

United States Department of the Interior
National Park Service

AUG 6 1993

National Register of Historic Places
Registration Form

NATIONAL REGISTER

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 an 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 U.S. Naval Ordnance Testing Facility Control Tower

other names/site number _____

2. Location

street & number Southwest corner South Anderson Blvd. (NC 50) and Flake Ave.,
6.3 mi. s. jct. NC 50 and NC 210 Not for publication

city or town Topsail Beach N/A vicinity

state North Carolina code NC county Pender code 141 zip code 28445

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, 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.)

William S. Price, Jr. 7-14-93
Signature of certifying official/Title Date

State of 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 certifying official/Title Date

State or Federal agency and bureau _____

4. National Park Service Certification

I hereby certify that the 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

Care D. Shuler

Date of Action

9-14-93

U.S. Naval Ordnance Testing Facility
Name of Property Control Tower

Pender, N.C.
County and State

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	
<u>1</u>	<u>0</u>	buildings
_____	_____	sites
_____	_____	structures
_____	_____	objects
<u>1</u>	<u>0</u>	Total

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing.)

Number of contributing resources previously listed in the National Register

U.S. Naval Ordnance Testing Facility, Topsail Island, N.C. 0

6. Function or Use

Historic Functions

(Enter categories from instructions)

Defense/naval facility

Current Functions

(Enter categories from instructions)

Domestic/single dwelling

7. Description

Architectural Classification

(Enter categories from instructions)

No style

Materials

(Enter categories from instructions)

foundation concrete

walls concrete

roof asphalt

other wood

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.)

- Criteria A, B, C, D with checkboxes and descriptions regarding property significance.

Criteria Considerations

(Mark "x" in all the boxes that apply.)

Property is:

- Criteria A through G with checkboxes and descriptions regarding property considerations.

Areas of Significance

(Enter categories from instructions)

Military

Period of Significance

1946-1948

Significant Dates

1946, 1948

Significant Person

(Complete if Criterion B is marked above)

N/A

Cultural Affiliation

N/A

Architect/Builder

Kellex Corporation/George & Lynch

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- Documentation checkboxes: preliminary determination, previously listed, designated landmark, recorded by Historic American Buildings Survey, recorded by Historic American Engineering Record.

Primary location of additional data:

- Location checkboxes: State Historic Preservation Office, Other State agency, Federal agency, Local government, University, Other.

Name of repository:

U.S. Naval Ordnance Testing Facility
Name of Property Control Tower

Pender, N.C.
County and State

10. Geographical Data

Acreage of Property Less than an acre

UTM References

(Place additional UTM references on a continuation sheet.)

1

1	8	2	5	8	2	2	0	3	8	0	5	6	8	0
Zone		Easting					Northing							

3

Zone		Easting					Northing							

4

Zone		Easting					Northing							

See continuation sheet

Verbal Boundary Description

(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification

(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Edward F. Turberg, Architectural Historian

organization Historical Society of Topsail Island, Inc. date May 26, 1993

street & number 307 North 15th Street telephone 919-762-6301

city or town Wilmington state NC zip code 28401

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

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 SHPO or FPO.)

name _____

street & number _____ telephone _____

city or town _____ state _____ zip code _____

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 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 Projects (1024-0018), Washington, DC 20503.

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Continuation Sheet**

U.S. Naval Ordnance Testing Facility Control
Tower, Topsail Island, Pender County, NC

Section number 7 Page 1

7. Description.

The Control Tower, designed in 1946 by the Kellex Corporation for the Navy Bureau of Ordnance, was erected by the contracting firm of George and Lynch of Wilmington, Delaware. It is a reinforced concrete frame, measuring sixteen feet by sixteen feet and thirty feet in height. The frame is filled with with concrete block walls, and the interior contains wood floors. The original design of the tower incorporated an open deck surrounded by glass shields on the roof of the structure.(1) In 1957, when the the building was purchased for civilian purposes, the open platform was removed and a wide-eave flat roof was installed atop the building. The current windows were added during alterations as a residence. The interior retains much of the original stark detail. The first level contains living and kitchen areas. The second level includes a bed room and enclosed bath. The upper story incorporates a sleeping area and lavatory. The original open staircases from the first to the second levels remain intact. The stair to the former observation deck atop the building is now enclosed and terminates beneath the current roof.

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 8 Page 2

U.S. Naval Ordnance Testing Facility Control
Tower, Topsail Island, Pender County, NC

8. Significance.

Summary.

