects and engineers could be retained to design Federal projects. However, such firms were required to complete projects within fixed government estimates. These estimated costs included site acquisition; design, construction, and interior design and furnishings for the buildings; as well as the administrative and supervisory costs incurred by the government (GSA 2005:62). A policy on material, systems, and equipment

selection was developed. The GSA prescribed buildings that were "functionally efficient and economical in construction, operation, and maintenance" (GSA 2005:62).

In 1962, the GSA again issued guidelines for the construction of Federal buildings under its management. The new guidelines encouraged maximization of net useable space, flexibility in space assignment, and economy. The guidance also encouraged designs that would promote employee morale and that were conducive to the protection of life and property (GSA 2005:62). The GSA continued to modify its guidelines and issue revisions throughout the 1960s and early 1970s. The 1962 GSA guidelines were issued after the design and construction of the NBS campus was underway. In an effort to be prudent with taxpayer funds, the GSA emphasized economy and expediency in Federal construction projects. NBS management, in contrast, were concerned that too great an emphasis was placed on minimizing costs at the potential expense of long-term functionality. The timing of the issuance of the first formal GSA guidelines in 1959, some of which codified requirements that NBS officials found objectionable, suggests the guidelines may have been in development during the design phase of the NBS project and did not apply to the Gaithersburg project.

When designing the NBS campus, the architects selected the International Style, a substyle of the Modern aesthetic movement and which was then-popular for the construction of commercial buildings. Coined in 1932 in The International Style by Henry-Russell Hitchcock and Philip Johnson, which was published in conjunction with the "Modern Architecture: International Exhibition" at the Metropolitan Museum of Art, the style did not gain in popularity in the United States until after World War II. The work of European architects, including Le Corbusier, Walter Gropius, and Mies van der Rohe introduced the style to an American audience. Hitchcock and Johnson identified three characteristics of the style: "architecture as volume, regularity, and voiding the application of ornament" (McAlester 2013:617).

A major feature of the style was the use of curtain-wall construction. The postwar increase in the availability of steel resulted in the construction of light-weight buildings that were taller than their predecessors and that could incorporate an abundance of windows. Cladding materials were smooth and unadorned. Additional character-defining features include clean geometrical forms, flat roofs, a lack of ornamentation, asymmetrical facades, and cantilevered projections (Pennsylvania Historical & Museum Commission n.d.).

While its use was not uncommon in residential applications, the style more commonly was applied to commercial office buildings. Indeed, it became popular in the design of skyscraper office towers and corporate and research campuses, as well as low-scale commercial buildings. In some cases, such as the General Motors Technical Center in Warren, Michigan, and the Seagram's Building in New York City, the style became an expression of corporate image.

Campus Landscape Design

A contemplative environment was seen to support productive scientific research and investigation. Postwar research campuses frequently were located in suburban environments and an abundance of well-designed and manicured greenspace was common. Formal landscape designs were used to enhance research "campuses" by defining vehicular and pedestrian circulation patterns, reinforcing connectivity between buildings, creating informal gathering points for professional interaction, and establishing an idyllic environment with minimal urban distractions that was conducive to focused scientific investigation.

The GPLs and the Administration Building are clustered at the eastern edge of the campus. Covered concourses connect the laboratory buildings to one another. The buildings are aligned along an east/west access with mowed

lawn between the buildings. Parking lots, which are arranged along a north/south access, are relegated to the periphery of the GPL complex. In general, parking lots were sited to allow for future building expansion (Voorhees Walker Smith Smith & Haines 1961b:6).

The support buildings and some of the special purpose laboratories generally are located west of Research Drive. Buildings requiring isolation are sited south of South Drive. The buildings at the southern end of the campus are isolated from the main concentration of buildings clustered north of South Drive as well as isolated from each other. Large expanses of mowed lawn define the southern end of the campus. Roads generally are aligned along a north/south access. The road network provides efficient vehicular circulation; sidewalks accommodate pedestrian circulation.

Landscaping to support the campus site plan at Gaithersburg was extensive. By 1966, 3,000 trees and shrubs had been planted (NBS 1966a:6). Two existing wood lots were integrated into the design. One was converted into a glade with grass and light shade; the other wood lot was an "open flowering woods with winding paths and azaleas" (NBS 1966a:6). The interior courtyard of Building 101 was landscaped extensively and included benches, specimen trees, and a water feature.

A well-developed landscape plan was not a unique feature to NIST. Many Federal agencies constructing buildings during the postwar years took landscape design into consideration in comprehensive site development. Indeed, "the landscapes of Federal buildings and complexes were also prominent components of many Modern buildings. Landscaped plazas and courtyards were often executed as part of original building plans" (GSA 2005:9).

Architect and Engineering Firms Working at NIST

Architectural and engineering firms experienced in designing extremely specialized buildings generally were selected to design the research campuses. The design teams working at NIST had particular expertise in the design of laboratories, research facilities, and research campuses. For example, HLW International, the principal architects for the campus, were nationally known for their specialization in research campuses, whereas Burns and Roe Associates, the firm responsible for the initial design of Building 235, had particular experience in designing energy facilities for public and private-sector clients.

Construction at the Gaithersburg campus was initiated after Congress appropriated $23.5 million in 1961 (U.S. Department of Commerce 1961). The new NBS campus was a major undertaking and construction activities were divided among numerous builders. Funds to build the HLW International-designed campus in its entirety were not appropriated in a single funding package. Consequently, buildings included in the original campus design were completed in phases as funds were appropriated and construction contracts were awarded. Annual funding and the agency's prioritization of building need dictated construction order. HLW International designed all the buildings completed under the initial construction period (1961-1969).

Development of the campus can be divided into three broad periods: Initial Construction (1961-1969), Second Period (1970-1999), and Third Period (2000-2015). The first period of construction (Initial Construction) is further divided into five phases coinciding with Congressional funding and the awarding of construction contracts. Twenty-six buildings were constructed during this period. Twelve buildings were constructed during the Second Period of construction. Two buildings, Building 102 (the original gatehouse) and Building 310 (a townhouse), were demolished. The current gatehouse replaced the original when the existing building was constructed in 2009. The

date of demolition for Building 310 is unknown. Sixteen buildings were constructed during the Third Period of construction. One building, Building 308, predates the campus. Building 308 is a dwelling constructed during the early 1950s. Select projects are discussed in additional detail below. Initial Construction Period (1961-1969)

Phase I of the Initial Construction Period comprised initial site work and construction of the Engineering Mechanics Laboratory (Building 202) and the power plant (Buildings 302 and 305). The contractor for Phase I was Paul Tishman Co., Inc., from New York, New York (Voorhees Walker Smith Smith & Haines 1961c:2). Official groundbreaking ceremonies were held at the actual site of the Engineering Mechanics Laboratory on June 14, 1961.

Phase II construction comprised the Radiation Physics Laboratory (Building 245), Administration Building (Building 101), Supply and Plant Building (Building 301), Automotive Service Building (Building 303), and the Instrument Building (Building 304). The contractor for Phase II was Blake Construction Company, Inc., from Washington, D.C. A neutron testing facility (Building 235) was constructed during Phase III. The construction contractor for the building was Blount Brothers Corporation (NBS 1966a:6).

Phase IV construction comprised the seven general purpose laboratories: Metrology (Building 220), Physics (Building 221), Chemistry (Building 222), Materials (Building 223), Polymers (Building 224), Technology (Building 225), and Building Research (Building 226). Phase V comprised the special purpose laboratories for Sound (Building 233), Hazards (Building 236), Industrial (Building 231), and Concrete Materials (Building 206). The contractor for both construction Phases IV and V was J.W. Bateson Co., Inc., from Dallas, Texas (NBS 1966a:6; Voorhees Walker Smith Smith & Haines Contract Kits 1961c; NIST 1997). The archival record is unclear regarding the end date of Phase V. Some sources include the construction of Buildings 230, 237, and 238 under Phase V, while others do not (Passaglia 1999:487).

HLW International was the architecture firm responsible for the overall design of the campus and the original buildings. Architects at the firm were noted specialists and national leaders in the design of postwar research campuses. The firm developed innovations in the design of research laboratories. Those innovations were applied to the NBS buildings.

In addition to HLW International, a second New York City-based firm also designed buildings constructed during the Initial Construction period. Burns and Roe Associates designed the original portion of Building 235, which was completed in 1965. Burns and Roe Associates was established in 1932 (Bloomberg Business n.d.a). As an engineering firm, Burns and Roe Group, Inc., as the company later was known, provided desalination, air quality and pollution control, and advanced nuclear technology services, among others, to private and public sector clients (Bloomberg Business n.d.a). POWER Engineers acquired Burns and Roe in 2014 (Rubin 2014).

NBS staff moved to the campus as the buildings were completed. Power plant personnel were the first staff to move to the campus in March 1962. In October 1963, the Office of Weights and Measures and the Engineering Mechanic Section staff occupied Building 202. The Administration Building was occupied in July 1965; NBS Director Astin moved into the completed headquarters building in September 1965. The GPLs were occupied during 1966. The formal dedication ceremonies were held in November of that year (Passaglia 1999:488-489).

Second Period (1970-1999)

The Second Period of development at the Gaithersburg campus was modest. Buildings constructed were

associated with expanded missions or new assignments. Building 307 (completed in 1971), Building 205 (completed in 1975), Building 309 (completed in 1976), Building 311 (completed in 1990), and Building 312 (completed in 1996) were constructed during the time period. Additional chemistry facilities were added to the campus with the construction of Building 227 in 1999. However, the majority of major construction projects comprised improvements or additions to existing buildings. Buildings 205 and 235 were expanded during this period.

Building 205 was constructed to support new testing demands for the existing fire research program. The architectural form of Fry and Welch designed the building, which was completed in 1975. The firm was established in 1954 by Louis Fry, Sr. and John Welch (Tuskegee University 2010:3). Early during its history, the practice specialized in campus construction and was responsible for the design of buildings at Prairie View A & M University, Texas; Tuskegee University, Alabama; Lincoln University, Pennsylvania; Howard University, Washington, D.C., and Morgan State University, Maryland, among others (Fry and Welch Associates, P.C. n.d.). The firm also undertook government projects as well as commercial commissions (Fry and Welch Associates, P.C. n.d.). Company co-founder, John Welch, later became the Dean of the Tuskegee Architecture Program (Tuskegee University 2010:4). The firm is one of the oldest African-American architectural practices in the country. Building 205 was expanded in 2014.

Building 235 also was expanded in 1988 to accommodate the growing program in cold neutron research (Rush and Cappelletti 2011:27). The 1988 addition was designed by NUS Corporation. Originally Nuclear Utility Services, Inc. NUS Corporation was an engineering consulting firm specializing in nuclear engineering, water management, and environmental safety (Nelkin 1974:31). Today, the company, Halliburton Nus Corporation, is a subsidiary of Halliburton Company (Bloomberg Business n.d.b).

A major expansion to Building 301 was completed in 1996. The addition to the building was designed by the Cleveland, Ohio-based Austin Company. The Austin Company was an early pioneer in the design of corporate campuses. The firm, under the leadership of company founder, Samuel Austin, designed the industrial research campus for the National Electric Lamp Association (NELA), a predecessor to General Electric in 1911 (The Austin Company n.d.:2). The company undertook the design of lamp manufacturing plants and other projects in the Midwest, as well as the east and west coasts (The Austin Company n.d.:2). During World War I, the Austin Company completed projects for the defense industry, designing the Curtiss Aeroplane and Motor Company's manufacturing facility (The Austin Company n.d.:3). The company again turned to designing airplane manufacturing facilities during World War II. Today, the firm provides design services for projects ranging from office and commercial development to health care and hospitals, to facilities for information processing and communications technology.

During the late 1980s, NIST administrators regularly requested Congressional appropriations for upgrades to the facility. To prioritize these requests, Congress directed NIST prepare a ten-year plan for anticipated capital improvement projects. This request was formalized under Public Law 102-245 enacted in 1992, which mandated that the NIST director submit a report on projected renovations and upgrades for the upcoming decade to the appropriate Congressional committees. The report was to prioritize facility needs, estimate costs, and include plans for meeting identified needs (United States Code 1992).

Third Period (2000-2015)

The agency's mission and priorities continued to evolve during the first decade of the twenty-first century. Additional buildings were constructed to meet changing needs. New additions were constructed to expand selected buildings during the time period.

A major construction program was initiated to erect a five-building complex to support the Advanced Measurements Laboratory (AML). This program included Buildings 215, 216, 217, 218. and 219, which were designed in 2000 by HDR Architecture, Inc. The firm was established in Omaha, Nebraska, in 1917 and expanded through the mid-twentieth century. HDR Architecture, Inc. originally specialized in municipal engineering services. Early commissions included designing water and sewer systems in the Midwest (HDR Inc. n.d.). By the 1960s, the firm expanded into the healthcare industry, designing serval medical facilities throughout the country. Engineering expertise was provided through HDR Engineering and HDR Architecture provided design services. The firm's range expanded during the late twentieth and early twenty-first centuries to include environmental, transportation, water, and science and technology services (HDR, Inc. n.d.). Buildings in the NIST complex designed by HDR Architecture feature state-of-the-art laboratories, NanoFab laboratory space, and a cleanroom (NIST 2013). The buildings offer rigorous air quality, temperature, vibration, and humidity control (NIST 2013). The complex was constructed to support measurement research in a variety of different areas, including measuring electrical current, "distances in increments tinier than the radius of an atom," and molecules (NIST 2013).

STV Architects, Inc. of Douglassville, Pennsylvania, designed the chiller addition to Building 302 in 2009. STV, Inc. is an engineering firm with a national practice with experience in multiple fields, including aviation, military, capital improvement programs, tunnels, and data centers, among others. The firm is a conglomeration of several engineering firms, the earliest of which, Elwyn E. Seeyle, was established in 1912. Major projects include renovations to Grand Central Terminal, design of the corporate headquarters for Shire Pharmaceuticals, rail transportation projects for municipalities across the country, the Nets Arena, the USAMRIID Containment Laboratory at Fort Detrick, Maryland, and RCA manufacturing facilities (STV, Inc. n.d.).

Smaller projects completed during the period include construction of Buildings 320 and 207. Designed by Colimore Thoemke, construction of the Child Care Center (CCC, Building 320) was completed in 2010. Building 207 (Robot Test Facility) was designed by Colimore Architects and completed in 2012. Established in 1973 by John A. Colimore, Jr., Colimore Architects specializes in commercial, industrial, educational, and institutional projects for public and private sector clients (Colimore Architects, Inc. n.d.).

Theme: Science and Technology

The NBS underwent a series of administrative reorganizations following the move from Washington, D.C. to its new Gaithersburg, Maryland, campus. The agency's mission also changed as a result of Congressional action. New missions often required the creation of new programs and the realignment of existing research programs to meet new national priorities. Major references consulted to compile this summary include Responding to National Needs by James F. Schooley (2000); the publication NIST at 100 (2000); and the NIST website. Contributions of key scientists are identified.

Standards and Measurements

Advancing the science of meteorology, the study of weights and measures, is central to the NIST mission. From its founding, NIST has established national measurement standards and safeguarded uniform, compatible, and reliable measurements. Basic measurements include mass, length, time, temperature, electric current, resistance, and chemical composition. Maintaining national measurement standards is not a static mission. Over time, requirements for measurements have become exacting and far exceed the level of precision previously accepted. For example, the original platinum-iridium bar that defined the meter was replaced by a more precise measurement based on the wavelength of krypton-86 in 1960. Large force measurements are required to support rockets for the space program or to measure large beams used in skyscrapers, while measurements of atoms are required for nanotechnology. Greater precision in measurement has led to the development of a variety of new and more rigorous measuring devices. Measurements are a requisite to new technologies, and scientific research is required to advance the precision of the science of measuring.

In 1968, NIST scientists Walter Hamer, Richard Davis, and Vincent Bower examined the basic measurement for the electric charge by testing five different solutions. The results of the testing led to improved measurement of the faraday, the basic unit of electric charge (Schooley 2000:83). In 1985, Clark Hamilton, Richard Kautz, and Frances Lloyd with the Electromagnetic Technology Division at Boulder succeeded in developing the world's first practical superconducting voltage standard for 1 volt. The team connected 1500 Josephson junctions in a series array. The new array remained stable despite temperature fluctuations. This achievement led to a variety of new and more precise voltage measurements. In 1986, a 10- volt standard was released using 20,000 Josephson junctions. (Schooley 2000:669; NIST 2014b; NIST 2000: n.p.). In 1989, Edwin R. Williams, P. Thomas Olsen, Marvin Cage, Ronald Dzuiba, John Shields, and Barry Taylor were awarded a Department of Commerce Gold Medal for their research on "the time-dependence of the NBS ohm and the …volt representation, as well as the low-field proton gyromagnetic ratio." Their work was credited with contributing valuable information supporting the 1990 international adjustment of electrical units (Schooley 2000:525).

During the early 1970s, two groups of NIST scientists worked independently to advance precise measurement for the speed of light. Two teams: Roger Barger, Bruce Danielson, Gordon Day, Kenneth Evenson, John Hall, F. Russell Petersen, and Joseph S. Wells at Boulder, and Gabriel Luther and Zoltan Bay at Gaithersburg, researched how to provide a more precise measurement for the speed of light. In Gaithersburg, Bay and Luther in the Quantum Metrology Section of the Optical Physics Division measured light based on the 633 nm line of a helium-neon laser using microwaves. The Boulder group used a methane-stabilized laser of known frequency and wavelength to measure the speed of light. The new measurement of the speed of light at 299,792,456.2 +/- 1.1 meters per second was 100 times more accurate than previous measurements. Both values were published in 1972 within months of each other (Schooley 2000:363-364, 369-370; NIST 2014b).

Between 1969 and 1971, NIST physicist Russell Young built the topografiner, a new type of microscope that scanned and mapped surfaces at a level approaching individual atoms. The topografiner demonstrated the operating principle used in the later scanning tunneling microscope. The IBM inventors of the scanning tunneling microscope based in Zurich were awarded the Nobel Prize in Physics in 1986. The Nobel committee noted the important contribution of Young to the work: "The first to succeed in doing this [building an instrument that operated on the principle of maintaining a small constant distance between the sample surface and a sharp mechanical stylus] was the American physicist Russell Young at the National Bureau of Standards in the USA. He used the phenomenon known as field emission…However, Young realized, that it should be possible to achieve better resolution by using the so-called tunnel effect" (Schooley 2000:423-434; Martin and Frederick-Frost 2014).

In 1979, NIST scientists issued a new measurement system with the first photomask linewidth standard. The tiny ruler was developed to measure integrated circuits for the semiconductor industry. NIST continued to refine accurate methods of measurements for smaller and smaller dimensions approaching one-tenth of a micrometer or less. Methods to measure the spacing between crystalline silicon atoms was under investigation in 2000 (NIST 2000: n.p.).

In 1984, NIST scientist John Cahn was among the team of scientists that announced the discovery of a new material, quasicrystals, comprised of metallic particles. Guest researcher Dan Shechtman of the Israel Institute of Technology grew the crystals in Building 231 at the Gaithersburg campus. In 2011 Dan Shechtman won the 2011 Nobel Prize in Chemistry for this discovery. John Cahn won the National Medal of Science for his lifetime contributions to the fields of materials science, solid-state physics, chemistry, and mathematics (NIST 2000: n.p.; Martin and Frederick-Frost 2014).

The production and distribution of standards and measurements for the general public, government, and industry have been ongoing NIST programs since the founding of the agency. Standards and measurements are distributed through calibration services for measuring equipment and devices and through publications, including Standard Reference Data, reports, journal articles, and conference materials. A popular standard reference data was the more than 1,000-page Handbook of Mathematical Functions, which was first published in 1964. The handbook was reprinted in 1965 and most recently in 1999. The handbook has been converted to a digital format (NIST 2000: n.p.).

One important means of distributing standards to the public is through the NIST Standard Reference Materials (SRMs) program. Under the SRM program, compounds, pure materials, chemicals, and other substances are certified for their physical properties and provided as standards to industry. This program originated in 1905 with the development of standard samples for the composition of steel, concrete, glass, and ceramics. The program has expanded exponentially over NIST's history. NIST has prepared over 4,900 SRMs. The current inventory contains approximately 1,300 SRMs and contains a wide variety of samples beyond the original physical master samples (Watters and Parrish 2006:1-7). A sample of SRMs that have been developed since 1966 includes SRMs to measure cholesterol and aerosols.

In addition, the NIST Office of Law Enforcement Standards produced several SRMs to support law enforcement agencies. In 1993, the Justice Department requested that NIST produce a SRM for DNA profiling. The study took two years and resulted in a SRM to test "every step of the restriction fragment length polymorphism analysis method" for forensic DNA analysis (NIST 2014b). In 1998, NIST started to develop a SRM for bullet casings, which was issued in 2006. Other SRMs developed to support law enforcement include materials for measuring blood-alcohol levels, for verifying drug detection in hair and urine, and for identifying residues in smokeless gunpowder and residues of ignitable liquids in arson (Watters and Parrish 2006:1-7).

The ongoing development of measurements and standards is central to NIST's current programs and is conducted at the Material Measurement Laboratory (MML) and the Physical Measurement Laboratory (PML); both laboratories have divisions in Gaithersburg and Boulder. The MML serves as the national reference laboratory in chemical, biological and material science. The divisions within the MML are Applied Chemicals and Materials, Biomolecular Measurement, Biosystems and Biomaterials, Chemical Services, Materials Measurement Science, and Materials Science and Engineering. The research conducted in this laboratory includes applied research on the composition, structure, and properties of environmental, industrial, and biological materials and processes, as well as development and distribution of tools and reference data. Areas of research include advanced materials; fossil and alternative fuels; measurement of environmental pollutants; food safety and nutrition; health care; infrastructure; manufacturing; and safety and forensics (NIST 2015a).

The PML "develops the national standards of length, mass, force and shock, acceleration, time and frequency, electricity, temperature, humidity, pressure and vacuum, liquid and gas flow, and electromagnetic, optical, microwave, acoustic, ultrasonic, and ionizing radiation." Divisions in the PML comprise Electromagnetics, Quantum Electronics and Photonics, Quantum Measurement, Quantum Physics, Radiation Physics, Semiconductor and Dimensional Metrology, Sensor Science, Time and Frequency, and the Office of Weights and Measures (NIST 2015b).

Two other shared-use facilities for measurement located at NIST Gaithersburg are the Center for Nanoscale Science and Technology and the NIST Center for Neutron Research (NCNR), both established in 2007 (Martin and Silcox 2010: iii). The Center for Nanoscale Science and Technology supports the "U.S. nanotechnology enterprise

from discovery to production" in diverse fields, including "electronics, computation, information storage, medical diagnostics and therapeutics, and national security and defense" (NIST 2014d). The NCNR, which encompasses previous NIST divisions associated with neutron research, offers a broad range of instruments and capabilities for the study of both hot and cold neutrons (NIST 2015c).

Testing and Evaluation

NIST scientists conduct research in several programs that support the Federal government and industry in testing and evaluation. Many of these programs are assigned to the current NIST Engineering Laboratory. As constituted in 2015, the Engineering Laboratory comprises six divisions: Materials and Structural Systems, Energy and Environment, Fire Research, Intelligent Systems, and Systems Integration and the offices of Applied Economics, the Smart Grid Program, the National Earthquake Hazards Reduction Program, and the National Windstorm Impact Reduction Program (NIST 2014e).

The following sample of NIST's testing and evaluation programs illustrates the agency's accomplishments since moving to the Gaithersburg campus. The discussion is not comprehensive, but selected from the research areas of fire, building materials, structure and building failures, energy, environment, and law enforcement.

Flammability and fire research are one important research area in the Engineering Laboratory. Fire research is a program historically associated with agency. NIST undertook fire research almost from its establishment. A major impetus for research into the flammable properties of clothing was the passage of the Flammable Fabrics Act of 1953, which was enacted following a series of children's deaths linked to highly flammable clothing, such as brushed rayon sweaters and cowboy outfits. Following passage of this legislation, NIST developed a standard flammability test. Any fabric that burned faster than the standard could not be sold and marketed between the states (Schooley 2000:497-499).

In 1967, Congress expanded the provisions of the Flammable Fabrics Act to include paper, plastic, and foam used in clothing and interior furnishings. The legislation instructed the Secretary of Commerce to conduct research into the flammability of products, fabrics, and materials; conduct feasibility studies to reduce the flammability of these items; and develop flammability test methods. The Secretary of the Department of Commerce assigned these tasks to NIST. Tasks included research to determine the products of fabric combustion, calorimetry of fabric combustion, laboratory burning of fabrics, analysis of burn cases, study of flame retardants, controlled burning of full-scale household furnishing, and study of heat transfer from burning fabrics. Studies conducted at NIST investigated the flammability of carpets, mattresses, children's sleepwear, and blankets.

In 1972, the legal responsibility for continuing the mandates under the Flammable Fabrics Act was transferred to the Consumer Product Safety Commission. The commission continued to fund fire research at NIST. For example, NIST was requested to devise a test to minimize the probability of ignition in fabrics. Emil Braun, John Krasny, Richard Peacock, and Ann Stratton completed the project by 1975. Braun's group later evaluated the effectiveness of protective clothing worn by firefighters and industrial workers exposed to high temperatures. Vytenis Babrauskas and William Twilley developed a cone calorimeter to measure the changing mass of a specimen during fire tests. The cone calorimeter won an award in 1988 from Research and Development Magazine (Schooley 2000:497-500).

The *Fire Research and Safety Act of 1968*, followed by the Federal *Fire Prevention and Control Act of 1974* resulted in the establishment of the Center for Fire Research. John Lyons was appointed the first Chief of the Division. The Secretary of Commerce was assigned the tasks of creating "a national fire research and safety program, including the gathering of comprehensive fire data; a comprehensive fire research program; fire-safety education and training program; demonstrations of new approaches and improvements in fire prevention and control; and, reduction of death, personal injury, and property damage" (Schooley 2000:225-226). Since its establishment, the Center for Fire Research has operated a robust research program into all aspects of fire, including fire retardants, smoke, soot formation, toxicology, materials combustion, and combustion of furnishings and room interiors. Scientists have been called into examine causes and effects of fire disasters (Schooley 2000:499-510). In 1997, NIST scientist, Gregory Linteris traveled on the space shuttle to conduct a NIST-designed, low-gravity combustion experiment (Schooley 2000:519). The focus of the current research program is fire detection, fire- fighting technologies, fire materials research, fire measurements, and fire computer modeling (NIST 2014f).

Fire performance standards for smoke detectors were one valuable product resulting from the agency's fire research. Work in this area was begun in 1974 by Richard Bright. NIST also developed recommendations on the number, type, and locations for the installation of home smoke detectors. These recommendations were incorporated into building and fire codes and were credited with a 50 per cent reduction of death by fires in 1997. In 1980, Irwin Benjamin conducted a similar study of the design of smoke detectors used in large buildings (NIST 2000: n.p.; Schooley 2000:507).

In 1972, the Center for Building Technology was established at NIST at the direction of the Secretary of Commerce. The new center contained three divisions: Building Environment; Structures, Materials and Life Safety; and, Technical Evaluation and Applications. The new center had a staff of 250 and engaged in a wide range of projects. Some projects included the development of computer models to predict the dynamic thermal performance of houses in winter and summer weather cycles, investigations into failed heat pumps, development of a device to measure the dew point in sealed glass envelopes to evaluate the moisture content in double-pane glass, measurement of the thermal resistance of building insulation, development of a systematic method to predict the service lives of buildings materials, and development of standard test methods for solar energy collectors and thermal storage systems. Work also progressed towards developing a performance-based building code to specify desired attributes of building materials, components, or systems to satisfy the intended user (Schooley 2000:392-395). Building research continues at NIST in the research areas of construction integration and automation, cybernetic building systems, net-zero and high-performance buildings, and sustainable infrastructure materials (NIST 2015d).

Special studies were conducted into the causes of building and structure failure. In 1967, NIST scientists evaluated the collapse of the Silver Bridge in Point Pleasant, West Virginia. Their investigation revealed that the cause of the collapse was a microscopic pit in the surface of a single I-bar that connected the deck to the suspension chain. In 1982, investigations were undertaken to identify the cause of the collapse of suspended walkways in a hotel in Kansas City, Missouri. NIST scientists traced the failure to the box beam-hangar rod connections (NIST 2014b). NIST scientists have continued investigations of building failures to the present. One of the most high-profile cases was NIST's participation in the investigation into World Trade Center buildings 1, 2, and 7 conducted between 2001 and 2008. The purpose of the investigations was to "investigate the building construction, the materials used, and the technical conditions that contributed" to the collapse of the buildings following the initial impacts of the aircraft into Buildings 1 and 2 (NIST 2011). NIST scientists also routinely are called upon to evaluate damage to buildings and structures caused by hurricanes, tornadoes, and other natural disasters (NIST 2015d).

NIST scientists also researched and published design and evaluation criteria for energy conservation for the construction industry. Application of the criteria by the construction industry is voluntary. The design and evaluation criteria were designed to reduce energy consumption by over 50 per cent in new buildings. In a separate study, NIST scientists developed testing and rating procedures to evaluate energy consumption in household appliances (NIST 2000: n.p.). In 1976, NIST signed a Memorandum of Understanding with the Electric Power Research Institute to support the institute in the areas of equipment, power generation, measurement of electrical and electromagnetic quantities, evaluation of devices and control systems, and energy conservation (Schooley 2000:462). Ongoing NIST projects related to energy include the research areas of alternative energy; electric power metrology; energy conservation, energy conversion, storage, and transport; fossil fuels; and, sustainability (NIST 2015e).

NIST environmental research programs were developed to measure pollutants in air, water, and soil; and toxicity in

organisms. New equipment was devised to measure pollutants, such as a portable meter to measure microscopic air particles. Standards were developed for fuel economy and automobile emissions. A computer model was developed to allocate salmon catches to support salmon fishery regulations. NIST, in cooperation with the U.S. Environmental Protection Agency (EPA), established a biomonitoring specimen bank that contains thousands of biological specimens preserved in liquid nitrogen to assist in the comparative study of chemical and pollutant exposure. As a result of the specimen bank, NIST scientists developed procedures and protocols for proper handling of environmental samples that have been adopted by environmental laboratories worldwide. One special project undertaken by NIST was the review of the organic chemical analysis in the 1982 EPA study of Love Canal. Another study was to characterize the damage to the earth's ozone layer caused by chloroflourocarbons from aerosol propellants and refrigerants (NIST 2000: n.p.). NIST current areas of research in the environmental field include climate science measurements, environmental technologies, marine health, and pollution/indoor air quality (NIST 2014g).

Testing and evaluation activities are conducted by NIST's Law Enforcement Standards Laboratory (LESL) established in 1971 to support law enforcement programs. NIST staff assigned to LESL identified problems with equipment and armament of police departments. LESL staff began studies that resulted in standards programs for vehicles, communications equipment, security systems, concealed-object detectors, protective equipment and clothing, emergency equipment, police weaponry, and building systems for law enforcement. Research projects carried out by NIST staff included improvements to body armor, helmets, and face shields; studies of the composition and color of paint for cars; gunpowder analysis; handcuffs; burglar alarms; and, window locks. LESL was not assigned its own laboratory but "purchased" research and development from existing NIST groups or outside contractors (Schooley 2000:266-267, 353-354, 355-357). Research to support law enforcement activities is an ongoing program in the MML. Current research areas include ballistics, biometrics, communications, forensics, and weapons and protective systems (NIST 2014h).

Technology

NIST has invested time and money to support improved technology in manufacturing and computers, both hardware and software. NIST built its first computer, known as SEAC, in 1950. Since that time, the agency has continued research into computer development. In 1965, a new Center for Computer Sciences and Technology was formed at NIST (NBS 1966b:2). Under the Brooks Act of 1972, NIST was charged with providing technical support to standardize the government use of computers and to increase the cost effectiveness of government expenditures for equipment. Currently, computer research is under the NIST Information Technology Laboratory. This laboratory has six divisions: Applied and Computational Mathematics, Advanced Network Technologies, Computer Security, Information Access, Software and Systems, and Statistical Engineering (NIST 2015f).

Software improvements included the development in 1966 of the Omnitab software, an early spread sheet. Omnitab was written to automate handling of data input and output, and the production of graphs. In 1977, NIST issued the first publicly available data encryption standard (DES). By 1997, approximately 50 per cent of U.S. cryptographic products implemented DES (NIST 2000: n.p.). In 2001, NIST released the Advanced Encryption Standard (NIST 2014b).

NIST scientists routinely developed computer applications for statistical analysis. In 1969, the Selective Service System requested assistance to make the 1970 military draft a truly random selection. Joan Rosenblatt and colleagues developed a methodology that used a selection of random calendars and priority permutations to accomplish the task. Her success on this and other projects earned Rosenblatt the Federal Woman's Award in 1971 (NIST 2014b).

Since the early 1970s, NIST scientists have been involved in automated manufacturing research through the design of computer-controlled manufacturing machines, or robots. Ernest Ambler, while Director of the Institute of Basic Standards, promoted the idea of automating the gear calibration process by combining the metrology division with the atomic physics program that linked three-dimensional coordinate measuring machines, mini-computers, laser

interferometers, and robotics from the Institute for Computer Sciences and Technology. The result was the establishment of the Automated Manufacturing Research Facility in 1980 that operated until 1995. As part of the program Jim Albus, a leading robotics researcher, developed NIST's real-time control system, a system that "creates an efficient organization for knowledge-based intelligent control of complex systems" (NIST 2000: n.p.). In 1991, NIST unveiled a floor-cleaning robot that used the real-time control system. The system also was used in shipbuilding, hospitals, and in land mine clearance (Schooley 2000:618-621, 625; NIST 2000: n.p.; Zenzen 2001:1-8). A robotics program continues at NIST in 2015 under the NIST Engineering Laboratory. Research areas in this program comprise bomb-disposal robots, mobility, manipulation, and urban search and rescue robots (NIST 2015g).

Select NIST Scientists

Thousands of scientists have worked at NIST since the move to the Gaithersburg campus. Some scientists have made their careers at NIST; others have launched their careers at NIST, then transferred to work in academia or at industrial laboratories. NIST scientists have won recognition for their work from professional organizations in their respective fields, as well as from the Department of Commerce and NIST. The Department of Commerce Award program began in 1949 to recognize distinguished and exceptional performance. Three to four NIST scientists and one group routinely have won Department of Commerce Gold Medals in the years between 1966 and 2009.

Among the most prestigious award in science is the Nobel Prize. NIST scientists historically have made scientific advances and had executed experiments that have supported scientists in academia and other institutions in discoveries that have won Nobel prizes. These contributions are discussed in the overall historic context and above. Between 1997 and 2012, four NIST scientists were awarded Nobel prizes for their work conducted at NIST:

- In 1997, William Phillips of NIST shared the 1997 Nobel Prize in Physics for successfully developing the technique of laser cooling and trapping of atoms. This technique has the potential to build a new kind of atomic clock that will be more accurate than what currently is used. This work was undertaken from 1985-1988 on the Gaithersburg campus. (Martin and Frederick-Frost 2014; NIST 2014b).
- In 2001, Eric Cornell of NIST/JILA and his colleagues shared the Nobel Prize in Physics for creating the first Bose- Einstein Condensate, "a new state of matter that emerges at just a few billionths of a degree above absolute zero." Scientists have incorporated this finding into their routine work to support research in quantum mechanics. This work partly took place on the Boulder campus from 1990-1995. (NIST 2000: n.d.; Martin and Frederick-Frost 2014; NIST 2014b).
- In 2005, John Hall of NIST/JILA shared the Nobel Prize in Physics for his "contributions to the development of laser-based precision spectroscopy, including the optical frequency comb technique." Frequency combs have the potential to increase the precision of a broad array of measurements in the future. This work partly took place on the Boulder campus around 1984 (Martin and Frederick-Frost 2014; NIST 2014b).
- In 2012, David J. Wineland of NIST shared the Nobel Prize in Physics for "ground-breaking experimental methods that enable measuring and manipulation of individual quantum systems." The research helped lay the groundwork towards building a computer using quantum physics and for a potential new time standard. This work took place between 1995-2005 on the Boulder campus (Martin and Frederick-Frost 2014; NIST 2014b).

NIST scientists have made important contributions to a broad variety of scientific and technological fields. Their cutting-edge work in measurement science and in the development and use of standards has led to great advances in science and technology that underpin the advances in U.S. industry and contributed to consumer safety. NIST scientists strive to continue to be a world leader in creating critical measurement solutions and promoting equitable standards.

Theme: Postwar Research Campus Design

Construction of the Gaithersburg campus of NIST followed a postwar trend in office development. A number of

factors influenced the decisions of corporate leaders to relocate their headquarters or research divisions to suburban, if not rural, locations. The factors contributing to those trends and provides a framework for understanding the philosophies influencing the design of the NIST campus are explored below. Maximum flexibility in the configuration of research space and an aesthetically pleasing environment were hallmarks of the development pattern.

Early Precedents in Research and Corporate Campus Design

Two closely related property types developed during the years following the end of World War II: the corporate campus and the research campus. These property types emerged during the second quarter of the twentieth century as corporations began moving their research divisions out of central cities. Corporate headquarters soon joined the migration from urban areas. Corporations left the cities with their noise, congestion, buildings with small footprints, and challenges to expansion. Suburban settings were affording greater amenities than their urban counterparts.

Corporate campuses differed from the research campuses in the amount of administrative space. The research campus, in contrast, provided facilities for corporate scientists to conduct experiments in rigidly controlled environments. Research and development branches emerged as distinctive entities from administrative and manufacturing arms of business and advanced technologies necessitated controlled environments. One building integrating management, research, and manufacturing functions, the common pattern during the nineteenth century, no longer was practical. By the early twentieth century, businesses increasingly began to separate the three functions into separate facilities.

Municipalities encouraged industry in the migration. Zoning ordinances that regulated land use were introduced during the first two decades of the twentieth century. As industry was reaching the pragmatic conclusion that research could not adequately be undertaken adjacent to heavy manufacturing due to noise, health, and safety reasons, local governments enacted legislation mandating the separation of manufacturing, commercial, and residential uses for some of the same reasons. In some cases, corporations seeking to keep its research functions in the center city were prohibited by zoning. Land use ordinances helped give rise to the construction of corporate and research campuses in suburban settings. These factors contributed to the development of the two types of campuses, which exhibited a common design aesthetic but differed in function.

The suburbs afforded space for the development of multi-building corporate and research campuses. In this new paradigm low-scale, sprawling buildings could be separated from one another by winding paths, lawn, and trees (Mozingo 2011:50). Zoning, however, was not the only impetus for corporations to move their administrative or research operations to the suburbs. Corporate management and academics felt that pastoral environments with designed landscapes emphasizing access to nature would improve scientific discovery and facilitate productivity.

The corporate and research campus was purpose-built and combined large, landscaped acreage with generally, low-rise buildings (Mozingo 2011:105). The design and quality of facilities of these pastoral campuses were used by business, industry, academia, and government to compete for a limited pool of scientists. Bucolic, tranquil landscapes were seen as key to attracting select qualified personnel. Aside from an idyllic environment, these new corporate campuses offered expansive parking and on-site cafeterias (Mozingo 2011:110). Other amenities included health facilities, gift shops, and walking trails (Dunham-Jones and Williamson 2011).

The research facilities developed for Bell Telephone Laboratories established an early precedent in the separation of research functions from manufacturing. The new facility, completed in 1939, introduced innovative ways of approaching the design of research facilities. Bell Telephone Laboratories set the standard for the design of postwar research campuses. The successful design of the facility established the reputation of its architectural designers, who eventually became leaders in the niche field of research campus design. NBS administrators and scientists

selected demonstrated experts in the design of state- of-the-art institutions for the development of the Gaithersburg campus.

Research Campuses

Bell Telephone Laboratories was located on Manhattan's lower west side prior to the move to Murray Hill, New Jersey, in 1939. The company required additional space to conduct highly sensitive research in strictly controlled environments. Expansion within Manhattan was not feasible because urban noise, electrical intrusion, and traffic vibrations would interfere with the accuracy of experimental measurements (Mozingo 2011:54). The company's research needs led to the construction of the first corporate research campus. The design of the project was initiated in 1930 by the architectural firm, Voorhees, Gmelin and Walker; however, the Great Depression delayed realization of the plan until 1939. By that time, the architects of record were the reorganized firm of Voorhees, Walker, Foley, and Smith (now HLW International) (Mozingo 2011:57). Historians have noted that "Bell Labs invented the fundamentals of the corporate campus." The integrated plan featured:

- green space, centrally located at the site;
- flexible laboratory space incorporating specialized utilities;
- ample parking and truck access;
- underground utilities;
- fenced property;
- three-story height limits; and
- generous landscape setbacks (Mozingo 2011:63).

Two key innovations of the Bell campus were generous site plans and the use of moveable walls in the laboratory spaces (Rankin 2013:54). As the largest of research facilities constructed during the period, the Bell facility became the prototype for future research laboratory construction. By the conclusion of World War II, the advantages of flexible space and site isolation had led to their adoption as accepted design practice. Architectural magazines, trade journals for the research-management field, and specialized laboratory-design handbooks extolled the benefits of the features first introduced at Bell Telephone Laboratories (Rankin 2013:54).

The vanguard architectural firm, HLW International, continued to integrate the innovations first introduced in the design of the Bell Telephone Laboratories in their commissions for the design of research campuses through the 1960s (Rankin 2013:54). The innovations first applied in the Bell campus were developed in direct response to the client's need for an economic solution and maximum flexibility (Haines 1951:337).

The resulting prototype for laboratory buildings integrated flexible laboratory space with common support space, such as cafeterias and libraries. Large-scale testing and research facilities, such as wind tunnels and nuclear reactors, were housed in separate, dedicated buildings (Rankin 2013:55). Laboratory buildings comprised flexible spaces, or modules, arranged in double-loaded corridor plans that could be modified, i.e., expanded or contracted, to suit research needs. The use of such flexible plans became universally accepted practice during the postwar period.

Notwithstanding the modular design standard for general research laboratories, research campuses were unique and sophisticated complexes requiring a broad range of building types and specialized equipment. In addition, designs often included provisions for specialized service requirements and required sophisticated engineering to address such factors as fluctuating building loads. Safety features were major components of the design and might include safety showers, additional exits, and special grounding devices (McCulley 1968:10).

Modern laboratories necessitated increasingly sophisticated technical facilities and complex mechanical equipment. The sensitivity of testing equipment demanded buildings systems that controlled humidity, temperature, and air quality (McCulley 1968:65). Finishes that could be easily cleaned, yet were resilient to damage from testing or chemicals, were installed (McCulley 1968:66).

Corporate Campuses

By the 1940s, an architectural image emerged for corporate headquarters: sweeping entry drives, gently rolling grassy topography, and ample parking lots (Mozingo 2011:105). Changes in corporate architecture and setting were adopted for economic, as well as for aesthetic reasons. The exodus for the suburbs continued through the 1950s. As Business Week noted in an article published during the early 1950s, firms were leaving New York for exurban locales because of increasing rent and a lack of office space in urban centers. The magazine article went on to state that it was increasingly difficult to attract "first class personnel to work in some of the more unsightly, congested New York areas" and "management thinks workers will be happier looking at trees instead of grimy buildings and listening to birds instead of honking taxis" (Mozingo 2011:105).

During the postwar period, many major corporations adopted the corporate campus as the architectural expression for new headquarters. Companies with household names including GE, GM, and IBM had adopted the model (Rankin 2013:52). Universities and government agencies quickly followed the precedent established by large corporations (Rankin 2013:52).

The rise in popularity of the corporate campus facilitated the postwar move of businesses from the traditional urban core to the suburbs. Businesses moved their research and development departments to suburban campuses; corporate headquarters soon followed suit (Mozingo 2011:98). One result of the move of corporations to the suburbs was the relocation of white-collar jobs from the urban core to the outskirts of the city limits. Increased automobile ownership and the construction of the interstate highway system facilitated the rapid movement of employees from the central cities to jobs in the new suburbs (Dunham-Jones and Williamson 2011: n.p.). Sophisticated corporations chose well-known "celebrity" architects to design new corporate campuses. Principal buildings symbolized corporate status and prestige.

General Foods was the first Fortune 500 company to leave Manhattan for the suburbs. The company chose Voorhees, Walker, Foley, and Smith (HLW International) and Olmsted Brothers, landscape architects to design its new facility (Mozingo 2011:98; 107). The design and construction of the General Foods corporate headquarters in White Plaines, New York, in 1954, introduced design elements that were later seen in the NBS campus: "architectural restraint, central courtyard, and self-contained site planning" (Mozingo 2011:110). With its rural siting, the General Foods campus became an architectural focal point, visible to commuters traveling along the expressway (Mozingo 2011:111).

Innovations in Research and Corporate Campus Design

During the construction of postwar corporate and research campuses, architects and designers, in collaboration with administrators and scientists, undertook extensive architectural programming studies. Comparable research laboratories were explored, and full-scale models of proposed designs were constructed and refined (Rankin 2013:56). Collaboration among the architects and the scientists on the design for research laboratories was not uncommon. The Bell Telephone Laboratories researchers played a prominent role in the design of the Murray Hill facility (Knowles and Leslie 2013:255). They provided insights and critiques regarding the pragmatic and functional proposed designs based on their experience and from observations after touring other research facilities (Knowles and Leslie 2013:255). The design developed for Bell Telephone Laboratories was presented in a full-scale, fully functional model composed of five modules (Knowles and Leslie 2013:266). While critics faulted the Laboratory's austere and "bland" exterior, the facility received high praise for the then-novel use of movable panels (Knowles and Leslie 2013:256). As a Bell Telephone Laboratories executive later observed "It has been so successful a model that scarcely any large industrial laboratory has subsequently been built without taking ideas from it and some laboratories are fairly close copies of it" (Knowles and Leslie 2013:256). The long halls, at once derided by scientists, were also praised because they facilitated collaboration. Researchers, forced to walk long distances, would meet their colleagues in the halls and walk past laboratories and offices, and thereby would learn about

projects in other departments (Knowles and Leslie 2013:259). This objective of using physical design to foster collaboration also was employed later for the new NBS campus.

In depth analysis conducted by the Nuffield Foundation, a British charitable organization, during the mid and late 1950s presented findings on the designs of the most efficient laboratories. The organization's analysis concluded that "requirements for space and services were found to vary only between scientists and assistants, not between disciplines" (Rankin 2013:57). In other words, the spatial needs for a chemist, biologist, or physicist were the same; however, the spatial requirements between the scientists and their assistants were different, with assistants requiring more space due to the nature of work they performed, i.e., less reading and writing than their scientist peers (Rankin 2013:57). The study also recommended that research campuses should include "amenities that would be used for only one percent of a researcher's tasks" (Rankin 2013:57). Designers and scientists agreed that high morale fostered scientific creativity; a properly designed work environment, one that encouraged collaboration, contributed to scientific productivity (Rankin 2013:58).

By 1951, Ralph Walker, principal in the New York City-based firm Voorhees, Walker, Foley & Smith, developed a methodology for designing corporate laboratories. Two steps he thought important included early discussions with key personnel regarding the location of mechanical and electrical services and the size of the module. Questionnaires also were a useful tool for soliciting feedback on design solutions and space allocation (McCulley 1968:11). In addition, Walker advocated the preparation of a full-scale model to help employees visualize the size and scale of the module, as well as to allow plumbing, electrical, and other contractors an opportunity to view the project before submitting an estimate (Walker 1951:149). The firm pioneered this approach with the design of Bell Telephone Laboratories and applied it later in the development of the NBS.

Key to the design of an effective laboratory was the incorporation of the "module." Walker's use of "module" was not to denote standardization; rather, he defined the module as "a unit of work space determined by human needs. It is dimensional only through its use factors. … The character of the research carried on, the need for safety considerations in the width of aisles, for example, each determines the final result" (Walker 1951:149). He further stated, "In the development of a module's dimensions there is no general standard and each research group should indicate for itself the size and character of its working conditions" (Walker 1951:149). The module was an effective use of research and office space because "the chief advantage of the module system is the known repetitive position of services and therefore the lack of interference between one laboratory at work and another in preparation for a new project requiring special and additional services" (Walker 1951:150). Concepts that were considered novel during the 1950s (i.e., movable partitions) became accepted practice. By the mid-1960s, they had become industry standard, with the expectation that one fifth of the partitions in any laboratory would move once a year (McCulley 1968:15).

The necessity for windows also was discussed in a 1951 article by Walker. He noted that windows may have become superfluous during the age of modern air conditioning and fluorescent lighting; however, in spaces deeper than 15', their inclusion may be desirable as "a wholly psychological device permitting the mind to relax" (Walker 1951:150). The necessity for windows was the subject of heated debate during the design of the NBS campus. Walker acknowledged that workers may state that they did not want windows; however, in practice, this was not the case, especially as research facilities moved to rural settings in part, to provide esthetically pleasing environments (Walker 1951:150).

Profile of a Leading Architectural Firm in the Design of Corporate and Research Campuses

The architectural firm that designed the first period of construction at NBS was a leader in the field. Voorhees, Walker, Smith, Smith, & Haines, the firm that would become HLW International, had developed a specialization in the design of research campuses. The firm's first research campus was completed in 1941 for Bell Telephone

Laboratories. Some of the firms' cutting-edge innovations included the design of laboratories with moveable partitions. Architect Ralph Walker, a partner in the firm, advocated the use of moveable partitions in numerous articles he wrote during the 1950s.

Throughout the 1930s, the firm designed a number of prominent buildings in New York City in the Art Deco style. These buildings included the Western Union Building (1930) and the Irving Trust (1932) (Vosbeck et al. 2008:86).

Additional works included projects completed for the Department of the Army and ten projects for the 1939 World's Fair in New York City. During World War I, the firm designed Army hospitals and during World War II, the firm designed military facilities in the United States and the Caribbean (Moore et al. 2010:142). The U.S. Army War College at Carlisle Barracks, Pennsylvania, and the Night Vision Laboratory at Fort Belvoir, Virginia, were designed during the Cold War period (Moore et al. 2010:142).

Walker found employment with the firm McKenzie, Voorhees & Gmelin upon his discharge from the army following the end of World War I. The firm's name changed to Voorhees, Gmelin & Walker in 1926 when he was made partner. The firm underwent another name change after 1939 when it became Voorhees, Walker, Foley and Smith. As Voorhees, Walker, Foley and Smith, the firm developed a national specialization in the design of corporate campuses. Selected projects included Bell Telephone Laboratories, Murray Hill, New Jersey; General Foods, White Plains, New York; IBM Research Center, Poughkeepsie, New York; and, Argonne National Laboratories, Chicago, Illinois (Vosbeck et al. 2008:86). Walker served as president of the American Institute of Architects between 1949 and 1951 (Vosbeck et al. 2008:85).

The firm continues today as HLW International. Established in 1974, the firm has offices in New York, New York; Madison, New Jersey; Los Angeles, California; London, England; and, Shanghai, China. In addition to architectural and engineering services, services expanded to include interior design, sustainability, and planning across a broad spectrum of sectors, such as, media and entertainment, hospitality and retail, and science and technology, among others (HLW International n.d.).

Evaluation Results

A total of 74 buildings, structures, objects, and landscapes were documented under the current investigation. Analysis of archival and architectural data applying the National Register NRHP Criteria for Evaluation identified a cohesive collection of buildings, structures, and landscapes that represent a recognizable entity united by design and historical association with the initial construction of NIST (1961 – 1969).

The buildings constructed between 1961-1969 exhibit many of the hallmarks of postwar research campus design. These character-defining features include flexible workspace that could be configured in a variety of different ways to suit current research/laboratory needs regardless of the research discipline. The buildings were constructed incorporating administrative/laboratory modules. The buildings are linear in plan, housing modules across a double-loaded hallway. The back-to-back laboratories were across from the exterior-facing administrative spaces. Long hallways would encourage spontaneous discussions among colleagues. In this manner, scientists could collaborate and discuss research problems in informal settings. The acreage afforded by the suburban site was acquired, in part, to facilitate expansion, as necessary. Greenspace with formal landscaping was held to be conducive to scientific inquiry and created a working environment reminiscent of an academic campus.

Building 101 is the central focus of the campus and is a representative of the International Style applied to a principal building within a research complex. Similar to many private sector research campuses of the period, the principal building was the primary focus for public space and architectural elaboration; Building 101 became an icon for the agency. Curtain-wall construction, generous use of windows, and minimal ornamentation, hallmarks of the style, are employed on the building. Public space is incorporated in the large lobby and cafeteria, spaces designed to

encourage social interaction. Other public spaces include auditoriums, providing forums for professional presentations.

A comprehensive site plan was designed and implemented for the campus. A grid street system provides access to the research laboratories. Lawn, mature specimen and deciduous trees, hardscapes, and storm water management ponds were incorporated in the landscape. The cohesive area capturing the design and operation of the campus during its initial period of development is defined by nine contributing resources, including the Administration Building, seven GPLs, and Building 304, encompassed by the area generally defined by East Drive to the east, the AML complex to the south, and Research Drive to the west. The northern edge of the historic district extends 205 feet from the north elevation of Building 226, which is the distance between the existing GPLs. The AML complex comprising Buildings 215, 216, 217, 218, and 219 are excluded from the proposed historic district.

The resources contained with the NIST Gaithersburg campus were analyzed applying the NRHP Criteria for Evaluation (36 CFR 60.4[a-d]). Site investigation and resource evaluation indicated that resources at the Gaithersburg campus display a high level of architectural integrity and are significant within the themes of Science and Technology and Postwar Research Campus Design (Criterion A). The facility also represents a significant and distinguishable entity whose components may lack individual distinction (Criterion C). Additionally, Building 101 individually possesses the significance and integrity for NRHP consideration under Criterion C as a representative example of the International Style.

The NIST historic district is significant under Criterion A for its association with events that have made important contributions to the broad patterns of history under the Science and Technology and Postwar Research Campus design themes. The 579-acre historic district is comprised of 24 contributory structures. There are 38 non-contributory resources. The campus landscape plan, including the Newton Apple Tree, also is a contributing resource to the district. Contributing objects include the flagpole and a masonry test wall located on a remote part of the historic district. A table of contributory and on-contributory resources within the district follows.
In addition to contributing to the NRHP, Building 101 individually is eligible for listing in the NRHP. All contributing built resources in the NIST historic district were completed between 1962-1969.

The historic district also meets National Register Criterion C as a significant and distinguishable entity whose components may lack individual distinction. The collection of resources comprising the NIST historic district achieves significance as an integrated campus associated with NIST history and the Science and Technology and Postwar Research Campus design themes. Resources in the historic district are related through function and design within the research campus. Buildings in the historic district were designed by an architecture and engineering firm with an established national practice in the design of research campuses. HLW International were acknowledged experts in designing research laboratories and were innovators in the field. They introduced such concepts as the modular laboratory. In addition, they worked collaboratively with scientists and administrators to ensure the buildings and the campus met their needs. Ample landscaping also was incorporated into the design of their campuses. A suburban setting and the use of the International Style are characteristics of their designs. The inclusion of such elements in research campuses became standard practice during the postwar years. The campus is representative of the firm's body of work.

Contributing Resources in the NIST Historic District:		
Building No.	***Building Name***	***Construction Date***
101	101 Administration Building	1962-1965
202	202 Engineering Mechanics	1961-1963
206	206 Concrete Materials	1966-1968
220	220 Metrology	1963-1966
221	221 Physics	1963-66
222	222 Chemistry	1963-1966
223	223 Materials	1963-1966
224	224 Polymer	1963-1966
225	225 Technology	1963-1966
226	226 Building Research	1963-1966
230	230 Fluid Mechanics	1967-1969
231	231 Industrial	1966-1968
233	233 Sound	1965-1968
235	NCNR	1963-1967; 1989-1990;2009
236	236 Hazards	1966-1968
237	237 Non-Magnetic Offices	1964-1968
238	238 Non-magnetic Laboratory	1964-1968
245	245 Radiation Physics	1962-1964 & 2020
301	301 Supply and Plant	1962-1964; 2013
302	Steam and Chilled Water Generation Plant	1961-1964; ca. 1990s; ca. 2010
303	303 Service	1962-1964
304	304 Shops	1962-1964
306A	306A PEPCO Electrical Substation	1961-1964
306B	306B PEPCO Electrical Substation	1961-1964
Campus Landscape Plan associated with the GPLs and Building 101, including vehicular and pedestrian circulation networks and parking lots, including the East Drive allee, the Newton Apple Tree		1961-1969; 1966
Flagpole		1965
Masonry Test Wall		1977 (and earlier)

Non-Contributing Resources in the NIST Historic District		
Building No.	***Building Name***	***Construction Date***
103	Visitor's Center and Gate House	2009
Gate House associated with Visitor's Center		2009
Gate B	Gate House ca.2009	ca.2009
Gate C	Gate House ca.2009	ca.2009
Gate F	Gate House ca.2009	ca.2009
203	Standard Reference Materials Facility	2012
205	Large Fire Facility	1973-1975;2014
205E	Emissions Control Electrical	ca.2000
205M	Emissions Control Mechanical	ca.2000
205E#2	Emissions Control Electrical	ca.2014
205M2	205M2 Emissions Control Mechanical	ca.2014
2	Hopper	ca.2014
3	Hopper	ca.2000
207	Robot Test Facility	2012
208	Net-Zero Energy Residential Test Facility	2012
215	Nanofabrication Facility	2002-2004
216	Center for Nanoscience and Technology (Instrument East)	2001-2002
217	AML Instrument West	2002-2004
218	AML Metrology East	2000-2004
219	AML Metrology West	2000-2004
227	Advanced Chemical Sciences Laboratory	1999
305	Cooling Tower	1961-1964;1993 (completely rebuilt); 1995 (expanded); ca. 2011 (completely rebuilt and expanded)
306	Potomac Electric Power Company (PEPCO) Electrical Substations owned by Pepco	ca. 1970
307	Hazardous Chemical Waste Storage	1970-1971
309	Grounds Maintenance	1974-1978
310	Hazardous Materials Storage	1986-1987
311	Grounds Storage Shed	1990
312	Materials Processing Facility	1996
313	Site Effluent Neutralization	1996
314	Backflow Preventer Building	1998
315	Backflow Preventer Building	1998
316	Electrical Service Building	1998
317	Cooling Tower	2010

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

National Institute of Standards & Technology
Name of Property Montgomery County, Maryland
County and State
Name of multiple listing (if applicable)

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Non- Contributing Resources at the NIST Historic District		
Building No.	***Building***	***Construction Date***
	Building associated with 317	2010
318	ES Consolidated Facility	2014
319	ES Storage Building	2014
320	CCC	2013
321	Liquid Helium Recovery Facility	2016
	Baseball Field 1	Late 1990s
	Baseball Field 2	Late 1990s
	Volleyball Court	ca.2009
	Picnic Area	Late 20th century
	Stormwater Management Pond 3	ca.2006
	Entrance Gates	1976

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See the attached Section 9 Continuations Sheets

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____ previously listed in the National Register
X___ previously determined eligible by the National Register
____ designated a National Historic Landmark
____ recorded by Historic American Buildings Survey #_____
____ recorded by Historic American Engineering Record # _____
____ recorded by Historic American Landscape Survey # _____

Primary location of additional data:

X___ State Historic Preservation Office
____ Other State agency
X___ Federal agency
____ Local government
____ University
____ Other
Name of repository: __Maryland Inventory of Historic Properties

Historic Resources Survey Number (if assigned): ___M:20-47_____

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10. Geographical Data

Acreage of Property ___579_____

Use either the UTM system or latitude/longitude coordinates

Latitude/Longitude Coordinates
Datum if other than WGS84:_____
(enter coordinates to 6 decimal places)

1. **Latitude: 39.1209 N** **Longitude: -77.2185 W**
2. **Latitude: 39.1308 N** **Longitude: -77.2071 W**
3. **Latitude: 39.1419 N** **Longitude: -77.2203 W**
4. **Latitude: 39.1298 N** **Longitude: -77.2270 W**

Or
UTM References
Datum (indicated on USGS map):

☐ NAD 1927 or ☐ NAD 1983

1. Zone:	Easting:	Northing:
2. Zone:	Easting:	Northing:
3. Zone:	Easting:	Northing:
4. Zone:	Easting :	Northing:

Verbal Boundary Description (Describe the boundaries of the property.)

