

5458

(This report also includes the AIR PHOTO FIELD INSPECTION REPORT for
METROPOLITAN NEW YORK.)

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| Form 504 Rev. Dec. 1933 DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, Director | |
| DESCRIPTIVE REPORT | |
| Air- Photo Topographic Hydrographic | Sheet No. T-5458 |
| | |
| State <u>New York</u> | |
| LOCALITY | |
| <u>East River,</u> <u>- Blackwells Island</u> <u>Wards Island to Belmont Island.</u> | |
| | |
| 193 6 Date of Photos 1934-35 | |
| CHIEF OF PARTY | |
| <u>Roswell C. Bolstad - Jr. H. & G. E.</u> | |

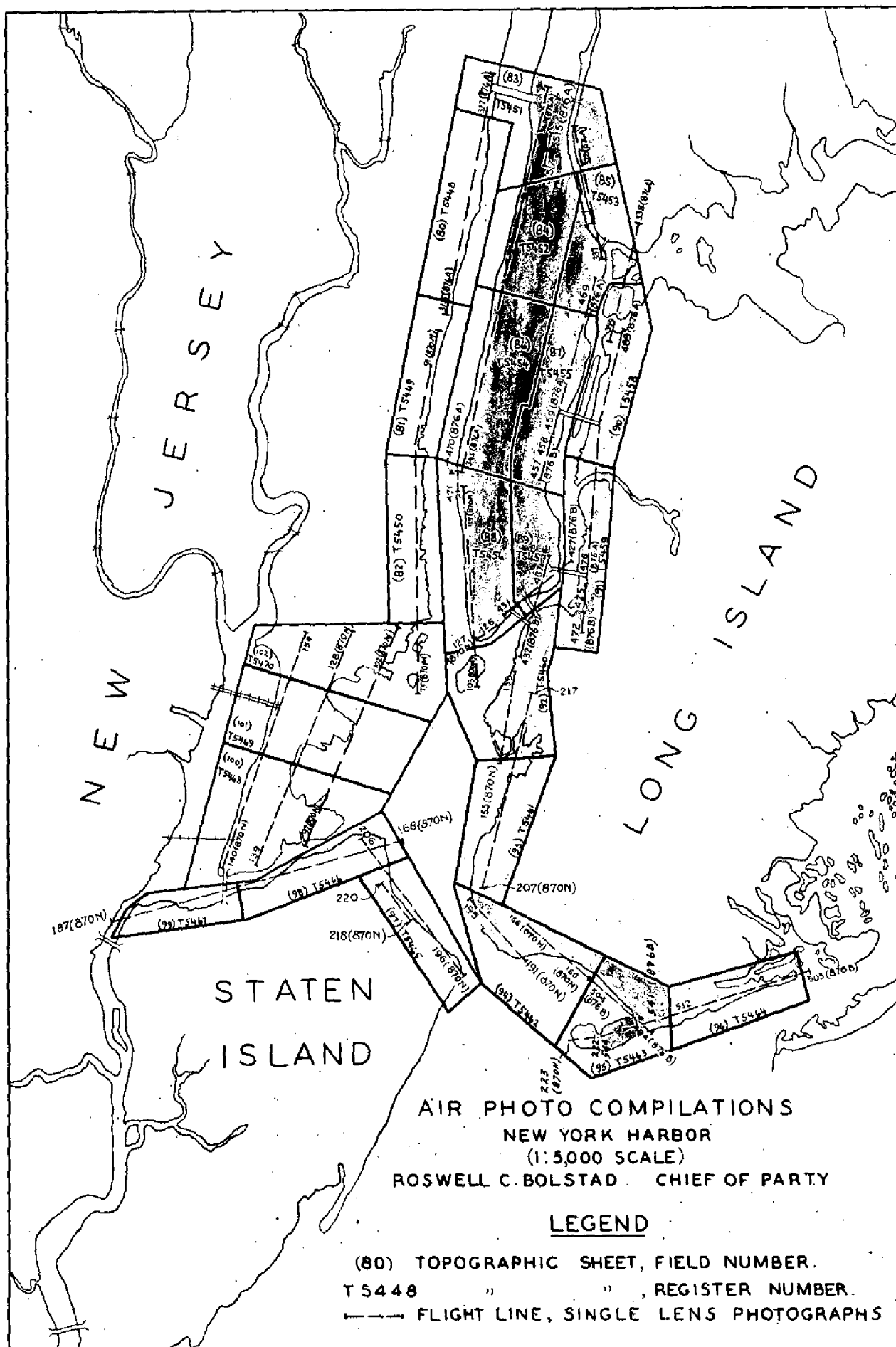
Applied to Chart 745 - Sept 2, 1937 - L.M.J.
Applied to Chart 276 - Dec 10, 1937 - L.M.J.
Applied to Chart 369 - Mar 17, 1939 - L.M.J.

AIR PHOTO FIELD INSPECTION REPORT

for

METROPOLITAN NEW YORK

To be attached to Descriptive Report for compilation
(Field No. 90) Reg. No. T5458.



AIR PHOTO FIELD INSPECTION REPORT

for

METROPOLITAN NEW YORK

At intervals from December 1934 to June 1935, as the field prints were received, a field inspection of aerial photographs was carried on of the Metropolitan New York area, blocked in with yellow ink on the preceding index sheet. The total area of approximately 40 square miles was covered by one member of party No. 12, on foot.

