

6399a

b

Graphic Control

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic } Sheet No. L and M
Hydrographic }

State New Jersey

LOCALITY

a-Manahawken Bay; Turtle Cove to Horse Pt.

b-Little Egg Harbor; Horse Pt. to Beach Haven

1935

CHIEF OF PARTY

B.H. Rigg

U. S. GOVERNMENT PRINTING OFFICE: 1934

Graphic Control

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
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FEB 26 1936

REG. NO.

Acc. 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. L

REGISTER NO.

6399a
T6399a

State New Jersey

General locality Little Egg Harbor Manahawken Bay¹⁴

Locality Manahawken Bay Turtle Cove to Horse Pt.²³

Scale 1/10,000 Date of survey July, 1935

Vessel Party No. 19

Chief of party Benjamin H. Rigg

Surveyed by Addison S. Hall & A. M. Rogers, Jr.

Inked by T. B. Nutting

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

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

Instructions dated May 16, 1935

Remarks: No hydrography done.

DESCRIPTIVE REPORT TO ACCOMPANY
GRAPHIC CONTROL SHEET "L"

Outline

1. INSTRUCTIONS.
2. PURPOSE OF SURVEY.
3. LIMITS OF SHEET.
4. DESCRIPTION OF TERRITORY.
5. CONTROL.
6. SURVEYING METHODS USED.
7. PERMANENT STATIONS ESTABLISHED.
8. AIDS TO NAVIGATION AND LANDMARKS.
9. COMPARISON WITH AIR PHOTO COMPILATION.
10. GEOGRAPHIC NAMES.

DESCRIPTIVE REPORT TO ACCOMPANY
GRAPHIC CONTROL SHEET "L"

INSTRUCTIONS

The Survey was carried out under instructions dated May 16, 1935.

PURPOSES

The purpose of the survey was to establish control for hydrography, to locate permanent stations, to check aids to navigation and landmarks, and to locate topographic detail for use in the air-photo compilation.

LIMITS OF SHEET

Sheet "L" includes the ocean beach from Surf City (Lat. $39^{\circ} 40'$, Long. $74^{\circ} 12'$) southwestward to about a mile below the Brant Beach Water Tank (Lat. $39^{\circ} 36.5'$, Long. $74^{\circ} 12'$).

It also includes the Intracoastal Waterway and a portion of Little Bay and surrounding territory to Lat. $39^{\circ} 41'$, Long. $74^{\circ} 13'$ on the northwest, and Lat. $39^{\circ} 38'$, Long. $74^{\circ} 15'$ on the southwest.

DESCRIPTION OF TERRITORY.

The barrier islands along the ocean beach in this area are quite well populated, contact with the mainland being made by means of the Manahawkin Bridge. The settlements of Surf City, Beach Arlington or Ship Bottom, and Brant Beach fall within the limits of the sheet.

Little Bay is a shallow body of water extending over most of the sheet. It is an excellent fishing and clamming area. It can be navigated at low tide, only by boats of the shallowest draft.

The New Jersey Inland Waterway extends across the sheet from north to south, keeping within two hundred meters or so of the barrier islands. An alternate route extends along the western edge of Little Egg Harbor, joining the main channel at Bonnett Island just below the Manahawkin Bridge.

The shoreline in the meadows is, in general, irregular and in most cases eroding. The marsh grass grows to a height of about one foot. The ground is firm on the surface, but consists of soft mud underneath the surface mat of grass roots.

