

# Addendum to Maryland Historical Trust Maryland Inventory of Historic Properties Form

Inventory No. M: 29-52- 2

Page 1 of 1

Name of Property: Building 106, Instrument House

Location: Naval Support Facility Carderock, Maryland

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## Building 106, Instrument House

Building 106 was surveyed and documented in 2010 as part of the 2011 update to the Integrated Cultural Resource Management Plan (ICRMP) for the Naval Support Facility (NSF) Carderock, formerly known as the Naval Surface Warfare Center Carderock Division (NSWCCD). Building 106 is located in the south portion of the 183.6-acre installation and stands on the north side of Building 134, the Pentagonal Test Pond. Building 106 and the Pentagonal Test Pond were both built in 1943. The building was subsequently altered with a second story constructed circa 2009.

The building is partially embedded in the berm of the test pond and is currently a two-story rectangular building set on a solid concrete foundation. Because of the slope of the site, the building appears to have one story on its south elevation. The 1943 first story of the building is constructed of poured concrete. The circa 2009 second story is constructed of metal framing and is clad in standing-seam metal. The 1943 first story has also been covered in standing-seam metal and only a small portion of poured concrete is visible on the east elevation. The second story of the south elevation is at ground level and is pierced by a large vehicular opening with a metal roll-up door and a single-leaf metal door. The remaining elevations are fenestrated by paired one-light metal-sash sliding windows on the second story. The building is 2,520 square feet.

Building 106, the Instrument House, was determined a contributing resource in the National Register-eligible NSF Carderock Historic District; however, since its evaluation in 1996, the building has been substantially enlarged with the addition of a second story, and the original building is no longer visible (circa 2009). It is therefore recommended as non-contributing to the NSF Carderock Historic District.

## Form Prepared by

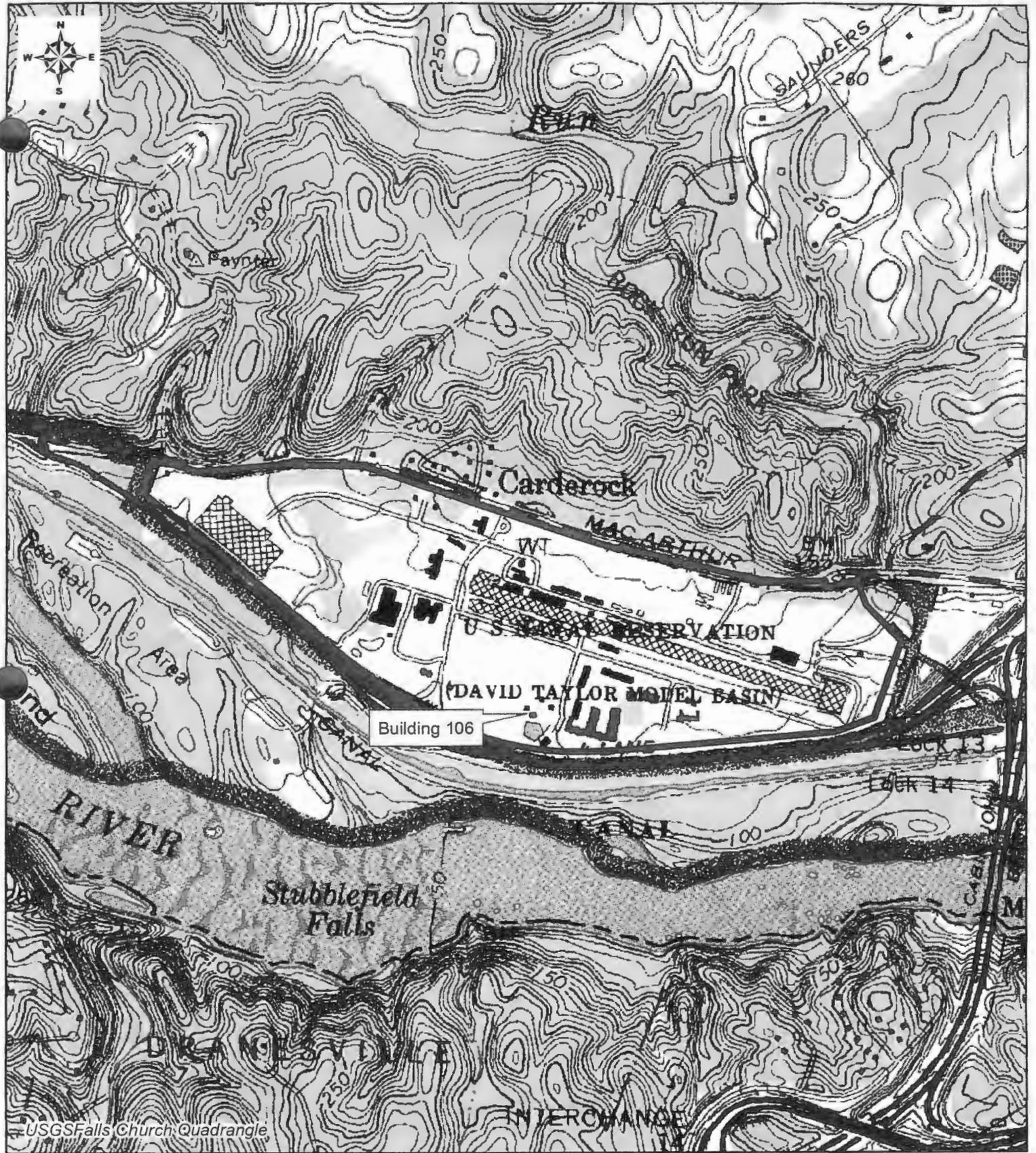
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name/title	Patti Kuhn, Architectural Historian		
organization	The Louis Berger Group	date	09/26/2011
street & number	1250 23rd Street, NW	telephone	202-303-2665
city or town	Washington	state	DC

