

8503

1219

Diag'd. on diag. ch. No. 1219

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Air Photo. Compilation

Field No. \_\_\_\_\_ Office No. T-8503

Air Photo. Test.

LOCALITY

State Delaware

General locality Indian River

Locality Frankford

1943

CHIEF OF PARTY

Lieut. Comdr. F. L. Gallen

Lieut. Comdr. K. G. Crosby

~~Comdr. Ray L. Schoppe~~

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DATE Feb. 13, 1948

B-1870-1 (1)

8503

## DATA RECORD

T- 8503

Quadrangle (II): FRANKFORD

Project No. (II): CS 302-B

Field Office:

Chief of Party: F.L.Gallen  
Ray L. Schoppe

Compilation Office: Tampa, Fla.

Chief of Party: K.G.Crosby

Instructions dated (II III): 18 Mar. 1943

Copy filed in Descriptive  
~~Report No. T~~ (VI)  
Div. Photogram. Office Files

Completed survey received in office: 1 Nov. 1943

Reported to Nautical Chart Section: ✓

Reviewed: 17 Jan. 1944 Applied to chart No. Date:

Redrafting Completed: 24 Feb. 1944

Registered: 2 Feb. 1948

Published: 1944

Compilation Scale: 1:20,000

Published Scale: 1:25000

Scale Factor (III): 1.00

Geographic Datum (III): N.A. 1927

Datum Plane (III): M.S.L. 1929

Reference Station (III): PINE, 1934

Lat.: 38°35'08"341(257.19) Long.: 75°11'15"176(367.32) Adjusted  
m. m. ~~Unadjusted~~

State Plane Coordinates (VI):

Delaware State Grid - Single Zone

X =

Y =

Plane Coords. not yet Computed 24m D.H. 1/5/44

Military Grid Zone (VI)

Zone "A"

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
8743	April 14, 1942	1:17	1:20,000	0.4 below M.L.W.
13338	April 4, 1943	1:15	"	0.5 " "
13343	" " "	1:27	"	0.5 " "
13344	" " "	1:29	"	0.5 " "
13345	" " "	1:31	"	0.5 " "

Eastern War time

No record of Date and times of photographs in Tampa Office

Tide from (III); Reference Sta. SANDY HOOK Corrected to Indian River Inlet (1/6 Mi from Ocean)

Mean Range: 1.1 ft. for 1942 & '43      Spring Range: 1.3 ft. for 1942 & 1943

Camera: (Kind or source)  
9- lens (usg+g.s.)

Field Inspection by: O.N. Dalbey, Photo. Aid      date:

Field Edit by: *Wendell Bever, Jr. Topo. Engr.* date: *Dec., 1943*

Date of Mean High-Water Line Location (III):

Projection and Grids ruled by (III) Wash. Office      date:

" " " checked by: " "      date:

Control plotted by: Washington Office      date:

Control checked by: " "      date:

Radial Plot by: " "      date:

Detailed by: A.E. Abbitt, Asst. Engr. Drafts.      date: Sept.-Oct. 1943

Reviewed in compilation office by: J.A. Giles, Asst. Photo. Engr.      date: Oct. 1943  
J.H.S. Billmyer, Asst. Photo. Engr.

Elevations on Field Edit Sheet  
checked by: *Wendell Bever, Jr. Topo. Aid.*      date: *Dec., 1943*

STATISTICS (III)

Land Area (Sq. Statute Miles); 52.9

Shoreline (More than 200 meters to opposite shore); 32.2 miles

Shoreline (Less than 200 meters to opposite shore); 26.0 miles

Number of Recoverable Topographic Stations established; None

Number of Temporary Hydrographic Stations located by radial plot; None

Leveling (to control contours) - miles; 103.6 st. mi.

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;



## General Procedure in the Production of Topographic Quadrangles for the War Department

This quadrangle, together with similar adjoining maps produced under Project C.S. 3018, was prepared by the Coast and Geodetic Survey for the War Department under "General Specifications for War Department Mapping Program" issued about December 1941, in which is incorporated the "Standard of Accuracy for a National Map Production Program" issued by the Bureau of the Budget under date of June 10, 1941.

The general procedure in the production of this and the adjoining quadrangles was:

### FIELD SURVEYS

Aerial photography with the Coast and Geodetic Survey nine-lens camera, with airplane and flight crew furnished by the U. S. Coast Guard. The photographs were taken to the scale of 1:20,000. 1942-43

Ground inspection of the photographs for identification of control points, and classification and clarification of planimetric details on the photographs.

Contouring by planetable directly on the photographs. Supplementary vertical control was established by means of an extensive subordinate level net, furnishing unmarked elevations at road intersections, drive-ways, and numerous other points identifiable on the photographs.

### COMPILATION OF MANUSCRIPT

Compilation on the map manuscripts by radial plot methods (celluloid hand templates) of all planimetry and contours. These manuscripts were drawn on the scale of 1:20,000 on celluloid sheets on which polyconic projections had been ruled with the Projection Ruling Machine in the Washington Office. Compilation was accomplished in the Baltimore Tampa Photogrammetric Office.