PHOTOGRAPHS

Flight lines of photographs involved are indicated on the preceding index chart and the numbers and dates on which the photographs weretaken are given below. The field photographs are all single lens photos taken by the U.S. Army Air Corps with a K-7C camera and are on 1:7500 scale. They were taken at an approximate altitude of 15,000 feet using a 24 inch cone on the camera.

SINGLE LENS PHOTOS

| <u>Photos Nos.</u> | <u>Flight No.</u> | <u>Date</u> | <u>Time</u> |
|--------------------|-------------------|-------------|---------------------|
| 345-360 | 876A-8 | 11-25-34 | 1:15 P.M. |
| 103-113 | 870N-8 | 11-25-34 | 1:07 to 1:12 P.M. |
| 328-337 | 876A-8 | 11-25-34 | 11:00 to 11:04 A.M. |
| 338-344 | 876A-8 | 11-25-34 | 11:10 to 11:12 A.M. |
| 427-431 | 876B-8 | 3-27-35 | 11:20 A.M. |
| 126-127 | 870N-8 | 3-27-35 | 11:27 A.M. |
| 155-159 | 870N-8 | 3-27-35 | 11:50 A.M. |
| 432-437 | 876B-8 | 3-27-35 | 11:55 A.M. |
| 457-458 | 876B-8 | 3-27-35 | 10:30 A.M. |
| 459-469 | 876A-8 | 3-26-35 | 10:32 to 10:35 A.M. |
| 472-475 | 876B-8 | 3-26-35 | 11:00 A.M. |
| 476-489 | 876A-8 | 3-26-35 | 11:05 to 11:12 A.M. |
| 470-471 | 876A-8 | 3-26-35 | 10:45 A.M. |
| 494-504 | 876B-8 | 5-11-35 | 2:30 P.M. |
| 160-166 | 870N-8 | 5-11-35 | 2:40 P.M. |
| 515-517 | 876A-8 | 5-16-35 | 3:30 P.M. |
| 207-217 | 870N-8 | 5-15-35 | 10:23 to 10:29 A.M. |
| 505-512 | 876B-8 | 5-15-35 | 9:15 A.M. |
| 191-195 | 870N-8 | 5-15-35 | 9:34 to 9:36 A.M. |
| 541-544 | 876B-8 | 6-25-35 | 9:04 A.M. |
| 222-223 | 870N-8 | 6-25-35 | to 9:07 A.M. |

AREA OF INSPECTION

The area covered by this field inspection embraces the following

air photo topographic sheets:-

| | <u>Field No.</u> | <u>Register No.</u> |
|---------|------------------|---------------------|
| Part of | 83 | T5451 |
| | 84 | T5452 |
| | 85 | T5453 |
| | 86 | T5454 |
| | 87 | T5455 |
| | 88 | T5456 |
| | 89 | T5457 |
| | 90 | T5458 |
| | 91 | T5459 |
| | 92 | T5460 |
| | 93 | T5461 |
| | 94 | T5462 |
| Part of | 95 | T5463 |
| | 96 | T5464 |

GENERAL DESCRIPTION OF TOPOGRAPHY

Sufficient and adequate notes relating to the topography were marked on the photographic prints.

Practically the entire area is densely populated and fairly flat, exceptions being noted on the prints.

CONTROL

(1) Triangulation

The triangulation performed by the following parties forms the basis of control for the compilations in this area:

| | |
|-----------------------|-----------|
| Lieut. R.W.Woodworth, | 1930-1933 |
| C.A.Egner | 1930 |
| Lieut. M.O.Witherbee | 1934 |

(2) Topographic Sheets

In addition to the above listed control, the following aluminum control sheets by Lieut. Witherbee may be used as an aid in the compilations in this area:

Field Sheet I
Field Sheet J
Field Sheet K

(3) U.S.E. Stations

All U.S.E.D. stations recovered from descriptions furnished by the U.S. Army Engineers were spotted on the photographs, marked U.S.E. and circled with blue ink. They were described on cards, Form 524.

(4) Stations Spotted on Photos

Recovery cards (Form 526) have been written for the

stations visited only where the station is lost or where the description on hand was inadequate or in error.

All triangulation stations were marked on the field prints with blue ink triangles when the actual point at the triangulation station was not picked on the photograph reference data is given on sketches on the photo which will determine the location.

Distances, unless otherwise noted, are given in meters.

NAMES

New names indicated on the field prints have been verified by at least three residents of the vicinity and are in local usage.

The west end of Coney Island, charted as Norton Point, has been a private development for over 35 years known as Sea Gate by the local residents.

Blackwells Island, charted as such, is known by city officials on the island as Welfare Island. Ferry, bridge signs and other signs refer to the island as Welfare Island.

BRIDGES

Clearances of bridges, with one exception, are given in the Coast Pilot Notes and topographic party reports of the area covered.

The exception noted is the Washington Ave. bridge over the Wallabout Canal. At the time of this inspection, the old bridge was removed. It is to be replaced by a new bridge for which clearances cannot be accurately determined until it is in place.

COAST PILOT NOTES

No discrepancies with the present edition of the Coast Pilot Notes have been noted by this inspection party.

RECOVERABLE OBJECTS

Since triangulation stations and U.S.E. stations are located at fairly close intervals, few other recoverable objects were spotted. However, additional prominent objects and recoverable objects were spotted on the photos, circled in blue ink, and labeled recoverable topo stations or class "C" landmarks. Descriptions of these objects have been submitted on Form 524.

LANDMARKS

The major (chartable) landmarks have been previously submitted and cut in as triangulation stations. A list was submitted by Lieut. R.W. Woodworth in 1933. It is understood that Lieut. Witherbee may have submitted a supplemental list to the Washington Office. This

party was not furnished with copies of any such data, or information.

