CONTRIBUTING RESOURCE
MARYLAND HISTORICAL TRUST
INTERNAL NR-ELIGIBILITY REVIEW FORM

Property Name: Building 9, Greenhouse Range 3 Survey Number: PG:61-17

Property Address: Beltsville Agricultural Research Center

Project: Proposed Controlled Environmental Facility Agency: USDA

Site visit by MHT Staff: ___ no _X_ yes Name L. Bowlin Date Jan. 9, 1995

District Name: North Farm historic district Survey Number: not yet assigned

_____ Listed _X_ Eligible appears elig based on prelim docum survey ongoing Comment

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

The resource _X_ contributes/____ does not contribute to the historic significance of this historic district in:

_X_ Location _X_ Design _X_ Setting _X_ Materials

_X_ Workmanship _X_ Feeling _X_ Association

Justification for decision: (Use continuation sheet if necessary and attach map)
Building 9 or Range 3 is a 1 1/2 story headhouse with six attached greenhouses. Located within the greenhouses of North Farm, this building was constructed between 1941 and 1943 to replace facilities located at USDA's property in Arlington, VA. The Bureau of Plant Industry was a precursor of the USDA which conducted plant related research and development. Building 9 was a component of a large construction effort at BARC in the 1940s as the Plant Industry Station moved from VA to the North Farm of the BARC facility. The North Farm facility illustrates a cohesive design in its Georgian Revival offices, laboratories and greenhouses. An intensive architectural survey is currently being conducted of the North Farm. However, preliminary documentation indicates that the Farm is an NR eligible historic district under Criterion A and C for its association with government-sponsored plant research and development and for its representation as a Georgian Revival governmental complex. Please refer to inventory form for additional documentation.

Documentation on the property is presented in: Maryland Inventory Form and Determination of Eligibility Report in compliance file (BARC-CEF)

Prepared by: Robinson and Associates

L. Bowlin — May 30, 1995
Reviewer, Office of Preservation Services — Date

NR program concurrence: ✓ yes ___ no ___ not applicable

[signature] — June 27, 1995.
Reviewer, NR program — Date

Survey No. PG:61-17

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
_____	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 Adaption

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: __building_____

Historic Environment: __suburban_____

Historic Function(s) and Use(s): _agricultural/greenhouse_____

_____

_____

Known Design Source: __USDA Bureau of Agricultural Engineering, Division of Plans_

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RANGE 3, BELTSVILLE AGRICULTURAL RESEARCH CENTER

BELTSVILLE, PRINCE GEORGES COUNTY, MD

Located at the North Farm of the U.S. Department of Agriculture's Beltsville Agricultural Research Station, Range 3 consists of a long 1-1/2-story headhouse and six attached greenhouses. The headhouse faces northeast onto Range 3 Drive. The building was constructed between 1941 and 1943 to replace facilities located at the Department of Agriculture's farm facility in Arlington, Virginia. The concrete block building has brick veneer walls and concrete foundations. Although Georgian Revival in its modest decorative motifs, the spareness of the building shows the influence of modernism. Since its construction, the building has been in continuous use as experimental greenhouses and associated laboratory, office, and potting space. Research in the building has related to forage crops, tobacco, sugar crops, and alfalfa. Innovative features of the building are the controlled temperature rooms, which permit the study of plants under a variety of temperature conditions. Now under the aegis of the Agricultural Research Service, the building was constructed for the Bureau of Plant Industry.

NATIONAL REGISTER OF HISTORIC PLACES
REGISTRATION FORM

1. Name of Property

historic name Range 3, Beltsville Agricultural Research Center
other names/site number Building 009

2. Location

street & number Beltsville Agricultural Research Center - West
Not for publication ___
city or town Beltsville **vicinity** N/A
state Maryland **code** MD **county** Prince Georges **code** 033
zip code 20705-2350

3. State/Federal Agency Certification

4. National Park Service Certification

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)

_X_ building(s)
___ district
___ site
___ structure
___ object

Number of Resources within Property

Contributing	Noncontributing	
1	_____	buildings
_____	_____	sites
_____	_____	structures
_____	_____	objects
1	0	Total

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Number of contributing resources previously listed in the National Register 0

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 Functions (Enter categories from instructions)

Cat:	**Sub:**
AGRICULTURE/SUBSISTENCE	horticulture facility
EDUCATION	research facility

Current Functions (Enter categories from instructions)

Cat:	**Sub:**
AGRICULTURE/SUBSISTENCE	horticulture facility
EDUCATION	research facility

7. Description

Architectural Classification (Enter categories from instructions)

OTHER: Colonial Revival

Materials (Enter categories from instructions)

foundation concrete
roof slate
walls concrete block with brick veneer
other copper gutters and downspouts, wood and stone trim.