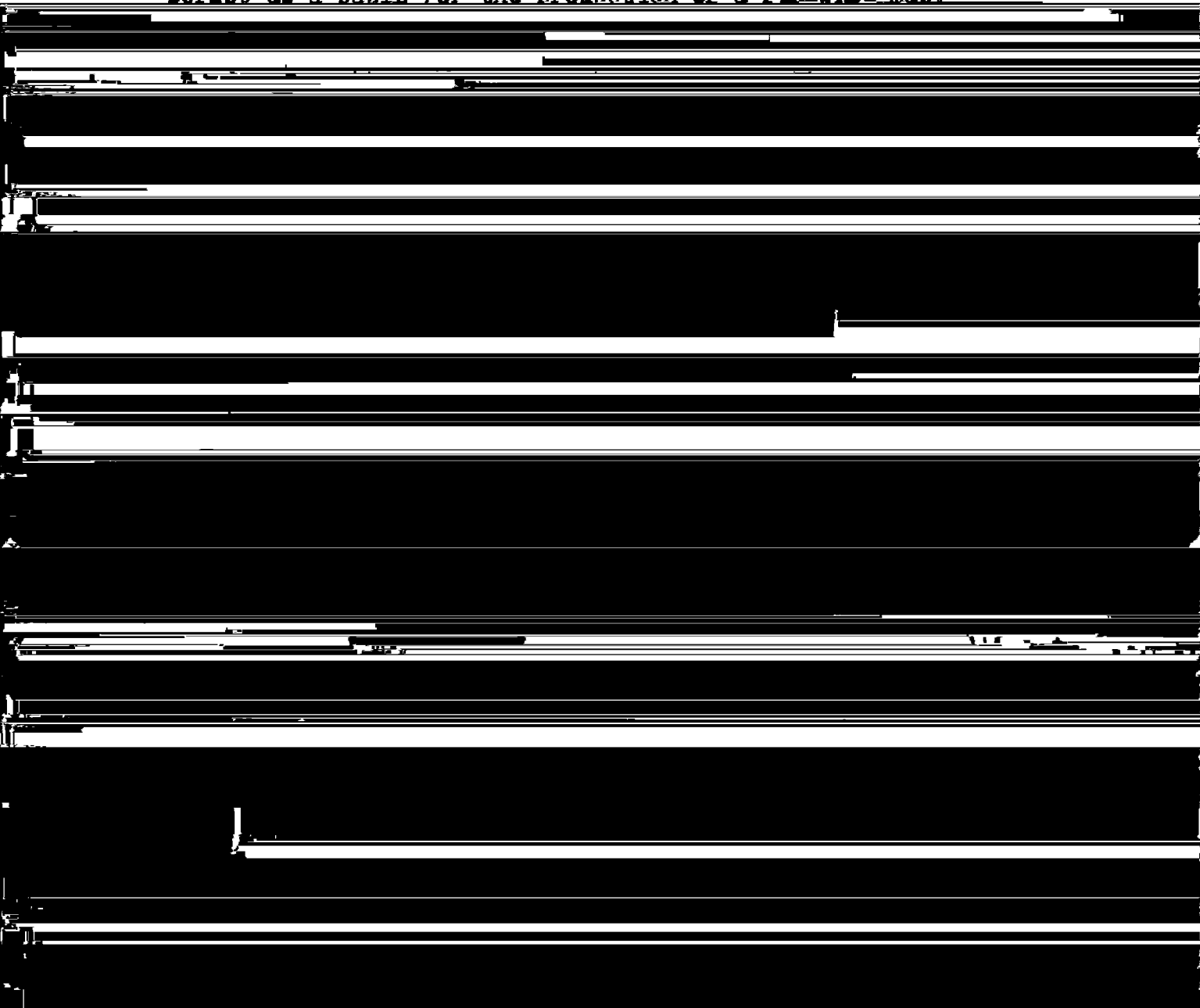
### FIELD EDIT

Comparison of a copy of the manuscript with the ground. This included inspection for completeness and accuracy as well as the location by planetable methods of additional details, checking of nautical and aeronautical aids to navigation, etc.

Accuracy Tests - Application of systematic horizontal and vertical accuracy tests to check the maps for conformity with the specifications. These tests consisted of comparison of the map position and elevation of selected random points with the true position and elevation as independently determined by standard survey methods.

#### PROCESSING IN THE WASHINGTON OFFICE

Review - Examination of the manuscript for accuracy and completeness of compilation and compliance with specifications, correcting where necessary; addition of military and state grids and other special features; and verification of the general adequacy of the manuscript as a basis for the production of a finished map.





FIELD INSPECTION REPORT  
QUADRANGLE T-8503  
Project CS-302-B  
F. L. Ga llen, Chief of Party

1. DESCRIPTION OF AREA:

This quadrangle which lies entirely in Sussex County, Delaware consists of rolling timberland, well developed farms, with marsh formed by the Indian River in the northeast portion of the survey. Elevations range from sea level in the northeast section to about 45 feet in the southwest portion. There is usually drainage in the timbered areas, while the farmland is drained by numerous ditches in the areas where drainage is found. The farm and wooded areas vary from rolling terrain in the central portion to rather flat land in the north and south. The farm and wooded areas have a light sandy soil which is well drained by the Indian River and the streams and ditches leading into it. Indian River is navigable for small boats and affected by tidal changes throughout the quadrangle. Delaware State Highway No. 26 serves the central portion of the quadrangle between Bethany Beach and Dagsboro, with Delaware No. 17 going southwest from Millville to Roxana, a village south of the quadrangle. The northern portion of this survey is served by Delaware State Highway No. 24. There are many all weather county roads throughout the quadrangle which permit travel in all types of weather. The timberland on this quadrangle consists of pine, cedar and deciduous trees, with a heavy undergrowth of brush. The towns of Frankford and Dagsboro are located in the southwest section of the quadrangle. Oak Orchard is a beach resort on the northern shore of the Indian River. The Pennsylvania Railroad, running north and south along the southwest portion of this quadrangle, serves the towns of Dagsboro and Frankford.

