

5329

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(Original)

5329

Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Air Photo Topographic Hydrographic	Sheet No. T-5329
State <u>New Jersey</u>	
LOCALITY <u>Barneqat Bay</u> East Coast of New Jersey.	
<u>Barneqat Bay, Toms River.</u>	
193 <u>6</u>	
CHIEF OF PARTY	
<u>Roswell C. Bolstad - - Jr. H. & G. E.</u>	

Applied to drawing of Chart 1216 - April 23, 1937 - J.F.W.
" " compilation " 825 1938 P.L. J. S.M.O.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

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. 73

REGISTER NO. T-5329 T5329

State New Jersey

General locality Barnegat Bay
East Coast of New Jersey

Locality Barnegat Bay, Toms River.

Scale 1:10,000 Date of photographs - 4/4/32 & 7/25/32
Date of Compilation - 3/5/36

Wassuck Air Photo Compilation Party No. 12

Reviewed and recommended for approval - Roswell L. Boisted.
Chief of party

Surveyed by See STATISTICS SHEET, page 2. of this report.

Inked by J. K. Batchellor

Heights in feet above - - - - - to ground to tops of trees

Contour, Approximate contour, Form line interval - - - feet

Instructions dated November 15th., 1932

Remarks: Compiled on a scale of 1:10,000 and printed by

Photo-lithography.

1216-#2

- STATISTICS -

on

SHEET, FIELD NO. 73 REG. NO. T-5329

DATE OF PHOTOGRAPHS (See back of this page) TIME Not available.

BY

DATE
From To

ROUGH RADIAL PLOT None

SCALE FACTOR (1.000) Previously determined

SCALE FACTOR CHECKED Previously done

PROJECTION S.E. Sperry, Jr. S.E. Sperry, Jr. 10/13/34

PROJECTION CHECKED J.P.O'Donnell J.P.O'Donnell 10/13/34

CONTROL PLOTTED G. Crowther G. Crowther 10/22/34

CONTROL CHECKED W.E. Brown W.E. Brown 10/25/34

TOPOGRAPHY TRANSFERRED None

TOPOGRAPHY CHECKED None

SMOOTH RADIAL LINE PLOT R.C. Bolstad R.C. Bolstad 2/28/35 - 3/6/35

RADIAL LINE PLOT CHECKED H.L. Hawkins H.L. Hawkins 3/7/35 - 3/11/35

DETAIL INKED Shoreline - P.A. Kelley & J.P.O'Donnell 3/12/35 - 3/19/35
Other - J.K. Batchelor 7/8/35 - 7/22/35

PRELIMINARY REVIEW OF SHEET R.C. Bolstad R.C. Bolstad (Also final review) 2/1/36 - 3/5/36
3/5/36 - 3/8/36

AREA OF DETAIL INKED 20.1 Sq. Statute Miles (Land area)

AREA OF DETAIL INKED 0.0 Sq. Statute Miles (Shoals in water area)

LENGTH OF SHORELINE (more than 200 m. from the nearest opposite shore)
17.7 Statute Miles

LENGTH OF SHORELINE (rivers and sloughs less than 200 m. wide)
13.8 Statute Miles

LENGTH OF STREETS, ROADS, TRAILS, RAILROADS, etc. 231.9 Statute Miles

GENERAL LOCATION East Coast of New Jersey

LOCATION Barneget Bay. Toms River.

DATUM North American 1927 (Final Office adjusted position).

STATION Island Heights. Standpipe Latitude 39°-56'-34.263" (1056.7 m.)
Longitude 74°-08'-49.144" (1166.7 m.)

Photographs

Date Taken

66-4-16 to 20 inclusive April 4, 1932.
66-4-68 to 72 inclusive April 4, 1932.
66-51-51 to 55 inclusive July 25, 1932.

COMPILER'S REPORT
for
AIR PHOTO TOPOGRAPHIC SHEET, FIELD NO. 73.

GENERAL INFORMATION.

The Air-photo Field Inspection Report for the East Coast of New Jersey, attached to the Descriptive Report for Compilation, register number T-5286, furnished the necessary information for the compilation of this sheet. Additional information was obtained from Mr. R.L. Fisher and myself (Mr. J.K. Batchellor) who are acquainted with this locality having performed the photo field inspection.

This sheet was compiled from three strips of single lens photographs (see back of page 2) taken by the Aero Service Corporation, 1612 Chancellor Street, Philadelphia, Pa., with a camera equipped with a special lens (Orthomessar 8" focal length). The original negatives were on a scale of about 1:21,800, and enlargements were made to 1:10,000 scale by using the old topographic sheets to bring the image to the proper scale. No information was available from the Aero Service Corporation in regard to the time of day at which these photographs were taken. It was stated that the record, if there was any, was in the possession of the pilot and the corporation had no knowledge of the time of day. A rough approximation can be obtained by noting the appearance of the shadows on the photos.

CONTROL.

(a) Sources.

Control for the compilation of this sheet was obtained from the following sources:- (All on N.A. 1927, adj. Datum.)

- (1) Triangulation station PENN 1926 by _____.
- (2) Triangulation stations by C.D. Meaney in 1932:-
Island Heights, Standpipe 1932
Gowdy's House Ecc. 1932
Toms River, Standpipe 1932
- (3) Triangulation station GOWDY'S HOUSE 1873 by _____.
- (4) Theodolite positions by R.C. Bolstad (See Field Inspection Report attached to Desc. Report T-5286, pages 5 & 6.)
- (5) N.J. State Board of Commerce and Navigation traverse data (See data enclosed in back of this report.)
- (6) Railroad traverse data of the Central R.R. of New Jersey and also of the Pennsylvania R.R.
- (7) Lieut. Riggs 1935 triangulation stations were not used in controlling the photo plot as they were not established at the time the plot was made. They have however been shown on this sheet and ~~four~~^{three} of these are identical stations previously located as topo stations on the compilation; they are ~~COATES~~, PARK, BEND, and COTTAGE. They are N.J. C. & N. stations (See traverse data in back of this report.). TOM and LUCK established in 1935 by Lt. Rigg have also been shown on this sheet but have no connection with the photo plot.

(b) Errors.

In conducting the radial plot no errors in the above control (with exception of item 7.) were discovered.

The 1935 triangulation position of stations PARK, COTTAGE, and BEND were found to be in very close agreement with the previously established compilation position; there being a difference of 1.3, 1.4, and 1.8 meters respectively. The difference is hardly plottable at the scale of this compilation (1:10,000) and a triangle was therefore

substituted directly on the compilation sheet for the previous $2\frac{1}{2}$ mm. black circle without shifting the point.

COMPILATION.

(a) Method.

The usual radial line method of plotting was used in the compilation of this sheet.

The N.J. State Board of Commerce and Navigation traverse was plotted, from the data given in the back of this report, on an aluminum sheet. The celluloid compilation sheet with all previous control plotted on it was then placed over the aluminum sheet and the common stations PARK, COTTAGE, and BOARDWALK were placed over their respective locations and the remaining C. & N. stations were then carefully pricked off and inked in blue on the celluloid sheet. No position was accepted until it had been checked by the radial plot. All stations appeared to be located accurately; due to the density of control any appreciable discrepancy would clearly become apparent in making the photo plot. The positions of Park, Cottage, and Boardwalk had previously been located by theodolite. (See pages 5 & 6 in Field Report attached to Desc. Report T-5286).