Narrative Description (Describe the historic and current condition of the property on one or more continuation sheets.) See continuation sheet.

8. Statement of Significance See continuation sheet.

Areas of Significance (Enter categories from instructions)
Agriculture

Period of Significance
1943-1944

Significant Dates 1943

Significant Person (Complete if Criterion B is marked above)

Cultural Affiliation N/A

Architect/Builder Division of Plans & Service, Bureau of Agricultural Engineering, U.S. Department of Agriculture

Narrative Statement of Significance (Explain the significance of the property on one or more continuation sheets.) See continuation sheet.

9. Major Bibliographical References See continuation sheet.

10. Geographical Data

Acreage of Property
Less than one acre

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(8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

Section 7 Page 1

Range 3, Beltsville Agricultural Research Center
name of property
Prince Georges, Maryland
county and State

USDI/NPS NRHP Registration Form
(Range 3, Beltsville Agricultural Research Center)
(Beltsville, MD) (Page 4)

UTM References (Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing		Zone	Easting	Northing
1	18	333100	4321120	3			
2				4			

Verbal Boundary Description (Describe the boundaries of the property.)
This resource is bounded by the following streets located on the North Farm of the Beltsville Agricultural Research Center: Range 3 Drive to the north, South Drive to the south, 2nd Street to the east, and 3rd Street to the west.

Boundary Justification (Explain why the boundaries were selected.)
These boundaries correspond to those traditionally associated with building. The roads around the building were constructed at the time of the construction of the building or soon thereafter. The boundaries represent the entire resource and all associated structures.

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11. Form Prepared By

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name/title Carol Hooper, Architectural Historian
organization Robinson & Associates, Inc. **date** October 1994
street & number 1710 Connecticut Ave., NW **telephone** (202) 234-2333
city or town Washington **state** DC **zip code** 20009

Property Owner

(Complete this item at the request of the SHPO or FPO.)
name
street & number **telephone** _____
city or town **state** **zip code**

DESCRIPTION

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Descriptive Summary

Located at the North Farm of the U.S. Department of Agriculture's Beltsville Agricultural Research Station, Range 3 consists of a long horizontal headhouse and six greenhouses attached at right angles to the headhouse. The front of the building faces northeast onto Range 3 Drive. Because of its sloped site, and to prevent shading of the greenhouses, the building is stepped to follow the contours of the topography. The 1-1/2-story Georgian Revival headhouse is of concrete block construction with brick veneer walls and concrete foundations. All downspouts and gutters are copper, and the roof throughout is of slate. Decorative detailing is of limestone, with the exception of windowsills and interior door lintels, which are of cast stone.

Front Facade/Headhouse

The 390-foot-long and 26-foot- wide Range 3 headhouse is separated into five stepped sections, each of which leads to a separate greenhouse. With the exception of the eastern-most section, each of the five sections of the headhouse are nearly identical.

Each of these sections of the building has six bays, with four windows to the east side, then a door, and a single window to the west. This portion of the building has a gabled roof with dormers located over the first and third windows of each section and over the door. The small gabled dormers feature two-over-two, double-hung windows. The entrances in this section of the building have simple flat arches with decorative limestone keystones. The steel casement-style windows used here and throughout the building consist of twelve panes, the central four of which pivot open from the top. The building has half-glass doors with two vertical panels below and nine panes above.

The slightly more elaborate east end section of the building is developed as a separate pavilion with a hipped roof and a central, projecting gabled section. The central projecting section of this unit has a single half-round lunette outlined with stone centered above the door. This pavilion is clearly modeled after the pavilion at the east end of Building 011. The west end of the east section is identical to the middle sections.

The side elevations of the two end sections of the headhouse are simpler, but

largely similar to the front facades.

Rear Facade/Greenhouses

The visible portion of the rear facade of the headhouse is stucco. Each greenhouse is 260 feet long and 40 feet wide. Together, the greenhouses occupy 60,000 square feet. The greenhouses are attached to the headhouse at a 90-degree angle. A central 7-foot ramp connects the houses. The greenhouses are of the "half-metal" type of frame construction. All rafters, doors, frames, sash, ridges, etc., used in the building are of heart cypress, while trusses and all other fittings are of galvanized steel. The gabled roof structures consist of rectangular 16" x 24" double-strength sash panels. Panels on the side walls and the ridge open for ventilation.

