DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

State: New Jersey

DESCRIPTIVE REPORT
Topographic Sheet No. 4570

LOCALITY
West bank of Hudson River
Englewood Yacht Club to Alpine

1930

CHIEF OF PARTY
O. S. Reading
DESCRIPTIVE REPORT TO ACCOMPANY
AIR PHOTO TOPOGRAPHIC SHEET

No. 4570 - Englewood Yacht Club to Alpine

This sheet is a compilation of two overlapping strips of single
lens photographs, numbers 209 to 219, 253 to 261, shore strip; 159
to 171, inshore strip. Photographs 209 to 219 were taken September
4, 10:20 A.M. Photographs 253 to 261 were taken September 4, 11:00
A.M. Photographs 159 to 171 were taken September 28, 12:00 N. The
stage of the tide on September 4, 10:20 A.M. is 0.7 foot; on September
28, 12:00 N., the height of tide is 3.2 feet.

Limits of Sheet 4570

This sheet includes the area between Englewood Yacht Club to
Alpine on the west bank of the Hudson River and extends about one
mile inland.

Control.

This sheet is controlled by triangulation executed in 1930 and
a plane table survey of the shoreline made in August, 1930. There
were sufficient stations along the shore to control the plotting of
the shore strip, but there was only one station over one-half mile
inshore. This resulted in the western limits of the sheet not being
controlled as well as they should be.

Compilation.

A 1:5,000 projection was made on a celluloid sheet. All tri-
angulation stations and other points obtained from the plane table
sheet were plotted on the celluloid projection. The shoreline
obtained from Topographic Sheet 4557 was traced on the projection.

The scale of the photographs is approximately 1:10,000. A spotting
radial plot was made to obtain the average scale of the photographs.
After obtaining the average scale of the photographs, the negatives
were enlarged to a scale of 1:5,000.

A graphic radial line plot was made with the enlarged pictures
holding to the control on the sheet. The same points were identified
on photographs of the different strips. The radial plot of the
shore strip was made first due to having more control. A plot was
then made of the inshore strip, and if the common points did not
intersect, a replot was made until the correct intersections were
obtained. If the two strips had been plotted correctly in the
beginning, points common to both strips would have had common inter-
sections. It is very easy to get off in azimuth in making the radial plot. Therefore, if the proper azimuth is not held to in making the radial plot, good intersections of the radials will not be obtained.

The inshore strips of pictures had an overlap of 40 per cent, which is not sufficient to obtain a rigid radial plot. This deficiency of overlap was easily noticed as trouble was experienced in securing the proper radial plot between the two strips. Therefore, it is seen that an overlap of at least 55 per cent is needed and 60 per cent is desired to obtain a rigid radial plot.

Landmarks for Charts.

Landmarks for charts are submitted on Form 567.

Names.

Names for this sheet were obtained from topographic sheet 4557 and a blueprint obtained from the Palisades Interstate Park Commission.

Symbols.

Standard topographic symbols were used throughout the sheet. The widths of the roads extend to the property lines.

Marshall H. Reese

Aid, C. & G. Survey.

Approved;

O. S. Reading
Chief of Party.

APPROVED

K. T. Adams
FIELD RECORDS (O)

L. O. Rollins
Chief, Division of Charts

J. B. Bond
Chief, Section Field Work

G. Wood
Chief, Div. of Hyd'y and Top'y
LANDMARKS FOR CHARTS

Director, U. S. Coast and Geodetic Survey:

The following determined objects are prominent, can be distinctly distinguished from seaward from the description given below, and should be charted and are recommended for charting on the proposed anchorage chart by the Commanding Officer of the NATOMA, 1930.

O. S. Reading.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>Approximate Position</th>
<th>CHARTS AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observation stand</td>
<td>40 53.6</td>
<td>73 56.9</td>
</tr>
<tr>
<td>House with many chimneys</td>
<td>40 53.7</td>
<td>73 56.4</td>
</tr>
<tr>
<td>Observation stand</td>
<td>40 54.5</td>
<td>73 56.0</td>
</tr>
<tr>
<td>Green House</td>
<td>40 55.4</td>
<td>73 56.0</td>
</tr>
<tr>
<td>Large grey house with red roof</td>
<td>40 55.7</td>
<td>73 55.6</td>
</tr>
<tr>
<td>Small grey house with red roof</td>
<td>40 55.6</td>
<td>73 55.6</td>
</tr>
<tr>
<td>Light brown house with black roof</td>
<td>40 55.9</td>
<td>73 55.6</td>
</tr>
<tr>
<td>Chimney north and two-story green house</td>
<td>40 55.3 (675)</td>
<td>73 55.5 (670)</td>
</tr>
<tr>
<td>North F.P. on park bldg. at Under Cliff Beach</td>
<td>40 53 (524)</td>
<td>73 58 (52)</td>
</tr>
<tr>
<td>Large rock 10 ft. high</td>
<td>40 53 (917)</td>
<td>73 56.6 (504)</td>
</tr>
</tbody>
</table>

* These positions were taken from Topographic No. 4557.

Approximate position, see Air Photo Sheet 4570.

A list of objects which are of sufficient prominence for use on the charts, together with a description of the same, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report. The selection, determination, and description of these points are of primary importance.

The description of each object should be short, but such as will identify it; for example, standpipe, water tower, church spire, tank, tall stack, red chimney, radio mast, etc. Generally, flagstaffs and like objects are not sufficiently permanent to chart.
The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. ................

REGISTER NO. 4570

State New Jersey

General locality West bank Hudson River

Locality Englewood Yacht Basin to Alpine

Scale 1:5,000 Date of survey Sept. 4 & 28, 1930

Vessel Aerotopograph Corporation airplane

Chief of Party O. S. Reading

Surveyed by M. H. Reese

Inked by M. H. Reese

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated (Control and compilation) July 22, 1930

Remarks: Compilation of single lens air photographs Nos. 209-219, 253-261 and 159-171, and printed by photolithographic process.
REPORT FOR SUPPLEMENTAL T-4570

Corrections shown in red on T-4570 were plotted in the office in March 1939, from single lens Air Photographs without field inspection and reported to the Cartographic Section for correction of Chart 747.

Corrections shown in blue were plotted in this office in May 1939, after receipt of the field inspection data supplied this office by the Tender GILBERT. Details in blue reported to Nautical Chart Section June 3, 1939.

Photographs

Single lens 7 x 9, Scale 1:10,000. Negatives are on file in this office. The photographs were taken in February 1939, by the Photographic Unit of the Naval Air Station, Washington, D. C.

Plot

The details in red and blue were plotted from contact prints by L. C. Lande.

Hydrographic Survey

The shoreline on the contemporary Hydrographic survey is from T-4570 prior to the above correction, and has not been corrected to agree with T-4570 Supplemental.