The Penna. R.R. traverse was plotted on a separate sheet of celluloid and fitted correctly into place beneath the compilation by means of tie-ins at triangulation stations SEASIDE PARK 1932, PENN 1926, and a small radial plotted location of some of the R.R. pluses in the vicinity of control stations Toms River Standpipe 1932 and Boardwalk. An agreement was also made with the cross-over of the N.J.C.R.R. just to the south of Toms River.

The Central R.R. of N.J. track traverse was similarly plotted and used in controlling the photo plot for this sheet. It was tied in at control stations VENT CUPOLA, LARGE BLDG. 1932, the cross-over of the Penna. R.R. just to the south of Toms River, and a small photo plot at Toms River of the R.R. pluses.

In cases of all supplementary control it was not the intention to adhere to it precisely without first checking it up. However there was no disagreement in the photo plot with any of the above supplementary control and in the inland area where the control is somewhat weak it was a decided aid in establishing a strong plot.

(b) Adjustments of Plot.

By holding to all available control no unusual adjustments of the plot were required. The photos, in general, have little tilt, are close to the 1:10,000 scale, and the radial plot intersections were good. There are some instances occurring in this area where photo overlap is sufficient for only two radial intersection; in this case a check was made by proportioning between well established radial locations of three or more cuts.

After compilation sheet, field number 72, had been completed and forwarded to the Washington Office a slight adjustment of the plot was made at the junction line connecting these two sheets near Island Heights. Some additional points were selected and a better location for the detail in this area was obtained. It may therefore be necessary to shift a few of the roads at the south junction limit on sheet 72 a slight amount in order that there is agreement between the two compilations. ←

(c) Information from Other Sources.

After this compilation had been nearly completed some additional information was received from the party of Lt. Rigg and Sammons who were conducting a combined-operations field party in this locality.

"Penna." is off in location

The triangulation stations of Lt. Rigg as mentioned on page 3, item 7, were received after the date of compilation and were therefore not used in controlling the photo plot except those mentioned under (b) Errors. They have been shown on this sheet and the descriptions of these stations agrees with the compilation detail.

Lt. Sammons 1935 topographic sheets, field letters C, D, & E also effect this area. A comparison with each of these sheets against the compilation was made and any discrepancies have been "ironed-out". A discussion for each of the sheets follows:-

Topographic Sheet, Field Letter "C". T-6396a

The 3 fenders shown on the aluminum topo. sheet at the draw bridge just to the east of triangulation station PARK 1935 were transferred directly to the compilation sheet as they do not show in the photos. The position of the draw agrees perfectly on both sheets and no discrepancy existed.

The short section of shoreline on topo. sheet "C" just to the S.W. of triangulation station PARK 1935 agrees with the compilation; a very slight shift in the previous compilation shoreline (about $1\frac{1}{2}$ meters) was made.

The position of the drawbridge on topo. sheet "C" near triangulation station LUCK 1935 does not agree with the position of this causeway as shown on this compilation sheet. The east-west position of the draw appears to agree well between the two sheets but the compilation position of the causeway is north of the topo. sheet "C" position about $4\frac{1}{2}$ meters. The compilation position has been retained for the following reasons:- The railroad (Penn.) track traverse running over the causeway is a tangent piece of track and extends so even to the west of triangulation station PENN 1926; this was also verified by the field inspection party. The track traverse is tied in to control stations PENN 1926, PIER, and SEASIDE PARK 1932 by direct taped measurements. An additional check was obtained by radial plotting in several points on the track and the cross-over point south of Toms River; these points fell on the tangent track when extended from the causeway; also the cross-over plus of the N.J.C.R.R. track traverse fell in agreement. On topo. sheet "C" it is noted a signal "For" (presumed to be a banner on the N. side of the causeway) would fall out in the water if the north side of the causeway shown thereon were extended. The compilation position of the causeway would however cause the signal to fall on the north edge of the causeway where it appears logical that it may be located.

Recoverable objects shown on this sheet "C" have been shown on the compilation and listed in the tabulation in the back of this report.

Topographic Sheet, Field Letter "D". T-6396b

There are no discrepancies between the compilation sheet and the topo. sheet "D" except at about 125 meters N.W. of signal "Long Pt. (C. & N.)". A small dock shown on the compilation 115 meters N.W. of this station has been omitted on the topo. sheet "D". Since measurements were made to this dock (photo 66-51-52) by the field inspection party it is known to exist and has therefore been shown on the compilation. The larger dock just to the west of this one has been shown on the compilation sheet in a slightly changed ^{position} orientation which does not agree exactly with the topo. sheet "D". It is unlikely that this dock as shown on the photos of 1932 is a different one than exists to-day; the dimensions are exactly the same and the dock appears to stable.

For recoverable objects see tabulation in the back of this report.

Topographic Sheet, Field Letter "E". T-6397a

There is no discrepancy between the topo sheet "E" and the compilation. The shore line agrees perfectly.

Signal "Boom" as shown on topo. sheet "E" does not check the location of the wrecked barge as shown on the 1932 photographs. It is evident that this barge is unstable and has shifted in position; therefore the topo. sheet "E" location has been accepted and the wreck shown on the compilation sheet by the standard symbol.

For recoverable objects see tabulation in the back of this report.

(d) Interpretation.

The usual graphic symbols were used as approved by the Board of Surveys and Maps (1932) and no difficulty was experienced in interpreting the photographic detail as I (Mr. J.K. Batchellor) was on the photo field inspection of this area and am well acquainted with the locality.

In the locality Lat. $39^{\circ}-55.5'$, Long. $74^{\circ}-06.8'$ there are located many wooden poles about 40 feet high which support the radio antenna for the ship-to-shore radio station at this site. The approximate boundaries of the poles has been shown on this compilation by the boundary symbol (long single broken dash).



The photo shown opposite was taken at Lat. $39^{\circ}-56.3'$, Long. $74^{\circ}-10.7'$ looking to the N.E. and shows the shoal bay on the south side of Toms River. There are many small docks both on the north side of Toms River and the south as shown in the photo. These docks are not of sturdy construction and many are taken up or removed by the winter ice.

As an example of the non-permanency of these small docks see photos 66-4-69 (taken April 4, 1932) and 66-51-52 (taken July 25, 1932). Many of the homes lining the shore are summer homes and the docks are removed during the winter months and replaced in the early summer months.

On the April 1933 edition of chart 1216 there is shown a railroad trestle over Toms River between Pine Beach and Island Heights. On the March 20, 1935 edition of chart 3243 the trestle has been removed with no railroad on the north side but a short section of track from the "Y" to the shore on the south side. The correct existing conditions obtained from the field inspection performed in December 1934 have been shown on this compilation.

At the north shore of Toms River at the mouth there has been shown a street system which does not appear on the 1932 photos. The data for plotting this development is shown on the back of photo 66-51-52 and was obtained from the office of the Bay Shore Development Co. The field inspection party verified the streets as existing and street signs gave information for names. There are only one or two houses at present located on this development and the position of these has been omitted from this compilation.