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2012/04/24





 Historic District  
 500 0 500 Feet  


Naval Support Facility, Carderock  
 NSWCCD Historic District (MIHP No. M:29-52)-z  
 Building Number 106





M: 29-52-2

NSWCCD HISTORIC DISTRICT (NSF CARDEROCK)

BLDG 106, INSTRUMENT HOUSE

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MDSHPO

SOUTH ELEVATION, LOOKING NORTH

PHOTO 1 OF 2



M: 29-52-2

NSWCCD HISTORIC DISTRICT (NSFCARDEROCK)

BLDG 106, INSTRUMENT HOUSE

MONTGOMERY COUNTY, MD

LOUIS BERGER GROUP

4/2010

MDSHPO

NORTHEAST CORNER, LOOKING SOUTHWEST

PHOTO 2 OF 2

# Maryland Historical Trust State Historic Sites Inventory Form

MARYLAND INVENTORY OF  
HISTORIC PROPERTIES

Survey No. ~~M29-53~~

Magi No. M: 29-52-2

DOE  yes  no

## 1. Name (indicate preferred name)

historic Instrument House, David Taylor Model Basin

and/or common Building #106, Naval Surface Warfare Center Carderock Division

## 2. Location

street & number 9500 MacArthur Blvd.  not for publication

city, town Bethesda N/A vicinity of congressional district 8th

state Maryland county Montgomery

## 3. Classification

Category	Ownership	Status	Present Use
<input checked="" type="checkbox"/> district	<input checked="" type="checkbox"/> public	<input type="checkbox"/> occupied	<input type="checkbox"/> agriculture <input type="checkbox"/> museum
<input checked="" type="checkbox"/> building(s)	<input type="checkbox"/> private	<input type="checkbox"/> unoccupied	<input type="checkbox"/> commercial <input type="checkbox"/> park
<input type="checkbox"/> structure	<input type="checkbox"/> both	<input checked="" type="checkbox"/> work in progress	<input type="checkbox"/> educational <input type="checkbox"/> private residence
<input type="checkbox"/> site	<b>Public Acquisition</b>	<b>Accessible</b>	<input type="checkbox"/> entertainment <input type="checkbox"/> religious
<input type="checkbox"/> object	<input type="checkbox"/> in process	<input checked="" type="checkbox"/> yes: restricted	<input type="checkbox"/> government <input type="checkbox"/> scientific
	<input type="checkbox"/> being considered	<input type="checkbox"/> yes: unrestricted	<input type="checkbox"/> industrial <input type="checkbox"/> transportation
	<input checked="" type="checkbox"/> not applicable	<input type="checkbox"/> no	<input checked="" type="checkbox"/> military <input type="checkbox"/> other:

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

name United States Navy

street & number 9500 MacArthur Blvd. telephone no.: 301-227-1896

city, town Bethesda state and zip code Maryland, 20817

## 5. Location of Legal Description

courthouse, registry of deeds, etc. Land Records Office liber

street & number Montgomery County Courthouse folio

city, town Rockville state Maryland

## 6. Representation in Existing Historical Surveys

title NSWC-CD Historic and Archeological Resources Protection Plan

date 1/97  federal  state  county  local

pository for survey records Maryland Historical Trust

city, town Crownsville state Maryland

M:29-52-2

# 7. Description

Survey No. M29-53

**Condition**

excellent  
 good  
 fair

deteriorated  
 ruins  
 unexposed

**Check one**

unaltered  
 altered

**Check one**

original site  
 moved      date of move \_\_\_\_\_

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

SEE CONTINUATION SHEET

# 8. Significance

Survey No. ~~M:29-53~~ M:29-52-2

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

SEE CONTINUATION SHEET

# 9. Major Bibliographical References

Survey No. ~~M29-53~~

M:29-52-2

SEE CONTINUATION SHEET

# 10. Geographical Data

Acreage of nominated property N/A

Quadrangle name Falls Church, VA

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

NSWC-CD Historic District is bounded to the south and west by MacArthur Blvd. and Clara Barton Parkway to the south.

### 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 Lex F. Campbell, Historic Preservation Planner

organization R. Christopher Goodwin & Associates, Inc. date June 26, 1998

street & number 241 East Fourth St., Suite 100 telephone 301-694-0428

city or town Frederick state Maryland, 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~~

MARYLAND HISTORICAL TRUST  
 DHCP/DHCD  
 100 COMMUNITY PLACE  
 CROWNSVILLE, MD 21032-2023  
 514-7600

M: 29-52-2  
~~H: 29-53~~

Instrument House  
NSWCCD  
Carderock, Maryland  
Section 7.1

## Summary Description

### Instrument House (Building #106)

The Instrument House is a one-story poured concrete building that terminates in a flat, built-up roof defined by parapet walls. A metal ventilator protrudes from the roof. The structure adopts a rectangular footprint and is partially bermed into the side of a hill; the north elevation fully is exposed. The north elevation exhibits a single entry well that contains a replacement metal door unit.

The interior of the instrument house exhibits an open rectangular plan with an exposed concrete floor. The walls are finished with wood paneling. The building includes electrical outlets and is illuminated by florescent ceiling units. All original equipment associated with the test pond has been removed and the building is currently unoccupied. A concrete stairway located at the east-end of the building provides access to the concrete test pond deck.

Building 106 is associated with the explosives test pond complex. The structure is oriented directly north of a 12' deep, pentagonal, concrete, explosives test pond. In 1943, the instrument house (Building 106) and the test pond (Facility 134) were constructed to augment experiments performed in an adjacent research pit (Facility 105). The primary use of the test pond was to perform underwater tests on mines and other explosive devices, such as small charges of TNT, to simulate the effects of underwater blasts. Building 106 served as a storage facility for instruments used in explosives testing.

The test pond complex is located at the Naval Surface Warfare Center Naval Surface Warfare Center Carderock Division (NSWCCD) which occupies a 183.6 acre tract of land in the Potomac River Valley, in Carderock, Maryland. NSWCCD is located approximately 12 miles northwest of Washington, D.C., along the northern bank of the Potomac River. The installation is bordered to the south by the Clara Barton Parkway and to the north and east by MacArthur Boulevard. The installation comprises 116 buildings and structures. Of these 116 built resources, forty-four buildings, including Building 106, have been identified as contributing resources to the NSWCCD Historic District.

*Handwritten signature*

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Instrument House  
NSWCCD  
Carderock, Maryland  
Section 7.2

Research laboratories, administration facilities, and operations and utility structures are the main components of the installation. The overall facility achieves architectural unity through its integrated layout and building design. At the center of the installation is an interconnected complex that includes an administration building, a shop building, a laboratory and the David Taylor Model Basin. The Model Basin was listed in the National Register of Historic Places in 1985 (Allison 1984).

