

5644

5644

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	<i>Topographic</i>
Field No. <i>11</i>	Office No. <i>5644</i>
LOCALITY	
State	<i>New Jersey</i>
General locality	<i>Atlantic Coast</i>
Locality	<i>Strathmere To</i>
	<i>Seaside City</i>
	<u>1936</u>
CHIEF OF PARTY	
<i>E. H. Kirsch</i>	
LIBRARY & ARCHIVES	
DATE	

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. 11

REGISTER NO. 5644

T5644

State NEW JERSEY

General locality Atlantic City
~~OUTSIDE COAST~~ ~~CAPE MAY COUNTY~~

Locality STRATHMORE TO SEA ISLE CITY

Photos 4-18-32

Scale 1:10 000 Date of survey Compilation July, 1936

Vessel AIR PHOTO PARTY NO. 21.

Chief of party E. H. Kirsch

Surveyed by See data sheet in descriptive report

Inked by W. W. King

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

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

Instructions dated May 16th, 1935, 19

Remarks: None Compiled on scale of 1:10,000

SHEET 11
REGISTER No. 5644

PHOTOS NO.	Along Long.	Date
66-55-24 to 25 -	74° 39'	8-1-32
66- 8-48 to 53 -	74° 41'	4-18-32
66- 8-24 to 30 -	74° 44'	4-18-32
66- 8- 3 to 5 -	74° 46'	4-18-32
M 172 to 18° (871-14)	74° 40'	12:30 P.M. 1-23-33

Projection By	L. C. Ripley	5-1-35
Projection Checked By	T. B. Nutting	5-1-35
Control Plotted By	E. J. Anderson	1935
Control Checked By	P. W. Hund	1935
Control Plotted on Photos By	F. H. Richardson	1935
Control Checked on Photos By	<i>E.H.K.</i> E. H. Kirsch	June 1936
Smooth Radial Plot By	<i>E.H.K.</i> E. H. Kirsch	June 1936
Smooth Radial Plot Checked By	W. W. King	July 1936
Detailed By	W. W. King	July 1936

*The above men have all
been discharged.*

STATISTICS:

LAND AREA 24 Square statute Miles

Coast Line 5 Statute Miles

Shoreline 7 Statute Miles (More than 200 meters wide)

Shoreline 31 Statute Miles (Less than 200 meters wide)

Ref. sta. "Ocean" ¹⁹³² 39° 10' 50.471 (1556.4 m)
Datum N.A. 1927 74° 44' 21.856 (524.6 m)

(adjusted)

N.J. Grid Coord. $x = 1,979,380.10$ ft
 $y = 126,516.83$ ft.

GENERAL INFORMATION

Statistics:

This compilation covers 24 square Miles (statute) of land area, 5 statute miles of Coast line, 7 statute miles of shoreline over 200 meters wide, and 31 statute miles of shoreline less than 200 meters wide. Datum N.A. 1927. Reference Station: Ocean streams

GENERAL REPORT:

Latitude: $39^{\circ} 10' 50.471''$ (556.4 meters)
Longitude: $74^{\circ} 44' 21.856''$ (524.6 meters)

plain
The area covered by this sheet is of the low coastal ~~plane~~ type with very little relief. Along the coast lies a narrow strip of low sandy area which is generally subdivided into streets and comprises Strathmere and Sea Isle City. Back of this narrow strip of land is a low marshy area interspersed with streams, bays, and the intracoastal waterway. Most of the marsh is drained by small ditches dug by the mosquito and pest control. Just back and parallel to the highground runs N. J. State highway No. 4 on both sides of which are numerous cultivated areas and farm houses. The vegetation is generally deciduous and in some places appears to be a second growth. The two railroads that run approximately at right angles to the coast line have been abandoned and the tracks taken up. For these the usual railroad symbol has been used and dashed to show abandonment.

PHOTOGRAPHS:

There are portions of four overlapping flights for this compilation, all of which run generally north and south. The exact time the photos were taken is not available.

Photo Nos.	Along Long.	Date
66-55-24 to 25	$74^{\circ} 39'$	8-1-32
66-8-48 to 53	$74^{\circ} 41'$	4-18-32
66-8-24 to 30	$74^{\circ} 44'$	4-18-32
66-8-3 to 5	$74^{\circ} 46'$	4-18-32

CONTROL

Sources:

Triangulation stations were established by Lieut. C. D. Meaney in 1932, and Lieut. J. A. Bond in 1936. The traverse stations were set by the N. J. Geod. Control Survey. They have been radial plotted and reported on form 524. All control is on N. A. 1927 datum.

ERRORS:

No errors in the control were found.

DESCREPANCIES:

The traverse by the N. J. Geod. Control Survey is the only control established by other organizations, and no discrepancies were found.

COMPILATION

METHOD:

The usual radial line method as described in "Notes on the compilation of planimetric line maps from 5 lens aerial photographs" was used in compiling this sheet.

ADJUSTMENTS OF THE PLOT:

No unusual adjustments of the plot were found necessary.

INTERPRETATION:

All the photos used in this compilation are fairly true to scale and the detail is generally clear. However, some of the shoreline of the small streams was a little indistinct looking through the celluloid. This difficulty was overcome by tracing this detail on the photos before detailing on the celluloid.

INFORMATION FROM OTHER SOURCES:

along the coast
The high water line was established, by field inspection by the compiler on Aug. 3rd, 1936. This was done by taping the distances at intervals along the coast from points visible on the ground and the photos, to the high water line. It will be seen that considerable erosion has taken place, especially in the vicinity of Strathmere.

All names on the overlay sheet are taken from U. S. C. & G. Survey chart No. 1217, State of N. J. Dept. of Conservation and development map No. 37, and highway maps.

CONFLICTING NAMES:

"Upper Thoro" on U. S. C. & G. Survey Chart No. 1217 is called "MAIN CHANNEL" on the State of N. J. Dept. of Conservation and development map No. 37.* Beach Thoro on U. S. C. & G. Survey chart No. 1217 is called "WHITE CREEK" on State of N. J. Dept. of conservation and development map No. 37. Names on the overlay sheet are shown according to the N. J. map. Geological quadrangle SEA ISLE also uses the names "MAIN CHANNEL" and "WHITE CREEK".

* Filed in Geog. Names.