2. COMPLETENESS OF FIELD INSPECTION:

The field inspection is thought to be complete. All public buildings have been shown and labeled. ~~Only~~ the buildings circled are to be shown on the map drawings. All buildings circled and not labeled are to be classed as dwellings. Trails which were not clear on the photographs are shown with a dashed red line. The marsh areas have been designated and enclosed with a dashed blue line. There are three main highways on this quadrangle which have been labeled: Delaware State Highways No. 17, No. 24 and No. 26. It is believed that all necessary notes and information are shown on the field photos that should be shown on the map drawing. Classification of bridges and culverts which have been designated on the photos or any other small items erroneously omitted will be noted by the field edit party. +145  
May 113

3. INTERPRETATION OF THE PHOTOGRAPHS:

See report for T-8498.

4. HORIZONTAL CONTROL:

See report for T-8498.



5. VERTICAL CONTROL:

See report for T-8498.

6. CONTOURS AND DRAINAGE:

See report for T-8498.

7-13. See report for T-8498.

14. ROAD CLASSIFICATION:

See report for T-8498.

15. BRIDGES AND CULVERTS:

See report for T-8498.

16. BUILDINGS AND STRUCTURES:

See report for T-8498.

17. BOUNDARY MONUMENTS AND LINES:

See report for T-8498.

18. GEOGRAPHIC NAMES:

See report for T-8498. *L.H.*

19. JUNCTIONS:

Junctions with T-8504 on the east and T-8501 on the north have been made and are in agreement. This quadrangle joins T-8101 in Project CS-278-B on the south. There are no recent surveys to the west.

20. PHOTOGRAPHS USED:

Photographs used in surveying this area are: 13343, 13345, 13336 and 13338.

Approved and forwarded:

*F. L. Gallen*

F. L. Gallen  
Chief of Party

Submitted by:

*Orvis N. Dalbey*

Orvis N. Dalbey  
Photogrammetric Aid



**CONTROL PROJECT 302B**  
**QUADRANGLE T-8503**

STATION	CLASS	PHOTO NO.	DATE	INITIAL
<b>HORIZONTAL CONTROL:-----</b>				
Higgins House W. Chy. ✓	R-M	13337	5/8/43	L.G.C.
Oak Orchard, Easterly				
House, W. Cable ✓	R-M	13337	5/12/43	L.G.C.
Oak Orchard, Flagpole				
Conical red roof F. P. ✓	R-M USED	13337	5/12/43	L.G.C.
Summer House Flagpole ✓	R-M	13337	5/12/43	L.G.C.
Spears Boathouse,				
South Cable ✓	R-M	13337	5/12/43	L.G.C.
Dark 2 story house,				
South west Cable ✓	R-M USED	13337	5/12/43	L.G.C.
Pine, 1934 ✓	R-M	13344	5/13/43	L.G.C.
Champlin, 1934 ✓	R-M	13344	5/8/43	L.G.C.
Iron, 1934 ✓	R-M	13337	5/7/43	L.G.C.
White, 1934 ✓	R-M	13337	5/7/43	L.G.C.
Frankford, Water Tank ✓	R-M	13344	5/13/43	L.G.C.
P.T.S. No.7,1910(USGS)	R-M	13344	5/13/43	L.G.C.
P.T.S. No.12,1910(USGS)	R-M	13344	5/13/43	L.G.C.
Dark 2 story house,				
South west Cable(USED)	R-M	13337	5/12/43	L.G.C.
Conical red roof Flag				
Pole (USED)	R-M	13337	5/14/43	L.G.C.
Camp Otonka Flagpole	D-M	-----	5/12/43	L.G.C.
Lungo, 1934	D-M	-----	5/8/43	L.G.C.
P.T.S. No.7,1917(USGS)	D-M	-----	5/13/43	L.G.C.
Buzzard No.2 (USED)	D-M	-----	5/14/43	L.G.C.
Cut No. 2 (USED)	D-M	-----	5/14/43	L.G.C.
Woods No. 2 (USED)	D-M	-----	5/8/43	L.G.C.
Island No. 2 (USED)	D-M	-----	5/8/43	L.G.C.
Trouble No. 2 (USED)	D-M	-----	5/14/43	L.G.C.
Bob (USED)	D-M	-----	5/14/43	L.G.C.
Duck No. 2 (USED)	D-M	-----	5/14/43	L.G.C.
Marsh (USED)	D-M	-----	5/14/43	L.G.C.
Three Pines (USED)	D-M	-----	5/8/43	L.G.C.
Cedar (USED)	D-M	-----	5/14/43	L.G.C.
Cove No. 2 (USED)	D-M	-----	5/8/43	L.G.C.
Reed No 2 (USED)	D-M	-----	5/14/43	L.G.C.
Swamp No. 2 (USED)	D-M	-----	5/14/43	L.G.C.
Bush (USED)	D-M	-----	5/8/43	L.G.C.
Sum (USED)	D-M	-----	5/14/43	L.G.C.
Shack No. 2 (USED)	D-M	-----	5/14/43	L.G.C.
Rosedale No. 2 (USED)	D-M	-----	5/8/43	L.G.C.