The majority of buildings and facilities added to the installation after the initial construction of the model basin complex were the direct result of research programs assigned to the installation. Areas of research undertaken at the installation involved *underwater explosive testing*, aeronautical research, and hydrodynamical research.

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Instrument House  
NSWCCD  
Carderock, Maryland  
Section 8.1

### Significance

The Instrument House is a contributing element to the Naval Surface Warfare Center Carderock Division (NSWCCD) Historic District (MIHP # 29-52). The building is associated with the explosives test pond, a testing facility designed to perform underwater tests on mine and other explosive devices. The instrument house originally stored equipment for underwater testing. The building is currently vacant. Proposed modifications will add a second story to the existing structure.

The NSWCCD Historic District possesses the qualities of exceptional importance defined under National Register Criterion Consideration G within the historic context of Military research, design, testing, and evaluation. In addition, NSWCCD is associated with events that have made a significant contribution to the broad patterns of military technology (Criterion A). The resources also represent an intact collection of RDT&E buildings and facilities (Criterion C). In 1938, the David Taylor Model Basin became the primary site for the research, development, and testing of models of ships and other vehicles for the U.S. Navy. As the center for naval research, design, testing, and evaluation (RDT&E), NSWCCD played a critical role in the design and development of the modern navy. The research facilities at NSWCCD have provided the U.S. Navy with accurate cost effective data of air and sea vehicle performance, and have made possible evaluative changes to improve performance, in advance of construction. The NSWCCD historic district is defined by the period of significance beginning in 1938 and extending to 1958.

NSWCCD comprises 117 buildings and facilities, and includes: administration buildings, industrial buildings and research centers. Of the 17 buildings and structures within Carderock, 67 were constructed during the period of significance (1938-1958), and include an underwater explosion laboratory; scaled subsonic, transonic, and supersonic wind tunnels; a circulating water channel; and, the David Taylor Model Basin (listed in the National Register of Historic Places in 1985). Forty-four of these buildings have been identified as contributing elements to the NSWCCD Historic District. The remaining seventy-

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Instrument House  
NSWCCD  
Carderock, Maryland  
Section 8.2

three resources do not retain their integrity to convey the period of significance, are not associated with the historic context or were constructed within the last fifty years and do not possess exceptional significance.

Naval Surface Warfare Center Carderock Division and the Underwater Explosives Test Pond.

During World War II, the David Taylor Model Basin was outfitted to undertake tests to seek solutions to specific war-related problems encountered by the fleet. Tests were performed to determine the characteristics of new ship designs, the hydrodynamic characteristics of torpedoes and depth charges, and the effects of structural modifications. While the capabilities of the model basin were expanded during the war, unique testing facilities and equipment also were constructed at NSWCCD. Constructed as a direct result of the programs assigned to the model basin, the new facilities increased the range of naval engineering research and testing able to be performed at the installation (Department of the Navy 1959:5).

In 1941, a research pit for explosion testing was constructed at the installation. This new facility was used primarily to study the deformation of diaphragms due to underwater explosions and the effect of gun-blasts on water-tight doors. It was also used to develop appropriate footwear to protect servicemen from land mines exploding under landing crafts (David Taylor Model Basin History 1959: 5).

In 1943, construction of a pentagonal test pond (Facility 134) and the instrument house (Building 106) allowed for the underwater testing of explosives. The small amount of explosives used in the test pond simulated the effects of full-scale underwater blasts on ships. Able to predict the effect of an underwater explosion, the Navy was able to construct ships and equipment tough enough to survive a wartime environment (Neil 1971:6). During the early post war years the test pond was used to test and predict the effects of nuclear weapons prior to full scale testing (Carlisle 1987: 6-19).

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Instrument House  
NSWCCD  
Carderock, Maryland  
Section 8.3

HISTORIC CONTEXT:

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA

- Geographic Organization: Piedmont
- Chronological/Development Period: Modern Period (1930-Present)
- Historic Period Theme: Military
- Resource Type:

Category: Building

Historic Environment: Research and Testing Laboratory Complex

Historic Function and Use: Research and Testing Laboratory Complex

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REFERENCES

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- 1984 David W. Taylor Model Basin, National Register of Historic Places Inventory, Nomination Form. Ms. on file at the Maryland Historical Trust, Crownsville.