The NIST Historic District is contiguous with the 579-acre NIST campus that is surrounded on all sides by the City of Gaithersburg, in Montgomery County, MD. The relatively flat, diamond shaped parcel, is defined above noted latitude and longitude coordinates parcel is bounded on the north by West Diamond Avenue,on the west by Quince Orchard Road and a private housing development. The southern border abuts wooded acreage owned by the Izaak Walton League, a national conservation league. Muddy Branch Road and Interstate 270 form the eastern boundaries.

Boundary Justification (Explain why the boundaries were selected.)
The entire campus (579 acres) was assembled by the Government with the express purpose of relocating the NBS from the District of Columbia to a suburban campus. As such, many of the support buildings such as 301 (Plant) and 302 (Steam and Chilled Water Generation Plant) were built in advance of the central research labora-tories located in the northeast portion of the campus. Likewise, two of the specialized research facilities (202 and 245) located on the southern half of the campus were the earliest Laboratories built. All of the site infrastructure, roadways, steam lines, utilities had to be constructed upon taking possession of the site in order to facilitate the build out. Thus, in consultation with the SHPO and the Keeper of the NRHP, NIST deter-mined that the boundaries of the historic district should be contiguous with those of the campus.

11. Form Prepared By

name/title: Phillip W. Neuberg, FAIA.
organization: National Institute of Standards & Technology
street & number: Office of Facilities & Property Management
100 Bureau Drive
city or town: Gaithersburg state: MD zip code: 20899
e-mail: phillip.neuberg@nist.gov
telephone: 202-309-4287
date: December 30, 2020

Additional Documentation

Submit the following items with the completed form:

- **Maps:** A **USGS map** or equivalent (7.5 or 15 minute series) indicating the property's location.

- **Sketch map** for historic districts and properties having large acreage or numerous resources. Key all photographs to this map.

- **Additional items:** (Check with the SHPO, TPO, or FPO for any additional items.

Photographs

Submit clear and descriptive photographs. The size of each image must be 1600x1200 pixels (minimum), 3000x2000 preferred, at 300 ppi (pixels per inch) or larger. Key all photographs to the sketch map. Each photograph must be numbered, and that number must correspond to the photograph number on the photo log. For simplicity, the name of the photographer, photo date, etc. may be listed once on the photograph log and doesn't need to be labeled on every photograph.

Photo Log

Name of Property:

City or Vicinity:

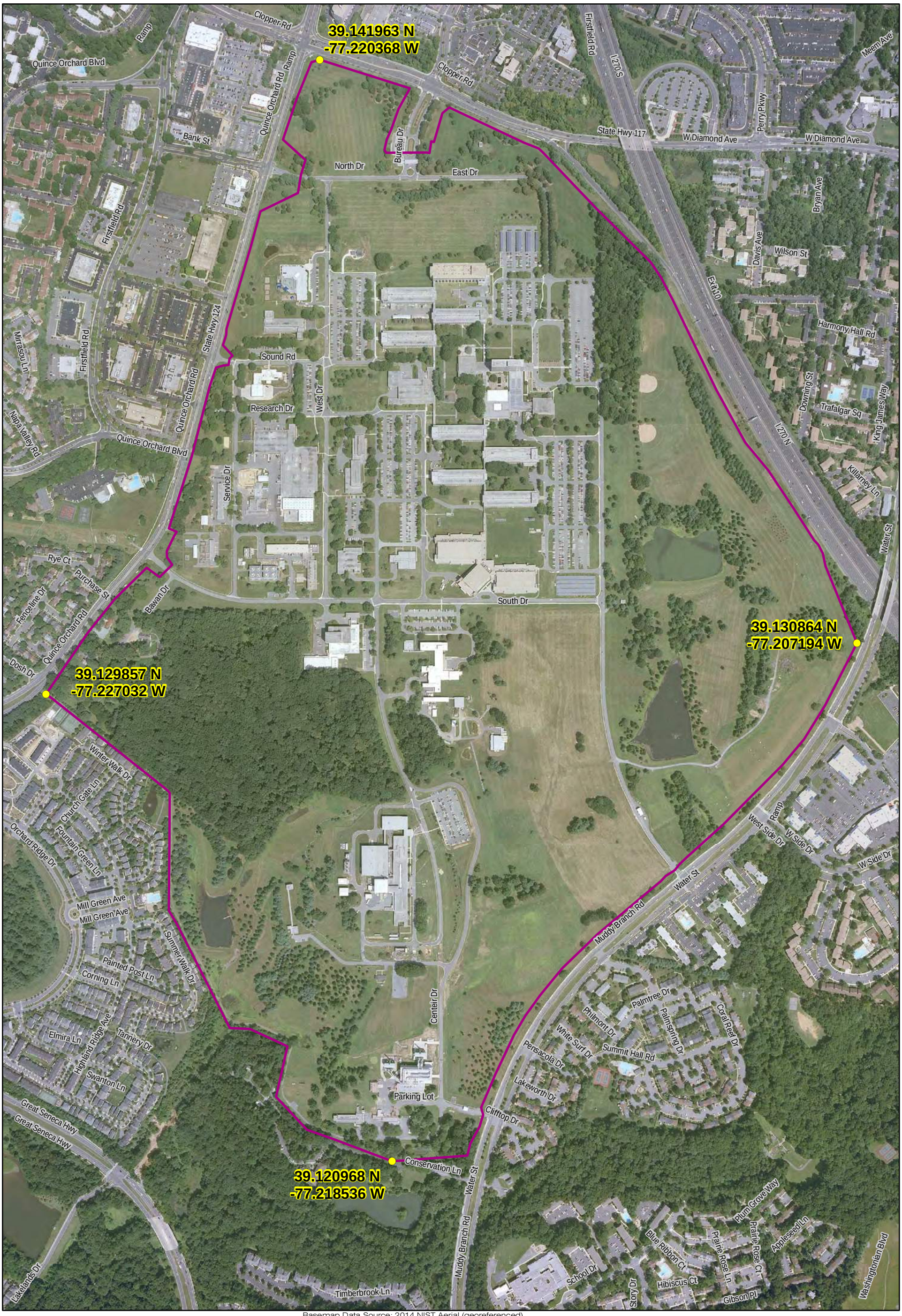
County: State:

Photographer:

Date Photographed:

Description of Photograph(s) and number, include description of view indicating direction of camera:

1 of 32.



Basemap Data Source: 2014 NIST Aerial (georeferenced)

N
W E
S

MSR: 1:7,500
SRS: UTM Zone 18 / NAD 83
Meters
0 50 100 150
Feet
0 200 400 600

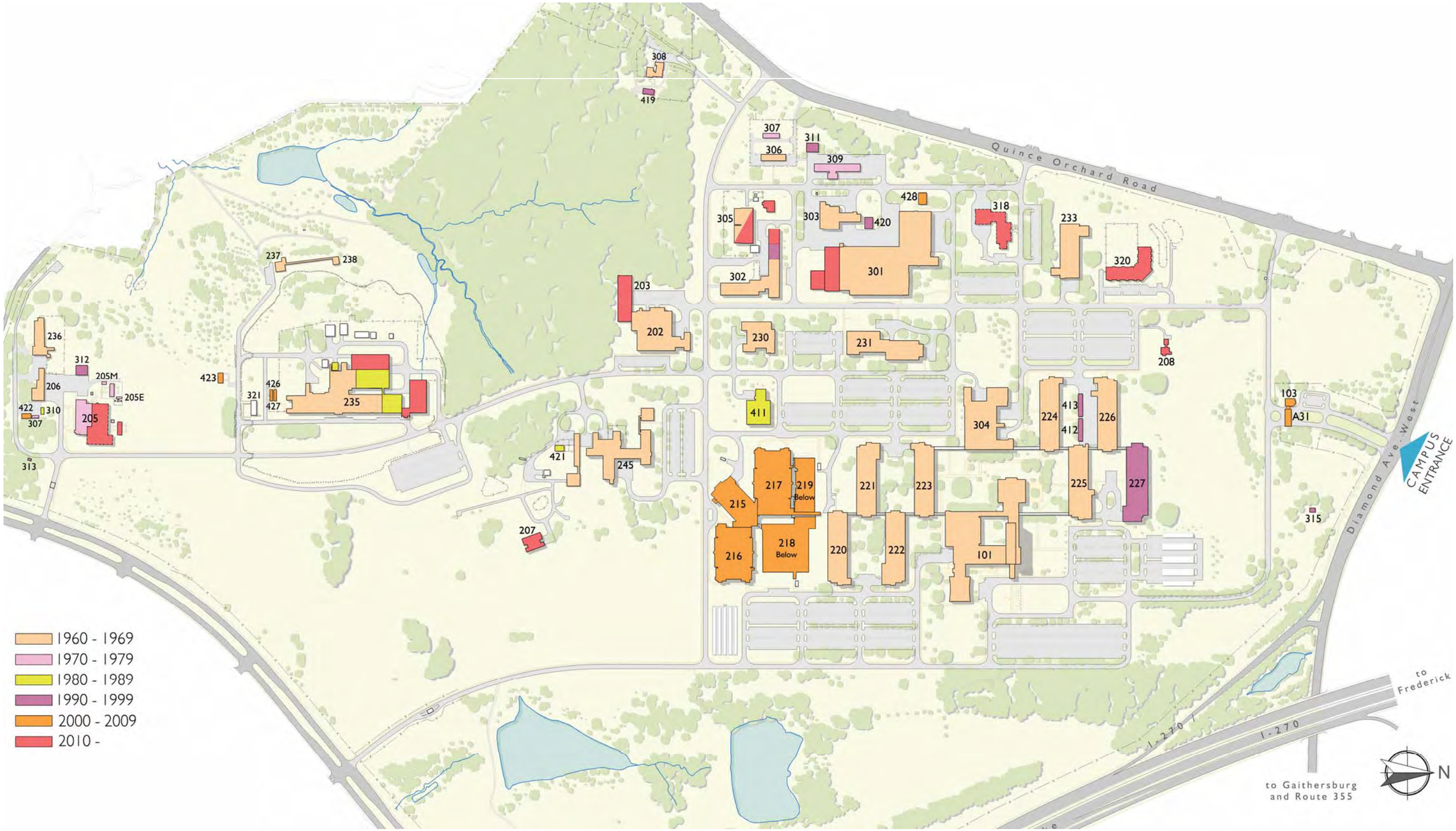
NIST Campus Boundary

Historic Assessment
National Institute of Standards and Technology
Gaithersburg, Maryland
NIST Campus

Sketch MAP showing all buildings on campus with identifying numbers

February 2021

*NIST CAMPUS GROWTH BY DEC**ADE***



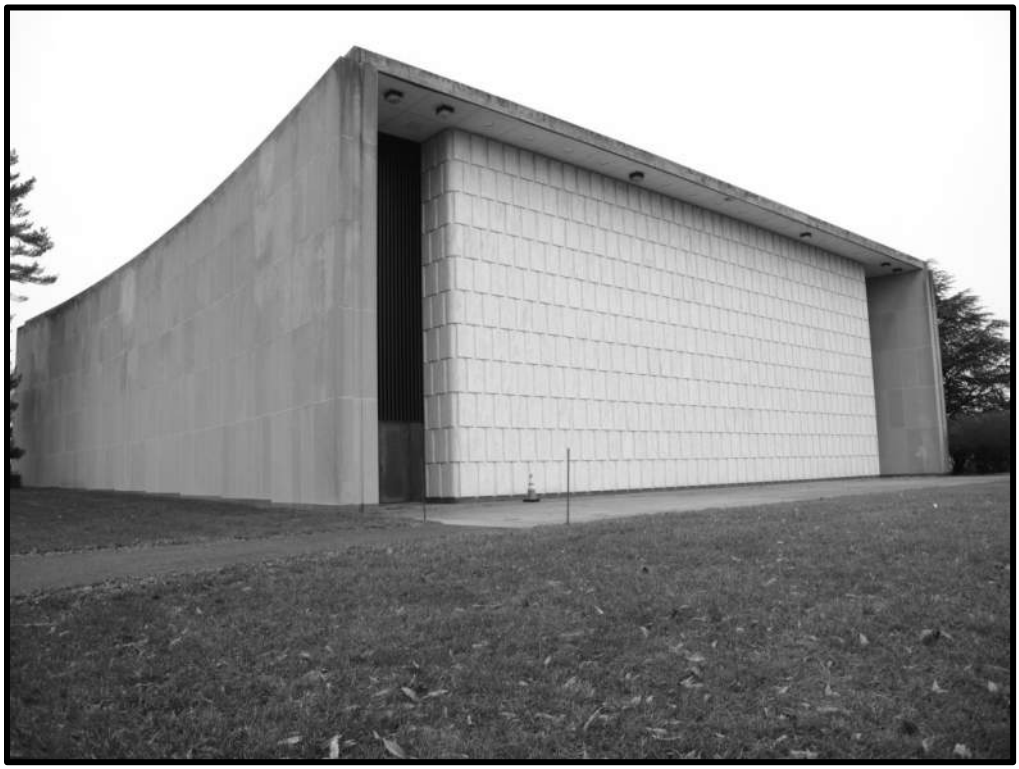
National Institute of Standards and Technology
Montgomery County, Maryland
Photos taken by: R. Christopher Goodwin & Associates, Inc.
Photos 1 -30 taken: December 3 and 4, 2014; January 28, 2015; March 3, 2015, and May 14, 2015
Photos 31 and 32 taken: June 2019
Photo paper and ink: HP Vivera ink 97 Tri-Color cartridge, 101 Blue Photo cartridge, and 102 Gray Photo cartridge on
Epsom Premium Photo Paper (high gloss)
Verbatim Ultralife Gold Archival Grade CD-R, PhthaloCyanine Dye

MD_Montgomery County_N.I.S.T._01.pdf	Building 101, looking Northwest
MD_Montgomery County_N.I.S.T._02.pdf	Building 101, North Elevation
MD_Montgomery County_N.I.S.T._03.pdf	Building 101, Library, North Elevation
MD_Montgomery County_N.I.S.T._04.pdf	Building 101, Auditorium, South and East Elevations
MD_Montgomery County_N.I.S.T._05.pdf	Building 101, Courtyard
MD_Montgomery County_N.I.S.T._06.pdf	Walkway from Building 101 to Building 225, Looking North
MD_Montgomery County_N.I.S.T._07.pdf	Building 224, West and South Elevations
MD_Montgomery County_N.I.S.T._08.pdf	Building 227, East and South Elevations
MD_Montgomery County_N.I.S.T._09.pdf	Building 202, East Elevation
MD_Montgomery County_N.I.S.T._10.pdf	Building 203, North Elevation
MD_Montgomery County_N.I.S.T._11.pdf	Building 205, South Elevation
MD_Montgomery County_N.I.S.T._12.pdf	Building 206, West and South Elevations
MD_Montgomery County_N.I.S.T._13.pdf	Building 207, West and North Elevations
MD_Montgomery County_N.I.S.T._14.pdf	Building 208, South Elevation
MD_Montgomery County_N.I.S.T._15.pdf	Building 215, Northwest Elevation
MD_Montgomery County_N.I.S.T._16.pdf	Building 216, West and South Elevations
MD_Montgomery County_N.I.S.T._17.pdf	Building 217, East and South Elevations
MD_Montgomery County_N.I.S.T._18.pdf	Building 219, Looking East
MD_Montgomery County_N.I.S.T._19.pdf	Building 230, East and North Elevations
MD_Montgomery County_N.I.S.T._20.pdf	Building 231, South and East Elevations
MD_Montgomery County_N.I.S.T._21.pdf	Building 233, South Elevation
MD_Montgomery County_N.I.S.T._22.pdf	Building 236, South Elevation
MD_Montgomery County_N.I.S.T._23.pdf	Building 237, South and East Elevations
MD_Montgomery County_N.I.S.T._24.pdf	Building 238, South and West Elevations
MD_Montgomery County_N.I.S.T._25.pdf	Building 245, North Elevation
MD_Montgomery County_N.I.S.T._26.pdf	Building 245, Looking Southwest
MD_Montgomery County_N.I.S.T._27.pdf	Building 103, North Elevation
MD_Montgomery County_N.I.S.T._28.pdf	Building 318, East and North Elevations
MD_Montgomery County_N.I.S.T._29.pdf	Building 320, Looking Southwest
MD_Montgomery County_N.I.S.T._30.pdf	Building 301, East Elevation
MD_Montgomery County_N.I.S.T._31.pdf	Stone Test Wall, South Elevation
MD_Montgomery County_N.I.S.T._32.pdf	East Drive Allée of Little Leaf Lindens

MD_Montgomery County_N.I.S.T._01.pdf Building 101, looking northwest

MD_Montgomery County_N.I.S.T._02.pdf Building 101, north elevation

MD_Montgomery County_N.I.S.T._02.pdf Building 101, Library, North Elevation



MD_Montgomery County_N.I.S.T._02.pdf Building 101, Auditorium, South and East Elevations

MD_Montgomery County_N.I.S.T._05.pdf Building 101, courtyard

MD_Montgomery County_N.I.S.T._05.pdf Walkway from Building 101 to Building 225

MD_Montgomery County_N.I.S.T._07.pdf Building 224, west and south elevations

MD_Montgomery County_N.I.S.T._08.pdf Building 227, east and south elevations

MD_Montgomery County_N.I.S.T._09.pdf Building 202, east elevation

MD_Montgomery County_N.I.S.T._10.pdf Building 203, North Elevation

MD_Montgomery County_N.I.S.T._10.pdf Building 205, South Elevation

MD_Montgomery County_N.I.S.T._12.pdf Building 206, West and South Elevations

MD_Montgomery County_N.I.S.T._13.pdf Building 207, North and West Elevations

MD_Montgomery County_N.I.S.T._14.pdf Building 208, South Elevation

MD_Montgomery County_N.I.S.T._15.pdf Building 215, northwest elevation

MD_Montgomery County_N.I.S.T._16.pdf Building 216, west and south elevations

MD_Montgomery County_N.I.S.T._17.pdf Building 217, east and south elevations

MD_Montgomery County_N.I.S.T._18.pdf Building 219, looking east

MD_Montgomery County_N.I.S.T._19.pdf Building 230, east and north elevations

MD_Montgomery County_N.I.S.T._20.pdf Building 231, south and east elevations

MD_Montgomery County_N.I.S.T._21.pdf Building 233, south elevation

MD_Montgomery County_N.I.S.T._22.pdf Building 236, south elevation

MD_Montgomery County_N.I.S.T._23.pdf Building 237, south and east elevations

MD_Montgomery County_N.I.S.T._24.pdf , south and west elevations

MD_Montgomery County_N.I.S.T._25.pdf Building 245, north elevation

MD_Montgomery County_N.I.S.T._26.pdf Building 245, looking southwest

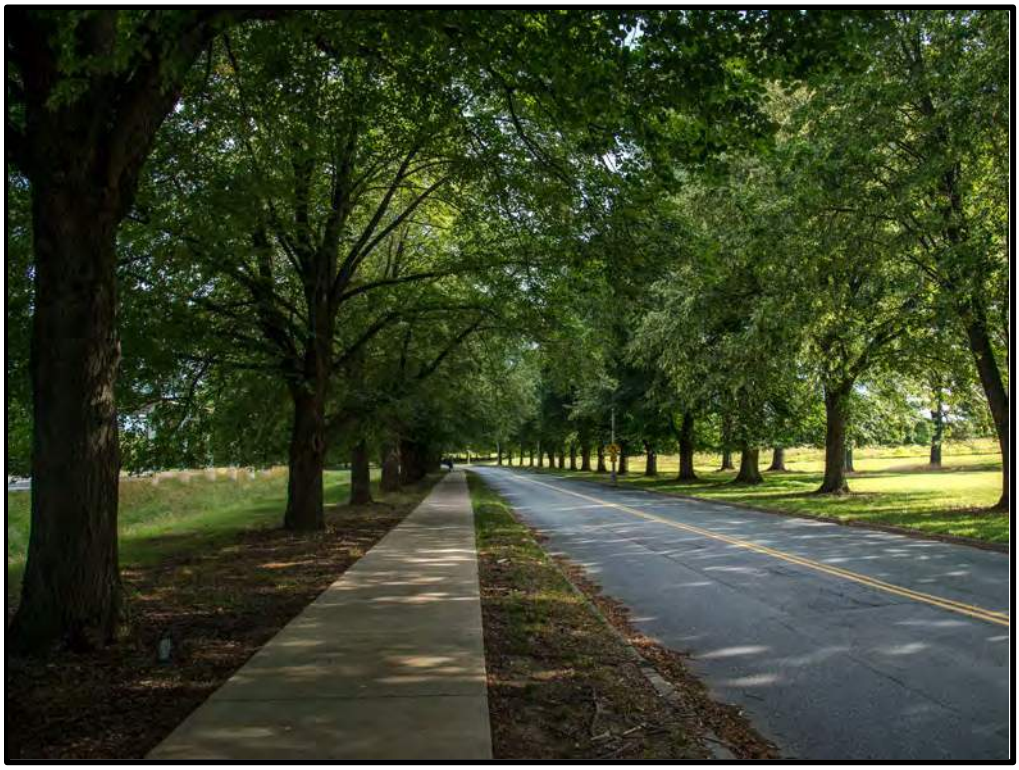
MD_Montgomery County_N.I.S.T._27.pdf Building 103, north elevation

MD_Montgomery County_N.I.S.T._28.pdf Building 318, north and east elevations

MD_Montgomery County_N.I.S.T._29.pdf Building 320, looking southwest

MD_Montgomery County_N.I.S.T._30.pdf Building 301, east elevation

MD_Montgomery County_N.I.S.T._31.pdf Stone Test Wall, South Elevation



M_20_47_2014_12_03_032. East Drive Allée of Little Leaf Lindens

Maryland Historical Trust
Determination of Eligibility Form

Property Name: Carderock Historic District **Inventory Number:** M: 29-52

Address: 9500 MacArthur Boulevard (Naval Surface Warfare Center, Carderock Division) **Historic District:** X **Yes** ___ **No**

City: Bethesda **Zip Code:** 20817 **County:** Montgomery

USGS Quadrangle(s): Falls Church

Property Owner: Department of the Navy **Tax Account ID Number:**

Tax Map Parcel Number(s): **Tax Map Number:**

Project: Rehabilitate Building 11 for BRAC **Agency:** Department of the Navy

Agency Prepared By: Navy, R. Christopher Goodwin & Assoc.

Preparer's Name: **Date Prepared:**

Documentation Is Presented In: DOE form for Building 11

Preparer's Eligibility Recommendation: X **Eligibility Recommended** ___ **Eligibility Not Recommended**

Criteria: X **A** ___ **B** X **C** ___ **D** **Considerations:** ___ **A** ___ **B** ___ **C** ___ **D** ___ **E** ___ **F** X **G**

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property:

Inventory Number: **Eligible:** ___ **Yes** **Listed:** ___ **Yes**

Site Visit by MHT Staff: X **Yes** ___ **No** **Name:** Elizabeth Hannold **Date:**

Description of Property and Justification: ***(Please attach map and photo)***

[The] grouping of resources at Carderock . . . represent the facility's unique mission and significance in the areas of ship modeling, aircraft design and testing, and underwater testing. These resources are eligible under National Register Criterion A for their association with events which have made a significant contribution to the broad patterns of military technology and under Criterion C as an intact collection of research, design, testing, and evaluation buildings and facilities. The property meets Criteria Exception G. The period of significance for the resources extends from 1938, with the construction of the David Taylor Model Basin [NR listed, M: 29-47], to 1958, the end date for the construction of physical model testing and research facilities and the beginning of computer-aided testing and research. Iin this period, NSWC Carderock Division led the Navy's research, development, testing, and evaluation program for Naval vehicles.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: X **Eligibility Not Recommended:** ___

Criteria: X **A** ___ **B** X **C** ___ **D** **Considerations:** ___ **A** ___ **B** ___ **C** ___ **D** ___ **E** ___ **F** X **G**

MHT Comments:

Elizabeth Hannold — 1996-03-27

Reviewer, Office of Preservation Services — **Date**

Orlando Ridout V — 1996-03-28

Reviewer, National Register Program — **Date**

Maryland Historical Trust
Determination of Eligibility Form

MARYLAND HISTORICAL TRUST REVIEW

Eligibility Recommended: X **Eligibility Not Recommended:** __

Criteria: X **A** __ **B** X **C** __ **D** **Considerations:** __ **A** __ **B** __ **C** __ **D** __ **E** __ **F** X **G**

MHT Comments:

Elizabeth Hannold	1996-03-27
Reviewer, Office of Preservation Services	**Date**
Orlando Ridout V	1996-03-28
Reviewer, National Register Program	**Date**

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

M: 29-52

Property/District Name: Naval Surface Warfare Center Historic District ~~Buildings 115, 123, 132, 144 and 153~~
Survey Number: M:29-52

Project: Demolition of support buildings Agency: Department of the Navy

Site visit by MHT Staff: ___ no _X_ yes Name Anne E. Bruder Date December 1998

Eligibility recommended _X_ Eligibility **not** recommended _____

Criteria: _X_A ___B _X_C ___D Considerations: ___A ___B ___C ___D ___E ___F _X_G
___None

Justification for decision: (Use continuation sheet if necessary and attach map)

In 1997, Christopher Goodwin & Associates prepared a HARP plan (M0162), which included an MIHP form evaluating the entire Naval Surface Warfare Center -- Carderock Division (NSWCCD) for inclusion in the National Register of Historic Places for all buildings built through 1958. The 1958 cut-off was chosen because buildings of that era met the Criteria Consideration G, Properties that have achieved significance within the last fifty years. The Trust agreed in June 1998 that these resources could be considered as an historic district known as the Naval Surface Warfare Center -- Carderock Division Historic District (MIHP #M:29-52). Although the inventory identified many new resources, the centerpiece of the district is the David Taylor Model Basin Historic Site (MIHP #M:29-47), which was listed in the National Register in 1985. The entire NSWCCD Historic District is eligible for the National Register, as an example of a Military Research and Design Facility under Criteria A and C, as well as under Criteria Consideration G.

The Navy wishes to demolish five buildings, Buildings 115, 123, 132, 144 and 153, because they are unused, contaminated by chemicals, or because the resources which they support have already been removed. We again concur that these are contributing historic resources and that their demolition constitutes an adverse effect on the historic district as a whole.
Documentation on the property/district is presented in: Project Review and Compliance/Inventory Books
Prepared by: Goodwin & Associates

_____ August 18, 1998
Reviewer, Office of Preservation Services Date

NR program concurrence: _X_ yes ___ no ___ not applicable

_____ 8/20/98
Reviewer, NR program Date

Survey No. M:29-52

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

____ Eastern Shore	(all Eastern Shore counties, and Cecil)
____ Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
__X__ Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
____ Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

____ Paleo-Indian	10000-7500 B.C.
____ Early Archaic	7500-6000 B.C.
____ Middle Archaic	6000-4000 B.C.
____ Late Archaic	4000-2000 B.C.
____ Early Woodland	2000-500 B.C.
____ Middle Woodland	500 B.C. - A.D. 900
____ Late Woodland/Archaic	A.D. 900-1600
____ Contact and Settlement	A.D. 1570-1750
____ Rural Agrarian Intensification	A.D. 1680-1815
____ Agricultural-Industrial Transition	A.D. 1815-1870
__X__ Industrial/Urban Dominance	A.D. 1870-1930
__X__ Modern Period	A.D. 1930-Present
____ Unknown Period (___ prehistoric ___ historic)	

III. Prehistoric Period Themes:

____ Subsistence
____ Settlement
____ Political
____ Demographic
____ Religion
____ Technology
____ Environmental Adaptation

IV. Historic Period Themes:

____ Agriculture
__X__ Architecture, Landscape Architecture, and Community Planning
____ Economic (Commercial and Industrial)
__X__ Government/Law
__X__ Military
____ Religion
____ Social/Educational/Cultural
__X__ Transportation

V. Resource Type:

Category: Building
Historic Environment: Military base
Historic Function(s) and Use(s): Service Buildings for Research, Testing and Development of Naval Resources
Known Design Source: _____

M: 17-63

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

FOR NPS USE ONLY
RECEIVED
DATE ENTERED

SEE INSTRUCTIONS IN *HOW TO COMPLETE NATIONAL REGISTER FORMS*
TYPE ALL ENTRIES -- COMPLETE APPLICABLE SECTIONS

1 NAME

HISTORIC

AND/OR COMMON
SENECA HISTORIC DISTRICT

2 LOCATION

STREET & NUMBER
See #10, Verbal Boundary Description — NOT FOR PUBLICATION

CITY, TOWN
Poolesville — VICINITY OF

CONGRESSIONAL DISTRICT
Eighth

STATE	CODE	COUNTY	CODE
Maryland	24	Montgomery	031

3 CLASSIFICATION

CATEGORY	OWNERSHIP	STATUS	PRESENT USE	
X DISTRICT	PUBLIC	X OCCUPIED	X AGRICULTURE	MUSEUM
BUILDING(S)	PRIVATE	X UNOCCUPIED	COMMERCIAL	X PARK
STRUCTURE	X BOTH	X WORK IN PROGRESS	EDUCATIONAL	X PRIVATE RESIDENCE
SITE	**PUBLIC ACQUISITION**	**ACCESSIBLE**	ENTERTAINMENT	RELIGIOUS
OBJECT	IN PROCESS	X YES: RESTRICTED	GOVERNMENT	SCIENTIFIC
	BEING CONSIDERED	YES: UNRESTRICTED	INDUSTRIAL	TRANSPORTATION
		NO	MILITARY	OTHER:

4 OWNER OF PROPERTY

NAME
Multiple Ownership

STREET & NUMBER

CITY, TOWN — STATE

— VICINITY OF

5 LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC.
Montgomery County Courthouse

STREET & NUMBER

CITY, TOWN — STATE
Rockville — Maryland 20850

6 REPRESENTATION IN EXISTING SURVEYS

TITLE
Historic American Buildings Survey (See continuation sheet #1)

DATE
1936 — X FEDERAL — STATE — COUNTY — LOCAL

DEPOSITORY FOR SURVEY RECORDS
Library of Congress

CITY, TOWN — STATE
Washington, D.C.

DESCRIPTION

M: 17-63

CONDITION		CHECK ONE	CHECK ONE
_EXCELLENT	_DETERIORATED	_UNALTERED	X ORIGINAL SITE
X GOOD	_RUINS	X ALTERED	_MOVED DATE_____
_FAIR	_UNEXPOSED		

DESCRIBE THE PRESENT AND ORIGINAL (IF KNOWN) PHYSICAL APPEARANCE

The Seneca Historic District is located in the northwest corner of Montgomery County, Maryland, twenty-three miles from Washington, D.C. and eight miles from the town of its Post Office address, Poolesville, Maryland.

It comprises 3,850 acres of federal, state, and county parkland and farmland in which fifteen historic houses are situated. When the first patents were granted in the early 18th century to Daniel Dulaney, it was forested land where game abounded and Indians fished and hunted. The first plantations, established by Georgetown residents and Anne Arundel County emigrants, were working farms of the same approximate size today.

The 1865 Simon Martenet map of Montgomery County shows the homesteads arranged so that the general appearance of the district must have resembled that of the present time with the following exceptions: (1) roads have been widened and paved for the automobile; (2) two or three farms have been subdivided, but only a few houses have been built since the early 1900's; (3) a small general store remains which was originally operated in conjunction with a grist mill that was removed to make a change in the route of River Road; (4) a stone barn was demolished in May 1975; (5) Red Seneca Sandstone is no longer from the site on the bank of the Potomac River, but the quarry remains.

The parkland in the Seneca Historic District is bounded by 1.65 miles of the Potomac River, the eastern shore of the Great Seneca Creek, 1.95 miles of River Road (Route 190), and a line 1.13 miles long drawn through some farmland owned by the Maryland Department of Parks.

The 1.65 mile length of the C & O Canal, Riley's Lock House (Lock House #24), the Seneca Sandstone Quarry, the Quarry Master's House and the Stone Cutting Mill are on the National Register of Historic Places. They are included in this nomination because they are an integral part of the Seneca Historic District and were important factors in the development of the District.

On the south, the parkland rises steeply to form bluffs along the river. It is in one of these bluffs that the Quarry is located. From the highest elevation, 300 feet, north to River Road, there are cleared, level fields. A one-room stone schoolhouse located on River Road is surrounded on three sides by oak trees and farm fields. Along Great Seneca Creek there are many summer houses and a few year round homes built directly on the shores. Once or twice a year residents are forced to evacuate these houses when flooding of Seneca Creek threatens or occurs.

On the north side of River Road, the privately owned land is divided by four winding secondary roads and by Great Seneca Creek and Dry Seneca Creek. Elevations range from 350 feet at Montevideo to 250 feet near Magurns' house to make a rolling countryside of beautiful vistas of

(see continuation sheet #2)

Form No. 10-300a
(Rev. 10-74)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

Seneca Historic District
Montgomery County,
Maryland

CONTINUATION SHEET ITEM NUMBER 6 PAGE 1

REPRESENTATION IN EXISTING SURVEYS

1. Historic Sites in the Bi-County Region Seneca Historic District
   1969 County

2. Inventory of Historical Sites: Western part of County
   1969 County
   Montgomery County Historical Society
   W. Montgomery County Avenue, Rockville, Maryland 20850

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

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NATIONAL REGISTER OF HISTORIC PLACES INVENTORY -- NOMINATION FORM

DESCRIPTION

productive farmland and small forests.

The fifteen historic houses are surrounded by dependencies of various periods, in most cases dating from the period of the dwelling. There are slave quarters, smokehouses, springhouses, corn cribs, and tobacco barns. Nearly every farm also contains a large bank barn built at Seneca sandstone foundations and red painted wooden siding with white trim. There are some sections of red sandstone fence bordering fields. These are about three feet high and two to three feet thick. They are very beautiful, but only in a few cases are efforts being made to preserve them.

A description of some of the buildings follows. They are numbered in relation to the numbers on the accompanying maps:

1. The Lewis Allnutt House is one of four houses in this District built around 1900. They are all two-story, large (10 or 12 rooms), white frame houses with porches on the front and on the side.

2. Dawson House is a five-bay, two-story house built of Seneca sandstone in 1802, with an interior chimney at each end. Now unoccupied and deteriorating.

3. "The Homestead" - (See #1)

4. "The Springs" is a two-story, stone structure built in several sections (good condition, altered, original site). The south end is the older part; it was a two-bay house with a flush gable chimney. The north three bays were added in 1845 and the entrance moved to the center bay. At the north end there is a flush gable chimney. Over the entrance an inscription reads, "B and L Allnutt 1845." The windows on the first floor are all 6/9 double hung sash; on the second floor they are 6/6 double hung sash. The lintels and sills are all stone. The central doorway is double, with a four-light transom and paneled reveals.

South of the house is the kitchen, now connected by a breezeway. It has a four-bay facade with two doors and two windows. The walls have been rebuilt above the doorheads and a gambrel roof added.

5. Lawrence Darby House - (See #1)

6. Stone Fence: two to three feet thick, three feet high, Seneca sand-

(see continuation sheet #3)

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DESCRIPTION

stone, dry wall construction.

7. "Oakland." The house is a frame, two-story, hip-roofed structure with a three-bay main facade. The doorway, with transom and sidelights, is in the north bay. The roof has a hipped roof lantern. The windows are 6/6 double hung sash. The cornice is bracketed. At the south end are two internal chimneys. The east wing of the house, which contains the kitchen, is built of stone and predates the rest of the house. It is thought to be the kitchen building of the original "Oakland," summer home of Thomas and Martha Parke Custis Peter.

8. "Rockland," also known as "Benoni Allnutt House," is a two-story sandstone building with a two-story stone wing (excellent condition, altered, original site). The main block is laid up in coursed, dressed stone with quoined corners; the wing is laid up in uncoursed stone. The facade is five bays with a central doorway. The windows are 4/4 double hung sash with false segmentally arched heads formed by moulded framing. The sills and lintels are cut stone blocks.

A broad wooden frieze encircles the house below the boxed cornice. The frieze carries the paired brackets; between sets of brackets, a paneling motif decorates the frieze. The roof is hipped, with a "widow's walk" having a balustrade of sawn, openwork design. The front porch has paired columns on either side of the steps. The cornice is bracketed. The balustrade is composed of turned posts. At either end are two interior brick chimneys. The wing, set back from the facade, repeats the motif of the main block. The house is built in the Victorian "Italianate" style.

9. The Magurn House is a two-story, frame structure with a five-bay main facade. The central doorway is flanked by 2/2 double hung sash. The boxed cornice has small brackets. There is a central gable with a semicircular, louvered window. To the rear is a two-story ell.

10. "Montanverde" is a two-story, clapboard-sheathed, brick structure with a five-bay main facade. There are two-story external brick chimneys with free-standing brick stacks above the second floor at both ends. The central doorway has a three-light transom, and windows are double hung 6/6. One-story wings are set back from the plane of the facade at each end of the house.

(See continuation sheet #4)

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DESCRIPTION

11. "Montevideo" (excellent, altered) is a two-story, three-bay house in a Georgian/Federal style. Built of random stone, it is completely covered by cement stucco except for a foundation of cut red sandstone from the Seneca quarries. Windows are of a three-part style known as Wyeth; the central section has 9/6 sash and the two side panels have 3/2. The doorway has sidelights and a large fanlight. There are no windows in the ends of the building. The house has a low hipped roof and double internal end chimneys. An addition was built onto the west end in 1959 and the original smokehouse was moved fifty yards from the house. The house was restored at the time.

12. The Seneca Schoolhouse is a small sandstone structure, two bays square and one and a half stories high with a steeply pitched A-roof. There is a smaller A-roofed sandstone enclosed porch projecting from the front gable end of the structure. Each side has two 6/6 windows with wide wooden frames. There are huge, stone corner quoins and no windows on the rear gable wall. There is a simple box cornice along the roof line.

13. Charles Allnutt House - (See #1)

14. William Frank House Slave Quarters. The L-plan of this building consists of the 1 1/2-story longer section and the one-story shorter one. A large, stone fireplace with a brick stack is located between the legs of the "L." The date 1835 is incised in the lintel of the south gable window of the larger block. This building is situated behind the William Frank House, site #15.

15. William Frank House or Montevideo Overseer's House. This is a two-story, three-bay structure of Seneca sandstone with large stone lintels over the openings.

The central double-paneled door has paneled reveals. The windows are 2/2 Victorian sash, full-length on the first floor. The main facade has a plain board frieze and a boxed cornice with paired bracket supports over the center of each window and at the corners.

A two-story frame wing was added to the house circa 1900.

Located behind the house is a large, frame double corn crib with stone foundations.

(see continuation sheet #5)

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DESCRIPTION

16. "Evermay" is a two-story, frame structure with a five-bay main facade. The doorway is in the central bay with transom and sidelights. At either end are internal chimneys for fireplaces. A one-story porch with bracketed posts extends across the entire facade. On the back of a riser on the stairs to the second floor there is an inscription, "Henry Young, Plasterer, June 14, 1955."

17. The Allnut/Poole Store is a general store situated on the property of "Evermay." It has a gabled, three-bay main facade with a shed-roofed porch. The windows are 6/6 double hung sash. It was built in 1901.

18. Historical Marker: "Rowser's Ford." "This Crossing of the Potomac River was used by Confederate General J.E.B. Stuart on the night of June 27, 1863, to enter Maryland on his ride around the Union army during the Gettysburg Campaign."

19. The Seneca Sandstone Quarries extend into the escarpment facing the C & O Canal and Potomac River for more than a hundred feet. A more complete description of the quarries can be found in the National Register of Historic Places forms submitted in the National Register.

20. The Quarry Master's House is a two and a half story, double house of sandstone. Quoins, sills and lintels are large, well-dressed stone. A wall divides the two sides of the house. A stairway mounts on each side of the dividing wall. Each unit has two rooms on each floor. The attic space is lighted by one window on each end. The house has been badly vandalized, but the structure is sound. Further description in National Register of Historic Places forms submitted in the National Register.

21. The Stone Cutting Mill is a double building, having been extended beyond its gable wall at a later date than its original construction. The wooden portions of the building have disappeared and the head race was obliterated by a service road. The walls are of dressed sandstone. Pedestals for machinery remain. A stone-lined trench extends the length of the building from the wheel pit at the west end. It is a roofless ruin of beautiful proportions.

22. The Turning Basin where barges were loaded with finished stone is a wide pond beside the canal.

(see continuation sheet #6)

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DESCRIPTION

23. The Seneca Aqueduct of Seneca sandstone has been badly damaged in floods, but is stabilized, awaiting repair.

24. Riley's Lock House is a handsome two-story sandstone house of three bays, in excellent condition.

GPO 892 455

8 SIGNIFICANCE

PERIOD	AREAS OF SIGNIFICANCE -- CHECK AND JUSTIFY BELOW				
__PREHISTORIC	__ARCHEOLOGY-PREHISTORIC	__COMMUNITY PLANNING	__LANDSCAPE ARCHITECTURE	__RELIGION
__1400-1499	__ARCHEOLOGY-HISTORIC	X CONSERVATION	__LAW	__SCIENCE
__1500-1599	X AGRICULTURE	__ECONOMICS	__LITERATURE	__SCULPTURE
__1600-1699	__ARCHITECTURE	X EDUCATION	__MILITARY	__SOCIAL/HUMANITARIAN
X 1700-1799	__ART	__ENGINEERING	__MUSIC	__THEATER
X 1800-1899	__COMMERCE	__EXPLORATION/SETTLEMENT	__PHILOSOPHY	__TRANSPORTATION
X 1900-	__COMMUNICATIONS	X INDUSTRY	__POLITICS/GOVERNMENT	__OTHER (SPECIFY)
		__INVENTION		

SPECIFIC DATES

BUILDER/ARCHITECT

STATEMENT OF SIGNIFICANCE

The section of Maryland where Seneca Creek flows into the Potomac River is a site of surpassing significance in the study of the changing of the American Colonies into a united nation. There is no place along the Potomac River which served more often as the theater for scenes of the developing history of Maryland from the 17th century to the early days of the 20th century, with each scene described in recorded history.

In the latter part of the 17th century, the Potomac Rangers under the command of Colonel Mason, who was stationed at Accotink, Virginia, ranged through the Seneca Section to the headquarters of Captain Richard Brightwell, whose land grant, Brightwell's Hunting, stretched along the river's edge above Seneca. Indian attacks were frequent and savage; wild animals abounded along the river. Captain Brightwell's request to rope and break some wild horses opens a new field of speculation to a student of history as to how wild horses arrived in the Seneca Section. It is interesting to note that Brightwell received permission from his superiors providing the horses were used by his Rangers and not offered for sale.[1]

In the early 18th century, great holdings of land were granted to favorite English families. One of those who received land adjacent to the Seneca was Daniel Dulany, 1930 acres, on March 21, 1731. He named his land Conclusion.[2]

For fifty years the Seneca Section remained quiet. When the country was swept by revolution, Seneca became involved. In November 1780, Daniel Dulany, because he was a Loyalist, had his lands in Montgomery County at Seneca confiscated. They were offered for sale by the Honorable Alexander Contee Hanson, acting for the State of Maryland. On October 25, 1781, lots two through seven of the land were bought by Robert Peter, a wealthy and influential merchant who was the Mayor of Georgetown, one of the most important ports on the Potomac River.[3] Lots one and eight were purchased by William Deakins, also of Georgetown, a member of the Committee of Observation, and a friend of General George Washington.[4]

In August 1785, George Washington traveled above and below the Seneca as he studied the navigation of the Potomac.[5]

(see continuation sheet #7)

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STATEMENT OF SIGNIFICANCE

Robert Peter rented his land in 100-acre farms, taking care to see that the leases stated exactly how the property was to be used. His lease to John Higgins, October 12, 1787, is an example of an early attempt at environmental protection. The lease for the 100 acres stated that:

> "John Higgins was to clear and grub not more than seventy-five acres. . . .and it was agreed and understood by and between the said parties,among other things, that the said John Higgins was to build upon the said premises one good dwelling house at least twenty by sixteen feet and one frame Tobacco house thirty-two by twenty-four feet double ground [?]. Both houses to have shingled roofs and finished in a workmanlike manner and also to plant in an Orchard on the said premises one hundred apple trees at the least. . . ."
>
> The rent for the property was to be one thousand and fifty pounds of Tobacco, delivered at the Georgetown Warehouse in one hogshead, "the Tobacco to be the first or best quality he makes on the premises."[6]

Robert Peter died in 1802 and by the terms of his will, left his Seneca land to his sons: Thomas, who was married to Martha Custis, the granddaughter of Martha Washington; George, who married the wealthy Ann Plater; and David, who was a bachelor.[7] The Peter heirs[8] developed the red sandstone and marble quarries along the bank of the Potomac River[9] and built large, substantial houses on their property. Houses of stone were built by their neighbors on the adjacent farms. At first many of these houses were lived in by their owners in summer only. During the winter, when they returned to their beautiful Georgetown houses, their country property was guarded and managed by capable overseers.

By 1828 the Chesapeake and Ohio Canal was being built through the Peter property along the river's edge. The farmhouses around Seneca were being lived in all year long by sons of the men who had built them for summer homes. The fields were planted with rye, wheat, corn, and tobacco. As soon as the section of the Canal between Georgetown and Seneca was completed it was opened for travel, while work continued up the river toward Cumberland. Stone from the Peter Quarry was cut and used in the construction of the canal and the aqueducts over the mouth of the Seneca and the many other creeks which flowed into the Potomac.

(see continuation sheet #8)

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Seneca Historic District
Montgomery County, Maryland
CONTINUATION SHEET ITEM NUMBER 8 PAGE 8

STATEMENT OF SIGNIFICANCE

Seneca soon became the business center for the canallers, the quarrymen, and the farmers who brought their grain to the tall mill on Seneca Creek and their tobacco to the canal boats on the way to Georgetown. Soon there were hundreds of boats passing through the lock at the mouth of the Seneca. Across the creek from the lockkeeper's house was a hugh stone-cutting mill where stone was cut for use in the neighborhood and for shipping to Washington and New York. Near the stone mill, a fan-shaped cut was made in the canal bank for boats to pull into while loading. By 1834 there were not only cargo and coal barges on the canal, but also passenger boats. It was not too pleasant a trip according to a letter Nelly Custis Lewis' daughter, Angela, wrote from Tudor Place, her Aunt Peter's home in Georgetown, September 8, 1834: "We arrived here last evening after a very tedious journey down the Canal. We were detained a day at Harper's Ferry...."[10]

During the Civil War, 1861-1865, fighting in the Seneca section was very real and very bitter. There were repeated crossings of the river by Southern raiders.* John Singleton Mosby left accounts in his memoirs of two of the crossings. One was on June 11, 1863, when the Southerners burned a canal boat and fought a Federal force drawn up at Seneca Mill. According to Mosby, the Northerners fled after heavy fighting, leaving behind their battle flag.[11] During that skirmish, the mill must have caught fire, as the Mill Book[12] has records of cleaning up debris, selling burned flour, and repairing the mill. In July 1864, Mosby again went to Seneca, this time in the hope of surrounding the 8th Illinois Cavalry camped there. Before he reached the camp, the Northerners retreated, leaving camp equipment, stores, and fifty head of beef cattle.[13]

From the daily records in the Seneca Mill Book it appears that in spite of the war the families in the large sandstone houses continued to plant their fields and carry their grain to the mill. Their tobacco was sent down the canal to Georgetown. Through subscriptions they raised money to build a schoolhouse.

The schoolhouse is still standing. Unfortunately, the large gristmill on Seneca Creek which had been the center of activity all through the 19th and early 20th centuries is gone. It was razed in 1973 when River Road was rebuilt. The miller's house has been torn down and one of the most interesting of the large barns was recently bulldozed. But on the whole, the Seneca section of Maryland, with its extra large barns, broad fields, and well-built stone houses, remains un-

(see continuation sheet #9)

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STATEMENT OF SIGNIFICANCE

changed and is a priceless, unspoiled picture of Maryland as it must have been during the 19th and early 20th centuries. Also unchanged is Sugarloaf Mountain in the distance which gave one of the most beautiful homes in the Seneca Section its name, Monte Video, I see the Mountain.

---

[1]Scharf's History of Western Maryland, page 647-652. Maryland Archives, Vol. 23 page 175. Maryland Archives, Vol. 2, May 27, 1669.

[2]Rockville Court House, Liber H, folio 250.

[3]Rockville Court House, Liber E 5, folio 114. Maryland During and After the Revolution, by Philip A. Crowl. Series LXI, No. 1, 1943, Johns Hopkins University Studies in Historical and Political Science.

[4]Washington's Writings, Vol. 36, page 180.

[5]Washington's Diary, Vol. II, August 1785.

[6]Rockville Court House, Liber E, folio 316.

[7]Rockville Court House, Liber P, folio 674.

[8]Assessment Book, 1798-1812, Rockville Court House.

[9]Report of the Board of Regents of the Smithsonian Institution 30th Congress, 1st Session, January 6, 1848, page 5.

[10]Original at Mount Vernon, Virginia

[11]Ranger Mosby, by Virgil Carrington Jones, page 134.

[12]Seneca Mill Book, 1863-1866 (the authors).

[13]Memoirs of Mosby, page 277, Ranger Mosby by V. C. Jones, page 189.

*War of the Rebellion, Library of Congress, National Archives Series I, Vol. XXVII, part III. Adjutant General J. H. Taylor to Major General Stahel 2.S.2. page 172,173.

(see continuation sheet #10)

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Montgomery County,
CONTINUATION SHEET Maryland ITEM NUMBER 8 PAGE 10

STATEMENT OF SIGNIFICANCE

The following are significant statements for some of the numbered sites in the description:

2. Dawson House. Robert Doyne Dawson served as an officer in the Revolutionary War. He served in the Maryland Line under General John Eager Howard during the battles of Long Island and Cowpens. He was wounded at the battle of Germantown in Pennsylvania. He married the daughter of another early settler in 1781. He built this house in 1801, a lintel stone inscribed with the date. His wife died in 1806. He married again but it is not known how long he continued to occupy this house. Since 1880 at least it has been used as a tenant house and is now unoccupied.

3. "The Homestead" was built in 1900 near the site of an earlier house which contained a stone reading "James N. Allnutt was born here August 21, 1791." This house was later torn down. The land was owned by this James Allnutt's father, James Allnutt and was called "Thomas Discovery."

7. "Rockland." After a house on this site burned, Benoni Allnutt built this house, inscribing "B. Allnutt 1870" on a lintel, of Seneca Sandstone, in the current "Italianate" style. Scharf describes it in 1882 as "perhaps the finest house in the area, the house having been built. . . .of native stone."

10. "Montanverde" is the oldest house lived in in the Seneca Historic District. It was built between 1806 and 1812 by Major George Peter, who occupied it only in summer until 1827 when he moved there to live year round. George Peter was born 1779 in Georgetown. At 15 he joined the Maryland troops during the Whiskey Rebellion. His parents sent a messenger to camp and General George Washington, a family friend, learning of George's presence, ordered him home. In 1799 he received an appointment as 2nd Lieutenant of the 9th Infantry from President Adams. He received his commission from George Washington at Mt. Vernon. In 1807 he was made Captain of Artillery, in 1808, a Major.

In 1848 Abraham Lincoln, a Congressman at the time, attended a political rally at Montanverde as the guest of Major Peter. He spent the night and the room in which he stayed as still referred to as "the Lincoln Room."

(see continuation sheet #11)

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STATEMENT OF SIGNIFICANCE

In 1813 Major Peter was in command of a battalion of "flying artillery" which was present at the Battle of Bladensburg. After a long career of public service with military and government, Major Peter died at "Montanverde" in 1861.

11. "Montevideo" was constructed between 1828 and 1830 as the home of John Parke Custis Peter and his family. Peter's father, Thomas, was a mayor of Georgetown and his grandfather, Robert, was the first mayor and one of the founders of Georgetown, Maryland (now D.C.). John P.C. Peter, during his life at Montevideo between 1830 and his death in 1848, served as President of the Board of Education of the Darvestown District (1839), was a member of the Maryland House of Delegates (1828), and was first President of the Montgomery County Agricultural Society (1846). A family cemetery was established in the field northwest of the house; it contains numerous Peter family graves, including that of John Parke Custis Peter.

The red sandstone used in the construction of Montevideo is the same Seneca stone used in the construction of the Smithsonian Institution "Castle" and the original Corcoran Art Gallery, now the Renwick, in Washington. The C & O Canal is involved with the history of Montevideo, providing mail delivery and transportation of goods for its owners. The Peter family was friendly with Mr. and Mrs. George Washington even before Thomas Peter married Mrs. Washington's granddaughter and namesake, Martha. Thomas and Martha Peter were the parents of John Parke Custis Peter.

15. William Frank House or Montevideo Overseer's House. Built as an overseer's house on John Parke Custis Peter's estate of Montevideo, the house is dated before 1858. In that year it was sold with the slave quarters (#14) and Greek Revival barn (now destroyed) as lot #3 of Peter's estate to the Potomac (late Sand) Stone Company. The William Franks, present owners of the house, have maintained a youth hostel in the slave quarters for the past twenty years.

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Collection Montgomery County Historical Society

2d George Kennedy
article The Washington Star, April 20, 1960

(see continuation sheet #13)

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Washington, D.C.

4c Anon.
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(DESCRIPTION CONTINUED)

The ruins of a second stone-cutting mill are located approximately .5 mile upstream from Seneca Mills. This mill site consists of numerous coursed and roughly squared sandstone walls, an earthen flume, and a water wheel housing. The exact configuration of the mill cannot be gleaned from surface examination due to dense ground vegetation.

Steven Phillips
C & O Canal Restoration Team
National Park Service
February, 1977

9 MAJOR BIBLIOGRAPHICAL REFERENCES

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(see continuation sheet #12)

10 GEOGRAPHICAL DATA

ACREAGE OF NOMINATED PROPERTY 3,850 acres

UTM REFERENCES

	ZONE	EASTING	NORTHING
A	18	294580	4330920
B	18	297300	4332100
C	18	299220	4329100
D	18	298480	4326580

E 18 296360/4326720

VERBAL BOUNDARY DESCRIPTION

The Seneca Historic District is bounded generally by the Potomac River on the south, Reddick Road on the west, the back lines of the properties just north of Sugarland Road on the north, and Berryville and Violets Lock Roads on the east with the exception of the Harman farm "Montanverde" on the east side of Berryville Road. (See map for further detail).