**VERTICAL CONTROL:-----**

U 4 ✓	R-A	13343	4/18/43	L.W.H.
V 4 ✓	R-A	13343	4/18/43	L.W.H.
U.S.G.S. "19" ✓	R-M	13345	5/31/43	J.N.H.

**SOUTH OF QUADRANGLE T-8503**

**VERTICAL CONTROL:-----**

T 4 not recovered  
F. L. Gallen  
Chief of party

Joe N. Henningsen, Prin. Photo. Aid.  
In charge, sub party.



**FIELD INSPECTION  
PROJECT CS-283**

**BUILDINGS**

B - Barn  
Bldg - Building  
Bo Ho - Boat House  
Ch - Church (give name)  
Co Ho - Court House (give name)  
P-O - Post Office (give name)  
Sch - School (give name)  
Hos - Hospital (give name)  
RR Sta - Railroad Station  
Sto - Country store or  
gas station  
P Sta - Power Station

**FEATURES**

BDY - Boundary  
F D - Fire Ditch  
Edgn - Edge  
Park - Park  
Cem - Cemetery  
Co - County

**LANDMARKS**

FT - Fire Tower (give name)  
TT - Transmission Tower  
NT - Radio Tower or mast  
Air Bn - Army Borden  
Bn - Borden lighted aid to  
navigation  
Lt - Lighted aid to  
navigation  
Lk - Low tank  
Tk elev - Tank elevated on  
structure  
Stk - Stack

**GENERAL**

X - delete; except where it  
pertains to elevations  
Use only the abbrev. listed  
on this page. Do not make  
up abbreviations.

**SHORE LINE**

HWL - Mean high water; fast land  
LWL - Low waterline  
LL - Marsh shore line  
M - Marsh  
Mw - Marsh grass in water  
Dr - Dock  
Pier - Pier  
Se V - Sea Wall  
Bld - Bulkhead  
Jet - Jetty  
Dol - Dolphin  
Pile - Pile  
J - Jam  
Lnd - Land  
Rk - Rock or rocky  
Sty - Steep  
Cem - Concrete  
Wo - Wood  
Blf - Bluff  
Dune - Dune

**WATER AND DRAINAGE**

D - Largest ditch only  
EX - Small ditch (delete)  
IS - Intermittent stream  
ID - Probable drainage  
Cr - Creek  
Ca - Canal  
Cv - Culvert  
Lw - Lower  
Bm - Dam  
P - Pond  
IP - Intermittent pond

**VEGETATION**

Gr - Grass  
Sw - Swamp  
Cy Sw - Cypress Swamp

## WOODS AND BRUSH

### TYPE

D	Deciduous
E	Evergreen
Gy	Cypress

### CONCEALMENT

Z	Trees 10 feet or more in height, and thick enough when in foliage to conceal troop and vehicles.
Y	Brush and undergrowth thick enough to impede foot troops and conceal troops lying down.
X	Scattered trees not thick enough to conceal troops.
W	Scattered brush not thick enough to conceal troops.

### PHYSICAL FEATURES

HG	Higher ground - usually appears in light tone on photograph; either wooded or cultivated area; may be scrub trees or brush. (usually not symbolized on photographs.)
LG	Low areas - generally appears dark on photograph; becomes swampy during rainy season; often covered with dense growth of brush.
SW	Swamp - ground covered with water or boggy most of the time; lower in elevation than LG; wooded and/or brush.
M	Salt marshes

NOTE: The above areas are not outlined but sufficient notes are made on each photograph so that the variation in tones can be correctly interpreted in the office.

## BRIDGE AND TUNNEL CLASSIFICATION

<u>First Symbol</u>	<u>One Lane</u>	<u>Unlimited</u>
Capacity	5 m.p.h.	
A	50 tons	25 tons
B	25 tons	18 tons
C	18 tons	13 tons
D	10 tons	7 tons
E	6 tons	4 tons
F	Light vehicles only	

### Second Symbol

Vertical Clearance	A - over 14 feet
	B - over 13 feet
	C - over 12 feet
	D - over 11 feet, etc.

### Third Symbol

Horizontal Clearance	A - over 18 feet
	B - over 17 feet
	C - over 16 feet
	D - over 15 feet, etc.

### Fourth Symbol - Year of Classification



## ROAD CLASSIFICATION FOR MAPS OF ALL SCALES

CLASS	LABEL	STRUCTURE	LOADING
1	Dependable hard-surface heavy duty road.	Concrete, asphaltic concrete bituminous Macadam, H-15 type structures.	Will bear heaviest loads with little maintenance.
2	Secondary, hard-surface all-weather road.	Surface-treated, oiled gravel, waterbound Macadam, structures generally lighter than H-15 but sturdy.	Will bear fairly heavy military loads in all weather if maintained.
3	Loose-surface graded, dry-weather road.	Gravel or stone surface, stable material, selected sand-clay, etc. Drained and graded.	Will bear light military loads in good weather.
4	Unimproved road.	Graded and drained earth, with very light structure.	Generally unsuitable for military loads.
4U	Truck road	Woods roads, farm roads, etc. over which a standard gage vehicle can be driven.	
5	Trail	(Horse trails, foot trails, etc.)	