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Instrument House  
NSWCCD  
Carderock, Maryland  
Section 9.2

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National Archives and Records Administration. Record Group 71. General Correspondence, Office of the Secretary of the Navy.

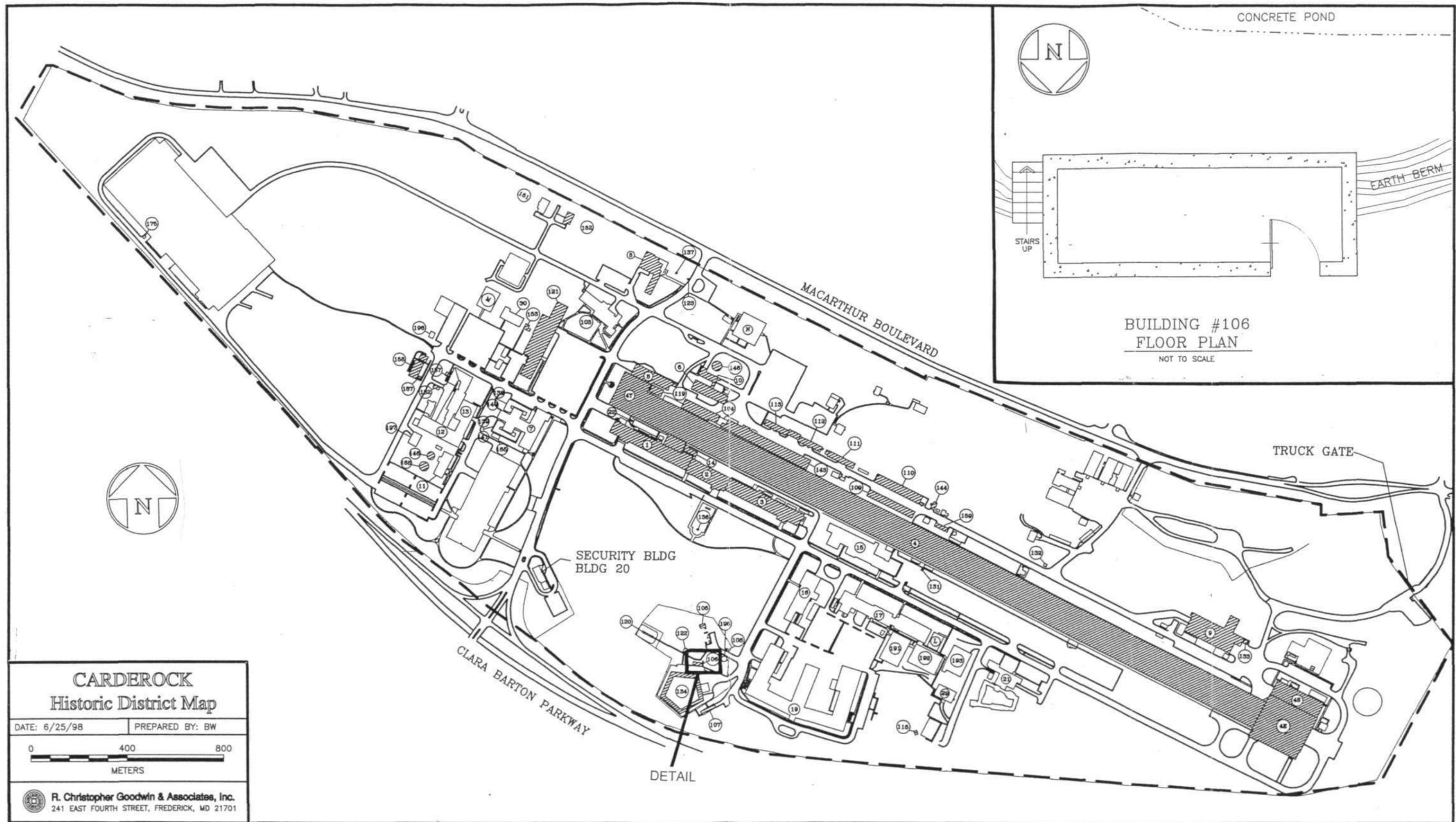
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BUILDING #106  
FLOOR PLAN  
NOT TO SCALE

