

# 8093

Diag. Cht. No. 78-4

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey Air Photographic Shoreline

Field No. \_\_\_\_\_ Office No. T-8093

### LOCALITY

State Virginia

General locality James & Appomattox Rivers

Locality Vicinity of Petersburg

194 1-'43

### CHIEF OF PARTY

H.O. Fortin, Chief of Field Party

F.L. Peacock, Balto. Photo. Office

### LIBRARY & ARCHIVES

DATE August 8, 1950

# 8093

## DATA RECORD

Survey T-8093 & ~~T-2092~~  
(Combined)

Quadrangle (II): Petersburg, Va. 15 Min. Project No. (II): CS-283  
U.S.G.S.

Field Office: Chief of Party:  
Air Photographic Party No. 2 ~~Fred. L. Peacock~~  
Henry O. Fortin

Compilation Office: Chief of Party:  
Baltimore Photogrammetric Office Fred. L. Peacock

Instructions dated (II III): Copy filed in Descriptive  
March 26, 1942, July 15, 1942 Report No. T- (VI)  
Sept. 30, 1942, Nov. 14, 1942, Nov. 24, 1942

Div. of Photogrammetry  
Office Files

Completed survey received in office: 2-19-44

Reported to Nautical Chart Section: 2-26-44

Reviewed: 12-3-48 Applied to chart No. 531 Date: 2-4-47

Redrafting Completed:

Registered: 7-12-50 Published:

Compilation Scale: 1:10,000 Published Scale:

Scale Factor (III): None

Geographic Datum (III): N.A. 1927 Datum Plane (III): ~~Mean Sea Level~~ MHW

Reference Station (III): CENTRAL ST. HOSP. ALUM. W.T. ~~NORTH~~ West TWIN, 1933

Lat.: 37° 12' 32.89" (1013.9m) Long.: 77° 27' 08.66" (213.5m) Adjusted  
~~Unadjusted~~

State Plane Coordinates (VI): Virginia - South

X =

Y =

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Eastern Standard Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
7495 to 7499, Incl.	11/25/41	10:53 A.M.	1:10,000	2.2' above M.L.W.
7500 to 7507, "	11/25/41	10:53 A.M.	1:10,000	2.2' above M.L.W.
7511	11/25/41	11:04 A.M.	1:10,000	2.1' above M.L.W.
7513 to 7517, "	11/25/41	11:04 A.M.	1:10,000	2.1' above M.L.W.

Tide from (III): Predicted tide tables for Washington, D. C., with corrections to Petersburg, Virginia.

Mean Range: 2.9'

Spring Range: 3.3'

Camera: (Kind or source) U. S. Coast & Geodetic Survey nine lens camera (focal length  $8\frac{1}{2}$ " ). All negatives on file at the Washington Office.

Field Inspection by: Lieut. Commander Henry O. Fortin date: March 1943

Field Edit by: None date:

Date of Mean High-Water Line Location (III): Date of photographs supplemented by field inspection data obtained in 1943. Season's field inspection reports previously submitted.

Projection and Grids ruled by (III) BRC, JT date: 9-30-44

" " " checked by: JT, BRC date: 9-30-44  
Washington Office

Control plotted by: Ruth E. Rudolph date: 10-8-44

Control checked by: Mildred M. Treutman date: 10-9-44

Radial Plot by: J. E. Deal, Jr. date: 10-31-44

Detailed by: James L. Harris date: 11-1-44 to  
12-8-44

Reviewed in compilation office by: Harry R. Rudolph date: 12-14-44

Elevations on Field Edit Sheet  
checked by: None date:

STATISTICS (III)

Land Area (Sq. Statute Miles): This Map Drawing includes shoreline and adjacent planimetric detail only.

Shoreline (More than 200 meters to opposite shore): None

Shoreline (Less than 200 meters to opposite shore): 20 statute miles  
(measured along approximate center of stream)

Number of Recoverable Topographic Stations established: ~~10~~ 10

Number of Temporary Hydrographic Stations located by radial plot: 16

Leveling (to control contours) - miles:

Roman numerals indicate whether the item is to be entered by, (II) Field Party, (III) Compilation Party, or, (VI) the Washington Office.

When entering names of personnel on this record give the surname and initials (not initials only).