The U.S. Naval Ordnance Testing Facility Control Tower was built as command headquarters for "Operation Bumblebee", where both military personnel and scientists from the Applied Physics Laboratory of Johns Hopkins University directed the intensive testing of ramjet missiles from 1946 to 1948. The Control Tower formed an important part of an extensive complex of buildings and proving grounds that are discussed in the multiple property documentation form "U.S. Naval Ordnance Testing Facility, Topsail Island." The architectural resources associated with the Topsail Island Testing Facility are the only such resources of three contemporaneous Atlantic coast facilities known to survive the conclusion of World War II. Although the Control Tower is less than fifty years old, it is eligible to be listed in the National Register of Historic Places under Criterion A for its association with the massive, secret effort that began at the close of World War II to apply the theory of jet propulsion to the practical development of missile technology. "Operation Bumblebee" at Topsail Island was a forerunner of the current United States missile program and its surviving resources are essential to understanding the progress of America's missile program from its inception to the present time. Following the Navy's abandonment of Topsail Island in 1948, the town of Topsail Beach began to develop around the testing facility and the associated acreage was subdivided into building tracts. In May 1957, James B. and Caroline M. Brame purchased the Control Tower and adapted it for use as a seasonal residence.(2)

Historical Background.

The U.S. Naval Ordnance Testing Facility, including a Control Tower and several associated buildings, is a unique survival of an experimental missile program that had its incubation period at Topsail Island, North Carolina from 1946 to 1948. Here, under the direction of the U.S. Navy and the Applied Physics Laboratory of Johns Hopkins University in Maryland, America's ramjet missile program succeeded through a series of secret launching and testing experiments on the remote North Carolina beach. Missile assembly and storage occurred in an explosion-proof building on the west side of the island and fired from a launching platform along the ocean. Observers were stationed in the control tower located midway between the Assembly Building and the launch site. A series of eight observation towers were positioned at exact sites along the beach where crews manned special monitoring equipment to measure the speed, angularity and distance of travel of the missiles after firing. The code name of project operation was "Operation Bumblebee", and it became the "incubator" for all subsequent rocket technology, including jet aircraft engines and supersonic craft, whose developments were made possible by the original ramjet design developed here. Topsail Island was the forerunner of widespread sites at Inyokern, California, White Sands, New Mexico, and Cape Canaveral, Florida. Long shrouded in secrecy, Topsail Island is now seen as a pioneer missile installation whose most significant structures still stand intact. These visible reminders of history are of inestimable value in understanding and interpreting the progress of America's missile program from its formative years to the present.(3)

United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number 8, 9 Page 3

U.S. Naval Ordnance Testing Facility Control
Tower, Topsail Island, Pender County, NC

In 1948, the U.S. Government abandoned the base at Topsail Island and disposed of the property for private use. The land was acquired by Evelyn P. Empie, Helen S. Bridgers and her husband, Burke H. Bridgers. On November 6, 1948, they sold a tract containing 189.5 acres to J.G. Anderson, J.G. Anderson, Jr., Jeff Flake and J.W. Crews of Wauchula, Hardee County, Florida, and E.N. Davis of Frost Proof, Florida, with the exception of "the poles, wires, water, lines, or that part of the main road claimed by the North Carolina Highway Commission." (4) On February 25, 1949, they owners subdivided the tract into lots under the designation "New Topsail Beach" caused a plat to be made of the subdivision. (5) On May 11, 1957, James B. and Caroline M. Brame of Durham, North Carolina purchased Lots 1, 2 and 3 in Block 11, containing the U.S. Naval Ordnance Control Tower. The building was modified for residential use and the Brame family currently retains title to the property. (6)

Endnotes

1. Navy Department Bureau of Ordnance report, May 3, 1946.
 2. "U.S. Naval Ordnance Testing Facility, Topsail Island" multiple property documentation form.
 3. ibid.
 4. Pender County Register of Deeds Office, Deed Book 260, p. 631.
 5. Pender County Register of Deeds Office, Deed Book 277, p. 171; Map Book 3, p. 56.
 6. Pender County Register of Deeds Office, Deed Book 326, p. 301.
9. Major Bibliographical References.
- "All Hands" newsletter, 1948.
- Applied Physics Laboratory News, March 1947 and July 1963.
- Bennett, Don. "Bumblebees flew at Island Beach", and "War effects felt in town by the sea." Toms River Observer, 5, 1991.
- Brown, Dick. "Topsail Island Seedbed Of Missile Program." Fayetteville Observer and Fayetteville Times, September 24, 1978, page D-1.
- Brown, Dick. "The Topsail Island Secret: Operation 'Bumblebee'." Tidewater, March 1985, pages 6-8.
- "Historical Society Vote To Preserve Arsenal." Pender Sounds, June 1989, pp. 19-21.