CONCRETE POND

EARTH BERM

TRUCK GATE

SECURITY BLDG  
BLDG 20

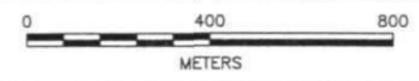
DETAIL

CLARA BARTON PARKWAY

MACARTHUR BOULEVARD

CARDEROCK  
Historic District Map

DATE: 6/25/98      PREPARED BY: BW

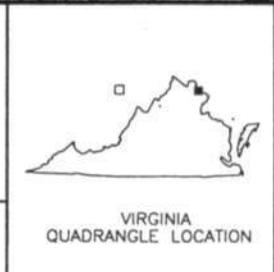
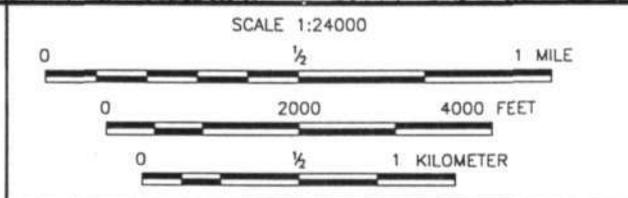
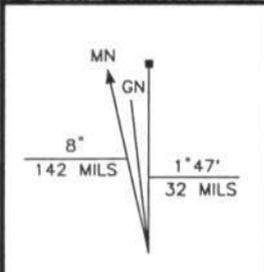
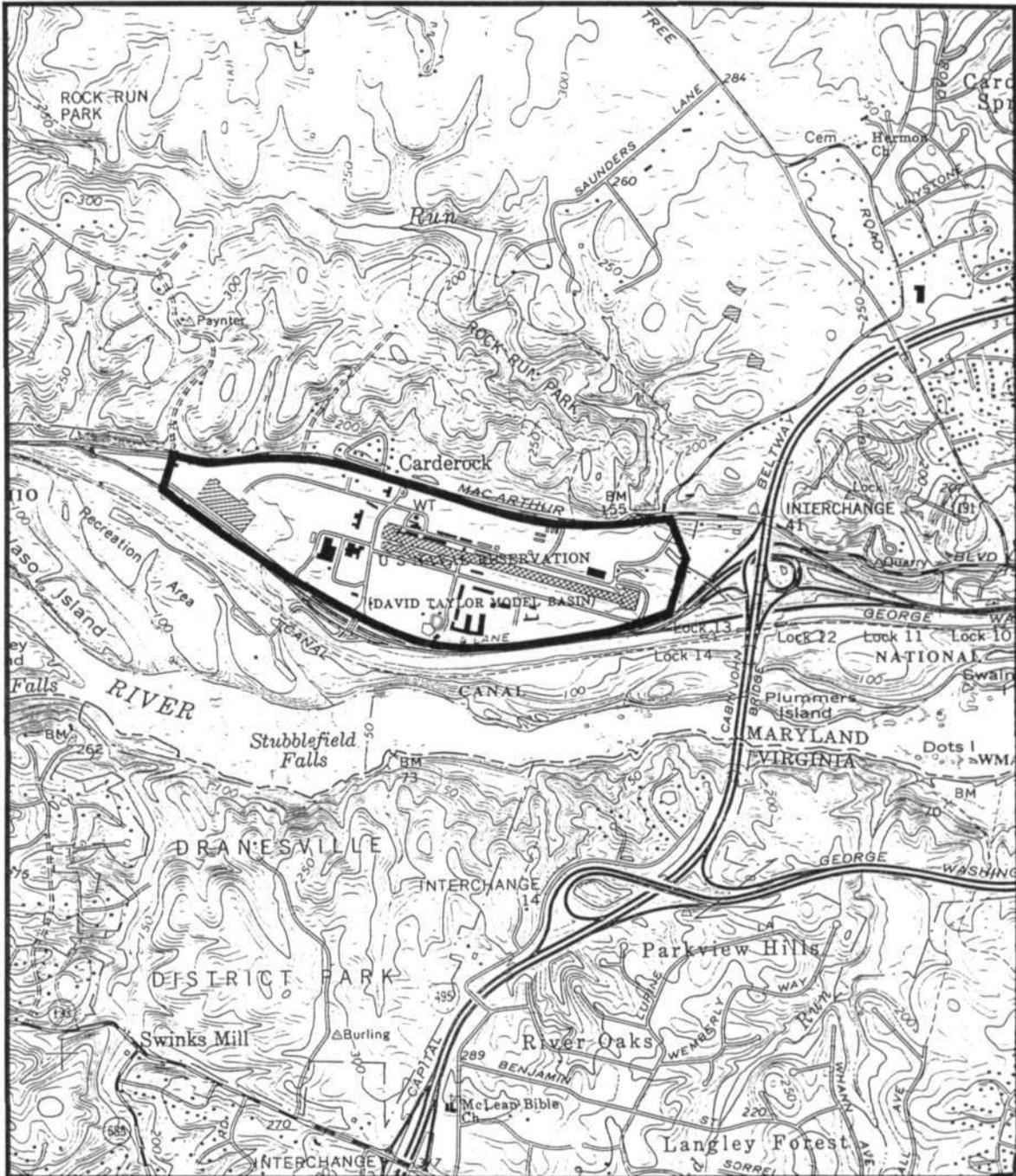