Remarks:



## Field Inspection

Field inspection data for the area of T-8093 are contained in the "Report on Field Inspection of Air Photographs, James River and Tributaries, Virginia" by Henry O. Fortin, dated April 20, 194~~8~~<sup>3</sup>.  
Filed in Division of Photogrammetry, General Files

26 CONTROL:

This Map Drawing includes that portion of the shoreline and adjacent planimetry of the Appomattox River lying approximately two miles northeast of and five miles west of Petersburg, Virginia.

The following horizontal control stations fall within the limits of this Map Drawing:

U. S. Coast and Geodetic Survey Intersection, Triangulation Stations:

TANK, 1932, r. 1943  
CENTRAL STATE HOSP. ALUM. W.T. <sup>West</sup> NORTH TWIN, 1933  
(Identified by Compilation Office)  
CENTRAL STATE HOSP. ALUM. W.T. <sup>East</sup> SOUTH TWIN, 1933  
(Identified by Compilation Office)

U. S. Geological Survey Temporary Traverse Stations:  
(All established in 1937, r. 1943) See Review Report

1059+  
1056A - Marked Station  
1077+  
1050+  
774A  
779  
782+  
1045+  
1046+

The following horizontal control stations fall just outside the limits of this Map Drawing:

U. S. Coast and Geodetic Survey Intersection, Triangulation Station:

BEACON, FLASHING WHITE, 1932, r. 1943

U. S. Geological Survey Monumented Station:

TT 12 T also 754, 1937, r. 1943

U. S. Geological Survey Temporary Traverse Stations:  
(All established in 1937, r. 1943)

1084+  
1081+  
748A  
755+  
761+  
784+  
621A



26 CONTROL: (Continued)

All of the above mentioned horizontal control stations were used to establish photograph centers, secondary control points, and detail points.

27 RADIAL PLOT:

Eighteen (18) nine lens, unmounted, photographs, scale 1:10,000, were used in the running of the radial plot for this Map Drawing. They are listed in flights as follows:

Nos. 7496 to 7499, inclusive  
7500 to 7507, inclusive  
7511  
7513 to 7517, inclusive

The above photographs were prepared for radial plot purposes in the same manner as described for the Preparation of Photographs in the Descriptive Report for the combined radial plot of Surveys Nos. T-8089, T-8090, T-8091, T-8094, T-8095, and T-8096, which was submitted to the Washington Office on August 31, 1944. Filed in Div. of Photogrammetry-General Files

The horizontal control stations recovered and identified by the Field Inspection unit and which were available for use in running this radial plot were for most part United States Geological Survey traverse stations established by C. A. Turner in 1937. They were fairly well distributed over the area of the Map Drawing. Sixteen of these stations were temporary traverse stations and one was a monumented traverse station.

Also available as horizontal control were four United States Coast and Geodetic Survey Intersection Triangulation Stations which were established in 1932 and 1933. Three were located in the south central area of the Map Drawing and the other just off the west limits of the Map Drawing. Two of these triangulation stations, namely, CENTRAL STATE HOSP. ALUM. W.T. NORTH TWIN, 1933 and CENTRAL STATE HOSP. ALUM. W.T. SOUTH TWIN, 1933, were identified at the Compilation Office. It is noted that these two tanks are referred to in their names as North Twin and South Twin. The Latitude location of each of these tanks is practically identical while a considerable difference is evident in Longitude. It, therefore, seems more appropriate to refer to these two tanks in their names as East Twin and West Twin.

See Review Report

Falling just inside and just outside the northern limits of this Map Drawing were several strong secondary points which had been established during the running of the combined radial plot for Surveys Nos. T-8089, T-8090, T-8091, T-8094, T-8095, and T-8096. These were also available for use as partial horizontal control.

Sufficient horizontal control stations were available to strongly orient each photograph. For this reason, it was decided not to make acetate templates.



27 RADIAL PLOT: (Continued)

An acetate sheet for Survey No. T-8093, ruled with a polyconic projection and Virginia State Grid for its area, was furnished the Compilation Office for use as a Map Drawing Projection. Enough margin was available to the east of this projection to include the small amount of planimetric detail desired to be shown for Survey No. T-8092. *See Review Report*

The secondary control points, previously mentioned, were transferred to the northern limits of this Map Drawing from the Map Drawing for Survey No. T-8094 after their common meridians and parallels had been matched.