COMPARISON WITH OTHER SURVEYS:

JUNCTIONS:

Satisfactory junctions have been made with the following sheets: Field Nos. 9 & 10 Reg. 5642 & 5643 on the north, and sheet 12, reg. 5645 on the south.

*

Note The value of 9.3^{ft} differs with the
U.S.C. 1935 list of Bridges which
gives M.L.W. cl. 9.5^{ft} - 4.2^{ft} Mean Range of Tide = 5.3 ft.
cl. at M.H.W. The value of 9.3^{ft} is accepted
in view of the discussion on page ^{13 to 15} of
Report T-5286, ~~the~~ which states that
the numerous conflicting values given
in U.S.C. Bridge Book and N.Y. Board
of Navigation have been checked
and corrected by field measurements.
Bgg

LANDMARKS:

A list of recoverable topographic stations are submitted herewith. A list of landmarks for charts will be submitted as a separate report at the close of the season, for the project. *This list of landmarks has been submitted and is filed as chart letter 751-1936*

BRIDGES:

The following data was obtained from field inspection:

LOCALITY	LAT.	LONG.	TYPE	VERT. CLEAR	HOR CLEAR
Corson Inlet Railroad	39° 12'	74° 39'	End swing	2.0 feet	31.0 feet
Strathmere Highway	39° 12'	74° 39'	Swing	* 9.3 feet	31.8 feet
Sea Isle City Highway	39° 09'	74° 42'	2 leaf Bascule	8.2 feet	50 feet

Vertical clearance listed is at M. H. W. with the bridge closed.

RECOMMENDATION FOR FURTHER SURVEYS:

This compilation is believed to have a probable error of not more than .4 MM in position of well defined detail of importance for charting, and not more than .7 MM for other data.

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

Assisted by E. H. Kirsch Lt. (j.g.)
Chief of Party, U. S. C. & G. Survey.

E. H. Kirsch

Submitted by

W. W. King

Remarks

Decisions

1		
2		
3		
4		
5		
6		
7		
8		
9		
10		<u>Whale Creek</u> (See CS 126 M)
11		
12	Corson's Inlet on Prog. Mil. Map only	AND Local Map * Corson's Inlet name of another settlement so. of strathmore on Local Map.
13		
14		
15		
16		
17		
18		
19		
20		
21		Location off sheet
22		
23		
24	Shown only on Prog. Mil. Map as Greenfield	
25		
26		
27		

GEOGRAPHIC NAMES

Survey No. T-5644

Name on Survey	A On Chart No. 1217	B On previous survey No. T-147	C On U. S. quadrangle Maps	D From local information	E State of N.J. Dept. of Conservation #31	F On local Maps	G P. O. Guide or Map	H Rand McNally Atlas	I U. S. Light List	
<u>Cedar Swamp Creek</u>			✓		✓					1
<u>Seaville</u>	✓		✓		✓	✓				2
<u>Corson Sound</u>	✓		✓		Corsons sd.					3
<u>Middle Thorofare</u>	Main Thoro- fare	✓	✓		✓				✓	4
<u>Ben Hand's Thorofare</u>	✓	Ben Hand's Thoro	✓		✓				✓	5
<u>Main Channel</u>	Upper Thoro- fare	Upper Thoro.	✓		✓				✓	6
<u>Sea Isle Junction</u>	✓		✓		✓	✓				7
<u>Flat Creek</u>	✓	Middle Thoro.	✓						Middle Thoro.	8
<u>Burroughs Hole</u>			✓						✓	9
<u>White Creek</u>	Beach Thoro- fare	Beach Thoro.	✓		✓				whale cr.	10
<u>Whale Beach</u>	✓		✓		✓					11
<u>Strathmere</u>	✓		Corson's Inlet		✓	✓				12
<u>Atlantic Ocean</u>	✓		✓							13
<u>Ocean View</u>	✓		✓			✓				14
<u>Ludlam Bay</u>	✓	Ludlam's Bay	✓		Ludlams Bay	Ludlam Sound				15
<u>Ludlam Beach</u>	✓	Ludlam's Beach	✓							16
<u>Ludlam Thorofare</u>	✓	Ludlam's Thoro.	✓							17
<u>Sea Isle City</u>	✓		✓		✓	✓				18
<u>add</u>										19
<u>Great Cedar Swamp</u>			✓		✓					20
<u>Kermosa Bog</u>			✓		Formosa Bog					21
<u>Swimming Creek</u>		✓	✓		✓					22
Heppa			✓							23
<u>Greenfield</u>			✓		✓	✓				24
										25
Names underlined in red approved										26
by <u>WFE</u> on <u>12/8/36</u>										27

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 R. E. Ask

Positions checked by R. E. Ask

Grid inked on machine by R. E. Ask

Intersections inked by _____

Points used for plotting grid:

X 1,975,000 ft
Y 145,000

X 1,990,000
Y 140,000

X 1,975,000
Y 130,000

X 1,990,000
Y 120,000

X 1,990,000
Y 130,000

X
Y

X 2,000,000
Y 130,000

X
Y

Triangulation stations used for checking grid:

X=1,979,380.10 Y=126,516.83

1. Ocean 1932 (ref. sta)
2. Strathmere 1932
3. Whale 1932
4. S.P. Sea Isle City 1932
5. Sea Isle 1932
6. _____
7. _____
8. _____

T= 5644

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	<u>1,975,000.00</u>	$\log S_0$	<u>4.39793984</u>
K	<u>2,000,000.00</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>- 25,000.00</u>	$\log (1/R)$	<u>1.086</u>
$x'^3/(6\rho_0^2)_0$	<u>-.01</u>	$\log S_m$	<u>3.88196653</u>
S_0	<u>- 24,999.99</u>	cor. arc to sine	<u>10</u>
$3 \log x'$	<u>13.19382003</u>	$\log S_1$	<u>3.88196643</u>
$\log 1/(6\rho_0^2)_0$	<u>4.5810213</u>	$\log A$	<u>8.50913215</u>
$\log x'^3/(6\rho_0^2)_0$	<u>7.7748413</u>	$\log \sec \phi$	<u>0.11092377</u>
$\log S_m^2$	<u>7.76393306</u>	$\log \Delta \lambda_1$	<u>2.56202235</u>
$\log C$	<u>1.316544</u>	cor. sine to arc	<u>+ 17</u>
$\log \Delta \phi$	<u>9.080477</u>	$\log \Delta \lambda$	<u>2.50202235</u>
y	<u>145,000.00</u>	$\Delta \lambda$	<u>312.7037</u>
ϕ' (by interpolation)	<u>39 13 53.2428</u>	λ (central mer.)	<u>74 40 00.0000</u>
$\Delta \phi$	<u>-.1204</u>	$-\Delta \lambda$	<u>+ 5 17.7037</u>
ϕ	<u>39 13 53.1224</u>	λ	<u>74 45 17.7037</u>
	<u>163.82 mm</u>		<u>42.48 mm</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