CONTROL

The following triangulation stations were used as control on sheet "L":

✓ SURF	Meany 1932	
✓ BEACH ARLINGTON	Meany 1932	
✓ " " S.P.	" "	
-BRANT	" "	
✓ " BCH. W.T.	" "	
✓ TURTLE	Rigg 1935	
✓ POPULAR	" "	
✓ CLAM	" "	
-BONNET	" "	
✓ CEDAR RUN	" "	

The following triangulation stations which fell within the limits of the sheet were not recovered:

SURF C. W.T.	Meany 1932
GREAT SWAMP	Farley 1839
HICKORY I.	" "
HICKORY I. 2	" 1867
GREAT SWAMP 2	" "
HICKEY	" 1839
HICKEY 2	" 1866

SURVEYING METHODS USED

Control was entirely adequate in this area. The method used was to take cuts to hydrographic signals and prominent natural objects from set-ups on triangulation stations. The survey was started at the northern end of the sheet and worked through to the south, setting up on triangulation stations SURE, TURTLE, BONNET, POPULAR, BRANT, and CEDAR RUN in the order named.

No traverses were run. The patches of high water line along the ocean beach were rodded in from banners on the dunes, which were cut in by graphic triangulation. Shoreline was rodded in from set-ups on, or eccentric from, hydrographic signals. Additional cuts to signals were also taken from these set-ups. The Manahawkin Highway and Railway Bridges were located by eccentric set-ups from hydrographic signals and from triangulation station BONNETT.

PERMANENT STATIONS ESTABLISHED

A. Natural objects located by Plane Table - Scaled geographic positions of all permanent natural objects located for hydrographic signals, together with descriptions on form 524 accompanying the sheet. These natural objects include chimneys and gables of houses, signal masts, water tanks, etc.

The following natural objects were described and marked on the graphic control sheet with the letter "D".

MAST SHIPBOTTOM COAST GUARD
CHIMNEY THREE STORY HOUSE
CHIMNEY YELLOW FRAME HOUSE
WOOD TANK
SO. CABLE POPULAR ~~ISLAND~~

C. Bolstad Fourth Order Stations. -- All of Bolstad's "4th order" stations (located for Air-Photo Compilation Control) falling within the limits of the graphical control sheets were plotted. Wherever possible, they were checked with the planetable. In the few cases where discrepancies occurred, they were adjusted by re-checks of the computations or of the topography, or both. The final position as shown on the sheet and the card, is to be considered correct.

Following is a list of stations falling on sheet "L":

Station	Whether or Not Checked	Amt. of Discrep.	Remarks
<u>Gray Tank</u>	Checked		
<u>N. Gab. Bonnet Club</u>	"		
<u>Thom. Garage S. Gab.</u>	"		
<u>Man</u>	"		
<u>Track</u>	Checked		
<u>Pav. Cedar Run Y. C.</u>	Checked		
<u>S. Gab. Reed I.</u>	Not Checked		Only one cut.
<u>Shipbottom C. G. Cup.</u>	Checked		
<u>Mill</u>	Not Checked		Temporary Station.

AIDS TO NAVIGATION AND LANDMARKS

The aids to navigation along the New Jersey Inland Waterway consist of two inch saplings surmounted by red, wooden crosses on the star-board hand side going south, and by black wooden triangles on the port hand. No lights fell within the limits of the sheet. The alternate route at the western edge of Little Egg Harbor is marked by mid-channel spar buoys only. (See corresponding paragraph in report on sheet "M")

No landmarks should be added to sheet "L". The water tank at Surf City above the Manahawkin Bridge has been removed, and should be deleted from the charts. Charts affected are Nos. 1216 and 3243.

TOPOGRAPHIC FEATURES LOCATED FOR USE IN AIR PHOTO COMPILATION

Patches of shoreline were rodded in at frequent intervals along the ocean beach and in the interior. In addition the two Manahawkin Bridges and the Shipbottom Fishing Dock were located. These details were compared with the compilation. In all cases except the shoreline along the ocean beach, which was transferred to the compilation, no adjustment was necessary.

GEOGRAPHIC NAMES - See air photo compilation for details.
Respectfully submitted,

Addison S. Hall
Addison S. Hall,
Surveyor

Forwarded by,
John J. ...
Lt. John J. ... Chief Party

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U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

DEC 28 1936

Acc. No.