Interior

The interior of the headhouses is utilitarian, with simple wood molding, exposed piping, and concrete floors. In general, the floor plan of the headhouses consists of an entranceway, with storage or laboratory space to either side. Leading off the entranceway is a corridor and work space -- an area set up with tables for potting, or used for equipment storage. The workspace acts as a hallway connecting the headhouses. Stairs to the upper story, which is used for storage, are also located off of this area. Access to the greenhouse is through a door in the work space aligned with the entrance door.

Two of the greenhouses have basements (the controlled temperature rooms) each 38′ x 148′. There is also a basement located between the two greenhouses.

Alterations

Alterations to the headhouse have been minor and appear to be reversible. They consist in general of the insertion of a number of window-unit air conditioners, security lights at the entrances, and assorted vents which penetrate the roof.

On the interior, greenhouses have been altered by the introduction of various modern mechanical systems including air-conditioning units and various revamped heating systems. Certain portions of the interior of the

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(8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
CONTINUATION SHEET

headhouses, such as those that house laboratory facilities, have been significantly altered over time.

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HISTORIC CONTEXT

MARYLAND COMPREHENSIVE HISTORIC PRESERVATION PLAN DATA

Geographical Organization: Western Shore

Chronological/Developmental Periods: Modern Period

Prehistoric/Historic Period Theme(s): Agriculture

Resource Type:
Category: Building

Historic Environment: Rural

Historic Function(s) and Use(s):
AGRICULTURE/horticulture facility
EDUCATION/research facility

Known Design Source:
Division of Plans & Service, Bureau of Agricultural Engineering, U.S. Department of Agriculture

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(8-86)

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United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES
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SIGNIFICANCE

Summary

Range 3 was constructed to replace existing greenhouses located at the USDA's Arlington farm facility in Arlington, Virginia. An innovative feature of the building is the provision made for controlled temperature rooms, located in the basement section of greenhouse #1.

Construction History of Range 3

In October 1933, the Bureau of Plant Industry purchased part of what is now the North Farm with Public Works Administration funds. At that time the site officially became the "U.S. Horticultural Field Station at Beltsville, Maryland." In addition to paying for the acquisition of the land, PWA funds for that year and the next few years were used for constructing the first buildings on the site and to clear the land, put in utilities, and construct roads and walks. Among the first buildings to be constructed was the Range 1 greenhouses and headhouses. These greenhouses were to become the model, in terms of design and layout, for all other greenhouses on the site, including the Range 3 group.

Another major flurry of development on the North Farm came as a result of the closing of Arlington Station, which was the Bureau of Plant Industry's first experimental station. Pressure to release the Arlington land had begun prior to the purchase of the North Farm, however it increased dramatically as defense activities expanded in the late 1930s and the Department of Defense increased pressure on USDA to release the site. After continual lobbying on the part of the USDA for funds to move the Arlington facility, on October 9, 1940, an appropriation in the Department of War's budget was approved for the operation. The appropriation was used for the acquisition of 606 acres of land (at the North, South, and Linkage Farms) and for construction of fifteen buildings, most on the North Farm.

The Range 3 building was part of this "Arlington Farm" wave of construction at the Plant Industry Station. It, along with the North and South Laboratories (Building 001 and 005), the Administration Building (Building 003), and the Soils Building (Building 007), were all completed around 1943.

Plans for the building were drawn up by the USDA's Bureau of Agricultural Engineering, Division of Plans and Service, and approved in April 1941. The Division of Plans and Services was the USDA's in-house design office and was responsible for the design of virtually all of the buildings at Beltsville. They also designed USDA buildings throughout the country, including the USDA's four regional labs.[1]

Contracts for a total of $ 302,118.39 were let for the greenhouses. Funding came from the $3,200,000 federal appropriation to move the Arlington Farms facilities. The general contractor for the building was the C.M.H. Construction Company of Washington, D.C. Lord and Burnham of Irvington, New York, were the contractors for the superstructure of the six greenhouses.

Lord and Burnham was a greenhouse manufacturing firm founded in 1857. With factories in New York, Illinois, and Ontario, Lord and Burnham catered to large growers throughout the United States and Canada. Their brochure emphasized progressive line production, to foster accuracy and high quality construction.

Work on the foundations for the greenhouses and the headhouse started in April 1941. Construction of the greenhouses especially lagged due to the difficulty in obtaining scarce war materials. In particular, the 80 tons of galvanized steel required for the greenhouse construction was hard to obtain. Although one of the Greenhouses (#5) was occupied in November, 1941, final payment for the project was not made until February 1943.