Roads with more than two (2) lanes are indicated by note along road, e. g. 3 LANE. Change in lanes shown by tick at point of change. Main roads have two lanes unless otherwise marked.

Private roads are designated by the letter P after the road classification.

### WOODS CONCEALMENT CLASSIFICATION

- Class-A: ~~Trees over 10' high and thick enough to hide troops.~~  
Class-B: ~~Brush thick enough to hide troops but dense enough to impede progress.~~  
Class-C: ~~Scattered brush thick enough to hide troops but not thick enough to impede progress.~~



COMPILATION REPORT  
TO ACCOMPANY  
SHEET NO. T-8503

26. CONTROL

There are eight U. S. C. and G. S. triangulation stations which fall within the tracing limits of the sheet and could be held to in the plot. One station, CONICAL ROOF FLAGPOLE, through misidentification could not be held. This is mentioned in the report on the main radial plot.

27. MAIN RADIAL PLOT

The main radial plot of the project, which was run in the Washington Office, is discussed in the compilation report for sheet T-8502.

28. DETAILING

The center portions of the photographs were of fair scale and clear, and the field inspection was, in general, sufficient. Therefore, no great difficulty was experienced in the detailing of the sheet.

The small streams flowing through heavy woodland are shown on the field prints and the survey sheet with the intermittent stream symbol. As it is quite obvious that these streams are "probable drainage, unsurveyed", they should be checked in the field.

At latitude  $38^{\circ} 30.'9$ , longitude  $79^{\circ} 12.'5$ , a stream as traced out under the stereoscope does not fit the contour as shown on the field print. As the area is covered with dense woods, either the stream or contour, as shown, may be incorrect. This should also be investigated. *75°*

Two radial points determined on the main radial plot, and shown in red, appear to be slightly in error. These points fall just east of the eastern tracing limit and in the lower part of the sheet. They have been checked by cutting in additional points in the vicinity.

Most of the detail along the southern junction agrees quite well with sheet T-8101. Some slight discrepancies along this junction should be investigated and corrected in the Washington Office, as T-8101 was compiled in the Baltimore Office.

The railroad tracks in the town of Frankford are to be investigated by the field edit party, as it was impossible to pick them out on the photograph.



As the compiler had some trouble with the red celluloid ink, the contours were inked on the back of the sheet in black. It is thought that this will cause little inconvenience to the smooth draftsman as they "stand out" fairly well. In the future, all contours will be inked in red, as has been requested by the Washington Office.

29. SUPPLEMENTAL DATA

No graphic control surveys by this Bureau, or maps and plans by other organizations were used to supplement the photographs and field inspection notes.

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES

In comparing the sheet with U. S. G. S. Rehoboth Quadrangle, (Edition of 1928 from surveys in 1917), numerous minor discrepancies were noted. These small differences are quite possible on maps made 26 years apart and on widely different scales.

45. COMPARISON WITH NAUTICAL CHARTS

No comparison could be made with the latest nautical charts, as the only chart of the area available in the Tampa Office was a bromide print of U. S. C. and G. S. Chart 1219, published in February 1931 on a scale of 1:80,000.

Respectfully submitted,

*Alpha E. Abbitt*  
Alpha E. Abbitt,  
Asst. Engr. Draftsman

Forwarded by:

*Kenneth G. Crosby*  
Kenneth G. Crosby,  
Chief of Party....

FIELD EDIT REPORT  
Quadrangle T-8503  
Project CS 302 B  
R. L. Schoppe, Chief of Party

1. DESCRIPTION OF AREA: See field inspection report.
2. COMPLETENESS OF FIELD INSPECTION: See field inspection report.
3. INTERPRETATION OF PHOTOGRAPHS: Photographs were not used by this party.
4. HORIZONTAL CONTROL: See field inspection report.
5. VERTICAL CONTROL: The photographs showing level elevations and bench marks were ~~not~~ available to this office, ~~hence they should be checked by the compilation office.~~ *and were checked against the compilation.*
6. CONTOURS & DRAINAGE: The contours and drainage in the vicinity of latitude 38° 30.9' and longitude <sup>75°</sup> 12.5 have been investigated and correctly shown on the compilation.  
It was noted in the compilation report that streams in heavily wooded areas were probably unsurveyed (probable drainage unsurveyed) and should be investigated by the field edit party. It was, also, noted that the streams to be inspected were not indicated. Checking all the streams would require weeks of work by plane table traverses or taping. Therefore, inspection was made by visual checks and pacing, of streams where a large error might exist. Hereafter, this party would recommend a discrepancy overlay be submitted to the field edit party showing questionable drainage and other pertinent information.
7. MEAN HIGH WATER LINE: This party was on the alert for discrepancies - none were found.
8. LOW WATER LINE: This item not applicable to this party.
9. WHARVES & SHORELINE STRUCTURES: Shoreline structures were investigated and found to be complete and adequate as shown.
10. DETAILS OFFSHORE FROM HIGH WATER LINE: There were no offshore details within the limits of this sheet.
11. LANDMARKS & AIDS TO NAVIGATION: There were no landmarks or navigational aids on this sheet.
12. HYDROGRAPHIC CONTROL: This item not applicable to this party.
13. Landing Fields and Aeronautical Aids: There were no landing fields or aeronautical