Each photograph was oriented under the Map Drawing holding to its respective horizontal control. Its center was then pricked and radials were drawn through all the secondary control points falling within its area. After all of the photographs had been oriented in this manner and all of the radials had been drawn through all of the secondary control points in the area of the Map Drawing, it was evident that a very strong radial plot had been accomplished. Radial intersections were excellent. These secondary control points were pricked and are shown on the reverse side of this Map Drawing with double blue waterproof ink circles.

28 DETAILING:

The shoreline and immediate adjacent planimetry of the part of the Appomattox River shown on the Map Drawing have been detailed according to the Director's letters, dated 3/26/42, 7/15/42, and 9/30/42, pertaining to Project No. CS-283. *Filed in Div. of Photogrammetry - Office Files*

Positions of minor detail points, temporary hydrographic stations, and recoverable topographic stations were determined by the usual radial line method.

The shoreline data furnished the Compilation Office by the Field Inspection Unit were transferred to the office photographs. These data were then detailed on the Map Drawing.

A considerable portion of the shoreline and adjacent planimetric detail of the Appomattox River to the West of Petersburg, falling beyond the limits of navigation and the limits of field inspection was delineated from the nine lens photographs with the aid of the stereoscope. The shoreline shown in this area is not of the usual standard of accuracy because the bed of the river, at the time the photographs were taken, contained only a small amount of water. It is believed by the Compilation Office, that during wet seasons of the year, or when the dam located above is open, the stream bed as shown on the Map Drawing is entirely filled by water.

The Mean High-Water Line and adjacent planimetric detail below the limits of navigation were detailed in accordance with field inspection data and stereoscopic examination of the nine lens photographs.



28 DETAILING: (Continued)

The number of nine lens photographs covering the area of this Map Drawing were sufficient for detailing. The scales of the photographs and of the Map Drawing were in good agreement.

Portions of the Mean High-Water Line (heavy line - firm ground) along the Appomattox River which could not be identified by the Field Inspection Unit were shown on the field inspection photographs by red dashed lines. These undetermined sections of shoreline were delineated with the aid of the stereoscope from the nine lens photographs.

It is believed that the position of the Mean High-Water Line in these areas as shown on the Map Drawing has been accurately determined by the Compiler.

29 SUPPLEMENTAL DATA:

No supplemental data were furnished the Compilation Office for use in detailing this Map Drawing.

30 MEAN HIGH WATER LINE:

Full heavy-weight and light-weight black acid ink lines have been used to differentiate between the Mean High-Water Line and the outer limits of marsh bordering the Mean High-Water Line, respectively. The light-weight line is not considered to be the Mean High-Water Line, but is only an indication of the outer limits of low wet land at Mean High-Water.

31 LOW WATER AND SHOAL LINES:

No Mean Low-Water Line has been shown on this Map Drawing and none was indicated by the field inspection data or visible on the nine lens photographs.

There are no shoal areas indicated by field inspection data or visible on the photographs within the limits of this Map Drawing.

32 DETAILS OFFSHORE FROM MEAN HIGH-WATER LINE:

A piling area, a tree in the water, and the remains of an abutment for a bridge now gone are shown on this Map Drawing offshore from the Mean High-Water Line. No data were available to the Compilation Office of the extent to which these offshore details bare.



33 WHARVES AND SHORELINE STRUCTURES:

Numerous jetties, piers, retaining walls, dams, trees down in water, trees overhanging, the remains of a barge, a catwalk, a long piece of iron, and an old foundation were detailed on this Map Drawing. No additional shoreline structures were indicated by the field inspection data or were visible on the office photographs.

34 LANDMARKS AND AIDS TO NAVIGATION:

There are two objects, within the limits of this Map Drawing, recommended for charting as Landmarks. They are:

TANK, elevated water, along R.R., gray with dark top,  
Between R.R. and North Channel.

TANK, elevated water, silver, 80 m. S. of river and  
500 m. East of dam.

Chart Letter  
910 (44)

The positions of these two recommended landmarks have been determined by radial intersection and Form No. 567 is being submitted.