All houses have been shown on this sheet except at Toms River and South Toms River (and in Bay Shore Development, see above.).

These long dashed clearings representing streets without grading or paving, which have been cleared by development companies, have been altered on the negative plates by painting out the long dashes. These streets now show as open lanes in the brush. A few of the more important have been changed to 2nd class roads by making short dashed lines of the long dashed.

On the aluminum control sheet of Lieut. Sammons, field letter "D", at Toms River, the highway bridge over the river has been shown with a width which includes the street and also the sidewalks. It has been shown on this compilation this way except at the ends where the width of the highway includes only the actual width of the road itself (curb to curb). There are three bridges in this area which have not been shown on the compilation by the usual symbol (wings at ends) because to do so would cause confusion of detail; therefore they have been shown by a short dash as marking the actual point of beginning and end of bridge.

Along Toms River on both the north and south sides there have been shown several boardwalks. They have been shown by a full single line in place of the usual dashed line in order not to confuse the highwater line where they at time coincide. They have been adequately labeled on the over-lay sheet.

There are several areas on this sheet where clearings have been made with the intention of building streets by development companies; however, as no grades have been made they have been shown on this compilation by the usual boundary symbol (long dash). (See opposite page.)

There are several places on this compilation along the railroad tracks on each side where fire lines have been shown. These usually consist of a plowed furrow^{rows} although they have been used as trails in many instances. They approximate closely the railroad right of way.

Just to the north of signal "INN TANK" the dock as shown on this compilation agrees with that shown on photo 66-4-70. The position of this dock was obtained from field measurements by the field inspection party in Dec. 1934 and plotted on the photo together with the high water line. Adequate measurements for tie-in were obtained and the plotting on the photo verified. Also this area is controlled decidedly strong by station "INN TANK" which was a theodolite position verified by Lt. Sammons topo. sheet "D".

The^{double} full line was used to indicate first class roads, the double dashed line to indicate second class or poor motor roads, and the single dashed line to indicate exceedingly poor roads, trails and paths.

Names.

For all geographical names see the special tables included in the back of this report.

LANDMARKS.

A list of landmarks, including those to be expunged, has been submitted by this party in the field inspection report attached to the Descriptive report T-5286, and also Lt. Sammons in 1935. They have all been shown on this compilation.

There are many other objects (such as houses, ends of docks, etc.) which are believed to be located within the accuracy specified under the paragraph Recommendations for Further Surveys, and may be used to obtain hydrographic fixes. Care should be taken when using houses to use the center as the size shown on the compilation may be expanded somewhat.

BRIDGES.

The bridge data shown on the over-lay sheet for this compilation was obtained from the field inspection report attached to the Descriptive report T-5286. It is noted that this information does not check the information as shown on Lieut. Sammons' topographic sheets of 1935. The following tabulation shows the differences for the two bridges over Barnegat Bay falling on this compilation.

		Lt. Sammons	Field Insp. (T-5286)
	Type	Drawbridge	Single leaf bascule draw.
Seaside Heights to Island Heights	Hor. Cl.	50.0 ft.	49.9 ft.
	Vert. Cl.	10.0 ft.	9.4 ft.
R.R. Bridge to Seaside Park	Type	Drawbridge	Swing
	Hor. Cl.	50.0 ft.	2 @ 70.0 ft. each.
	Vert. Cl.	4.0 ft.	4.4 ft.

In the case of the Seaside Heights bridge the field inspection data was accepted because it is on the safe side; also the U.S. Army Engineers obtained the same values.

In the case of the Seaside Park bridge it appears evident that Lieut. Sammons's topographer has made an error in the horizontal clearance. According to data in report T-5286 both the U.S.E. and the New Jersey Board of Commerce and navigation give a horizontal clearance of 77.0 ft. By actual measurement with a steel tape in the field a value of 70.0 ft. for each of the two channels was obtained. This also agrees with the clear width as shown on photo 66-51-53 where the draw is open and the clearance can be readily verified. A vertical clearance of 4.4 ft. is shown on the over-lay sheet in preference to Lt. Sammons 4 ft. as this value was obtained by the field party, the N.J. C. & N., and the U.S.E.D. Also it is believed that the topographer of Lt. Sammons did not list any closer than this value as tenths of feet are not shown.

The other bridges as shown on the over-lay sheet at Toms River was obtained from the report T-5286.

RECOMMENDATIONS FOR FURTHER SURVEYS.

The compilation of this sheet is believed to have a probable error of not over 2 meters in position for well defined detail of importance for charting, and not over 4 meters for other detail. It is understood the widths of roads and similar objects may be slightly exaggerated in order to keep the detail clear and to avoid the closing up of lines during the photo-lithographic process.

To the best of my knowledge and belief this sheet is complete in all detail of importance for charting, within the accuracy stated above, and no additional surveys are required.

March 6th, 1936.

Submitted by-

J. K. Batchelor
J. K. Batchelor, Draftsman.

LIST OF RECOVERABLE STATIONS.

This list includes all recoverable objects shown by a small black circle on this compilation. They have all been described on form 524 with the exception of "Bouy 49 B". The name in parenthesis preceeding the descriptive name is the Hydrographic name.