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic }
Hydrographic }

Sheet No. L

T6399a Supplemental work in 1936

State New Jersey

LOCALITY

Manahawkin Bay

1936

CHIEF OF PARTY

John A. Bond

U. S. GOVERNMENT PRINTING OFFICE

R. L. Graham

6.

SUPPLEMENTAL REPORT

To Accompany Graphic Control Sheet L 76399a

Manahawkin Bay.

INSTRUCTIONS

The graphic control on sheet L is a part of Project HT-205, the instructions for which were dated May 16, 1935.

GENERAL INFORMATION

This sheet was surveyed in July 1935 under Lieutenant B. H. Rigg but no hydrography was done in this area. In June 1936, all old signals that could be recovered were re-built and additional signals built and located..

LANDMARKS FOR CHARTS

The water tank at Surf City has been destroyed and should be deleted from all charts. A list of landmarks to be deleted from charts will be submitted in a separate report. No new landmarks were located this season.

NON-FLOATING AIDS TO NAVIGATION

A list of non-floating aids to navigation will be submitted in a separate report.

DISCREPANCIES

(1) The flag tower at the Shipbottom C. G. Station was found to be approximately 10 meters south of the station "MAST SHIPBOTTOM C.G." This discrepancy was noted in the field and additional set-ups were made at triangulation stations BONNET, POPULAR and topo station EBO, to verify the location as given for SHIPBOTTOM C.G. FLAG TOWER 1936. The Coast Guard Station was visited and there is no mast or structure of any kind at the position as shown for MAST SHIPBOTTOM C.G.

(2) A storm in November 1935 wrecked the railway bridge at the northern edge of this sheet. At present only the vertical piles are remaining, all rails, ties and super structure of the bridge having been carried away in the storm. The tops of this row of piles extend 6 inches to 2 feet above the surface of the water, depending on the tide.

RECOVERABLE TOPOGRAPHIC STATIONS

Twelve new recoverable topographic stations were located. There are descriptions of these stations, on Forms 524, submitted herewith. One form 524 for destroyed station "Chy. Three Story House" is submitted also.

SURVEY METHODS

All signals were located by intersections and three point fixes.
No shoreline was rodded this year.

Submitted by,

D. M. Watt

D. M. Watt

Approved by,

J. A. Bond

John A. Bond
H. & G. Engineer
Chief of Party

M-189

REVIEW OF GRAPHIC CONTROL SURVEY T-6399a, SCALE 1:10,000

Date of Review 2/9/27 2/17/37

1. This survey has been reviewed in connection with Air Photo Compilation Nos. T-5899, 5444, 5443, with particular attention to the following details:

- ✓ (a) Projection has been checked in the Field.
- ✓ (b) Accuracy of location of plane table control points.
- ✓ (c) Discrepancies between detail on this survey and the air photo compilations listed above.
- ✓ (d) Discrepancies found in descriptions submitted on Form 524 when compared with the air photo compilations listed above.

2. Refer to the reviews and descriptive reports of air photo compilations Nos. T-5899, 5444, 5443, for a more complete discussion of any errors or discrepancies found.

Any material errors found on this survey are noted in subsequent paragraphs of this review, and these have been reported to the Field Records Section and the Cartographic Section.

Notes and corrections resulting from the review are shown on this survey in green.

L. C. Hardy

Frank R. Zollon

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

U. S. COAST & GEODETIC SURVEY
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FEB 26 1936

REG. NO.

Acc. 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. M

REGISTER NO.

^{6399b}
T6399 b

State New Jersey

General locality Little Egg Harbor

Locality ~~Beach Haven~~ Horse Pt. to Beach Haven

Scale 1/10,000 Date of survey July, 1935

Vessel Party No. 19

Chief of party Benjamin H. Rigg

Surveyed by Addison S. Hall & A. M. Rogers, Jr.

Inked by T. B. Nutting

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated May 16, 1935

Remarks: Hydrography partly completed.