One of the innovative features of the building was the provision made for controlled temperature rooms which permitted study of plants under very exacting temperature parameters. The basement section of greenhouse #1 was equipped with 23 insulated rooms. These rooms had floors, walls, and ceilings, that were insulated with cork and outfitted with refrigeration and air conditioning equipment. The design permitted the obtaining of low to

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[1]So far, little information on how the Division operated or who the major designers in the Division were has been uncovered. It appears, however, that during the late 1930s the Division was designing literally dozens of buildings at one time, and must have employed a substantial number of designers.

medium temperatures. These basement rooms were accessible both directly from the outdoors (for the loading and unloading of material and supplies) and by elevator from the greenhouses. The cost of outfitting these rooms was roughly $1000 per room.

Since its construction, the building has been in continuous use as experimental greenhouses and associated laboratory, office, and potting space. Research in the building has related to forage crops, tobacco, sugar crops, and alfalfa.

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BIBLIOGRAPHY

"The Agricultural Research Center of the United States Department of Agriculture." Washington, D.C.: United States Department of Agriculture, 1949.

American-Moninger Greenhouse Manufacturing Corporation. American Greenhouses [Trade Catalogue]. Brooklyn, NY: circa 1928.

Arlington Relocation Documents, National Archives Records Administration, Record Group 54, Entry 151A.

Beall, Susie. "Birmingham Manor - The Snowden Grant." Undated manuscript.

Beattie, J. H. "Greenhouse Construction and Heating." Farmers Bulletin. 1318: 1-38 (1934)

"Beltsville Farm to be Expanded." The Sunday [Washington] Star. October 15, 1933.

Capitaine, Elizabeth. "New Bulb Industry is Assured." Washington Star, March 24, 1940.

"Construction at Beltsville." Science 78 (1933): 525-6.

The Division of Fruit and Vegetable Crops and Diseases. Newsletter. National Archives Records Administration, Record Group 54, Entry 135B. Various dates.

George, Alexander R. "Beltsville Scientists Seek New Ways to Boost Our Wartime Food Production." Washington Star, March 18, 1945.

"Greenhouse Design." American Architect V. 133 p. 335-42, March 5, 1928.

"How Uncle Sam Runs World's Finest Farm." Popular Mechanics 47 (1927): 371-4.

Kennedy, George. "Beltsville Provides Beautiful Setting for Farm Research. Washington Star. September 4, 1955.

Lease between Theodore Alexander Sellman and Robert Lee Sellman and the United States of America, December 18, 1931. National Archives Records Administration, Record Group 54, "Deed & Title Records."

Leonard, John. "Frontiers of Agriculture." Sunday Star Magazine, November 11, 1956.

Logan, C.A. "Brief History of the Agricultural Research Center." Manuscript, September 1962.

Lord and Burnham Company. Handy Hand Book of Commercial Greenhouses & Materials [Trade Catalogue]. Irvington, NY: 1936.

"Mall Greenhouses Razed, Plants Now at Beltsville," Washington Star, March 6, 1940.

Matthews, Samuel W. "Beltsville Brings Science to the Farm." National Geographic 104 (August 1953): 199-218.

National Archives Records Administration, Record Groups 16 and 54.

Olmert, Michael. "Genes and Viruses are Harnessed on a Farm Tended by Scientists." Smithsonian, March 1982.

Pevsner, Nikolaus. A History of Building Types. Princeton: Princeton University Press, 1976.

"Plant Science After Fifty Years." Science 113 (June 19, 1951): Sup. 3.

Powell, Fred Wilbur. The Bureau of Plant Industry; Its History, Activities. New York: AMS Press, 1974.

Senner, Arthur H. "Unit Heaters in Greenhouses." Agricultural Engineering V. 17, No. 8 (August 1936) p. 333-6 and 340.

Stokes, Dillard. "Beltsville Agricultural Research Center Does Well a Multitude of Duties." The Washington Post. February 20, 1938.

True, Alfred Charles. A History of Agricultural Experimentation and

Research. Washington, D.C.: U.S. Government Printing Office, 1904.