NAME	LAT.	LONG.	METHOD OF DETERMINATION.
(Gill) Flagpole	39°-56.6'	74°-07.9'	A.C.S."D".
(Make) Flagpole	-56.5'	-08.1'	A.P.T. & A.C.S."D".
Long Point (U.S.E.)(C. & N.)	-56.3'	-08.3'	A.P.T.
(Church) Cross on Steeple	-55.6'	-07.6'	A.C.S."D" & A.P.T.
(Gate)N. Gable dormer window	-55.8'	-08.4'	A.C.S."D".
Beacon 49 A	-56.1'	-08.3'	A.C.S."D".
(Ted) Pointed Green Cupola	-56.4'	-08.7'	A.C.S."D" & A.P.T.
(E.R.A. 2237) Traverse disk	-54.9'	-09.3'	A.P.T.
Cupola Bayville School	-55.1'	-09.5'	A.P.T.
Yellow Cupola	-55.9'	-09.1'	A.P.T.
(Bank) Concrete Mon. C. & N.	-56.2'	-09.1'	A.C.S."D" & A.P.T.
(Flack) Flagpole #3 (C. & N.)	-56.2'	-09.2'	A.P.T. & A.C.S."D".
Railroad (C. & N.) conc. Monument	-56.3'	-09.4'	A.C.S."D" & A.P.T.
(Round) N.Gab. 3-story House	-56.3'	-09.8'	A.C.S."D" & A.P.T.
(High) Flagpole	-56.4'	-09.1'	A.C.S."D".
Flagpole #4 (C. & N.)	-56.7'	-09.6'	A.P.T. & A.C.S."D".
Inside (C. & N.) Conc. Mon.	-56.7'	-09.4'	A.C.S."D".
Cove (C. & N.) Conc. Mon.	-56.9'	-09.9'	A.C.S."D".
(Rod) Red Cupola	-56.4'	-10.4'	A.P.T. & A.C.S."D".
Inn Tank	-56.4'	-10.1'	T.S. & A.C.S."D".
(Rex) Flagpole	-56.4'	-10.9'	A.C.S."D".
Bulkhead (C. & N.) Conc. Mon.	-56.8'	-10.2'	A.C.S."D" & A.P.T.
(E.R.A. 2230) Traverse disk	-57.6'	-10.6'	A.P.T.
(Wood) Cupola	-56.5'	-11.1'	A.C.S."D" & A.P.T.
Boardwalk (U.S.E.)(C. & N.) Conc.M.	-56.5'	-11.1'	T.S. & A.C.S."D".
(E.R.A. 2234) Traverse disk	-56.5'	-11.6'	A.C.S."D".
Pine (C. & N.) Conc. Mon.	-56.7'	-11.7'	A.C.S."D".
Dock (C. & N.) Conc. Mon.	-56.7'	-11.1'	A.C.S."D" & A.P.T.
Lawn (C. & N.) Conc. Mon.	-56.9'	-11.4'	A.P.T. & A.C.S."D".
(Esso) Chimney	-56.8'	-11.8'	A.C.S."D".
(Coal) Flagpole	-56.9'	-11.9'	A.C.S."D".
(Feed) E. Gable Elevator	-56.9'	-11.9'	A.C.S."D".
Bridge (C. & N.) Iron Pipe	-56.9'	-11.9'	A.P.T. & A.C.S."D".
(Pex) Apex of Pavilion	-57.1'	-11.9'	A.C.S."D".
(Gulf) Gasoline pump	-57.1'	-11.9'	A.C.S."D".
Toms River M.E.Church Steeple	-57.2'	-11.6'	A.P.T. & A.C.S."D".
(E.R.A. 2232) Traverse disk	-57.2'	-11.6'	A.C.S."D".
1st. Presby. Ch. Steeple, T.River	-57.3'	-11.7'	A.P.T. & A.C.S."D".
(E.R.A. 2233) Traverse disk	-57.4'	-11.9'	A.C.S."D".
Baptist Ch. Steeple, Toms River	-57.5'	-12.0'	A.P.T.
(E.R.A. 2229) Traverse disk	-57.7'	-11.3'	A.P.T.
Bouy 49 B	-56.7'	-11.3'	A.C.S."D".
(Toby) Flagpole	-57.1'	-12.1'	A.C.S."D".
(E.R.A. 2227) Traverse disk	-57.8'	-12.1'	A.P.T.
Point (C. & N.) Conc. Mon.	-56.8'	-11.5'	A.P.T.
Pier (C. & N.) Conc. Mon.	-55.2'	-06.6'	A.P.T. & A.C.S."C".
Exchange (C. & N.) Conc. Mon.	-55.6'	-06.9'	A.C.S."C".
Tule (C. & N.) Conc. Mon.	-55.6'	-06.4'	A.P.T.
Beacon 49	-56.2'	-06.6'	A.C.S."C".
(Way)Center of drawbridge c'weight	-56.9'	-06.6'	A.C.S."C".
Beacon 48	-54.7'	-06.9'	A.C.S."E".
South Gable Grey House	-54.3'	-08.1'	A.P.T. & A.C.S."E".
Trinkty M. E. Ch. Bell Tower	-54.5'	-09.3'	A.P.T.
Vent Cupola	-54.6'	-10.7'	T.S.
F.P. Polyhue Yacht Club	-56.6'	-11.4'	T.S. & A.P.T.

NOTE FOR PRECEEDING PAGE:-

A.C.S. denotes Aluminum Control Sheet, Sammons, 1935.

T.S. denotes Theodolite-observed control Station (See pages 5 & 6 in field inspection report attached to Desc. Report T-5286.).

A.P.T. denotes location by Air Photo Topography (radial plot).

In the column METHOD OF DETERMINATION on the preceeding page there are, in some cases, two methods of determination. The first listed is the original location and one following means that original location was verified by the Aluminum Control Sheet (A.C.S.) or the Air Photo Topography (A.P.T.- radial plot), as the case may be.

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INSPECTORS OF POWER VESSELS, THE NEW JERSEY SHIP CANAL COMMISSION AND THE NEW
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MAINTAINS INLAND WATERWAYS AND OPERATES STATE INLAND
WATERWAY TERMINALS.

February 19, 1935.
No. 1 Exchange Place,
Jersey City, N.J.

Mr. W.E. Hachett,
U. S. Coast & Geodetic Survey,
330 West 42nd Street,
New York, N.Y.

Dear Mr. Hachett:-

Enclosed herewith are the co-ordinates of the triangulation or topographic points in the vicinity of Beach Haven Inlet, which you requested. I regret I have been unable to locate the calculations of the Toms River survey but I am also including herewith a tabulation of each point and the bearing and distance to adjacent points. From this data by establishing one point as the origin you can easily compute your own system of co-ordinates.

Very truly yours,

Frank A. Tracey
Frank A. Tracey
Assistant Engineer

FAT:ag
encl.

STATE OF NEW JERSEY
BOARD OF COMMERCE AND NAVIGATION

Stations: Tom's River Survey.

<u>Station</u>	<u>Observed Point</u>	<u>Bearing</u>	<u>Distance</u>
Park	Bend	S 23°-48'-45" E	6716.35'
	Barb Wire	N 57-37-15 E	2560.3'
	Cottage	S 12-42-45 W	OK 6244.3 1903.3 ^m
Bend	Park	N 23°-48'-45" W	OK 6716.35 2047.1 ^m
	Barb Wire	N 45-36-15 W	6828.9'
	Cottage	N 89-15-15 W	OK 4087.3 1245.8 ^m
	Exchange	S 51-44-45 W	3327.7
	Tule	S 2-59-45 W	✓ 1998.8 609.2 ^m
Tule	Bend	N 2°-59'-45" E	1998.8'
	Exchange	S 88-33-15 E	2509.5
	Pier	S 27-30-15 W	✓ 2477.4 755.1 ^m
Pier	Tule	N 27°-30'-15" W	2477.4'
	Exchange	N 32-35-45	2533.00
Cottage	Wildwood	S 78°-45'-45" W	4633.20
	Long Point	N 66-46-15 E	OK 5370.5 1636.9 ^m
	Barb Wire	N 9-28-45 W	4785.5
	Park	N 12-42-45 E	6244.3
	Bend	S 89-15-15 E	4087.3
	Exchange	S 34-53-15 E	7576.7
Wildwood <i>lost</i>	Slip	N 55°-44'-45" W	3216.46
	Slope	N 34-22-15 E	-
	Long Point	N 7-22-15 W	3046.26
	Barb Wire	N 33-44-45 E	6762.70
	Cottage	N 78-45-45 E	4633.20