DESCRIPTIVE REPORT TO ACCOMPANY
GRAPHIC CONTROL SHEET M

Outline

1. INSTRUCTIONS.
2. PURPOSE
3. LIMITS OF SHEET.
4. DESCRIPTION OF TERRITORY.
5. CONTROL.
6. SURVEYING METHODS USED.
7. PERMANENT STATIONS ESTABLISHED
8. AIDS TO NAVIGATION AND LANDMARKS.
9. TOPOGRAPHIC FEATURES LOCATED FOR USE IN AIR PHOTO COMPILATION.
10. GEOGRAPHIC NAMES.

DESCRIPTIVE REPORT TO ACCOMPANY
GRAPHIC CONTROL SHEET M

1. INSTRUCTIONS

The survey was carried out under instructions dated May 16, 1935.

PURPOSE

The purpose of the survey was to locate topographic control for hydrography, to establish permanent stations, to locate aids to navigation and check landmarks, and to locate topographic features for use in the Air Photo Compilation.

LIMITS OF SHEET

The topography on sheet M includes the ocean beach from Lat. $39^{\circ} 36.5'$, Long. $74^{\circ} 12.2'$ southwestward to the northern end of the boardwalk at Beach Haven (Lat. $39^{\circ} 33.8'$, Long. $74^{\circ} 14.0'$). It also includes Little Egg Harbor and surrounding territory from Lat. $39^{\circ} 38'$, Long. $74^{\circ} 16'$ on the northwest, to Lat. $39^{\circ} 35.7'$, Long. $74^{\circ} 17.8'$ on the southwest.

DESCRIPTION OF TERRITORY

The territory covered by sheet M is entirely similar to that covered by sheet L. All of the central portion of the sheet is water. Most of this water area is navigable at low tide only, by boats of the shallowest draft. Beach Haven, in the S.E. corner of the sheet, is the largest settlement on Long Beach. It has fine docking facilities and is a good anchorage for small craft. All supplies may be obtained here.

Beach Haven is a growing summer resort and a great pleasure fishing center.

CONTROL

The following triangulation stations were used as control on sheet M:

PEAHALA (Meanev '32) STANDPIPE (C.D.M. '32) TERRACE Meanev 1932
SHELTER (Rigg '35) WEST (Rigg 1935) (PARKER Rigg 1935)

The following triangulation stations which fell within the limits of the sheet were not recovered:

DINNER PT.	Farley	1839
DINNER PT. 2	"	1867
CRAMER	"	1839

SURVEYING METHODS USED

The hydrographic signals on sheet M were cut in from set-ups on triangulation stations PEHALA, WEST, TERRACE, SHELTER, and an eccentric set-up at station PARKER. A set-up was made on the signal about 100 m. east of West Gable Long Pt. Additional set-ups were made on hydrographic signals, to complete the location of the signals. Patches of shoreline were rodded in in conjunction with this work. The ocean beach from the southern limit of the sheet northward to Long Beach Coast Guard Station was run in in conjunction with a traverse run northward from a point transferred from sheet "O", and tied in to a station located by a cut from triangulation station TERRACE and a resection on triangulation station SHELTER. No adjustment was necessary.

PERMANENT STATIONS ESTABLISHED.

A. Natural Objects located and described.

The following natural objects were located, and designated with the letter "D" on the graphical control sheets. These objects are described on form No. 524.

Cupola, Long Beach Coast Guard Station
Sig. Mast Long Beach Coast Guard
E. Gab. Three Story Bldg.
E. Gab. Hotel
Chy West Cr. Yacht Club

B. Monumented Stations.

No permanently marked H & T stations were established on sheet M.

C. Bolstad Fourth Order Stations. -- All of Bolstad's "4th order" stations (located for Air-Photo Compilation Control) falling within the limits of the graphical control sheets were plotted. Wherever possible, they were checked with the planetable. In the few cases where discrepancies occurred, they were adjusted by re-checks of the computations or of the topography, or both. The final position as shown on the sheet and the card, is to be considered correct.