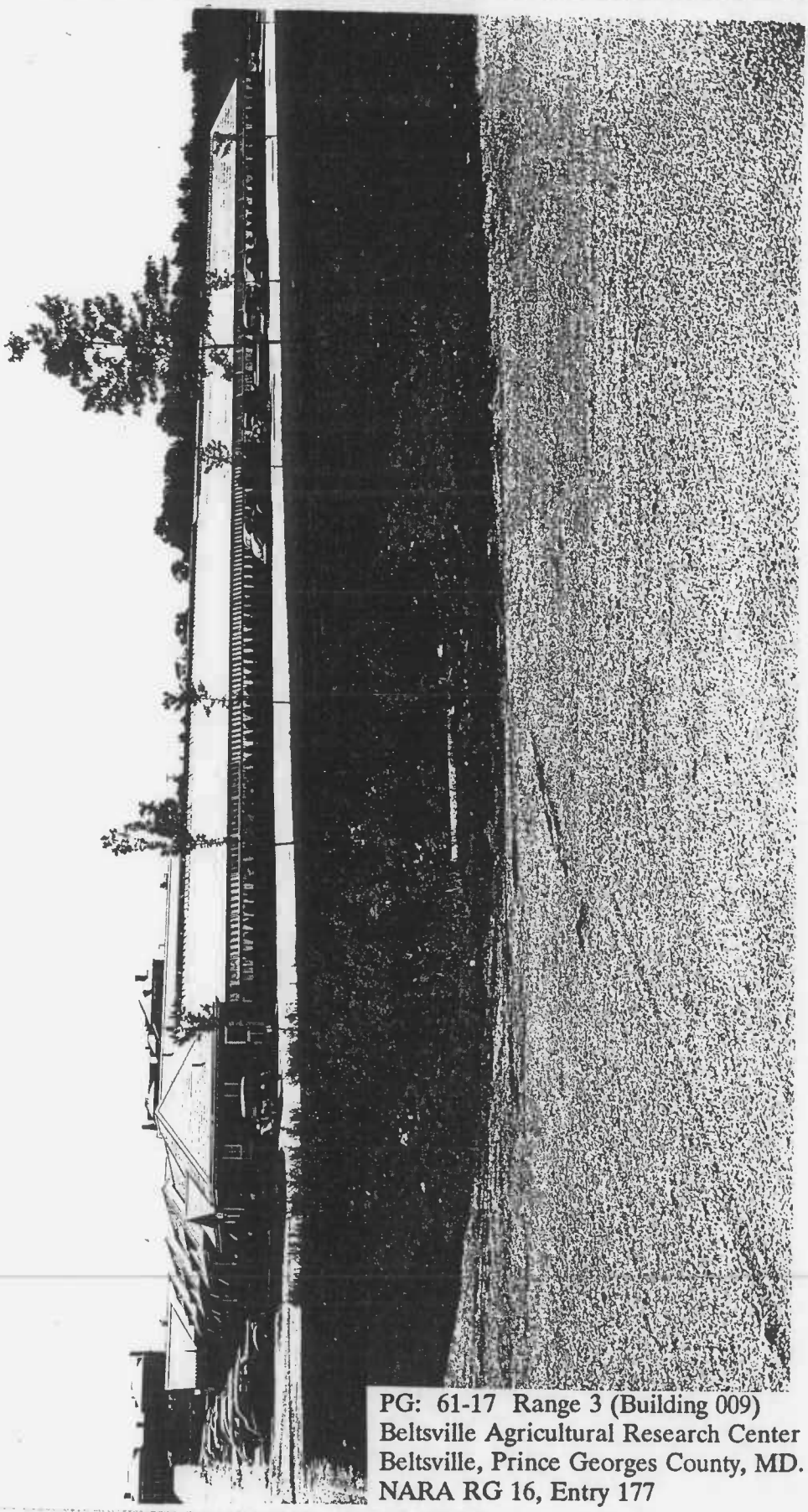
United States Department of Agriculture, Agricultural Research Administration. Directory of Activities of the Bureau of Plant Industry, Soils, and Agricultural Engineering. Washington: United States Government Printing Office, 1952.

"U.S. Self-Dependence Stressed in Plant Industry Report." Science 93 (1941): 10.