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE	CODE	COUNTY	CODE
STATE	CODE	COUNTY	CODE

11 FORM PREPARED BY

njm

NAME / TITLE

Dorothy Muir, Mary Ann Kephart, Austin Kiplinger

ORGANIZATION — DATE

Historic Medley District, Inc. — December 1975

STREET & NUMBER — TELEPHONE

P.O. Box 232

CITY OR TOWN — STATE

Poolesville — Maryland 20837

12 STATE HISTORIC PRESERVATION OFFICER CERTIFICATION

THE EVALUATED SIGNIFICANCE OF THIS PROPERTY WITHIN THE STATE IS:

NATIONAL ___ STATE X LOCAL ___

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

STATE HISTORIC PRESERVATION OFFICER SIGNATURE John N. Pearce — 1/6/77

TITLE — DATE

FOR NPS USE ONLY

I HEREBY CERTIFY THAT THIS PROPERTY IS INCLUDED IN THE NATIONAL REGISTER

DATE

DIRECTOR, OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION

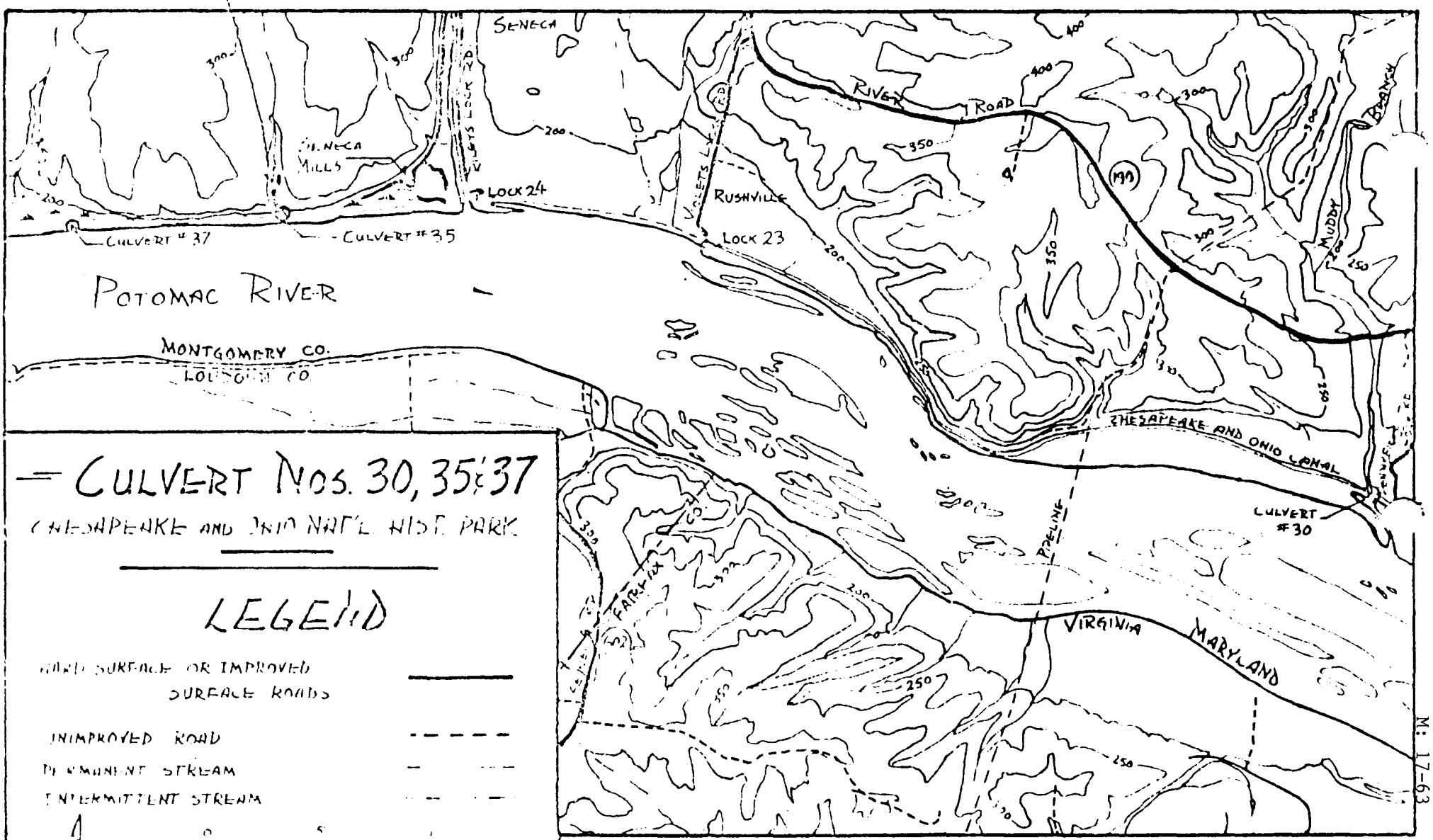
ATTEST: DATE

KEEPER OF THE NATIONAL REGISTER

GPO 892-451

LOCATION OF SECOND STONE-CUTTING MILL

1' - EXISTING WALLS



CULVERT NOS. 30, 35 & 37

CHESAPEAKE AND OHIO NAT'L HIST. PARK

LEGEND

HARD SURFACE OR IMPROVED SURFACE ROADS

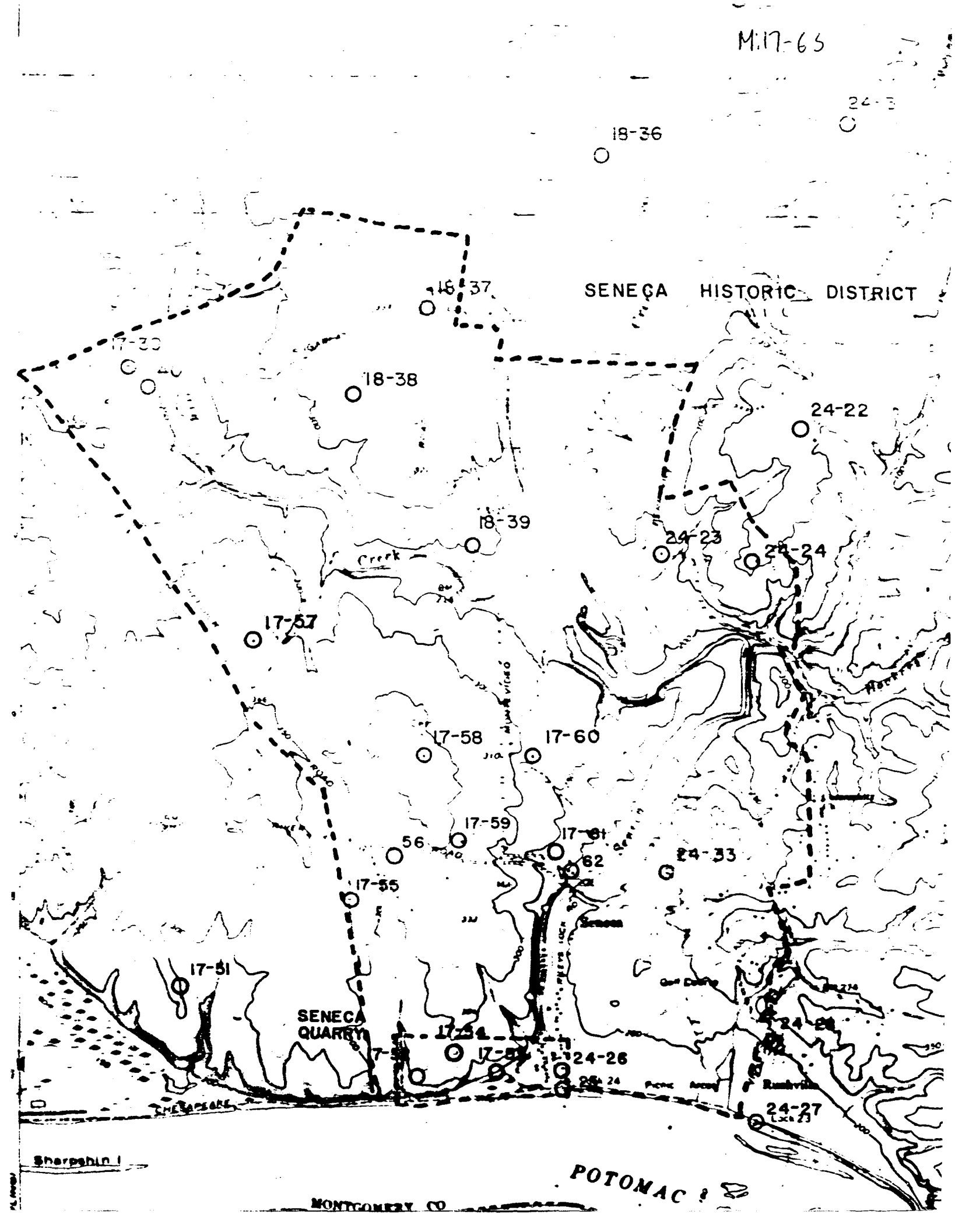
UNIMPROVED ROAD

PERMANENT STREAM

INTERMITTENT STREAM

M: 17-63

M:17-65


SENECA HISTORIC DISTRICT
18-36
24-3
18-37
17-30
18-38
24-22
18-39
24-23
24-24
Creek
17-57
17-58
17-60
17-59
17-61
56
62
24-33
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17-51
SENECA QUARRY
17-54
17-53
24-26
24-27
Sharpshin I
POTOMAC R
MONTGOMERY CO

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F-7-120

MHT Inventory No.

MHT Computer No.

Maryland Historical Trust/ National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. For instructions, see the Trust publication National Register Application Guidelines. Type all entries.

1. Name of Property

historic name: Sugarloaf ~~Rural~~ Mountain Historic District

other names:

DRAFT

2. Location

street & number: Area defined by Bennett Creek, Peters Road & Thurston Road to the north; Comus-Hyattstown, Comus, & Peach Tree Roads to the east; B&O Railroad to the south; and Monocacy River to the west ☐ not for publication ☐ vicinity

city, town:

state: Maryland code: MD county: Fred. & Montg. code: zip code:

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
		Contributing	Noncontributing
☒ private	☐ building(s)		buildings
☒ public-local	☒ district		sites
☒ public-State	☐ site		structures
☒ public-Federal	☐ structure		objects
	☐ object		Total

Name of related multiple property listing: ☐

Number of contributing resources previously listed in the National Register

4. OWNERSHIP

☐ See Continuation Sheet

5. RESERVED (leave this space blank)

submit completed applications to:

National Register Administrator
Maryland Historical Trust
Arnold Village Professional Center
1517 Ritchie Highway
Arnold, Maryland 21012

6. Function or Use

MHT Inventory No.:

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
Domestic: Single dwelling/Residence/Farmstead	Domestic: single dwelling
Domestic: Secondary Structures/Dependencies	Domestic: Secondary structures
iculture: agricultural outbuildings	Agriculture: Agricultural Outbuildings
ommerce: Specialty Stores/Craftsmen Shops	Commerce: Specialty Stores/Craftsmen Shops
Recreation and Culture: Outdoor Recreation	Recreation and Culture: Outdoor Recreation

7. Description

Architectural Classification (enter categories from instructions)	Materials (enter categories from instructions)
	foundation Stone
Vernacular	walls Stone, Brick, Log
Colonial Revival	
	roof Metal, Wood Shingle
	other

Describe present and historic physical appearance.

DESCRIPTION SUMMARY:

The Sugarloaf Rural Historic District is an irregularly shaped area of land principally located in the southwest section of Frederick County and extending south into adjacent northwestern Montgomery County. Amidst a gently rolling Piedmont landscape, it provides a geographic transition between the flatter "plains" of the tidewater region and the mountainous terrain of Western Maryland. The district is essentially agrarian in character, with open spaces provided by large dairy and crop farms affording sweeping vistas in all directions. Sugarloaf Mountain, a monadnock rising 1,282 feet above sea level and occupying a central location within the district, is a dominant feature f the landscape. The mountain is forested with occasional stone outcroppings. Wooded acreage rediating out from the mountain provides natural coundaries between farmlands, particularly on the north, east and south sides. This area has been listed on the National Register of Natural Areas because of its significant environmental and natural resources and it adjoins the Catoctin Rural Historic District located south of the Potomac River in Loudoun County, Virginia, which is listed in the National Register of Historic Places.

The district preserves a wide range of cultrual traditions and historic landscapes with the mountain providing the focus for sweepoing vistas in all directions. The rural landscape components reflect man's interaction with the land for over two centuries. Early development involved local industries including the Johnson family iron furnace and Johan Frederich Amelung's glass manufactory and both standing structures and archaeological sites document this period of history. Agriculture has been the center of the local economy since the early 19th century and the historical traditions of the region's agriculture are shown in the farmstead designs and architecture of the farmhouses, barns, and other agricultural buildings. These designs were influenced by the cultural affiliations of the settlers which primarily consisted of Pennsylvania Germans migrating from the north and Tidewater Marylanders from the east and south. Transportation history is well-represented in the engineering structures and architecture within the district. Significant cultural traditions are also present in the layout and development of the small towns and crossroad villages. The buildings and history of Stronghold present a unique enterprise in the conservation and historic preservation field.

☐ See continuation sheet

For GENERAL DESCRIPTION, see continuation sheets.

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8. Statement of Significance MHT Inventory No.:

the significance of this property in relation to other properties:

☐ national ☐ statewide ☐ local

plicable National Register Criteria ☒ A ☒ B ☒ C ☒ D

Criteria Considerations (Exceptions) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

Areas of Significance (enter categories from instructions)

Agriculture
Architecture
Landscape Architecture
Community Planning
Economic
Transportation

Period of Significance

mid-18th century to 1939

Significant Dates

n/a

Cultural Affiliation n/a

Significant Person n/a

Architect/Builder William T. Hilton, builder

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

SIGNIFICANCE SUMMARY:

The Sugarloaf Rural Historic District is a cohesive region of cultural landscapes and natural areas oriented around the monadnock Sugarloaf Mountain. The district reflects many facets of man's interaction with the land representative of the iedmont region along the East Coast, especially in the central Maryland region. Scattered throughout the rural landscape are several small communities, including Barnesville, Comus and Dickerson. Sugarloaf Mountain attracted the earliest settlers in the region who developed industries using the natural resources of the area. These include the iron furnaces of the Johnson family and the glass manufactory of Johan Friederick Amelung. The natural resources also influenced the agricultural development and transportation network of the area. The settlement pattern involved primarily two groups: the Pennsylvania Germans from the north and the Tidewater Marylanders from the east and south. Cultural traditions from both groups involving both agriculture and architecture are part of the historical evolution of this region. The transportation history of the district includes early roads and turnpikes, the C&O Canal, The B&O Railroad, and 20th century farm to market roads. Significant engineering landmarks include the Monocacy River Aqueduct, the Little Monocacy Viaduct, and the B&O Railroad Monocacy Viaduct. Successful conservation and historic preservation activities have also been a part of the district's history and contribute to the preservation of the cultural landscape today. The centerpiece of this program was the establishment of Stronghold by Gordon Strong and the preservation of over 3,000 acres of the mountain by a non-profit organization. The district also contains a portion of the C&O National Historic Park administered by the National Park Service, the Monocacy Multiple Resources Area administered by the Maryland Department of Natural Resources, and easements held by national and state agencies. Public conservation efforts also include a county-wide historic preservation plan and transfer of development rights program in Montgomery County and agricultural easements purchased under the Maryland Agricultural Land Preservation program.

☐ See continuation sheet

For HISTORIC CONTEXT and MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN data, see continuation sheets.

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9. Major Bibliographical References MHT Inventory No.:

see attached continuation sheets

[XX] See continuation sheet

Previous documentation on file (NPS):

- [ ] preliminary determination of individual listing (36 CFR 67) has been requested
- [ ] previously listed in the National Register
- [ ] previously determined eligible by the National Register
- [ ] designated a National Historic Landmark
- [ ] recorded by Historic American Buildings Survey # _____
- [ ] recorded by Historic American Engineering Record # _____

Primary location of additional data:

- [XX] State historic preservation office
- [ ] Other State agency
- [ ] Federal agency
- [ ] Local government
- [ ] University
- [ ] Other

Specify repository:
Maryland Historical Trust
21 State Circle, Annapolis, MD

Geographical Data

Acreage of property approximately 16,000 acres

USGS quad _____

UTM References

	Zone	Easting	Northing		Zone	Easting	Northing
A				B			
C				D			

[ ] See continuation sheet

Verbal Boundary Description

[X] See continuation sheet

Boundary Justification

[X] See continuation sheet

Form Prepared By

name/title Sugarloaf Regional Trails - Joseph M. Getty, Frederick Gutheim
organization _____ date April 1990
street & number 23720 Mt. Ephraim Road telephone (301) 972-8375
city or town Dickerson state MD zip code 20753

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MAJOR BIBLIOGRAPHICAL REFERENCES

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Description

The Sugarloaf Mountain Historic District is an irregularly shaped area of land principally located in the southwest section of Frederick County and extending south into adjacent northwestern Montgomery County. Amidst a gently rolling Piedmont landscape, it provides a geographic transition between the flatter "plains" of the tidewater region and the mountainous terrain of western Maryland. The district is essentially agrarian in character, with open spaces provided by large dairy and crop farms affording sweeping vistas in all directions (Photo 1, 2, & 3). Sugarloaf Mountain, a monadnock rising 1,282 feet above sea level and occupying a central location within the district, is a dominant feature of the landscape. The mountain is forested with occasional stone outcroppings. Wooded acreage radiating out from the mountain provides natural boundaries between farmlands, particularly on the north, east and south sides (Photos 4, 5, & 6). This area has been listed on the National Register of Natural Areas because of its significant environmental and natural resources. The district also adjoins part of the Catoctin Rural Historic District, a 25,000 acre district in Loudoun County, Virginia, that is listed on the National Register of Historic Places. The outline for documention of landscape characteristics provided in *National Register Bulletin 30: How to Identify, Evaluate, and Register Rural Historic Landscapes* has been used to organize the material in the description section.

Patterns of landscape spatial organization

The rural landscape components in the Sugarloaf historic district focus on the role of Sugarloaf Mountain as a natural landform. Landscape spatial organization refers to the large-scale relationships among major material components, predominent landforms, and natural features. Sugarloaf Mountain as a predominant natural feature determined many features of settlement and development within this region.

The rough terrain of the mountain limited settlement of the slopes themselves, but the timber and geological resources located here led to early interest in the region for the local economy. Exploitation of the mineral and forest resources led to a road system that circles the mountain. Small villages were established at the foot of the mountain to house the workers of the local industries and their families. The rolling topography of the foothills provided rich agricultural lands that were developed as farmsteads. The waterways that traverse the region provided some early transportation routes as well as power for local industry and mills.

Despite the proximity of the district to the urbanized corridor along Interstate Highway 270 reaching from Washington, D.C., into Frederick County, the Sugarloaf area remains essentially free from development and has an atmosphere of quiet isolation. The large farms adjoining the mountain seem to flow naturally into one another, their farmhouses and related structures providing a sense of visual continuity (Photo 7). The farms, mountain, and Monocacy River are linked together by a system of narrow country roads. Ranging from macadam to dirt, these follow winding routes that in several instances were established trails and wagon routes long before the advent of the automobile. A report titled "Proposal for a Rural/Rustic Roads Program, Montgomery County, Maryland, March 1990" identifies all of the routes surrounding Sugarloaf as meeting the qualifications for designation and protection under the proposed program.

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Although much of the district's historical significance is based on it's early industrial development, the manufacture of iron and glass, to an uninformed visitor, few structures within the district obviously relate to these activities. Most of the industrial sites, excluding the houses erected by the early industrialists, are of an archaeological nature. Many such sites exist, although to a great extent they are unmarked and only a few are accessible to the general public.

Few 20th century intrusions have occurred within the district. Two power lines that pass through portions of the district on the north, south and east sides are visually detrimental to the district. The local economy is promarily agricultural with some commercial support services. Commercial operations generally fit into the ambience of the district such as the Comus Inn, located in a 19th century farmhouse in Comus, and the fish hatchery at Lily Pons. Recent subdivision activity including the Columbia-Comus tract and individual lots along Route 109 introduce new land development and architectural features to the district but have not greatly impacted the cohesiveness of the tradition landscape. Scattered throughout the district are mid-20th century houses that do not contribute to its architectural or historic significance.

Considering the kinds of development that have occurred elsewhere in the region, the Sugarloaf Mountain area is, overall, a unique survival of a now rare landscape and way of life. Much of the mountain's preservation is due to the foresight of Gordon Strong who began in 1902 to acquire extensive acreage here, eventually including most of the mountain itself. Strong's 3,000 acres are now maintained by Stronghold, Incorporated as a private preserve open to the public. Similar occurrences which will hopefully insure against development of an adverse nature are the acquisition of 2,000 acres (encompassing many of the principal industrial sites along the Monocacy at Furnace Ford) by the State of Maryland, ownership of the C&O Canal by the Department of the Interior and the activities of Sugarloaf Regional Trails, a non-profit planning organization sponsored by Stronghold, Inc. Sugarloaf Regional Trails developed interpretive histories of the immediate area and seminars on local environmental and historic preservation, and devised and published a series of trail guides for the use and education of visitors to the area.

Major Boundary Elements

Rural historic districts are defined by cultural, political and natural boundaries. The boundaries for the Sugarloaf historic district are based primarily on the cultural identity of the region and demarcated by the natural characteristics and physical features with the monadnock of Sugarloaf Mountain as the focus. The boundary has been delineated to protect the essence of the district and provides a broad perspective on the historic, cultural and natural resources of the Sugarloaf region.

The Sugarloaf Historic District has been defined to reflect the historical character of the area as a whole; the reciprocity of views - to the mountain and from the mountain; specific historic sites that illustrate the vernacular architecture of the region, throughout successive historical periods; and historical significance as exemplified in the region's industry, agriculture, transportation, construction.

To define the history of this resource, a description of the district's boundaries beginning at Comus is provided. Comus is a crossroads settlement of the later 19th century that was originally a crossroads village known as Johnsonville. It offers commanding panoramas of the Sugarloaf monadnock which runs from north to south

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parallel to Rte. 109 (Old Hundred Road; also called Barnesville-Hyattstown Road). In this complex of white-painted clapboard houses the Comus Inn is representative, although larger than its neighbors. A wide-ranging view of the mountain is found about 750 yards farther south on Route 109 - one forming the subject for a mural painting of the New Deal era in the Rockville Post Office on Court House Square. But good views of the mountain will be found for nearly a mile along this ridge. In the far distance the Catoctins and Blue Ridge can be seen. To the east are the Martin, Johnson and other large dairy farms typical of the agriculture circa 1910-1960 (Photos 8 & 9). Farther along on the west side is Hough's apple orchard (peaches also) that is also typical of the area, as on Peach Tree Road. Passing a wooded stretch of the road takes us down to a branch of the Little Monocacy, the main stream flowing from the east side of Sugarloaf.

The boundary takes in the lots on the northeast corner of Comus and continues to the east along Comus Road with the northern edge of the road forming the boundary. At Thompson's Corner (the intersection of Comus Road and Peach Tree Road), the boundary turns south and follows the eastern edge of Peach Tree Road, which is called Ridge Road on the U.S.G.S. topographic maps, down to the intersection of the B. & O. Railroad tracks at Sellman. This area west of Peach Tree Road consists of farms, woodland and some large lot modern housing and is included in the district for its vistas of Sugarloaf Mountain and for the protection of the scenic countryside east and south of the village of Barnesville. In Barnesville, the rolling Piedmont character of the landscape is experienced, with views of Sugarloaf's south flank. The large Hays dairy farm on the right along Barnesville Road, and the Breger peach orchard on the left a little farther along are representative of an agriculture that has prevailed here for nearly a century. The Hays farm has been in the same family for several generations. The Hays family also own one of the few surviving mountain lots on Sugarloaf where building materials, fence posts and rails and firewood are cut which preserves an early cultural tradition. Beyond the orchard the road runs down to the Little Monocacy, here a larger stream. The rise on the west side presents the Carlisle Ensor farm, the largest dairy farm in the region and cornerstone of a larger than 1,000 acre farming operation, much of it on leased land - another illustration of the impact of mechanization on commercial farming in this region.

At Sellman, the boundary follows Sellman Road to the west to include within the district the lots fronting on the south side of the railroad which have traditionally had industrial uses. At the intersection of Sellman Road with Beallsville Road, the boundary follows the southern edge of the B. & O. Railroad right-of-way. This boundary encompasses the southern view of the Breger orchard and the Dayhoff farm north of Dickerson at Mount Ephraim Road, another of the very large farming operations in the region, marked seasonally by corn, winter wheat, soy beans, barley, alfalfa as well as a large dairy herd.

The boundary encircles the historic section of the railroad community of Dickerson (1873) by following the property lines of lots within the village. On the west side of the village, the boundary again follows the B. & O. Railroad until its intersection with the Mouth of Monocacy Road which runs down to the Potomac at the seven-arched aqueduct carrying the C & O Canal across the Monocacy River (Photo 10). Further views of Sugarloaf are seen to the north as the boundary continues along a tributary down to the Monocacy and then follows the west bank of the Monocacy to the north (Photo 11). At the Route 28 bridge, one has entered the 2,000 acres Monocacy Multiple Resource Area, owned by the Maryland State Department of Natural Resources. This part of the historic district is significant during the prehistoric and early historic periods because of its Indian

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trails, hunting camp sites, 17th century French fur trading stations and other archaeological sites.

Lying within this historic district, just before Rte 28 crosses the river, is the early iron furnace of Roger Johnson, youngest brother of Thomas Johnson, Maryland's first governor. He lived at Rock Hall, up the hill to the northeast. Pig iron from Johnson's furnace was processed into bar iron, the article of commerce, at the Bloomery Forge near Urbana, the two operations being connected by barge along the Monocacy and Bennett Creek, and by the Mount Ephraim and Mountain Roads built by this early enterpriser.

Shortly after crossing the Monocacy, the historic district boundary turns north onto Park Mills Road. Along this route one sees Sugarloaf Mountain's west side, with views of the fertile Frederick Valley on the left. Also within view is Lily Pons, a flood plain complex where aquatic plants are produced, an adaptive use of the former fish ponds. Farm houses of brick, stone and wood and extensive barns and dependencies line this road through increasingly rugged landscapes until the early settlement of Park Mills (formerly called Fleecy Dale) is reached.

At the upper end of the village a private road turns toward Mountvina, the two-story brick mansion built ca. 1785 by Johann Friedrich Amelung whose glass factory produced both window panes and household glassware for the early republic as well as the "presentation glass" exhibited in the Metropolitan Museum of Art in New York City and the Yale University Fine Arts Collection. Important archaeological discoveries have been made here.

Before reaching the hilltop village of Flint Hill, with its views of Sugarloaf's exposed rock face to the west (Photo 12), and the distant Catoctins and Frederick valley, the district boundary turns west along Peter Road (which parallels Bennett Creek.) The higher rugged land traversed by Peter Road crossed the north end of Sugarloaf Mountain. Farms here are devoted to beef cattle sheep, or the northern crop of hay. Farmsteads are more modest in size. Many areas are heavily wooded. Peter Road finds its first significant intersection at Thurston Road where the district boundary turns south along the south fork, Little Bennett Creek. Here one is travelling the historic road built by Roger Johnson from Furnace Ford to the Bloomery.

Thurston Road continues to rise from the stream bottom through the woods to the heights above its junction with Comus Road where it turns south, past the historic Mountain Chapel, built by William Hilton, the Barnesville carpenter-builder whose works are frequently encountered throughout the Sugarloaf Historic District. The boundary closes at Comus Inn.

The route described is inseparable from Sugarloaf Mountain. Throughout the district, the mountain serves as a focus for the natural and cultural landscape. An additional historic theme is conservation and the work of Gordon Strong, whose vision led him to assemble the 3,000 acres of Sugarloaf Mountain and create it as a protected natural resource through the formation of Stronghold, Inc. Conservation activities at the local, state and national level through public and private initiatives have also supported the preservation of this district.

Land use

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Human activities in the Sugarloaf help to define the rural historic district. The exploitation of mineral resources in the 18th and early 19th century was ended primarily due to economic restructuring of the nation's economy as a result of the Industrial Revolution. Some historical illustrations of the mountain provide a view of this era in its history, including scenes from when the mountain was occupied by Union forces during the Civil War (Photo 13 & 14). Mining and industrial use of the mountain has given way to recreational uses.

Primary land uses today include woodland, pastures and agricultural fields. The agricultural land continues to be tilled although the traditional practices have been adapted to modern agricultural techniques in the 20th century. This has primarily resulted in a change in field patterns with strip cropping, no-till farming and large field sizes compatible to highly mechanized agriculture.

There has also been some conversion of land use to modern residential. Zoning provisions and market conditions create a non-traditional pattern of large-lot residential or farmette development. An example can be seen at the Columbia-Comus tract north of Comus Road. The large amount of land in conservation areas provides for the long-term preservation of the historic district.

Response to Natural Features and Vegetation Related to Land Use

The most prominent natural feature and the visual focal point for a wide-ranging landscape throughout the region is the monadnock Sugarloaf Mountain. The geology of the mountain is a syncline with a tight overturned fold which is bent into the shape of a horseshoe that opens southward. The crest of Sugarloaf Mountain peak is about 1300 feet in altitude and stands 800 feet above the general level of the Piedmont upland. Its high cliffs on the west and south sides are made of thick-bedded white quartzites while the lower ledge-making quartzites, some stained bright red from iron oxide, form irregular-trending rocky spurs descending to the base of the mountain. These are known as "Sugarloaf Mountain quartzites" and the grade downward into the Ijamsville phyllite, Urbana phyllite and associated quartzites of the Piedmont upland.

Sugarloaf Mountain projects out as a large area of upland forests amidst a Piedmont landscape of rolling terrain marked by agricultural fields. Ecologist Stanwyn G. Shetler describes the natural resources as an agricultural countryside ecosystem:

> In major features it blends in with all the other farming parcels, which consist of cultivated fields, pastures, hayfields, fencerows, farmsteads, orchards, small stream valleys, and roadsides. Here and there, portions of the land have been taken out of intensive agriculture in recent years and allowed to revert to old-field succession. These quickly become rich pockets of local flora and fauna. Hardwood forests once covered the entire region, but most areas have been cut over and cleared for agriculture for nearly three centuries. An agricultural land use and economy began to take shape in the early 19th century. Apparently, substantial clearing continued into the late 19th century, however, and the present remnant pattern in which the forest is reduced to the vanishing point has existed for only about a hundred years. The typical forest remnant occupies steep or rocky slopes, stream bottoms, edges, and other sites that have proved unsuitable for farming. It consists of small woodlots, orchards, shade trees around dwellings and in pastures, and narrow files of trees along roadsides, fences, and watercourses...The fauna

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and flora are similar and shared throughout the agricultural countryside around Sugarloaf Mountain. The forest remnant of the area is dominated by oaks, primarily red and white oaks. Other species of trees are beech, hickories, black locust, red maple, tulip-poplar and an occasional black walnut. Flowering dogwood is a frequent understory tree. In the stream valleys, sycamore, American elm, pin oak, river birch and willows occur. Virginia or scrub pine is a ubiquitous successional tree, and aspen (big-toothed) invades old fields and roadsides. The pockets of woodlands harbor pockets of typical hardwood ground flora, including such choice spring wildflowers as bloodroot, hepatica, and trout-lily, to mention only a few. These pocket flower gardens are vestige outposts of the once widespread forest flora, and their preservation rests with the preservation of the forest remnant.

The Sugarloaf region is well known to local birders for its rich birdlife both during migration and year-round... The open rural landscape affords safe passage to an amazing diversity of spring and fall migrants and to residents that occupy the mountain stronghold but make regular forays into the surrounding countryside. The countryside itself, despite its apparent habitat uniformity at first glance, really is a mosaic of diversse vest-pocket habitats and biotic communities, which provide food and shelter not only for migrants but for many summering and/or wintering species. The open space around Sugarloaf Mountain is favored soaring space for hawks (especially red-tailed and red-shouldered) and vultures, both the black and turkey vultures. In winter, such open-country raptors as short-eared owls and rough-legged hawks frequently are among the northern visitors. Among the increasingly uncommon species of the fields, grasshopper and vesper sparrows, horned larks, ring-necked pheasants, bobwhite quail, and even upland sandpipers and dickcissels are known to nest in the Sugarloaf region. Fence row and edge thickets harbor sparrows and thrushes. King fishers, green herons, and wook ducks range along the streams in summer. Pileated and red-headed woodpeckers can still be found in the woodlots, which also provicde a haven for migrating warblers, vireos, and other species. Farmstead trees and orchards are home to orioles, wrens, robins, and bluebirds, still a common sight here in the open country. The buildings harbor swallows and barn owls. Red and gray foxes, rabbits, raccoons, opossums, skunks, and white-tailed deer roam the countryside, and squirrels are common in the woods. For the mammals as well as the birds, the mountain and the countryside are all part of the same habitat.

Details of the large-scale patterns have changed over time, such as the reforestation of the mountain. However, the spatial patterns and elements have remained fairly consistent in the history of the region. The panoramic views to and from the mountain are preserved primarily by the continuity of land use within the region.

Circulation networks

The current road system retains strong relationships to the early transportation routes around Sugarloaf Mountain. The mountain itself provided an obstacle for early travel so the major east-west routes, including roads, the C&O Canal, and the railroad, follow along the Potomac River corridor. Secondary roads formed a network that encircled Sugarloaf mountain. The earliest circulation route of iron furnace trade followed the streams. Various aspects of the circulation network are described in the book *Circling*

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Historic Landscapes: Bicycling, Canoeing & Walking Trails near Sugarloaf Mountain published by Sugarloaf Regional Trails in 1980..

Early settlement in the Sugarloaf area occurred primarily to create industry aimed to exploit the available resources. A transportation network was then necessary to make these industries economical. Perhaps in no element of the history of the area more than in transportation can be seen the dynamics of regional growth: the canoe and pack horse trails, the canal and turnpike, the railroad and the highway - down to today's Concorde roaring overhead daily at 1:15 p.m. precisely - offer a varied interpretation of the fortunes of the region, as reflected in the landscape itself.

The most significant of the early industries were the iron works of the Thomas Johnson family headed by the youngest brother, Roger Johnson. The Johnson family used "bank ore," surface deposits extracted along stream banks. Cast iron (pig iron) was the product of his establishment at Furnace Ford. Surface mining of iron ore and limestone, with charcoal made from the Sugarloaf forest were the raw materials of this operation. To make bar iron (the principle article of commerce) Johnson's pig iron was taken in shallow draft barges, at seasons of high water, up the Monocacy and Bennett Creek to the Bloomery forge near Urbana. The demands of the Revolutionary War stimulated this production of iron. Later Johnson built a road, now designated as Sugarloaf Mountain Road, along which ox teams hauled the pig iron to the Bloomery. The iron works yielded in the 1830s to the iron works elsewhere that were more competitive because they commanded better grades of ore, had the railroad for transportation and had access to coal.

The early transportation system that provided for removal of natural resources was primarily roads and rivers. The first public roads led from Georgetown to Frederick and 1774 public monies provided for the upkeep of these roads. During the early 19th century, the road network multiplied rapidly. The Old Baltimore Road at Barnesville led from the Mouth of Monocacy, connecting with Mt. Ephraim, and then to Baltimore. The 1873 Montgomery County Atlas shows a diverse road network that circled around Sugarloaf Mountain (the northern and eastern parts of this traditional road network are the same as the historic district boundaries today). The road from Barnesville to Frederick City (now West Harris Road) went to Park Mills; Peter Road at the northern boundary of district connected Flint Hill and Bloomsbury (R. Johnson Bloomery Forge) to what is now Thurston Road (both run along Bennett Creek). This pattern continued to connect to Mt. Ephraim and at Linthicum a branch road continued to the east. To the west of this road system south of Bennett Creek is Park Mills Road.

In a much-remarked coincidence on July 4, 1828, the first shovelful of dirt was removed in Washington to begin construction of the Chesapeake and Ohio Canal, while simultaneously in Baltimore construction started on the Baltimore and Ohio Railroad. The two modes of travel to the west were in hot competition for the next two decades (Photo 15). More than the dramatic episodes of construction was the effect of these new modes of transportation in accelerating the concentration and specializations of America's industry, agriculture and urbanization. In the Sugarloaf region, the local merchant furnaces yielded to Pittsburgh. Local grist and flour mills began the transition to industrialized processes that eventually favored the large-scale Midwest mills.

Construction of the new modes of transportation brought a temporary boom during construction, but more notably greater access to markets. The first impact to the Sugarloaf District was improved access to Baltimore. Not until 1833 did the completion of the 516-foot long, seven-arch aqueduct over the Monocacy mark the arrival of the canal from

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Georgetown. The Metropolitan Branch of the B & O Railroad was built in 1873, and further construction of stations and replacement of temporary wood trestles with masonry arch as at the Little Monocacy occurred in 1906. The railroad brought summer visitors, commuters and jobs for construction workers. it spawned new local industries and took diary products to Washington markets. Increased prosperity opened new post offices at Dickerson and Sellsman (Barnesville). As throughout the nation, the railroad revolutionized the old local life and restructured the community to the national influences.

Major transportation changes also occurred in the early 20th century with hard roads, automobiles and trucks. Heralded by the bicyclists' demands for hard roads, "Centurians" from Washington made the trip to Sugarloaf a popular objective of a day's outing. It was on such a trip at the turn of the century that Gordon Strong discovered the mountain that he would one day own.

More important as an agent of change was the farm-to-market roads. One popular form of these rural roads in the Sugarloaf district was a single lane concrete strip with dirt lanes to either side edged by fieldstone walls. Called "politician's paths," such roads brought the greatest benefit to the largest number of rural voters. As traffic increased, the concrete lane was flanked by asphalt and eventually paved over altogether, as with Mount Ephraim Road. Embraced in the State Roads network, historic roads like Park Mills and Old Hundred Roads joined earlier designated Route 28 with its strategic crossing of the Monocacy. Many historic and scenic routes remained unpaved landmarks such as Peter Road, Mount Ephraim Road or West Harris Road. Mouth of Monocacy Road now provides access to the C&O Canal National Historic Park.

Significant architectural and engineering structures relative to the development of transportation in the Sugarloaf district include the Monocacy River Aqueduct, Baltimore and Ohio Railroad Viaduct, Little Monocacy Viaduct, Maryland Route 28 Bridge over the Monocacy (Photo 16), Barnesville station, and the Dickerson station.

Cultural Traditions and Structural Types

The Sugarloaf Mountain Historic District preserves a wide range of cultural traditions and historic landscapes with large farms surrounding the mountain providing sweeping vistas in all directions. Although the influence of early German settlement in this area and distinct regional characteristics (especially before 1830) are apparent, a variety of building materials and styles is in evidence. Many of the finer early structures are of stone; there are a number of dwellings and small dependencies manufactured of local brick; log structures span the entire 19th and early 20th centuries; and industrial sites range from 18th century iron and glass enterprises to 19th century structures related to the C&O Canal and the B&O Railroad.

Several hundred structures of various types exist within the district, with agriculturally related buildings constituting about one-half of this number. The majority of these structures date from about 1840 to 1925; less than one-fifth are known to date earlier. During the period when this particular area experienced its greatest industrial development, stone was the most popular building material. Many of the district's finer early buildings were constructed of log and log structures continued to be built here well into the early 20th century (Photo 17). There are also a number of brick dwellings and small dependencies, but the use of brick as a building material does not seem to have become popular until about

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the end of the second quarter of the 19th century, undoubtedly due to the lack of necessary materials and labor.

Most of the existing 19th century brick houses were probably built of brick made at Buckeystown, Frederick or elsewhere in the vicinity where commercial brick kilns were established. One exception to this is Mountvina (site No. 16), a fine Georgian house built in 1785 by Johann F. Amelung, founder of the New Bremen Glass Works. Its brick appears to have been made near the site of the house, although it is possible that it was prepared somewhere closer to the Potomac or Frederick. Mountvina is the only known 18th century brick house located within the district. By about 1850, when several saw mills had been established, frame construction became more common, and many of the buildings erected here between 1785 and 1925 are frame structures.

Despite the variety of building materials, all of the dwellings relate to one another in their overall architectural styling and detail. Distinct regional characteristics, especially evident on houses erected after about 1850, include symmetrical facades, interior end chimneys and two-part plans that include a two-story main block with a lower two-story wing located either at the end or to the rear. The wings usually were fronted by a two-story galleried porch. The influence of the regions early settlement by Germans is evident in an overall appearance of simplicity and solidity, a characteristic trait of most western Maryland architecture.

A representative complex of a farm house with its preserved outbuildings is the Farr Farm. The farmhouse fits into the regional style of a two--story, five-bay by two-bay main block with an ell wing, gable roof and symmetrical facade(Photo 18). This brick structure has a centrally-located entrance on the main facade and the windows on the first story are taller than those on the second story. It has had additions to the rear of the house, but the integrity of the 19th century farmhouse has been preserved. Also as part of the farmstead is a late 19th century bank barn (Photo 19). The barn has a stone foundation and a stone ramp on the west elevation. It is a timber-framed barn with vertical siding and round-arched louvers. The gable roof iw capped with three ventilator cupolas. The complex also includes two log outbuildings (Photos 20 & 21). The is a log corncrib consisting of two log pens with a central area open as a wagon shed. It is covered with a gable roof and the spaces between the logs are not chinked. The other log building is a meat house and consists of a single log pen with chinked logs, gable roof, no windows and a gable-front main facade with a single four-paneled door. Both the these log structures have V-notched corners and they represent typical agricultural outbuildings of the 19th century. The site also contains several 20th century farm buildings including a frame chickenhouse on a brick foundation (Photo 22).

One of the major visual features of the cultural landscape throughout the Sugarloaf Historic District are the large bank barns (Photo 23). These barns are part of the vernacular architectural tradition in this region. The earliest barns were constructed of log and used to shelter livestock although no log barns are known to survive within the district. One characteristic of the bank barn design is the projecting forebay to shelter livestock from the prevailing winds. The typical siting of the barn was with the forebay oriented towards the south or southeast. The standard design of these barns includes a foundation dug into the hillside and constructed of stone. Construction into a bank provided ground level access to the main floor. The foundation level was used for the shelter of livestock and the wall under the forebay had several doors that opened into aisles leading to the bank wall at the rear. Usually along the bank wall was an aisle running the length of the barn. Between the aisles were stalls for cattle, horses, a tack room and cellars. The stalls were equipped with

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a trough for water and hay racks to hold fodder for feeding the livestock. The main level of the barn contained a central threshing floor with hay mows on both sides. Doors open at each end of the threshing floor. During the early 20th century, silos built of staves, concrete or tile were constructed adjoining the barns and are also part of the visual features in the Sugarloaf landscape (Photo 24).

During the height of its industrial development in the last quarter of the 18th century and the first quarter of the 19th, the immediate area encompassing Sugarloaf Mountain was settled and largely cleared. A few large farm complexes existed along with numerous small subsistence farms. An extensive amount of land was owned by the four Johnson brothers: Thomas, Roger, Baker and James.

The abundance of raw materials had to be steadily worked to continue the operations of the various Johnson enterprises. The use of charcoal, for instance, was a necessary part of iron production, and before the iron furnaces ceased operations in the early 19th century thousands of acres of surrounding forest had been stripped bare. The around-the-clock maintenance of the furnaces required the workers and their families to remain close by, usually in clusters of small dwellings built for them by the owners.

With the decline of these industries in the early 19th century, the lands were gradually sold and converted to agricultural use. Beginning about 1820, farming activities continued to increase steadily until a nearly complete transformation from industry to agriculture had taken place by the middle of the century. Agriculture continues to be the chief occupation in the district today.

Some of the prominent and representative examples of the district's archtecture are listed below:

Amelung House (Mountvina) and the New Bremen Glass Factory ARCHEOLOGICAL SITE (MHT-54) (Individually listed on the National Register.): Built by Johann Friedrich Amelung in about 1785, this two-story brick house has several features not ordinarily found in the region--a high watertable and a brick beltcourse (Photo 25). The principal facade, facing the former factory site, is six bays in width. The transomed entrance door occupies the third bay from the southeast corner. The windows frame sash of twelve-over twelve panes and have flat-arched lintels. The gable roof, with a single flush chimney at each end, has a boxed cornice decorated with modillion blocks. Original woodwork from two principal rooms has been removed and is in storage in Baltimore.

Amelung's home is all that remains of the New Bremen Glass Factory, an extensive industrial complex that once supported as many as 342 employees and produced the finest glass in America at the time. Established about 1785, the glassworks were unfortunately short lived. A disastrous fire preceded by financial difficulties forced the operation to cease shortly after 1795. A stone outbuilding survives that depicts the industrial nature of the architecture of the site (Photo 26). Several of the principal structures, including one of the glass houses, have been excavated and recorded by Colonial Williamsburg and others.

Johnson Furnace: (Individually listed on the National Register.) Today only scattered remains mark the site of what was once a remarkable complex of industrial sites extending from this point west to Point of Rocks and north to Catoctin Furnace at Thurmont (Photo 27).

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The Johnson furnace is believed to have commenced operations in about 1785. Not quite as large as Catoctin Furnace, It produced 12 to 15 tons of pig iron per week, a large percentage of which was probably sent by wagon to the Bloomsbury Forge (No. 13) for working into bars.

The existing remains of the furnace, located on the north bank of Furnace Creek just above the intersection of Maryland Rte. 28 and the Monocacy River, indicate that it was a "broad based pyramidal structure about 30 feet square at the base tapering to 18 to 20 feet across the top, built of sandstone quarried further upstream. Its height was probably 25 feet, and its bosh--the widest part of the firepot--about 8 feet across."

There were undoubtedly other structures in addition to the furnace stack--casting houses, storehouses and workers' cottages among others, but no traces survive above-ground of any of these except the charcoal storehouse. Evidence of a system of trails and wagon roads and several quarry sites are clearly discernible.

In 1793 the original owners, brothers Thomas, James, Baker and Roger Johnson, dissolved their partnership, with Roger assuming ownership of the furnace and forge. He continued its operation until about 1822 or 1823.

Old Forge Farm (Bloomsbury: MHT-311): The original construction date of this ivy-covered stone house has not yet been sufficiently documented, but it is probable that it was built at about the same time that Roger Johnson established an iron forge here in 1789 (Photo 28). The main block of the two-part house is of local stone, two stories high beneath a gable roof. The principal (north) facade is five bays wide with the door centered. windows are six-over-nine on the first floor and six-over-six on the second. A single flush gable chimney stands at each end of the roof. Most of the original woodwork and hardware has been retained. At one end stands a modern, one-story, two-bay stucco addition.

The house is the only building remaining intact among the several structures that made up this small industrial complex. In 1964 the site was visited by representatives of Colonial Williamsburg and Corning Glass who documented the location of the forge, a dam spanning Bennett Creek, the foundations of several workers' cottages and other related structures. The forge is where pig iron brought from the main Johnson furnace near Rock Hall (21) was worked into wrought iron (bar iron) for the manufacture of hardware and other products.

Monocacy Aqueduct (Individually listed on the National Register.): Extending across the Chesapeake and Ohio Canal for a length of 560 feet, this seven-arch aqueduct is one of the finest examples of canal-related architecture along the canal route (Photo 29). Built between the years 1829 and 1833 by skilled Irish stonemasons, it is currently being stabilized under the supervision of the National Park Service. Stone for the aqueduct came from the Johnson quarries north of Rock Hall. The metal railing along the Aqueduct is worn from the ropes of the canal boats (Photo 30).

Little Monocacy Viaduct: When the Metropolitan Line of the B & O was completed in 1873, there were two permanent stone bridges built along the line, one at Rock Creek and one over the Monocacy. This crossing at the Little Monocacy was, like the other crossing, a wooden trestlework. During the early 20th century, these were replaced with masonry and steel structures. This was wan constructed in 1906-07 as a double piered, three-arch stone bridge (Photo 31). It is roughly 400 feet long and 70 feet from parapet to streambed.

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Monocacy Viaduct, Baltimore and Ohio Railroad: Just upriver from the Monocacy Aqueduct is the B & O Viaduct, an impressive structure of sandstone, limestone and white quartzite, the latter from the Johnson quarries. Seven hundred feet long and 75 feet high, it is now taller than the original structure erected in 1870, having been strengthened by the addition of three additional piers and raised to its present height in about 1900 (Photo 32).

Isaac Davis House (MHT-317): A two-story, ell-shaped brick farmhouse, the Davis House was built in two parts, the front section being the earlier (Photo 33). Probably of mid-19th century date, it has a formal five-bay facade featuring an entrance door with over and side lights beneath a bracketed wood lintel. Windows are of six-over-six sash with louvered shutters and bracketed lintels. Nearby are several good barns and related outbuildings.

Log House (MHT-344): Built against the sloping hill side, this two-story structure has a three-bay facade over an elevated basement. At the rear is a two-story frame wing. A centered stove chimney rises from the front roof. Attractively maintained, the house probably dates from the second half of the 19th century.

Rock Hall: The main block of this two-part house is believed to have been built circa 1812 (Photo 34). Of local sandstone, it is three bays wide with the transomed entrance door occupying an end bay. A single flush gable chimney rises from each end of the roof ridge. On the interior the existing three-room first floor plan constitutes a conversion of the original four-room plan. The woodwork, including mantels, cupboards, doors and trim, employs a simplified classical motif popular during this period. Much of the hardware also appears to be original. The roof is heavily framed, utilizing purlins, principal rafters and wind braces, and probably originally supported a slate covering as it does today. The boxed exterior eave cornices are embellished with fretwork on the bed moulding. At the north end of the house is a two-story stone wing fronted by a galleried porch. It contains two first and two second floor rooms. Beneath the main block is a two-room cellar that partially extends into the wing, which is believed to be of a slightly later date than the main block, although there is evidence to suggest that it incorporated an earlier detached or semi-detached kitchen.

Near the north end of the house stands a small log structure that is believed to date from the mid-19th century, but which has ceiling joists removed from an earlier building. A large bank barn of relatively recent date incorporates an earlier stone silo, possibly a surviving portion of the stone barn mentioned in the accounts of Roger Johnson for the year 1815. Though it is doubtful that he ever lived here, Rock Hall was built for Roger Johnson during his tenure as sole owner of the nearby furnace. While he retained title to the property, it served as the residence of one of his sons, Joseph A. Johnson. The property is now owned by the State of Maryland, Department of Natural Resources.

Heritage Hills (MHT-314): Heritage Hills is a two-part stone house in excellent condition and attractively maintained. Built by or for Richard Johnson, eldest son off Roger Johnson, the main block is three bays wide with a centered door and two stories high beneath a gable roof. A single flush gable chimney rises at each end of the roof. The wing, also of two stories but lower than the main block, is fronted by a galleried porch. Heritage Hills was probably built during the first quarter of the 19th century, although it may be somewhat earlier.

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Wellcome Farms (Bloomsbury MHT-60): The oldest part of this large, three-part stone house is believed to have been a log structure that was later extensively remodeled and is now incorporated into the two-story northwest wing of the existing building. Though not a truly formal house, it is nevertheless a physically commanding structure notable for its architecture and setting.

On the southwest front the centered main block is four bays wide with the main entrance door occupying the third bay from the southeast corner. The gable roof is unbroken and has a single flush gable chimney at each end. The northwest wing is also of two stories with the front wall flush with that of the main block. It has a single window at each floor level and a chimney at the northwest end of the gable roof. The southeast wing, of more recent date, is one story with a single first floor window. Directly behind the house is a row of several early dependencies, including a one-story, log slave quarter. Bloomsbury, now called Wellcome Farms, was purchased by Thomas Johnson in 1763 and first occupied by Roger Johnson in 1774-75. At that time, it is generally believed, he enlarged an existing structure, later, in about 1790-1810, adding the present center section. Roger Johnson remained at Bloomsbury until his death in 1831.

Mount Ephraim (M-NCPPC 12-1): A simple, regionally characteristic, ell-shaped brick house, Mount Ephraim, so named for its original owner, Ephraim Harris, was extensively modernized in 1941. Built in 1868 by William T. Hilton of nearby Barnesville, the house is two stories tall and was initially fronted by a one-story bracketed porch and center gabled. The two-story porch on the south side was retained. The house has been documented through photography in the Historic American Buildings Survey.

Prior to the rise of Dickerson three miles west when the Metropolitan Branch of the Baltimore and Ohio Railroad was completed in 1873, Mt. Ephraim was the name of not only the house, but also the locality, once a community of half a dozen houses and a store. The foundations of Ephraim Harris' store on the Mt. Ephraim property (at the SW corner of Harris and Mt. Ephraim Road) is a reminder of the importance of Mt. Ephraim Road, running from Barnesville to Park Mills -- the old route to Buckeystown.

Harris House (MNCPPC 12-2): There are two houses on this property. The earlier, probably of early 19th century date, is a one-story log structure that was initially built as a one-room house with an exterior chimney. It was subsequently extended on the chimney end with a recessed opening provided on one side of the chimney between the two parts of the house.

The second house, built about 1870, stands north of the first. Its two-story main block is of log construction and has a frame rear wing. The principal facade has a centered door with two flanking windows and three windows above. Fronting the house is a two-story, galleried porch. The house has two end chimneys, one internal and the other external. Windows are of two-over-two sash and the boxed cornices have gable returns. A recent frame addition to the rear is compatible.

James Pearre House (MNCPPC 12-5): A large, two-story, five-bay, stone structure built circa 1860, the Pearre House has an entrance door framed by over and side lights, first floor windows of six-over-nine panes, and two exterior chimneys at the east end. The house has been extensively remodeled, with a wing added to the south end of an earlier rear wing, the main block stucco, a front porch removed and other alterations.

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The Pearre House is particularly noteworthy for its interesting collection of dependencies, including a log smokehouse, log dairy and log corn crib.

Sugarloaf Mountain Chapel (MNCPPC 10-70): Built by William Hilton in 1861 for Otis Holland, the Sugarloaf Mountain Chapel is a simple, rectangular, brick structure in a good state of preservation. Its end facade faces south and has two first floor doors and two windows above. Both side elevations have three windows and a door and the roof is sheathed with slate. Originally a Methodist Church, the Chapel is now privately owned and used as a community church. It is surrounded on three sides by a tree-shaded cemetery.

Spates Farm (MNCPPC 10-71): A frame, two-story structure, the Spates house was probably built in the late 19th century (Photo 35). The principal facade has five bays with a centered entrance framed by over and side lights. A modernized one-story wing stands at the east end and there is a two-story rear wing. The house commands a particularly fine view of Sugarloaf Mountain.

Johnson House (MNCPPC 10-72): This small log structure is of particular interest for its false plate eaves construction, a framing technique popularly used on smaller dwellings, barns and sheds in the tidewater region from the 17th through the middle of the 19th century. Possibly dating from the late 18th century, the house has several other notable features, including two-piece chair rails and attic partition walls of vertical logs. The structure is in ruinous condition.

George Pearre House (MNCPPC 10-73): The Pearre House was initially built as a two-story, one-room deep, brick dwelling. It has a five-bay facade with a centered entrance flanked by two windows. In the early 20th century the house was enlarged by the addition of two rear rooms across the back of both floor levels. The dormered, hipped roof and interior woodwork date from this conversion. The structure and nearby barn are in ruinous condition. A family cemetery is nearby.

Peters House (MHT-310): Located close to the side of Peters Road and facing east, this pleasing two-story brick house dates from the mid-19th century. It was the mill owner's house associated with nearby Peters Mill (previously Bloomsbury Mill) and was evidently built after Thomas Peters purchased the mill property in 1857. The principal facade is five bays wide with a centered entrance door which has side and over lights beneath a bracketed wood lintel. A smaller version of the same lintel is repeated over the windows. At each end of the gable roof is a single brick chimney. The integrity of this structure is compromised by a large frame rear addition of recent date.

Yingling Stone House, Park Mills Road (MHT-1003): An ell-shaped house of local stone, this two-story dwelling has a three-bay front and a single chimney at each end of the roof (Photo 36). The house probably dates from the early to mid-19th century, with a cross gable added to the front roof slope in the late 19th century and, in more recent years, a two-story frame extension built against the south side of the two-bay rear wing.

Stone House on Park Mills Road Near Bennett Creek: The front of this otherwise attractive two-part stone house is unfortunately marred by a recent two-story frame addition that appears to have been created by enclosing the remaining portion of what was once a two-story galleried porch (Photo 37). The largest section was probably three bays wide on both floor levels, two bays of which, including the entrance, are now covered. A single chimney rises from each end of the gable roof. Against the south end stands a lower two-

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story wing, also partially covered by the frame addition. It has a later brick chimney built against the exposed south end.

Thomas House (MHT-302): A regionally typical 19th-century farmhouse, the Thomas House is a two-story brick structure with a one and one-half story rear kitchen wing (Photo 38). The three-bay principal facade faces north. The transomed entrance door was once framed by a heavy, Greek Revival-style surround, the outline of which is still seen in the surrounding brickwork. The gable roof is unbroken, has a single flush chimney at each end and sawtooth patterned brick cornices on both side elevations. The rear wing was initially constructed of frame over which a brick veneer was added; for its date an extremely unusual and interesting detail. The interior woodwork is fairly simple and characteristic of the region. However, the west parlor displays frescoed walls painted in imitation of elaborate marble and gilt panels, with similarly painted ceiling cornices and medallions.

Koontz Chapel (MHT-1000): Built by 1867, this one and one-half story frame structure with gable roof, Gothic windows and louvered shutters, was used as a school in 1867. By the time of the publication of Titus' Atlas in 1873 it was the Dixon Chapel Methodist Church. It was later renamed for Pastor William Koontz. A one-story, concrete-block wing has been added to the southwest facade of the chapel.

Cluster arrangement

There are two large-scale patterns of clustering within the Sugarloaf Historic District. One is the traditional arrangement of farmhouses and agricultural buildings on the region's farmsteads. The geography of a tract of land played an important role in the layout of an early farmstead. Prime agricultural land with well-drained fields was highly valued for acquisition in the first land grants. A settler looking for a home site first sought a spring and then considered the quality of the land around the spring with regard to its potential agricultural productivity. Topography of a house site was also important in protecting the house and barn from the winds and weather. Unfortunately there are no major studies of the proxemics of regional farmsteads in central Maryland that delineate the relationships of the farmhouses, domestic outbuildings, agricultural buildings and their landscape. From the arrangement of the farmsteads in the Sugarloaf Historic District, it appears that the cultural traditions affecting the farmstead designs are representative of the broad regional patterns found in central Maryland.

The second large-scale pattern of clustering in found in the layout and development of villages within the district. The villages of Dickerson and Barnesville basically follow a linear plan found widely throughout central Maryland. Comus is representative of a crossroads village. Park Mills represents the cluster arrangement of the 19th century whereby isolated locations would identify their community by the location of a country store and post office.

Dickerson. The village of Dickerson (MHT 12-21-1) is representative of the pattern of town development that occurred due to the construction of the Metropolitan Branch of the Baltimore and Ohio Railroad (Photo 40). The village today retains many of the rail-oriented characteristics that it possessed at the turn-of-the-century. The land which roughly comprises the town was a 217-acre fram inherited by Christy A. Dickerson in 1857 from the estate of her brother, Nathan T. Hempstone. At that time it included a frame dwelling housee, kitchen, stable, barn, tobacco house and outbuildings. Her son, William H. Dickerson moved to the farm in 1860. He established a general store and post office by

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1871, at the time the railroad was being constructed. Dickerson also opened a quarry in 1898 that served as a commercial boom to the community and resulted in the construction of a number of houses.

The village is located at the convergence of several prominent roads with the Metropolitan Branch. Route 28, Mount Ephraim Road, and Big Woods Road are the major thoroughfares that pass through Dickerson. The buildings are randomly grouped along these roads and the railroad tracks and present a mixture of late 19th and early 20th century architectural styles. While most of the structures are frame, they contain a variey of styles, rooflines, exterior surfaces, shutters, brick chimneys and other architectural details. The presence of porches, frame outbuildings, and mature shade trees on wide lawns provide representative village characteristics of the turn-of-the century. Although the individual structures are well spaced, there are groupings of buidings within the community. These include a cluster of the warehouse/commercial buildings along the railroad tracks, a row of smaller homes along Big Woods Road, houses with intertwined back yards along Dickerson Church Road, and the large Victorian style houses along Route 28 PHOTO NO.