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

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

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

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

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

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

T-5644

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	1,975,000.00	$\log S_g$	4.39793984
K	2,000,000.00	$\log (1200/3937)$	9.48401583
$x' (=x-K)$	-25,000.00	$\log (1/R)$	10.86
$x'^3/(6\rho_0^2)_g$	-.01	$\log S_m$	3.88176653
S_g	-24,999.99	cor. arc to sine	-10.86
		$\log S_1$	3.88194567
$3 \log x'$	13.19382003	$\log A$	8.50913849
$\log 1/(6\rho_0^2)_g$	4.5410213	$\log \sec \phi$	0.11066907
$\log x'^3/(6\rho_0^2)_g$	7.7748413	$\log \Delta \lambda_1$	2.50177439
		cor. sine to arc	+17
$\log S_m^2$	7.76393306	$\log \Delta \lambda$	2.50177456
$\log C$	1.316544	$\Delta \lambda$	317.5225
$\log \Delta \phi$	9.080477		
y	130,000.00		
ϕ' (by interpolation)	39 11 24.5885	λ (central mer.)	74 40 00.0000
$\Delta \phi$	-1204	$\Delta \lambda$	+5 17.5225
ϕ	39 11 24.8605	λ	74 45 17.5225
	76.67 ^{mm.}		42.06 ^{mm}

Explanation of form:

$$x' = x - K$$

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

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

R = scale reduction factor

ϕ' is interpolated from table of y

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

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

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

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

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

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

T-5644

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE N. J.

STATION _____

x	<u>1,990,000.00</u>	$\log S_0$	<u>4.00500000</u>
K	<u>2</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>- 10,000.00</u>	$\log (1/R)$	<u>1.986</u>
$x'^2/(6\rho_0^2)_0$	<u>— .00</u>	$\log S_m$	<u>3.48402669</u>
S_0	<u>- 10,000.00</u>	cor. arc to sine	<u>2</u>
		$\log S_1$	<u>3.48402667</u>
$3 \log x'$	<u>12.00000000</u>	$\log A$	<u>8.50913889</u>
$\log 1/(6\rho_0^2)_0$	<u>4.5810213</u>	$\log \sec \phi$	<u>0.1166924</u>
$\log x'^3/(6\rho_0^2)_0$	<u>6.5810213</u>	$\log \Delta \lambda_1$	<u>2.10383480</u>
		cor. sine to arc	<u>+ 3</u>
$\log S_m^2$	<u>6.96805338</u>	$\log \Delta \lambda$	<u>2.10383483</u>
$\log C$	<u>1.315811</u>	$\Delta \lambda$	<u>122.0091</u>
$\log \Delta \phi$	<u>8.284864</u>		
y	<u>130,000</u>		
ϕ' (by interpolation)	<u>39 11 24.9809</u>	λ (central mer.)	<u>74 40 00.0000</u>
$\Delta \phi$	<u>— .0192</u>	$\Delta \lambda$	<u>+ 2 07.0091</u>
ϕ	<u>39 11 24.9617</u>	λ	<u>74 42 07.0091</u>
	<u>76.98 mm.</u>		<u>16.83 mm</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

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

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

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

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

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

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

44927
J.M.A

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE New Jersey

STATION T-5644

x	<u>2,000 000.00</u>	$\log S_e$	<u>—</u>
K	<u>—</u>	$\log (1200/3937)$	<u>9 . 4 8 4 0 1 5 8 3</u>
$x' (=x-K)$	<u>0.00</u>	$\log (1/R)$	<u>—</u>
$x'^3/(6\rho_0^2)_e$	<u>—</u>	$\log S_m$	<u>—</u>
S_e	<u>—</u>	cor. arc to sine	<u>—</u>
$3 \log x'$	<u>0.0</u>	$\log S_1$	<u>—</u>
$\log 1/(6\rho_0^2)_e$	<u>4.5810213 -20</u>	$\log A$	<u>—</u>
$\log x'^3/(6\rho_0^2)_e$	<u>—</u>	$\log \sec \phi$	<u>—</u>
$\log S_m^2$	<u>—</u>	$\log \Delta\lambda_1$	<u>—</u>
$\log C$	<u>1.316</u>	cor. sine to arc	<u>+</u>
$\log \Delta\phi$	<u>—</u>	$\log \Delta\lambda$	<u>—</u>
y	<u>130 000.00</u>	$\Delta\lambda$	<u>—</u>
ϕ' (by interpolation)	<u>39° 11' 24.9809"</u>	λ (central mer.)	<u>74° 40' "</u>
$\Delta\phi$	<u>—</u>	$\Delta\lambda$	<u>0</u>
ϕ	<u>39° 11' 24.9809"</u>	λ	<u>74 40 00.000</u>
	<u>77.04 mm</u>		<u>—</u>

Explanation of form:

$$x' = x - K$$

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

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

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-5644-

x	1,990 000.00	$\log S_e$	4. 0
K	2 000 000.00	$\log (1200/3937)$	9. 4 8 4 0 1 5 8 3
$x' (=x-K)$	-10,000.00	$\log (1/R)$	10 86
$x'^3/(6\rho_e^2)$	0	$\log S_m$	3.48402669
S_e	-10,000.00	cor. arc to sine	2
		$\log S_1$	348402667
$3 \log x'$	2.	$\log A$	8.50913819
$\log 1/(6\rho_e^2)$	4.5810213-20	$\log \sec \phi$	0.11083900
$\log x'^3/(6\rho_e^2)$		$\log \Delta\lambda_1$	2.10400386
		cor. sine to arc	+ 3
$\log S_m^2$	6.96805338	$\log \Delta\lambda$	2.10400389
$\log C$	7.316333	$\Delta\lambda$	127.0585
$\log \Delta\phi$	8.28438638		
y	140 000.00		
ϕ' (by interpolation)	39° 13' 03.8223"	λ (central mer.)	74° 40' "
$\Delta\phi$	0.0192	$\Delta\lambda$	+ 2 07.0585
ϕ	39° 13' 03.8031"	λ	74 42. 07.0585
	11.73 ^{mm}		16.94 ^{mm}