CHANGES

Since the field inspection was made soon after the pictures were taken, very few changes occurred on the pictures. These changes together with present construction work and future proposed work were clearly indicated on the pictures.

The most important changes now under construction are as follows:

- (1) The Triborough Bridge over the East River at Wards Island.
- (2) The Midtown Tunnel under the Hudson River at 39th Street.
- (3) The elevation of the surface tracks of the N.Y.C.R.R. on the west side of Manhattan in the vicinity of 41st Street.
- (4) The continuation of the west side Express Highway, and the filling in of the shore front for park construction, along the Hudson River in Manhattan.
- (5) The construction of a new Washington Ave. bridge over the Wallabout Canal (noted under bridges).
- (6) Several minor changes, as the erection of piers, pier sheds or demolished piers etc. which have been clearly indicated on the field prints.

Submitted by

J. Rippstein
J. Rippstein

Draftsman, Party No. 12

June 28, 1935.

COMPILER'S REPORT

for

COMPILATION, FIELD NO. 90.

- 1 -
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. 90

REGISTER NO. T-5458.

State New York

General locality East River,

Locality Wards Island to Belmont Island. - Blackwells Island and
* photographs - Nov. 25, 1934 & Mar. 26, 1935.

Scale 1:5,000 Date of Survey 19
Date of Compilation - April 20, 1936.

Vessel Air Photo Compilation Party No. 12.

Reviewed and recommended for approval - Roswell S. Bolstad.

Chief of party

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

Inked by R. H. Packworth and R. C. Bolstad.

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

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

Instructions dated November 15th., 1932

Remarks: Compiled on a scale of 1:5,000 and printed by

photo-lithography.

* Blueprint on scale 1:5000

* STATISTICS *

on

COMPILATION? FIELD NO. 90 , REGISTER NO. T-5458 .

| Photographs No. | Date | Time. | Tide. |
|--------------------|---------------|------------|---|
| 339 - 344 (876A-8) | Nov. 25, 1934 | 11:03 a.m. | About 3 ft. below M.H.W. @ Pot. Cove, Astoria. |
| 480 - 486 (876A-8) | Mar. 26, 1935 | 11:09 a.m. | About 1 1/2 ft. below M.H.W. @ E. 41st. St., N.Y.C. |

| | By | Date | From | To |
|-----------------------------|--|----------------|-------------------------|----|
| SCALE FACTOR (1.000) | R.C. Bolstad <i>R.C. Bolstad</i> | | (Previously determined) | |
| PROJECTION | R.H. Peckworth <i>R.H. Peckworth</i> | Mar. 18, 1935. | | |
| PROJECTION CHECKED | J.P. O'Donnell <i>J.P. O'Donnell</i> | Mar. 18, 1935 | | |
| CONTROL PLOTTED | R.H. Peckworth <i>R.H. Peckworth</i> | Mar. 20 | Mar. 21, '35. | |
| CONTROL CHECKED | D.B. Bogart <i>D.B. Bogart</i> | Mar. 25, 1935 | | |
| TOPOGRAPHY TRANSFERRED | None | | | |
| TOPOGRAPHY CHECKED | None | | | |
| SMOOTH RADIAL LINE PLOT | R.H. Peckworth <i>R.H. Peckworth</i> | Apr. 8 | Apr. 15, 1935 | |
| | R.H. Peckworth | June 9 | June 16, 1935 | |
| RADIAL LINE PLOT CHECKED | S.E. Sperry, Jr. <i>S.E. Sperry, Jr.</i> | July 9 | July 11, 1935 | |
| | S.E. Sperry, Jr. | July 12 | Aug. 3, 1935. | |
| DETAIL INKED | R.H. Peckworth <i>R.H. Peckworth</i> | Apr. 3 | Apr. 20, 1936. | |
| | R.C. Bolstad <i>R.C. Bolstad</i> | Apr. 3 | Apr. 20, 1936. | |
| PRELIMINARY REVIEW OF SHEET | R.C. Bolstad <i>R.C. Bolstad</i> | Apr. 20 | Apr. 22, 1936. | |

AREA OF DETAIL INKED 3.4 Sq. Statute Miles (Land Area).

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

LENGTH OF SHORELINE (More than 200 m. from nearest opposite shore) 12.3 Statute Miles.

LENGTH OF SHORELINE (Rivers, sloughs, etc., less than 200 m. wide) 1.6 Statute Miles.

LENGTH OF STREETS, ROADS, TRAILS, RAILROADS, etc. 97.8 Statute Miles.

DATUM North American 1927

STATION COCHEO 1932 Latitude 40°-45'-11.632" (358.8m) (M)
Longitude 73°-56'-28.900" (678.0m)

COMPILER'S REPORT
for
AIR PHOTO TOPOGRAPHIC SHEET, FIELD NO. 90.

GENERAL INFORMATION.

The Air-photo Field Inspection Report for METROPOLITAN NEW YORK attached herewith furnished the necessary information for the compilation of this sheet. Additional information was obtained from Mr. Rippstein who performed the field inspection and is acquainted with this area.