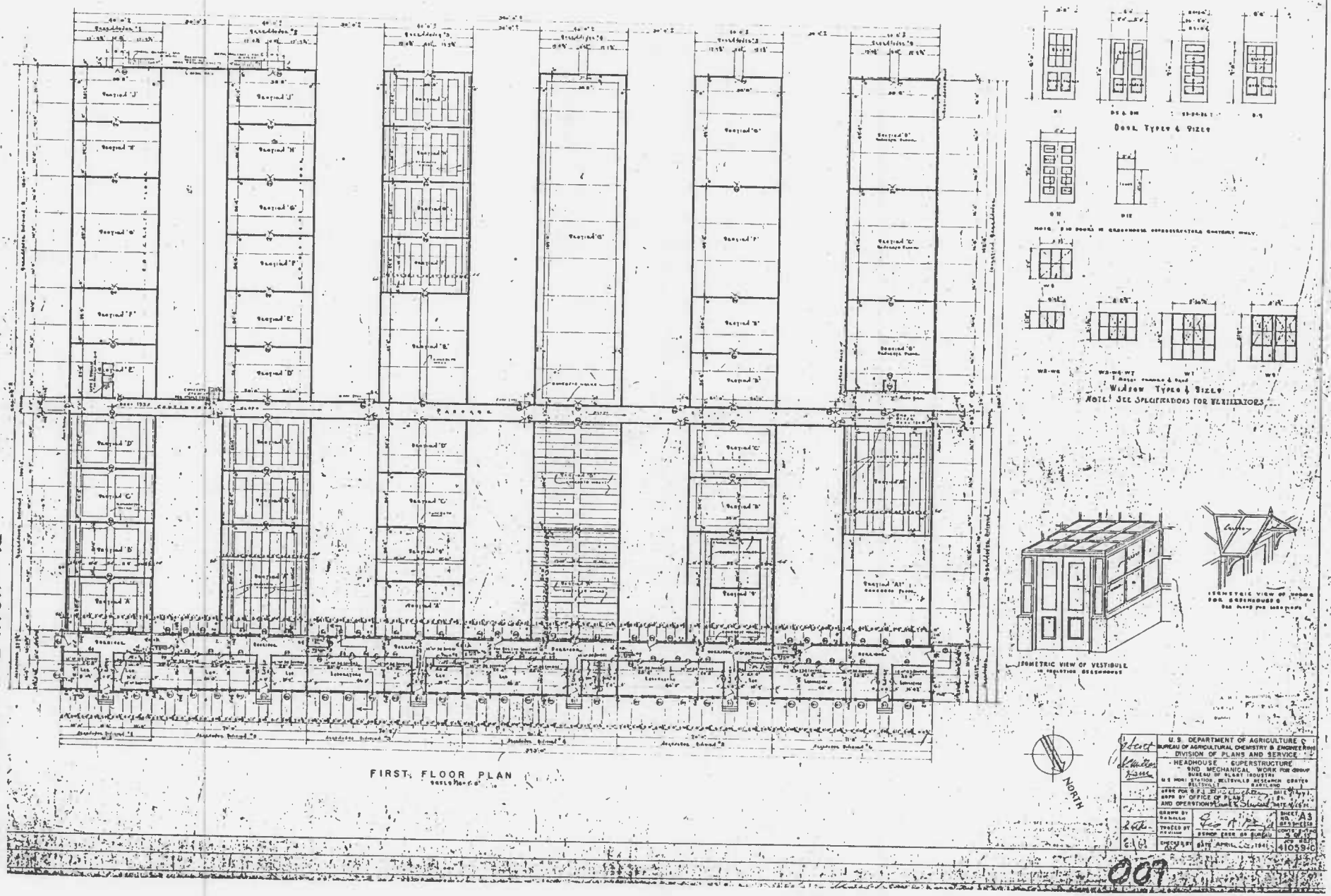
U.S. Bureau of Plant Industry, Soils, and Agricultural Engineering. Directory of Activities. Washington, D.C.: U.S. Government Printing Office, (n.d.).

"USDA and AEC Expand Research." Franklin Institution Journal, 247 (1949): 192-3.

Wiser, Vivian and Wayne D. Rasmussen. "Background for Plenty: A National Center for Agricultural Research," Maryland Historical Magazine, Vol. 61, No. 4 (December 1966), p. 292.