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

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

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

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

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

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

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

dt-827
2.4

GEODETIC POSITIONS FROM TRANSVERSE MERCATOR COORDINATES

STATE New Jersey

STATION T-5644

x	<u>1,990 000.00</u>	$\log S_0$	
K	<u>2,000 000.00</u>	$\log (1200/3937)$	<u>9.48401583</u>
$x' (=x-K)$	<u>-10,000.00</u>	$\log (1/R)$	
$x'^2/(6\rho_0^2)$		$\log S_m$	<u>3.48402669</u>
S_0		cor. arc to sine	<u>2</u>
		$\log S_1$	<u>3.48402667</u>
$3 \log x'$		$\log A$	<u>8.50913958</u>
$\log 1/(6\rho_0^2)$		$\log \sec \phi$	<u>0.11049966</u>
$\log x'^2/(6\rho_0^2)$		$\log \Delta\lambda_1$	<u>2.10366591</u>
		cor. sine to arc	<u>+ 3</u>
$\log S_m^2$	<u>6.96805338</u>	$\log \Delta\lambda$	<u>2.10366594</u>
$\log C$	<u>1.315499</u>	$\Delta\lambda$	<u>126.9597</u>
$\log \Delta\phi$	<u>8.28355238</u>		
y	<u>120 000</u>		
ϕ' (by interpolation)	<u>39 09 46.1391</u>	λ (central mer.)	<u>74 40 "</u>
$\Delta\phi$	<u>0.0192</u>	$\Delta\lambda$	<u>+ 206.9597</u>
ϕ	<u>39 09 46.1199</u>	λ	<u>74 42 06.9597</u>
	<u>142.23 mm</u>		<u>16.71 mm</u>

Explanation of form:

$$x' = x - K$$

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

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

R = scale reduction factor

ϕ' is interpolated from table of y

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

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

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

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

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

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

OFFICE
REVIEW OF AIR PHOTO COMPILATION T-5644
Scale 1:10,000

Comparison with Previous Topographic Surveys

This compilation, T-5644, is adequate to supersede the previous topographic surveys in this area over the common area except as noted below:

T- 147 (1842), 1:10,000
T-1597 (1885), 1:20,000 - Except for form lines
T-2453 (1899), 1:20,000
H-2165 (1891), 1:20,000

There is good general shoreline agreement between these old surveys and T-5644, however there have been numerous changes in detail.

Hydrographic and graphic control surveys as ^{required} requested for hydrographic control are contemplated for this area in 1937. Corrections and additions to T-5644 as a result of these surveys will be made when this work is completed.

Comparison with Charts 1217 and 3243

This compilation shows numerous corrections to shoreline and interior detail on the present charts.

The two small islands shown on the charts at lat. $39^{\circ} 12.0'$, long. $74^{\circ} 40.8'$ and also at lat. $39^{\circ} 10.9'$, long. $74^{\circ} 41.7'$ are not visible on the photographs and no longer exist as islands.

See page 3 of descriptive report regarding landmarks.

Descriptions of Topographic Stations on Form 524.

Descriptions were checked against compilation and found correct except for the following:

The descriptions of stations N. J. Geod. S. 2723 and 2724 as given by New Jersey Geodetic Survey did not correspond to description given by U. S. C. & G. S. field inspection party. A letter will be sent to the New Jersey Geodetic Survey to determine which of the two sets of descriptions are correct. The positions plotted on compilation T-5644 are those of the U.S.C. & G.S. field inspection party.

Determination of Low Water Line

A strip of outer coast photographs Nos. M (172 to 180) 871-14 taken at 12:30 p.m. on Jan. 23, 1933 for the U. S. Beach Erosion Board were used to determine the low water line. These photographs were taken at approx. low tide.

These photographs were not used in the radial plot but were used for examination of detail along the coast line.

Feb. 9, 1937.

R. E. Ask

R. E. Ask
V. B. Jones

REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party: E. H. Kirsch

Compiled by: W. W. King

Project: H. T. 205

Instructions dated: May 16th, 1935

- ✓ 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. 26; 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 rocks, 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 navigation 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. *unadjusted*
- ✓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 Longitude 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: *None*

✓ 18. Examined and approved;

E. H. Kirsch.
Chief of Party

19. Remarks after review in office:

Reviewed in office by: *R. E. Ask* *H. G. Jones*

Examined and approved:

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

L. O. Solbert.
Chief, Division of Charts

Wm. L. Peacock
Chief, Section of Field Work

G. H. Hulse
Chief, Division of Hydrography
and Topography.

60/SM

*N. J. with
field station*

February 16, 1937.

Mr. Arthur Noack,
State Supervisor,
New Jersey Geodetic Control Survey,
17-19 William Street,
Newark, New Jersey.

N. J. Mark S. 2724 and 2723 have

*been removed from compilation as they conflict
with the location given by Mr. Kirsch and the
attached correspondence is confusing.*

Dear Sir:

I am enclosing a section of airphoto compilation
T 5644, together with descriptions of New Jersey Geodetic
Control Stations Nos. 2723 and 2724, as submitted by your
project and as transmitted by a Coast and Geodetic Survey
field party working under the direction of Lieutenant.
E. Kirsch.

You will notice the discrepancies in the descriptions
as submitted by you and those submitted by the Coast and
Geodetic Survey party. Station No. 2723 is described by
your party as being 300 ft. northeast of Sea Isle City
Blvd., while Mr. Kirsch's party states the mark is 1 ft.
north of the extension of the center line of the Sea Isle
City Blvd.

The description of Mark No. 2724, as submitted by
your party, states the mark is on the northwest side of
the road and 63.9 ft. northeast of telephone pole No. 3193.
Mr. Kirsch's party, on the other hand, states that the mark
is on the east side of State Highway No. 4 and 62.2 ft.
south of pole No. 3193.