Tom's River
STATE OF NEW JERSEY

BOARD OF COMMERCE AND NAVIGATION

<u>Station</u>	<u>Observed Point</u>	<u>Bearing</u>	<u>Distance</u>
Long Point	Barb Wire	N 57° -53' -45" E	4896.30
			4894.74
	Cottage	S 66 -46 -15 E	5370.5
	Bayview East	S 58 -55 -00 E	7239.75
	Bayview West	S 18 -48 -15 E	3736.16
	Wildwood	S 7 -22 -15 E	3046.26
	Slip	S 61 -54 -15 W	2570.8
	Bank	S 81 -47 -15 W	OK 4071.12 1246.9
	Slope	N 65 -21 -45 W	2685.92
Bank	Slip	S 70 -20 -30 E	1870.42
	Long Point	N 81 -47 -15 E	4071.12
	Slope	N 43 -01 -00 E	2326.80
	Cliff	N 23 -25 -00 W	2442.67
	Railroad	N 60 -27 -30 W	1593.75
Inn	Railroad	S 69 -36 -10 E	2780.62
	Depot	N 80 -51 -20 E	3060.00
	Cliff	N 35 -48 -20 E	2642.52
	Bulkhead	N 21 -57 -40 W	2713.63
	Pavillion	N 79 -37 -40 W	2326.59
Bulkhead	Cove	N 58 -37 -50 E	1462.29
	Cliff	S 81 -41 -40 E	2588.08
	Inn	S 21 -57 -40 E	2713.63
	Pavillion	S 31 -15 -50 E	2454.48
	Boardwalk	S 66 -58 -50 W	4185.64
	Dock	S 83 -54 -20 W	4081.38
Pavillion	Inn	S 79 -37 -40 E	2326.59
	Cliff	N 65 -47 -20 E	4204.43
	Bulkhead	N 31 -15 -50 E	2454.48
	Dock	N 59 -08 -10 W	3245.03
	Boardwalk	N 79 -51 -40 W	2619.75

STATE OF NEW JERSEY
BOARD OF COMMERCE AND NAVIGATION

<u>Station</u>	<u>Observed Point</u>	<u>Bearing</u>	<u>Distance</u>
Boardwalk	Pavillion	S 79°-51'-40" E	2619.75
	Bulkhead	N 66 -58 -50 E	4185.64
	Dock	N 9 -43 -10 W	1220.97
	Lawn	N 35 -04 -40 W	3109.70
	Point	N 45 -05 -05 W	2812.45
Dock	Bulkhead	N 83°-54'-20" E	4081.38
	Pavillion	S 59 -08 -10 E	3245.03
	Boardwalk	S 9 -43 -10 E	1220.97
	Lawn	N 49 -41 -10 W	2072.82
	Point	N 66 -20 -40 W	1948.90
Point	Boardwalk	S 45°-05'-05" E	2812.45
	Dock	S 66 -20 -40 E	1948.90
	Lawn	N 20 -05 -35 E	595.37
	Bridge	N 77 -11 -40 W	1905.50
	Pine	S 62 -53 -35 W	1427.64
Lawn	Dock	S 49°-41'-10 E	2072.82
	Boardwalk	S 35 -04 -40 E	3109.7
	Point	S 20 -05 -35 W	595.37
	Pine	S 50 -39 -05 E	1907.81
	Bridge	S 86 -12 -20 W	2067.14
	Hotel	-	-
Hotel	Lawn	-	-
	Pine	-	-
Bridge	Lawn	N 86°-12'-20" E	2067.14
	Point	S 77 -11 -40 E	1905.50

Remarks

Decisions

1		
2		
3		
4		
5		
6	<i>this would appear to be just a public park in Bay Shore</i>	
7	<i>(9 & mal/long)</i> <i>Shown on AAA road map.</i>	
8	*From U.S.E. maps, file no. 2718.	
9		
10	*From U.S.E. maps, file no. 2718.	
11	* " " " " " 2719.	
12	<i>Seems unnecessary, in view of "Toms River" and the P.R. sta. there</i> * " " " " " 2719. <i>is marked "Toms River"</i>	
13	* " " " " " 2717.	
14	* " " " " " 2715.	
15	** Spelled as "Good Luck Point" (also see legend). *From U.S.E. maps, file no. 2716 <i>But already charted "Good Luck"</i>	<i>Good Luck</i>
16	* " " " " " 2717.	
17	* Spelled <u>Potter's Creek</u> on (1,2) (See legend) also on highway sign. <i>but charted "Potter"</i>	<i>Potter</i>
18	* Spelled "Jake's Branch on (2) (See legend) also on U.S.E. map, file no. 2719.	<i>Jakes</i>
19	<i>the official RR abbreviation is</i> " State is Pa. <i>PENNA.</i> (Government Printing Off)	
20	* From U.S.E. map, file no. 2719.	
21		
22		
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES

Survey No. T 5329

GEOGRAPHIC NAMES		1216, 3243		Air-photo Field Inspection		P. O. Guide or Map		Rand McNally Atlas		U. S. Light List		Rwy. maps, & Signs.	
Survey No. T5329		No. 3243		No. T117		From local information		On local maps		On U. S. S. quadrangle Maps		On previous survey	
Name on Survey		A	B	C	D	E	F	G	H	K	15329		
Toms River (town)	*	x		(1,2) 3 men	x	✓	✓	✓		x	1		
Toms River (stream)	*	x	✓	(1,2) 3 men	x	✓		✓		x	2		
Island Heights	*	x		(1,2) 3 men	x	✓	✓	✓		x	3		
Bayville	*	x		(1,2) 3 men	x	✓	✓	✓		x	4		
Bay Shore				3 men	x					x	* 5		
Gilford Park				3 men	x					x	* 6		
Barnegat Pier				(1,2) 3 men	x	✓		✓		x	* 7		
River Bank				(1,2) 3 men	x	x*					* 8		
Ocean Gate				(2) 3 men	x	✓	✓	✓		x	* 9		
Pine Beach				(2) 3 men	x	x*	✓	✓		x	* 10		
Beachwood				(2) 2 men	x	x*	✓	✓		x	* 11		
South Toms River (town)				(2) 2 men	x	x*					12		
Long Point	*	x		(1,2) 4 men	x	x*					13		
Coates Point	*	x		(1) 2 men	x	x*					14		
Goodluck Point	*	x	✓	(1,2) 2 men	x*	x*					15		
Mill Creek	*	x		(1,2) 4 men	x	x*					16		
Potter Creek	*	x		(1,2) 3 men	x*	x				x*	17		
Jakes Branch				(1,2)	x*	x*					* 18		
P.R.R.	*	x		(1,2) 5 men	x	✓		✓			19		
C.R.R. of N.J.	*	x		(1,2) 4 men	x	x*		✓			20		
Money Island			✓	(1,2)	x	✓					* 21		
Barnegat Bay	*	✓			✓	✓		✓			22		
Added 1/29/37 by M.B.												23	
Cedar Point } from used index												24	
Wilpatrick Pt. } Map. Phil. district												25	
** Legend:-												26	
(1) From U.S. Engineers Progressive Military Map. New Jersey, Barnegat Quadrangle, 1919.												27	
(2) From Dept. of Conservation & Development Atlas Sheet, no. 33, 1929.												28	
Names underlined in red approved												29	
by C.R.D. on 7/25/36												30	
M 234												31	

PLANE COORDINATE GRID SYSTEM

Positions of grid intersections used for fitting the grid to this compilation were computed by Division of Geodesy and the computation forms are included in this report.