This sheet has been compiled from two strips of single lens photographs, the numbers, dates and times of which are indexed on the preceding Statistics Sheet. The photographs were taken by the U. S. Army Air Corp at Mitchell Field, L.I., N.Y. with a special camera recently developed by the Fairchild Camera Corporation, 62-10 Woodside Ave., Woodside, New York city, with the cooperation of the Air Corp. Inasmuch as these photographs were among the first to be taken with this camera difficulties were encountered which caused considerable trouble at first, and in some cases, due to the short interval of time between exposures, affected the tilt and overlap. The camera is known as the K-7C by the Army and as the K-7A by the Fairchild Corporation. The Army plane was piloted by Lieut. Cullen at an altitude very close to 15,000 feet; the photographer was Sergeant Cates. A 24 inch cone (60 cm. focal length) was used which placed the original negatives on a scale of 1:7500. One set of contact prints were furnished the field party for inspecting purposes and the original negatives were used to enlarge a set of office prints to a 1:5000 scale (enlarging factor 1.5) in the Washington Office. These office prints were furnished this party and were used for the compilation of this sheet.

Enlargement of a 1:5000 print from negative V484 - 876A-8 was overlooked by the Washington Office and it was necessary to have an enlargement of this photograph made by the Air Corp at Mitchell Field. As the equipment at Mitchell Field would not allow for a single full sized print it was made in three overlapping prints. As these had to be pieced together by matching detail the assembling is open to question and strict adherence to the radials from this photo was not maintained; each section was oriented independently for the plot.

CONTROL.

(a) Sources.

Control for the compilation of this sheet was obtained from the following sources:-

- (1) Triangulation, 1932, Lt. Woodworth. Field positions on a N.A. datum were used with a correction applied as follows;- lat. -12.0 m. long. 1 (plus) 3.1 meters. For SOHMER and COCHEO the final office adjusted position on N.A. 1927 datum was used.
- (2) U.S.E.D. Stations as listed on page 9, and described on form 524 submitted with this report.

(b) Errors.

No error in the position of any of the above control stations established by Lieut. Woodworth of this bureau was discovered. However, Lt. Woodworth has submitted a recovery for the two following 1882 stations which is in error. Astoria Episcopal Church 1882 is lost. The air-photo plot definitely shows this station falls in a vacant lot on the photographs. It has been shown with a blue triangle on the celluloid compilation sheet and can be verified by the Washington Office if deemed questionable. The Astoria Dutch Reformed Church 1882 is not the same station recovered by Lt. Woodworth; it is evidently a new church which occupies a close site to the 1882 church. The present spire falls 8.5 meters east of the 1882 spire.

Corrected recovery cards are submitted with this report.

*Recovery cards
submitted to Mr. Lutz pp.*

There were a few small errors discovered in the locations of the U.S.E.D. stations, item 2 preceeding paragraph. (See following paragraph for details.)

All U.S.E.D. stations located on the field prints by the field inspection party were not plotted on this sheet; a selection was made to give a proper distribution for future chart correction to U.S.E.D. surveys. With the exception of TISDALE all stations are well marked and permanency should be such as to render them valuable for future surveys. Following are the discrepancies discovered in conducting the photo plot. In all cases the spotting on the photos was verified.

• Station 63 (U.S.E.) - new position as determined by the photo plot and shown on this sheet, lies 2 meters distant on azimuth 175° (from north) from the U.S.E. position.

• City Mon. (U.S.E.) - new position as determined by the photo plot and shown on this sheet, lies 3 meters distant on azimuth 190° (from north) from the U.S.E. position.

• Tisdale (U.S.E.) - new position as determined by the photo plot and shown on this sheet, lies 1 meter distant on azimuth 120° (from north) from the U.S.E. position.

• Monument "B" (U.S.E.) - new position as determined by the photo plot and shown on this sheet, lies 1 meter distant on azimuth 0° (north) from the U.S.E. position.

• Monument "F" (U.S.E.) - new position as determined by the photo plot and shown on this sheet, lies 2 meters distant on azimuth 0° (north) from the U.S.E. position.

• Monument "X" (U.S.E.) - new position as determined by the photo plot and shown on this sheet, lies 4 meters distant on azimuth 320° (from north) from U.S.E. position.

With the exception of the above listed stations all other U.S.E. stations agreed closely in position. As no coordinate position for SMOKESTACK ON ST'D. OIL CO. was available no check of this station could be made. The "Y" coordinate of TISDALE as listed by the U.S.E.D. is "N"; this is evidently an error and should be "S"(south). (See card 524 submitted with this report.)

See following paragraph Method for further explanation.

COMPILATION.

(a) Method.

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

The U.S.E.D. stations as listed in the back of this report were used as supplementary control for the radial plot. They were plotted on an aluminum sheet from their coordinate values (at 5000 scale) and transferred to the celluloid compilation sheetx by means of fitting to common stations (i.e., coordinate positions of triangulation stations on the aluminum sheet fitted to their corresponding geographical position on the celluloid sheet.). The transferred position of the U.S.E. station was not accepted unless it adhered strictly to the photo plot as there are sufficient triangulation stations to independently control the plot.

(b) Adjustments of Plot.

With the exception of the difficulty as mentioned in the last paragraph of GENERAL INFORMATION there were no unusual adjustments of the plot. A slight adjustment of both the plot of this sheet and compilation T-5088 was required for the junction.

(c) Interpretation.

No difficulty was experienced in interpreting the photographic detail.

The usual graphic symbols were used as approved by the Board of Surveys and Maps (1932) with the exception of the following:-

The long broken dashed line was used to indicate the bridge limits of the new Triboro Bridge which is at present under construction. The actual position of the concrete footings and cable anchorages over Hell Gate have been shown and the long dashed line is used only to show a close approximation of position of completed bridge. The portion leading over Little Hell Gate ~~and the construction of footings on Randalls Island were~~ not shown as construction of footings on Randalls Island were not apparent on the photographs and the exact bridge limits is therefore not definable. (See newspaper photographs in back of this report.)