United States Department of the Interior
National Park Service

**National Register of Historic Places
Continuation Sheet**

Section number 9, 10 Page 4 U.S. Naval Ordnance Testing Facility Control
Tower, Topsail Island, Pender County, NC

Military press release, May 14, 1947.

Specifications drawn by The Kellex Corporation, 1946.

Stallman, David A. "A History of Camp Davis." Privately printed, 1990.

Stallman, David A. Operation Bumblebee, 1946-1948, Topsail Island, N.C. (Privately printed, 1992). pp. 1-32.

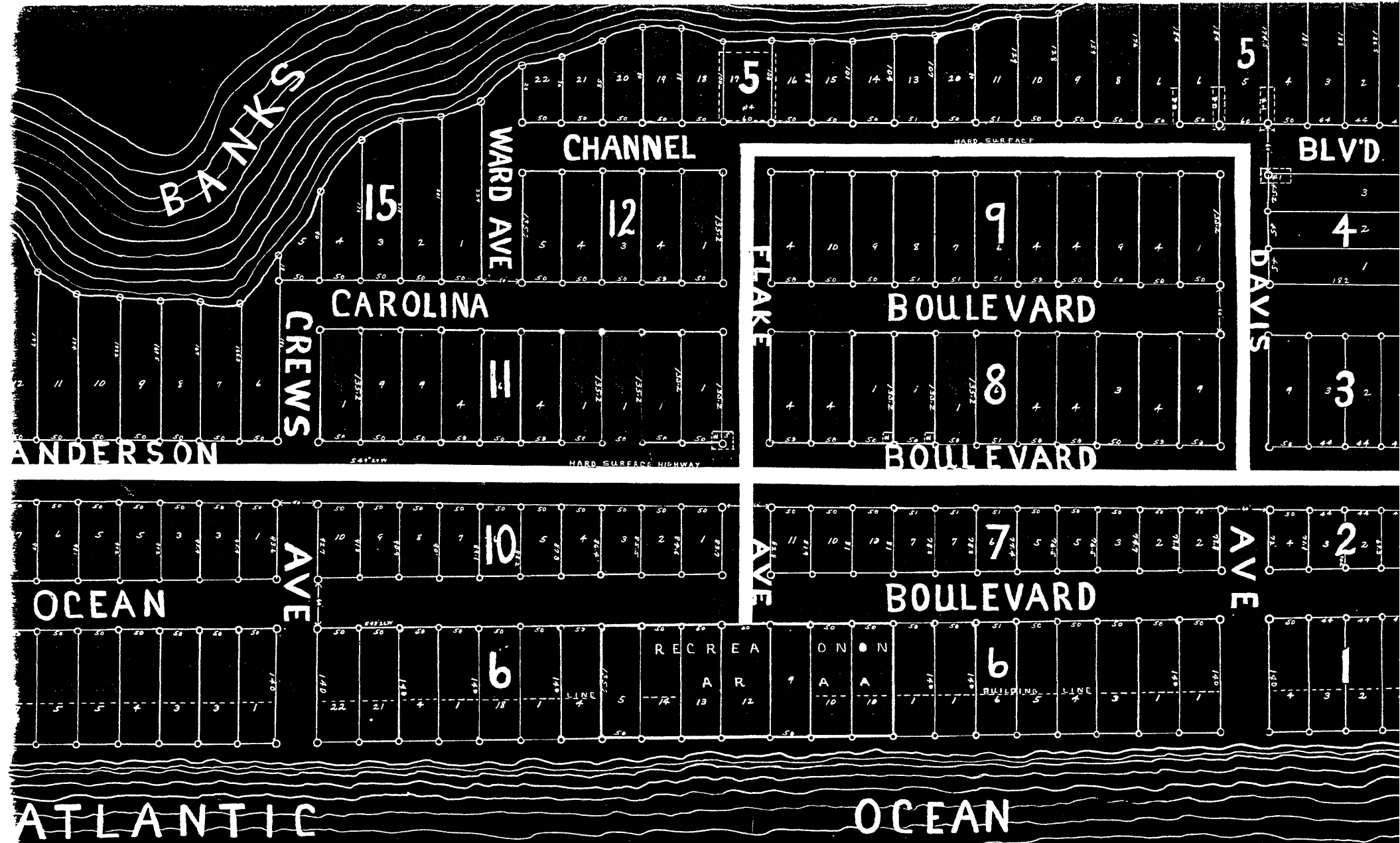
Stallman, David A. "Tad Stanwick." Privately printed, 1989.

Stallman, David A. "Topsail Beach Historical Tour." Privately printed, 1990.

Unger, Steve. "Is the Arsenal Worth Saving?" Pender Sounds, June 1989, p. 5.