Positions plotted by _____

Positions checked by _____

Grid inked on machine by _____

Intersections inked by _____

Points used for plotting grid:

x
y

x
y

x
y

x
y

x
y

x
y

x
y

x
y

Triangulation stations used for checking grid:

- | | |
|----------|----------|
| 1. _____ | 5. _____ |
| 2. _____ | 6. _____ |
| 3. _____ | 7. _____ |
| 4. _____ | 8. _____ |

*This grid was not plotted on celluloid because of poor projection. The attached computations may be used later. R.E. Ask

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE New Jersey

STATION T-5329-1

x	<u>2,130 000.00</u>	$\log S_e$	<u>5.11394054</u>
K		$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>+130 000.00</u>	$\log (1/R)$	<u>1086</u>
$x'^3/(6\rho_e^2)$	<u>.84</u>	$\log S_m$	<u>4.59796723</u>
S_e	<u>129 999.16</u>	cor. arc to sine	<u>279</u>
		$\log S_1$	<u>4.59796444</u>
$3 \log x'$	<u>5.34183005</u>	$\log A$	<u>8.50911984</u>
$\log 1/(6\rho_e^2)$	<u>4.5810213</u>	$\log \sec \phi$	<u>0.11539234</u>
$\log x'^3/(6\rho_e^2)$	<u>9.92285135</u>	$\log \Delta\lambda_1$	<u>2.22247662</u>
		cor. sine to arc	<u>+ 474</u>
$\log S_m^2$	<u>9.19592888</u>	$\log \Delta\lambda$	<u>3.22248136</u> ✓
$\log C$	<u>1.327491</u>	$\Delta\lambda$	<u>1669.0962</u>
$\log \Delta\phi$	<u>0.52341988</u>		
y	<u>405,000.00</u>		
ϕ' (by interpolation)	<u>39 56 42.9461</u>	λ (central mer.)	<u>74 40 "</u>
$\Delta\phi$	<u>3.3375</u>	$\Delta\lambda$	<u>27 49.0962</u>
ϕ	<u>39 56 39.6086</u>	λ	<u>74 12 109038</u>

Explanation of form:

$$x' = x - K$$

$$S_e = x' - \frac{x'^3}{(6\rho_e^2)}$$

$$S_m = \frac{1}{R} \left(\frac{1200}{3937} \right) S_e$$

R = scale reduction factor

ϕ' is interpolated from table of y

$$\Delta\phi = C S_m^2$$

$$\phi = \phi' - \Delta\phi$$

$$\Delta\lambda_1 = S_1 A \sec \phi$$

$$\log S_1 = \log S_m - \text{cor. arc to sine}$$

$$\log \Delta\lambda = \log \Delta\lambda_1 + \text{cor. arc to sine}$$

$$\lambda = \lambda \text{ (central mer.)} - \Delta\lambda$$

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE New Jersey

STATION T-5329-2

x	<u>2,155 000.00</u>	$\log S_e$	<u>5.190 32 77 2</u>
K		$\log (1200/3937)$	<u>9 . 4 8 4 0 1 5 8 3</u>
$x' (=x-K)$	<u>+ 155 000.00</u>	$\log (1/R)$	<u>10 8 6</u>
$x'^3/(6\rho_o^2)_e$	<u>1.42</u>	$\log S_m$	<u>4.6743 54 41</u>
S_e	<u>154 998.58</u>	cor. arc to sine	<u>396</u>
		$\log S_1$	<u>4.6743 50 45</u>
$3 \log x'$	<u>5.570 99 51 0</u>	$\log A$	<u>8.509 11 9 8 5</u>
$\log 1/(6\rho_o^2)_e$	<u>4.581 02 13</u>	$\log \sec \phi$	<u>0.115 38 98 6</u>
$\log x'^3/(6\rho_o^2)_e$	<u>0.152 01 6 40</u>	$\log \Delta\lambda_1$	<u>3.2988 60 1 6</u>
		cor. sine to arc	<u>+ 674</u>
$\log S_m^2$	<u>9.3487 08 8 2</u>	$\log \Delta\lambda$	<u>3.2988 66 9 0</u>
$\log C$	<u>1.3274 9.1</u>	$\Delta\lambda$	<u>1990.0633</u>
$\log \Delta\phi$	<u>0.6762 00</u>		
y	<u>405 000.00</u>		
ϕ' (by interpolation)	<u>39° 56' 42.9461</u>	λ (central mer.)	<u>74° 40'</u>
$\Delta\phi$	<u>4.744 6</u>	$\Delta\lambda$	<u>33 10.0633</u>
ϕ	<u>39 56 38.2015</u>	λ	<u>74 06 49 93 67</u>

Explanation of form:

$$x' = x - K$$

$$S_e = x' - \frac{x'^3}{(6\rho_o^2)_e}$$

$$S_m = \frac{1}{R} \left(\frac{1200}{3937} \right) S_e$$

R = scale reduction factor

ϕ' is interpolated from table of y

$$\Delta\phi = C S_m^2$$

$$\phi = \phi' - \Delta\phi$$

$$\Delta\lambda_1 = S_1 A \sec \phi$$

$$\log S_1 = \log S_m - \text{cor. arc to sine}$$

$$\log \Delta\lambda = \log \Delta\lambda_1 + \text{cor. arc to sine}$$

$$\lambda = \lambda \text{ (central mer.)} - \Delta\lambda$$

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE New Jersey

STATION T-5329-3

x	<u>2,130 000.00</u>	$\log S_0$	<u>5.11394054</u>
K		$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>+130 000.00</u>	$\log (1/R)$	<u>1086</u>
$x'^3/(6\rho_0^2)_0$	<u>.84</u>	$\log S_m$	<u>4.59796723</u>
S_0	<u>129 999.16</u>	cor. arc to sine	<u>279</u>
		$\log S_1$	<u>4.59796444</u> ✓
$3 \log x'$	<u>5.34183005</u>	$\log A$	<u>8.50912088</u>
$\log 1/(6\rho_0^2)_0$	<u>4.5810213</u>	$\log \sec \phi$	<u>0.11513115</u>
$\log x'^3/(6\rho_0^2)_0$	<u>9.92285135</u>	$\log \Delta\lambda_1$	<u>3.22221647</u>
		cor. sine to arc	<u>+ 473</u>
$\log S_m^2$	<u>9.19592888</u> ✓	$\log \Delta\lambda$	<u>3.22222120</u>
$\log C$	<u>1.326860</u>	$\Delta\lambda$	<u>1668.0966</u>
$\log \Delta\phi$	<u>1.522789</u>		
y	<u>390,000.00</u>		
ϕ' (by interpolation)	<u>39° 54' 14.7026</u> ✓	λ (central mer.)	<u>74° 40' "</u>
$\Delta\phi$	<u>3.3326</u>	$\Delta\lambda$	<u>27 48.0966</u>
ϕ	<u>39 54 11.3700</u>	λ	<u>74 12 11.9034</u>