Would it be possible for you to check up the descrip-
tion of these two marks by an actual visit to the site,
and report to this office in the very near future the
correct description data.

Very truly yours,

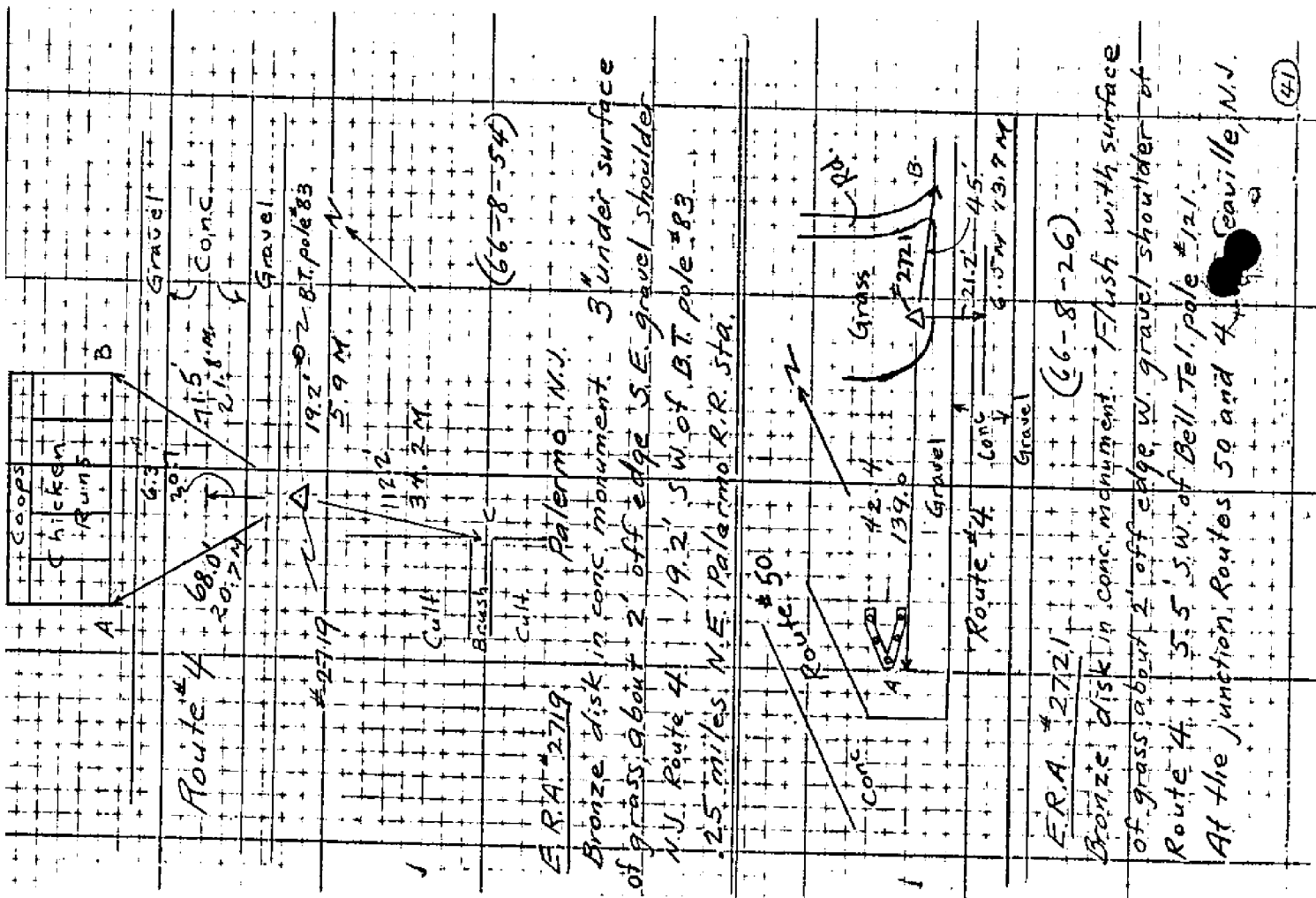
(Signed) PAUL C. WHITNEY

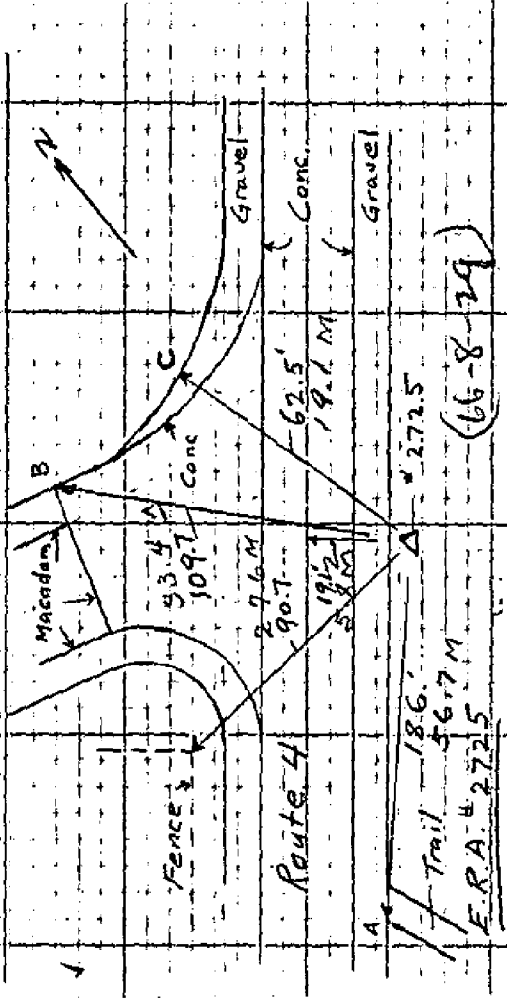
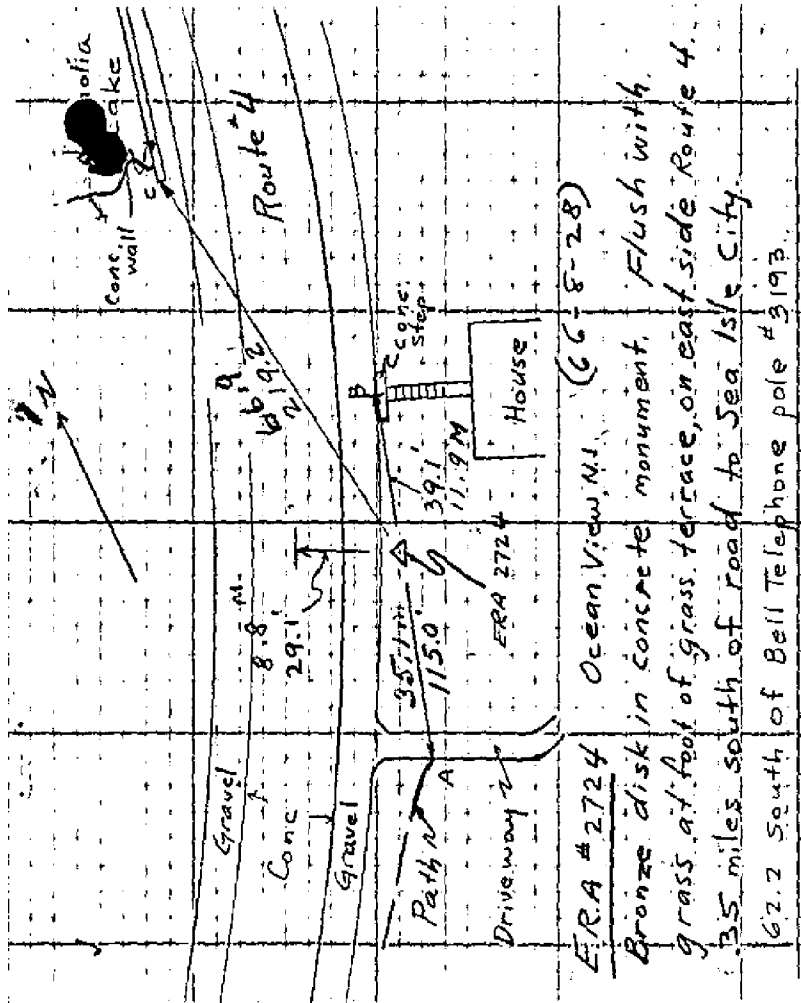
Acting Director.

Enclosures.

CC - Prof. KISSAM

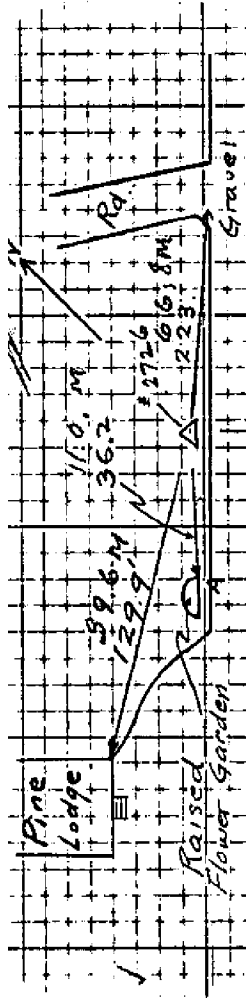
Route 4	5.9M. 19.3	59.3M. 175.	Gravel Conc Gravel	
#2722	White, 2-story House			
E.R.A. #2722	Seaville, N.J.	(66-8-26)		
Bronze disk in conc monument. Flush with surface grass about 1' off edge of east shoulder Route 4, directly in front of white two-story house. 39.6' N. of A.C. pole #3171. .3 miles south of junct. with Route 50.				
E.R.A. #2723	Ocean View, N.J.	(66-8-28)		
Bronze disk in concrete monument. Flush with grass. On N.W. side of Route 4, about 1' north of extension of rd of road to Sea Isle City. 7.8' N.W. of corner of large vertical green direction sign (to Sea Isle City) 35.2' N.W. of rd Route 4. 10.7m.				





ERA #2724 Ocean View, N.I. (66-8-28)
 Bronze disk in concrete monument. Flush with grass at foot of grass terrace, on east side Route 4. 3.5 miles south of road to Sea Isle City. 62.2 South of Bell Telephone pole #3193.

ERA #2725 (66-8-29)
 Bronze disk in concrete monument. Flush with surface about 1.5' off edge S.E. gravel shoulder of Route 4, and about 10' S.W. of extension of road to South Sea View, N.I. 5 miles south of road to Sea Isle City.