The exact boundaries of all wrecks have been shown by a dashed line rather than the symbol. They have been adequately labeled.

In cases where docks are in ruins they have been so labeled and shown by the dashed line to indicate this state.

At lat. $40^{\circ}-45.6'$, long. $73^{\circ}-56.8'$ there is a traveling crane. The elevated trestles have been shown by single full lines with a cross line (broken - with arrows) representing the moveable crane riding the trestles.

Along the Astoria Park waterfront, from Pot Cove to the northward, there are numerous large rocks. It is probable that many of these are exposed at low water immediately adjacent to the shore; however only the rocks which show clearly on the photographs and have been labeled on the field prints by the inspecting party have been shown on this compilation.

At the north end of Hallets Cove there is shown on this sheet a rectangular figure, with broken dash on one side and full line on the other. No mention was made of this object on the field prints; however, by stereoscopic study it appears to be a wrecked barge partly submerged on one side. The submerged portion was indicated by a dashed line with the full line indicating the portion above high water.

At lat. $40^{\circ}-45.8'$, long. $73^{\circ}-56.6'$ there is shown a large building with the cross-hatching extending in an opposite direction on the portion adjacent to the waterfront. By studying the photographs under the stereoscope it was found that the waterfront portion of the building is formed by the basement floor which projects out at the lower waterfront elevation. No boundary line was used for the portion which indefinitely passes under the ground level. There appear to be traveling cranes at this marble yard; they have been omitted from this sheet.

At lat. $40^{\circ}-45.0'$, long. $73^{\circ}-57.7'$ the rocks shown above high water were shown by the boundaries as appearing on photo V-481-876A-8 which was taken when the water level was about $1\frac{1}{2}$ feet below the M.H.W. level. The most northerly rock in this group appears (when studied under the stereoscope) to have, in general, two different levels with the easterly level being the highest. It was therefore shown on this compilation with a division line between the two levels. The easterly level appears to check the rock as shown on chart 745 and it may therefore be open to question if the westerly level is above the M.H.W. level. It appears probable that the westerly level is such as to be very nearly awash at M.H.W.

(d) Information from Other Sources.

As this area is subject to constant improvement and changes are being made from time to time, the newspapers of New York City were closely watched for any changes which may affect this compilation. Photographs and newspaper clippings are included in the back of this report. Below are listed some of the changes which have occurred since the date of these photographs:-

(1) Triboro Bridge. Supposed to be completed in the summer of 1936. Piers and footings appear on the photographs and have been shown on the

compilation to aid in detailing the completed bridge without resorting to blueprints for location. (See newspaper clippings in back of report.)

(2) Astoria Park. Construction of playground and swimming pool under construction in 1936. Probably completed about same time as Triboro bridge. (See newspaper clippings, New York Times, May 5, 1935).

(3) Welfare Island ferry abandoned. (See newspaper clipping of July 26, 1935). While not affecting the actual compilation of this sheet this item is of interest and has bearing on the area.

(4) In the Baltimore Sun, Sunday newspaper of April 1936, an item appeared stating the penitentiary on Welfare Island was to be removed to provide space for a park. The penitentiary and all buildings on Welfare Island (Blackwells Island) have been shown on this compilation.

(5) Many of the buildings on Wards Island have been torn down. Only the buildings which remained at the time of the field inspection have been shown on this compilation. It was gathered from local information that a park was to be constructed on the island and practically all of the present buildings would be demolished.

No track traverse blueprints were available for aiding in detailing the Long Island R.R. yards at the south end of this sheet.

(c) Names.

All geographical names shown on this compilation have been listed on the special forms included in the back of this report.

COMPARISON WITH OTHER SURVEYS.

(a) Junctions.

This compilation joins the 1-10,000 scale compilation T-5088 at the northeast portion of this sheet. At the north end it makes a junction with compilation T-5453 which has not been compiled at present, and on the south a junction is made with sheet T-5459. All junctions are in proper agreement.

(b) Discrepancy with Chart 226.

A comparison of this compilation with the present edition of chart no. 226 was made by means of contact negatives of the compilation sheet reduced to the chart scale, 1-10,000.

Wards Island. The shoreline in general agrees closely (3 or 4 meters) with the chart shoreline except at the N.E. side adjacent to the Little Hell Gate bridge there is an appreciable discrepancy (over 20 meters). At the N.W. side the two docks and ferry slip are in error on the chart by an amount varying from about 12 to 18 meters. On the S.E. side of Wards Island the dock shown on the chart is in error by about 15 meters. Practically all of the buildings shown on the chart appear to be in error in both shape and position; this is also true of the streets which in cases where general agreement in position is made the width is exaggerated beyond the true proportions. The beacon and bell at Negro Pt. on the chart is in error approximately 8 meters (See list of recoverable objects in back of this report for correct position.)

Mill Rock. The bulkhead and H.W. line on the chart are in error up to approximately 6 meters. The shape, position, and number of buildings as shown on the compilation show some discrepancy with those on the chart. At Hog Back to the east of Mill Rock there has been shown on the compilation the rocks as appearing on photograph V486-876A-8. The current appears to be setting to the eastward and their position on the compilation was gauged with this in mind. While their correct position may be open to question an earnest endeavor was made to locate them correctly on the compilation. (These rocks can also be seen on the newspaper photograph included in the back of this report.) ~~It was also shown on the compilation as no indication of it could be found on the photographs, it is such as rock and~~

The position of Holmes Rock as shown on the compilation sheet was determined from photographs V485 and V486 (876A-8); it does not show on photographs V-342 and 343 (876A-8). This rock has been shown on the chart as being above high water; it has therefore been shown this way on the compilation. It does seem rather peculiar that this rock should not show the current swirls as do the rocks just to the west of it; however it may be that the westerly barrier of rocks diminish the strength of current to such extent that the effect would not be apparent on the photos.