R. Christopher Goodwin & Associates, Inc.  
241 EAST FOURTH STREET, FREDERICK, MD 21701

FALLS CHURCH QUAD

M: 29-52-2

M: 29-53



R. Christopher Goodwin & Associates, Inc.  
337 EAST THIRD STREET, FREDERICK, MD 21701

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~~M: 29-53~~

## INDEX TO PHOTOGRAPHS

**Instrument House (Building #106)**  
**Naval Surface Warfare Center Carderock Division Historic District**  
**Bethesda, Maryland**

Photographer: Elaine Kiernan  
R. Christopher Goodwin & Associates, Inc.

- 1 of 5 View south, Instrument House with explosives testing pond in the background.
- 2 of 5 Front elevation of Instrument House facing south.
- 3 of 5 Southwest view, Instrument House.
- 4 of 5 Interior view of Instrument House.
- 5 of 5 North facing view of the test pond deck and the rooftop of the Instrument House.



INSTRUMENT HOUSE (M29-52-2)  
NAVAL SURFACE WARFARE CENTER, CALDEROCK DIVISION  
MONTGOMERY COUNTY, MD  
ELAINE KIERNAN  
JULY 7, 1998  
VIEW SOUTH  
PHOTO 4 OF 5

TCP 26 01 NNNNN402AU 013



106

INSTRUMENT HOUSE (M29-52-2)  
NAVAL SURFACE WARFARE CENTER, CAROLSBROOK DIVISION  
MONTGOMERY COUNTY, MD  
ELAINE KIERMAN  
JULY 7, 1998  
VIEW SOUTH, FOOT ELEVATION  
2 OF 5

TCP: 26-03 NNNNN+22RU 013



INSTRUMENT HOUSE (M29-52-2)  
NAVAL SURFACE WARFARE CENTER, CARDROCK DIVISION  
MONTGOMERY COUNTY, MD  
ELAINE KIERNAN  
JULY 7, 1998  
VIEW SOUTHWEST  
PHOTO 3 OF 5

TCF 26-01 NNNNN+088AU 013



INSTRUMENT HOUSE (M29-52-2)

NAVAL SURFACE WARFARE CENTER CAROLSBROCK DIVISION

MONTGOMERY COUNTY, MD

ECAINE KIBANAN

JULY 7, 1998

INTERVIEW

PHOTO 4 OF 5

TOP 26 01 N44514 02AW 013



INSTRUMENT HOUSE (M29-S2-2)

NAVAL SURFACE WARFARE CENTER, CARDROCK DIVISION

MONTGOMERY COUNTY, MD

ELAINE KIRWAN

JULY 7, 1998

NORTH FACING VIEW OF TEST POND DECK

PHOTO 3 OF 5

TCP 26 82 NNNNN 813