Route #4

E.P.A. #2726 (66-8-29)

Bronze disk in conc. men. Flush with surface of grass about 9' off edge N.W. gravel shoulder Route #4 139.9 NE of corner of Pine Lodge .3 miles south of road to South Sea ville

DESCRIPTION OF RECOVERABLE HYDROGRAPHIC OR TOPOGRAPHIC STATION

Name **N. J. Geod. S. No. 2724** Year **1935**
General locality **N. J. Cape May County** Sheet No. **5644**
Locality **Dennis Twp. Ocean View** Datum: **N. A. 1927**
Checked by **E. H. Kirsch** **W. W. K.** **F. H. M.** Meters
Scated by **W. W. K.** **F. H. M.** **39-10-1085.3**
Checked by **F. H. M.** **74-44-168.9** **68.0**
Approximate elevation above high watermark **feet omitted from compilation**

Location method: **Plane table, Sextant, Theodolite, Air photocompilation**

Detailed description:

Cape May Co.
1935

LOCAL CONTROL SURVEY

STATE OF NEW JERSEY

DESCRIPTION OF MONUMENTS

Mon. #2723: (R.H. #2 to Triangulation Station Ocean View, Dennis Twp., Cape May Co. N.J., A standard U.S.C. & G.S. disk set in concrete, on State Highway Route #4 about 300. ft. northeast of Sea Isle City Blvd. (Co. Rte. #25). It is located on the north-west side of the road, at a curve, and 0.37 ft. above the ground. The monument is 25.8 ft. northwest of the center line of Route #4; 57.9 ft. east of the east corner of the house of Pasquale Conuso; and 79.6 ft. southeast of the north corner of the east house. Companion monument #2724 is ft. southeast.