Explanation of form:

$$x' = x - K$$

$$S_0 = x' - \frac{x'^3}{(6\rho_0^2)_0}$$

$$S_m = \frac{1}{R} \left(\frac{1200}{3937} \right) S_0$$

R = scale reduction factor

ϕ' is interpolated from table of y

$$\Delta\phi = C S_m^2$$

$$\phi = \phi' - \Delta\phi$$

$$\Delta\lambda_1 = S_1 A \sec \phi$$

$$\log S_1 = \log S_m - \text{cor. arc to sine}$$

$$\log \Delta\lambda = \log \Delta\lambda_1 + \text{cor. arc to sine}$$

$$\lambda = \lambda (\text{central mer.}) - \Delta\lambda$$

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE New Jersey

STATION T-5329-4

x	<u>2,155,000.00</u>	$\log S_e$	<u>5.19032772</u>
K		$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>+155 000.00</u>	$\log (1/R)$	<u>1086</u>
$x'^2/(6\rho_o^2)_o$	<u>1.42</u>	$\log S_m$	<u>4.67435441</u>
S_e	<u>154 998.58</u>	cor. arc to sine	<u>396</u>
		$\log S_1$	<u>4.67435045</u>
$3 \log x'$	<u>5.570 99510</u>	$\log A$	<u>8.509 12089</u>
$\log 1/(6\rho_o^2)_o$	<u>4.581 0213</u>	$\log \sec \phi$	<u>0.115 12868</u>
$\log x'^3/(6\rho_o^2)_o$	<u>0.15201640</u>	$\log \Delta\lambda_1$	<u>3.29860002</u>
		cor. sine to arc	<u>+ 673</u>
$\log S_m^2$	<u>9.348 70882</u>	$\log \Delta\lambda$	<u>3.298 60675</u>
$\log C$	<u>1.326860</u>	$\Delta\lambda$	<u>1988.8716</u>
$\log \Delta\phi$	<u>0.675568</u>		
y	<u>390 000.00</u>		
ϕ' (by interpolation)	<u>39° 54' 14.7026"</u>	λ (central mer.)	<u>74° 40' "</u>
$\Delta\phi$	<u>4.7377</u>	$\Delta\lambda$	<u>33 08.8716</u>
ϕ	<u>39 54 09.9649</u>	λ	<u>74 06 51.1241</u>
			<u>8</u>

Explanation of form:

$$x' = x - K$$

$$S_e = x' - \frac{x'^3}{(6\rho_o^2)_o}$$

$$S_m = \frac{1}{R} \left(\frac{1200}{3937} \right) S_e$$

R = scale reduction factor

ϕ' is interpolated from table of y

$$\Delta\phi = C S_m^2$$

$$\phi = \phi' - \Delta\phi$$

$$\Delta\lambda_1 = S_1 A \sec \phi$$

$$\log S_1 = \log S_m - \text{cor. arc to sine}$$

$$\log \Delta\lambda = \log \Delta\lambda_1 + \text{cor. arc to sine}$$

$$\lambda = \lambda \text{ (central mer.)} - \Delta\lambda$$

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE New Jersey

STATION T-5329-5

x	<u>2,140 000.00</u>	$\log S_0$	<u>5.146 124 78</u>
K		$\log (1200/3937)$	<u>9.484 015 83</u>
$x' (=x-K)$	<u>+140 000.00</u>	$\log (1/R)$	<u>1086</u>
$x'^2/(6\rho_0^2)_0$	<u>1.05</u>	$\log S_m$	<u>4.630 151 47</u>
S_0	<u>139 998.95</u>	cor. arc to sine	<u>322</u>
		$\log S_1$	<u>4.630 148 25</u>
$3 \log x'$	<u>5.438 384 12</u>	$\log A$	<u>8.509 120 54</u>
$\log 1/(6\rho_0^2)_0$	<u>4.581 021 3</u>	$\log \sec \phi$	<u>0.115 217 23</u>
$\log x'^2/(6\rho_0^2)_0$	<u>0.019 405 42</u>	$\log \Delta\lambda_1$	<u>3.254 486 02</u>
		cor. sine to arc	<u>+ 549</u>
$\log S_m^2$	<u>9.260 302 94</u>	$\log \Delta\lambda$	<u>3.254 491 51</u>
$\log C$	<u>1.327 070</u>	$\Delta\lambda$	<u>1796.7659</u>
$\log \Delta\phi$	<u>0.587 373</u>		
y	<u>395,000.00</u>		
ϕ' (by interpolation)	<u>39° 55' 04.1172</u>	λ (central mer.)	<u>74° 40' "</u>
$\Delta\phi$	<u>3.6670</u>	$\Delta\lambda$	<u>29 56.7659</u>
ϕ	<u>39 55 00.2502</u>	λ	<u>74 10 03.2341</u>

Explanation of form:

$$x' = x - K$$

$$S_0 = x' - \frac{x'^2}{(6\rho_0^2)_0}$$

$$S_m = \frac{1}{R} \left(\frac{1200}{3937} \right) S_0$$

R = scale reduction factor

ϕ' is interpolated from table of y

$$\Delta\phi = C S_m^2$$

$$\phi = \phi' - \Delta\phi$$

$$\Delta\lambda_1 = S_1 A \sec \phi$$

$$\log S_1 = \log S_m - \text{cor. arc to sine}$$

$$\log \Delta\lambda = \log \Delta\lambda_1 + \text{cor. arc to sine}$$

$$\lambda = \lambda \text{ (central mer.)} - \Delta\lambda$$

REVIEW OF AIR PHOTO COMPILATION T-5329
Scale 1:10,000

Comparison with Graphic Control Surveys

T-6396a (June 1935), 1:10,000

The causeway of the Pennsylvania R. R. bridge at lat. $39^{\circ} 55.1'$, long. $74^{\circ} 06.4'$ occupies a position on the graphic control sheet about 4.5 m. south of and parallel to its position as shown on T-5329. (See page 5 of this report.) The draw of this bridge also shows a discrepancy in location of about 5 m. The clearance and span of the bascule draw at lat. $39^{\circ} 56.9'$, long. $74^{\circ} 06.7'$ as shown on T-6396a is slightly greater than on the compilation. The latter however agrees with the U. S. Army Engineers data and is furthermore on the side of safety.

No other discrepancies noted.

T-6396b (June 1935), 1:10,000

Piers shown at lat. $39^{\circ} 56.3'$, long. $74^{\circ} 08.4'$ and lat. $39^{\circ} 56.4'$, long. $74^{\circ} 10.0'$ on T-5329 are not in exact agreement with those shown on T-6396b. The piers are probably the same on each survey since their dimensions and form are almost identical and because of their apparent stability the compilation is ~~believed to be correct~~ *accepted after check with the photographs.*

A small pier at lat. $39^{\circ} 56.3'$, long. $74^{\circ} 08.3'$ has been omitted from T-6396b. Field inspection shows this dock to exist.

No other discrepancies noted.

T-6397a (June 1935), 1:10,000

No discrepancies noted.

All other detail on these graphic control sheets within the area of this compilation is shown on T-5329 with the exception of temporary planetable stations and magnetic meridians.

The 1936 surveys located no additional detail on the above graphic control surveys *which were went back to the field in 1936.*

Form 524, descriptions on this compilation are filed under T-5329, T-6396 and T-6397.

Comparison with Contemporary Hydrographic Surveys

H-5870 (June 1935), 1:10,000

No discrepancies noted.