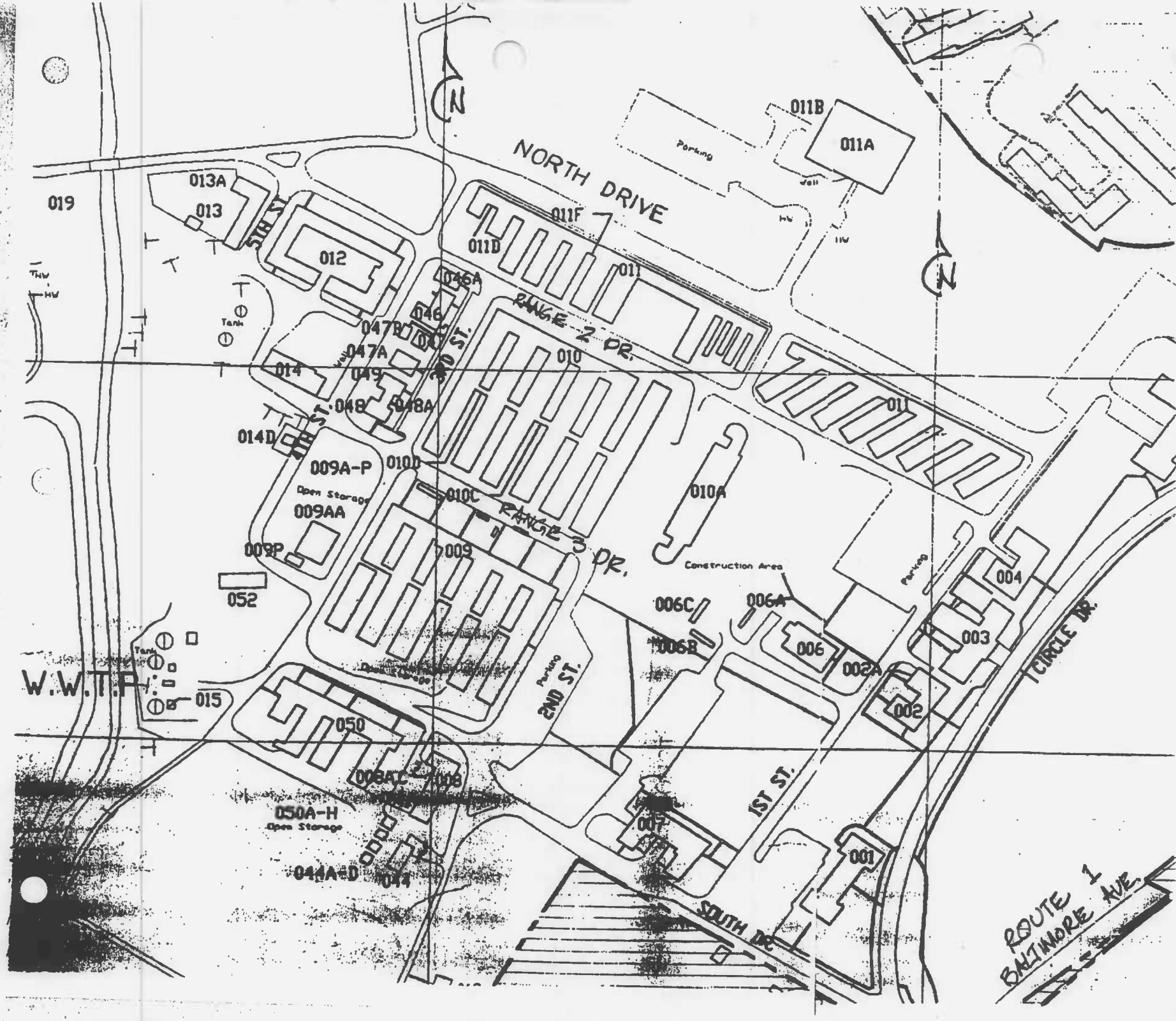


PG: 61-17 Range 3 (Building 009)
Beltsville Agricultural Research Center
Beltsville, Prince Georges County, MD.
NARA RG 16, Entry 177