There are no fixed aids to navigation within the limits of this Map Drawing and none are shown on Chart No. 531.

35 HYDROGRAPHIC CONTROL:

The Compilation Office was furnished the identification of 16 temporary hydrographic stations and 10 Recoverable Topographic Stations. These were identified on the 1:10,000 field photographs by numbers and their descriptions listed in a field sketch book (Form No. 274) by corresponding numbers. These stations were transferred to the 1:10,000 office photographs and radially plotted on the Map Drawing.

The numbers and descriptions of these stations have been noted near the station to which they refer directly on the Map Drawing.

Form No. 524 is being submitted for the 10 Recoverable Topographic Stations. They are: *Filed in Div. Photog. General Files. See Review Report.*

CAMP LEE W.T. SOUTH WEST, also Aeronautical Landmark  
CAMP LEE W.T. NORTH EAST, also Aeronautical Landmark  
CAMP LEE W.T. NORTH WEST, also Aeronautical Landmark  
~~ELEVATED WATER TANK, SILVER, also Landmark, 1943~~  
~~ELEVATED WATER TANK, also landmark, 1943~~  
~~W.M.B.C. RADIO MAST, also aeronautical Landmark, 1943~~  
~~FIFTH LAMP POST FROM N. END OF BRIDGE, 1943~~  
~~S. FACE OF SECOND ABUTMENT, 1943~~  
~~S.W. GAB. UNPAINTED BARN, 1943~~  
~~CHY. IN CENTER OF UNPAINTED HOUSE, 1943~~



36 LANDING FIELDS AND AERONAUTICAL AIDS:

A small, unnamed landing field, located east of the Atlantic Coast Line R. R. tracks and approximately 400 meters north of the North Channel of the Appomattox River, has been shown on this Map Drawing.

The following four features have been recommended for charting as Aeronautical Landmarks:

- RADIO MAST, WMBG, steel, alternating red and white, 200' high 100 m. north of the Appomattox River at Petersburg.
- CAMP LEE W.T. NORTHWEST, elevated, silver, 125' high.
- CAMP LEE W.T. NORTHEAST, elevated, silver, 125' high.
- CAMP LEE W.T. SOUTHWEST, elevated, silver, 80' high.

Form No. 567 is being submitted for the above recommended Aeronautical Landmarks.

37 JUNCTIONS:

To the North a satisfactory junction has been made with Map Drawing for Survey No. T-8094. In addition, a satisfactory junction has been made for the small amount of planimetric detail falling within the area of Survey No. T-8092 and which has been included in the area of this Map Drawing, with Map Drawing for Survey No. T-8091.  
*See Review Report*

To the East, West, and South are no contemporary Surveys.

38 GEOGRAPHIC NAMES: *Approved list of names filed in the Geographic Names Section.*

As instructed, the Field Inspection Unit did not make a geographic name investigation for this Map Drawing. The Geographic Names shown on this Map Drawing have been taken from the only sources available to the Compilation Office, namely: Nautical Chart No. 531, James River and Appomattox River, published at Washington, D. C., August 1940, reissued March 6, 1944, scale 1:20,000, and the United States Geological Survey Petersburg, Virginia, fifteen minute Quadrangle, edition of July 1894, reprinted 1917. A list of disputed names and a list of undisputed names are attached to this Descriptive Report.

39 HORIZONTAL ACCURACY:

The probable error in the positions of detail points, the Mean high-Water Line, and well defined objects is believed to be within the limits of satisfactory accuracy.



40 RECOMMENDATIONS FOR FUTURE SURVEYS:

The shoreline, rough draft, Map Drawing for Surveys Nos. T-8093 and T-8092 is believed to be complete in all details for charting and no other surveys are deemed necessary.

41 BRIDGES:

Several bridges over the Appomattox River have been shown on the Map Drawing. Only two of these, the A. C. L. RR bridge and U. S. Hwy. No. 1 concrete bridge, are within the limits of navigation. They are shown on the Map Drawing, accompanied by pertinent notes, in accordance with the field inspection data.

44 COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES:

Due to scale difference, a visual comparison only could conveniently be made with the United States Geological Survey, 15 minute, Petersburg, Va. Quadrangle, edition of 1894, reprinted 1917, scale 1:62,500.