Mon. #2724: Ocean View, Dennis Twp., Cape May Co. N.J., A standard U.S.C. & G.S. disk, set in concrete, on State Highway Route #4 at Magnolia Lake about 0.25 miles southwest of the Sea Isle City Blvd. (Co. Rte. #25). It is located on the northwest side of the road, just southwest of the retaining wall of the lake, and 0.33 ft. above the ground.

The monument is 27.3 ft. northwest of the center line of the road; 48.9 ft. southwest of a pole #3194; and 53.9 ft. northeast of a pole #3193. Companion monument #2723 is ft. northeast.

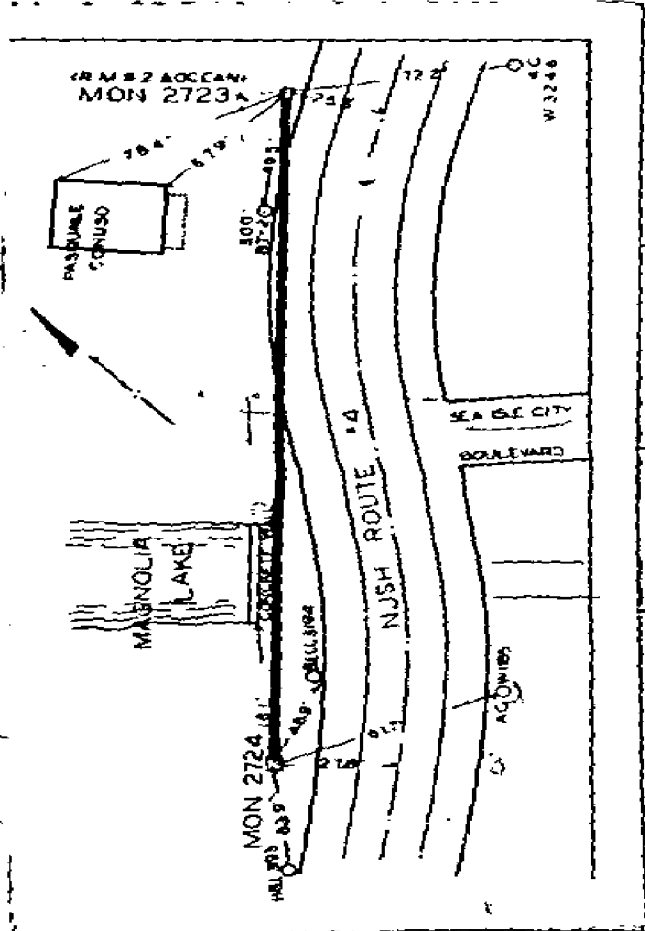
N.J. Grid Reading: **Mon. #2723 to Mon. #2724 is** **Questioned** **feet**

Mon. #2723: feet
Elevation: **Questioned**
x-coord: (east)
y-coord: (north)

Sketch for shore-line data and reference points:

N. J. Geod. S. No. 2723

39 - 10 - 1085.3
74 - 44 - 168.9 68.0



ances actually obtained in the field.

Hydrographic Manual, paragraph 167; Circular No. 30, 1933.

WORKS PROGRESS ADMINISTRATION

NEW JERSEY

17-19 William Street
Newark, N.J.

WILLIAM H. J. ELY
STATE ADMINISTRATOR

Project 10-172

(DISTRICT OR DIVISION)

May 7, 1937

To the Director
U.S. Coast & Geodetic Survey
Washington, D. C.

Attention: Lieutenant H. W. Hemple

Dear Sir:

With reference to the discrepancies in descriptions of monuments #2723-2724 in CapeMay County about which you inquired in letters of Feb. 16th and March 24, we have had a little difficulty in ascertaining just what had occurred, but the answer is now at hand.

The descriptions of this pair of monuments as shown on the blueprint attached are correct for the final location. Monument 2724 was moved some time ago from its former position southeast of Rte. #4, while Monument 2723 as originally set was destroyed, and the number assigned to reference disk #2 for station Ocean.

Unfortunately we are unable to establish the former positions of these monuments which may have been used by Lieutenant Kirsh in his aerial mapping.

Very truly yours,

ARTHUR NOACK, State Supervisor
N.J. Geodetic Control Survey

By: 
Howard B. Ranken
Assistant State Supervisor

HBR:hkc
Encl.

*Lt. Kirsh's position of 2724 and 2723
are probably correct but in view of the
above correspondence they have been
questioned*

Cape May Co.
1935

LOCAL CONTROL SURVEY

STATE OF NEW JERSEY

DESCRIPTION OF MONUMENTS

Mon. #2723: (A.M.#2 to Triangulation Station Ocean) Ocean View, Dennis Twp., Cape May Co. N.J. A standard U.S.C.&G.S.&S.S. disk set in concrete, on State Highway Route #4 about 300. ft. northeast of Sea Isle City Blvd. (Co. Rte. #25). It is located on the northwest side of the road, at a curve, and 0.37 ft. above the ground.

The monument is 25.8 ft. northwest of the center line of Route #4; 37.9 ft. east of the east corner of the house of Pasquale Conuso; and 78.4 ft. southeast of the north corner of the same house. Companion monument #2724 is ft. southwest.

Mon. #2724: Ocean View, Dennis Twp., Cape May Co. N.J. A standard U.S.C.&G.S.&S.S. disk, set in concrete, on State Highway Route #4 at Magnolia Lake about 0.25 miles southwest of the Sea Isle City Blvd. (Co. Rte. #25). It is located on the northwest side of the road, just southwest of the retaining wall at the lake, and 0.33 ft. above the ground.

The monument is 27.8 ft. northwest of the center line of the road; 48.9 ft. southwest of a pole #3194; and 63.9 ft. northeast of pole #3193. Companion monument #2723 is ft. northeast.