17. BOUNDARY MONUMENTS AND LINES: The political-subdivisions of Sussex County have been added from political boundary maps and where necessary verified in the field. All other boundaries added by the field inspection party have been checked.
18. GEOGRAPHIC NAMES: See field inspection report.
19. Discrepancies and questions under item 28 in the compilation report have been inspected in the field. Suitable notes have been made on the compilation report and/or under the proper item in this report.
20. Junctions: The contours of this sheet and the sheet (newly published) to the south, T-8101, failed to make a suitable junction. The contours on sheet T-8503 were found to be a little in error. They were rerun and a satisfactory junction with the contours on sheet T-8101 was made. Suitable notes have been made on the compilation.
46. METHODS: This compilation was field edited on the chart paper print and later transferred to the Whatman paper print. Discrepancies not covered by suitable symbols were noted on the sheet by a sentence and an arrow to the point in question. All symbols used are standard topographic symbols except that a green X was used to show deletions and tick marks were used to show limits of deletion and points of change in road classifications. The following color scheme was used:
- |                                                   |            |        |
|---------------------------------------------------|------------|--------|
| Deletions. . . . .                                | b. . . . . | Green  |
| Additions, classifications, names, notes. . . . . |            | Black  |
| Water Culture. . . . .                            |            | Blue   |
| Political Boundaries. . . . .                     |            | Violet |
47. ADEQUACY OF COMPILATION: Except for known deficiencies such as classifications of roads, dwellings and public buildings, and the additions of new structures, the compilation of this sheet was complete and adequate.
48. ACCURACY TESTS:
1. Horizontal: A separate report of the horizontal accuracy test for this sheet has been previously submitted to the Washington Office.
  2. Vertical: See field inspection report.

Submitted by:  
*Wendell Bever*  
 Wendell Bever,  
 Jr. Topo. Engr.

Approved by  
*Ray L. Schopp*  
 Ray L. Schopp,  
 Chief of Party.



## HORIZONTAL ACCURACY TEST

Quadrangle T-8503

Project 302 B

This test consists of a traverse between triangulation stations Indian(1934) and North(1929). The traverse is 9.0 statute miles in length and contains 23 test points; 11 of which are within the limits of this quadrangle. The traverse closure is one part in 7890 and a discrepancy of 1.83 meters was adjusted through the traverse. In the tabulation the geodetic position from the traverse computations is referred to as T. No. and the scaled position from the map manuscript is referred to as M. No.

## TABULATION OF TEST POINTS

Description of Point	Test Point Number	Latitude	Longitude	Displacement in mm.
Inter. of road & road, 60 degrees	T.No.2 M.No.2	38-34-1506.7 38-34-1509.9	75-07-1097.1 75-07-1090.9	.35
Center of house	T.No.3 M.No.3	38-34-1393.0 38-34-1393.5	75-07-1137.0 75-07-1135.5	.08
Inter. of "Y" road	T.No.4 M.No.4	38-34-909.9 38-34-896.2	75-07-1239.5 75-07-1235.5	.71
Inter. of road & road, 70 degrees	T.No.5 M.No.5	38-34-84.7 38-34-84.5	75-08-793.9 75-08-795.9	.10
Inter. of road & road, 85 degrees	T.No.6 M.No.6	38-33-1358.8 38-33-1354.9	75-08-776.9 75-08-775.5	.21
Center of house	T.No.7 M.No.7	38-33-1050.3 38-33-1052.9	75-08-735.7 75-08-735.3	.13
Inter. of road & road, 80 degrees	T.No.8 M.No.8	38-33-1016.2 38-33-1010.7	75-08-768.6 75-08-766.7	.29
Inter. of road & road, 60 degrees	T.No.9 M.No.9	38-33-204.5 38-33-200.1	75-08-741.8 75-08-744.4	.26
Inter. of road & road, 80 degrees	T.No.10 M.No.10	38-33-73.1 38-33-59.7	75-07-1348.9 75-07-1357.9	.81
Center of house	T.No.11 M.No.11	38-33-57.4 Not compiled.	75-07-825.5	
Center of intersection	T.No.13 M.No.13	38-32-1608.9 Not compiled.	75-07-800.8 34.6	

This pt. was never cut in even in detailing. The error occurred in shifting between detail points.

Same error as on Point 4. Careless drafting. Showed the smooth curve too sharp.

Error in Computations. This Point is on T-8504 Wm. P.H.

Test points No. 3, No.4, and No.7 are less well defined; the remaining test points are well defined. Test points No.11 and No.13 were not compiled; these points(the center of a house and center of intersection, respectively)were not shown on the manuscript. Since the intersection at the scaled position is not shown on the manuscript, it is probable that this point is the intersection of drives; however, it is not possible to ascertain this definitely from the traverse measurement note-book. It may be noted that about 84% of the well defined points are within the requirements of .5 mm; the less well defined points are within the requirements.

Approved by: *Ray L. Schoppe*  
Ray L. Schoppe, Chief of Party.

Submitted by: *Charles Hanavich*  
Charles Hanavich, Prin. Photo. Aid.



DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF AIR PHOTOGRAPHIC SURVEY T- 8503

FRANKFORD, DELAWARE QUADRANGLE

This quadrangle manuscript has been examined for completeness, accuracy, and conformity with the specifications. It is adequate for smooth drafting, reproduction and publication. Revisions found to be necessary in this office are discussed on the next page.

Horizontal and Vertical Accuracy

The horizontal accuracy test shows that two out of the nine tested points were in error more than 0.5mm. An explanation of these errors is written on the margin of a carbon copy of the test and bound in the Descriptive Report.

A vertical accuracy test was run on T-8501, -north of T08503.

Previous Surveys

This manuscript has been compared with the following previous topographic surveys of this Bureau and other agencies. This map is satisfactory to supersede the previous surveys over the common area.

T-226 1/20000 1845 The shoreline along the Indian River has moved, in general, shoreward from 20 to 40 meters. After datum corrections, points along the shore still appear to be about 1 mm farther east on T-8503. Inland detail is considerably changed. of 1.0+ mm

U.S.G.S. REHOOTH 15' 1/62500, 1928. Few differences/in shoreline. Inland detail shows many changes.

Survey T-8503 supersedes all previous surveys in the area which it covers; except the 10-ft and 30-ft contours on the quadrangle.

Comparison with Nautical Charts Nos. 1219 1/80000

The manuscript has not been applied to the charts at the date of this review. The following comments are pertinent to the compilation and correction of nautical charts: In general the shoreline of the Indian River is in good agreement. The scale difference made it difficult to check accurately. The inland topographic features are much more complete on T-8503.

Survey T-8503 has not been applied to nautical charts at the date of this review.

The following revisions of the map manuscript were found to be necessary and were accomplished as a part of this review: Changes in contours from Field Edit information.

Reviewed 17 January 1944 By William D. Harris  
under direction of D. H. Benson

Inspected by B. G. Jones *B.G. Jones 2/48*

Examined and approved:

Chief, Surveys Branch

*[Signature]*  
Chief, Topography Section

K.T. Adams  
Chief, Div. of Charts *Photogrammetry*

*[Signature]*  
Chief, Div. of Coastal



## RECORDS

Between January, 1942 and July, 1944, this Bureau completed 323 quadrangles. These maps have been published, or are in the process of being published on scales of 1:31,680 or 1:25,000. This series of quadrangles includes a land area of approximately 15,000 square miles. Incident to this work, a considerable volume of survey records and data has accumulated which will be filed for future reference. This material is filed as follows:

### Registered and Filed in the Vault.

Cloth-mounted copy of the published quadrangle.

Black and white cloth-mounted copy of the published quadrangle at 1:20,000 scale. This copy is filed to preserve original survey detail shown on the manuscript at 1:20,000 scale which may not have been shown on the published sheet. For woodland, refer to the published quadrangle for the finally adopted outlines.

Descriptive Report.

### Filed in the Photogrammetric Division.

Field inspection photographs.

Contoured photographs (on which planetable contouring work was performed.)

Field edit sheet.

Descriptions of recoverable topographic stations (Form 524), filed in Review Section.

Supplementary traverse and level records.

Field notes, computations, lists of positions, and tabulations of results of horizontal and vertical accuracy tests.

Reproduction proof.

Correction sheet (copy of quadrangle showing in red changes to be made when next printed.)

Check lists of work performed on each sheet in the Washington Office during review, drafting, edit, and reproduction.

Copies of specifications and all instructions to field parties and field offices.

Filed in Reproduction Branch.

Glass negatives of the color separation drawings.

Filed in the Library.

Special report on office work by B. G. Jones, 1944.

Season's report on field work by Commander F. L. Gallen, 1944.

Season's report on field work by Commander R. L. Schoppe, 1944.

Delivered to the Army Map Service in accordance with the contract.

Film negatives and film positives of the color separation drawings.

All color separation drawings.

A correction sheet consisting of a copy of the first edition of the quadrangle with notes in red indicating changes desirable at the next printing.

T-8503

1

Remarks

Decisions

1		
2		Road Maps
3		" "
4		Railway Guide
5		
6		
7		
8		
9		
10		385751
11		"
12		"
13		"
14		"
15		"
16		"
17		"
18		"
19		"
20		" USGB
21		" "
22		"
23		"
24		"
25		"
26		"
27		"

# GEOGRAPHIC NAMES

Survey No. T-8503

FRANKFORD quadrangle

1 Name on Survey

	A. On Chart No.	B. On previous survey No.	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List	K.
Sussex County		✓							1
Dupont Highway, U.S. No. 113		✓							2
State Highways Nos. 26 (Atlantic Avenue), 24, 25, 5 (to Oak Orchard)								✓	3
Pennsylvania R R (Delmarva Division)				✓					4
District No. 8 (Indian River)				✓					5
District No. 7 (Baltimore)				✓					6
District No. 6 (Dagsboro)				✓					7
									8
Bayard	✓								9
Frankford Road	✓								10
Atlantic Avenue	✓								11
Clarksville	✓								12
Roxana Road	✓								13
Quar Mill Branch	✓								14
Deep Hole Branch	✓								15
Blackwater Creek	✓								16
Clarksville Branch	✓								17
White Neck	✓								18
Holts Landing	✓								19
Orange Point	✓								20
Irons Lane Landing	✓								21
Grays Point	✓								22
Indian River	✓								23
Blackwater Beach	✓								24
Blackwater Point	✓								25
Aydelotte Point	✓								26
Champlin Neck	✓								27