Dickerson's store served as the original train depot. By the 1880s, an elevator and scales had been constructed to serve local commerce. About 1890, the store was moved across the road to provide a site for the railroad station built by the B&O in 1891. The store was moved to its present location about 1910 when Mt. Ephraim Road was widened (Photo 41). The center section of the existing store is the original log and frame structure of Dickerson's Store. It is a one and one-half story, four-bay structure that has been enlarged on the north and south by one-bay cinderblock additions with shed roofs. The exterior walls of the original section are now covered by asbestos siding. The gable roof is covered by slate shingles and there is a simple bargeboard on the north and south gable ends. The fenestration has been altered by the addition of plate glass commercial windows. The structure also has a utilitarian porch with poured concrete foundation, shed roof with raised metal roofing supported by four metal posts. A blacksmith's shop once stood next to the store.

The architectural focus of Dickerson is the 1891 Railroad Station (Photo 42). This was built by the B&O Railroad, which originally planned to construct a brick station at this location. This is a frame structure with a gable roof that is hipped and bracketed. There is one dormer along the south (railroad side) elevation. This dormer provides for a bay window projection from the building that provides a view up-and-down the tracks. The exterior sheathing is tongue-and-groove flush siding.

Other significant structures in the village include the William H. Dickerson house, the Richard Poole Hays house, the Lawrence Nicholson house, the William H. Dickerson House and the Dickerson Church, and the Meem House (Photo 43).

Barnesville. The village of Barnesville is located at the intersection of Maryland Route 109 and Barnesville Road. It has a linear plan and most of the buildings date from the late 19th century (Photos 44 & 45). An interesting feature of this cluster arrangement is the influence of a single builder, William T. Hilton, on the architecture of the community. The documentation available on Hilton, his business and his buildings provides a unique glimpse of the vernacular architectural traditions representative of a central Maryland town.

Hilton was born on the western outskirts of Barnesville in 1829. It is not known where he apprenticed as a carpenter, but it is most likely that trained under an earlier Barnesville carpenter and learned the traditional crafts of the region. Documentation shows

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that in the 1850s, Hilton was constructing buildings in the Dickerson area and in 1861 received a major project for the construction of the Sugar Loaf Methodist Chapel. Later, he established an undertaker's and carpenter's shop in Barnesville. He died in Barnesville at the age of 80 years old.

A good example of rural ecclesiastical architecture is the Christ Episcopal Church in Barnesville which was built by Willitam T. Hilton in 1878 (Photo 46). It is a one and one-half story, one-bay by five-bay structure with a gable roof. A small entry with a gable roof is on the east elevation and contains paneled double doors. A round-arched design caps the doors and windows of the church. The west elevation has a simple projecting apse with triple lancelet windows. After World War II, the congregation sold the building to the Hilton family and it is used as a cabinetmaker's workshop and storage shed by the descendants of the builder. A collection of account books and woodworking tools of William T. Hilton as well as the signboard "William Hilton and Sons - Carpenters and Undertakers" that formerly hung on the old woodworking mill are housed at the Christ Church building.

Hilton also built St. Mary's Catholic Church in Barnesville (Photo 47). It is a Victorian Gothic style structure built in 1900. Hilton worked from a design drawn by Henry L. Simpson, a Washington architect. It is a brick structure that is one and one-half stories with a gable roof covered with slate tiles. The three-bay by five-bay design has five corbelled brick buttresses on the east and west elevations. The main facade has a projecting, square bell tower with lancet windows and a pyramidal roof. There is an arched doorway with paneled double doors. Above the doorway is a leaded-glass rose window.

Another Hilton structure built outside of the local vernacular tradition is the Thomas O. White house. Its design is a fashionable Eastlake style and may have been taken from a popular pattern book of the period. Built in 1903, it is Hilton's last major project having been built five years before his death. It is a two-story frame house with interesting details in the Federal-style garlands below the cornice of the projecting bay and Georgian Revival windows over the entrance. The interiors include ornamental Doric columns turned from chestnut as well as chestnut wainscoting.

The vernacular traditions of Hilton, however, can best been seen in the early houses to which he constructed additions. One of the earliest homes in the area is the Leonard Hays house, where Hilton constructed the front part of an L-shaped frame house (Photos 48 & 49). The original portion of the house became the ell wing of an 1890 Victorain vernacular structure. Hilton's craftsmanship is especially evident on the interiors which, like in the Hays House, typically have curved stariways and rails, heavy molded wood trim of door and window frames, Victorian plaster ceiling medallions, and marble mantelpieces. The Mary Morningstar house was built in 1824 but contains a late 19th century addition constructed by Hilton. The main facade of this house contains a double-tiered porch with columns and latticework (Photo 50).

The Barnesville Post Office (Lawrence Hilton Price house) is also associated with Hilton (Photo 51). The original part of the house was built about 1835 when John Poole, Sr., purchased the property from William S. Hays. William Hilton's father, John, purchased the property in 1847. It became William's home and woodworking operation during the 1860s. The additional room which has housed the Post Office for about 20 years was built by Hilton about 1900.

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A number of other structures in Barnesville contribute to the historical characters of this small town. The Barnesville Baptist Church is another example in the community of rural ecclesiastical architecture with its plain, straight-forward design of a rectangular main block with gable-front main facade, bell tower, and white weatherboard exterior (Photo 52). Also of interest in the study of Barnesville's architectural are two Sears catalog houses representing 20th century national influences on the community (Photo 53). Both of these houses are in the "foursquare" tradition with a square main block, hipped roof with hipped roof dormers, and Colonial Revival details in the door and window trim.

Comus. Comus (MHT M-12-8) is representative of the small rural crossroads villages that developed in northwestern Montgomery County during the late 19th through early 20th centuries. It is located at the intersection of Comus and Old Hundred Roads and historically its commercial focus has been a general merchandise store (Photo 54). The village also contained a schoolhouse to serve the surrounding farm community.

The late 19th century map and atlases identify elements in the growth of Comus. The 1865 Martinet and Bond Map identifies the location of the schoolhouse and the residence of Robert Johnson (now the Comus Inn). The 1879 Hopkins Atlas designates the village as Johnsonville and shows three structures belonging to L. B. Nicholson, including a store building at the southwest corner of the intersection. Historical documents also refer to the village's name as Nicholsonville or Nicholson's Crossroads. In the 1880s, the village was known as Comus. Oral tradition indicates that Comus was named for Senator Lewis McComas who represented Maryland's Sixth Congressional District at the time that the post office was first established here.

The major commercial structure today is the Comus Inn at 23900 Old Hundred Road (Photo 55). The house today appears as a large Victorian vernacular dwelling. However, the earliest part of this rambling frame structure is the central portion, probably built in 1863 for Robert Johnson. It is possible that the original house was built by William Hilton, who is credited with two additions of 1890 and 1900. In 1960 the house was moved back from its original location closer to the road and the interior converted for use as a restaurant.

The Comus Inn is a two-story, five-bay by two-bay structure in an L-shaped plan. It has a gable roof with a central gable on the main facade with rounded-arch windows in the gables. The windows are two-over-two sash windows with shutters. The main facade also has a full-length porch with plain squared posts. In the north gable end of the main block iis an exterior brick chimney. The ell wing is two stories and two bays deep. A modern glass-enclosed porch is at the rear of the ell. An addition is located at the northern set back from the main elevation. It contains a large bay window on the first story and four four-over-four sash windows on the half-story. West of the house is a log meat house. It is a small square structure of hewn logs chinked with mortar. It has a gable roof with the gable on the main elevation with a single door.

The village contains seven other structures of vernacular design dating from the late 19th to the early 20th centuries. On the northwest corner of the crossroads is property bought by John W. Nicholson from the Johnson family in the 1870s. Historical documentation from the late 19th century shows a residence and store on this property. The current residence and store were probably built by Mary E. D. Maxwell who purchased the property in August 1880. The residence at 23830 Old Hundred Road is a two-story, cross-gable dwelling that was probably built around the turn-of-the century. The documentation on the store indicates that it was rebuilt about 1906. The current

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structure has been adapted for residential use. It is a two-story frame building with a gable front main facade.

One of the oldest surviving buildings inn Comus is the residence at 23810 Old Hundred Road. While this building has been substantially remodeled, it originally was a one and one-half story, two-bay by two-bay log house. The house now has aluminum siding, modern windows, and composition shingles on the roof. To the south of this property is a early 20th century one-story frame commercial building that houses Sugarloaf Mountain Market. It's design is a utilitarian commercial form with a gable front main facade and multi-paned storefront windows. On the same property at 23700 Old Hundred Road is a late 19th century vernacular Victorian style residence that is the most elaborate of the dwellings in Comus. It is a two-story frame with a front facing T-shaped plan and a cross gable and hipped roof. Its side pavilions, extended bays and multi-gabled roof present features popular in the Queen Anne style.

Located on the east side of Old Hundred Road, 16725 Comus Road is a frame, two-story structure with an L-shaped plan. It appears to have been built by Zachariah Cooley before 1891. 16715 Comus Road is a frame two-story with a gable front main facade. It is more fashionably ornamented with Italianate style trim including arched window lintels and a porch with Doric columns and pilasters. It appears to have been built by John P. Sellman in the late 19th century.

On the southeast corner of the crossroads is an early 20th century Bungalow style house that is located on the site of the old schoolhouse. It is a three-bay by three bay frame structure with a gable roof that projects out to cover a full-length porch. There are entrys on both the northern and western elevations. The structure has a plain brick chimney located off-center from the roof peak. The 20th century features include the cinderblock foundation, asbestos shingles as the exterior cladding and composition shingles on the roof.

Park Mills (Fleecy Dale: MHT-1002): Although a decaying remnant of it former self, this small village on Bennett Creek is significant to the 19th century socioeconomic history of the area. When Johann F. Amelung's nearby New Bremen Glass Factory closed many of the workers remained and later helped establish and maintain a woolen factory here between the years 1810 and 1860. Other workers evidently were absorbed in two new glassworks, one established by Thomas Johnson near Bush Creek (north of the district described here) and the other erected by Adam Kohlenberg on Lower Bear Branch.

Remaining buildings include two small log houses in ruinous condition, one suspected log house greatly altered, and two small commercial buildings that are vacant and deteriorating. One of the commercial building is known as the Bear Branch Academy (Photo 56). The most prominent building existing at Park Mills today is a two-story, two-part stone house with a two-story galleried porch fronting the main block (Photo 57). Situated away from the other buildings, it possibly served as the residence of the mill manager or owner, Mathias Brown.

Stronghold. There is also a cluster of sites relating the Stronghold (Photo 58) and the efforts of Gordon Strong to acquire the mountain and its surrounding land and his later plans for its future. In 1924, Strong commissioned Frank Lloyd Wright to design an automobile tourist attraction for the mountain. Wright made a number of sketches for an "automobile objective" that proposed a sprial plan of automobile ramps (Photo 59). The designs included various plans for the mountaintop to contain a planetarium, theatre,

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athletic facilities, open air and enclosed terraces for picnicing, restaurant, dance hall, and onernight accomodations. Strong eventually decided to preserve the mountain in a natural state and the concept of Stronghold, Inc., was spelled out in his will.

Strong's work at Stronghold involved the introduction of a number of man-made features that are now a recognized part of the landscape around the mountain. One widely-found element are the rail fences with concrete posts located throughtout the complex (Photo 60). Other landscape features include the brick gates, such as those to the pond (Photo 61) and the stone retaining walls along the automobile approaches and at the visitor's areas on the mountain (Photos 62 & 63).

The structures that are part of the Stronghold complex include:

Gordon Strong Mansion: Designed in 1907 by Joseph Ashe as the wing of a projected larger residence, this Georgian-style building, itself of mansion-house proportions, contains eighteen rooms and is built of reinforced concrete and Bedford stone (Photos 64, 65, & 66). Constructed in 1912 and situated amidst large trees, it functions today as a meeting place for civic, educational and religious groups. The gardens of the property are also designed with terraces as landscape features (Photos 67 & 68) and lion's head fountain (Photo 69).

Westwood: Also of Georgian styling, Westwood was built in 1921 for Mrs. Ella Denison, a sister of Gordon Strong (Photo 70). Its hundred-foot length house nine rooms. The house serves as the residence of the park superintendent.

Baxter Cottage: A two-story, five-bay frame structure, built about 1900, Baxter Cottage served as Gordon Strong's first living quarters during his early visits to the mountain. It was at that time a combined log and frame structure and was located west of the present site. A stone chimney marks the original site and near it is a mausoleum where the Strongs are buried.

Fram Cottage: Constructed of logs, this small attractive building served as a field hospital when Confederate forces captured the mountain look-out post following a brief skirmish in 1862. Believed to date from about 1812, the cabin was extensively remodeled in 1948.

Hunter Cabin: A one-story log house of probable early 19th century date, the Hunter Cabin is picturesquely situated in a small meadow beyond split rail fencing and large trees (Photo 71). Now boarded up, it awaits a planned restoration.

Snyder Cottage, a colonial-style frame house built about 1909, used as the offices of Sugarloaf Regional Trails from 1974-79 (Photo 72).

The Shop Building, housing the workshop and office of the park maintenance crew, is a long, one-story brick structure. It was built about 1916 to provide additional room for vocational high school subjects taught at the Halstead School.

Beardshire Cottage, of probable late 19th century date, is part of a small farm complex that visually relates the mountain to the surrounding community.

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The Halstead School, a chestnut frame structure containing one room, has been moved from its original site and is temporarily located behind the ship building. Its restoration is planned by Stronghold, Inc.

Comstock School, also a one-room building, is of frame construction (Photo 73). It was built by Gordon Strong early in this century to serve the local black community. Free blacks had settled in this area as early as 1840, owning their own land and working in various occupations, such as quarrying and fencing.

Tanglewood Cabin, a dependency of the Strong mansion, is of chestnut logs with stone floors and a large stone chimney. Built in the early 1920s, it is now temporarily boarded up.

The Barn, built around 1908, was designed as a horse and carriage barn (Photo 74). Current plans call for its conversion to an orientation and nature center.

HISTORIC CONTEXT:

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA

Geographic Organization:

Piedmont

Chronological/Developmental Periods:

Contact and Settlement Period	A.D. 1570-1750
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

Prehistoric/Historic Period Themes:

Agriculture/Architecture/Landscape Architecture/Community Planning/Economic/Transportation

Resource Type

Category: District

Historic Environment: Rural/Village

Historic Functions or Uses:

Domestic/Single Dwelling/Residence/Farmstead
Domestic/Secondary Structures/Dependencies
Commerce/Specialty Store/Craftsmen Shops
Recreation and Culture/Outdoor Recreation/Park

1. Historic Landscape/Cultural Geography;
2. Industry/Transportation;
3. Vernacular Architecture/Small Town/Village;
4. Conservation.

Historic Environment:

The geography of the Sugarloaf area formed the earliest Indian paths following the Potomac and the Monocacy Rivers. To command these routes the early fur traders had located their trading posts. Explorers became settlers before 1700. Louis Michel and Martin Chartier had located at the Mouth of the Monocacy where they were found by Christof de Graffenried in 1711 when he became the first to describe Sugarloaf Mountain. Today these early Indian and French sites are archaeological landmarks.

The timber resources of the Sugarloaf area were a mainstay of the early, charcoal-fueled local industry. Water-powered mills had been built before the revolutionary war,

helping to arm the American forces. One of these at Furnace Ford was built and operated by Roger Johnson, youngest brother of Thomas Johnson, Maryland's first governor. Pig-iron from this furnace was taken from there to the Bloomery Forge near Urbana by river barges up the Monocacy and, in seasons of low water, by the Mountain Road that Johnson built. After the Revolution a boom in native industries was reflected here by the glass furnaces near Flint Hill operated by Johan Friederich Amelung and successors. Amelung's "presentation glasses" and other products are highly prized examples of this early American craft in the collections of the Metropolitan Museum of Art and Yale University. His house, Mountvina, still stands and major archaeological investigations of this site by the Smithsonian, Steuben Glass and Winterthur have been conducted here.

Before the canal and railroad, local building resources were important and the white stone quarry on Sugarloaf Mountain provided the material for such landmarks as the Seven-Arch Aqueduct of the C & O Canal crossing the Monocacy; and later of the railroad viaduct at this location. The Metropolitan Branch of the Baltimore and Ohio Railroad was not built until 1873. Only then was the long hegemony of local industry and agriculture emancipated from reliance on local roads and the canal. The Little Monocacy viaduct at Dickerson, built in 1906 to replace an earlier wooden trestle, is a structure of importance to the Historic American Engineering Record.

The railroad provided Sugarloaf farmers with access to the expanding Washington market and the local dairy industry was based on this resource. The railroad also hauled commuters and railroad workers and such local specialties as goldfish from the Monocacy fish ponds. But the agricultural landscape of the area was dominated by such staples as corn, wheat and barley.

From the earliest settlements in the mid-18th century farming here was a reflection of Tidewater patterns of tobacco and corn, followed shortly by small grains and subsistence farming patterns of the Pennsylvania Germans and Quakers. Surrounding the big bank barns of the northerners was a rich profusion of wagon sheds, corn cribs, buildings for hogs, chickens, shops and other uses that can still be seen at the Farr residence on Comus Road or Inverness on Route 28. A good example of a flourishing dairy operation is that of Harry Ensor on Mount Ephraim Road. The physical reflections of such farming practices show a fundamental stability of the local population with its many families who have lived here for two centuries.

The urban opportunities brought first by the railroad, and later by automobiles have drained much of the local population, and the attractions of rural community life have brought many new settlers to the Sugarloaf area. Modern farming methods have reduced the demand for farm labor, and the exodus of many Black families in particular has brought social changes, but traditional settlements like Jerusalem or Mount Ephraim or Martinsburg come to life with weddings, funerals and local celebrations.

The Sugarloaf area is best regarded as an environmental district, a cultural landscape, rich in landmarks and historical associations. Remarkable for its continuity over nearly 300 years (plus thousands of years of earlier Indian history), its many and diverse landmarks of architectural and engineering significance, its beautiful scenic and cultural landscapes, it should also be recognized as an achievement of historic preservation. Hundreds of landmarks have been identified, researched, mapped and placed on preservation inventories by county and state preservation agencies. Visitors by the hundreds of thousands have been drawn to the area by its scenic and cultural value and its

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historic associations, but it is the area as a whole that contains the greatest value rather than any single historical period, phase, or individual. These characteristics are stamped on the land by the preservation of the 3200 acres of Sugarloaf Mountain by private efforts of Gordon Strong and the Stronghold trustees; the voluntary dedication of scenic and conservation easements by surrounding landowners, the acquisition of the 2000 acres of the Monocacy Multiple Resource area by the state of Maryland, the creation of the Chesapeake and Ohio Canal National Historic Park, the Barnesville and Poolesville historic districts and scores of historic sites included in the Montgomery County Master Plan for Historic Preservation. The protection of the Master Plan is accompanied by property use restrictions that reflect the public interest in this land and its historical significance. To ignore these considerations is to break faith with the residents of this area and to negate the historical and cultural significance of this place and the generations that have created its character and values.

In all of the United States and the extensive inventory of historic sites that has been accumulated since 1966 when the National Register of Historic Places was established one would be hard pressed to find any large cultural landscape of comparable significance encompassing so must of America history, exploration, settlement, industry, agriculture, and landscape.

Resource History:

Rural Historic Landscape

Historic landscape characteristics are the tangible evidence of the activities and habits of the people who occupied, developed, used and shaped the landscape to serve human needs. The landscape in the Sugarloaf historic district is defined by Sugarloaf mountain itself, and the natural resources that led to the early settlement of this region. The continuity of the district has been preserved by the continuation of traditional uses of the land by its residents and the conservation efforts of various organizations.

The Sugarloaf landscape illustrates a distinctive regional character much of which derives from its geographical position in the Maryland Piedmont. The rolling topography, the mixture of open and wooded areas, the variety of types of agriculture have all left their mark on the landscape. The celebration in 1986 of the fiftieth anniversary of the National Soil and Water Conservation program has further directed attention to the impact of stripcropping, contour planting, farm ponds and other man-made changes that are widely visible in this area.

The early settlement of the area brought two distinctive types of agriculture, one by settlers from the tidewater regions to the south and east, largely of British stock; the other from the north composed of German immigrants and Quakers. Each had its distinctive form of agriculture as well as architecture and gardening.

The Tidewater settlers located their houses on high ground and farmed plantation style with tobacco as a money corp and corn as the staple. The Germans practiced a more diversified farming with wheat and other small grains, orchards and livestock. They built large bank barns and located their houses near streams and springs that watered their stock. Early agriculture (1750-1800) in the Sugarloaf historic district shared its position with the significant industry that was stimulated by American independence. Water-powered mills of all sorts were prominently shown on early maps.

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Most of all the landscape is marked by Sugarloaf Mountain itself, a monadnock, independent of any range like the neighboring Catoctins. Sugarloaf dominates the horizon visible from a wide Piedmont area including portions of Frederick and Montgomery counties. Although known to the aboriginal inhabitants of the region for many centuries, the name, location and description of this historical and geological landmark were first chronicled in 1712 by Baron Christoph de Graffenried, noted Swiss explorer and founder of New Bern, North Carolina. But long before de Graffenried's visit, the mountain was known to previous generations of white fur traders exploiting the upper reaches of the Potomac.

To the indigenous population, the Sugarloaf area was dominated by the Potomac and Monocacy Rivers and the mass of the heavily-forested Sugarloaf Mountain. Indians from the lower Potomac followed the river in seasonal migrations to the upper Potomac where, in carefully cultivated upland pastures, they hunted the large migratory animals (eastern bison, elk and other species). The evidence of these seasonal migrations in the Sugarloaf District is seen in hunting camps, rock overhangs as well as in the trails and portages themselves. Further archaeological investigations are needed before this evidence is documented and understood. What is clear now is the location and use of such routes as the Carolina Hunting Path and the Warrior's Path that run from the Great Lakes down to the Carolinas.

Early white settlement is marked by two outstanding 17th century figures, the French fur trader, Martin Chartier who maintained a fur trade with Canadian Indians for decades before the westward moving settlers from Tidewater arrived. The Swiss, Christoph de Graffenried, first drew crude maps of the area, including a record of his ascent of Sugar Loaf Mountain. Later maps further trace the exploration and settlement of the region.

Few early sites have been recorded on the mountain itself, but in the late 18th and early 19th centuries Sugarloaf provided raw materials for the industries of both Amelung and the Johnsons. For instance, in 1810 Benjamin Henry Latrobe, noted American architect, visited Sugarloaf mountain and there sketched a Negro family living in a bark shack and engaged in charcoal burning. Several decades later the mountain was utilized as an observation and signal post during the Civil War, first by the Union forces and then, briefly following a skirmish, by the Confederates.

In 1902 Gordon Strong (1869-1954), whose family amassed a fortune in Chicago real estate, began purchasing large tracts of land on the mountain, developing it as a private preserve. At his death, he turned over the balance of his then 3,000 acres to be maintained by a private, non-profit corporation, Stronghold, Incorporated, which he had earlier created and given the upper portion of the mountain. Stronghold operates the property as a privately owned park accessible to the public. In addition to footpaths and a bridle trail, Stronghold maintains a macadam road allowing access to the mountain's four observation points, several of which include stone constructed platforms. High on the northeast side of the mountain, one of these offers a truly spectacular view of the surrounding countryside. To the north and west of Sugarloaf extends a miniature wilderness area of nearly 2,000 acres, broken only by old logging roads. This hinderland provides the hiker with a vivid impression of how the area looked 200 years ago.

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When Gordon Strong, decided to make the mountain the site of his permanent residence, he entertained various ideas about how the mountain should be developed. The more formal landscape history is well illustrated by his continuing efforts beginning about 1907, particularly in the country house tradition. Initially related to the design of the Strong Mansion, this came to fruition in the axial design by Henry V. Hubbard, head of the Harvard School of Landscape Architecture and a member of the National Capital Park and Planning Commission. Centered on the never-to-be-realized central part of the Strong Mansion, this featured a powerful axis running from high in the mountain down to a romantic rectangular *piece d'eau*, bordered by the white trunks of birch trees and the classically detailed terraces.

In the early 1920s, he retained Frank Lloyd Wright to prepared a plan for the development of Sugarloaf. Wright, in a series of drawings, envisioned the creation of an "Automobile Objective," a pyramidal-shaped structure to be built on the top of the mountain. Sunday drivers from Washington would ascend the mountain, driving up through the building via a spiral ramp. Within the structure, in addition to a complex system of ascending and descending ramps, bridge, roof garden and parking facilities, would be a restaurant, theater, planetarium and observation platform.

It is fortunate that Strong eventually decided the mountain was far more important as a natural monument and chose to preserve it in its natural state. His interest in the natural beauty of the region became evident in the informal pond that he had created at the entrance to the mountain. His further landscape efforts were illustrated in plans designed for the views from the mountain. These included the view of the Frederick Valley and the view to the east which was the scene of an annual Easter Sunrise service. These viewing points were provided with seating, defined by masonry parapets and walls, and enhanced with road landscaping.

A major landscape change to the district in the 20th century occurred with the agricultural orientation to dairy farming. The extensive dairy industry caused the formation of large farms (typically 300 acres) used for pasture and the production of ensilage and hay. These succeeded the smaller diversified farms of about 100 acres. Today, the large farms are slowly yielding to smaller farms, suburban and country homes, and subdivisions. Nearly all of the district in Montgomery County is zoned for agriculture, strengthened by a subdivision regulation of 25 acres per lot. In Frederick County, a conservation zone with basically the same provisions exists in the Urbana planning district which encompasses the area of the Sugarloaf Historic District.

The view of Sugarloaf Mountain today from within the district presents the characteristics and perceptual qualities of the traditional Piedmont cultural landscape. The rolling topography of open and wooded area, cultivated fields and rivers and streams preserve elements of the natural setting of the region. The cultural networks and patterns of spatial organizations of man-made features, including roads, railroads, canals, farmsteads and cultivated fields reflect the history of the district. There are few modern intrusions. The 1977 PEPCO tower located outside of the district presents a visual feature in sharp contrast to the overpowering image of Sugarloaf Mountain.

Industry/Transportation

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Early settlement in the Sugarloaf area occurred primarily to create industry aimed to exploit the available resources. A transportation network was then necessary to make these industries economical. Perhaps in no element of the history of the area more than in transportation can be seen the dynamics of regional growth: the canoe and pack horse trails, the canal and turnpike, the railroad and the highway - down to today's Concorde roaring overhead daily at 1:15 p.m. precisely - offer a varied interpretation of the fortunes of the region, as reflected in the landscape itself.

The most significant of the early industries were the iron works of the Thomas Johnson family, Maryland's first governor, headed by the youngest brother, Roger Johnson. The Johnson family used "bank ore," surface deposits extracted along stream banks. Cast iron (pig iron) was the product of his establishment at Furnace Ford. Surface mining of iron ore and limestone, with charcoal made from the Sugarloaf forest were the raw materials of this operation. To make bar iron (the principle article of commerce) Johnson's pig iron was taken in shallow draft barges, at seasons of high water, up the Monocacy and Bennett Creek to the Bloomery forge near Urbana. The demands of the Revolutionary War stimulated this production of iron. Later Johnson built a road, now designated as Sugarloaf Mountain Road, along which ox teams hauled the pig iron to the Bloomery. The iron works yielded in the 1830s to the iron works elsewhere that were more competitive because they commanded better grades of ore, had the railroad for transportation and had access to coal.

Another Sugarloaf industry closely related to the mountain was the glass works of Johann Friederich Amelung near Park Mills, started in 1789. Archaeological work under the auspices of the Corning Glass Company, Winterthur Museum and Smithsonian Institution produced historical reports that analyzed Amelung's production including the "presentation glass," which is considered the most important of early American glass production. While Amelung's business ultimately failed, those trained by him continued at the Sugarloaf location and, at a larger scale, in Pittsburgh, Pennsylvania.

One of the most dramatic episodes relates to the forest resources of the area, now but a sad reflection of former richness. Here 18th century timber merchants cruised the area, selecting specifically shaped forms to be used for parts of the largest contemporary ships, ultimately the celebrated Baltimore Clippers. To this region, this business was as significant for the young maritime nation as the exploitation of timber for ship's masts was for southern Maine. Later the hardwood resources were prodigally used for barns, bridge and other utilitarian structures. The raw material of bark from the trees and hides from the farms was used locally by the tanning industry. Ultimately, as Benjamin Henry Latrobe recorded in drawings made about 1810, the entire mountain forest was systematically cut and burned to provide charcoal for the merchant furnaces of the infant iron industry. A drawing of Sugarloaf charcoal burners by Benjamin Henry Latrobe has survived to record the primary resource of this district that largely denuded the district's forest cover, leaving the second growth for the nearby farmers who needed firewood, fencing materials and building timber.

Mineral resources also were extracted as part of early industries. Quarries were opened to provide white sandstone that built significant structures of the Chesapeake and Ohio Canal, particularly the seven-arched aqueduct that carries the canal across the Monocacy River; and the white granite that built the piers of the Baltimore and Ohio Railroad bridge at the same spot, as well as other important structures. A white stone quarry at the base of Sugarloaf Mountain, shown on the 1873 atlas, was used to build the

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first railroad viaduct (a later one was built about 1909). Another stone quarry was located near Sugarloaf but is not shown on map.

Stones for the underpass at Dickerson were quarried at a nearby farm. Local quarries were also opened near building sites for farmstead houses and foundations where the stone was available. The limestone in this regions was also quarried and used in local lime burning operations through the 19th and early 20th centuries.

Water was perhaps the most important natural resource especially when used as water power for mills. Water-powered mills of many types (grist mills, saw mills and woolen mills) were represented in the Sugarloaf historic district before 1800. One example is Park Mills, also known as Fleecy Dale (MHT-1002). Although a decaying remnant of it former self, this small village on Bennett Creek is significant to the 19th century socioeconomic history of the area. When Johann F. Amelung's nearby New Bremen Glass Factory closed many of the workers remained and later helped establish and maintain a woolen factory here between the years 1810 and 1860. Other workers evidently were absorbed in two new glassworks, one established by Thomas Johnson near Bush Creek (north of the district described here) and the other erected by Adam Kohlenberg on Lower Bear Branch. The most prominent building existing at Park Mills today is a two-story, two-part stone house with a two-story galleried porch fronting the main block. Situated away from the other buildings, it possibly served as the residence of the mill manager or owner, Mathias Brown. Remaining buildings include two small log houses in ruinous condition, one suspected log house greatly altered, and two small commercial buildings that are vacant and deteriorating.

The early transportation system that provided for removal of natural resources was primarily roads and rivers. The first public roads led from Georgetown to Frederick and 1774 public monies provided for the upkeep of these roads. During the early 19th century, the road network multiplied rapidly. The Old Baltimore Road at Barnesville led from the Mouth of Monocacy, connecting with Mt Ephraim, and then to Baltimore. The 1873 Montgomery County Atlas shows a diverse road network that circled around Sugarloaf Mountain (the northern and eastern parts of this traditional road network are the same as the historic district boundaries today). The road from Barnesville to Frederick City (now West Harris Road) went to Park Mills; Peter Road at the northern boundary of district connected Flint Hill and Bloomsbury (R. Johnson Bloomery Forge) to what is now Thurston Road (both run along Bennett Creek). This pattern continued to connect to Mt Ephraim and at Linthicum a branch road continued to the east. To the west of this road system south of Bennett Creek is Park Mills Road.

In a much-remarked coincidence on July 4, 1828, the first shovelful of dirt was removed in Washington to begin construction of the Chesapeake and Ohio Canal, while simultaneously in Baltimore construction started on the Baltimore and Ohio Railroad. The two modes of travel to the west were in hot competition for the next two decades. More than the dramatic episodes of construction was the effect of these new modes of transportation in accelerating the concentration and specializations of America's industry, agriculture and urbanization. In the Sugarloaf region, the local merchant furnaces yielded to Pittsburgh. Local grist and flour mills began the transition to industrialized processes that eventually favored the large-scale Midwest mills.

Construction of the new modes of transportation brought a temporary boom during construction, but more notably greater access to markets. The first impact to the Sugarloaf

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District was improved access to Baltimore. Not until 1833 did the completion of the 516-foot long, seven-arch aqueduct over the Monocacy mark the arrival of the canal from Georgetown. The Metropolitan Branch of the B & O Railroad was built in 1873, and further construction of stations and replacement of temporary wood trestles with masonry arch as at the Little Monocacy occurred in 1906. The railroad brought summer visitors, commuters and jobs for construction workers. it spawned new local industries and took diary products to Washington markets. Increased prosperity opened new post offices at Dickerson and Sellman (Barnesville). As throughout the nation, the railroad revolutionized the old local life and restructured the community to the national influences.

Major transportation changes also occurred in the early 20th century with hard roads, automobiles and trucks. Heralded by the bicyclists' demands for hard roads, "Centurians" from Washington made the trip to Sugarloaf a popular objective of a day's outing. It was on such a trip at the turn of the century that Gordon Strong discovered the mountain that he would one day own.

More important as an agent of change was the farm-to-market roads. One popular form of these rural roads in the Sugarloaf district was a single lane concrete strip with dirt lanes to either side edged by fieldstone walls. Called "politician's paths," such roads brought the greatest benefit to the largest number of rural voters. As traffic increased, the concrete lane was flanked by asphalt and eventually paved over altogether, as with Mount Ephraim Road. Embraced in the State Roads network, historic roads like Park Mills and Old Hundred Roads joined earlier designated Route 28 with its strategic crossing of the Monocacy. Many historic and scenic routes remained unpaved landmarks such as Peter Road, Mount Ephraim Road or West Harris Road. Mouth of Monocacy Road now provides access to the C&O Canal National Historic Park.

Significant architectural and engineering structures relative to the development of transportation in the Sugarloaf district include the Monocacy River Aqueduct, Baltimore and Ohio Railroad Viaduct, Little Monocacy Viaduct, Barnesville station, and the Dickerson station.

Vernacular Architecture/Village/Small Town

Much of the vernacular architecture in the Sugarloaf district can be viewed from the perspective of the agricultural economy of the region. Historians have concluded that within two or three miles from Sugarloaf Mountain, two distinct streams of settlement crossed and blended: Pennsylvania German and Tidewater plantation peoples. This movement from their original "hearths" has been described by Henry Glassie and others so that it can be clearly illustrated in map form, and the close parallel to earlier Indian paths demonstrated. The settlement of the area is closely related to these migrations, and the early history of the region and its agricultural prosperity in the period 1800-1850 has been well documented. Similarly, later periods tracing the shift from diversified family farms to more specialized dairying - a change that was faithfully reflected in the landscape and its buildings - can easily be illustrated.

From the earliest settlements in the mid-18th century farming here was a reflection of Tidewater patterns of tobacco and corn, followed shortly by small grains and subsistence farming patterns of the Pennsylvania Germans and Quakers. Surrounding the big bank barns of the northerners was a rich profusion of wagon sheds, corn cribs,

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buildings for hogs, chickens, shops and other uses that can still be seen at the Farr residence on Comus Road or Inverness on Route 28.

The railroad provided Sugarloaf farmers with access to the expanding Washington market and the local dairy industry was based on this resource. The railroad also hauled commuters and railroad workers and such local specialties as goldfish from the Monocacy fish ponds. But the agricultural landscape of the area was dominated by such staples as corn, wheat and barley. A good example of a flourishing dairy operation is that of Harry Ensor on Mount Ephraim Road. The physical reflections of such farming practices show a fundamental stability of the local population with its many families who have lived here for two centuries. Orchards also appeared as a farming enterprise in the 20th century. Lily Pons is a unique aquaculture operation within the Sugarloaf district. In recent years, farm operations have become more diversified to meet the changing agricultural economy.

The vernacular architectural traditions followed primarily the ethnic traditions of the settlers in the Sugarloaf area. Log construction was a predominant building type of the early settlers. Following Piedmont traditions, the popular 19th century farmhouse was an L-shaped plan structure of two stories with a gable roof. Double-tiered porches in the ell wing were also a prominent feature of this regional style.

Another example of this regional style by mid-19th century is Mount Ephraim (M-NCPPC 12-1). The design and massing of the exterior reflects the regional style with its details including two-stories, symmetrical facade, gable roof, L-shaped plan, and double-tiered porches. Mount Ephraim is named for its original owner, Ephraim Harris. Built in 1868 by William T. Hilton of nearby Barnesville, the house is two stories tall and was initially fronted by a one-story bracketed porch and center gabled. The two-story porch on the south side was retained.

Prior to the rise of Dickerson three miles west when the Metropolitan Branch of the Baltimore and Ohio Railroad was completed in 1873, Mt. Ephraim was the name of not only the house, but also the locality, once a community of half a dozen houses and a store. The foundations of Ephraim Harris' store on the Mt. Ephraim property (at the SW corner of Harris and Mt. Ephraim Road) is a reminder of the importance of Mt. Ephraim Road, running from Barnesville to Park Mills -- the old route to Buckeystown. Small crossroads villages such as Mt. Ephraim dotted the Sugarloaf landscape but lost their historic function with the modern transportation network of the mid-20th century.

The vernacular building traditions changed with the changes in transportation during the nineteenth century. In the Sugarloaf region, these changes can be viewed through the buildings constructed by the vernacular builder William Hilton. Hilton built Mount Ephraim in the tradition of the regional farmhouse style. Later in the 19th century, he constructed several houses in Barnesville that make use of the Victorian designs that were popular nationally.

The design of the Comus Inn is one example of the vernacular Victorian style in the Sugarloaf district. The earliest part of this rambling frame structure is the central portion, probably built in 1863 for Robert Johnson. It is possible that the original house was built by William Hilton, who is credited with two additions of 1890 and 1900. In 1960 the house was moved back from its original location closer to the road and the interior converted for use as a restaurant.

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The Sugarloaf Mountain Chapel (MNCPPC 10-70) is an example of rural ecclesiastical architecture built by William Hilton in 1861 for Otis Holland It is a simple, rectangular, brick structure in a good state of preservation. Its end facade faces south and has two first floor doors and two windows above. Both side elevations have three windows and a door and the roof is sheathed with slate. Originally a Methodist Church, the Chapel is now privately owned and used as a community church. It is surrounded on three sides by a tree-shaded cemetery.

The evolution of the vernacular designs into the 20th century leads to mail-order architecture. Barnesville has two Sears-Roebuck houses that represent this popular designs of mass-appeal. Other vernacular features in the district include man-made features such as fences. The existing fences show the full range of fencing types including split rail, stone, concrete post and rail, and wire.

Conservation:

Events in the Sugarloaf district have made it a significant conservation area. Most notably is the work of Gordon Strong in creating Stronghold. However, the district has also demonstrated historic preservation and conservation techniques at the public and private levels. These efforts have been accomplished by a local private historic preservation organization, Sugarloaf Regional Trails, that has concentrated on educational programs, tours and planning studies of the region. The efforts have also included involvement of private organizations at the national level, including the Nature Conservancy which holds an easement within the district.

Easements are also held by state agencies, the Maryland Historical Trust and the Maryland Environmental Trust. The state also controls significant acreage within the Monocacy Multiple Resources Area, under the Maryland Department of Natural Resources, which has also designated the Monocacy in the state scenic rivers program. The National Park Service controls the land within the C&O National Historic Park that is within the Sugarloaf district. Also significant to the conservation initiatives of this district has been preservation studies by the state including Archaeological Resources of Monocacy River and the Power Plant Siting Survey.

Public involvement at the local level includes the county-wide historic preservation plan under the Montgomery County planning office and the use of transfer-of-development rights within the district. Under the Frederick County planning office, the land within the Sugarloaf district is zoned in a preferential agricultural zone. Easements on land in both Frederick County and Montgomery County has been purchased under the Maryland Agricultural Land Preservation Program.

Foremost to the conservation initiatives of this region was the work of Gordon Strong in creating his own private philanthropic institution, Stronghold, Inc. Strong was the son of a western railroad magnate who became the leading Chicago real estate broker and specialist in central business area properties. He was real estate adviser to Marshall Field and other leading Chicago enterprises. Among his distinctions are as the initiator of the Chicago subway system developer of the standard amortization tables for office buildings as used by the Internal Revenue bureau and one of the founders of the Chicago Regional Plan Association. Despite this Chicago background, Strong had spent nearly a decade of his early life in Washington and at this time had become attached to the Maryland

M:12-44

countryside. At this period he bought his first tract of Sugar Loaf Mountain land, and built a characteristic log cabin where he spent weekends. This interest never waned and upon it was built the unique commitment to acquire and develop the entire mountain, first as a gentleman's country estate, and later as a public environmental trust.

In Gordon Strong's lifetime can be seen a transition from the gentleman's country house ideal to a more contemporary dedication to the conservation ethic. Tracing this biographical evolution will do much to explain why Strong, after assembling the 3,000 acres of Sugarloaf Mountain, chose to hand it over to a non-profit trust to maintain forever for public education and enjoyment. This evolution is punctuated by a series of five complete plans for the "development" of the area, the most important and revealing being the 1912 plan prepared by Henry V. Hubbard, an outstanding exponent of formal landscape architecture and head of the Harvard school of landscape architecture; that prepared in 1923 by Frank Lloyd Wright, one of America's greatest architects, and esteemed of such importance in that architect's career that more drawings of this scheme were included in the Museum of Modern Art's exhibition of his work than any other single project. The Hubbard plan was partially executed.

The plan finally adopted by Strong was, in fact, outlined by Robert Marshall, one of America's outstanding figures in the conservation movement, a noted forester and founder of the Wilderness Society. These documents were inventoried and arranged by Wilhelm von Moltke in 1942, but have never been publicly exhibited. The historical interpretation of the Strong material will involve further research in the Strong manuscript records, and interviews with many Strong connections, outstanding among whom is Donald and John McCormack. This background, explicit in Strong's will and the terms of the Stronghold Corporation, explains many features of the mountain park that have aroused the curiosity of visitors. The experimental program to discover a blight-resistant mutation of the American forest-type chestnut, decimated by the 1922 blight, derives from this source. The rustic path and stair leading from the parking area to the pinnacle of Sugar Loaf Mountain, marked by curious directions and admonitions, is another. The sudden appearance of the Strong Mansion, designed by architect Joseph Ashe in 1907, and its formal gardens with balustrades, balconies, reflecting pools and geometrical allees is equally puzzling unless seen in the historical perspective that will be provided of a rich man's search for appropriate expression of his philanthropic instincts.

Chief among the illustrations of Strong's philosophy and accomplishment here is the house he built himself, and a less important one built for this sister. The Strong mansion, designed by the architect Joseph Ashe in 1907, was never completed, due to personal reasons. The single wing of the projected mansion has been equipped as a small conference center, but the most important rooms have been maintained in their original state. It is proposed to describe the house in the trailside museum, and to offer conducted tours of the mansion and the adjacent grounds for small groups at periodic intervals.

Resource Analysis:

Criterion A: The district is "associated with events that have made a significant contribution of the broad patterns of our history" in that it contains resources which exemplify both the development of industries (notably iron and glass manufacture) on the frontier during the last quarter century of the 18th century and the first quarter of the 19th, and the subsequent

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transition of agriculture as these rural industries declined with the shift to an urban focus by the mid-19th century

Criterion B: The district is "associated with the lives of persons significant in our past," by bearing the enduring mark of pioneer industrialists such as the four Johnson brothers, Thomas, James, Baker, and Roger, who established an iron works in 1785 on what has come to be known as Furnace Creek, and Johann F. Amelung, who started his New Bremen Glass Factory at about the same time. The district owes its excellent state of preservation in large part to Gordon Strong, a Chicago real estate magnate whose personal vision led him to acquire some 3,000 acres including nearly all of Sugarloaf Mountain and to preserve this area as a public trust.

Criterion C: The architecture of the district includes numerous examples of regional vernacular buildings and farmsteads of the late 18th through early 20th centuries which clearly "embody the distinctive characteristics of a type, period, or method of construction;" "the work of a master" is represented by Gordon Strong's mansion, Stronghold, designed by the prominent architect Joseph Ashe, and by the landscape plan which compliments the building, created by premier conservationist Robert Marshall. Taken as a whole, the district, whose current appearance is that of an essentially unaltered agrarian landscape of the 19th century, clearly represents "a significant and distinguishable entity.

Criterion D: The district contains significant properties "that have yielded, or may be likely to yield, information important in prehistory or history." The district offers countless opportunities for archaeological study, including the documented presence of early woodland (1000 BC - 200 AD) period habitation sites along the Monocacy and Potomac rivers. Historical archaeologists have investigated the remains of the New Bremen Glass Factory, and much remains to be learned about the early development of industry in the region. Also a systematic study of the vernacular architecture of this region would reveal significant patterns of cultural development in central Maryland.

POOLESVILLE QUADRANGLE
MARYLAND–VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

5562 IV SE (URBANA)

M:12-44

00 FEET (VA.) 287 | 27'30" 288 | 1 MI. TO MD. 85 | 5562 IV SW (BUCKEYSTOWN) 290 | 291 | 25' | 292 | 293 | 690 000 FEET (MD.) | 77°22'30" 39°15'

arora Sta

CHICK

220

BM 240

BALTIMORE AND OHIO ROAD

CHESAPEAKE AND OHIO CANAL

C & O CANAL NATIONAL HISTORIC PARK

Island

ICK CO

CO

Woods

Cox Island

Campsite

Monocacy Aqueduct

Recreation Area

MONOCACY RIVER

Furnace Ford

Furnace

MONOCACY NATURAL RESOURCES AREA

FREDERICK CO

MONTGOMERY CO

Branch

Mount Ephraim

River

HARRIS

Monocacy

EPHRAIM

MOUNT

Little

ROAD

Scholls Hill

Mt Pleasant Cem

BARNESVILLE

Monocacy Sch

MOUTH OF MONOCACY

BM 284

BM 356

BM 392

Dickerson

Recreation Center

Barnesville

BM 548

Cem

BALTIMORE AND OHIO

Lock 27

Little Monocacy River

VIRGINIA MARYLAND

WT

Conveyor

Powerplant

Substation

BM 282

BIG WOODS

Barnesville Sta

Sellman

Sellman Recreation Center

Mt Zion Ch

COMUS 2 MI.

4346

510 000 FEET (MD.)

4345

4343

12'30"

4342

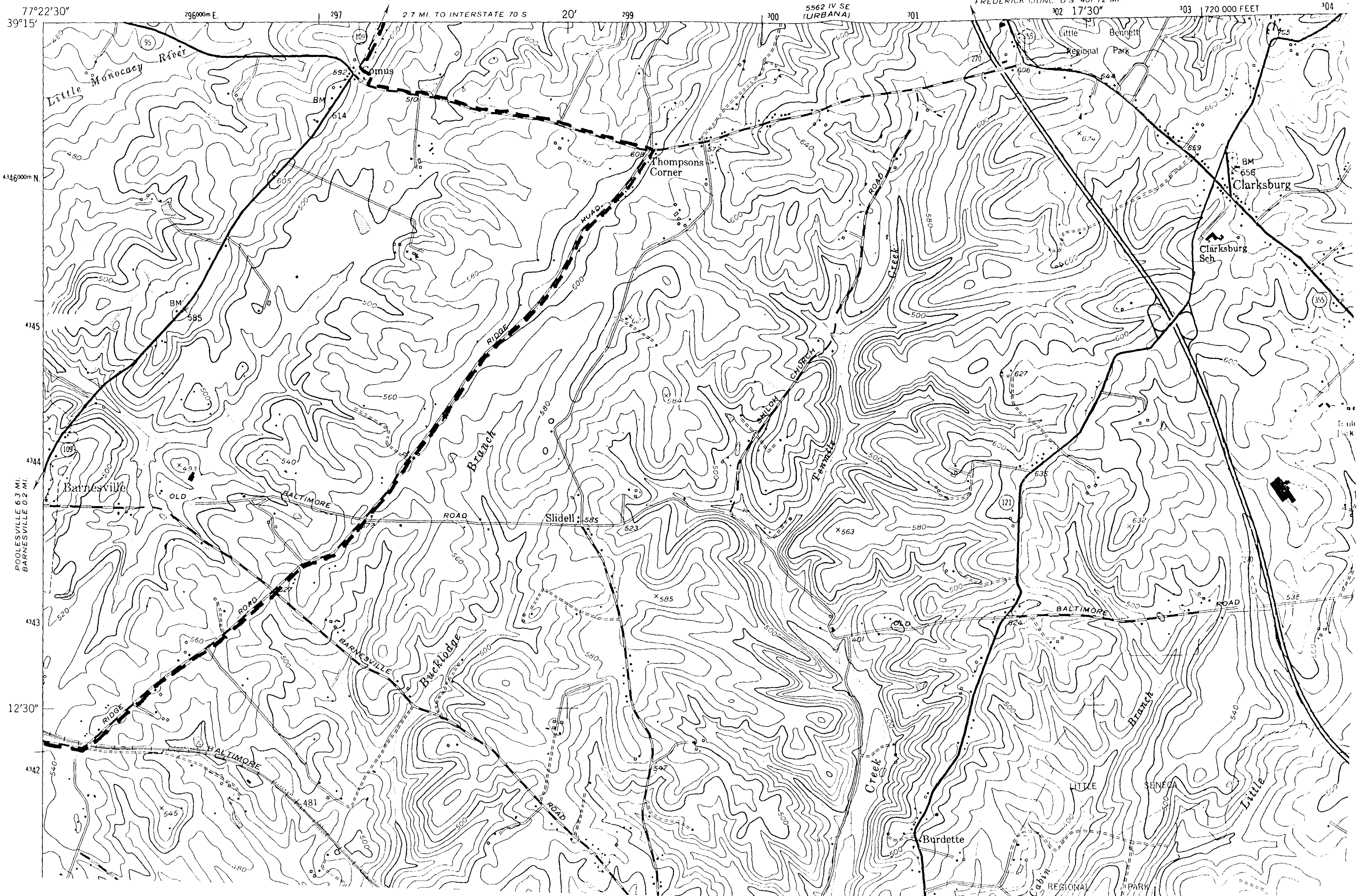
5562 IV SW (BUCKEYSTOWN)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Germantown quad

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

M:12-44



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301
HAGERSTOWN 36 MI.
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302 17'30"
303
720 000 FEET
304
Little Monocacy River
Comus
Thompsons Corner
Little Bennett Regional Park
Clarksburg
Clarksburg Sch
Barnesville
POOLESVILLE 6.3 MI.
BARNESVILLE 0.2 MI.
OLD BALTIMORE ROAD
RIDGE ROAD
Branch
Slidell
SHILOH CHURCH ROAD
Tenmile Creek
BARNESVILLE ROAD
Bucklodge Branch
Creek
Burdette
LITTLE SENECA
Little Branch
Cabin
REGIONAL PARK
4346000m N.
4345
4344
4343
12'30"
4342

Caggett Diocesan Center
Flint Hill
North Branch
Bennett
Park Mills
Fish Hatchery
Lilypons
Flint Creek
RIVER
Bennett Branch
Koontz Ch
Cem
MONOCACY
Greenfield Mills
St Paul Ch
Cem
SUGAR LOAF MTN
Furnace Branch
Cem
Bells Chapel
Stronghold
MONOCACY NATURAL RESOURCES AREA
FREDERICK CO
MONTGOMERY CO
(URBANA)
(POOLESVILLE) 5562 III NW
ROCKVILLE 23 MI.
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INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1966
77°22

SCALE 1:24000

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CONTOUR INTERVAL 20 FEET
NATIDNAL GEDDETIC VERTICAL DATUM DF 1929

THIS MAP CDMPLIES WITH NATIDNAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, RESTON, VIRGINIA 22092
RGINIA DIVISION OF MINERAL RESOURCES, CHARLOTTESVILLE, VIRGINIA 22903
OLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

14-12-44

MARYLAND

QUADRANGLE LOCATION

Revisions shown in purple and woodland compiled by the Geological Survey in cooperation with Commonwealth of Virginia agencies from aerial photographs taken 1981 and other sources. This information not field checked. Map edited 1984

ROAD CLASSIFICATION

Heavy-duty ——— Light-duty ———
Medium-duty ——— Unimproved dirt - - - - - -
Interstate Route U. S. Route State Route

BUCKEYSTOWN, MD.—VA.

39077-C4-TF-024

1952
PHOTOREVISED 1984
DMA 5562 IV SW—SERIES V833

M:12-44

Urbana Quad

5562 IV SW
(BUCKEYSTOWN)

4353

4352

17'30"

4351

4350

4348

520 000
FEET

39°15'

77°22'30"

Bennett

Urbana Lake
Fish Management Area

Little Bennett Creek

Thurston

Hyattstown

FREDERICK CO
MONTGOMERY CO

PERRY

SUGAR LOAF

ROAD

LANE

R. R.

Cem

BM

POOLESVILLE 10 MI.
DICKERSON 4.1 MI.

STRONGHOLD 1 MI

COMUS 1 1 MI.

700 000 FEET

COMUS 0 2 MI.
POOLESVILLE 8.8 MI

20'

(POOLESVILLE)
5562 III NW

Mapped by Corps of Engineers, U.S. Army
Edited and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by stereophotogrammetric methods. Aerial photographs taken 1943
Culture revised by the Geological Survey 1953

Polyconic projection. 1927 North American datum
10,000-foot grid based on Maryland coordinate system
1000-meter Universal Transverse Mercator grid ticks, zone 18, shown in blue

To place on the predicted North American Datum 1983 move the projection lines 7 meters south and 25 meters west as shown by dashed corner ticks

Revisions shown in purple compiled by the Geological Survey from aerial photographs taken 1977 and other source data. This information not field checked. Map edited 1979

MN

8°
142 MILS

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UTM GRID AND 1979 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

SCA

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CONTOUR I
NATIONAL GEODET

THIS MAP COMPLIES WITH
FOR SALE BY U. S. GEOLOGIC
A FOLDER DESCRIBING TOPOGRAPHIC

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 20-21

Name of Property: Ward House / Belward Farm
Location: 10425 Darnestown Road, Rockville, MD 20850

The purpose of this MIHP update is to identify contributing and non-contributing elements of the National Register-eligible Ward House / Belward Farm.

Previous Survey Efforts

1974 and 1983: Ward House/Belward Farm was surveyed twice by The Maryland-National Capital Park Planning Commission (M-NCPPC), but not evaluated for the National Register of Historic Places (NRHP). The 1983 survey form identified the surveyed area as 134.37 acres.

1985: M-NCPPC designated the site in the Master Plan for Historic Preservation because it is significant as an example of a high style, late nineteenth century farmstead.

1996: The Maryland State Highway Administration (SHA) determined the property eligible for the NRHP, and the Maryland Historical Trust (MHT) concurred. The evaluation described the house as a good example of a nineteenth century farmhouse ornamented with high Victorian design aesthetics.

2008: SHA created an Addendum to revise the NRHP-eligible boundary to 107 acres due to: (1) the sale of about 10 acres of the property at the northern end for the Mission Hills Subdivision in the 1990s and (2) development of about 17 acres at the eastern end of the property by Johns Hopkins University, the farm property's current owner (see **Attachment A**). MHT concurred with Ward House/Belward Farm's continued NRHP eligibility (Criteria A and C) and new boundary on June 26, 2008.

Brief Additional Historic Context

The Ward House/Belward Farm is located in an area historically called Hunting Hill, located five miles west of Rockville and three miles south of Gaithersburg. Published in 1879, *The History of Montgomery County* described Hunting Hill agriculture as yielding fair crops of wheat, corn, potatoes, and hay (Boyd, p. 132). These crop plantings continued well into the twentieth century, dairy operations became increasingly important in this area and the rest of Montgomery County.

Ignatius B. Ward acquired the property from James Heath and Mary C. Dodge in 1883 (Deed, Dodge to Ward, 1883), although he was already occupying the property. Ward was Hunting Hill's first postmaster, appointed in 1872 (Maryland Historical Trust, 1979). G. M. Hopkins' 1879 map identifies the store and post office at the southern end of the Ward House/Belward

Hill's first postmaster, appointed in 1872 (Maryland Historical Trust, 1979). G. M. Hopkins' 1879 map identifies the store and post office at the southern end of the Ward House/Belward Farm property, and the 1880 population census identifies Ward as a merchant (Holt). Ward constructed the current farmhouse; built in circa 1891, this may be the oldest element on the property. It is likely the dairy barn, with its attached milk house and silos, was also built by him, sometime during the early twentieth century. The 1900 population census lists him as both a merchant and farmer (Holt). After Ignatius Ward died in 1909, the property was inherited by his wife, Elizabeth; after her death, the property was to be divided between their seven children, Beulah, Mercy, George, William, Frances, Porter, and Frank (Crawford, p. [3]). It appears Elizabeth continued to live on the farm (contemporary newspaper notices), although it could not be confirmed if any of the children lived on or farmed the land after Ignatius' death.

It is likely, however, that the property continued to be farmed, at least by tenant farmers. *A Real Estate Atlas* identifies the property as 140 acres owned by the heirs of I. B. Ward in 1917 (Deets and Maddox, 1917). The three tenant houses at the east end of the property were constructed sometime between 1923 and 1944 (Rockville USGS topographic maps). There was also another tenant house, located north of the three that still exist, that stood in 1908 (Rockville USGS topographic map) but was demolished. It was common in Montgomery County for there to be at least one tenant house on a farm, occupied by a tenant farmer who worked on the farm on a yearly basis. In addition to a house, he would receive a stipulated amount of food and firewood (Poole, p. 2).

It is difficult to determine construction dates for most of the other built elements on the property; it is assumed many were built sometime during the first half of the twentieth century. The farmstead is surrounded by former farm fields. There are also mature shade trees located throughout the property, including along the driveway leading from Darnestown Road to the farmstead, at the farmstead itself, and along two swales at the northern section of farm fields. The property still has some wooded areas to the east where the tenant houses are located; historically the farmer would have gone into the woods to obtain wood for cooking, heating, and building materials (Poole, p. 3).

The property was acquired by Elizabeth Bealle Banks, granddaughter of Ignatius Ward, in 1965 (Deed, Ward [estate] to Banks), although she was likely already farming the property by the late 1950s (Spivack, p. 2). After Elizabeth Banks sold the property to Johns Hopkins University in 1989, the university built a house for her that still stands today. The wood fencing located throughout the property, as well as the walls at the Darnestown Road entrance, were built by the early 2000s. Banks continued to live on and farm the property, raising black Angus cattle, (Spivack, p. 1) until the early 2000s.