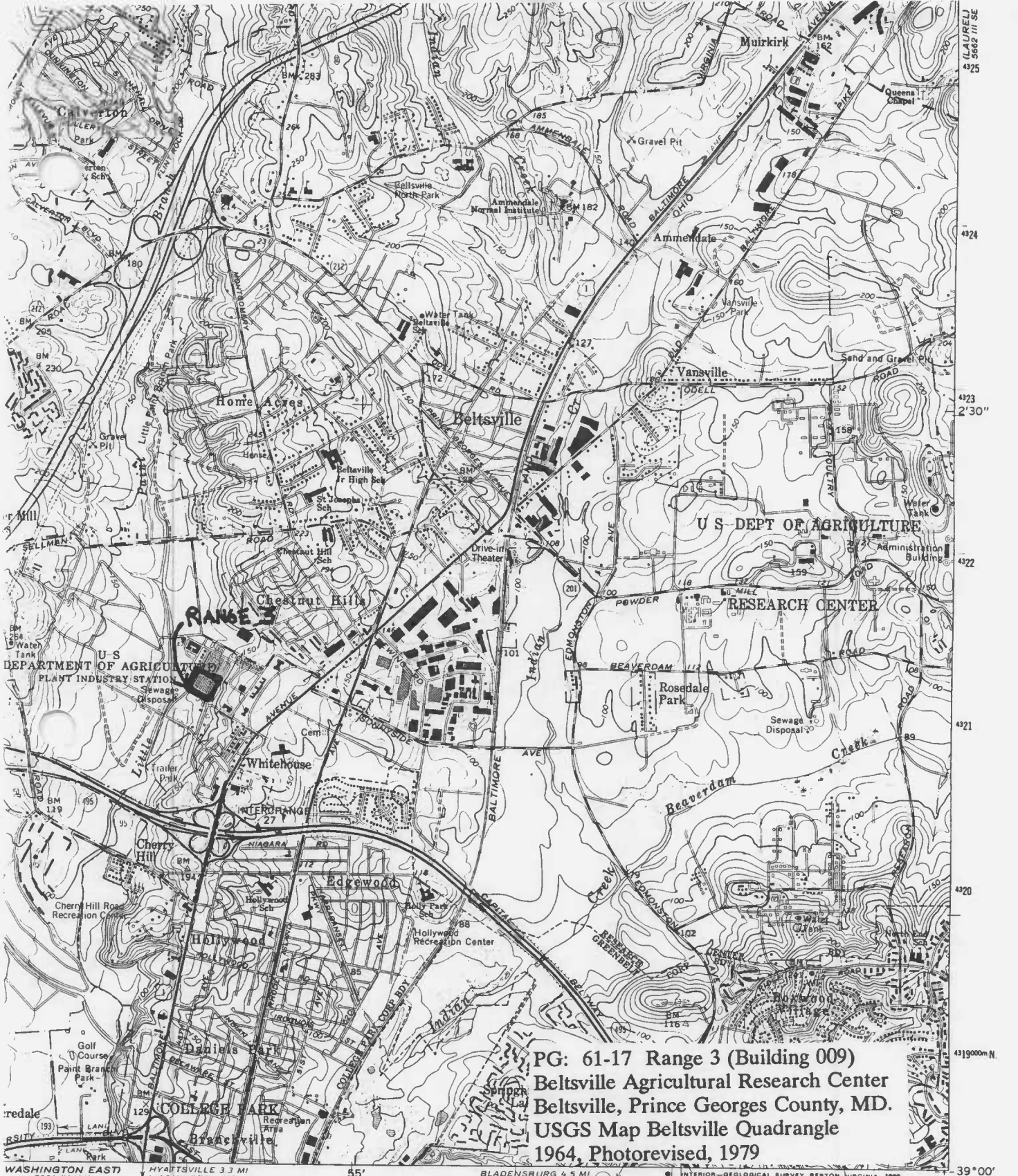
Plan (1941) Range 3 (Building 09)
Beltsville Agricultural Research Center
Beltsville, Prince Georges County, MD.

PG:61-17



Beltsville Agricultural Research Center
Site Plan

PG. 61-17



PG: 61-17 Range 3 (Building 009)
Beltsville Agricultural Research Center
Beltsville, Prince Georges County, MD.
USGS Map Beltsville Quadrangle
1964, Photorevised, 1979

WASHINGTON EAST) 5661 IV NW
HYATTSVILLE 3.3 MI
WASHINGTON MONUMENT 1.1 MI
BLADENSBURG 4.5 MI
U.S. CAPITOL (VIA U.S. 50) 9 MI
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1969
INTERCHANGE 29 (BALT WASH PKWY) 1 MI.

SCALE 1:24 000

0 — 1 MILE

000 3000 4000 5000 6000 7000 FEET

0 — 1 KILOMETER

OUR INTERVAL 10 FEET
ODETIC ... AL DATUM OF 1929

ROAD CLASSIFICATION

Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
Interstate Route — U. S. Route — State Route

QUADRANGLE LOCATION

Boundary lines shown in purple compiled from latest information available from the controlling authority

WITH NATIONAL MAP ACCURACY STANDARDS
BY U. S. GEOLOGICAL SURVEY
O 80225, OR RESTON, VIRGINIA 22092
PHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

BELTSVILLE, MD.
SW/4 LAUREL 15' QUADRANGLE
39076-A8-TF-024

1964
PHOTOREVISED 1979
DMA 5662 III SW—SERIES V833

PG: 61-17

Range 3 (Building 9), Beltsville Agricultural Research Center

Prince Georges County, MD

Neg. at MD SHPO

Carol Hooper, 9/1994

Front (Northeast) Facade

1/3

PG. 61-17
Range 3 (Building 9), Beltsville Agricultural Research Center
Prince Georges County, MD
Negative at MD SHPO
Carol Hooper 9/1994
Front (Northeast) Facade
2/3

PG. 61-17
Range 3 (Building 9), Beltsville Agricultural Research Center
Prince Georges County, MD
Carol Hooper, 9/1994
Negative at MD SHPO
Rear (southwest) Facade
3/3