## Remarks

## Decisions

1		385751
2		"
3		"
4		"
5		"
6	See Names Sheet for location	"
7		"
8		"
9		"
10		"
11		385752
12		385751
13		"
14		"
15		"
16		"
17		"
18		"
19		"
20		"
21		"
22		"
23		"
24		"
25		" USGB
26		"
27		"

# GEOGRAPHIC NAMES

Survey No. T-8503

2	Name on Survey	<div> <div>On Chart No.</div> <div>On previous survey No.</div> <div>On U. S. quadrangle Maps</div> <div>From local information</div> <div>On local Maps</div> <div>P. O. Guide or Map</div> <div>Rand McNally Atlas</div> <div>U. S. Light List</div> </div>									
		A,	B,	C,	D	E	F	G	H	K	
	<u>Pepper Creek</u>	✓									1
	<u>Stump Creek</u>	✓									2
	<u>Falling Point</u>	✓									3
	<u>The Hub</u>	✓									4
	<u>Sandy Landing</u>	✓									5
	<u>Camp Otonka</u>	✓									6
	<u>Pools Point</u>	✓									7
	<u>Vines Creek</u>	✓									8
	<u>Ballast Point</u>	✓	(Vines Creek)								9
	<u>Derickson Point</u>	✓									10
	<u>Poplar Point</u>	✓									11
	<u>Wingate Cove</u>	✓									12
	<u>Turnip Patch Point</u>	✓									13
	<u>Israel Haul</u>	✓									14
	<u>Israel Point</u>	✓									15
	<u>Pershing Cove</u>	✓									16
	<u>Rock Point</u>	✓									17
	<u>Three Points</u>	✓									18
	<u>Deans Hole</u>	✓									19
	<u>Highgrass Point</u>	✓									20
	<u>Vase Cove</u>	✓									21
	<u>Frames Point</u>	✓									22
	<u>Frames Cove</u>	✓									23
	<u>Hawks Nest</u>	✓									24
	<u>Yellowbank Point</u>	✓									25
	<u>Oak Orchard</u>	✓									26
	<u>Emily Gut</u>	✓									27

## Remarks

## Decisions

1	Partly on this quadrangle	386751
2		" USGB
3		" " "
4		"
5		"
6		"
7		"
8		"
9		"
10		" USGB
11		"
12		386752
13		385752
14		"
15		"
16		"
17		"
18		"
19		"
20		"
21		"
22		"
23		"
24		"
25	1	"
26		"
27		"

# GEOGRAPHIC NAMES

Survey No. T-8503

3	Name on Survey	A. On Chart No.	B. On previous survey No.	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List	K.
	Indian River Bay	✓							✓	1
	Lingo Point	✓								2
	Lingo Creek	✓								3
	Pot Nets Point	✓								4
	Pot Nets Cove	✓								5
	White House Point	✓								6
	White House Cove	✓ (partly on this quadrangle)								7
	Boat House Cove Pond	✓								8
	Long Neck Road	✓								9
	Long Neck	✓								10
	Trinity	✓								11
	Warwick	✓								12
	Piney Neck Road	✓								13
	Ferry Cove	✓								14
	Ferry Landing	✓								15
	Ballast Point	✓ (north side Indian River)								16
	Puddle Hole	✓								17
	Bullseye Point	✓								18
	Warwick Gut	✓								19
	The Landing	✓								20
	Seals Point	✓								21
	Rosedale Beach	✓								22
	Warwick Cove	✓								23
	Island Creek	✓								24
	Warwick Point	✓								25
	Hickory Cove	✓								26
	Gut Point	✓								27



T-8503

4

Remarks

Decisions

1		385752
2		"
3		"
4		"
5		385751 USCB
6		385752
7		"
8		"
9		"
10		"
11		"
12		"
13		"
14		"
15		"
16		"
17		385751
18		385752
19		"
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24		
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26		
27		

# GEOGRAPHIC NAMES

Survey No. T-8503

4	Name on Survey	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
		A.	B.	C.	D.	E.	F.	G.	H.	K.
	<u>Big Cove</u>	✓								1
	<u>Long Point</u>	✓								2
	<u>Deep Hole</u>	✓								3
	<u>Barton Island</u>	✓								4
	<u>Piney Neck</u>	✓								5
	<u>Dagsboro</u>	✓								6
	<u>Cattail Marsh</u>	✓								7
	<u>Holland Point</u>	✓								8
	<u>Buck Landing</u>	✓								9
	<u>Kildee Point</u>	✓								10
	<u>Timmons Cove</u>	✓								11
	<u>Alvin Point</u>	✓								12
	<u>Townsend Bridge</u>	✓								13
	<u>Dumpling Neck</u>	✓								14
	<u>Herring Branch</u>	✓								15
	<u>Old Baltimore Mill</u>	✓	(locality)							16
	<u>Omar</u>	✓								17
	<u>Stevens Branch</u>	✓								18
	<u>Frankford</u>	✓								19
										20
										21
										22
										23
										24
										25
										26
										27

Names underlined in red approved  
by L. Heck on 2/10/44

## NAUTICAL CHARTS BRANCH

**SURVEY NO.** \_\_\_\_\_

### Record of Application to Charts

[illegible]

**M-2169-1**

**A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.**