Following is a list of stations falling on sheet "M":

Station	Whether or Not Checked	Amt. of Discrep.	Remarks
INCINERATOR STACK	Checked		
W. GABLE LONG PT.	Checked		
EAST GABLE (West Creek)	Not Checked		

AIDS TO NAVIGATION AND LANDMARKS

The following is a quotation from "Coast Pilot Notes to Accompany Chart No. 3243" and applies to aids to navigation falling on this sheet:

"The United States Lighthouse Service maintains aids to navigation at the inlets and along the following portions of the inland waterway: Barnegat Bay from Cedar Creek to Sandy Island; at Beachhaven; the channel leading to Tuckerton from Little Egg Inlet; Great Bay from Little Egg Inlet to Main Marsh Thorofare; in the vicinity of Great Egg Inlet from Shelter Island to Ocean City; and the channel leading to Cape May Harbor from the inlet by that name.

The marks of the Lighthouse Service for the inland through-route are as follows:

L. Red nun buoys even numbered from north to south, when southbound will be on the right or starboard side of the channel.

2. Black can buoys odd numbered from north to south, when southbound will be found on the left or port side of the channel.

3. Red-black buoys at the junction points of channels. Inlets and channels not a part of the main inside through-route and the channel leading from the sea to Cape May Harbor are marked in accordance with the general practice, that is, red buoys on the right and black buoys on the left hand when proceeding from seaward or from the main inside through-route.

"In addition to the United States aids, the State of New Jersey maintains a comprehensive system of day marks along the channels of the inside route. Lighted buoys and lighted beacons are also maintained by the State in some sections.

The day marks and lights maintained by the State for marking the inside through-route are as follows:

1. Small stakes each with mounted red cross on southbound right hand side of channel, and small stakes each with mounted black triangle on southbound left hand side of channel, at frequent intervals where the channels are narrow.

2. Red beacons supported generally by three stakes each with mounted keg on the southbound right hand side of the channel and black beacons supported generally by three stakes each with mounted pyramid on the southbound left hand side of channel, at important turns or where leading to branch channels. (Stakes with circular discs or squares mark the branch channels, and signs indicate the directions to towns.)

3. Black-white buoys, either barrel or spar type, at the middle of the deeper or more open channels. These are generally intervisible.

4. Flashing red lights on the southbound right hand side and flashing green lights on the southbound left hand side of the channel in the sections Manasquan River and between [^]Island Heights-Seaside Heights Bridge. (see 5)

5. Flashing red lights on the southbound right hand side and flashing white lights on the southbound left hand side of the channel in the sections between Island Heights-Seaside Heights Bridge and Atlantic City, and between Ottens Harbor (Wildwood) and Cape May Harbor.

During the summer months a number of buoys are established to mark racing courses by various yacht clubs. They are usually marked in a distinctive manner, to distinguish them from the navigation buoys.

The buoys and lights are removed before freezing. The stakes and beacons are left in position, some of which may be carried away by the ice. All are restored about April of each year."

The channel lights were the only aids to navigation considered permanent enough or of sufficient importance to be located on the topographic sheet. Scaled positions of these lights on form 567 accompany the sheets. These positions should be used with caution, as ice frequently carries away the stakes to which the lights are attached. The lights are replaced each spring in the same, or approximately the same, locations and the same numbers are held to from year to year.

The landmarks as shown on the present chart are correct for the area covered by sheet "M".

TOPOGRAPHIC FEATURES LOCATED FOR USE IN AIR PHOTO COMPILATION

Portions of the high water line along the ocean beach and of the shoreline in the interior were rodged in for comparison with the Air Photo Compilation. The northern end of the boardwalk at Beach Haven was also located. Rod readings were shown by dots in breaks in the shoreline. Considerable adjustment in the compilation was necessary, especially along the ocean beach where a great deal of change had taken place since the photos were taken in 1932.