Blackwells Island. The shoreline, in general, agrees closely with the chart shoreline except in the following localities: The dock at lat. 40°-46.2' on the west side is about 10 meters in error as shown on the chart. The bulkhead line on the west side of the island below the Queensboro bridge is shown incorrectly on the chart by about 15 meters. Many of the buildings are shown incorrectly in shape and position, several have been omitted which are shown on the compilation. The bridge piers of the Queensboro bridge are shown about 5 meters in error on the chart and the bridge width has been exaggerated about 60%.

Astoria. The highwater line of the chart at Hell Gate is in error practically all the way down to Hell Gate beacon on Hallets Pt. varying from 2 meters to over 20 meters. Hallets Cove shows a sizeable change in that the long dock extending from the north on the chart differs from the compilation position by 20 meters, also it appears that a fill has been made in this area which causes a change in the highwater line of about 30 meters. At lat. 40°-45.5' there is an appreciable change in the shoreline while below the Queensboro bridge a straight bulkhead has been shown on chart 226 which is in error; the break in the bulkhead has been shown on chart 745 which is however in error by about 10 meters. There are a large number of errors occurring on chart 226 in the position, shape and size of the buildings shown along the waterfront. In general the widths of streets on the chart have been exaggerated beyond true proportions.

(c) Discrepancy with Chart 745.

Long Island City. The bulkhead line agrees well in general with the chart except at lat. 40°-45' the bulkhead at detail adjacent, on the chart, is in error by around 30 meters; the detail appears to have been oriented in wrong. The railroad tracks in Long Island City are correctly shown on the compilation which does not agree with the chart. Omission, changes in size, shape, and position of many building occur on the chart. Vernon Ave. appears to be out of position on the chart by around 10 meters.

Belmont Island shoreline on the chart does not agree with the compilation shoreline, particularly on the west and northwest sides. The positions and shapes of the rocks on Blackwells Reef as shown on the compilation sheet do not agree with the chart. (Also see last paragraph, Interpretation, page 5).

In making the comparison between this compilation and the charts the landmarks (which are triangulation stations) were held to so that the change due to Datum (Chart on N.A. - Compilation on N.A. 1927) does not enter.

LANDMARKS.

Landmarks for this area have been previously submitted by Lieut. R.W.Woodworth, March 28, 1933 and include the following:-

- (1) Yellow Chy. (△ Tall Chy., Welfare Id. 1932) Comment:- Still exists and should be charted.
- (2) Bn. (Blackwells Reef). (A 1932 triangulation station) Comment:- Still exists and should be charted.
- (3) Bn. (Hell Gate). (A 1932 triangulation station). Comment:- Still exists and should be charted.
- (4) Bn. (Hog Back). (A 1932 triangulation station). Comment:- Still exists and should be charted.

- (5) N. Bn. (Mill Rock). (A 1932 triangulation station). Comment:- Still exists and should be charted.
- (6) S. Bn. (Mill Rock). (A 1932 triangulation station). Comment:- Still exists and should be charted.
- (7) Blackwells Id. Light. (A 1932 triangulation station). Comment:- Still exists and should be charted.
- (8) Bn. (Negro Pt.). (A lighted beacon and bell - no position given by Woodworth). Comment:- The position on the present charts appears to be somewhat in error (about 7 meters) and the correct position is given in the list of recoverable objects following.
- (9) Cupola Flagpole. (Triangulation station "Sohmer 1907-32"). Comment:- While the tower can be plainly seen in the newspaper photograph (New York Times, May 5, 1935) the permanency and conspicuousness of the flagpole on top of the low tower may render it a questionable landmark of little aid except in the immediate vicinity of Halletts Cove. Present charts do not show this landmark and it is recommended that it be continued not to be shown. If landmark is to be charted it should be termed "tower".
- (10) Green Dome. (1932 triangulation station "Dome, St. Johns Hosp.") Comment:- Still exists without change in location.

On Lieut. Woodworth's expunged list a "Spire" is listed at Lat. 40°-47.2', long. 73°-55.7'. There is shown on the present charts a "chapel" which may or may not be the same object; it appears probable that this is not the same object referred to. However, the "chapel", on Wards Island, is not outstandingly conspicuous relative to adjacent detail, and furthermore what little prominency it now retains will be diminished upon completion of the triboro bridge as can be readily seen from the newspaper photographs. It is recommended that it be expunged from the charts and that the two twin chimneys at the west side of Wards Island be charted. (The oblique newspaper photographs clearly show that the prominency of these chimneys is unquestioned.)

In the locality of lat. 40°-46' on Blackwells Island there are two brick stacks and a yellow brick chimney which have been shown on this compilation sheet by the $2\frac{1}{2}$ mm. black circle. These objects exhibit a certain degree of prominence, particularly the 100 ft. stack which shows with a prominence equal to either of the two charted stacks at lat. 40°-45.6' in Long Island City. (See newspaper photograph, New York Times, May 5, 1935). The correct position is listed in the tabulation of recoverable objects included in the back of this report.