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 20-21

Name of Property: Ward House / Belward Farm
Location: 10425 Darnestown Road, Rockville, MD 20850

Significance Statement for Criterion A and Period of Significance

In addition to Criterion C, the Ward House/Belward Farm is eligible under Criterion A as a historic district because it is a cohesive and good representative example of a late nineteenth to mid-twentieth century dairy farm in Montgomery County. The farm played a role in the county's success in the dairy industry during the first half of the twentieth century, contributing to the area's prosperity as an agricultural region. In addition to the agricultural landscape itself, the property has numerous dairy farm buildings and objects that retain integrity, most notably its Victorian farmhouse, dairy barn with attached milk house and double silos, hay barn and stable, and tenant houses. The Criterion A period of significance is from 1891 to 1969[1] for this well-preserved dairy farm complex owned by Ignatius Ward and later his descendants, and farmed for over a century.

Contributing and Non-Contributing Elements

This Addendum identifies contributing and non-contributing elements of the Ward House/Belward Farm historic district and building, NRHP-eligible under Criteria A and C. The property is located on 107 acres and has a period of significance from 1891 to 1969. While the 107 acre boundary includes the Hunting Hill Store and Post Office (M: 20-22) area, the elements described below do not include the boulder with a bronze maker (installed in 1995 by Elizabeth Banks to commemorate the site of the Hunting Hill store and post office) nor the mature trees that surround it.

The following Ward House/Belward Farm elements are identified on the attached site plan and photographs. Elements present during the period of significance and retaining integrity are considered contributing to the Ward House/Belward Farm historic district:

Ward House/Belward Farm Contributing (C) and Non-Contributing Elements (NC)				
#	*Element*	*Estimated Build Year*	*Integrity*	*C/NC*
1	Farmhouse	ca. 1891	Yes	C
2	Well house	First half of the 20th century	Yes	C

[1] The end year for the period of significance is based on the common cultural resource management practice of lowering the age limit for NRHP eligibility from 50 years to 45 years to account for lead-time between the preparation of environmental documentation and actual project construction.

Prepared by: Christeen Taniguchi, RK&K **Date: 7/28/14**

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 20-21

Name of Property: Ward House / Belward Farm
Location: 10425 Darnestown Road, Rockville, MD 20850

Ward House/Belward Farm Contributing (C) and Non-Contributing Elements (NC)				
#	*Element*	*Estimated Build Year*	*Integrity*	*C/NC*
3	Former garage	First half of the 20th century	No (The building no longer looks like a garage. The garage door opening has been filled in and the exterior walls resided with vinyl)	NC
4	Dairy barn with attached milk house and double silos	ca. early 20th century	Yes	C
5	Bell	First half of the 20th century	Yes	C
6	Hand water pump	First half of the 20th century	Yes	C
7	Two connected farm buildings	First half of the 20th century	Yes	C
8	Gas tank	First half of the 20th century	Yes	C
9	Hay barn and stable	First half of the 20th century	Yes	C
10	Equipment shed	*Northeast section:* First half of the 20th century *Two additions at the southwest elevation of the northeast section:* circa 1960s	No (Most of the shed has been demolished; only the southwest addition remains)	NC
11	Barn	First half of the 20th century	Yes	C
12	Chicken coop (?)	First half of the 20th century	Yes	C

Prepared by: Christeen Taniguchi, RK&K **Date: 7/28/14**

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 20-21

Name of Property: Ward House / Belward Farm
Location: 10425 Darnestown Road, Rockville, MD 20850

Ward House/Belward Farm Contributing (C) and Non-Contributing Elements (NC)				
#	*Element*	*Estimated Build Year*	*Integrity*	*C/NC*
13	Concrete trough	First half of the 20th century	Yes	C
14	Concrete pad	First half of the 20th century	No	NC
15	Modern residence	Circa 1990s	Yes	NC
16	Generator enclosure	First half of the 20th century	Yes	C
17	North tenant house	Sometime between 1923 and 1944	Yes	C
18	North tenant house shed	Possibly sometime between 1923 and 1944	Yes	C
19	North tenant house hand water pump	Possibly sometime between 1923 and 1944	Yes	C
20	Middle tenant house	Sometime between 1923 and 1944	Yes	C
21	Middle tenant house garage	Possibly sometime between 1923 and 1944	Yes	C
22	Middle tenant house well house	Possibly sometime between 1923 and 1944	Yes	C
23	Middle tenant house shed	Possibly sometime between 1923 and 1944	Yes	C
24	South tenant house	Sometime between 1923 and 1944	Yes	C
25	South tenant house shed	Possibly sometime between 1923 and 1944	Yes	C

Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 20-21

Name of Property: Ward House / Belward Farm
Location: 10425 Darnestown Road, Rockville, MD 20850

Ward House/Belward Farm Contributing (C) and Non-Contributing Elements (NC)				
#	*Element*	*Estimated Build Year*	*Integrity*	*C/NC*
26	Stone entrance walls and connected wood fencing	Circa early 2000s	Yes	NC
27	Farm land, including fields, mature trees, and wooded areas	19th century	Yes	C
28	Drive to the main farmstead	Circa early 20th century	Yes	C
29	Drive to the tenant houses	Circa early 20th century	Yes	C

Summary of findings:

24 contributing elements
5 non-contributing elements

Prepared by: Christeen Taniguchi, RK&K

Date: 7/28/14

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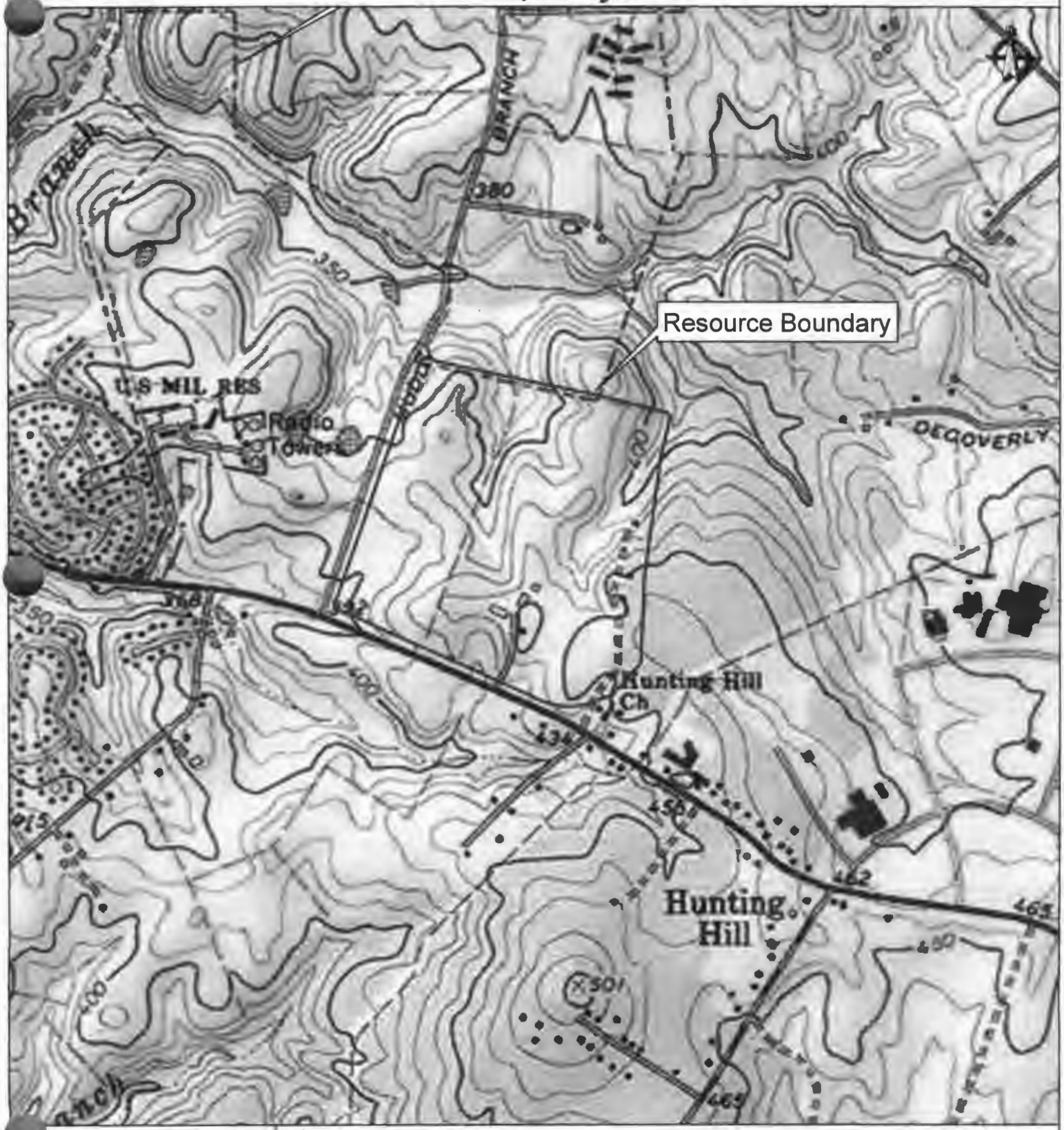
Ward House / Belward Farm (M:20-21)
10425 Darnestown Road (MD 28)
Rockville, Maryland



MTA Maryland

CCT Corridor Cities Transitway

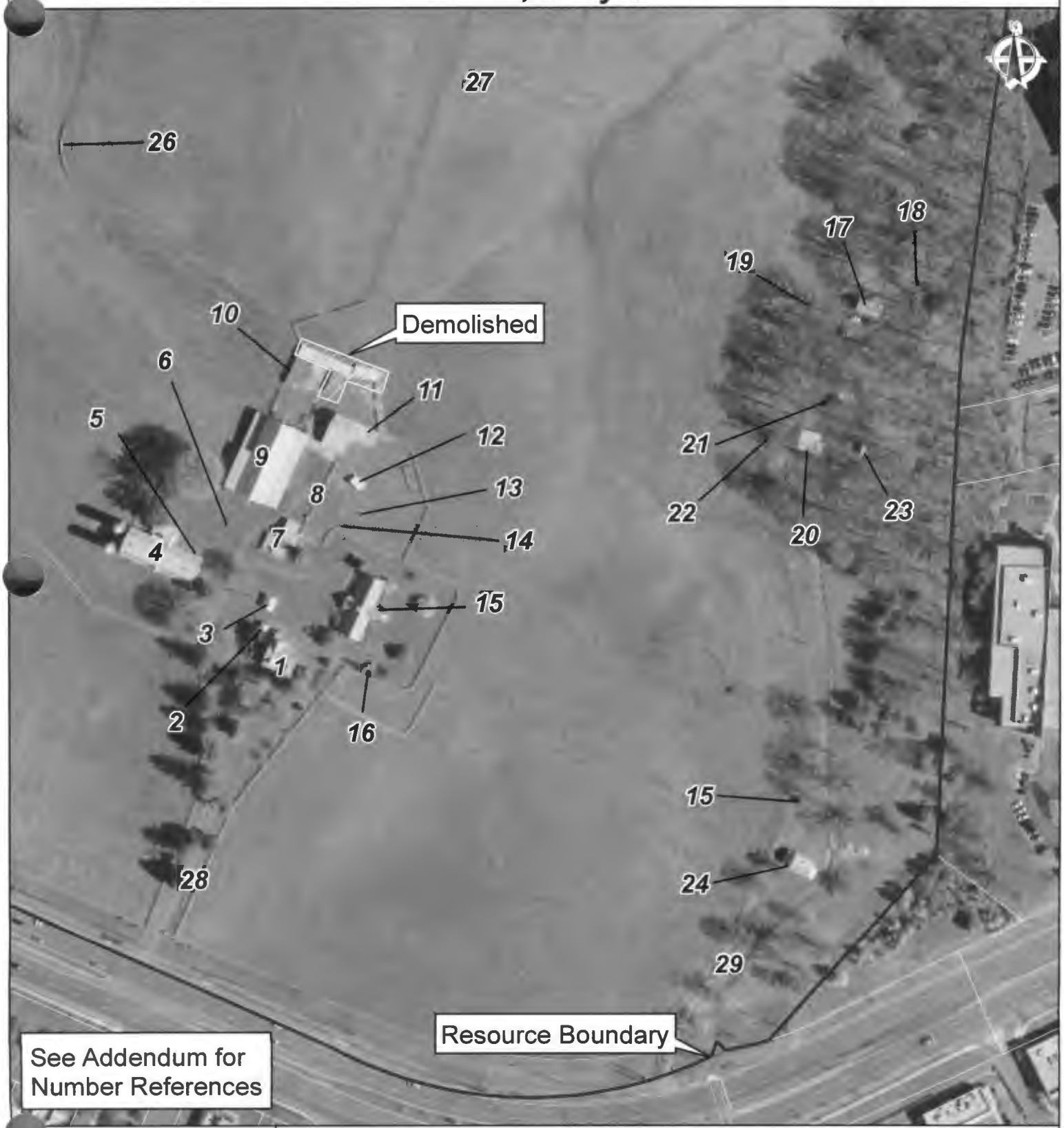
Location Map

0 250 500 1,000 1,500 2,000 Feet

June 2014

Source: Rockville USGS 7 5' DRG

Ward House / Belward Farm (M:20-21)
10425 Darnestown Road (MD 28)
Rockville, Maryland



MTA Maryland

CCT Corridor Cities Transitway

Contributing and Non-Contributing Elements

0 50 100 200 300 400 Feet

July 2014

Photo Log
MIHP# M: 20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, Maryland
Photographer: Christeen Taniguchi
Date: January 16 and July 18, 2014

#	Digital Image File Name	Description of View
1	M; 20-21_2014-01-16_01.tif	View east at the farmhouse
2	M; 20-21_2014-01-16_02.tif	View south (from right to left) at the farmhouse, well house, and former garage
3	M; 20-21_2014-07-18_03.tif	View west at the well house to the left and former garage to the right
4	M; 20-21_2014-01-16_04.tif	View north at the dairy barn and attached double silos
5	M; 20-21_2014-01-16_05.tif	View west at the dairy barn with attached milk house and double silos, bell, and hand water pump
6	M; 20-21_2014-01-16_06.tif	View east at the two connected farm buildings
7	M; 20-21_2014-07-18_07.tif	View southeast at the two connected farm buildings with gasoline tank to the left
8	M; 20-21_2014-01-16_08.tif	View northeast at the hay barn and stable
9	M; 20-21_2014-01-16_09.tif	View west at the hay barn and stable
10	M; 20-21_2014-01-16_10.tif	Detailed view northwest at the southeast elevation of the hay barn and stable
11	M; 20-21_2014-01-16_11.tif	January 16, 2014 view north at the equipment shed
12	M; 20-21_2014-07-18_12.tif	July 18, 2014 view north at what remains of the equipment shed visible in the background
13	M; 20-21_2014-07-18_13.tif	View east at a barn
14	M; 20-21_2014-07-18_14.tif	View northeast at the southeast section of the barn
15	M; 20-21_2013-07-18_15.tif	View east at the chicken coop (?)
16	M; 20-21_2013-01-16_16.tif	View east at the concrete trough and concrete pad
17	M; 20-21_2013-01-16_17.tif	View southeast at the modern residence
18	M; 20-21_2013-07-18_18.tif	View south at the generator enclosure
19	M; 20-21_2013-07-18_19.tif	View east at the north tenant house with its shed visible in the background to the right
20	M; 20-21_2013-07-18_20.tif	View east at the north tenant house shed
21	M; 20-21_2014-07-18_21.tif	View northwest at the north tenant house hand water pump
22	M; 20-21_2014-07-18_22.tif	View northeast at the middle tenant house, its associated well house, and the tenant houses' drive

Photo Log
MIHP# M: 20-21
Ward House/Belward Farm

#	Digital Image File Name	Description of View
23	M; 20-21_2014-07-18_23.tif	View northeast at the middle tenant house
24	M; 20-21_2014-07-18_24.tif	View west at the middle tenant house
25	M; 20-21_2014-07-18_25.tif	View west at the middle tenant house well house
26	M; 20-21_2014-07-18_26.tif	View east at the middle tenant house garage
27	M; 20-21_2014-07-18_27.tif	View southeast at the middle tenant house shed
28	M; 20-21_2014-07-18_28.tif	View north at the south tenant house, its associated shed, and the tenant houses' drive
29	M; 20-21_2014-01-16_29.tif	View southeast from Muddy Branch Road at the farm, including the farmstead in the background
30	M; 20-21_2014-01-16_30.tif	View northeast from Darnestown Road towards the driveway, with the farmhouse visible in the background; the driveway entrance is flanked by stone entrance walls and wood fencing
31	M; 20-21_2014-01-16_31.tif	View northeast at the farmhouse, hay barn and stable, and dairy barn
32	M; 20-21_2014-01-16_32.tif	View northwest towards mature trees located northeast of the dairy barn with attached milk house and double silos
33	M; 20-21_2014-01-16_33.tif	View north at the southern portion of the farm fields, with the dairy barn and silos, and wood fencing visible to the right
34	M; 20-21_2014-01-16_34.tif	View north at the northern portion of the farm fields and wood fencing, taken from near the west side of the hay barn and stable; the mature trees lining a swale are visible in the background
35	M; 20-21_2014-01-16_35.tif	View northeast, with the hay barn and stable visible in the foreground and equipment shed in the background
36	M; 20-21_2014-01-16_36.tif	View northeast at the farm fields and wood fencing at the east side of the property; the farmhouse is visible in the background
37	M; 20-21_2014-01-16_37.tif	View east at the tenant houses, with farm fields at the east side of the property in the foreground

Prints:
Processing – RA-4
Paper – Fujicolor Crystal Archive Professional Paper (Super Type CN)

DVD-R Gold:
Verbatim, UltraLife Gold, Metal Azo dye

M: 20-21

Ward House / Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View east at the farmhouse

M; 20-21_2014-01-16_01.tif

1 of 37

M:20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
January 16, 2014
MD SHPO
View south (from right to left) at the farmhouse, well house, and former garage
M;20-21_2014-01-16_02.tif
2 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

July 18, 2014

MD SHPO

View west at the well house to the left and former garage to the right

M; 20-21_2014-07-18_03.tif

3 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View north at the dairy barn and attached double silos

M; 20-21_2014-01-16_04.tif

4 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View west at the dairy barn with attached milk house and double silos, bell, and hand water pump

M; 20-21_2014-01-16_05.tif

5 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View east at the two connected farm buildings

M; 20-21_2014-01-16_06.tif

6 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View southeast at the two connected farm buildings with gasoline tank to the left
M; 20-21_2014-07-18_07.tif
7 of 37

M:20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
January 16, 2014
MD SHPO
View northeast at the haybarn and stable
M; 20-21_2014-01-16_08.tif
8 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View west at the hay barn and stable

M; 20-21_2014-01-16_09.tif

9 of 37

M: 20-21

Ward House / Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

Detailed view northwest at the southeast elevation of the hay barn and stable

M; 20-21_2014-01-16_10.tif

10 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

January 16, 2014 view north at the equipment shed

M; 20-21_2014-01-16_11.tif

11 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

July 18, 2014

MD SHPO

July 18, 2014 view north at what remains of the equipment shed visible in the background

M; 20-21_2014-07-18_12.tif

12 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View east at a barn
M; 20-21_2014-07-18_13.tif
13 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View northeast at the southeast section of the barn
M; 20-21_2014-07-18_14.tif
14 of 37

M: 20-21

Ward House / Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

July 18, 2014

MD SHPO

View east at the chicken coop (?)

M; 20-21_2014-07-18_15.tif

15 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View east at the concrete trough and concrete pad

M; 20-21_2014-01-16_16.tif

16 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View southeast at the modern residence

M; 20-21_2014-01-16_17.tif

17 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

July 18, 2014

MD SHPO

View south at the generator enclosure

M; 20-21_2014-07-18_18.tif

18 of 37

M: 20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View east at the north tenant house with its shed visible in the background to the right
M; 20-21_2014-07-18_19.tif
19 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View east at the north tenant house shed
M; 20-21_2014-07-18_20.tif
20 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View northwest at the north tenant house hand water pump
M; 20-21_2014-07-18_21.tif
21 of 37

M: 20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View northeast at the middle tenant house, its associated well house, and the tenant houses' drive
M; 20-21_2014-07-18_22.tif
22 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View northeast at the middle tenant house
M; 20-21_2014-07-18_23.tif
23 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

July 18, 2014

MD SHPO

View west at the middle tenant house

M; 20-21_2014-07-18_24.tif

24 of 37

M: 20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
July 18, 2014
MD SHPO
View west at the middle tenant house well house
M; 20-21_2014-07-18_25.tif
25 of 37

M: 20-21

Ward House / Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

July 18, 2014

MD SHPO

View east at the middle tenant house garage

M; 20-21_2014-07-18_26.tif

26 of 37

M: 20-21

Ward House / Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

July 18, 2014

MD SHPO

View southeast at the middle tenant house shed

M; 20-21_2014-07-18_27.tif

27 of 37

M: 20-21

Ward House / Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

July 18, 2014

MD SHPO

View north at the south tenant house, its associated shed, and the tenant houses' drive

M; 20-21_2014-07-18_28.tif

28 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
January 16, 2014
MD SHPO
View southeast ~~from~~ Muddy Branch Road at the farm, including the farmstead in the background
M; 20-21_2014-01-16_29.tif
29 of 37


BELWARD
BELWARD

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View northeast from Darnestown Road towards the driveway, with the farmhouse visible in the background; the driveway entrance is flanked by stone entrance walls and wood fencing

M; 20-21_2014-01-16_30.tif

30 of 37

M: 20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
January 16, 2014
MD SHPO
View northeast at the farmhouse, hay barn and stable, and dairy barn
M; 20-21_2014-01-16_31.tif
31 of 37

M: 20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
January 16, 2014
MD SHPO
View northwest towards mature trees located northeast of the dairy barn with attached milk house and double silos
M; 20-21_2014-01-16_32.tif
32 of 37

M: 20-21
Ward House/Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
January 16, 2014
MD SHPO
View north at the southern portion of the farm fields, with the dairy barn and silos, and wood fencing visible to the right
M; 20-21_2014-01-16_33.tif
33 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
January 16, 2014
MD SHPO
View north at the northern portion of the farm fields and wood fencing, taken from near the west side of the hay barn and stable; the mature trees lining a swale are visible in the background
M; 20-21_2014-01-16_34.tif
34 of 37

M: 20-21
Ward House / Belward Farm
10425 Darnestown Road (MD 28)
Rockville, Montgomery County, MD
Christeen Taniguchi
January 16, 2014
MD SHPO
View northeast, with the hay barn and stable visible in the foreground and equipment shed in the background
M; 20-21_2014-01-16_35.tif
35 of 37

M: 20-21

Ward House / Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View northeast at the farm fields and wood fencing at the east side of the property; the farmhouse is visible in the background

M; 20-21_2014-01-16_36.tif

36 of 37

M: 20-21

Ward House/Belward Farm

10425 Darnestown Road (MD 28)

Rockville, Montgomery County, MD

Christeen Taniguchi

January 16, 2014

MD SHPO

View east at the tenant houses, with farm fields at the east side of the property in the foreground

M; 20-21_2014-01-16_37.tif

37 of 37

MARYLAND HISTORICAL TRUST
DETERMINATION OF ELIGIBILITY FORM

NR Eligible: yes X
no ____

Property Name: Belward Farm Inventory Number: M:20-21

Address: 10425 Darnestown Road Historic district: ____ yes X no

City: Rockville, MD Zip Code: ____ County: Montgomery

USGS Quadrangle(s): Rockville

Property Owner: Johns Hopkins Belward Research Campus Tax Account ID Number: ____

Tax Map Parcel Number(s): N500 Tax Map Number: FS341

Project: I-270/US 15 Multi-Modal Corridor Study Agency: FHWA/SHA

Agency Prepared By: Architectural Historian, SHA

Preparer's Name: Anne E. Bruder Date Prepared: 12/27/2007

Documentation is presented in: Project Review and Compliance Files

Preparer's Eligibility Recommendation: X Eligibility recommended ____ Eligibility not recommended

Criteria: X A ___ B X C ___ D Considerations: ___ A ___ B ___ C ___ D ___ E ___ F ___ G

Complete if the property is a contributing or non-contributing resource to a NR district/property:

Name of the District/Property: ____

Inventory Number: ____ Eligible: ____ yes Listed: ____ yes

Site visit by MHT Staff ____ yes X no Name: ____ Date: ____

Description of Property and Justification: *(Please attatch map and photo)*

Please see the attached Addendum which describes the revised boundary for Belward Farm as a result of residential and biotechnological park construction.

MARYLAND HISTORICAL TRUST REVIEW

Eligibility recommended X **Eligibility not recommended** ____

Criteria: X A ___ B X C ___ D **Considerations:** ___ A ___ B ___ C ___ D ___ E ___ F ___ G

MHT Comments: Concur with boundary revision. Remains eligible.

Reviewer, Office of Preservation Services Date 6/24/08

Reviewer, National Register Program Date 7/2/08

200800113

Maryland Inventory of Historic Properties Addendum

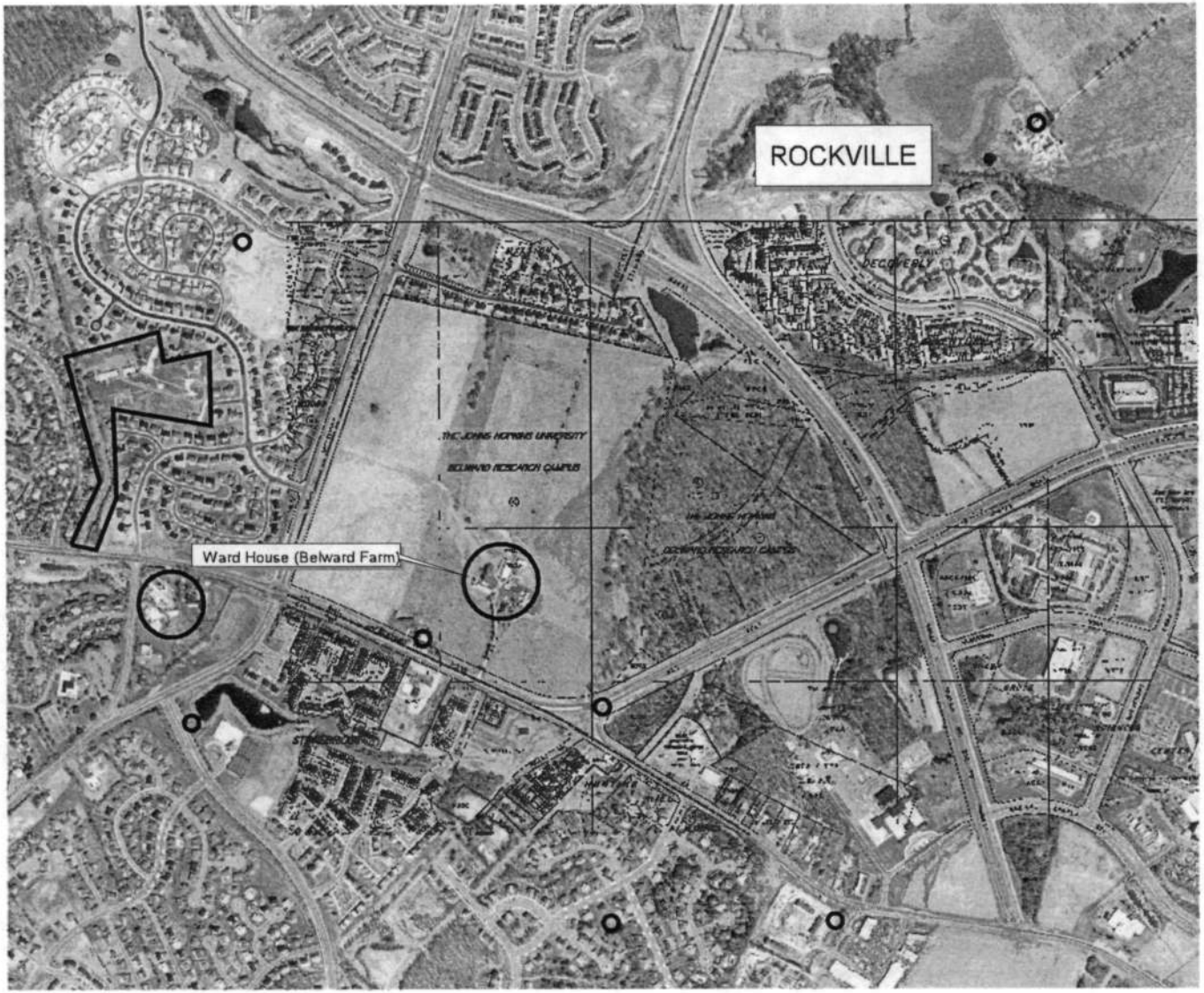
MIHP Number: M:20-21
Property Name: Belward Farm
Property Address: 10425 Darnestown Road (MD 28), Rockville, Montgomery County

The Maryland State Highway Administration determined the property to be eligible for the National Register of Historic Places and MHT concurred with that determination on September 24, 1996.

The historic property has been surveyed two times by M-NCPPC since 1974. In 1983, the farm was described as having acreage of 134.37 Acres, but that was reduced in the 1990s through the development of the Mission Hills Subdivision. In 1996, the property was described as containing 124 Acres. Further property reductions occurred following the sale of the entire property to Johns Hopkins University, which has used portions of the property to create the Johns Hopkins Belward Research Campus, a biotechnology park. As a result, there is residential development in the northern portion of the historic property, as well as the biotechnological development in the eastern portion of the historic property's former historic boundary. Because this development is not in keeping with the architectural qualities that make the Belward Farm National Register-eligible, and because the altered areas are outside the control of the original owners, SHA has limited the Belward Farm's historic boundary to the boundary described as Tax Parcel N500 shown on Montgomery County Tax Map FS341 (2006), containing 107 Acres. Copies of the Tax Map and USGS Rockville Quad are attached to demonstrate this boundary.

Prepared by Anne E. Bruder, Maryland State Highway Administration, Architectural Historian, December 27, 2007

Belward Farm, M:20-21
Boundary Shown with SHA 1998 Aerial superimposed with Montgomery County Tax Map FS341 showing Parcel N500
Scale: 1:12,000



USGS Topo Quad Index
Maryland Inventory of Historic Places
DOQQ Index
Swsdoe3m.shp
County

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S

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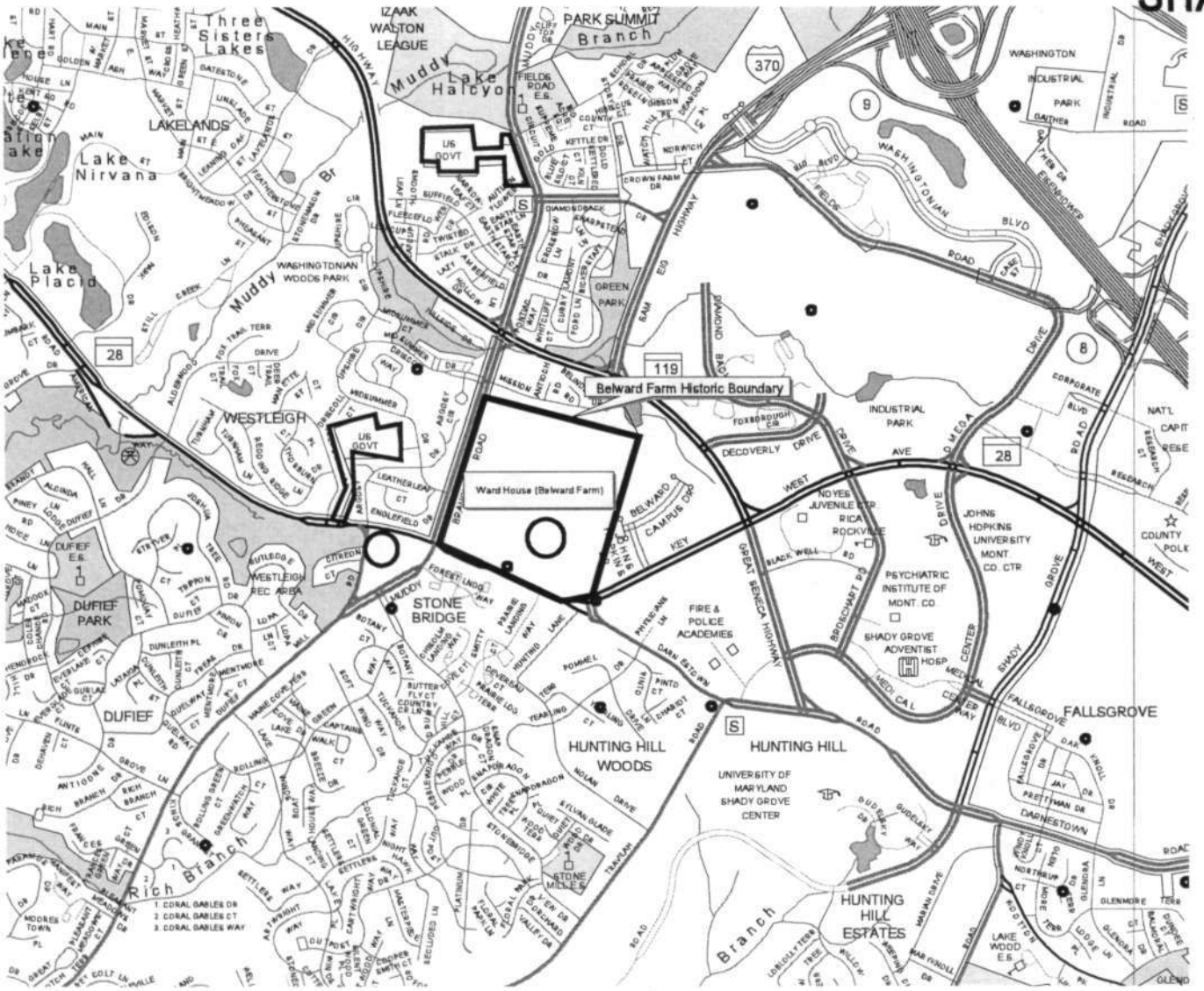
M:20-21

Belward Farm, M:20-21
Historic Boundary Map
Scale: 1:24,000
SHA Rockville Quadrangle



Maryland Inventory of Historic Places
DOQQ Index
Swsdoe3m.shp
County

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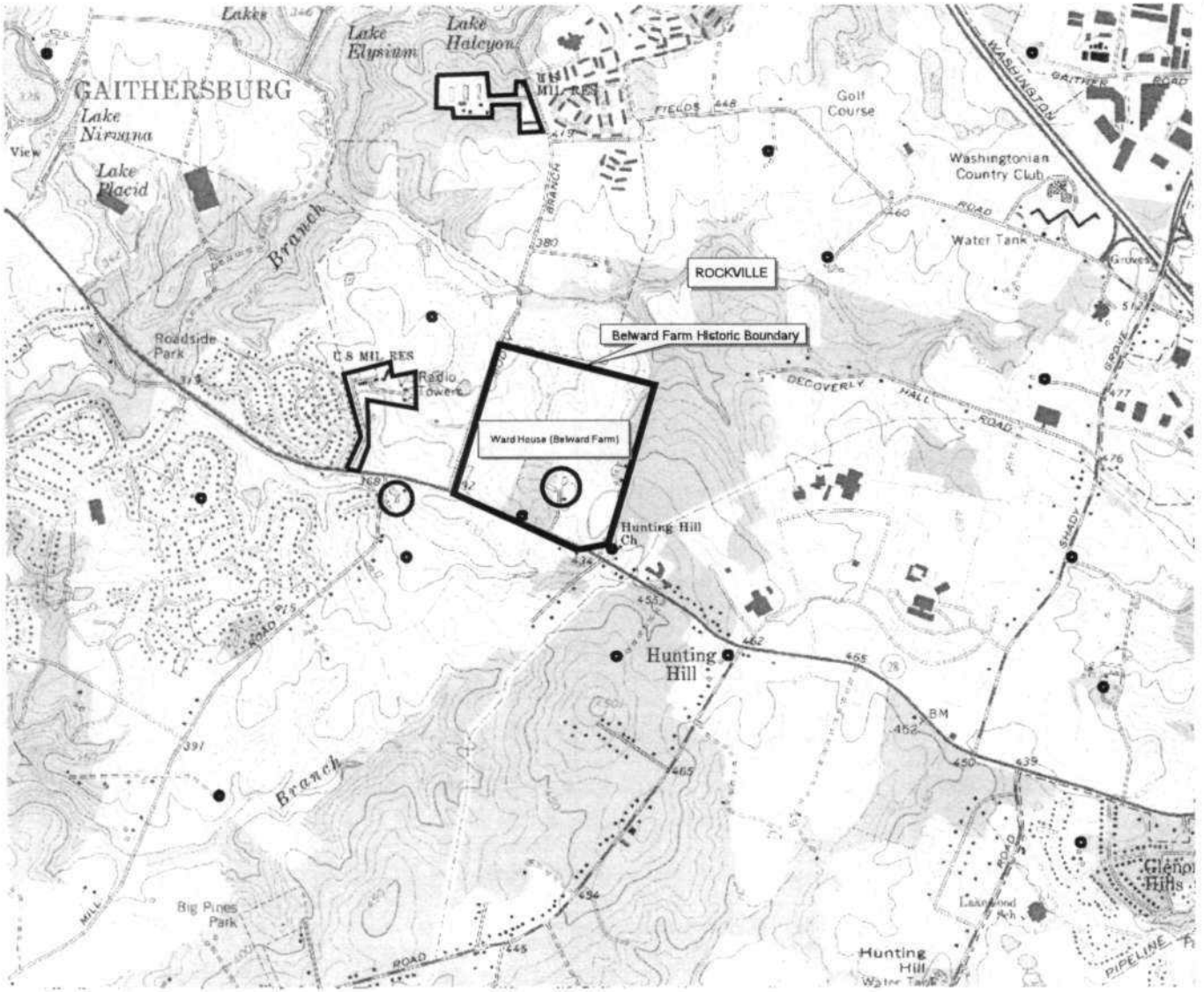
H:20-21

Belward Farm, M:20-21
Historic Boundary Map
Scale: 1:24,000
USGS Rockville Quadrangle



- Maryland Inventory of Historic Places
- USGS Topo Quad Index
- DOQQ Index
- Swsdoe3m.shp
- County

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M:20-21

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Ward House Survey Number: M:20-21

Project: I-270/US 15 Multimodal Study, Montgomery and Frederick Co. Agency: SHA

Site visit by MHT Staff: _X_ no ___ yes Name _____ Date _____

Eligibility recommended _X_ Eligibility **not** recommended ___

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

Justification for decision: (Use continuation sheet if necessary and attach map)

The Ward House (Belward Farm) is located at 10425 Darnestown Road and is considered eligible for listing on the National Register of Historic Places under Criterion C.

The Ward House was built ca. 1891 by Ignatius B. Ward, to replace an earlier structure on the site which burned down. Ignatius Ward, a longtime resident of the area, was a farmer and a storekeeper. Ward had a combination country store and post office. He also ran a wheelwright and blacksmith shop at that location. His store sat on the farm property directly on the Darnestown Road in front of the house. Ignatius Ward died in 1909, but the property remained in the Ward family until at least 1983.

The present house on the property is a two-story frame structure having an L-shaped footprint and a central-passage, single-pile plan. The frame building sits upon a low foundation, has clapboard walls and is covered with a gable roof. The house is characterized by vernacular Queen Anne massing and detailing, including a two-story polygonal bay; a double-story porch with turned posts and decorative brackets; a projecting gable; and fishscale shingles located in the gable ends.

The house is a good example of a 19th-century farmhouse ornamented with high Victorian design aesthetics; as such the property embodies distinctive characteristics of a type and style of construction and is thus eligible for the National Register under Criterion C.

Documentation on the property/district is presented in: MHT Inventory Files

Prepared by: Catherine Crawford, MHT form (1983)

Kimberly Prothro Williams September 20, 1996
Reviewer, Office of Preservation Services Date

NR program concurrence: X yes ___ no ___ not applicable

Peter B. Finney 9/24/96
Reviewer, NR program Date

Survey No. M:20-21

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

____	Eastern Shore	(all Eastern Shore counties, and Cecil)
____	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
__X__	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
____	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

____	Paleo-Indian	10000-7500 B.C.
____	Early Archaic	7500-6000 B.C.
____	Middle Archaic	6000-4000 B.C.
____	Late Archaic	4000-2000 B.C.
____	Early Woodland	2000-500 B.C.
____	Middle Woodland	500 B.C. - A.D. 900
____	Late Woodland/Archaic	A.D. 900-1600
____	Contact and Settlement	A.D. 1570-1750
____	Rural Agrarian Intensification	A.D. 1680-1815
____	Agricultural-Industrial Transition	A.D. 1815-1870
__X__	Industrial/Urban Dominance	A.D. 1870-1930
____	Modern Period	A.D. 1930-Present
____	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

____	Subsistence
____	Settlement
____	Political
____	Demographic
____	Religion
____	Technology
____	Environmental Adaptation

IV. Historic Period Themes:

____	Agriculture
__X__	Architecture, Landscape Architecture, and Community Planning
____	Economic (Commercial and Industrial)
____	Government/Law
____	Military
____	Religion
____	Social/Educational/Cultural
____	Transportation

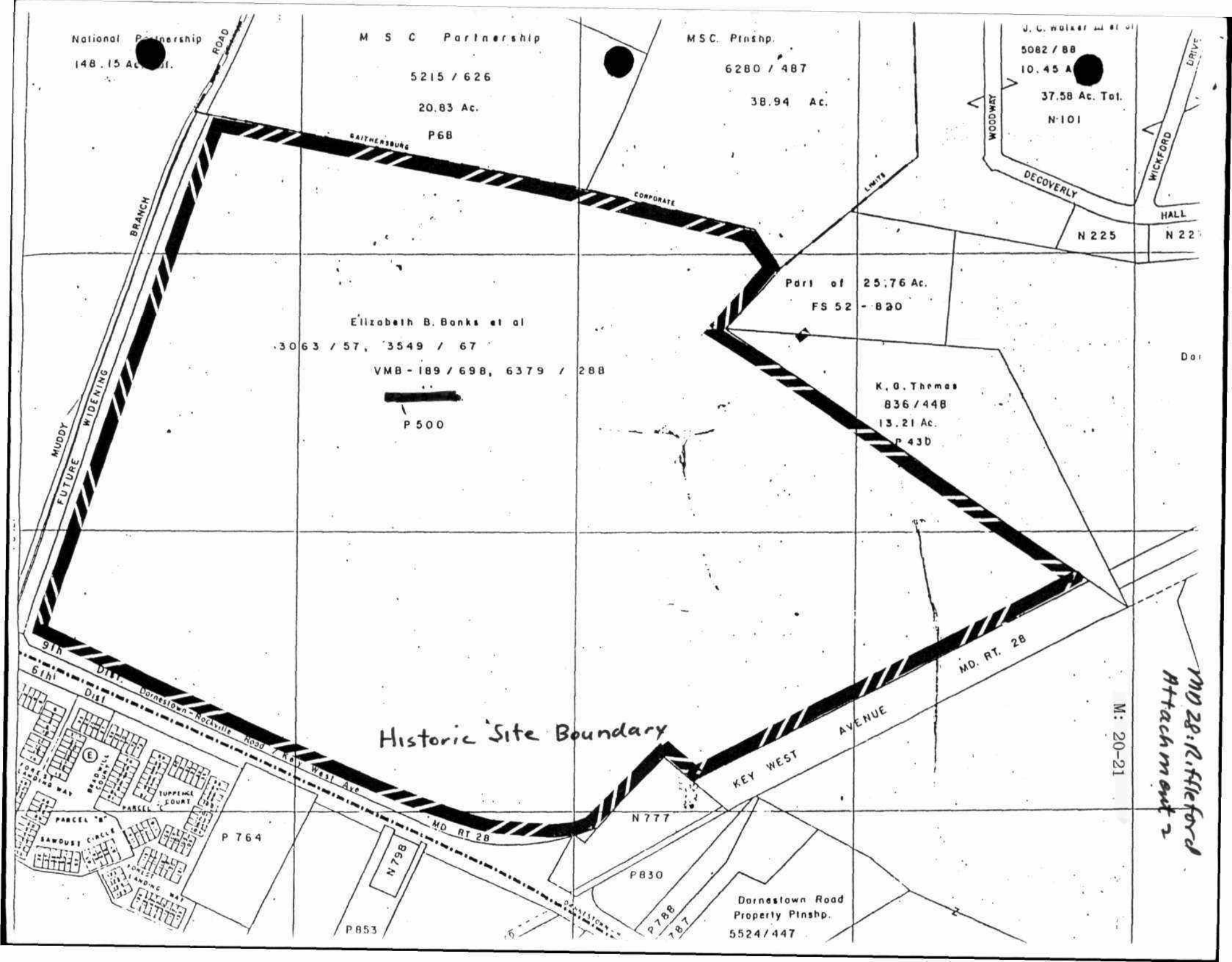
V. Resource Type:

Category: Building

Historic Environment: Rural

Historic Function(s) and Use(s): Domestic/Single Dwelling

Known Design Source:


National Partnership
148.15 Ac. ±
ROAD
M S C Partnership
5215 / 626
20.83 Ac.
P68
MSC. Ptnshp.
6280 / 487
38.94 Ac.
J. C. Walker III et al
5082 / 88
10.45 A
37.58 Ac. Tot.
N-101
WOODWAY
DECOVERLY
WICKFORD
DRIVE
HALL
N 225
N 22
GAITHERSBURG
CORPORATE
LIMITS
BRANCH
MUDDY
FUTURE WIDENING
Part of 25.76 Ac.
FS 52 - 820
Elizabeth B. Banks et al
3063 / 57, 3549 / 67
VMB - 189 / 698, 6379 / 288
P 500
K. O. Thomas
836 / 448
13.21 Ac.
P 430
9th Dist.
6th Dist.
Dornestown - Rockville Road
Key West Ave
MD RT 28
KEY WEST AVENUE
MD. RT. 28
Historic Site Boundary
M: 20-21
MD 28: Rt. 1 to Ford
Attachment 2
PARCEL "B"
SAWDUST CIRCLE
FOREST LANDING WAY
BRADVILLE COURT
TUPPENCE COURT
PARCEL
P 764
N 798
P853
N777
P830
P788
787
Dornestown Road
Property Ptnshp.
5524/447

Survey No. M 20-21

Magi No. 160475604

DOE __yes __no

Maryland Historical Trust
State Historic Sites Inventory Form

1. Name (indicate preferred name)

historic Ward House

and/or common Belward Farm

2. Location

street & number 10425 Darnestown Rd. (Rt. 28) ___ not for publication

city, town Rockville ___ vicinity of congressional district

state Maryland county Montgomery

3. Classification

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

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

name Elizabeth B. Banks

street & number 10515 Darnestown Rd. telephone no.:

city, town Rockville, Md. state and zip code 20850

5. Location of Legal Description

courthouse, registry of deeds, etc. Mont. Co. Courthouse liber 3063

street & number folio 57

city, town Rockville state Md.

6. Representation in Existing Historical Surveys

title MNCPPC Historic Sites Inventory

date 1976 ___ federal X state X county ___ local

depository for survey records Park Historian's Office

city, town Rockville state Md.

M:20-21

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	■ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	■ Altered	☐ Unaltered	☐ Moved	■ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE

The house is a two story, frame structure of L-plan. Between the stem and leg of the L is a two story porch with turned posts. The end of leg of the "L" has a two story bay window. The gables are shingled with pattern shingles. The windows are 1/1 and 2/2 double hung sash.

On the interior the house has a central hall and flanking rooms. The doorways have glazed transom lights.

Behind the house is a water tower.

SEE INSTRUCTIONS

8. Significance

Survey No. M:20-21

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	_X_ architecture	___ education	___ military	___ social/ humanitarian	
___ 1700–1799	___ art	___ engineering	___ music	___ theater	
_X_ 1800–1899	___ commerce	___ exploration/settlement	___ philosophy	___ transportation	
___ 1900–	___ communications	___ industry	___ politics/government	___ other (specify)	
		___ invention			

Specific dates 1891 Builder/Architect

Check: Applicable Criteria: __A __B __C __D
and/or
Applicable Exception: __A __B __C __D __E __F __G

Level of Significance: __national __state __local

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

The Belward farmhouse is a good example of late vernacular Victorian architecture. Houses of this type, modeled after high Victorian and the later Queen Anne styles, were localized or simplified in small town America during the late nineteenth and early twentieth centuries. The architectual details of these popular styles such as cross gables, projecting wings and bays, decorative porches and balconies and other forms of ornate woodworking were incorporated into less complex structures. This is seen in the Belward farmhouse. These elements, including the use of shingled gables to break the monotony of the clapboard, have been well maintained in the Belward farmhouse, thus retaining the structures original late nineteenth century appearence.

The house was built about 1891 (to replace an earlier structure which burned down) by Ignatius B. Ward.[1] Ignatius, a long time resident of the area (he appears on the 1865 map) was a farmer as well as a store keeper. Ward had a combination country store and post office. He also ran a wheelwright and blacksmith shop at that location. His store sat on the farm property directly on the Darnestown Rd. in front of the house.[2] Ignatius died in 1909 leaving all his property, including the farm and store, to his wife, Elizabeth F. Ward, to be divided after her death between their seven children (Beulah, Mercy, George, William, Frances, Porter amd Frank).[3] The house remains in the family to this day. The present owner, Elizabeth Beall Banks, received the farm in full by the last will and testament of her aunt, the late Beulah Ward, in August of 1965.[4]

[1]Conversation between a member of the Ward family and Park Historian, Micheal Dwyer.
[2]Hopkins Map of 1894 and the mention of the store and farm in Will HCA 8/182, Mont. Co. Register of Wills.
[3]Will HCA 8/182, Mont. Co. Register of Wills.
[4]Deed 3549/67, Mont. Co. Land Records.

9. Major Bibliographical References

Survey No. M:20-21

Mont. Co. Land Records
Mont. Co. Register of Wills

10. Geographical Data

Acreage of nominated property 134.37 acres

Quadrangle name _____ Quadrangle scale _____

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

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 Catherine Crawford

organization Mont. Co. Hist. Preservation Comm. date 6/83

street & number _____ telephone _____

city or town Rockville state Maryland

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

PS-2746

M #20-21

160475604

MARYLAND HISTORICAL TRUST WORKSHEET

NOMINATION FORM
for the
NATIONAL REGISTER OF HISTORIC PLACES, NATIONAL PARKS SERVICE

SEE INSTRUCTIONS

1. NAME

COMMON: Belward Farm

AND/OR HISTORIC: Dodge-Ward House

2. LOCATION

STREET AND NUMBER: 10425 Darnestown Road (Rte. 28)

CITY OR TOWN: Rockville

STATE: Maryland

COUNTY: Montgomery

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☒ Building	☐ Public	Public Acquisition:	☒ Occupied	Yes:
☐ Site ☐ Structure	☒ Private	☐ In Process	☐ Unoccupied	☐ Restricted
☐ Object	☐ Both	☐ Being Considered	☐ Preservation work in progress	☐ Unrestricted
				☒ No

PRESENT USE (Check One or More as Appropriate)

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☒ Private Residence	☐ Other (Specify)	
☐ Educational	☐ Military	☐ Religious		
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY

OWNER'S NAME: E. B. Banks

STREET AND NUMBER:

CITY OR TOWN: STATE:

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Montgomery County Courthouse

STREET AND NUMBER:

CITY OR TOWN: Rockville STATE: Maryland

Title Reference of Current Deed (Book & Pg. #):

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: None

DATE OF SURVEY: ☐ Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS:

STREET AND NUMBER:

CITY OR TOWN: STATE:

M.20-21

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	☒ Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	☒ Altered	☐ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE

The house is a two story, frame structure of L-plan. Between the stem and leg of the L is a two story porch with turned posts. The end of leg of the "L" has a two story bay window. The gables are shingled with pattern shingles. The windows are 1/1 and 2/2 double hung sash.

On the interior the house has a central hall and flanking rooms. The doorways have glazed transom lights.

Behind the house is a water tower.

SEE INSTRUCTIONS

M.20-21

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

☐ Pre-Columbian	☐ 16th Century	☐ 18th Century	☐ 20th Century
☐ 15th Century	☐ 17th Century	☒ 19th Century	

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

Aboriginal	☐ Education	☐ Political	☐ Urban Planning
☐ Prehistoric	☐ Engineering	☐ Religion/Phi.	☐ Other *(Specify)*
☐ Historic	☐ Industry	losophy	_____
☐ Agriculture	☐ Invention	☐ Science	_____
☐ Architecture	☐ Landscape	☐ Sculpture	_____
☐ Art	Architecture	☐ Social/Human-	_____
☐ Commerce	☐ Literature	itarian	_____
☐ Communications	☐ Military	☐ Theater	_____
☐ Conservation	☐ Music	☐ Transportation	_____

STATEMENT OF SIGNIFICANCE

The house is about 83 years old and replaces a house that burned.

SEE INSTRUCTIONS

M:20-21

9. MAJOR BIBLIOGRAPHICAL REFERENCES

10. GEOGRAPHICAL DATA

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY							OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES					
CORNER	LATITUDE			LONGITUDE				LATITUDE			LONGITUDE		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds		Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	°	'	"	°	'	"		°	'	"	°	'	"
NE	°	'	"	°	'	"							
SE	°	'	"	°	'	"							
SW	°	'	"	°	'	"							

APPROXIMATE ACREAGE OF NOMINATED PROPERTY:

Acreage Justification:

11. FORM PREPARED BY

NAME AND TITLE:
Christopher Owens, Park Historian

ORGANIZATION
MNCPPC

DATE
20 Aug 74

STREET AND NUMBER:
8787 Georgia Avenue

CITY OR TOWN:
Silver Spring

STATE
Maryland

12. State Liaison Officer Review: (Office Use Only)

Significance of this property is:

National ☐ State ☐ Local ☐

Signature

SEE INSTRUCTIONS

THE MARYLAND-NATIONAL CAPITAL PARK AND PLANNING COMMISSION

M:20-21

FOR ADDITIONAL INFORMATION

See correspondence dated May 16, 1984

ACTION TAKEN

I am pleased to transmit to you a copy of the Final Draft Amendment to the Master Plan for Historic Preservation: Gaithersburg Area Resources. This Plan recommends that only one of the remaining Gaithersburg area resources (the Belward Farm/Ward House, Site #20/21) be placed on the Master Plan for Historic Preservation.

This Amendment recommends against the designation of the following resources on the Master Plan:

- Railroad Underpass, Site #20/30
- Mineral Spring Houses, Site #20/10 1 & 2
- Sylvester Thompson's House & Store, Site #20/11
- Fields/King Farm, Site #20/12
- Watkins Farmhouse, Site #20/13
- Briggs Farm #2, Site #20/26

FOR ADDITIONAL INFORMATION

See correspondence dated May 16, 1984

ACTION TAKEN

The architectural and historic significance of the Gaithersburg Vicinity resources identified on the Locational Atlas and Index of Historic Sites in Montgomery County were reviewed as part of this Master Plan. As a result of this evaluation, the Plan recommends the Master Plan for Historic Preservation be amended to include the following sites:

20/4 Nathan Dickerson Farm

- Excellent example of late Federal style frame farmhouse built around 1836.
- Associated with Nathan Dickerson, prominent citizen and two-time County Commissioner.

20/17 England/Crown Farm

- Victorian style structure with intricate bracket work and cornice along its main facade.
- Typical Maryland farmstead with log tenant house.

20/21 BELWARD FARM/WARD HOUSE

- 1891--SIGNIFICANT AS AN EXAMPLE OF A HIGH STYLE, LATE 19TH CENTURY FARMSTEAD.
- QUEEN ANNE HOUSE EXEMPLIFIES HIGH STYLE VICTORIAN ARCHITECTURE. THIS TWO-STORY FRAME HOUSE FEATURES SHINGLED GABLES AND A TWO-STORY PORCH WITH TURNED POSTS.
- BUILT BY IGNATIUS B. WARD, FARMER, STOREKEEPER, AND POSTMASTER FOR HUNTING HILL.
- THE ENVIRONMENTAL SETTING INCLUDES THE QUEEN ANNE STYLE HOUSE, SOME REPRESENTATIVE OUTBUILDINGS, AND THE SIGNIFICANT SHADE TREES WHICH COMBINE TO DEFINE THE HISTORIC FARMSTEAD. THE SETTING ALSO INCLUDES THE TREE-LINED DRIVE IN ORDER TO PRESERVE THE HISTORIC RELATIONSHIP OF THE FARMSTEAD TO THE ROAD. AT THE TIME OF DEVELOPMENT, SPECIAL ATTENTION SHOULD BE GIVEN THE SITING OF STRUCTURES TO PROVIDE A VIEW OF THE HOUSE FROM MD 28.

20/28 St. Rose's Church and Cemetery

- Excellent example of 19th Century rural church incorporating significant

#20-21

NAME BELWARD FARM

LOCATION RTE. 28, W. OF ROCKVILLE, MD

FACADE SW

PHOTO TAKEN 8/20/74

M. MEYER

INDIVIDUAL PROPERTY/DISTRICT
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property/District Name: Washington Aqueduct NHL/NRHD Survey Number: MO- M:29-49

Project: Section 110 investigations Agency: F/COE

Site visit by MHT Staff: ___ no _X_ yes Name L. Bowlin Date 2/95

Eligibility recommended _X_ Eligibility **not** recommended ____

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

Justification for decision: (Use continuation sheet if necessary and attach map)

The Washington Aqueduct was designated a National Historic Landmark in 1973. However, the documentation did not clearly define all the contributing resources of the Landmark district within the delineated boundaries which straddle Maryland and DC. Architectural investigations in 1995 have corrected this oversight. The Washington Aqueduct is a water supply system located within Montgomery County, MD and the District of Columbia. Water is supplied to DC and several municipalities in Northern Virginia. The NHL district is composed of all the resources which are associated with the first phase of development and its designer, Montgomery C. Meigs. The period of significance is 1853 to 1880. The Aqueduct is nationally significant as an intact 19th century water supply system. Some of the character-defining resources located in Maryland are the brick conduit itself, the Cabin John Bridge and the Dalecarlia Reservoir. In addition, the Aqueduct is important for its association ith Meigs, a prolific architect and engineer. As the assistant to the Chief of Engineers, Meigs designed the gravity-fed water system before he was promoted to Quartermaster General of the Army Corps of Engineers. The NHL has 40 contributing resources identified in the architectural survey report on p.241-44.