Because of the date of the quadrangle survey and the minute planimetric details involved, a detailed discussion of the many differences occurring between the quadrangle and the Map Drawing has not been attempted. However, many common planimetric features seem to be in good agreement.

45 COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Nautical Chart No. 531 - "Continuation of Appomattox River", scale 1:20,000, published at Washington, D. C., August 1940, reissued March 6, 1944.

Between the channels of the Appomattox River, along both sides of a levee from approximately Latitude  $37^{\circ} 14' 30''$ , Longitude  $77^{\circ} 23'$  to the northeast limits of the Map Drawing, a marsh area is shown on the Map Drawing and firm ground is shown on the Chart.

Also between the Norfolk & Western R.R. tracks and the South Channel of the Appomattox River, at approximately Latitude  $37^{\circ} 14' 20''$  Longitude  $77^{\circ} 23' 30''$ , a marsh area is indicated on the Map Drawing and firm ground is shown on the Chart.

The marsh area appearing on the chart at approximately Latitude  $37^{\circ} 14' 35''$  and Longitude  $77^{\circ} 23' 00''$ , along the north side of the north branch of the Appomattox River has been shown on the Map Drawing as firm ground, in accordance with the field inspection data.

At approximately Latitude  $37^{\circ} 14' 03''$  and Longitude  $77^{\circ} 24' 25''$ , a bridge appears on the Chart connecting the western end of the first large island, west of the Highway Bridge, to the mainland. This bridge

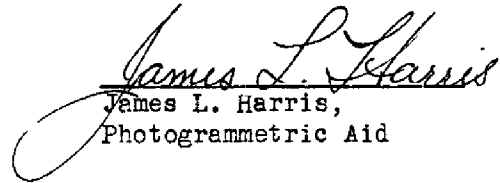


45 COMPARISON WITH NAUTICAL CHARTS: (Continued)

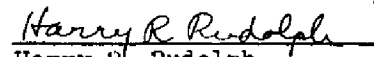
has not been shown on the Map Drawing because it cannot be identified on any of the photographs and no field inspection data were submitted relative to it.

Planimetric features, common to both the Map Drawing and the Nautical Chart, are in good agreement.

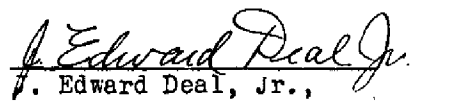
Respectfully Submitted,  
December 13, 1944

  
James L. Harris,  
Photogrammetric Aid

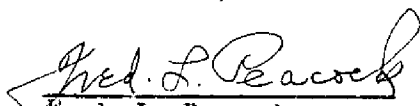
Compilation and Descriptive  
Report, Reviewed by:

  
Harry R. Rudolph,  
Sr. Photogrammetric Aid

Compilation of Map Drawing  
Supervised by:

  
F. Edward Deal, Jr.,  
Asst. Photogrammetric Engineer

Approved and Forwarded:  
December 19, 1944

  
Fred. L. Peacock  
Chief, Air Photographic Party No. 2

Descriptions of Photo-Hydro Stations

T-8093

- 616 - Thirty foot deciduous tree on small mound.
- 619 - S.W. tip of island
- 622 - Tip of bank on W. Side of break in marsh.
- 623 - Tip of rocky point
- 624 - Center of three bridge abutments, bridge gone.
- 625 - Supporting member of street bridge. Second in water from W. shore.
- 626 - W. gable of one story, white house with dark roof.
- 627 - S. gable of unpainted building, three windows in end.
- 628 - End of jetty, N.E. of catwalk.
- 629 - End of jetty
- 630 - End of second jetty N.E. from 629.
- 631 - End of jetty, second from 630, W. of 617.
- 632 - End of jetty, second N.E. from 631.
- 633 - End of second jetty N.E. from 632.
- 634 - Corner of jetty
- 635 - End of jetty, second N. of 634.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

NONFLOATING AIDS OR LANDMARKS FOR CHARTS

**TO BE CHARTED**  
**TO BE DELETED**

STRIKE OUT ONE

Baltimore, Maryland

Dec. 8, 1944

I recommend that the following objects which have *(have not)* been inspected from seaward to determine their value as landmarks, be charted on *(deleted from)* the charts indicated.