At lat. 40°-45.6' in Long Island City the two stacks shown as landmarks on the present charts are in error in position. The correct position is included in the list of recoverable objects. These stacks were not mentioned in the list submitted by Lieut. Woodworth and it is not known ~~where~~ from what source the charted position was obtained. There are two slim metal stacks of equal height adjacent to these two stacks and they serve to aid in rapid identity of the objects; they have been correctly shown on this compilation sheet by the $\frac{1}{2}$ mm. circles. No position was scaled. The two tall gas holders east of these objects are decidedly conspicuous from land, air and water and should be charted as shown on this compilation; the present charted positions are in error. (The conspicuousness of the stacks and gas holders mentioned above can be verified by inspection of the New York Times May 5, 1935 newspaper photograph). The tall chimneys on the Loft Candy Co. to the south of the gas holders are conspicuous but of minor prominence relative to the gas holders.

The smokestack on the Std. Oil Co. (U.S.E. station, shown on this sheet by $2\frac{1}{2}$ mm. black circle) is about 150 ft. high and exhibits prominence from the waterfront. It has the words "SOCONY" on the north side; it is a round yellow brick stack. The position is given in the list of recoverable objects with the exact scaled position shown on form 524 submitted with this report.

On each pier of the Queensboro bridge (2 piers on Blackwells Id. and¹ each side of East River) there are two flagstaffs arising from short spires; these have been shown on the compilation sheet by a small $\frac{1}{2}$ mm. circle. They are decidedly prominent, being more conspicuous and with greater visibility range than any of the other landmarks shown on this compilation. (The New York Times photograph of May 5, 1935 clearly shows these flagstaff, even though at a distance of three miles.) To the navigator going north up the East River they would be the most outstanding objects during daylight after passing under the Williamsburg Bridge. The bridge towers only are shown on the present charts and these are out of position; it is believed the prominence of these staffs should warrant consideration.

LIST OF RECOVERABLE OBJECTS.

The following tabulation lists all recoverable objects shown on this compilation by a small ($2\frac{1}{2}$ mm. diam.) black circle. They have been located by the photo plot, and cards, form 524, are submitted for all objects followed by the letter (d).

| NAME | LATITUDE | LONGITUDE |
|---|------------------|------------------|
| Station 63 (U.S.E.)(d) | 40°-47'- 838.5m. | 73°-55'-1231.5m. |
| City Mon. (U.S.E.)(d) | -47'- 619.0m. | -55'- 316.0m. |
| Center Bridge(Center of Fan Ranges) (U.S.E.) (d) | -46'-1849.5m. | -55'- 585.5m. |
| Wolcott (U.S.E.) (d) | -47'- 70.5m. | -55'- 72.0m. |
| Potter (U.S.E.) (d) | -46'-1562.0m. | -55'- 479.0m. |
| Woolsey (U.S.E.) (d) | -46'-1397.5m. | -55'- 633.5m. |
| N.Twin Chy.(125 ft.) | -47'- 400.0m. | -56'- 28.5m. |
| S.Twin Chy.(125 ft.) | -47'- 383.0m. | -56'- 38.0m. |
| Station 33 (U.S.E.) (d) | -46'-1822.5m. | -56'- 183.5m. |
| Lighted beacon and bell | -46'-1588.5m. | -55'- 954.0m. |
| Tisdale (U.S.E.) (d) | -46'-1053.0m. | -55'-1173.5m. |
| Monument "A-H" (U.S.E.) (d) | -46'- 653.0m. | -56'- 625.5m. |
| Monument "B" (U.S.E.) (d) | -46'- 569.0m. | -56'- 773.0m. |
| Spire, Astoria Dutch Reformed Church | -46'- 680.5m. | -55'-1174.5m. |
| N. Yel. Brick Stack (80 ft.) | -46'- 25.0m. | -56'-1002.5m. |
| S. Yel. Brick Stack (100 ft.) | -45'-1842.0m. | -56'-1017.5m. |
| Children's Hospital (U.S.E.) (d) | -46'- 70.0m. | -56'-1037.0m. |
| Monument "F" (U.S.E.) (d) | -45'-1378.0m. | -57'- 115.0m. |
| Monument "X" (U.S.E.) (d) | -45'- 363.5m. | -56'- 802.0m. |
| Yel. Brick Chy. (75 ft.) | -45'-1667.0m. | -56'-1127.0m. |
| Smokestack on Std. Oil Co.(U.S.E.)(d) | -44'-1503.5m. | -57'- 559.5m. |
| N.W.Brick Stack (100 ft.) | -45'-1166.5m. | -56'-1114.0m. |
| S.E.Brick Stack (100 ft.) | -45'-1139.0m. | -56'-1106.5m. |
| City Mon. (A) (See description following) | -45'-1803.0m. | -56'- 569.0m. |
| City Mon. (B) (" " ") | -45'- 60.0m. | -57'- 217.0m. |

There are also many other recoverable objects which exhibit minor prominence; these have been shown by a small $\frac{1}{2}$ mm. circle or in the case of square chimneys by a small $\frac{1}{2}$ mm. square. They can be used as aids for navigation, controlling future surveys, locating buoys, etc. They have all been located by the photo plot and are believed to be within the limits of accuracy as specified in the paragraph "Recommendations for Further Surveys".

No description has been submitted for the City Monuments (A) & (B) as tabulated above. These monuments consist of metal plugs set in the sidewalk and located by the Queens topographical bureau in their surveys. The letters (A) & (B) were prefixed to serve in identifying them only; they are probably known by the street intersection on which they exist. Mon. (A) is at the turn on Vernon Boulevard between 33rd and 34th streets.