A larger NR historic district exists as well. The NR eligible Historic district encompasses all the NHL resources but expands the period of significance to 1939. The NR district is eligible under Criterion A and C. The late nineteenth and twentieth century improvements illustrate the technological developments in the methods of procuring, purifying and delivering water. The McMillan Filtration Plant (DC), Dalecarlia Treatment Plant and the construction of a parallel conduit are some of the significant developments which supplemented Meigs' original design as the District's demand for potable water increased. Under Criterion C, the Aqueduct represents the works of two important engineers: Meigs and Allen Hazen who pioneered the slow sand filtration method of water purification. The NR district consists of 158 contributing resources listed on pages ~~227-234~~ 251-258 of the architectural survey report.

Documentation on the property/district is presented in: Washington Aqueduct Architectural Survey, draft report located in MHT library. S.106 correspondence in compliance file

Prepared by: Eliza Edwards et al. Goodwin & Associates

Lauren Bowlin — November 2, 1995
Reviewer, Office of Preservation Services — Date

NR program concurrence: ✓ yes ___ no ___ not applicable

Reviewer, NR program — 11-2-95 Date

Survey No. MO M:29-49

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA - HISTORIC CONTEXT

I. Geographic Region:

____	Eastern Shore	(all Eastern Shore counties, and Cecil)
____	Western Shore	(Anne Arundel, Calvert, Charles, Prince George's and St. Mary's)
__X__	Piedmont	(Baltimore City, Baltimore, Carroll, Frederick, Harford, Howard, Montgomery)
____	Western Maryland	(Allegany, Garrett and Washington)

II. Chronological/Developmental Periods:

____	Paleo-Indian	10000-7500 B.C.
____	Early Archaic	7500-6000 B.C.
____	Middle Archaic	6000-4000 B.C.
____	Late Archaic	4000-2000 B.C.
____	Early Woodland	2000-500 B.C.
____	Middle Woodland	500 B.C. - A.D. 900
____	Late Woodland/Archaic	A.D. 900-1600
____	Contact and Settlement	A.D. 1570-1750
____	Rural Agrarian Intensification	A.D. 1680-1815
__X__	Agricultural-Industrial Transition	A.D. 1815-1870
__X__	Industrial/Urban Dominance	A.D. 1870-1930
__X__	Modern Period	A.D. 1930-Present
____	Unknown Period (___ prehistoric	___ historic)

III. Prehistoric Period Themes:

____	Subsistence
____	Settlement
____	Political
____	Demographic
____	Religion
____	Technology
____	Environmental Adaptation

IV. Historic Period Themes:

____	Agriculture
__X__	Architecture, Landscape Architecture, and Community Planning
____	Economic (Commercial and Industrial)
__X__	Government/Law
____	Military
____	Religion
____	Social/Educational/Cultural
____	Transportation

V. Resource Type:

Category: historic district of buildings, structures

Historic Environment: rural and urban

Historic Function(s) and Use(s): government/public works, water system

Edward D. Hardy engineer & designer of Dalecarlia Filtration Plant

Known Design Source: Montgomery C. Meigs resources dating between 1853-1880

DRAFT

M: 29-49

NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior, National Park Service

NATIONAL HISTORIC LANDMARK NOMINATION

==========

1. Name of Property

==========

historic name: Washington Aqueduct
other names/site number: Not applicable

==========

2. Location

==========

street & number: N/A not for publication: N/A

city or town: Great Falls to D.C. vicinity: Washington, D.C.

states: MD and DC county: Montgomery Co., MD and District of Columbia

codes: 001 and 031 zip code: N/A

==========

3. State/Federal Agency Certification

==========

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria. I recommend that this property be considered significant ___ nationally ___ statewide ___ locally.
(___ See continuation sheet for additional comments.)

_____ _____
Signature of certifying official Date

_____
State or Federal agency and bureau
In my opinion, the property ____ meets ____ does not meet the National Register criteria.
(___ See continuation sheet for additional comments.)

_____
Signature of commenting or other official Date

_____
State or Federal agency and bureau

M:29-49

DRAFT

4. National Park Service Certification

I, hereby certify that this property is:
____ entered in the National Register_____ _____
___ See continuation sheet.
____ determined eligible for the National Register _____
_____
___ See continuation sheet.
____ determined not eligible for the National Register
_____ _____
____ removed from the National Register _____ _____
____ other (explain): _____

_____ _____
Signature of Keeper Date of Action

5. Classification

Ownership of Property (Check as many boxes as apply)
___ private
_X_ public-local
___ public-State
_X_ public-Federal

Category of Property (Check only one box)
___ building(s)
_X_ district
___ site
___ structure
___ object

Number of Resources within Property

Contributing	Noncontributing	
3	13	buildings
0	0	sites
37	20	structures
0	0	objects
40	**33**	**Total**

Number of contributing resources previously listed in the National Register 10

Name of related multiple property listing (Enter "N/A" if property is not part of a multiple property listing.) N/A

==========
6. Function or Use
==========

Historic: Government — Sub: Public Works
Industry — Waterworks

Current: Government — Public Works
Industry — Waterworks

==========
7. Description
==========

Architectural Classification:
Mid-Nineteenth Century — Sub: Classical Revival
Late Victorian — Italianate
Second Empire

Materials (Enter categories from instructions)
foundation: Stone (Conduit)
walls: Brick (Caretaker Dwelling), Stone (Culvert headwalls, Bridges, Gatehouses)
other: _____
_____

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.)

==========
8. Statement of Significance
==========

Applicable National Register Criteria (Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

X A Property is associated with events that have made a significant contribution to the broad patterns of our history.

___ B Property is associated with the lives of persons significant in our past.

_X_ C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

___ D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations (Mark "X" in all the boxes that apply.)

___ A owned by a religious institution or used for religious purposes.

___ B removed from its original location.

___ C a birthplace or a grave.

___ D a cemetery.

___ E a reconstructed building, object,or structure.

___ F a commemorative property.

___ G less than 50 years of age or achieved significance within the past 50 years.

Applicable National Historic Landmark Criteria (Mark "x" in one or more boxes for the criteria qualifying the property as a National Historic Landmark)

_X_ 1 Property is associated with events that have made a significant contribution to, and are identified with, or that outstandingly represent, the broad national patterns of United States history and from which an understanding and appreciation of those patterns may be gained.

___ 2 Property is associated with the lives of persons nationally significant in the history of the United States.

___ 3 Property represents some great idea or ideal of the American people.

_X_ 4 Property embodies distinctive characteristics of an architectural specimen exceptionally valuable for a study of a period, style, or method of construction, or that represent a significant, distinctive and exceptional entity whose components may lack individual distinction.

___ 5 Property is composed of integral parts of the environment not sufficiently significant by reason of historical association or artistic merit to warrant individual recognition but collectively compose an entity of exceptional historic or architectural significance, or outstandingly commemorate or illustrate a way of life or culture.

___ 6 Property yields, or may be likely to yield, information of major scientific importance by revealing new cultures, or by shedding light upon periods of occupation over large areas of the United States. Such sites are those which have yielded, or which may reasonably be expected to yield, data affecting theories, concepts, and ideas to a major degree

National Register Areas of Significance (Enter categories from instructions)
Community Planning and Development
Engineering
Health/Medicine

National Historic Landmark Themes (1987 version)
V.K. Political and Military Affairs, 1783 - 1860: The Army and Navy
XVIII.H. Technology: Construction
XVIII.K. Technology: Water & Sewerage
XVIII.L. Fire, Safety, Sanitation, and Pollution Controls

National Historic Landmark Themes (1994 version)
Theme: VII. Transforming the Environment

Subtheme: 1. Manipulating the Environment and its Resources

Period of Significance: 1853 - 1880

Significant Dates: N/A

Significant Person (Complete if Criterion B is marked above): N/A

Cultural Affiliation: N/A

Architect/Builder: Captain Montgomery Cunningham Meigs

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.)

==========

9. Major Bibliographical References

==========

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)

___ preliminary determination of individual listing (36 CFR 67) has been requested.
_X_ previously listed in the National Register
___ previously determined eligible by the National Register
_X_ previously designated a National Historic Landmark
___ recorded by Historic American Buildings Survey #
_X_ recorded by Historic American Engineering Record # MD-47

Primary Location of Additional Data

___ State Historic Preservation Office
___ Other State agency
___ Federal agency
___ Local government
___ University
_X_ Other: Washington Aqueduct, Dalecarlia Reservoir

M:29-49 DRAFT

==========
10. Geographical Data
==========

Acreage of Property: approximately 374 acres

UTM References (Place additional UTM references on a continuation sheet)

Zone	Easting	Northing	Zone	Easting	Northing
1) 18	3057604	3197403	19) 18	316580	4312600
2) 18	305340	4319240	20) 18	318860	4312840
3) 18	305480	4319120	21) 18	316860	4312660
4) 18	305440	4318940	22) 18	317380	4311560
5) 18	305220	4319080	23) 18	317300	4311700
6) 18	305720	4317740	24) 18	317100	4311720
7) 18	306200	4317300	25) 18	317000	4311600
8) 18	308220	4316500	26) 18	317320	4311000
9) 18	309620	4316440	27) 18	317340	4310880
10) 18	311070	4316160	28) 18	318060	4309900
11) 18	311300	4316100	29) 18	318060	4309560
12) 18	311640	4315960	30) 18	318200	4309460
13) 18	312340	4315960	31) 18	318420	4309260
14) 18	312480	4316040	32) 18	318820	4308720
15) 18	313260	4315820	33) 18	318620	4308600
16) 18	314060	4315740	34) 18	318200	4309100
17) 18	314680	4315220	35) 18	321660	4307960
18) 18	316140	4312680			

Verbal Boundary Description:

The portion of the Washington Aqueduct being nominated for National Historic Landmark designation straddles the Maryland/Washington, D.C. boundary. This property runs from Great Falls, Maryland to the Georgetown Reservoir in Washington, D.C. The Aqueduct property included in the NHL boundaries is 60 feet in width throughout most of its length, but widens at three locations: Great Falls, Dalecarlia Reservoir, and the Georgetown Reservoir. These three areas contain the majority of the above-ground resources that were constructed as part of the original Aqueduct system. The portions of the Washington Aqueduct property excluded from the NHL boundaries along this stretch include the Little Falls pumping facility, and the Dalecarlia property south of MacArthur Boulevard. Rock Creek Bridge (Bridge 6), located southeast of the Georgetown Reservoir where Pennsylvania Avenue crosses

Rock Creek, was included as a discontiguous element of the system. The following paragraphs discuss in greater detail the areas where the system widens beyond 60 feet.

Great Falls (Maryland)

Great Falls marks the beginning of the Aqueduct system. The westernmost part of the system is on the Virginia shore of the Potomac River, where the Great Falls Dam begins. The dam meets the Maryland shore at the intake facility. At this point, the boundaries widen to encompass eight built resources. The boundaries extend around these eight buildings and then head south to follow the path of the conduits. From Great Falls, the Aqueduct (occupying land approximately 60 feet wide) heads in a south-southeasterly direction through a wooded area for one and three-quarter miles until it reaches the intersection of MacArthur Boulevard. From this point, the Aqueduct runs in a southeasterly direction below MacArthur Boulevard for eight miles, until it reaches the Dalecarlia Reservoir. During this eight-mile stretch, the conduits cross Bridge 3 and Bridge 4 (Cabin John Bridge).

Dalecarlia Reservoir (D.C.)

At the Dalecarlia facility, the Aqueduct discharges into the forebay, located in the northwestern neck of the Dalecarlia Reservoir. At this point, the NHL boundaries widen to encompass the Washington Aqueduct property east of MacArthur Boulevard. It is at Dalecarlia that the NHL boundaries cross the Maryland/D.C. line, which extends through the reservoir. The Aqueduct property west of MacArthur Boulevard is excluded from the NHL boundaries. From the southeast corner of the Dalecarlia Reservoir, the Aqueduct resumes its course heading in a southeasterly direction below MacArthur Boulevard. From Dalecarlia, the Aqueduct extends two miles (occupying a 60-foot wide path) to the Georgetown Reservoir.

Georgetown Reservoir (D.C.)

The third area that the NHL boundaries widen is at the Georgetown Reservoir. The Aqueduct enters the reservoir

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in the northwestern corner of the basin. The boundaries encompass all 63 acres of Washington Aqueduct property comprising the Georgetown Reservoir.

Boundary Justification:

The boundaries of the NHL property were defined to encompass all extant elements of the original Washington Aqueduct system designed by Montgomery Meigs. The system has evolved and expanded over time, but most of the original elements are intact and operational. The boundaries include those resources that were built in association with the original system but that are no longer owned or operated by the Washington Aqueduct. Due to the original layout of the system, the property boundaries also include many of the subsequent additions to the Aqueduct system, such as the new conduit, and the new intake facility at Great Falls.

The northernmost boundary begins at the Great Falls Dam where water is first directed into the Aqueduct system. The boundaries continue along the path of the Aqueduct, encompassing the minimum area necessary to accommodate the width of the Aqueduct. The southernmost boundary ends at the Georgetown Reservoir. Bridge 6, because of its integral role in the original system, is included in the NHL property as a discontiguous element.

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11. Form Prepared By
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Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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Construction of the Washington Aqueduct, a water supply system for Washington, D.C., began in 1853 by the U.S. Army Corps of Engineers. Designed by Captain Montgomery C. Meigs, the system consisted of a 12-mile, underground conduit extending from the Great Falls of the Potomac River in Maryland to the District of Columbia (Figure 1). The Aqueduct system is 60 feet in width throughout most of its length, but widens at three locations: Great Falls, Dalecarlia Reservoir, and the Georgetown Reservoir. These three areas contain the majority of the above-ground resources constructed as part of the original Aqueduct system. The Aqueduct was designed as a gravity-fed system. A descent of nine inches every 5,000 feet allows water to flow through the conduit by gravity. To maintain this constant slope, the conduit required the construction of 11 tunnels, 26 culverts, and six bridges. Air vents, waste weirs, gatehouses, a receiving reservoir, and a distributing reservoir also were built as part of the original system. These support structures were integral elements of the Meigs plan.

The original system was designed to divert Potomac River water into the system at Great Falls. A dam was built to direct water into intake works located on the Maryland shore of the river. From there, the water flowed 10 miles through a nine-foot diameter masonry conduit (now referred to as the "old conduit") to a Receiving Reservoir at Dalecarlia Farms. This 50-acre Receiving Reservoir provided both a place for the turbid river water to settle, and a water storage site for times when the conduit was closed due to excessively muddy Potomac waters or for repairs. From the Receiving Reservoir, water was channeled through a two-mile extension of the conduit to a 36-acre Distributing Reservoir located on the western edge of Georgetown. This reservoir

allowed for further sedimentation and served as a distribution point. From the Distributing Reservoir, water was delivered through cast-iron pipes to the city (Meigs 1853; Ways 1993:15-16; U.S. Army Corps of Engineers 1953:5-8). A high service reservoir constructed in Georgetown at High and Road Streets (now Wisconsin and R Streets) also was built as part of the Meigs plan. This High Service Reservoir was designed to supply water to the areas of Georgetown that were too high in elevation to receive water via the gravity-fed system. Water was pumped up 145 feet to this site by an hydraulic ram housed in the west abutment of a bridge constructed at Pennsylvania Avenue (Bridge 6) to carry water mains over Rock Creek Valley (Historic American Engineering Record 1992:1; Ways 1993:16). This high service reservoir no longer exists; the site now is occupied by the Georgetown Branch of the D.C. Public Library. Potomac River water was first delivered to the city of D.C. via the Washington Aqueduct in 1864.

As in the case of many cities, Washington's original water supply system was unable to meet the demand of its expanding service area. Subsequent additions to the Washington Aqueduct have included a second distributing reservoir (McMillan Reservoir); two water filtration plants to provide safer and cleaner water; a second conduit (the "new conduit") to increase the water-carrying capacity of the system; new high reservoirs to facilitate the delivery of water to areas of Washington at a higher elevation; and a supplemental intake facility at Little Falls (Figure 2). Unlike other municipal water systems, however, the original system has been expanded not replaced. The original Washington Aqueduct system remains largely intact and operational. The U.S. Army Corps of Engineers continues to own and operate the system.

Today, much of the Washington Aqueduct is located below MacArthur Boulevard, a roadway established during the 1860s as Conduit Road, an access road for the conduit. Located along MacArthur Boulevard are some of the Aqueduct's above-ground resources such as brick air vents, bridges, and culverts. The area spanned by the Aqueduct gradually becomes more urban as the conduit proceeds eastward towards the city. Some of the system's original features have been concealed by subsequent development.

This nomination presents the Washington Aqueduct as a linear historic district consisting of a series of above-ground elements, in some cases miles apart, that are physically linked by a below-ground conduit. Rock Creek Bridge (Bridge 6), located southeast of the Georgetown Reservoir where Pennsylvania Avenue crosses Rock Creek, is included as a discontiguous element of the NHL district (Figure 3a-c).

A total of 73 built resources were identified within the NHL boundaries. Of these, 40 are considered to be contributing elements, while the remaining 33 elements are non-contributing resources. One of the contributing resources within the NHL boundaries, the Cabin John Bridge (WA31), is individually listed in the National Register. Another one of the buildings, the Castle Gatehouse (GR3), was included in the 1973 NHL designation of the Washington Aqueduct, but more recent archival research revealed that this building is not associated with the Meigs-era construction and therefore was not included as a contributing element of the NHL property. This building was listed individually in the National Register in 1973.

In general, most of the resources classified as non-contributing were constructed during later periods of development and are not associated with the original construction of the Aqueduct. Only five Meigs-era resources were considered non-contributing due to lack of integrity. These included Brick Vent 2 (WA23), Culvert 23 (WA40), Culvert 24 (WA41), waste weir (WA43), and Culvert 26 (WA44). Evidence of the original design of these structures is concealed by subsequent modification. Other alterations are discussed in more detail in the resource-specific descriptions below.

The following discussion highlights some of the Washington Aqueduct's most important contributing resources. Included in each resource description are construction date, original and current use, architectural and engineering features, building materials, and resource integrity. Resource descriptions are organized according to location: Great Falls, Dalecarlia, Georgetown, and along the conduit path. Much of the resource-specific archival information was compiled from annual reports submitted to Congress by the Chief Engineer of the Corps of Engineers.

Great Falls

The primary intake facility for the Washington Aqueduct is located along the Potomac River in Great Falls, Maryland. Figure 4 presents a map identifying the locations of built resources at Great Falls.

Construction at Great Falls began in 1853. The first structures at Great Falls were a rip-rap dam designed to direct water into the Aqueduct system; an intake facility along the Maryland

shore of the river; and a gatehouse to control the flow of water into the conduit. During the 1870s a dwelling was constructed to house the Great Falls gatekeeper. All of these original resources survive with the exception of the original intake facility.

Gatehouse (GF2). The gatehouse at Great Falls was designed by Montgomery Meigs and was in operation by 1862 (Photograph 1). Gates within the gatehouse regulated the flow of water to the conduit. During periods when the water was especially turbid, the gates were closed. If increased pressure was necessary in the aqueduct system, the gates could be opened to allow a greater volume of water into the conduit. The gatehouse is no longer in operation.

Description. The gatehouse is a one-story, three-by-one bay structure occupying a rectangular plan. The building is constructed of coursed Seneca sandstone with quoins extending the height of the structure. A mansard roof sheathed in hexagonal slate shingles shelters the building. A metal door centered in the west elevation provides access to the building. There are no windows in the building. Four circular louvered copper vents are located in the dormers; one vent in each elevation. The mansard roof and round dormers effectively convey an association with the Second Empire style.

Alterations. The building originally was sheltered by a wooden gable roof with projecting cross gable. Annual reports filed by the Chiefs of the Aqueduct reveal that this roof was left exposed and rotted, as did the wooden gate structures within the building. In 1877, a metal cornice and mansard roof were constructed, and iron components were added inside the building to replace the deteriorated wooden structures.

Gatekeeper Dwelling (GF4). The gatekeeper dwelling was built in 1875 to house the Great Falls gatekeeper. This was one of three caretaker residences constructed by the Aqueduct between 1874 and 1875. Other residences were built at the Receiving Reservoir (Dalecarlia Reservoir) and the Distributing Reservoir (Georgetown Reservoir). These three dwellings were built according to the same plan but using different materials, exemplifying the Army's early usage of standardized plans (Figure 5). As Quartermaster General of the Army, Montgomery Meigs encouraged the use of standardized plans at Army installations. Meigs hoped to control costs and to establish consistent construction standards at the expanding number of Army posts (Cannan 1994:440). The gatekeeper dwelling at the Georgetown Reservoir has been demolished; the dwelling at Dalecarlia (D) survives but is abandoned. The dwelling at Great Falls was transferred to the National Park Service ca.1970. The building now houses offices for Park Service officials.

Description. The gatekeeper dwelling is a two-story, "L" plan, stone structure constructed on a stone foundation. A mansard roof sheathed with wooden shingles shelters the building. Two brick interior chimneys rise above the roof plane. A one-story, flat-roofed porch occupies the crook of the "L" plan. Two building entries open onto the porch. Windows throughout the structure are two-over-two light, double hung, wooden sash units.

Alterations. A one-story, shed-roofed, frame addition supported by a concrete foundation was constructed on the south elevation. The walls of the addition are clad with German siding.

Great Falls Dam (WA1). Montgomery Meigs designed the Great Falls dam to divert Potomac water into the conduit. The dam was completed in 1863.

Description. The current dam consists of a cut masonry head wall and a slope of stone rubble. The dam extends across the Potomac to the Virginia shore. The dam is angled upstream to minimize the impact of the river current on the dam's structural integrity.

Alterations. Constructed between 1857 and 1863, the original dam was a rip-rap structure. Between 1864 and 1867 the rip-rap dam was replaced with a solid masonry structure due to damage to the original structure caused by the sudden rise of the river level each spring. The masonry dam was extended to the Virginia shore between 1882 and 1886. During 1895 and 1896, the dam's lip was raised two feet to 150 feet above sea level. In 1928, "flash boards" were added to the lip of the dam to raise the contained water level to 151.5 feet above sea level, increasing flow throughout the Aqueduct system.

Conduit Path (MacArthur Blvd.) and Other Miscellaneous Distribution Locations

Although most of the Washington Aqueduct's above-ground resources are located in discrete functional clusters at Great Falls, Dalecarlia, and Georgetown, many of the system's resources are dispersed outside of these geographically compact entities, generally along the conduit path. Most of these original resources are intact.

Old Conduit (WA3). The original conduit was designed by Meigs to carry Potomac River water 10 miles from Great Falls to the Receiving Reservoir (Dalecarlia Reservoir), and then two miles from there to the Distributing Reservoir (Georgetown Reservoir). Branch by-conduits were established at each reservoir to allow the water to bypass the reservoirs and connect directly with

the city distribution system, if necessary. The conduit, an integral part of the Meigs plan, was constructed between 1853 and 1864. Water flows by gravity through the conduit. The conduit continues to function as originally designed.

Description. The conduit consists of a circular brick channel and the materials that support the brick channel. The conduit maintains a constant descent rate of nine inches per 5,000 feet, and extends a total of 12 miles. Over the 12-mile length of the conduit, Potomac valley topography varies (Figure 6). Thus, to maintain the nine-inch-per-5,000 foot grade, three methods of construction were used: tunneling; cut-and-fill; and building on elevated fill. Eleven tunnels were excavated; all tunnels are bored through rock, and currently are lined with concrete. The cut-and-fill and elevated sections of conduit were constructed to conform to the same general characteristics; the brick conduit was constructed within a bed of rammed earth, which in turn rests upon a watertight layer. When impermeable rock was unavailable as a foundation, a layer of puddled clay was laid. Puddling is defined as the act of forming a compact mass that becomes impervious to water when dry (Merriam-Webster 1988). Upon the puddled or rock foundation, a column of rammed earth was constructed. The sides of the column sloped steeply upwards. The brick conduit was constructed within the upper portion of the rammed earth column. Next, earthen fill was deposited to cover the foundation and rammed earth column. The cut-and-fill and elevated sections differed in that cut-and-fill sections of the conduit simply required the excavation of a channel for the conduit and backfilling of the site once the conduit was in place. On the other

hand, elevated sections of the conduit required the construction of a large earthen embankment. The fill protected the conduit from damage and frost.

Meigs' design for the conduit called for a channel that was circular in section, nine feet in diameter, and constructed with three courses of brick. As built, the channel's diameter varied from nine to eleven feet (U.S. Army Corps of Engineers, *Annual Report* 1896:3906).

By-conduits around the system's reservoirs varied from the main conduit design. The by-conduit around the Receiving Reservoir was constructed with a nine-foot diameter through most of its course, but 625 feet of this by-conduit was only eight feet in diameter. The by-conduit around the Distributing Reservoir was constructed with a seven-foot diameter.

A two-lane road, MacArthur Boulevard, was established during the 1860s as an access road for the conduit. The road extends along the top of the conduit's earth berm, defining the conduit path.

Alterations. Few alterations were made to the conduit during its early years of operation. Between 1869 and 1871, the by-conduit around the receiving reservoir was lined with brick, because the rock through which the unlined by-conduit passed was soft and spalling rapidly. In 1881, the head of the conduit between Dalecarlia and Georgetown was enlarged to create more pressure at the conduit entrance and cause the water to flow faster through the conduit.

The next alteration to the conduit was the lining of the system tunnels. Spalling rock falling into the conduit was noted as early as the 1870s. Between 1911 and 1913 a comprehensive

effort was undertaken to line the tunnels with concrete. Presently, the application of gunnite to the entire conduit interior is a routine maintenance procedure.

The access road over the conduit (MacArthur Boulevard) also has been improved during the Aqueduct's operation. As early as 1868, the Chief Engineer of the Aqueduct noted that the conduit had become a heavily traveled artery between southern Montgomery County and Washington. To alleviate wear upon the conduit's earthen embankment by the heavy traffic, work began on macadamizing the road in 1871. Work progressed slowly; by 1885, the road between the Georgetown Reservoir and the Angler's Inn was paved. In 1892, the road was realigned to match exactly the path of the conduit channel. The adjustment was intended to prevent wagons straying from the macadam road from damaging the conduit embankment during the wet spring season. In 1974, recognizing the importance of the conduit access road as a county transportation artery, maintenance and policing of the road was turned over to Montgomery County (U.S. Army Corps of Engineers, *Dalecarlia Master Plan* 1983:7).

Culverts (WA5, 9, 11-19, 21, 22, 26-29, 32, 34-36, 38, 40-42, and 44). Structures constructed on an earthen foundation possess greater stability, and are less costly to maintain, than structures maintained above grade. Therefore, when crossing small stream valleys engineers often prefer to import fill and create an artificial earthen foundation, rather than erect a bridge. Culverts are just such structures. They serve two functions in the Aqueduct: to support the conduit as it crosses small stream valleys, and to allow existing streams to follow their natural course without eroding the conduit. A total of 26 masonry culverts were built between 1854 and

1856 as part of the Meigs plan (Figure 7). Similar masonry culverts were designed by Engineer John B. Jervis for the Croton Aqueduct in New York (Lange 1991:5).

Description. Culverts of Meigs' design were constructed of brick, with coursed ashlar headwalls. Like Meigs' bridges, Seneca sandstone typically was used in the construction of the culvert headwalls. Culvert dimensions varied; width and height were determined by the potential volume of water and debris that channeled body of water might carry during an average flood. Some of the culverts were designed with stepped sides and act as embankment walls. Others were capped with flat slabs of stone and covered in earth. Culvert 12, which spans Rock Run, is the largest culvert designed for the system and survives fully intact (Photograph 2).

Alterations. During the mid-1920s, a second conduit (the "new conduit") was constructed within the Aqueduct's original corridor. While some of the 1850s culverts possessed sufficient width to carry the new conduit, many of the culverts were extended. To expand the culverts, Aqueduct engineers simply added poured concrete tunnels that matched the height and width of the 1850s structures. New culvert headwalls were constructed of concrete, and lack ornamentation (Photograph 3).

Waste Weirs (WA43). Three waste weirs were constructed between 1855 and 1858 as part of the original conduit system. Waste weirs served two functions: to provide gates through which sections of the conduit could be de-watered quickly, and to provide blowoff points in the system should water pressure within the conduit channel build to dangerous levels. A section of the conduit could be drained by putting wooden stop planks across the conduit at the upstream waste

weir, and opening the gates in the downstream weir. Waste weirs allowed a portion of the conduit to be drained without interrupting the entire system.

Description. Waste weirs consisted of a two-doored, wooden framed gate set in the conduit channel wall, a gate chamber abutting the conduit channel exterior, and a tunnel leading from the gate chamber to a nearby creek, into which conduit water was discharged. Conduit gatekeepers accessed the waste weir gates via wooden catwalks constructed in the discharge tunnels.

Alterations. During the 1890s rotting wooden structural members were removed and replaced with iron framing. In ca. 1910, iron sluice gates replaced the original gates in the weirs. Valve mechanisms in the weirs were motorized during the 1940s; however, these motors have since been abandoned.

Bridges (WA6, 7, 24, 30, 83). Bridges were incorporated into the Washington Aqueduct system for the purpose of transporting the Aqueduct over valleys. Six bridges, identified as Bridges 1-6, were designed by Meigs. Four of these were built between Great Falls and the Distributing Reservoir; two bridges (Bridges 5 and 6) were located east of the Distributing Reservoir and were designed to convey iron water mains across Foundry Branch and Rock Creek.

Description. Bridges 1-4 are single span masonry bridges constructed of Seneca sandstone. The spring arch of the bridges range in dimension from 14 feet (Bridge 1) to 220 feet (Bridge 4 - Cabin John Bridge). The beltcourse, voussoirs, and keystone of each bridge are constructed of a more finely dressed sandstone. Bridge 3 (the Griffith Park Bridge) was designed

by Montgomery Meigs and Charles Talcott to carry the old conduit across Mountain Spring Branch (Photograph 4). The Cabin John Bridge (originally known as the Union Arch) carries the old conduit across Cabin John Creek (Photograph 5). Meigs designed the bridge with Alfred Rives. Between 1864 and 1903, the Cabin John Bridge was the longest single span masonry arch in the world. The bridge was listed in the National Register of Historic Places in 1973.

Bridges 5 and 6 were designed by Meigs as single span iron bridges to carry the Aqueduct's two original 48-inch iron distribution mains across Foundry Branch and Rock Creek (Photograph 6). Bridge 5 consisted of the two arched water mains anchored within granite abutments on either side of Foundry Branch. Bridge 5 is no longer visible; it has been buried beneath fill. Bridge 6 was designed with a similar configuration. The iron mains of Bridge 6 served as the supporting elements for a road deck carrying Pennsylvania Avenue over Rock Creek. A pump situated in the west abutment of Bridge 6 pumped water to the high service reservoir in Georgetown. The pump was powered by the flow of water through the Aqueduct. The design of Bridge 6 was altered dramatically in 1916. Bridge 6 presently exists as a 200-foot single arch concrete structure clad in smooth granite block facing (Photograph 7). On the bridge deck are a roadway, sidewalks, and balustrade. The roadway is 50 feet wide and paved with asphalt. The 10-foot wide sidewalks are constructed of poured concrete, and flank the roadway. A balustrade extends the length of each sidewalk. Although the bridge has been altered, the original pipes continue to carry water. The original Aqueduct pipes are visible on the underside of the bridge (Photograph 8).

Alterations. Alterations to the masonry bridges have been minimal. Roadways and stone parapets were added to both Bridge 3 and the Cabin John Bridge (Bridge 4) during the 1870s to accommodate traffic on the bridge deck. During the 1980s, the deteriorated stone parapet on the Cabin John Bridge was replaced with cast concrete colored to resemble the Seneca sandstone.

Alterations to the iron bridges (Bridges 5 and 6) have been more severe. Bridge 5 has been buried, and Bridge 6 has been reconstructed. In 1916, the iron portions of the Bridge 6 were dismantled, except for the water mains, and a concrete bridge faced with granite was erected in its place. The Meigs bridge was replaced because it was only 17 feet wide and could not accommodate the increasing amount of traffic; the new reinforced concrete structure was designed to carry a heavier traffic load.

Brick Vents (WA10, WA23, WA37). Air vents were incorporated into the conduit to maintain water "freshness," and encourage sedimentation during the passage from Great Falls to Dalecarlia. Four vents were constructed in 1873 along the conduit path; only two (WA10 and WA37) retain their original design. New York's Croton Aqueduct also incorporated air vents, one every mile (Lange 1991:5).

Description. WA10 and WA37 are one-story, brick structures with an octagonal plan (Photograph 9). Pavilion roofs shelter the structures. Metal vent grates occupy the peaks, and approximately one-half, of the roof surfaces. The vents incorporate wooden Italianate style cornices. Brick walls are painted red. No entries or windows are located in the vent elevations.

WA23, one of the vents that no longer retains its original design. It has been replaced with a four-foot tall concrete structure.

Alterations. Vents WA10 and WA37 appear unaltered. Vent WA23 appears to have been replaced with the current concrete structure during the construction of the Capital Beltway.

Dalecarlia Reservoir

The Dalecarlia Reservoir straddles the D.C./Maryland border. Figure 8 presents a map identifying the locations of built resources at Dalecarlia. Only the property on the east side of MacArthur Boulevard is included in the NHL boundaries.

The reservoir basin (Receiving Reservoir), created by damming Powder Mill Creek between 1854 and 1858, was the first feature established at Dalecarlia. By 1859, a sluice tower (WA51) and effluent gatehouse (no longer extant) were completed and the system between Dalecarlia and the city of Washington became operable, fed by Powder Mill Creek and Little Falls Branch.

Between 1864 and 1867, a by-conduit was constructed to allow Potomac water to bypass the Receiving Reservoir and flow directly to Washington if waters in the reservoir were more turbid than the water arriving directly from the river. In 1875, a brick dwelling (DS37) was constructed on a hill overlooking the reservoir and Conduit Road. This dwelling was intended to house the gatekeeper at the Receiving Reservoir.

Concern over the reservoir's water quality led to the abandonment of the reservoir in 1888. Instead, water was channeled through the by-pass conduit directly to the system's Distributing

Reservoir. To alleviate pollution concerns, between 1894 and 1895 a system of open channels was established around the Dalecarlia Reservoir to divert the tributaries of Powder Mill Creek that formerly fed the reservoir. When the diversion channels were completed, the reservoir was reintegrated into the Aqueduct system.

During the 1920s, Dalecarlia became the site of Washington's second filtration plant. Most of the construction associated with the development of this filtration plant occurred on the west side of MacArthur Boulevard, removed from the reservoir itself. Once the filtration plant was in operation, the Dalecarlia Reservoir fed both the Distributing Reservoir and the Dalecarlia filtration plant. The Dalecarlia Treatment Plant is not included in the Washington Aqueduct NHL District boundaries.

Abandoned Dwelling (DS37). In 1875, a permanent dwelling was completed at the Dalecarlia Reservoir to house the reservoir gatekeeper. This is one of three caretaker residences constructed by the Aqueduct between 1874 and 1875. Other residences were built at Great Falls and the Distributing Reservoir (Ways 1993:107). These three dwellings were built according to the same plan but using different materials, exemplifying the Army's early use of standardized plans. As Quartermaster General of the U.S. Army, Montgomery Meigs encouraged the use of standardized plans at Army installations. Meigs hoped to control costs and to establish consistent construction standards at the expanding number of Army posts (Cannan 1994:440). The caretaker dwelling at Dalecarlia currently is abandoned.

Description. The dwelling is a two-story, "L" plan, brick structure constructed on a concrete foundation. The building was designed in the Second Empire style (Photograph 10). Building walls are brick coursed in 6:1 American bond. Scrolled brackets support a dentilled cornice. A mansard roof sheathed with slate shingles shelters the building. Two brick interior chimneys rise above the roof plane. A one-story, shed-roofed porch occupies the crook of the "L" plan.

Alterations. A two-story, wood-frame addition was built on the east (rear) elevation. German siding clads the addition walls. A hip-roofed porch wraps around the east and south elevations of the addition.

Receiving Reservoir (WA47). WA47 was created by damming Powder Mill Creek between 1854 and 1858. Montgomery Meigs designed the Receiving Reservoir as a settling area for the Potomac water, where excess sediments in the water could settle before the water continued on into the distribution system. Potomac water entered the west end of the reservoir and exited at the east end. Little Falls Branch, Powder Mill Creek, and East Creek also fed the reservoir. The Receiving Reservoir was first officially referred to as the "Dalecarlia Reservoir" in 1893.

Description. The Dalecarlia Reservoir is located on the east side of MacArthur Boulevard. The reservoir is divided into two parts: the forebay (three acres), where water enters the reservoir; and the remainder of the reservoir (44 acres). The shore is paved with rip-rap. Several structures related to the influence and effluence of water in the reservoir are located along the reservoir shore.

Alterations. During 1871 and 1872, the bare earthen walls of the Receiving Reservoir were lined with rip-rap to prevent erosion. Erosion not only damaged the reservoir walls, but also sullied the water within the reservoir.

By 1888, the tributaries that naturally fed the Receiving Reservoir, Powder Mill Creek, Little Falls Branch, and East Creek, were recognized as sources of reservoir pollutants and the reservoir was taken out of service. The by-pass conduit was utilized to divert water around the reservoir. During 1894 and 1895, a series of channels and dams were constructed to divert the tributaries from the Receiving Reservoir, and the reservoir was again reintegrated into the Aqueduct system.

During the 1930s, the reservoir was altered by the construction of an earthen dam (WASO) in the western portion of the basin. The Booster Control Station (D6) was built on this dam in 1933 (Ways 1993: 165).

Sluice Tower (WA51). The Sluice Tower was completed by 1858. This tower is situated in the southern end of the reservoir and is surrounded by water (Photograph 11). The structure is situated above a tunnel that leads to the Little Falls Branch drainage. Gates within the tower wall were opened by vales located within the tower. The sluice tower enabled the Dalecarlia gatekeeper to accelerate emptying of the reservoir for maintenance purposes, and provided an additional emergency release during periods of high water. Though the Receiving Reservoir dam had a spillway to prevent overfilling the reservoir, the addition of the sluice tower ensured that water would not cross the dam lip. Earthen dams are most susceptible to erosion when water is allowed to cross the lip.

Description. The Sluice Tower extends one-story above the Dalecarlia Reservoir's water level. The building has an octagonal plan and is constructed of stone. An entablature of stone defines the roof line. The building terminated in a pavilion roof sheathed in fishscale slate shingles. An urn crowns the roof peak. No windows punctuate the building walls. A single entry is located on the tower's northeast elevation. An iron ladder extends from the entry into the water. An inscription on the west elevation reads:

> "Washington Aqueduct. Built by order of the Congress of the United States for bringing water into Washington. Begun A.D. 1853 on the 8th day of November. Water delivered in Washington from this reservoir A. D. 1859, on the 3rd day of January. From the Potomac River A. D. 1863 on the 5th day of December. 151 feet above 0 of the Washington Aqueduct, or 150 feet above ordinary high water at Washington. A. D. 1858. Captain M. C. Meigs, Chief Engineer.

Georgetown Reservoir

The Georgetown Reservoir occupies approximately 65 acres in northwest Washington. The facility consists of only seven built resources. Figure 9 presents a map identifying the locations of built resources at the Georgetown Reservoir.

The first construction at the Georgetown facility was the reservoir basin (WA61), which was excavated between 1862 and 1864. Originally, this reservoir was designed as the Distributing Reservoir, where water was stored before distribution to the city. Influent and Effluent Gatehouses were built to control the flow of water in and out of the reservoir; only the Influent Gatehouse

(GR1) survives. In 1875, a dwelling was built at the Distributing Reservoir for the gatekeeper; this building no longer survives.

One building, the Castle Gatehouse (GR3), often is mistaken for one of the original resources designed by Meigs. This castellated structure was constructed in 1901 in association with the new Washington City Reservoir and Tunnel, the first major expansion to the Aqueduct. The Castle Gatehouse regulates the flow of water from the Georgetown Reservoir into the City Tunnel. The building was listed in the National Register in 1974.

Influent Gatehouse (GR1). GR1 was constructed between 1864 and 1872 to regulate the flow of water into the Distributing Reservoir from the Receiving Reservoir. The gates in the building could also be adjusted so Dalecarlia water flowed into the Distributing Reservoir by-pass conduit rather than the reservoir.

Description. GR1 is a one-story, concrete, octagonal plan structure constructed on a granite sill foundation (Photograph 12). Stucco on the building walls is scored to resemble cut stone. A plain cornice defines the roofline. A concrete dome shelters the interior. A wooden double door is located in the west elevation. No windows punctuate the building walls.

Pipe Vault (GR7). GR7 is the stairwell that leads to the pipe vault where the old city water mains are located. The pipe vault is a brick-lined barrel vault constructed between 1862 and 1864. A 12-inch, a 30-inch, and two 48-inch iron mains lead through the pipe vault from the Effluent Gatehouse to the city distribution system.

Description. GR7 is a one-story, brick, hexagonal plan structure constructed on a Seneca sandstone foundation. Brick walls coursed in 6:1 American bond rise from the foundation to terminate at a dome roof. The wall exterior is stuccoed and scored to resemble cut stone. A metal entablature defines the roofline. No windows punctuate the building elevations. A single door is located in the northeast elevation. A transom infilled with stucco is situated above the door. A metal spiral staircase descends into the pipe vault. Each riser bears the inscription "M.C. Meigs" (Photograph 13). The pipe vault itself is a brick barrel vault, and extends the width of the dam embankment.

Alterations. The pipe vault was a small ovular chamber prior to 1890. By 1890, the existing pipes were leaking into the dam embankment. To prevent erosion, the vault was extended the width of the embankment. During the twentieth century, electric lighting was installed within the pipe vault.

Reservoir Basin (WA61). The Georgetown Reservoir Basin was begun in 1862, useable by 1864, and completed in 1873 when the interior walls were finally lined with stone paving to prevent erosion (Figure 10). The Georgetown Reservoir was originally designated the Washington Aqueduct's Distributing Reservoir. Water was transported to this reservoir from the Receiving Reservoir at Dalecarlia. Like the Receiving Reservoir, the Distribution Reservoir provided an opportunity for sediment to settle out of the water. From the Distributing Reservoir, water was sent through pipes directly into the city's distribution system. The mains to the city were turned off in August 1905. After that date, all water held within the reservoir proceeded directly to the McMillan

Reservoir and Filtration Plant where it was filtered. The Georgetown Reservoir continues to serve as a settling reservoir for the McMillan facility.

Description. The Georgetown reservoir is an artificial basin created through the construction of earthen walls on a rectangular plan. An earthen embankment divides the reservoir into northern and southern basins. The northern half is also divided.

Alterations. In 1864, the basin dividing wall was raised to the height of the outer walls; water flowed from the north basin to the south basin through a gate in the wall. During the 1940s, a cement floor was installed in the basin to allow deposited sediments to be collected with plows. Also, a series of baffle walls were constructed to improve sedimentation. These proved to be ineffective and were later removed (Ways 1993:176). A concrete wall later was added to divide the north basin.

Integrity

The Washington Aqueduct system, as a whole, retains a high-level of integrity. Most early American water systems of this type, such as New York's Croton Aqueduct and Boston's Cochituate Aqueduct, are no longer in service. Washington's system remains in use and, despite expansions and equipment upgrades, operates according to Meigs' original design.

While most of the above-ground buildings and structures, such as the gatehouses and bridges, still retain their integrity, other resources such as the culverts have been modified. Most of the changes to the culverts occurred during the 1920s when a new conduit was added. Since

the new conduit paralleled the old conduit, the existing culverts were extended to accommodate the combined width of the conduits. These extensions obscure the 1850s culvert elements along the river side. Due to these extensions, the original stone faces are generally only visible on the north side of the culverts. Nonetheless, these culverts were assessed as contributing elements.

Rock Creek Bridge (Bridge 6), the only discontiguous element of the NHL property, is the component of Meigs' system that has undergone the most significant alteration. Bridge 6 was designed to carry the Aqueduct's water across Rock Creek into the Federal City. The bridge originally was cast-iron; the two large cast-iron pipes not only carried water across the valley but served as arches supporting the bridge structure. It was one of the first large cast-iron bridges in the country. In 1916, the bridge was modified to accommodate twentieth century traffic. The current bridge is a single span concrete arch structure with granite facing; the original Aqueduct pipes were retained and are visible on the underside of the bridge. The pipes continue to transport water. Although this bridge does not retain its original appearance, the bridge does retain its engineering integrity and therefore was included as a contributing element within the Washington Aqueduct NHL district.

The following table presents all built resources located within the defined boundaries of the Washington Aqueduct NHL property. The table is organized according to geographic location (Great Falls, Conduit Path, Dalecarlia Reservoir, and Georgetown Reservoir). Resources assessed as contributing are indicated by a "Y" in the Status column; those evaluated as non-contributing are indicated by an "N."

RESOURCE NO.	DATE	BUILDING NAME	ORIGINAL USE	STATUS
Great Falls - Maryland				
WA1**	1854-1928	Great Falls Dam	Dam	Y
GF2**	1869	Gatehouse	Gatehouse	Y
GF4*	1875	Caretaker House	Gatekeeper dwelling	Y
GF5*	1956	Park Ranger Dwelling	CoE personnel qtrs.	N
GF6*	1956	Ranger Station	CoE personnel qtrs.	N
GF7	1970	Intake Structure	Intake house	N
WA2	ca. 1960	Shed	Shed	N
GF-S-3*	1941	Garage	Vehicle storage	N
Conduit Path (MacArthur Blvd.) and other Miscellaneous Distribution Locations - Maryland/Washington, D.C.				
WA3**	1853-1856	Old Conduit	Conduit	Y
WA4	1922-1928	New Conduit	Conduit	N
WA5	1856	Culvert 1	Culvert	Y
WA6	1857	Bridge 1	Bridge 1	Y
WA7	1857	Bridge 2	Bridge 2	Y
WA8	1920s	Cross Connection 1	Cross connection	N
WA9	1856	Culvert 2	Culvert	Y
WA10**	1873	Brick Vent 1	Air vent	Y
WA11	1855	Culvert 3	Culvert	Y
WA12	1855	Culvert 4	Culvert	Y
WA13	1855	Culvert 5	Culvert	Y
WA14	1855	Culvert 6	Culvert	Y
WA15	1855	Culvert 7	Culvert	Y
WA16	1855	Culvert 8	Culvert	Y
WA17	1856	Culvert 9	Culvert	Y
WA18	1856	Culvert 10	Culvert	Y
WA19	1856	Culvert 11	Culvert	Y

* = Properties constructed as part of the Aqueduct, but no longer owned by the Washington Aqueduct.

** = Identified in the original 1973 NHL documentation as contributing to the NHL.

WA20	1922-1928	Cross Connection 2	Cross connection	N
WA21	1856	Culvert 12	Culvert	Y
WA22	1856	Culvert 13	Culvert	Y
WA23**	1873	Brick Vent 2	Air vent	N
WA24**	1858	Griffith Park Bridge	Bridge 3	Y
WA25	1920s	Griffith Park Culvert	Culvert	N
WA26	1856	Culvert 14	Culvert	Y
WA27	1856	Culvert 15	Culvert	Y
WA28	1856	Culvert 16	Culvert	Y
WA29	1856	Culvert 17	Culvert	Y
WA30**	1864	Cabin John Bridge	Bridge 4	Y
WA31	1922-1928	Cabin John Syphon	Syphon	N
WA32	1856	Culvert 18	Culvert	Y
WA33	1922-1928	Cross Connection 3	Cross connection	N
WA34	1855	Culvert 19	Culvert	Y
WA35	1855	Culvert 20	Culvert	Y
WA36	1855	Culvert 21	Culvert	Y
WA37**	1873	Brick Vent 3	Air vent	Y
WA38	1855	Culvert 22	Culvert	Y
WA39	1910/1940	Gatehouse	Blowoff tunnel gatehse	N
WA40	1856	Culvert 23	Culvert	N
WA41	1856	Culvert 24	Culvert	N
WA42	1856	Culvert 25	Culvert	Y
WA43	1856	Waste Weir No. 3	Waste Weir	N
WA44	1858	Culvert 26	Culvert	N
WA83*	1862/1916	Rock Creek Bridge	Bridge 6	Y

Dalecarlia Reservoir - Maryland/Washington, D.C.

WA47**	1854-1858	Dalecarlia Reservoir	Receiving Reservoir	Y
WA48	1893-1895, 1973	Diversion channels	Diversion Channels	N
WA49	1959	Little Falls Outfall	Little Falls outfall	N

* = Properties constructed as part of the Aqueduct, but no longer owned by the Washington Aqueduct.

** = Identified in the original 1973 NHL documentation as contributing to the NHL.

WA50	1933	Cross-reservoir dam	Dam	N
D4	1939	Storage	Storage	N
D5	1935	Booster Control Stn.	Booster control stn.	N
WA51	1858	Sluice Tower	Sluice tower	Y
D6	1935	Booster Pump Station	Booster pump station	N
D7	1959	Intake Gatehouse	Intake gatehouse	N
D8	1939	South Screen Building	Screen building	N
DS32	1950	Storehouse	Storehouse	N
DS36	ca. 1900	Garage	Unknown	N
DS37	1875	Abandoned Dwelling	Caretaker house	Y
DS42	ca. 1950	Transformer House	Transformer house	N
DS45	1954	Storage	Storage	N

Georgetown Reservoir - Washington, D.C.

WA61**	1862-1873	Georgetown Reservoir	Distributing reservoir	Y
GR1	1872	Gatehouse	Influent gatehouse	Y
GR3	1901	Castle Gatehouse	Gatehouse	N
WA62	1872	Platform	Effluent gatehouse	N
GR7	1872	Pipe Vault	Pipe vault access	Y
GR8	1890	Pipe Vault Well	Lighting well	N
GR9	1901	West Shaft House	West shaft house	N

* = Properties constructed as part of the Aqueduct, but no longer owned by the Washington Aqueduct.

** = Identified in the original 1973 NHL documentation as contributing to the NHL.

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The original Washington Aqueduct system is nationally significant under NHL Criteria 1 and 4. Under Criterion 1, the system is representative of the national pattern in nineteenth century public works in which public water systems were introduced as part of municipal services. The system is significant under NHL Criterion 4 for its design by Montgomery C. Meigs, an important nineteenth century architect-engineer.

The period of significance for the Washington Aqueduct NHL is defined as 1853 to 1880. The period extends from the approval to the completion of the Meigs plan for the water system. Although Meigs' direct involvement in the project lasted only until 1862 when he was appointed Quartermaster General of the U.S. Army, his plans were carried out by his successors with only minor modifications. The NHL period of significance includes those resources designed as part of Meigs' plan but built after his departure.

Establishment of the Washington Aqueduct System 1853-1880

During the eighteenth and nineteenth centuries, District of Columbia residents procured water from springs, wells, or cisterns scattered throughout the region. By the 1850s, due to rapid population growth in the city, these sources were insufficient, especially for fire protection. A more reliable supply of water became necessary.

Congress addressed the problem in 1850 with an appropriation of $500 to conduct a survey of potential municipal water sources (Hellman 1983:11; Ways 1993:4). The modest appropriation financed only a study of Rock Creek as a potential source. The resulting report

estimated that if Rock Creek was dammed for use as Washington's primary source of water, the creek could provide approximately eight million gallons per day, a volume considered far below that necessary to supply the rapidly growing city. Congress responded by financing a more comprehensive study of potential water sources. In 1852, Congress provided an additional $5,000.00 for a second survey (Ways 1993:5).

On the recommendation of General Joseph G. Totten, Chief of the U.S. Army Corps of Engineers, this second survey was conducted by Montgomery Meigs (Photograph 14). Within three months, Meigs had completed his survey and submitted a 55-page report to General Totten. Unlike the first study, Meigs' report addressed the *future* water needs of the city. He investigated three water sources -- Great Falls, Little Falls, and Rock Creek. In his report, Meigs described the advantages and disadvantages of each source, ultimately concluding that Great Falls would be the most logical choice due to its ample water supply, as well as its geographic relationship to the city. Meigs' report to Congress was received favorably and approved in March 1853 (Ways 1993:7-13). Plans and specifications for the water system got underway immediately.

In developing his plan for the Washington Aqueduct, Meigs investigated both New York's Croton Aqueduct and Boston's Cochituate Aqueduct. Meigs developed a concept similar to these systems, incorporating an underground conduit to carry the water, and a receiving reservoir and distributing reservoir to allow sediment to settle out of the water before distribution. Meigs' plan called for a 10-mile brick conduit to carry the water from Great Falls to the Receiving Reservoir, and a two-mile extension of the conduit to convey the water from the Receiving Reservoir to the

Distributing Reservoir. Cast-iron mains were incorporated to deliver the water from the Distributing Reservoir to the city. Eleven tunnels, 26 culverts, and six bridges were constructed to ensure that the Aqueduct maintained a consistent downward descent.

Limited development existed in the Potomac Valley at the time of the Meigs survey. The most significant improvement in the area was the Chesapeake and Ohio (C&O) Canal. By 1831, the canal had been completed between Georgetown and Seneca, providing an important link between the District of Columbia and western markets. Although the canal never became the intended all-water route to the Ohio River and the west, it did bring commercial progress to the Potomac Valley, and provided a major economic boost to local farmers (Hiebert and MacMaster 1976:101). Canal boats transported wheat and corn meal to Georgetown, and returned with fertilizer and other supplies to county farms (Sween 1984:50). The canal not only benefitted area farmers, but it also spurred the development of small commercial and industrial enterprises along the Potomac River. The quarry industry was particularly important in the area, exploiting local deposits of blue stone, limestone, red Seneca sandstone, slate, marble, and granite (Unrau 1976b:1-2; Wesler et al. 1981:169). Work on the canal ended in 1850.

The C&O Canal not only provided Meigs with initial access to Great Falls, but it also played an important role in the construction of the Aqueduct. Construction of the different elements of the Aqueduct required a variety of building materials, including brick, sand, cement, cast iron pipe, and a myriad of valves and fittings. Typically, these items were delivered by schooner to the Washington Aqueduct Wharf at 27th Street in Georgetown, which was built

specifically to accommodate supply deliveries during construction of the Aqueduct. From there, the materials were transported to the required construction sites by boats using the C&O Canal, located parallel to the conduit (Ways 1993:32-33; Levy and Ghioto 1973). The canal also facilitated the delivery of building materials originating north of the site. These included sandstone quarried at Seneca, Maryland, nine miles north of Great Falls. This sandstone was used in the construction of the culverts, gatehouses, and bridges.

Under Meigs' supervision, construction of the Aqueduct began in November 1853. However, due to lack of funding, difficulty in obtaining land, political disputes, and delays caused by the Civil War, construction lasted nearly 11 years (Ways 1993:10). Water from the Potomac first reached the city via the Washington Aqueduct in July 1864.

Meigs' supervision of the Aqueduct project came to an end in June 1861 when President Abraham Lincoln appointed him Quartermaster General of the U.S. Army. Although this appointment marked the end of his formal involvement with the Aqueduct, Meigs remained actively interested in and committed to the project until his death in 1892. By the time of Meigs' new appointment, the only portions of the Aqueduct system that were actually in place and operational were the Receiving Reservoir, the Rock Creek Bridge, and the Georgetown High Service Reservoir. The Cabin John Bridge was under construction, work at Great Falls had just begun, and the Distributing Reservoir had yet to be built (Ways 1993:96-7). Despite the departure of Meigs, work proceeded on the Aqueduct according to his plans.

Chief Engineer William R. Hutton assumed supervision of the project for one year following Meigs' departure, and was succeeded by Chief Engineer Silas Seymour, who supervised construction from July 1863 to 1865. Under Seymour's supervision, water from the Potomac first reached the city via the new Aqueduct. After 11 years of construction, the Aqueduct first delivered water to the city of Washington in July 1864.

Continued Growth of the Washington Aqueduct

Since its establishment, the Washington Aqueduct system has undergone a series of upgrades and expansions to meet the demands of Washington's increasing population. The first expansion to the Washington Aqueduct occurred during the 1880s when Congress authorized the creation of a second distributing reservoir to improve water service to the eastern areas of the city. The site chosen for this new "Washington City Reservoir," was in the northwest section of the District of Columbia, in the vicinity of Howard University. Excavation began on the new reservoir in 1885 and was completed in 1888. A four-mile tunnel -- the Washington City Tunnel -- was constructed to link the new reservoir to the existing Washington Aqueduct system via the Georgetown Reservoir. The new reservoir, later named McMillan Reservoir, went into operation when the tunnel finally was completed in 1902 (Martin 1990:24).

The next upgrade to the Washington Aqueduct was the addition of a filtration system. During the 1880s and 1890s the threat of disease, such as dysentery, cholera, and typhoid fever,

mandated the need for an effective water filtration system. A study of filtration systems was initiated in 1898, and eventually resulted in the establishment of a slow sand filter plant on land adjacent to the new (McMillan) reservoir. The filtration plant became operational in 1905 (Kanarek 151; Ways 1993:149).

The most ambitious expansion of the Washington Aqueduct occurred in the 1920s when a second conduit (now referred to as the "new conduit") and a second water filtration facility were added. The new conduit was constructed of concrete and ran parallel to the original conduit. The old and new conduits were interconnected at three locations so that sections could be drained for inspection or repair without shutting down the entire system. The new water filtration facility was established at Dalecarlia and consisted of a rapid sand filtration plant. This plant was intended to supplement, not replace, the original slow sand filter plant. These expansions to the system effectively doubled the city's reserves of potable water (Kanarek 151).

In 1926, the service area of the Washington Aqueduct was expanded when Congress approved the sale of water to Arlington County, Virginia. To convey the water to Virginia, a 24-inch water main was built from the Dalecarlia Treatment Plant across the Chain Bridge to connect with the Arlington County system (Ways 1993:163).

The latest major expansion of the Washington Aqueduct occurred during the 1950s. In 1940, the population serviced by the Aqueduct totaled over 720,000; by the end of World War II, the population had skyrocketed to over one million. Anticipating continued growth of the city, Congress commissioned a study of future water needs for Washington. The resulting report,

commonly known as "The 480 Report," was submitted to Congress in 1946, and presented a plan to meet the projected water needs of the city through the year 2000. A variety of projects were implemented as a result of this report. At Dalecarlia, new flocculation-sedimentation basins, an additional clear water reservoir, and a new pumping station were constructed. At Little Falls, an entirely new complex was established as a supplemental raw water source that could be utilized when the water from Great Falls was insufficient to meet demand, or if one of the main conduits failed. Unlike the gravity-fed intakes at Great Falls, Little Falls is powered by electric pumps (Ways 1993:178-84).

Other recent improvements to the Aqueduct system have included the construction of the new intake structure at Great Falls in 1967 and the new chemical and filter building at McMillan Reservoir during the 1980s. When the new facility at McMillan went into operation in 1986, all of the original slow sand filter beds were abandoned.