10. Geographical Data - Verbal Boundary Description and Justification

The boundaries of the nominated property encompass all the land both historically and currently associated with the built resource, comprising Lot 1 of Block 11 in New Topsail Beach, North Carolina, as shown on the accompanying Tax Map and plat drawn February 1949 (Pender County Register of Deeds Office, Map Book 3, p. 56).



FIRST EDITION OF
NEW TOPSAIL BEACH, N.C.

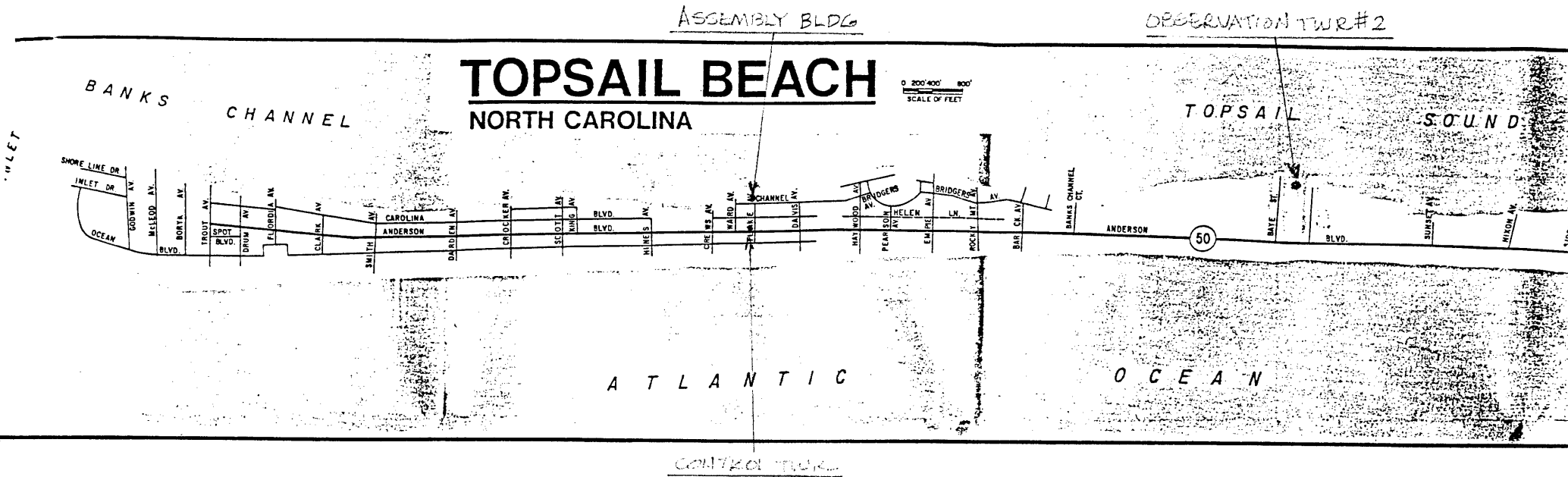
J.G. ANDERSON & J.G. ANDERSON, JR. DEVELOPERS.

BROKEN LINES ENCLOSING NO. 11, 7, 5, 4
 BUILDINGS AND TOWERS ON LOTS AND STREET
 BEGINNING POINT BEING AN IRON PIPE LOCATED
 S 46° 35' E 314.4 FROM U.S. CO. MARKER
 "CAMERA" AND N 70° 13' E 912.8 FROM U.S. CO.
 MARKER "CONTROL" ENGINEERING AND
 PLOTTING BY J. Steller C.S. FEB. 1949
 SCALE 1" = 50'

J. Steller
 Feb. 49
J. Steller
 Feb. 26, 49
 38

U.S. Naval Ordnance Testing Facility, Topsail Island, Pender County, NC

N →



United States Department of the Interior
National Park Service

National Register of Historic Places
Continuation Sheet

Section number _____ Page _____

SUPPLEMENTARY LISTING RECORD

NRIS Reference Number: 93000910

Date Listed: 9/14/93

US Naval Ordnance Testing Facility

Control Tower
Property Name

Pender
County

NC
State

US Naval Ordnance Testing Facilities, Topsail Island MPS
Multiple Name

This property is listed in the National Register of Historic Places in accordance with the attached nomination documentation subject to the following exceptions, exclusions, or amendments, notwithstanding the National Park Service certification included in the nomination documentation.

Patrick Andrus

Signature of the Keeper

9/14/93

Date of Action

=====
Amended Items in Nomination:

Historic Function:

Add Defense/Air Facility to historic functions to note the facility's use as a missile launching site. [NR Bulletin 16A p. 22]

This item is not considered an error by the SHPO, but reflects a NPS recommendation to aid in later resource identification and classification.

DISTRIBUTION:

National Register property file
Nominating Authority (without nomination attachment)