The positions given have been checked after listing by \_\_\_\_\_

STATE	CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION				METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	Charts of Party					
				LATITUDE		LONGITUDE				HARBOR CHART	INSHORE CHART	OFFSHORE CHART			
				°	'	°	'						D. M. METERS	D. P. METERS	DATUM
	Tank	Elevated Water Tank, along R.R., gray with dark top		37 14	605	77 24	138	NA	1927	Radial Plot	March 1943				531
	Tank	Elevated Water Tank, silver, 80 m S. of River and 500 m E. of dam.		37 13	1833.7	74 24	599	"	"	"	"				"
		Copy of Chart Letter 910 (44)													

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.



## GEOGRAPHIC NAMES

(Undisputed)

- ✓ • Appomattox River
- ✓ • Atlantic Coast Line Railroad
- ✓ • Batterssea Canal
- ✓ • Blandford
- ✓ • ~~Etticks College~~ Virginia State College
- Matoaca
- ✓ • Norfolk & Western ~~Railroad~~
- ✓ • Petersburg
- ✓ • Pocahontas
- ✓ • Poesa ~~Run~~ Run
- ✓ • V.S. 18301
- ✓ • Seaboard Air ~~line~~
- ✓ • Va No. 36
- ✓ • Colonial Heights
- ✓ • Swan I.
- ✓ • Old Town Creek
- ✓ • Ettrick
- ✓ • Colonial Heights Field (name on "Norfolk  
Sec. Aero. chart)
- ✓ • Halls I.

Names preceded by •  
are approved. 12/6/48  
L.H.



T8093

GEOGRAPHIC NAMES

(Disputed)

• Lieutenant Run (U.S.B. G.N.)

~~Lieutenant Creek~~

Division of Photogrammetry  
Review Report of  
Shoreline Map Manuscript T-8093

Subject numbers not used in this report have been adequately covered in other parts of the Descriptive Report.

26 Control

All unmarked U.S.G.S. traverse stations were removed from the map manuscript.

Recovery dates for triangulation stations were deleted.

The names of triangulation stations; Central State Hospital, Aluminum Water Tank, North Twin and South Twin, 1933 were changed to West Twin and East Twin respectively by the Division of Geodesy. See Item 27 of the Compilation Report. The change has been made on the map manuscript.

28 Detailing

The eastern limit of the map manuscript has been moved to Long.  $77^{\circ} 22.5'$ . All planimetric detail west of this line has been deleted.

34 Landmarks and Aids to Navigation

A copy of Chart Letter 910(44) was prepared and made a part of the descriptive report.

A form 567 was prepared and forwarded to the Aeronautical Charts Section for the following Aeronautical Landmarks:

Camp Lee, Water Tank, Southwest  
Camp Lee, Water Tank, Northwest  
Camp Lee, Water Tank, Northeast

These tanks are outside the limits of T-8093 in the area that was covered by T-8092. Since these surveys have been combined, the Form 524 cards are filed under T-8093.

37 Topographic and Photo-Hydro Stations

A list of descriptions of photo-hydro stations was prepared and made a part of the descriptive report.

The names of topographic stations were changed to a short, descriptive term.

44 Comparison with Existing Surveys

U.S.G.S. Petersburg Quadrangle 1:62,500 1894 Repr. 1945

T-389 1:10,000 1853

T-2095 1:10,000 1892

H-3207 1:20,000 1910

Common features on all previous surveys are superseded by the map manuscript in common areas *for nautical charting purposes.*

45 Comparison with Nautical Charts

Chart No. 531 1:20,000 1947

Several buildings shown on the chart east of Pocahontas do not appear on the photographs.

51 Application to Nautical Charts

The map manuscript has been applied to the nautical chart.

Reviewed by:

Under the direction of:

Charles Theurer  
Charles Theurer 12/3/48

A. V. Griffith  
Chief, Review Section K.R.M.

Approved by:

M. Jones 7/5  
Tech. Asst. to the Chief,  
Division of Photogrammetry

H. H. Edmonston  
Chief, Nautical Chart Branch,  
Division of Charts

J. S. Reading  
Chief, Div. of Photogrammetry

Wm. Scife  
Chief, Div. of Coastal Surveys