Throughout the years, the Washington Aqueduct has been expanded and upgraded as demand required. These changes ensured that the Washington Aqueduct continued to provide an adequate and high-quality water supply to its service area.

Waterworks Context

The development of public water supply in America began as early as the seventeenth century. The first water system constructed in the 13 English colonies was established in Boston

in 1652. The collected water was intended for fire fighting and the suppression of road dust, rather than public consumption (LaNier 1976:174).

The first system in the 13 colonies to deliver water to individual houses was established in 1752 in Bethlehem, Pennsylvania. A pump drew water from a nearby creek and delivered it to a water tower erected on the crest of a hill. From the tower, the water was fed to several distribution tanks. Wooden pipes extended from the distribution tanks to individual homes. The wooden pipes leaked profusely, and experiments were made with other materials. In 1813, Bethlehem was the first in the United States to utilize cast iron distribution pipes. The system attracted interest throughout the colonies. Representatives from other colonies visited Bethlehem to inspect the system and its operation (Schodek 1987:196-197).

The first major American city to establish a public water distribution system was Philadelphia in 1801. The Philadelphia waterworks was designed to provide the quantities of water needed to improve public health. The system drew water from the Schuylkill River. By 1814, the original system could not provide volumes sufficient for the city's increasing needs. A new waterworks was established on the banks of the Schuylkill below Fairmount Hill. Steam driven pumps delivered water to a reservoir on Fairmount Hill, from which the water flowed by gravity through brick conduits into the city.

In 1829, engineer Albert Stein introduced a concept that later became standard in American waterworks for the remainder of the century: the settling basin. Stein constructed a

settling basin as part of the Lynchburg, Virginia waterworks. The settling basin allowed sediment to settle from river water prior to distribution.

Philadelphia's water system remained the nation's premier system until the 1840s, when New York constructed the Croton Aqueduct, which linked New York City with the Croton River, 41 miles to the north. Major David Douglass was the first engineer hired to construct the aqueduct. However, after making little progress over a three-year period, Douglass was replaced by engineer John B. Jervis in 1836. The gravity-fed system consisted of a dam built across the Croton River to impound water, and a 40-mile brick conduit to carry water to New York City. The Croton Aqueduct began service in 1842 (Lange 1991; Schodek 1987:206).

The Croton Aqueduct was hailed as an engineering marvel and spurred the establishment of systems in other U.S. cities. By 1850, 85 U.S. communities possessed water systems (LaNier 1976:174). The largest cities with waterworks were Boston, Chicago, Cincinnati, Philadelphia, Pittsburgh, Richmond, and St. Louis (Lange 1991:17). Between 1850 and 1860, 55 new systems were established (Turneaure and Russell 1924:9). Large municipalities that established waterworks during this period included Washington, D.C.; Brooklyn and Buffalo, New York; and Cleveland, Ohio (Lange 1991:17). The Croton Aqueduct was designated a National Historic Landmark in 1990.

Boston's Cochituate Aqueduct was another important mid-nineteenth century municipal water system. This gravity-fed system was started in 1846 and modeled upon the Croton Aqueduct. Noted engineer Loammi Baldwin designed the system. Water first coursed through

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the system in 1848. The aqueduct carries water eastward from Lake Cochituate in Wayland, Massachusetts to Boston via a 14.5-mile long enclosed conduit. In Boston, the water first entered a receiving reservoir in Brookline. After 1870, water flowed from the receiving reservoir to a distributing reservoir at Chestnut Hill, in the Brighton section of Boston. The Cochituate Aqueduct was removed from service in 1940 and listed in the National Register in 1990 (Jenkins et al. 1989).

Significance

The Washington Aqueduct is nationally significant as a representation of a highly important period of development in American waterworks and of the U.S. Army Corps of Engineers, entry into the field of public works (Criterion 1). The Washington Aqueduct also is significant for its design by the important nineteenth century architect - engineer Montgomery C. Meigs (Criterion 4).

The Washington Aqueduct's exceptional integrity and active operation provide a rare example of a nineteenth century municipal water supply system. Although the Washington Aqueduct has been expanded to meet the demands of Washington's increasing population, the original system remains largely intact and operational. Other early nineteenth century systems, such as New York's Croton Aqueduct and Boston's Cochituate Aqueduct, are not fully intact and are no longer in service. The Washington Aqueduct illustrates not only the technology of early gravity-fed water systems, but also the affect of waterworks on the physical development of cities. The financial commitment, as well as the meticulous planning and engineering necessary to

provide an ample supply of water to the District of Columbia, represent an important development in nineteenth century urban planning and development: substantial public works projects. By the turn-of-the-century, the provision of water had become an essential element of every American city.

The Washington Aqueduct also is nationally significant as a large and important public works effort undertaken by the U.S. Army Corps of Engineers. During the early nineteenth century, the Corps of Engineers was the only Federal organization with trained engineers. For this reason, between 1824, when the Rivers and Harbors Act was passed, and the Civil War, the Corps became increasingly involved in civil works projects. The Washington Aqueduct exemplifies the military influence on the civil sector of antebellum America, a pattern that continued as the necessity of civil engineering became recognized more widely after the Civil War.

On a regional level, the Washington Aqueduct is significant for its contributions to the physical development of the District of Columbia. The patterns of residential development throughout the city were influenced by the Aqueduct. In addition to water, the Aqueduct provided access to previously inaccessible areas through the construction of bridges and roads. For instance, Conduit Road, the maintenance road for the conduit, quickly became a well-traveled route into the city. Towards the end of the nineteenth century, residential development gradually increased along Conduit Road. The area includes the D.C. neighborhood of Potomac Palisades, and the Maryland suburbs of Glen Echo, Idlewood, Brookmont, and Cabin John. Bridges, such as the Cabin John Bridge (Bridge 4), allowed traffic to cross otherwise impassable valleys.

Similarly, the construction of Rock Creek Bridge (Bridge 6), originally developed to carry water mains over Rock Creek into the city, instituted an important traffic route between Georgetown and downtown Washington.

The Washington Aqueduct system also is significant for its important design by the architect-engineer Montgomery C. Meigs (Criterion 4); the Washington Aqueduct was one of Meigs' earliest large-scale public works projects. Meigs was born in Georgia in 1816 and raised in Philadelphia. In 1832, he entered the U.S. Military Academy, the only engineering school in the country at the time. Meigs graduated from the Academy fifth in his class in 1836. Meigs' involvement with the Corps of Engineers began in 1837. Among his first projects were improvements to the Mississippi River navigation and the Port of St. Louis. In 1851, Meigs was appointed assistant to Chief of Engineers, General Totten. Totten recommended that Meigs undertake the water supply study authorized by Congress in 1852 (Ways 1993:6).

Meigs was a highly influential architect and engineer, particularly in the Washington area. In addition to the Washington Aqueduct, he was involved in several major projects in Washington, including the expansion of the U.S. Capitol between 1853 and 1859 (while supervising the Aqueduct), and the design and construction of the Pension Building (now the National Building Museum) in 1881. Meigs died on January 2, 1892 and is buried in Arlington National Cemetery (Ways 1993:120).

The Washington Aqueduct is not only important for its engineering significance, but also for its architectural significance. The above-ground resources designed by Meigs illustrate the

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importance of architectural design in nineteenth century engineering projects. As Professor H.E. Babbitt explained in a 1962 textbook of waterworks, the physical appeal of waterworks historically has been an important factor in design. Babbitt notes that in order to gain public confidence, the buildings relating to a water system should be:

> ...of pleasing design and should be surrounded by attractive grounds. The public not acquainted with the technicalities of water [supply and] treatment, is likely to judge the quality of the water as much from the appearance of the plant, both inside and out, as from the appearance and taste of the water (Babbitt 1962:469).

Meigs' buildings and bridges were meticulously designed and constructed. The above-ground resources constructed as part of the original system illustrate period architectural styles. The resources built between 1853 and 1880 typically were designed in the Classical Revival style, as illustrated by the Influent Gatehouse (GR1) at the Georgetown Reservoir and the Sluice Tower (WA51) at the Dalecarlia Reservoir. Structures built during the 1870s represent other period styles. The brick air vents along MacArthur Boulevard were designed in the Italianate style, while the caretaker dwellings at Great Falls and Dalecarlia were designed in the Second Empire style. The bridges and culverts also demonstrate the level of design attention given to the utilitarian structures of the Aqueduct. For example, the Cabin John Bridge (Bridge 4), designed as a single span bridge with a span of 220-feet, was the longest single span masonry bridge in the world for nearly 40 years. The bridge was listed in the National Register of Historic Places in 1973. The

longevity of the system, both in terms of its design as well as its operation, attests to Meigs' skill and careful attention to detail in the planning of the Washington Aqueduct.

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(Rev. 8-86)

United States Department of the Interior, National Park Service

NATIONAL HISTORIC LANDMARK NOMINATION
CONTINUATION SHEET

M. 29-49

Section Photos Page 1 Washington Aqueduct NHL District
Montgomery County,
Maryland/Washington, D.C.

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The following information is the same for all photographs:

1. Washington Aqueduct Historic District
5. R. Christopher Goodwin & Assoc., Inc., Frederick, Maryland

Photograph #

1 of 14
1. Gatehouse at Great Falls (GF2)
2. Montgomery County, Maryland
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View facing east

2 of 14
1. Culvert 12 (WA21)
2. Montgomery County, Maryland
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View facing south

3 of 14
1. Typical 1920s Culvert Extension
2. Montgomery County, Maryland
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View facing north

4 of 14
1. Bridge 3/Griffith Park Bridge (WA24)
2. Montgomery County, Maryland
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View facing north

5 of 14
1. Bridge 4/Cabin John Bridge (WA30)
2. Montgomery County, Maryland
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View facing northwest

6 of 14
1. Historic view of Bridge 6 (WA83)
2. Washington, D.C.
3. N/A
4. ca. 1865
6. View facing west

7 of 14
1. Bridge 6 (WA83)
2. Washington, D.C.
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View facing northwest

8 of 14
1. Exposed pipes on the underside of Bridge 6 (WA83)
2. Washington, D.C.
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View of underside of bridge

9 of 14
1. Brick air vent
2. Montgomery County, Maryland
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View west

10 of 14
1. Caretaker Dwelling (DS37) at Dalecarlia
2. Washington, D.C.
3. Ken Baumgardt, U.S. Army Corps of Engineers, Baltimore District
4. January 1995
6. View southwest

11 of 14
1. Sluice Tower (WA51) at the Dalecarlia Reservoir
2. Washington, D.C.
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View north

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NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior, National Park Service

NATIONAL HISTORIC LANDMARK NOMINATION
CONTINUATION SHEET

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Section Photos Page 3 Washington Aqueduct NHL District
Montgomery County,
Maryland/Washington, D.C.

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12 of 14
1. Influent gatehouse (GR1) at Georgetown Reservoir
2. Washington, D.C.
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. View west

13 of 14
1. Meigs stairs located in Pipe Vault stairwell (GR7) at the Georgetown Reservoir
2. Washington, D.C.
3. R. Christopher Goodwin & Assoc., Inc.
4. January 1995
6. Interior view

14 of 14
1. Quartermaster General Montgomery C. Meigs
2. Washington, D.C.
3. R. Christopher Goodwin & Assoc., Inc.
4. ca. 1865
6. N/A

The following information is the same for all photographs:

1. Washington Aqueduct Historic District
5. R. Christopher Goodwin & Assoc., Inc., Frederick, Maryland

Additional Documentation

Figure 1	Plan of Washington Aqueduct, signed by President Franklin Pierce, 1853.
Figure 2	Schematic Map of the Washington Aqueduct as it currently exists.
Figure 3a	Map of Washington Aqueduct NHL District.
Figure 3b	Map of Washington Aqueduct NHL District (Cont'd).
Figure 3c	Map of Washington Aqueduct NHL District (Cont'd).
Figure 4	Map of Great Falls.
Figure 5	Design for Castle Gatehouse, 1901.
Figure 6	Profile of the conduit.
Figure 7	Drawing of a culvert by M.C. Meigs.
Figure 8	Map of the Dalecarlia Reservoir; only the property to the east of MacArthur Boulevard is included in the National Historic Landmark property boundaries.
Figure 9	Map of the Georgetown Reservoir.
Figure 10	1864 Plan of the Distributing Reservoir (Source: 1864 Annual Report of the Chief Engineer).

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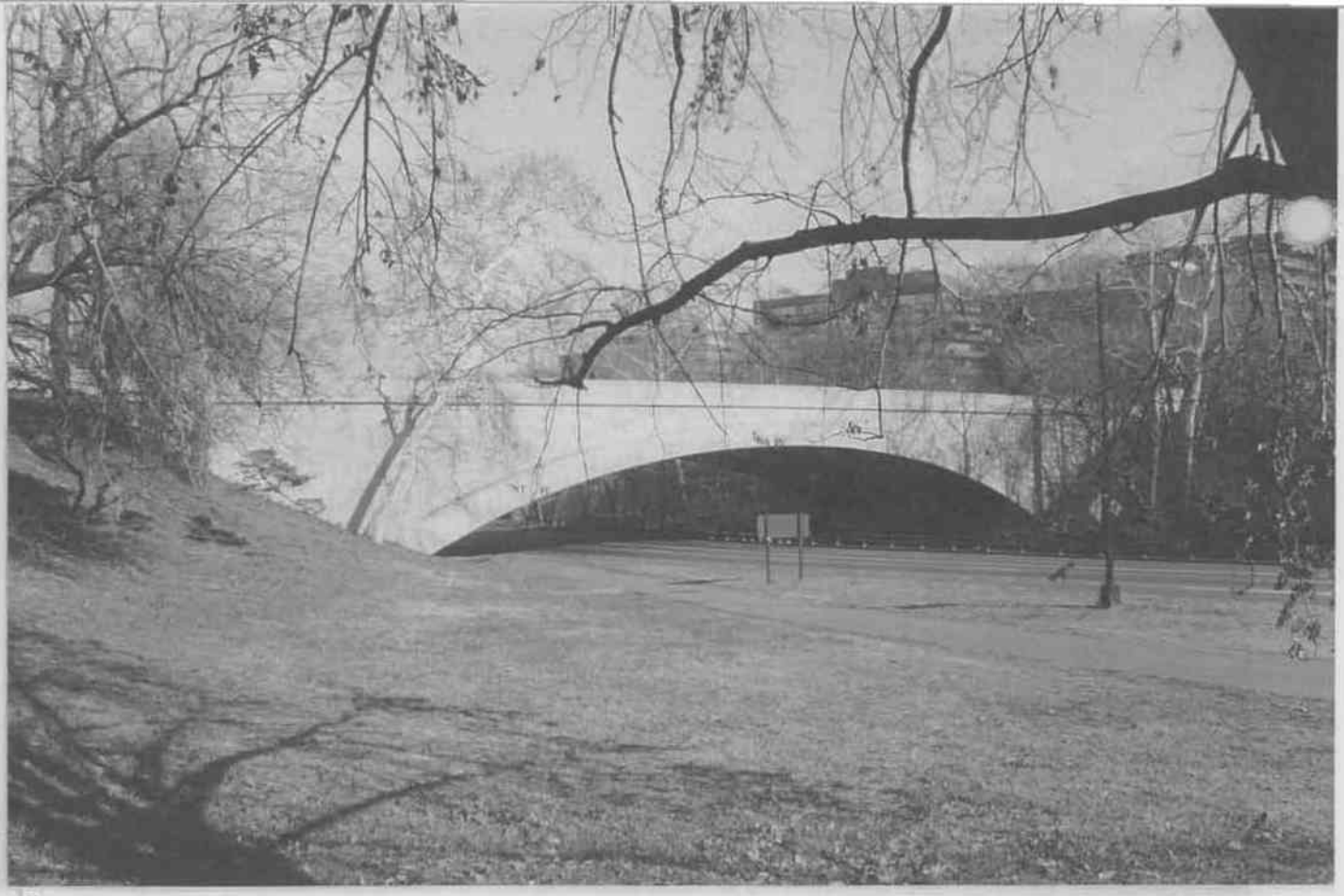

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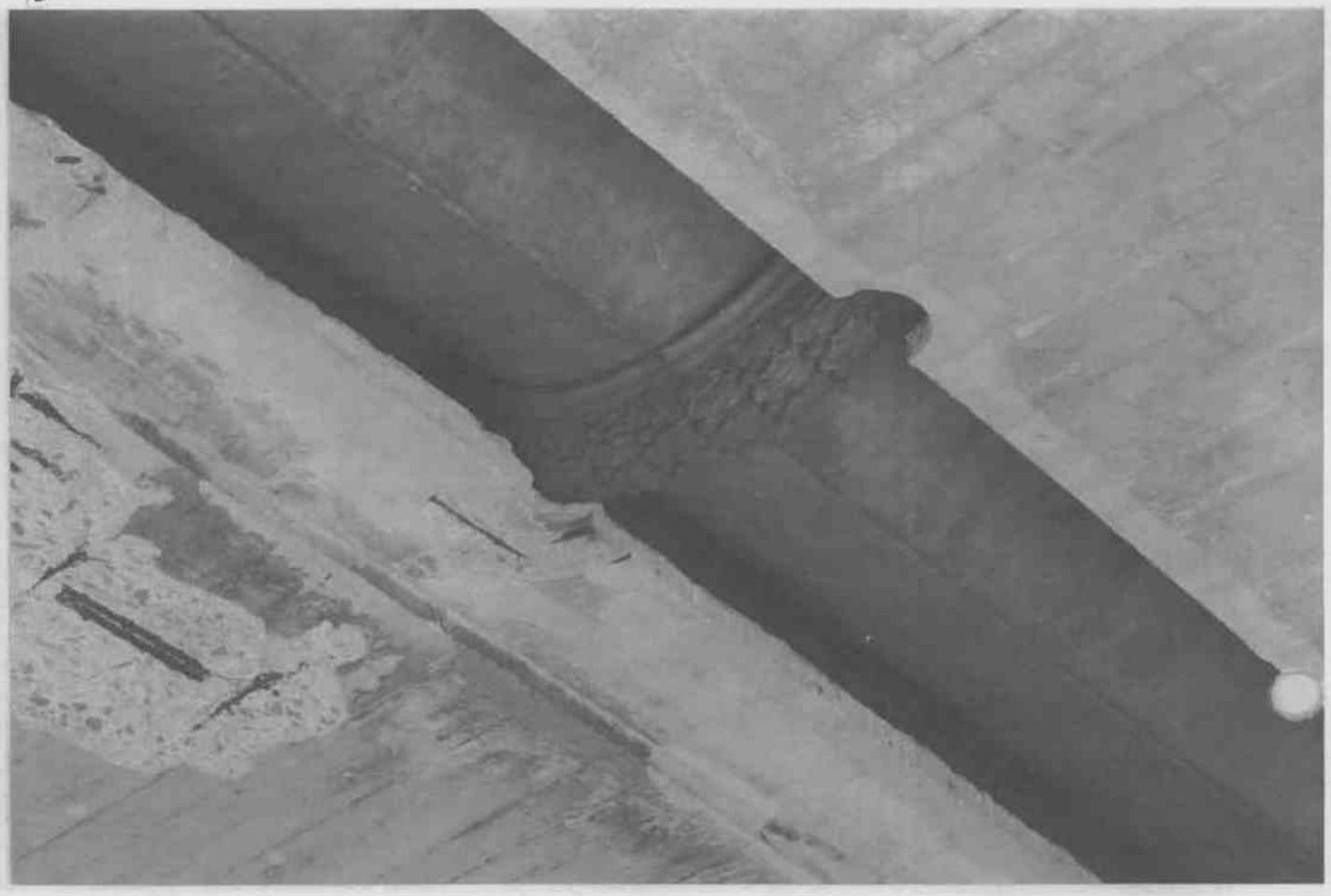

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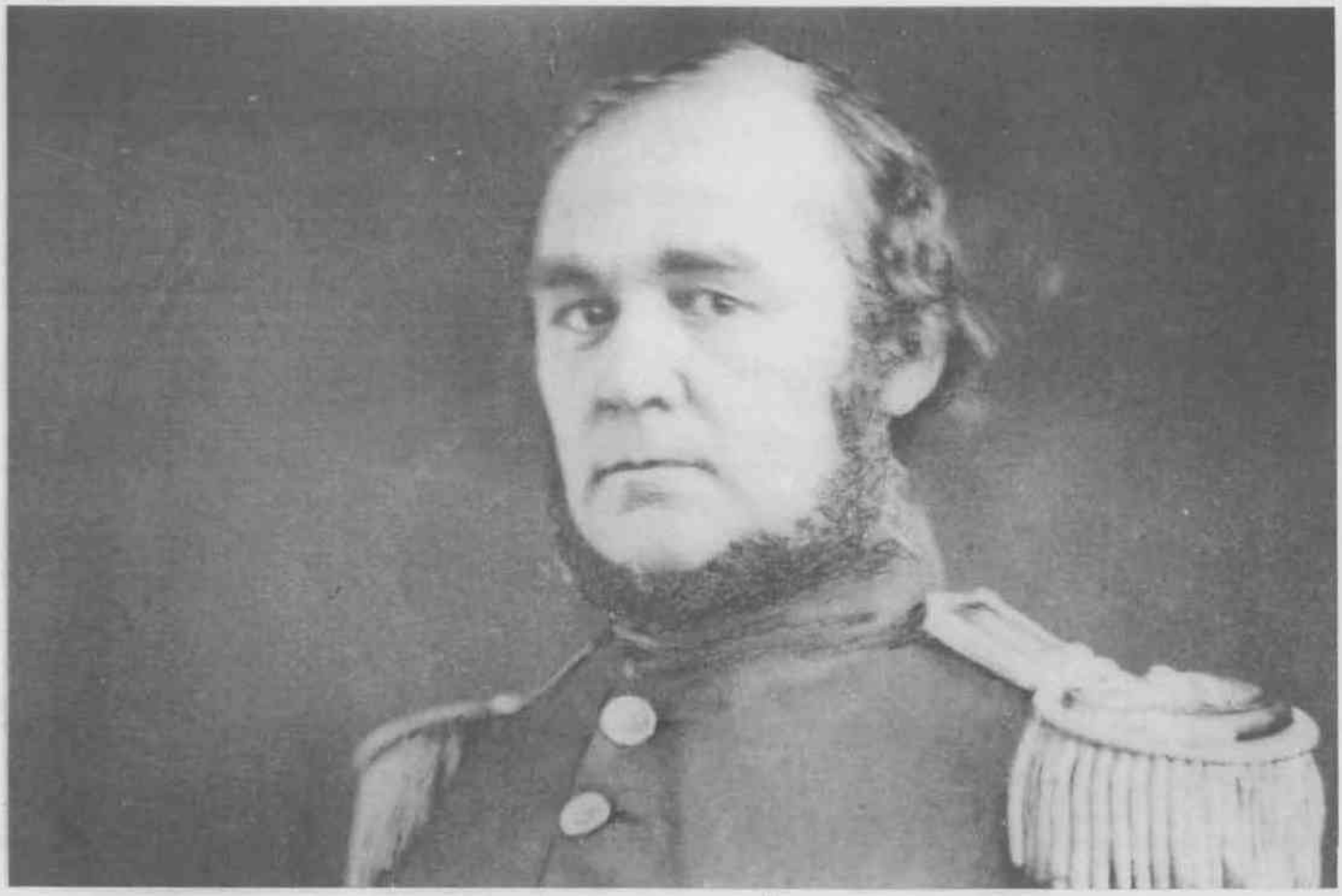
14



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Form 10-300
(July 1969)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

National Historic Landmark
NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY – NOMINATION FORM

(Type all entries – complete applicable sections)

STATE: Maryland
District of Columbia
COUNTY:

FOR NPS USE ONLY
ENTRY NUMBER: designated 7 Nov. 1973
DATE:

SEE INSTRUCTIONS

1. NAME

COMMON: Washington Aqueduct

AND/OR HISTORIC: Washington Aqueduct

2. LOCATION

STREET AND NUMBER: 5900 MacArthur Boulevard, N.W.

CITY OR TOWN: Washington

STATE: Maryland
District of Columbia — CODE: — COUNTY: Montgomery — CODE:

3. CLASSIFICATION

CATEGORY (Check One)	OWNERSHIP		STATUS	ACCESSIBLE TO THE PUBLIC
☐ District ☐ Building	☒ Public	Public Acquisition:	☒ Occupied	Yes:
☐ Site ☒ Structure	☐ Private	☐ In Process	☐ Unoccupied	☒ Restricted
☐ Object	☐ Both	☐ Being Considered	☐ Preservation work in progress	☐ Unrestricted
				☐ No

PRESENT USE *(Check One or More as Appropriate)*

☐ Agricultural	☐ Government	☐ Park	☐ Transportation	☐ Comments
☐ Commercial	☐ Industrial	☐ Private Residence	☒ Other (Specify)	
☐ Educational	XX Military	☐ Religious	Water system for general population	
☐ Entertainment	☐ Museum	☐ Scientific		

4. OWNER OF PROPERTY

OWNER'S NAME: U.S. Army Corps of Engineers

STREET AND NUMBER: 5900 MacArthur Boulevard

CITY OR TOWN: Washington — STATE: District of Columbia — CODE:

5. LOCATION OF LEGAL DESCRIPTION

COURTHOUSE, REGISTRY OF DEEDS, ETC: Montgomery County Courthouse and District of Columbia Courthouse

STREET AND NUMBER:

CITY OR TOWN: District of Columbia
Rockville — STATE: -- Maryland — CODE:

6. REPRESENTATION IN EXISTING SURVEYS

TITLE OF SURVEY: Historic American Engineering Record

DATE OF SURVEY: 1972-1973 — XX Federal ☐ State ☐ County ☐ Local

DEPOSITORY FOR SURVEY RECORDS: National Park Service

STREET AND NUMBER: 1100 L Street, N.W.

CITY OR TOWN: Washington, — STATE: District of Columbia — CODE:

STATE | COUNTY | FOR NPS USE ONLY: ENTRY NUMBER | DATE

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M:29-49

7. DESCRIPTION

CONDITION	(Check One)					
	☐ Excellent	XX Good	☐ Fair	☐ Deteriorated	☐ Ruins	☐ Unexposed
	(Check One)		(Check One)			
	XX Altered	☐ Unaltered	☐ Moved	☒ Original Site		

DESCRIBE THE PRESENT AND ORIGINAL (If known) PHYSICAL APPEARANCE

The Washington Aqueduct, built principally between the years 1853-1863 to supply the water needs of the District's citizens, is still intact today, still the main source of water, and is in overall good condition.

Montgomery Meigs, chief engineer for the Aqueduct during most of its construction, borrowed ideas from other aqueducts in the country but considered the Washington system to be designed more nearly upon that of the Cochituate Aqueduct in Boston.

Beginning at Great Falls, Maryland near Lock 20 on the C&O canal, the Aqueduct stretches for 12 miles downriver to the Georgetown Reservoir. Since the 19th century the Aqueduct has been lengthened and expanded to provide for the increased needs of a growing population. Though the Aqueduct has changed somewhat in outward appearance it still includes the following features: a dam across the Potomac at Great Falls to divert water to the Maryland side, intake works on the shore including the original sandstone control gate house, tunnels totaling 5,392 feet in length, six bridges, numerous brick air vents, pump stations and reservoirs at Dalecarlia and Georgetown, and of course the conduit itself.

The dam on the river was originally built only about halfway across but increased demand for water resulted in its completion to the Virginia side. Built of cut stone the dam was anchored to the river floor, not to block the flow but to divert it.

The intake works are covered by a modern concrete observation deck keeping them from view.

The original sandstone control gatehouse is still in use and looks much the same as it did a century ago. Inside is a system of 20 small cast iron slide gates 2' wide by 4' high in two sets of 10 each, operated by iron stems 30' long with threaded hand wrenches.

A cut and cover header lies beneath the C&O canal bed.

The conduit itself was the largest item of construction. Almost 12 miles in length, the circular tube is 9' in diameter and is built of brick, stone, and mortar. The work on the conduit was done so well that the Corps of Engineers considers the old conduit in better condition than a parallel one built of concrete in the 1920's. A road was constructed parallel to the conduit to facilitate repairs and inspections. This road today is known as MacArthur Boulevard, named for the famous general. Its path lies above much of the original conduit, which first enters beneath the roadway near Anglers Inn in Montgomery County. However the conduit doesn't follow the exact route of the roadbed into the District since in various locations it was found advantageous to blast tunnels through the hillsides rather

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SEE INSTRUCTIONS

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Form 10-300a
(July 1969)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Continuation Sheet)

STATE	District of Columbia
COUNTY	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE

(Number all entries)

7. Description: (1) Washington Aqueduct

than make deep-rock cuts during the original construction. The most obvious example of this "deviance" is found at Bridge No. 3 where the bridge is not joined by any roadbed but instead lies at the foot of a hill through which a tunnel had been sent. According to Corps engineers the conduit is still in very good condition. Heavy loads on the roadbed above have caused it to "go a little out of round," however this has caused no problems.

Of the original six bridges only three (No. 3, Cabin John, and Rock Creek) remain in view today. Bridges No. 1 and 2 due to earth fills are nothing more than culverts while Bridge No. 5, which used to cross College Pond, has been covered along with the pond, also by earth fills. Only Bridge No. 3 and Cabin John Bridge retain their original appearance. Both constructed of sandstone and granite, Bridge No. 3's arch supports a span of 75-feet while that at Cabin John's supports one at 220-feet. From 1863 to 1903 the latter arch held the world's record for the longest single masonry arch span. Around the bases of both spans today thick underbrush makes access difficult. Rock Creek Bridge, with its two 48-inch diameter arched cast iron pipes not only carrying water for a city but also supporting a span for vehicular traffic, had its superstructure completely removed when a larger concrete bridge was built over it in 1916 to accommodate increased traffic loads.

Along the path of the conduit can be seen three brick air vent structures, weathered, but in good condition.

Today both Dalecarlia and Georgetown reservoirs have little of their outward appearance of the time when first constructed.

A gate house, with battlement parapet, at Georgetown Reservoir, about 70 years old, is remarkable in that it closely resembles the castle emblem of the U.S. Army Corps of Engineers.

The Aqueduct spills into the Dalecarlia Reservoir just as it reaches the District line. Constructed originally by placing an earth dike across the valley of Little Falls Brook the reservoir had a total holding capacity of about 150,000,000 gallons. It was hoped that allowing the murky river water to remain in this reservoir and the Georgetown reservoir two miles away that the material carried in suspension would settle to the bottom before distribution to the city. However such was not completely the case and the water was destined to have a muddy yellowish color until filtration was adopted in 1928 by the addition of a rapid-sand filter plant. Since this time other facilities have been added to Dalecarlia to make it a modern filtration plant.

(continued)

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GPO 921-724

Form 10-300a
(July 1969)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Continuation Sheet)

STATE	District of Columbia
COUNTY	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE

M:29-49

(Number all entries)

7. Description: (2) Washington Aqueduct

The Georgetown Reservoir which unlike Dalecarlia, had to be excavated and then surrounded by an earth dike, was later paved with rip rap to further sedimentation and preserve the walls. Originally designed as the last point before distribution, its use now is as a sedimentation basin. From here partially-treated water flows to McMillan Reservoir, completed in NE Washington in 1905, where it is filtered and then sent on for public use.

GPO 921-724

M:29-49

8. SIGNIFICANCE

PERIOD *(Check One or More as Appropriate)*

☐ Pre-Columbian	☐ 16th Century	☐ 18th Century	☐ 20th Century
☐ 15th Century	☐ 17th Century	☒ 19th Century	

SPECIFIC DATE(S) *(If Applicable and Known)*

AREAS OF SIGNIFICANCE *(Check One or More as Appropriate)*

Aboriginal	☐ Education	☐ Political	☐ Urban Planning
☐ Prehistoric	☐ Engineering	☐ Religion/Philosophy	☐ Other *(Specify)*
☐ Historic	☐ Industry	☐ Science	
☐ Agriculture	☐ Invention	☐ Sculpture	
☐ Architecture	☐ Landscape Architecture	☐ Social/Humanitarian	
☐ Art	☐ Literature	☐ Theater	
☐ Commerce	☒ Military	☒ Transportation	
☐ Communications	☐ Music		
☐ Conservation			

STATEMENT OF SIGNIFICANCE

The Washington Aqueduct, the District of Columbia's first water system, epitomizes the entry of the Army Corps of Engineers into the field of public works and consequently into direct involvement in major economic influences. From 1824 with the passage of the Rivers and Harbors Act until the Civil War, the Army Corps developed a special relationship with Congress based on its profound involvement in civil works. The Washington Aqueduct is a superlative illustration of the military influence on the civil sector of ante-bellum America.

The Aqueduct is a monument of engineering to its designer and developer, Montgomery Cunningham Meigs, future quartermaster general of the Army. From 1836 until the Civil War, Meigs was involved in engineering fortifications from Philadelphia to Fort Wayne, the Delaware Breakwater, and, ultimately, the dome and the wings of the Capitol. In the Aqueduct, which he counted his favorite project, he left such engineering superlatives as a 12-mile underground masonry conduit utilized to this day; the old Cabin John Bridge, which remained the longest masonry arch in the world until 1903; and the Rock Creek Bridge whose arched cast iron conduit supported the structure!

History

When L'Enfant drew up his original plan for the nation's Capital only Rock Creek was mentioned as a source of a future water supply for the city. The burning of the Capitol by British forces during the War of 1812, a later fire in the Capitol in December 1851 which destroyed many valuable manuscripts, and an ever-increasing population within the boundary of the District of Columbia eventually forced the Congress into the realization that Washington required more than the present wells and springs for its source of water. In 1852, Lt. Montgomery C. Meigs, United States Army Corps of Engineers, was authorized by Congress to submit a report concerning the water needs of the Capital. Meigs report not only covered the present and future needs of the city's population, but also comparisons of the water supplies of other cities, storage, and the equipment and operating costs required for an aqueduct's operation. Due to the depth and scope of his study it was accepted, and for the next decade work

(continued) 284

SEE INSTRUCTIONS

would be done which would provide Washington with its first public water system.

In 1853 Congress appropriated the funds necessary for surveys right of way acquisitions, and initial construction. Ground was broken at Great Falls, Maryland in November of the same year for construction of the conduit. Problems which were to either stop completely or delay construction were numerous: little or no Congressional funding; difficulty in obtaining right of way; sickness (especially from malaria); politics; the outbreak of the Civil War; shortage of labor due to the war; and fear of Confederate raids.

The plan of Montgomery Meigs was to divert the waters of the Potomac River, at a point 12 miles upriver from the city of Georgetown, into a brick or stone conduit and with the aid of pumping stations and the force of gravity bring the water to retaining reservoirs where after several days it could then be pumped into the pipelines of the city. Accomplishing this feat required construction of a masonry dam halfway across the river and a control gate house at Great Falls, eleven tunnels with an aggregate length of 5,392 feet, six bridges, pump stations, pipelines, and two reservoirs.

The conduit itself was the largest item to be constructed and runs approximately 12 miles. With an interior diameter of 9 feet it was envisioned by Meigs that it could supply the city's water needs for the next 200 years. However population increases and the use of such things as "fixed" bath tubs resulted in capacity being reached in less than a third of the predicted time.

Building materials included cast iron for the outlet pipes at Georgetown and the conduit over Rock Creek, natural cement, sharp flint sand, concrete, mortar, rubble stone, brick, and sandstone (quarried at Seneca 7 miles upriver from Great Falls). Supplies were paid for directly by the U.S. Government and were brought to the site by wagon or canal boat using the C&O Canal. Rubble from tunnel excavations provided fill for valleys and roadways. The sandstone from Seneca was used in culverts, gate houses, and bridges.

Besides the construction of the conduit which brought water to the city, the most notable achievement of Meigs and his engineers was the construction of 6 bridges to aid in the flow of the stream. Two in particular, Cabin John Bridge and Rock Creek Bridge, enjoyed much critical acclaim at the time. Cabin John, constructed of timber, granite, and sandstone, held the record for the longest masonry arch in the world (220') for 40 years until the Luxemburg Bridge in Europe eclipsed it by its completion in 1903. Rock Creek employed the use of

(continued)

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Form 10-300a
(July 1969)

UNITED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Continuation Sheet)

STATE: District of Columbia
COUNTY:
FOR NPS USE ONLY
ENTRY NUMBER | DATE

(Number all entries)

8. Significance: (2) Washington Aqueduct

arched cast iron pipes not only to transport water but also as a means of support for the bridge. Its arch of 200-feet is today still one of the longest unsupported metal pipe arches in the world.

The construction of the first reservoir (today known as Dalecarlia) was made by erecting an earthen dike across the valley of Little Falls brook near the District boundary line. The Georgetown reservoir, 2 miles down river, required excavation to 12-feet and construction of a large earthen rectangular dike for storage.

During the period of the Aqueduct's construction and for years afterward numerous personalities were to clash in its history. Captain Montgomery Meigs, the chief engineer for most of the period 1853-1863, met with disfavor from President Buchanan and in September 1860 was transferred by Secretary of War John Floyd to Dry Tortugas Island to superintend the construction of Fort Jefferson. Meigs was later returned as chief engineer in February 1861 upon Lincoln's accession to the presidency. Meigs considered the Aqueduct always as his favorite accomplishment and saw to it that numerous inscriptions were placed on various bridges, hydrants, and pumps heralding his deed and that of his assistants. The name of Jefferson Davis, Secretary of War in 1853 when the Aqueduct was begun, was stricken from a stone inscription on the west end of Cabin John Bridge in 1862 by orders of Secretary of the Interior Caleb Smith, who administered the Aqueduct for 5 years (1862-7). Later, in 1909, President Theodore Roosevelt ordered Davis's name reinstated. Living in retirement in D.C. until his death in 1892, Meigs often would submit reports condemning the proposed modifications of his successors at the Aqueduct and then submit his own plans directly to Congress. This caused quite a furor on several occasions.

Despite the many problems besetting the Nation, on December 5, 1863 the first water flowed into the conduit near Lock 20 on the C&O Canal. Two days later it was let into the reservoirs. After two weeks more the water was shut off in order to "point up the conduit." Reopened again in July 1864, the conduit was placed in service from that date. Drained in 1891 after 27 years of continuous use, the structure showed remarkable watertightness.

GPO 921-724

M:29-49

9. MAJOR BIBLIOGRAPHICAL REFERENCES

Hutton, William R. "The Washington Aqueduct 1853-1898," The Engineering Record, Vol. 40, No. 9, 1899.

History of the Washington Aqueduct, Washington District Corps of Engineers, 1953.

10. GEOGRAPHICAL DATA

* see continuation sheet

LATITUDE AND LONGITUDE COORDINATES DEFINING A RECTANGLE LOCATING THE PROPERTY								OR	LATITUDE AND LONGITUDE COORDINATES DEFINING THE CENTER POINT OF A PROPERTY OF LESS THAN TEN ACRES					
CORNER	LATITUDE			LONGITUDE					LATITUDE			LONGITUDE		
	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds			Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
NW	38°	00'	20"	77°	15'	13"			38°	54'	15"	77°	73'	23"
NE	39°	00'	30"	77°	15'	13"								
SE	38°	58'	56"	77°	13'	35"								
SW	38°	58'	47"	77°	13'	50"								

Area #4

Rock Creek Bridge

APPROXIMATE ACREAGE OF NOMINATED PROPERTY: 163 acres

LIST ALL STATES AND COUNTIES FOR PROPERTIES OVERLAPPING STATE OR COUNTY BOUNDARIES

STATE:	CODE	COUNTY	CODE
Maryland		Montgomery	
STATE:	CODE	COUNTY:	CODE
District of Columbia		District of Columbia	
STATE:	CODE	COUNTY:	CODE
STATE:	CODE	COUNTY:	CODE

SEE INSTRUCTIONS

11. FORM PREPARED BY

NAME AND TITLE:
Ben Levy, Senior Historian, and Paul Ghioto, Assistant

ORGANIZATION: Division of History, Office of Archeology and Historic Preservation, National Park Service

DATE: June 27, 1973

STREET AND NUMBER:
1100 L Street, N.W.

CITY OR TOWN: Washington

STATE: D.C.

CODE:

12. STATE LIAISON OFFICER CERTIFICATION

As the designated State Liaison Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service. The recommended level of significance of this nomination is:

National ☐ State ☐ Local ☐

Name _____

Title _____

Date _____

NATIONAL REGISTER VERIFICATION

I hereby certify that this property is included in the National Register.

_____
Chief, Office of Archeology and Historic Preservation

Date _____

ATTEST:

_____
Keeper of The National Register

Date _____

GPO 901-087

M:29-49

Form 10-300a
(July 1969)

ED STATES DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

NATIONAL REGISTER OF HISTORIC PLACES
INVENTORY - NOMINATION FORM

(Continuation Sheet)

STATE	
District of Columbia	
COUNTY	
FOR NPS USE ONLY	
ENTRY NUMBER	DATE

(Number all entries)

10. Geographical Data

Area 3

NW	38° 58' 56"	77° 13' 35"
NE	38° 58' 27"	77° 08' 45"
SE	38° 58' 17"	77° 08' 47"
SW	38° 58' 45"	77° 13' 37"

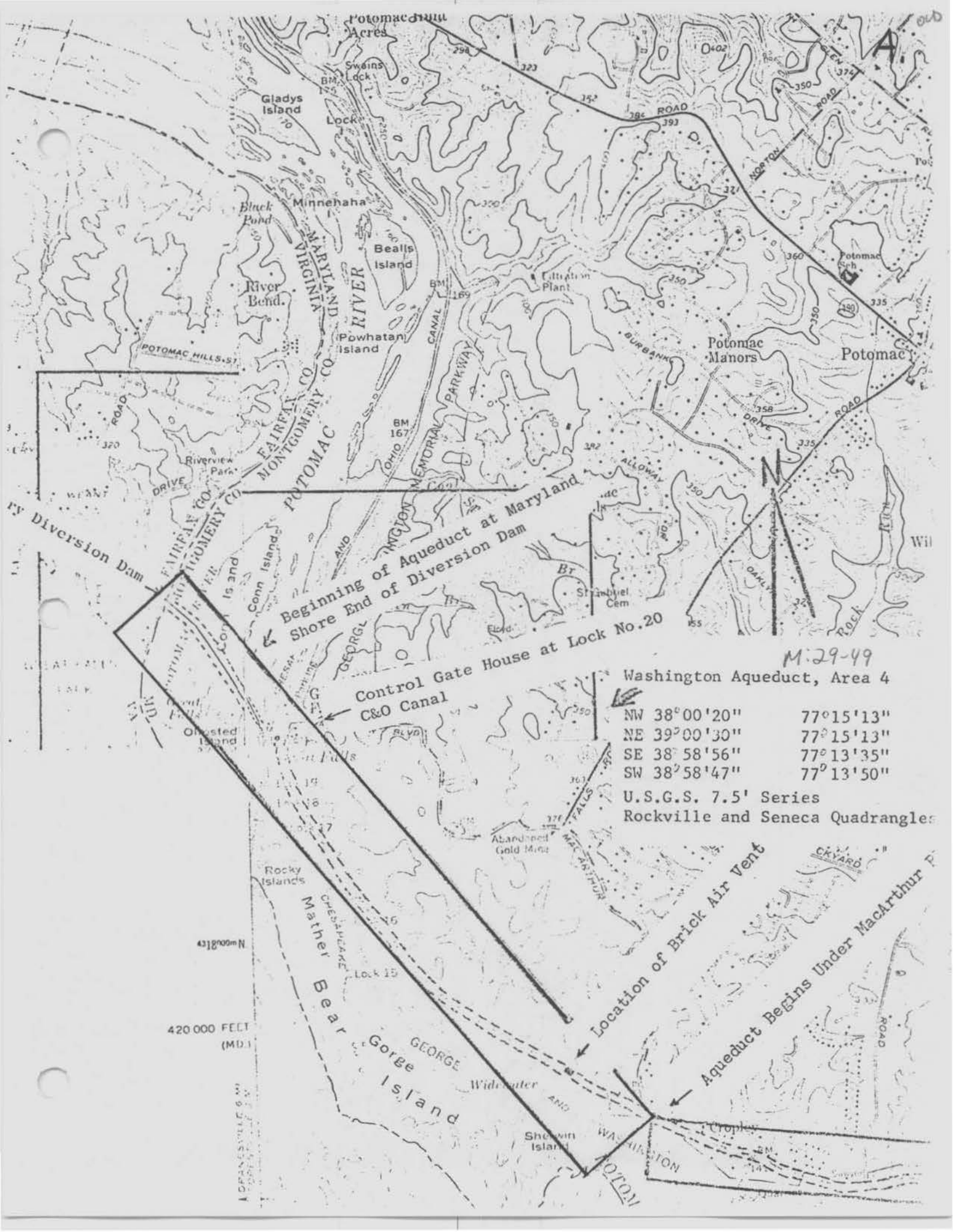
Area 2

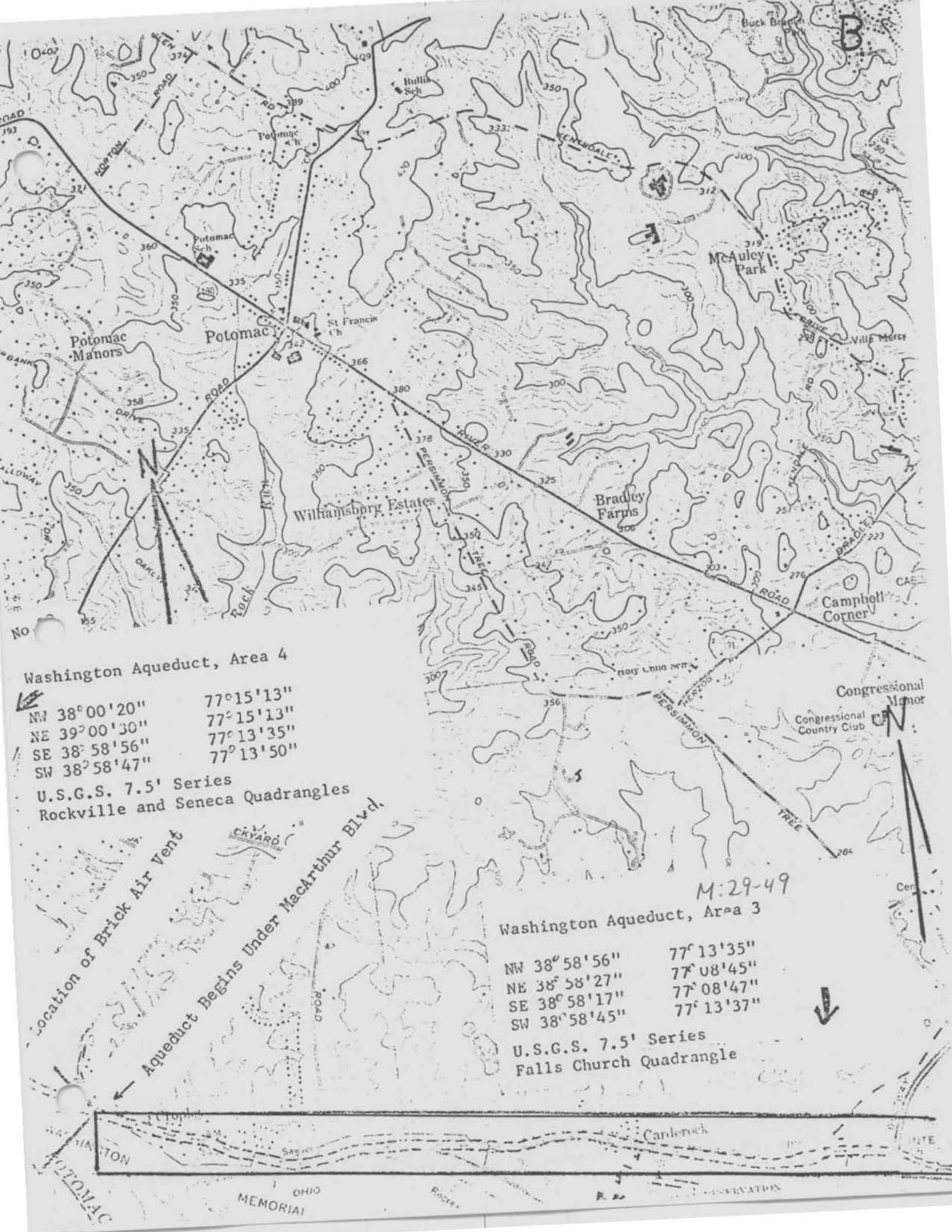
NW	38° 58' 21"	77° 08' 47"
NE	38° 58' 38"	77° 08' 11"
SE	38° 56' 27"	77° 06' 14"
SW	38° 56' 08"	77° 06' 53"

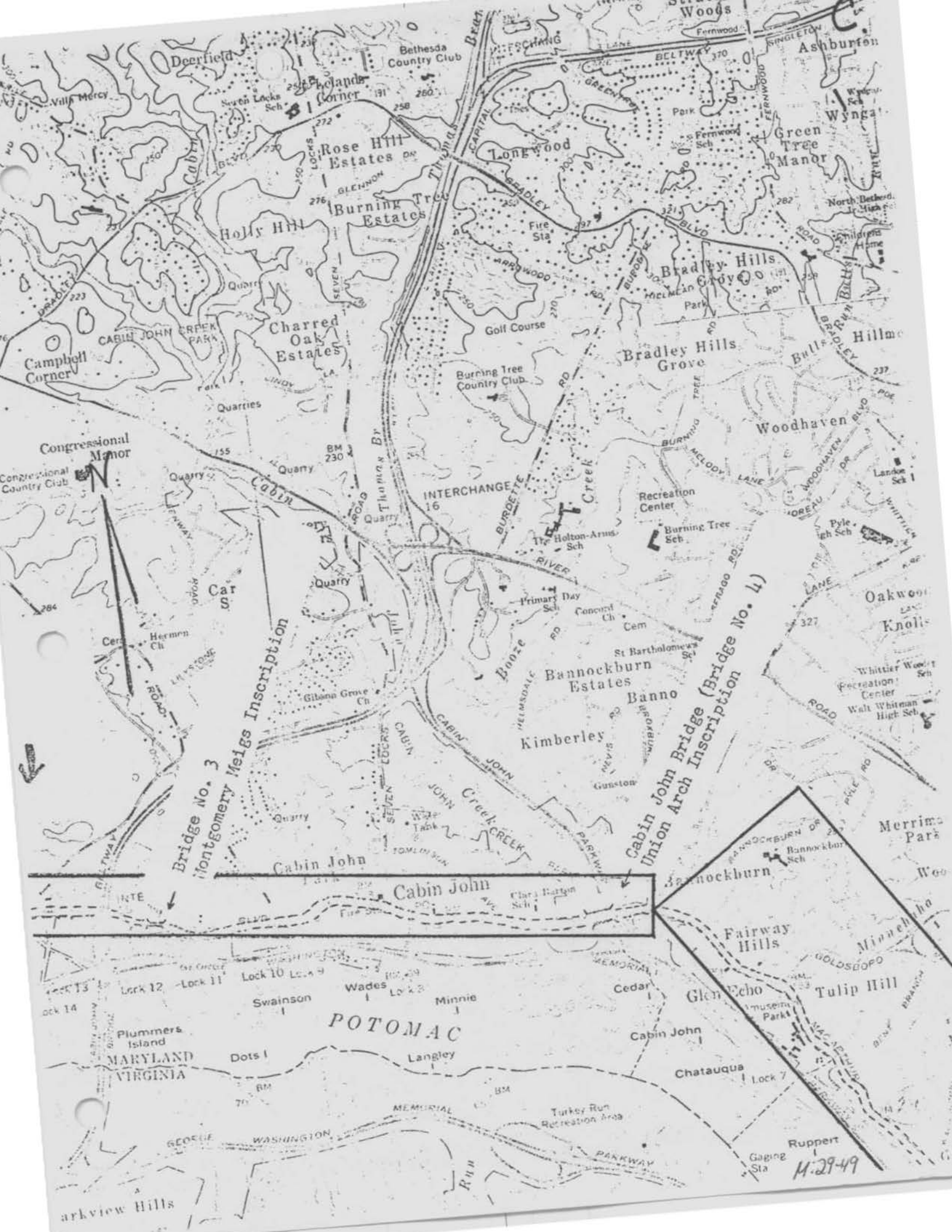
Area 1

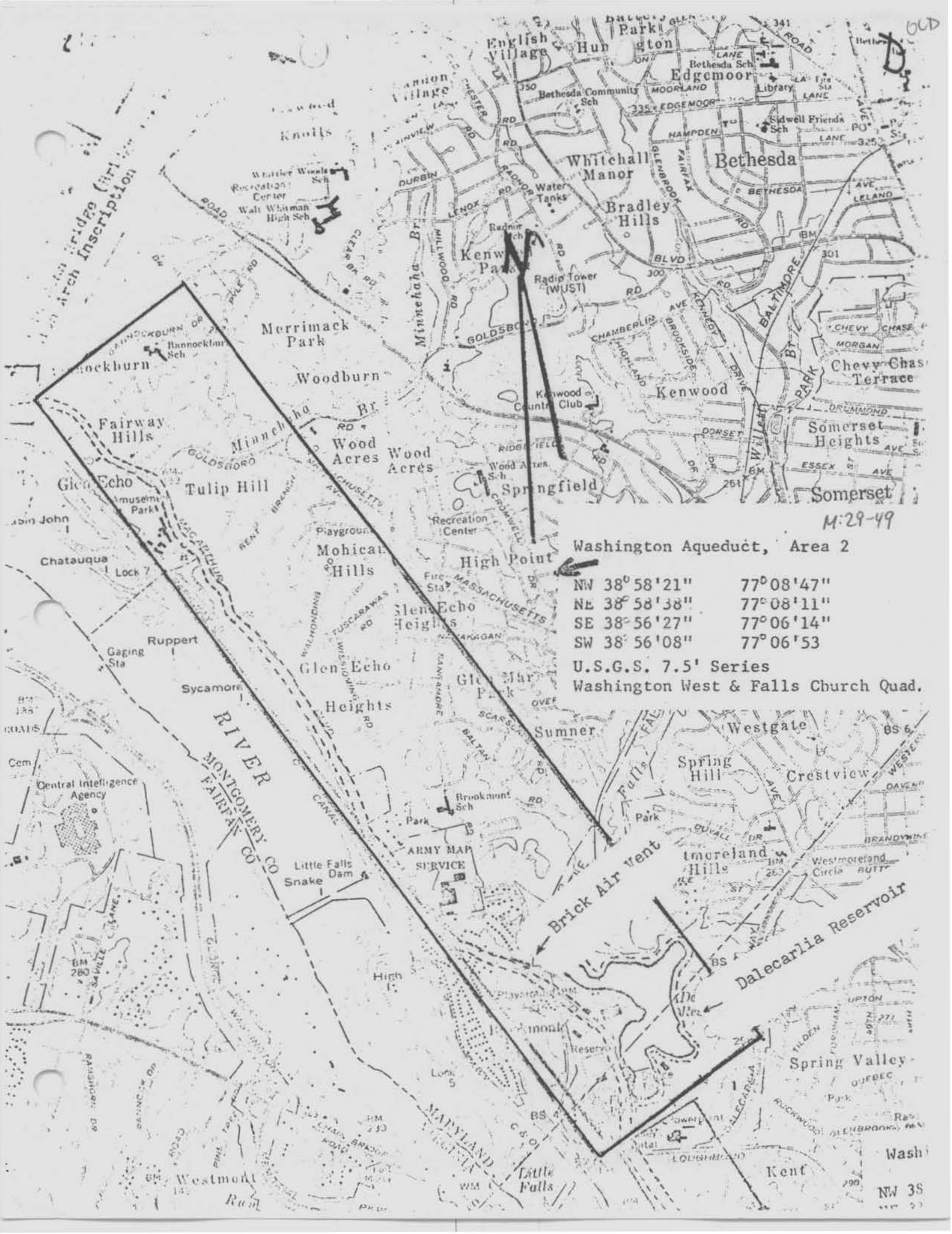
NW	38° 54' 26"	77° 05' 34"
NE	38° 56' 08"	77° 06' 47"
SE	38° 56' 16"	77° 06' 29"
SW	38° 54' 33"	77° 05' 17"

(3.1)