H-5871 (June 1935), 1:10,000

The shoreline on the hydrographic sheet has been traced from T-5329, but nevertheless shows numerous minor differences. Various piers on Toms River show similar minor differences in location due to poor tracing. The compilation in this respect may be accepted as being correct.

A lighted beacon set on a wreck (lat. $39^{\circ} 55.6'$, long. $74^{\circ} 06.2'$) and shown on H-5871 is not shown on the compilation although it is known to exist (see chart letter #579 (1933) and descriptive report H-5871). The beacon cannot be spotted on the photographs.

Numerous buoys occupy the area of this compilation, none of which are shown on T-5329.

Comparison with Previous Topographic Surveys

T-117 (1839),	1:10,000
T-120 (1839),	1:20,000
T-159 (1842),	"
T-160 (1842),	"
T-1371 (1874),	"
T-1407 (1875),	"

The older topographic sheets (1839-1842) show the usual changes in shoreline, stream beds, outline of swamp areas, roads, etc. which are to be expected in the lapse of a century. T-1371 and T-1407 show only minor changes, the general topography remaining unaltered with most of the differences occurring in the swamp area south of Goodluck Point. The Pennsylvania R. R. bridge across Barnegat Bay at lat. $39^{\circ} 55.1'$ is ~~ix~~ not shown on T-1371, but occurs on T-1407 (the two sheets overlapping in this area).

This compilation, T-5329 is complete and adequate to supersede those sections of the above topographic surveys covered by the compilation.

Comparison with Chart No. 3243 (1935), 1:80,000

Two docks shown on the chart on the north shore of Toms River are no longer existent (lat. $39^{\circ} 56.7'$, long. $74^{\circ} 09.6'$, and lat. $39^{\circ} 56.8'$, long. $74^{\circ} 09.7'$).

A light shown on compilation T-5329 at lat. $39^{\circ} 54.8'$, long. $74^{\circ} 06.9'$ occupies a different position on the chart. The position given on the compilation is taken from T-6397a of June 1935.

The positions of both spans across Barnegat Bay show considerable disagreement with the compilation. The mouth of Toms River for a distance of two miles inland and adjoining topography show a distinct upward warping on the chart. All landmarks in this locality, however, are in perfect agreement with the compilation.

A wreck at latitude $39^{\circ} 55.6'$, long. $74^{\circ} 06.2'$ carries a light which is not shown on the compilation. *light is shown on H 5871 (1935)*

Beacons off Long Point and off Goodluck Point are not shown on the chart. Flashing buoys in their immediate vicinity and maintained during the summer months are, however, shown.

Locations of all beacons and lights ^{shown by} on this compilation are from *plan table* survey of June 1935.

Roads shown west of Bayville are not in agreement with T-5329.

With the above exceptions all landmarks and aids to navigation (excepting buoys) shown on that part of chart 3243 covered by this compilation are shown on the compilation.

Remarks

On the original compilation streets which were mere clearings made by development companies with the intention of future grading and paving were represented by long dashed lines in contrast to the short dashed lines representing second class roads. These have been painted out on the negative plates leaving open lanes through the brush. The more important of these crude streets were shown as second class roads or as trails.

Jan. 23, 1937

Frank R. Gollon.

Information from Coast Pilot Sec.

Geo. Names -

From - U.S. E. Index Map (Philadelphia)

CEDAR Pt. -- Lat. $39^{\circ} 56.9'$ - Long $74^{\circ} 11.5'$

KILPATRICK Pt. - Lat. $39^{\circ} 56.95'$ - Long. $74^{\circ} 11.7'$

E.K.G.

V.B.G. Jones
1/24/37
Frank R. Gollon

REVIEW OF AIR PHOTO COMPILATION NO. T-5329.

Chief of Party: Roswell C. Bolstad

Compiled by: (See page 2)

Project Air Photo Compilation Party #12. Instructions dated: Nov. 15, 1932.

- ✓ 1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64)
- ✓ 2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 28; and 66 g,n)
- ✓ 3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d,e)
- ✓ 4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)
- ✓ 5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.
- ✓ 6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 12b; 44; and 66 c,h,i)
- ✓ 7. High water line on marshy ~~and mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

- ✓ 8. The representation of low water lines, ~~reefs, coral reefs and~~
~~reefs~~, and legends pertaining to them is satisfactory. (Par.
36, 37, 38, 39, 40, 41)
- ✓ 9. Recoverable objects have been located and described on Form 524
in accordance with circular 30, 1933, circular letter of March 3,
1933, and circular 31, 1934. (Par. 29, 30, and 57)
- ✓ 10. A list of landmarks was furnished on Form 567 and instructions
in the Director's letter of July 16, 1934, Landmarks for Charts,
complied with. (Par. 16d, e; and 60)
- ✓ 11. All bridges shown on the compilation are accompanied by a note
stating whether fixed or draw, clearance, and width of draw if
a draw bridge. Additional information of importance to naviga-
tion is given in the descriptive report. (Par. 16c)
- ✓ 12. Geographic names are shown on the overlay tracing. The accepted
local usage of new names has been determined and they are listed
in the report, together with a general statement as to source of
information and a specific statement when advisable. Complete
discussion of place names differing from the charts and from the
U. S. G. S. Quadrangles is given in the descriptive report,
together with reasons for recommendations made. (Par. 64, and 66k)
- ✓ 13. The geographic datum of the compilation is N.A. 1927 and the
reference station is correctly noted.
- ✓ 14. Junctions with adjoining compilations have been examined and are
in agreement. (Par. 66j)
- ✓ 15. The drafting is satisfactory and particular attention has been
given the following:
 - 1. Standard symbols authorized by the Board of
Surveys and Maps have been used throughout
except as noted in the report.
 - 2. The degrees and minutes of Latitude and Longi-
tude are correctly marked.


- ✓ 3. All station points are exactly marked by fine black dots.
- ✓ 4. Closely spaced lines are drawn sharp and clear for printing.
- ✓ 5. Topographic symbols for similar features are of uniform weight.
- ✓ 6. All drawing has been retouched where partially rubbed off.
- ✓ 7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

- ✓ 16. No additional surveying is recommended at this time.

17. Remarks: Any additional reports and requirements affecting this area are referred to the reports and surveys of Lt. Sammons who conducted a hydrographic and topographic party in this locality in 1935. The hydrographic sheets were not available for this area except for a very short interval. Although no discrepancies were found it is suggested a final comparison be made with particular attention to names which have not been tabulated on the special form under the column "Previous Surveys".


- 18. Examined and approved;



Roswell C. Bolstad.
 Chief of Party

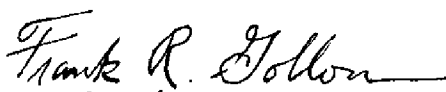
- 19. Remarks after review in office:

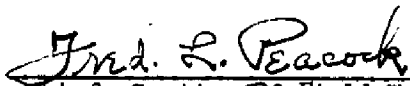
Reviewed in office by:

Examined and approved:


E. H. Green.
 Chief, Section of Field Records


L. O. Lobert
 Chief, Division of Charts


Frank R. Galloway
 Chief, Section of Field Work


J. L. Peacock
 Chief, Division of Hydrography and Topography.