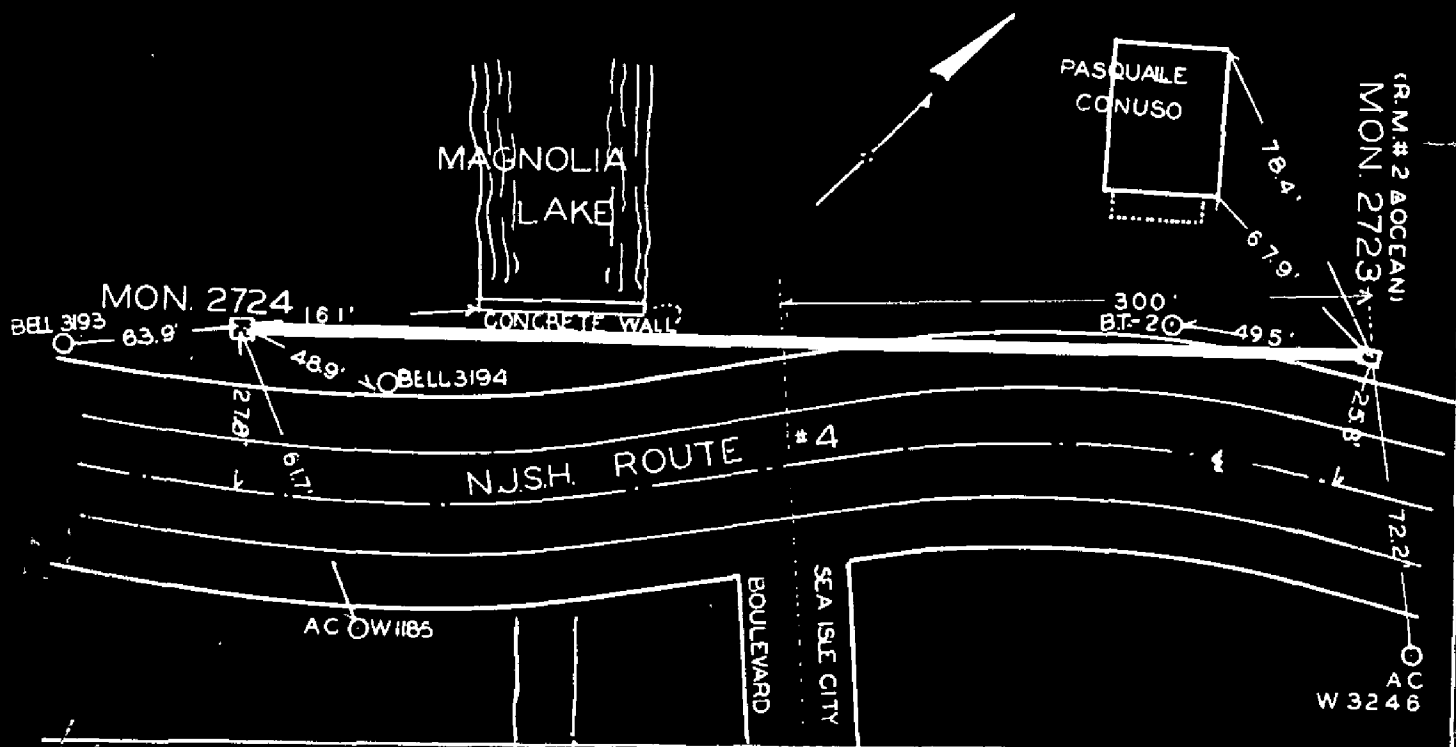
N.T. Grid Bearing: Mon. #2723 to Mon. #2724 is

Mon. #2723: feet

Mon. #2724: feet

Elevation:
x-coord: (east)
y-coord: (north)

Elevation:
x-coord: (east)
y-coord: (north)



60-MM

March 24, 1937.

Mr. Arthur Noack, State Supervisor,
New Jersey Geodetic Control Survey,
17-19 William Street,
Newark, N. J.

Dear Sir:

Under date of February 16, 1937, I sent you a letter, asking you to investigate the discrepancies in the descriptions pertaining to New Jersey Control Survey Stations Nos. 2723 and 2724. Under date of February 18 you replied to the effect that your party chief at Sea Isle City had been asked to investigate this matter. Has any reply been received from this man, and if so, will you please inform me as to the results of the investigation.

Your prompt attention to this matter will be appreciated.

Very truly yours,

(Signed) PAUL C. WETZNEY
Acting Director.

Report for Supplemental T 5644

5/11/38

Details shown in red on T 5644 Supplemental have been applied by E. W. Frederick and checked by B. G. Jones, 5/11/38, from the following sources:

(a) Planetable Survey, Field No. GG, Office No. C.S. 126 M; and Planetable Survey Field No. FF, Office No. C.S. 127 M, all details on C.S. 126 M and C.S. 127 M within the area of T 5644 have been applied to T 5644 Supplemental except the following:

1. Temporary Planetable stations
2. Magnetic meridian
3. Tide gauge locations
4. Certain Form 524 descriptions.

These descriptions are not necessary for the recovery of the stations and have not been put into the regular files. The stations are shown on T 5644 Supplemental without a(d).

The sanding outside the H.W. line around the point on south side of Carson Inlet merely indicates the character of the beach and not the low water line. Low water line was not surveyed on C.S. 127 M.

The range marks or Beacons in main channel and Ludlam Shoal are noted in the report ^{C.S. 126 M} as temporary but are described as useful in making safe passage thru the channel. They have been added to T 5644 Supplemental.

(over)

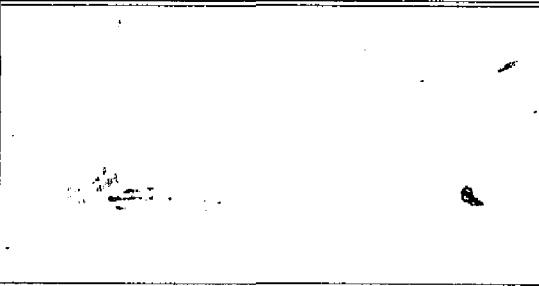
T5344 Supplemental has been compared
with H 5231 and H 6262 1937 and no
discrepancies were found.

B. G. Jones

5644

5644

AIR
PHOTO

Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, Director	
DESCRIPTIVE REPORT	
Topographic Hydrographic	FIELD 11 Sheet No. REG. 5644
	
State NEW JERSEY	
LOCALITY Atlantic Coast	
OUTSIDE COAST CAPE MAY COUNTY	
STRATHMERE TO SEA ISLE CITY	
1936	
CHIEF OF PARTY	
E. H. Kirsch	

U. S. GOVERNMENT PRINTING OFFICE: 1934

1217-2

T5644 (corrected to May 11, 1938) Applied to Chart 1217 - May 19, 1938 - JFW.
T5644 (. " . . .) " " new compilation Ch. 8 27 (June 12/39) BR.