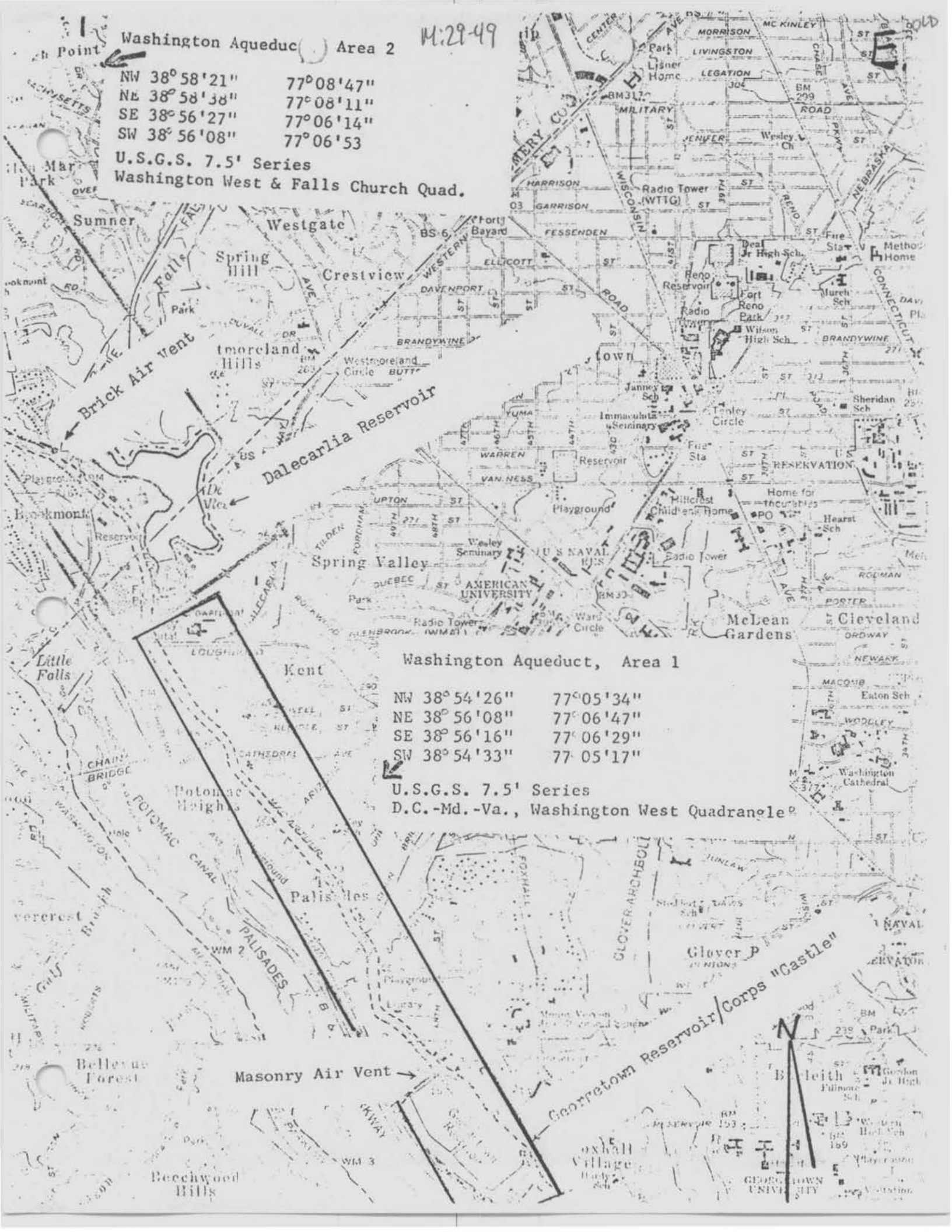

Potomac Hills Acres
Swains Lock
Gladys Island
Lock
Minnehaha
Black Pond
Beall's Island
River Bend
MARYLAND
VIRGINIA
POTOMAC RIVER
Powhatan Island
POTOMAC HILLS ST
FAIRFAX CO
MONTGOMERY CO
Riverview Park
DRIVE
ROAD
BM 169
BM 167
OHIO
CANAL
MEMORIAL PARKWAY
Filtration Plant
BURBANK
Potomac Manors
Potomac
Potomac High
NORTON
ALLOWAY
OAKLEY
Rock
Conn Island
Beginning of Aqueduct at Maryland Shore End of Diversion Dam
Control Gate House at Lock No.20
C&O Canal
Diversion Dam
Abandoned Gold Mine
FALLS
MACARTHUR
Location of Brick Air Vent
Aqueduct Begins Under MacArthur
Rocky Islands
Mather Gorge
Bear Island
CHESAPEAKE
Lock 15
GEORGE
Widewater
Shepherd Island
420 000 FEET
(MD.)
4318000m N
M-29-49
Washington Aqueduct, Area 4
NW 38°00'20" 77°15'13"
NE 39°00'30" 77°15'13"
SE 38°58'56" 77°13'35"
SW 38°58'47" 77°13'50"
U.S.G.S. 7.5' Series
Rockville and Seneca Quadrangles

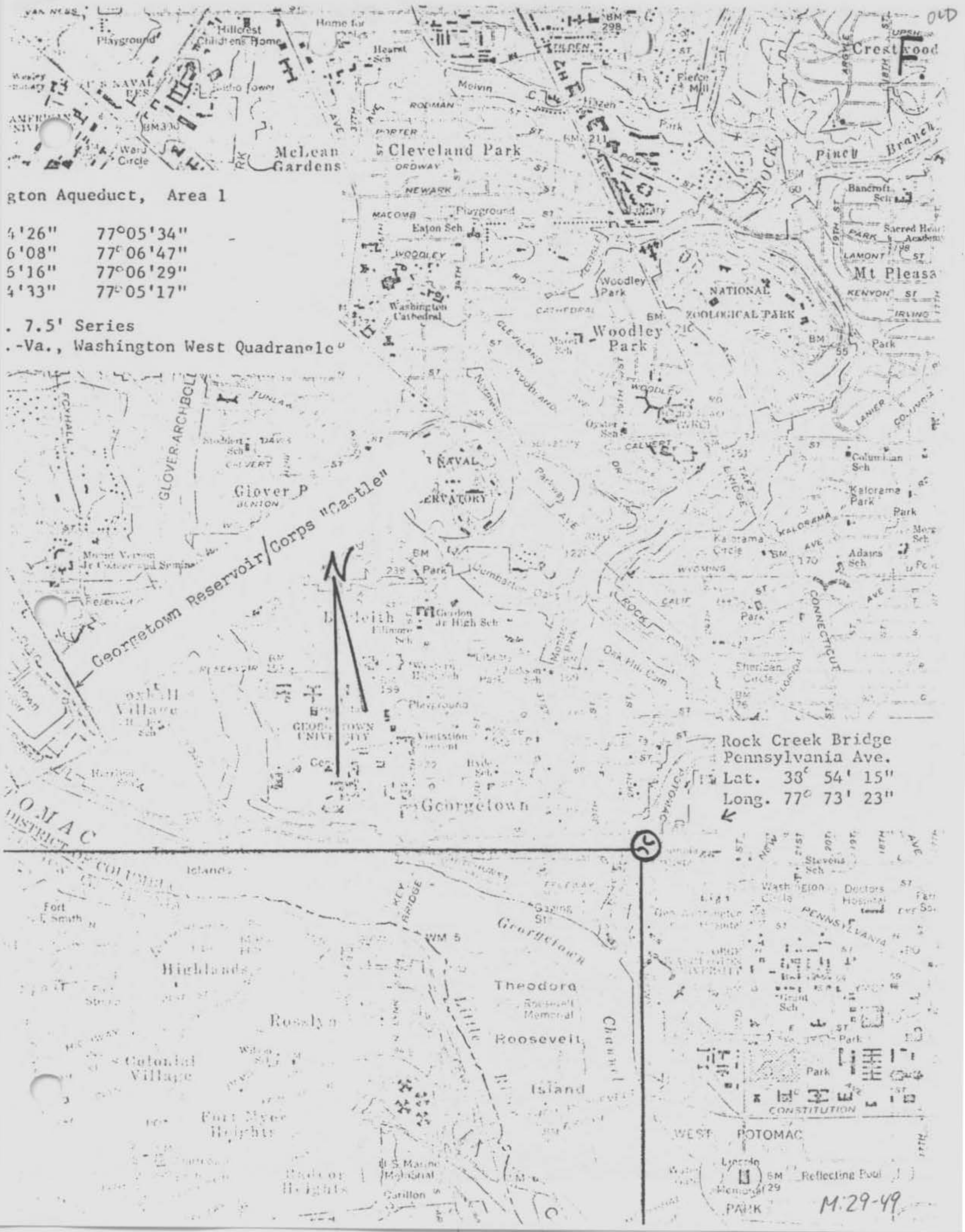

Washington Aqueduct, Area 4
NW 38°00'20" 77°15'13"
NE 39°00'30" 77°15'13"
SE 38°58'56" 77°13'35"
SW 38°58'47" 77°13'50"
U.S.G.S. 7.5' Series
Rockville and Seneca Quadrangles
Location of Brick Air Vent
Aqueduct Begins Under MacArthur Blvd.
M:29-49
Washington Aqueduct, Area 3
NW 38°58'56" 77°13'35"
NE 38°58'27" 77°08'45"
SE 38°58'17" 77°08'47"
SW 38°58'45" 77°13'37"
U.S.G.S. 7.5' Series
Falls Church Quadrangle
Potomac
Potomac Manors
Williamsburg Estates
Bradley Farms
McAuley Park
Campbell Corner
Congressional Manor
Congressional Country Club
Carderock
MEMORIAL
OHIO
POTOMAC


Deerfield
Bethesda Country Club
Villa Mercy
Seven Locks Sch
Holland Corner
Rose Hill Estates
Burning Tree Estates
Holly Hill
Longwood
Ashburton
Fernwood
Park
Fernwood Sch
Green Tree Manor
Wynga
North Bethesda Junior High
Children's Home
Fire Sta
Bradley Hills
Bradley Hills Grove
Golf Course
Burning Tree Country Club
Charred Oak Estates
Campbell Corner
CABIN JOHN CREEK PARK
Quarries
Quarry
Congressional Manor
Congressional Country Club
BM 230
INTERCHANGE 16
Thomas Br
Burdette Creek
Recreation Center
Burning Tree Sch
The Holton-Arms Sch
Woodhaven
Landon Sch
Pyle High Sch
Primary Day Sch
Concord Ch
Cem
St Bartholomew's Sch
Bannockburn Estates
Banno
Kimberley
Oakwood Knolls
Whittier Woods Recreation Center
Walt Whitman High Sch
Hermon Ch
Gibson Grove Ch
Bridge No. 3
Montgomery Meigs Inscription
Cabin John Bridge (Bridge No. 4)
Union Arch Inscription
Cabin John
Clara Barton Sch
Bannockburn Sch
Merrimac Park
Fairway Hills
Glen Echo
Tulip Hill
Museum Park
Cedar
Wades
Swainson
Minnie
Lock 10
Lock 11
Lock 12
Lock 13
Lock 14
POTOMAC
Plummers Island
MARYLAND
VIRGINIA
Dots I
Langley
Cabin John
Chatauqua
Lock 7
Turkey Run Recreation Area
Ruppert
Gaging Sta
Parkview Hills
M-29-49



OLD
Washington Aqueduct, Area 2
NW 38°58'21" 77°08'47"
NE 38°58'38" 77°08'11"
SE 38°56'27" 77°06'14"
SW 38°56'08" 77°06'53"
U.S.G.S. 7.5' Series
Washington West & Falls Church Quad.
M:29-49
Brick Air Vent
Dalecarlia Reservoir
English Village
Edgemoor
Bethesda
Whitehall Manor
Bradley Hills
Kenwood
Chevy Chase Terrace
Somerset Heights
Somerset
Springfield
High Point
Merrimack Park
Woodburn
Fairway Hills
Glen Echo
Tulip Hill
Wood Acres
Mohican Hills
Glen Echo Heights
Sumner
Westgate
Spring Hill
Crestview
Spring Valley
Kent
RIVER
MONTGOMERY CO
FAIRFAX CO
Central Intelligence Agency
ARMY MAP SERVICE
Little Falls Dam
MARYLAND
VIRGINIA
Little Falls
Westmont
NW 3S


M:29-49
Washington Aqueduc( ) Area 2
NW 38° 58'21" 77°08'47"
NE 38° 58'38" 77° 08'11"
SE 38° 56'27" 77°06'14"
SW 38° 56'08" 77°06'53
U.S.G.S. 7.5' Series
Washington West & Falls Church Quad.
Brick Air Vent
Dalecarlia Reservoir
Washington Aqueduct, Area 1
NW 38° 54'26" 77° 05'34"
NE 38° 56'08" 77° 06'47"
SE 38° 56'16" 77° 06'29"
SW 38° 54'33" 77° 05'17"
U.S.G.S. 7.5' Series
D.C.-Md.-Va., Washington West Quadrangle
Masonry Air Vent
Georgetown Reservoir/Corps "Castle"


OLD
gton Aqueduct, Area 1
4'26" 77°05'34"
6'08" 77°06'47"
6'16" 77°06'29"
4'33" 77°05'17"
. 7.5' Series
.-Va., Washington West Quadrangle
Georgetown Reservoir/Corps "Castle"
N
Rock Creek Bridge
Pennsylvania Ave.
Lat. 38° 54' 15"
Long. 77° 73' 23"
Hillcrest Childrens Home
Playground
Home for
Hearst Sch
Melvin
Rodman
Porter
Tilden
Hazen
Pierce Mill
McLean Gardens
Cleveland Park
Ordway
Newark
Macomb
Playground
Eaton Sch
Woodley
Washington Cathedral
Cathedral
Cleveland
Woodland
Woodley Park
National Zoological Park
Crestwood
Piney Branch
Rock
Bancroft Sch
Sacred Heart Academy
Park
Lamont
Mt Pleasa
Kenyon
Irving
Park
Lanier
Columbia
Glover Archbold
Foxhall
Tunlaw
Stoddert Sch
Davis
Calvert
Glover P
Benton
Naval
Observatory
Oyster Sch
Calvert
Taft Bridge
Columbian Sch
Kalorama Park
Park
Kalorama
Kalorama Circle
Wyoming
Adams Sch
Calif
Connecticut
Park
Mount Vernon Jr College and Seminary
Reservoir
Burleith
Gordon Jr High Sch
Ellmore Sch
Park
Dumbarton Oaks
Montrose Park
Oak Hill Cem
Rock Creek
Sheridan Circle
Florida
Village
Georgetown University
Playground
Visitation Convent
Hyde Sch
Georgetown
Potomac
Potomac
District of Columbia
Islands
Key Bridge
Stevens Sch
Washington Circle
Doctors Hospital
Pennsylvania
Fort C F Smith
Georgetown
Highlands
Theodore
Roosevelt Memorial
Roosevelt
Channel
Island
Rosslyn
Little
Colonial Village
Fort Myer Heights
Grant Sch
Park
Park
Constitution
West Potomac
Lincoln Memorial
Reflecting Pool
Park
U S Marine Memorial
Carillon
M:29-49

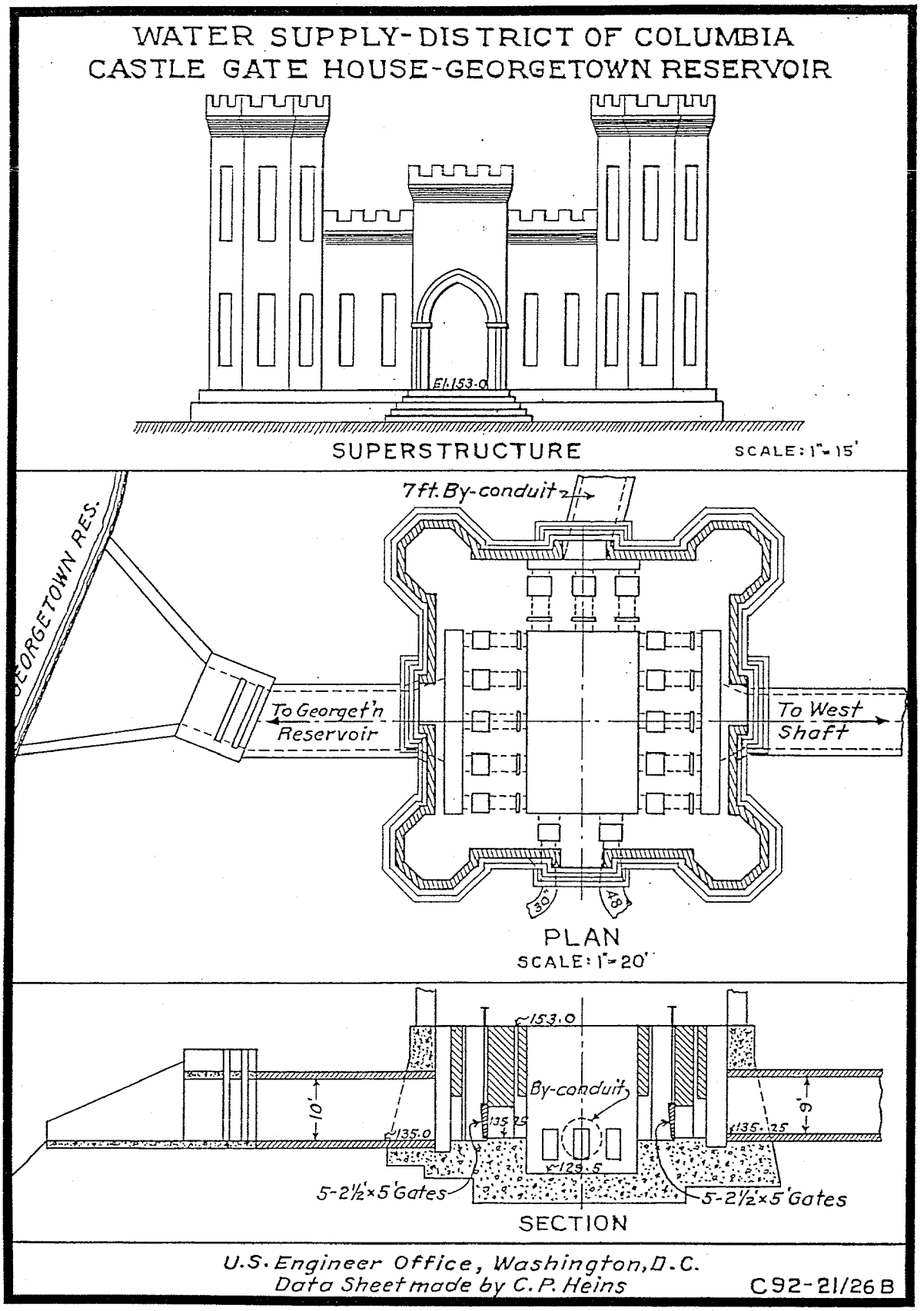


Figure 5 Design for Castle Gatehouse, 1901.

M:29-49

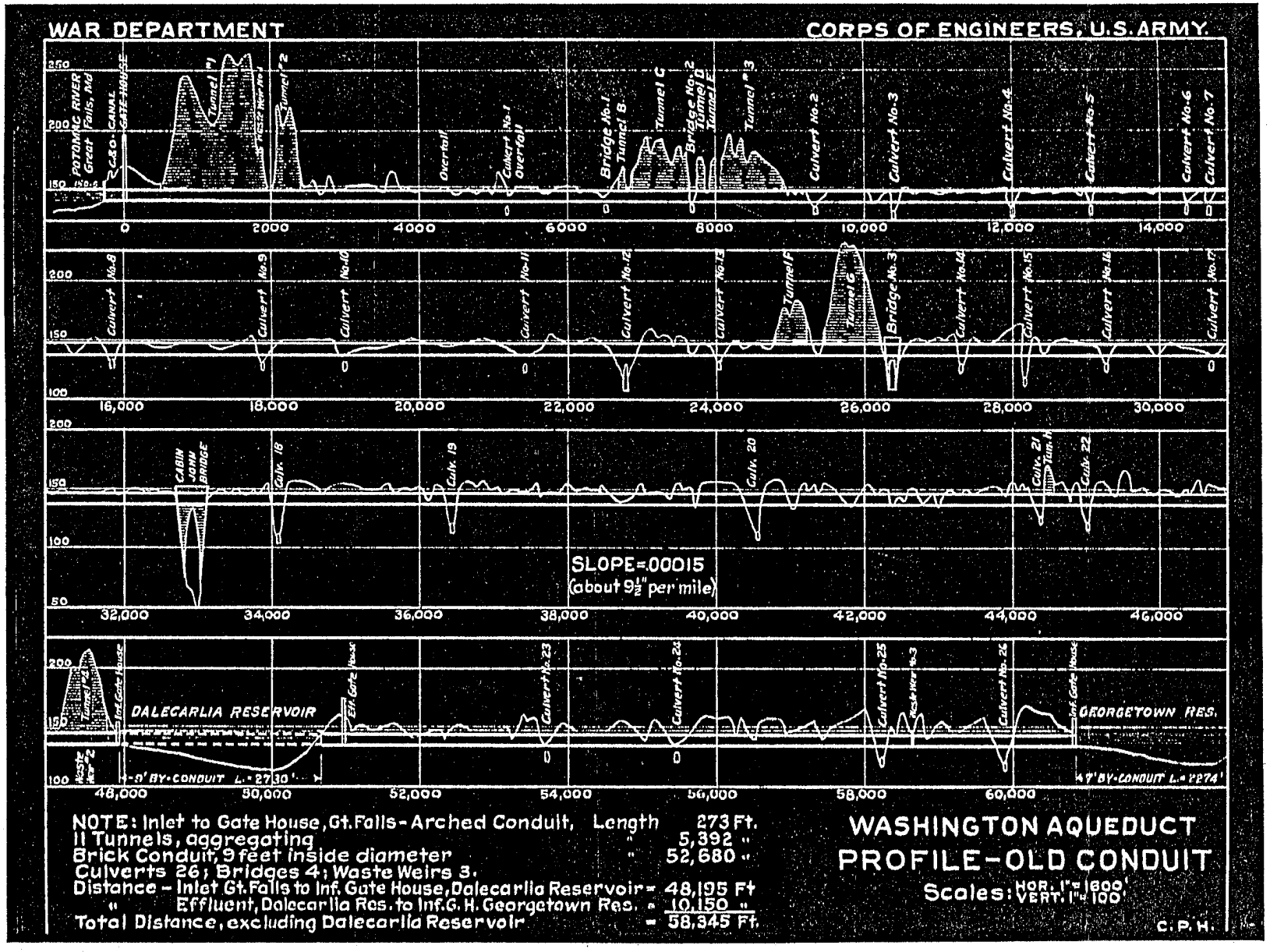


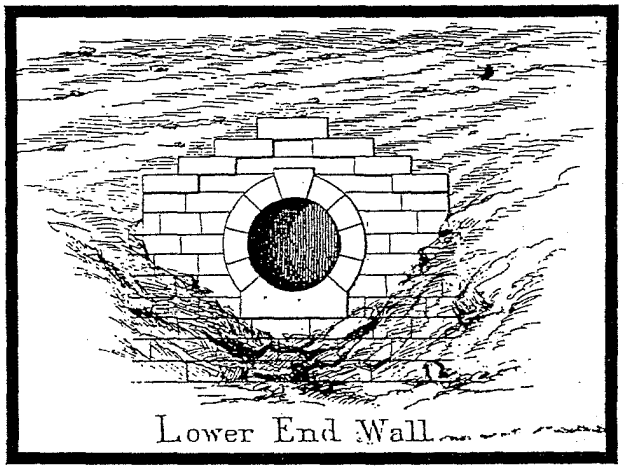
Figure 6 Profile of the conduit.

DRAFT

WASHINGTON AQUEDUCT

CULVERT Nº6

STATION 144+27.5



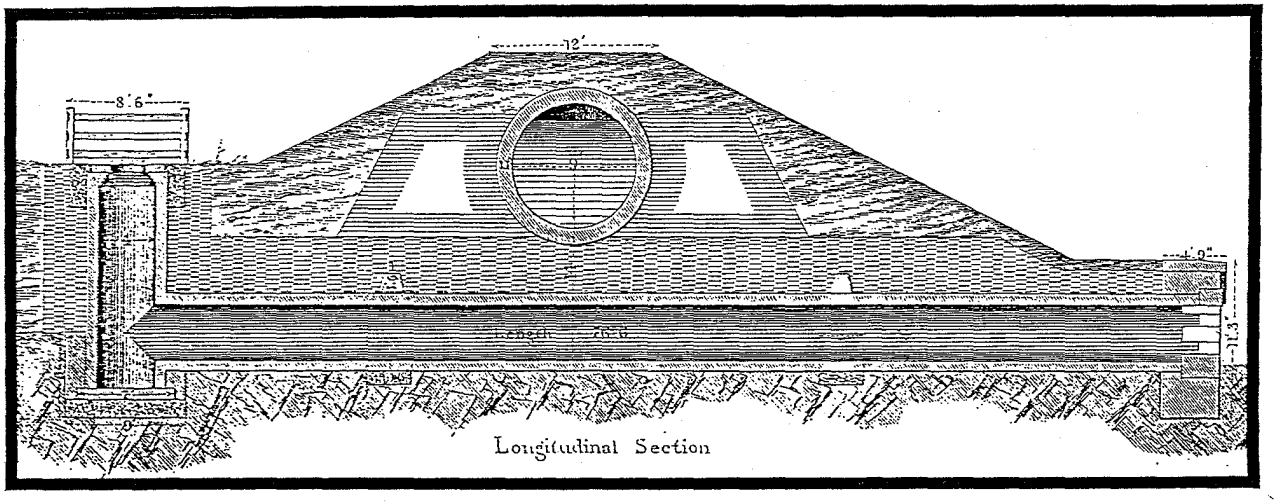


Figure 7 Drawing of a culvert by M.C. Meigs.

M:29-49

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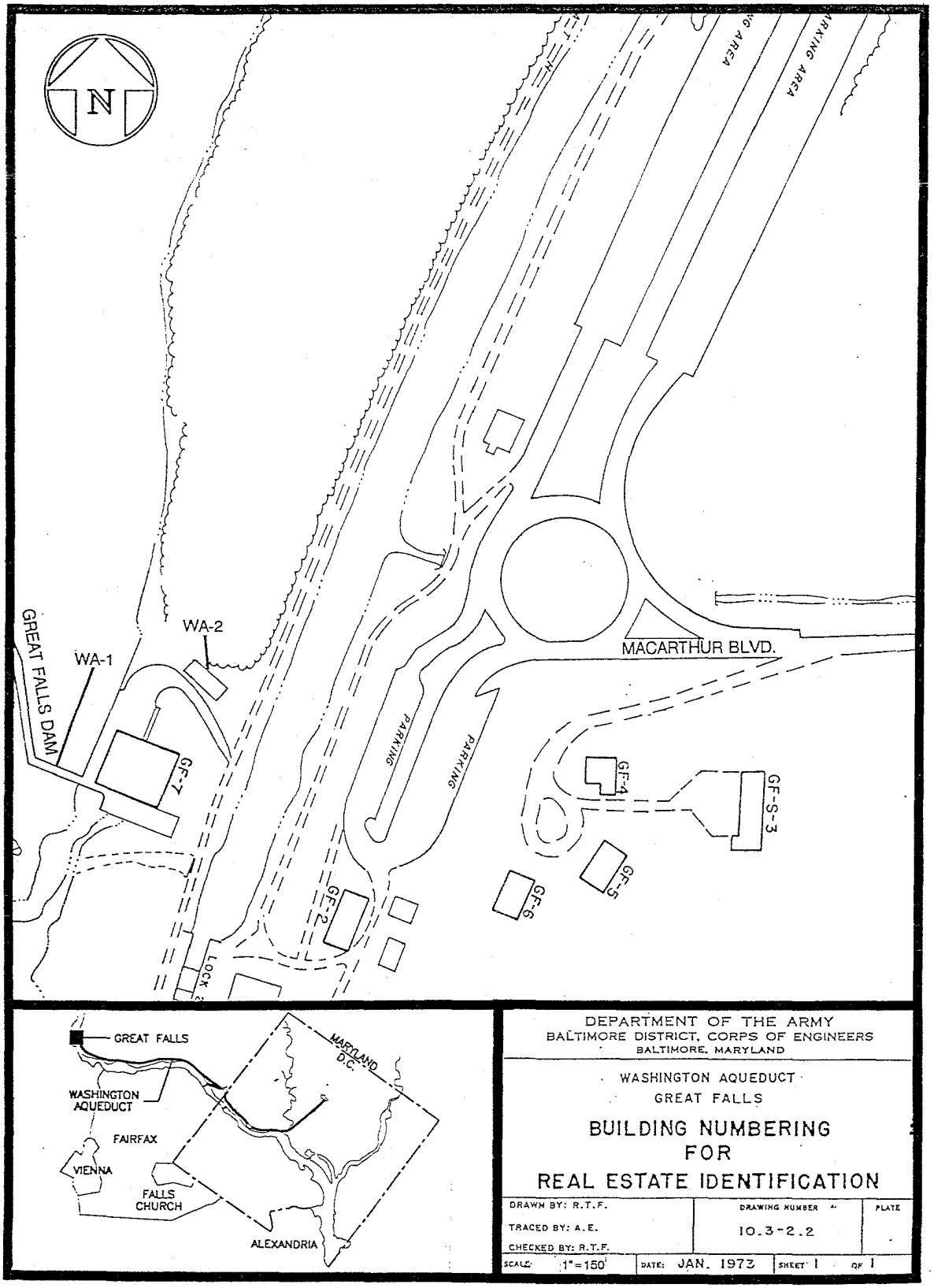

Figure 4 Map of Great Falls.

M:29-49

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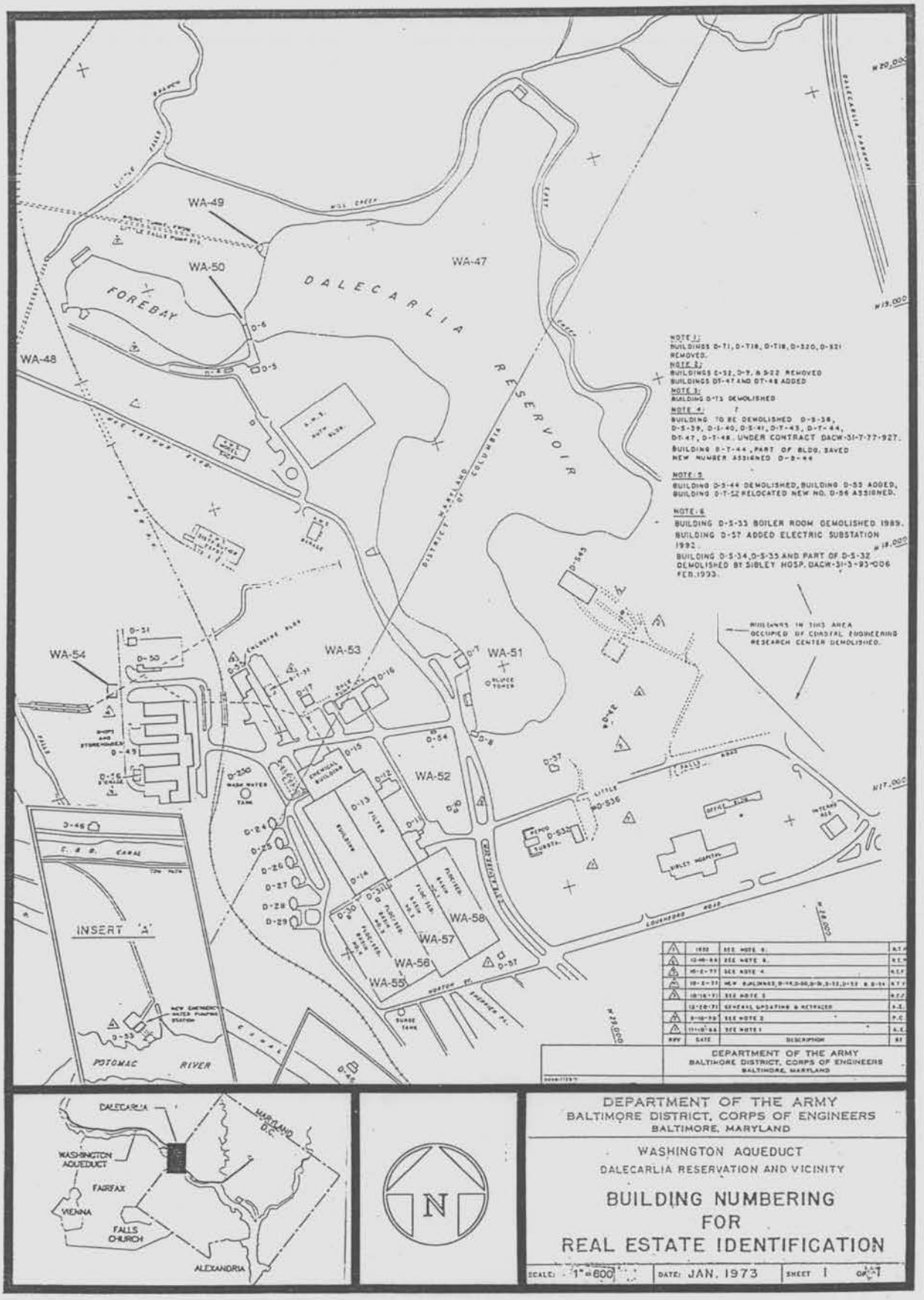

Figure 8 Map of the Dalecarlia Reservoir; only the property to the east of MacArthur Boulevard is included in the National Historic Landmark property boundaries.

M:29-49

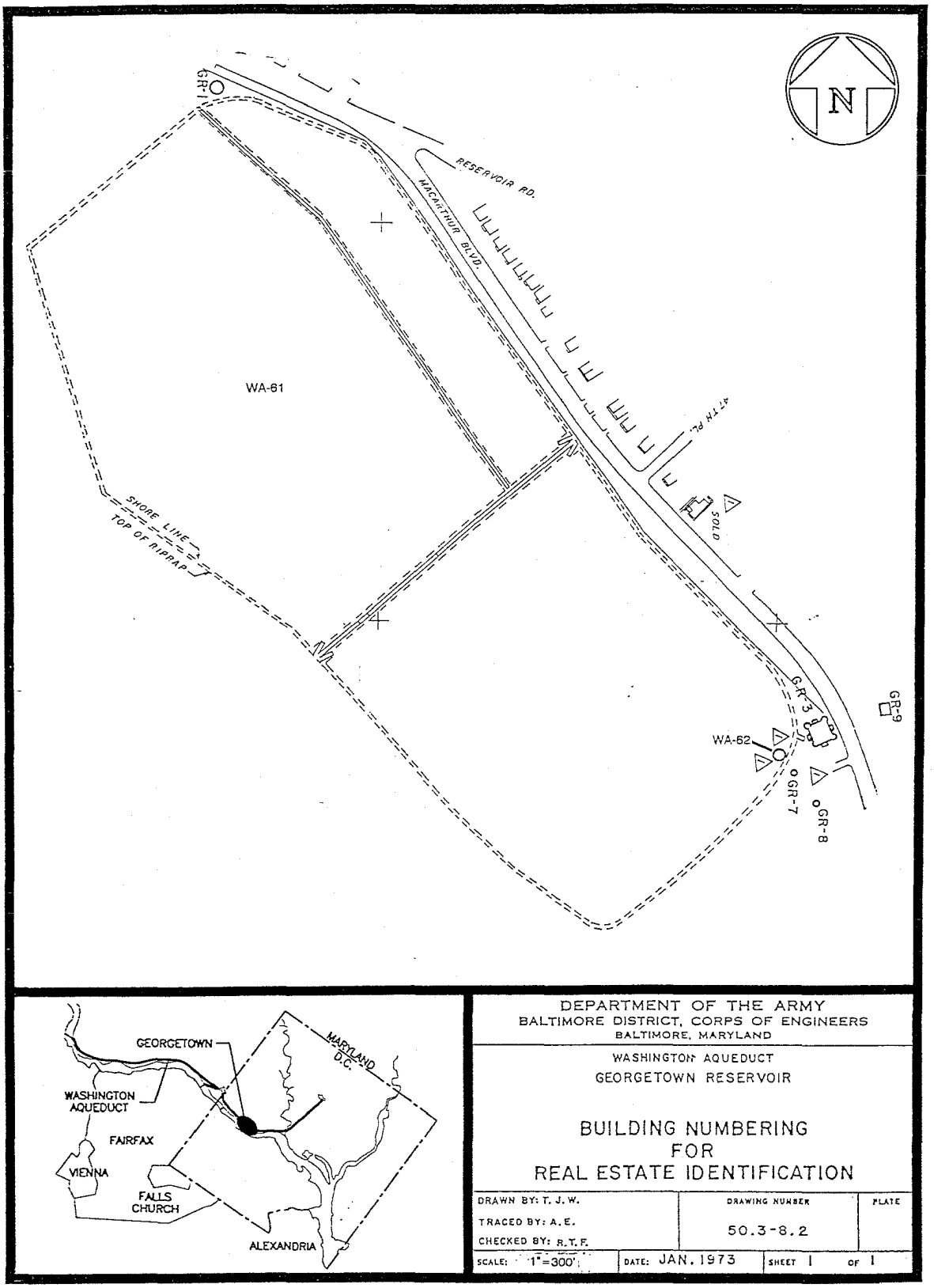

Figure 9 Map of the Georgetown Reservoir.

M:29-49

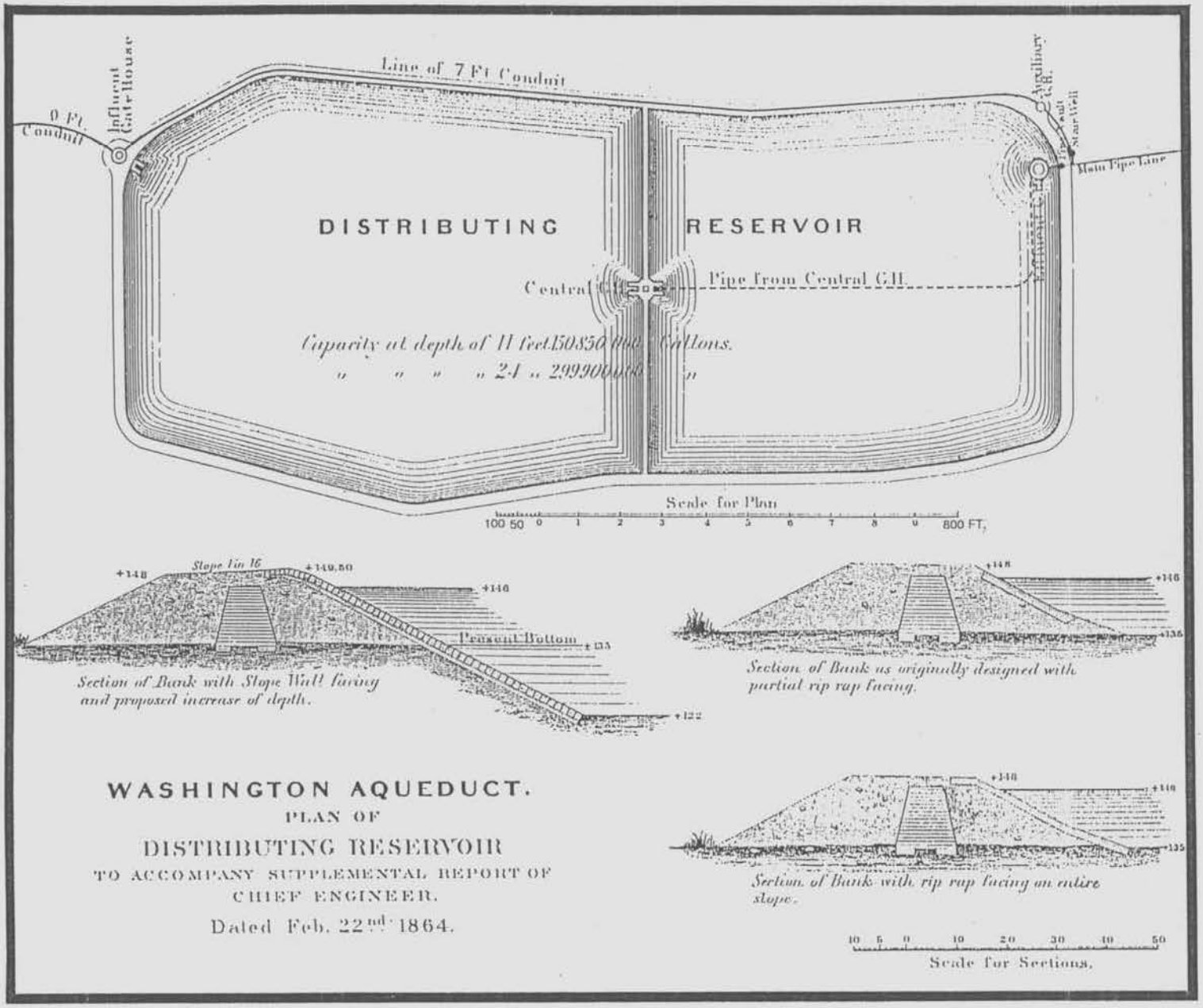

Figure 10 1864 Plan of the Distributing Reservoir (Source: 1864 Annual Report of the Chief Engineer).

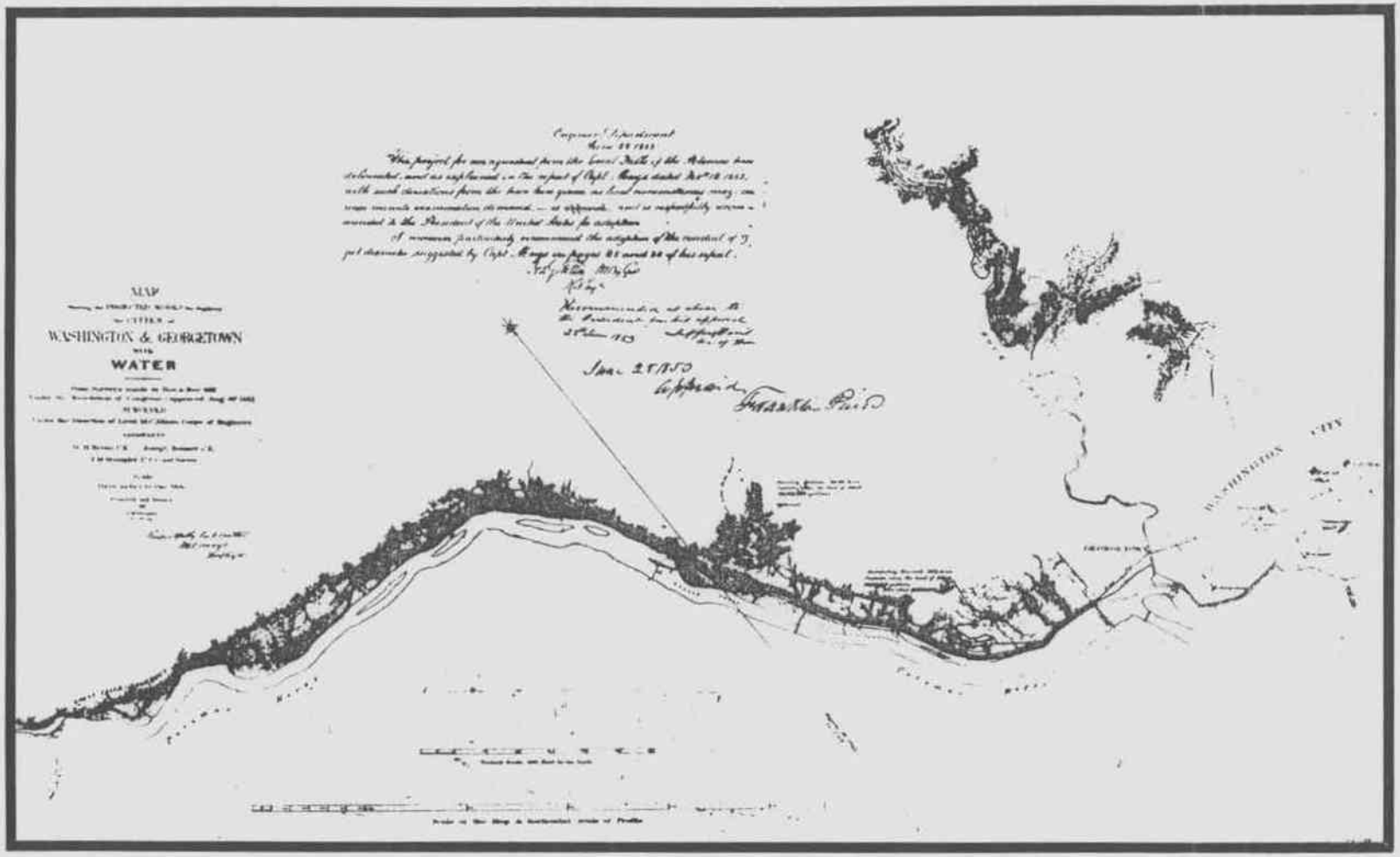

Figure 1 Plan of Washington Aqueduct, signed by President Franklin Pierce, 1853.

M.29-99

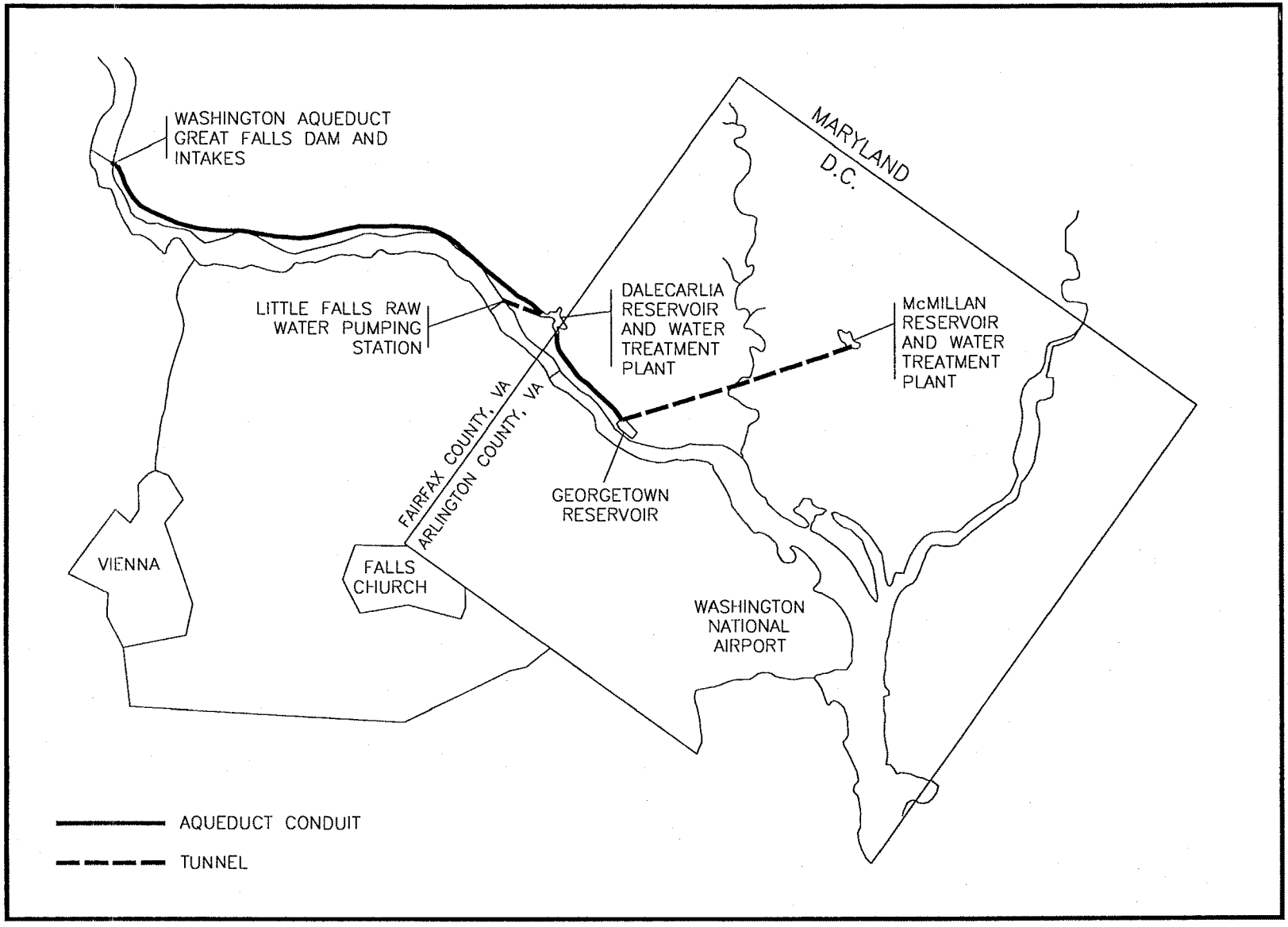

Figure 2 Schematic Map of the Washington Aqueduct as it currently exists.

DRAFT

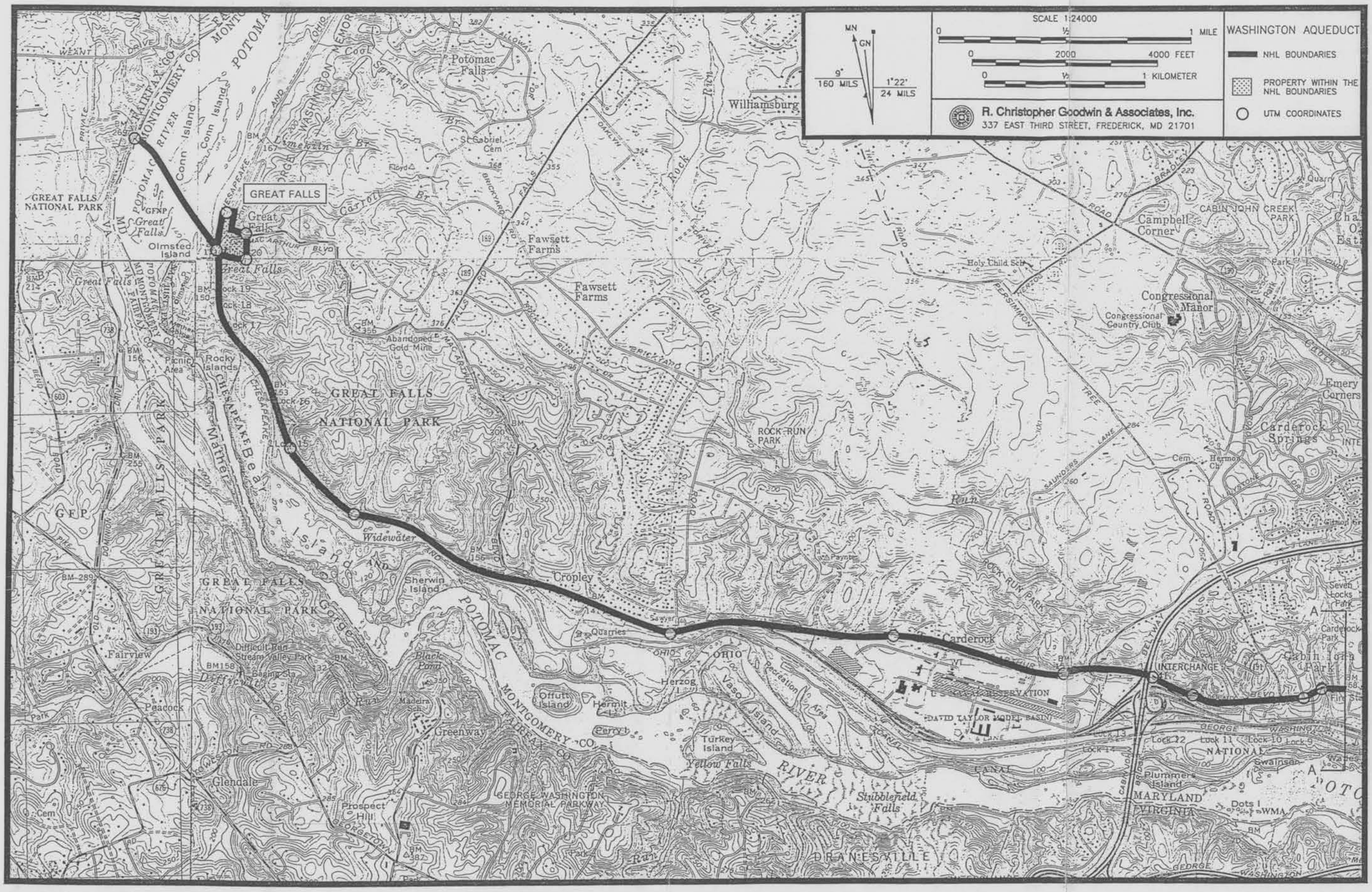

Figure 3a Map of Washington Aqueduct NHL District.

M:29-49

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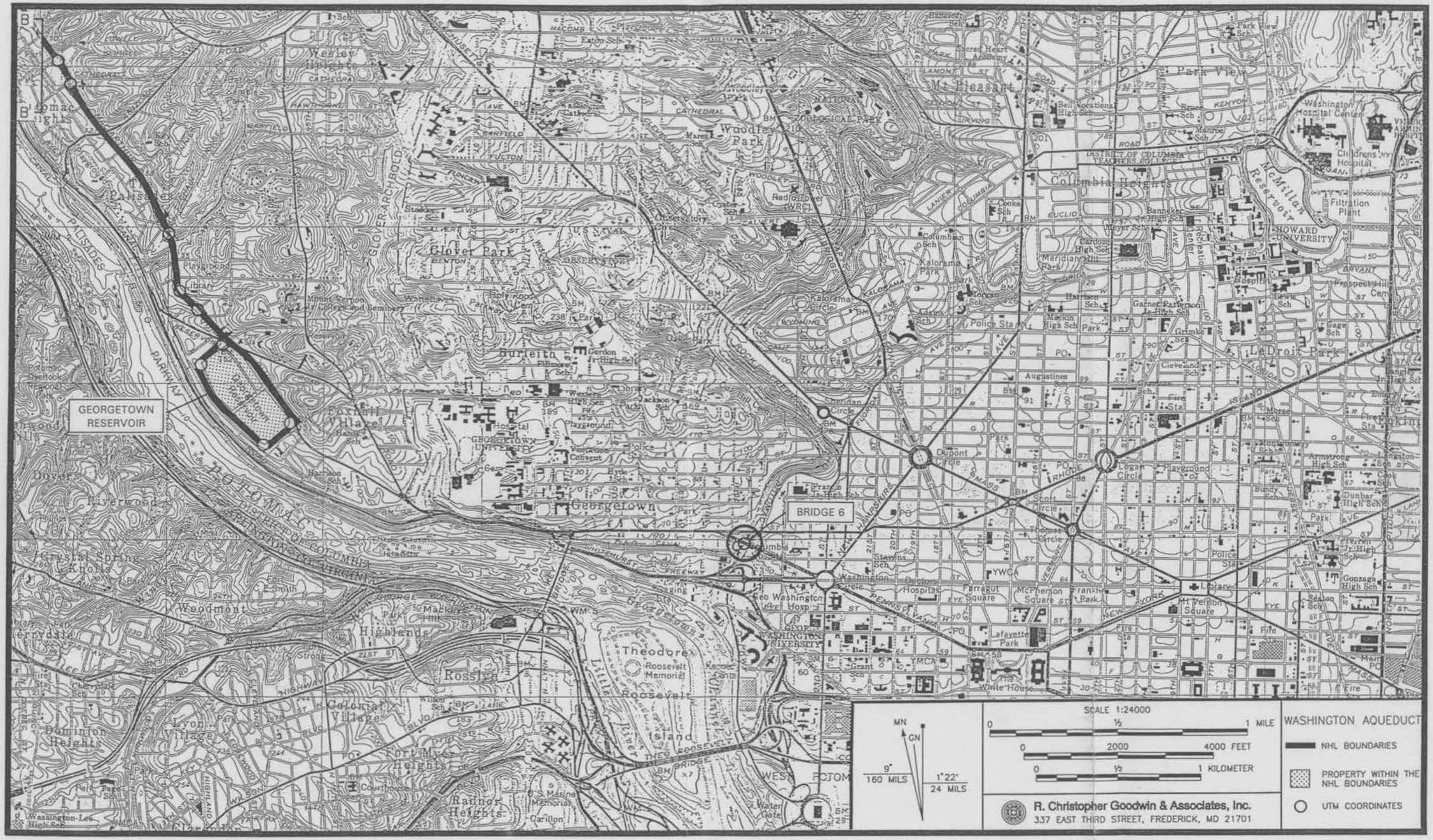

Figure 3b Map of Washington Aqueduct NHL District (Cont'd).

M:29-49

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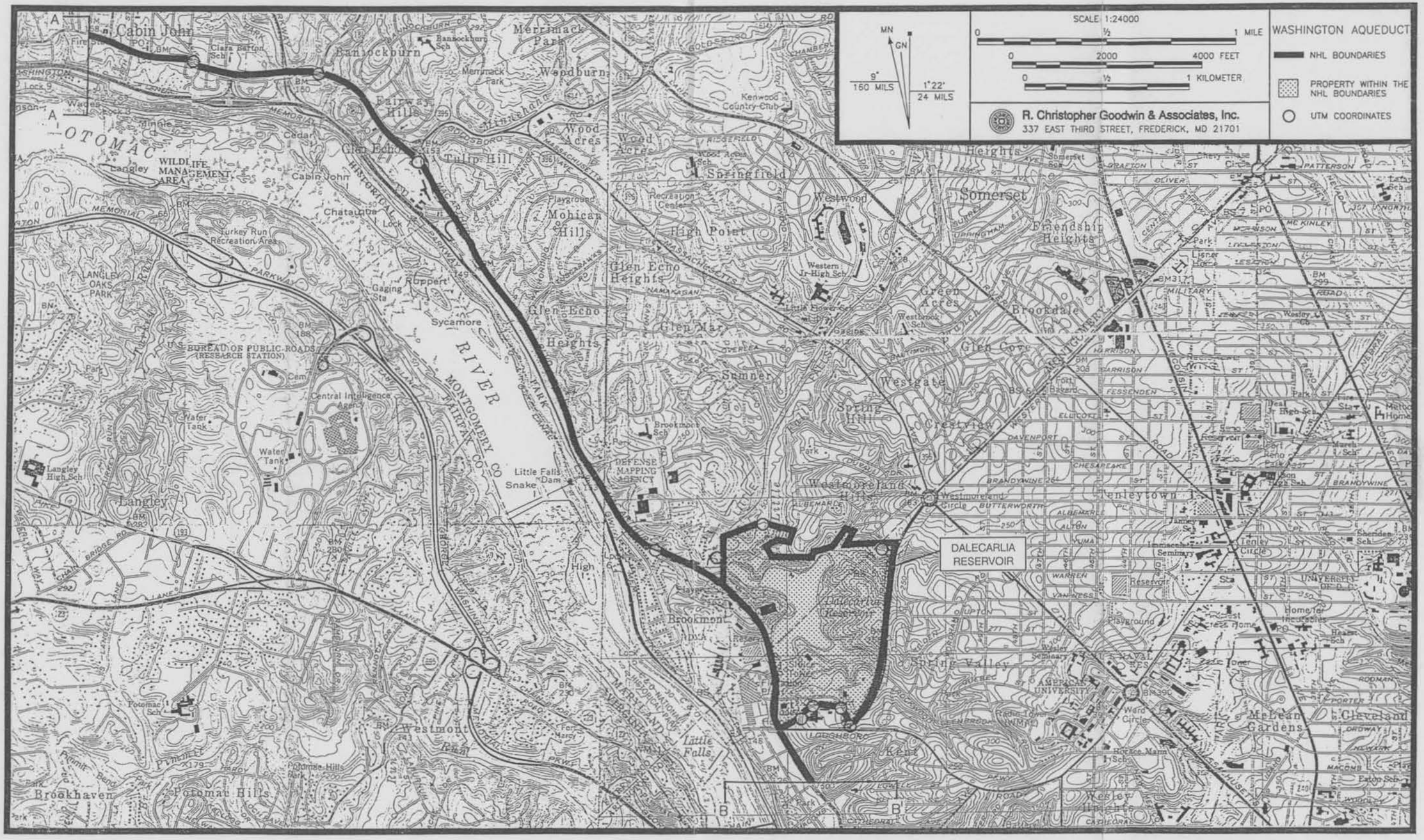

Figure 3c Map of Washington Aqueduct NHL District (Cont'd).

M:29-49