Due to beach erosion - not adjustment.

Refs.

GEOGRAPHIC NAMES

See air photo compilation for details.

Respectfully submitted,

A. M. Rogers, Jr.

Forwarded by,


Lt. Benjamin H. Rice,
Chief of Party.

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U. S. COAST & GEODETIC SURVEY
LIBRARY AND ARCHIVES

DEC 28 1936

Acc. No. _____

Form 504
Rev. April 1935
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Topographic }
Hydrographic }

Sheet No. _____

T6399b Supplemental work in 1936

M

State New Jersey

LOCALITY

Little Egg Harbor

1936

CHIEF OF PARTY

John A. Bond

U. S. GOVERNMENT PRINTING OFFICE

R. H. Graham

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SUPPLEMENTAL REPORT

To Accompany Graphic Control Sheet M T6399b

Little Egg Harbor

INSTRUCTIONS

The graphic control on sheet M is a part of Project HT-205, the instructions for which were dated May 16, 1935.

GENERAL INFORMATION

This sheet was surveyed in July 1935 under Lieutenant B. H. Rigg but no hydrography was done in this area. In June 1936 all old signals that could be recovered were re-built and additional signals as needed were built and located.

LANDMARKS FOR CHARTS

No new landmarks were located this season.

NON-FLOATING AIDS TO NAVIGATION

The range marked by signals AT and LIP at the lower edge of the sheet is also shown on graphic control sheet O with the azimuth. These range beacons are triangles, approximately 4 feet on the side, mounted on a single 2x4 upright about 12 feet long, driven in the mud. These beacons, as now constructed, are not of permanent nature.

The lights hydrographic signals WAG (Lat. $39^{\circ} 34.8'$; Long. $74^{\circ} 15.9'$) and SEP (Lat. $39^{\circ} 36.5'$; Long. $74^{\circ} 15.5'$) are temporary. These lights are mounted on single piles about 10 inches in diameter and extending 10 feet above the water. In the late fall these lights are removed and the ice usually destroys the piles during the Winter. The following Spring no effort is made to replace the lights at the exact locations as the previous season. It is doubtful as to whether the positions and numbers of the lights, as shown in the Summer of 1936, will be reliable data for charting purposes after the Winter of 1936.

Attention is called to the two lights bearing the same number, 40A. The light number 40A (Lat. $39^{\circ} 36.5'$; Long. $74^{\circ} 17.5'$) was installed in the Spring of 1936. The light number 40A (Lat. $39^{\circ} 36.9'$; Long. $74^{\circ} 15.8'$) was installed and numbered in 1935. H-6216
H-6215

RECOVERABLE TOPOGRAPHIC STATIONS

Eleven new recoverable topographic stations were located. These stations are described on forms 524.

SURVEY METHODS

All signals were located by intersection and three point fixes.

Submitted by,

D. M. Watt
D. M. Watt

Approved by,

J. A. Bond

John A. Bond
H. & G. Engineer
Chief of Party

REVIEW OF GRAPHIC CONTROL SURVEY T-6399b, SCALE 1:10,000

Date of Review 2/10/37

1. This survey has been reviewed in connection with Air Photo Compilation Nos. T-5444, , , with particular attention to the following details:

- ✓(a) Projection has been checked in the Field.
- ✓(b) Accuracy of location of plane table control points.
- ✓(c) Discrepancies between detail on this survey and the air photo compilations listed above.
- ✓(d) Discrepancies found in descriptions submitted on Form 524 when compared with the air photo compilations listed above.

2. Refer to the reviews and descriptive reports of air photo compilations Nos. T-5444, , , for a more complete discussion of any errors or discrepancies found.

✓Any material errors found on this survey are noted in subsequent paragraphs of this review, and these have been reported to the Field Records Section and the Cartographic Section.

Notes and corrections resulting from the review are shown on this survey in green.

L. C. Landy