Mon. (B) is located at the intersection of 44th. and Vernon Blvd.

BRIDGES.

The bridge information as shown on this compilation was obtained from the section B, Coast Pilot. No verification was made by the field party of the clearances. However, the clearance of 200 feet for the Little Hell Gate R.R. bridge appears to be too conservative; the photographs indicate an unobstructed channel between the bridge piers which gives a measured distance of slightly more than 260 feet.

RECOMMENDATIONS FOR FURTHER SURVEYS.

The compilation of this sheet is believed to have a probable error of not over 1 meter in position for well defined waterfront detail of importance for charting, not over 2 meters for other waterfront detail, and not to exceed 3 meters for inland detail.

This compilation is believed to be complete in all detail of importance for charting purposes, within the accuracy stated above, and no additional surveys are required other than those specified in the paragraph "Information from Other Sources", pages 5 and 6, which will bring the survey to-date.

Submitted by -

April 21, 1936.


Roswell C. Bolstad, Jr. H. & G. Engr.

Remarks

Decisions

| | | |
|----|---|--|
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| 11 | | |
| 12 | | |
| 13 | *Known as Welfare Island; this names is used by all New Yorkers, referred to as such in publications and newspapers (However, see following page) Suggested that name Welfare Island be shown in smaller letters in parenthesis below the name Blackwells Island on the compilation. | |
| 14 | | |
| 15 | | |
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GEOGRAPHIC NAMES
Survey No. T-5458.
Air Photo Compilation.

| Name on Survey | A | B | C | D | E | F | G | H | K | |
|---|-----|---|---|---------------|----|---|-----------------|---|-----|----|
| <u>Little Hell Gate</u> ✓ | * x | | | (3 men) x | x | | | | x | 1 |
| <u>Wards Island</u> ✓ | * x | | x | (4 men) x | x | x | | | x | 2 |
| <u>Mill Rook</u> ✓ | * x | | | (3 men) x | | | | | x | 3 |
| <u>Hell Gate</u> ✓ | * x | | x | (3 men) x | x | x | | | x | 4 |
| <u>Negro Point</u> ✓ | * x | | | | | | | ✓ | | 5 |
| <u>Hallets Point</u> ✓ | * x | | | - | | | | | | 6 |
| <u>Pot Cove</u> ✓ | * x | | | | | | | | x | 7 |
| <u>Astoria Park</u> ✓ | * x | | | (2 men) x | x | | | | * x | 8 |
| <u>Rainey Park</u> ✓ | | | | (2 men) x | x | | | | * x | 9 |
| <u>Gibbs Point</u> ✓ | * x | | | | | | | | | 10 |
| <u>West Channel</u> ✓ | | | | | x | | | | * x | 11 |
| <u>East Channel</u> ✓ | | | | ✓ | x | | | | * x | 12 |
| <u>Blackwells Island</u> ✓ | * x | ✓ | x | (5 men) x* | x* | x | | | * x | 13 |
| <u>Astoria</u> ✓ | * x | | x | (4 men) x | x | x | | | x | 14 |
| <u>Long Island City</u> ✓ | x | * | x | (4 men) x | x | x | postal guide | | x | 15 |
| <u>East River</u> ✓ | * x | ✓ | x | (3 men) x | x | x | | | x | 16 |
| <u>Belmont Island</u> ✓ | x | * | | | | | | | | 17 |
| New York Connecting R.R. 369 | | | | | x | | | | x | 18 |
| <u>Triborough</u> ✓ | | | | (4 men) x | x | | * | | x | 19 |
| <u>Hog Back</u> ✓ | * x | | | | | | | | | 20 |
| <u>Holmes Rock</u> ✓ | * x | | | | | | | | | 21 |
| <u>Queensboro Bridge</u> ✓ | * x | ✓ | | ✓ | x | | | | x | 22 |
| Queensboro Plaza | | | | (4 men) x | | | | | x | 23 |
| <u>Halletts Cove</u> ✓ | * | | | | | | | | | 24 |
| <u>Hell Gate Bridge</u> | | | | | | | | | | 25 |
| NOTE:- Names of streets may be obtained from the New York City Map, Board of Estimate and Apportionment, May 15th, 1933. | | | | | | | | | | 26 |
| | | | | | | | | | | 27 |

Names underlined in red approved
on 5/21/36
by (signature)

C O P Y

U. S. COAST & GEODETIC SURVEY

WASHINGTON

March 11, 1935

To: The Inspector, New York Field Station.

From: The Director, U. S. Coast and Geodetic Survey.

Subject: Amendments to Chart No. 745.

Replying to your letter of March 9, 1935, the receipt of which is acknowledged.

1. Blackwells Island is a decision of the U. S. Geographic Board whose decisions this Bureau must follow. In 1930 the Board was asked to reconsider their former decision and the adoption of the name Welfare Island by the City of New York was brought to its attention. The Board refused to alter its decision on the ground that the matter was referred to the New York State Committee on Geographic Names and that the Committee had voted to retain the name Blackwells Island. It appears from the above that the proper procedure is for the City of New York to get the State Committee to rescind its decision. If this is done the U. S. Board will undoubtedly follow.

2. The amendments noted in paragraphs 2 and 3 in your letter, while desirable, are not such as would affect the navigational use of the chart and can wait until the aerotopographic sheet is available for charting, provided the amendments are or will be shown on the sheet.

(signed) R. S. Patton

Director

Datum station
T-5458

Plane coordinates on Lambert projection

Long Island System State New York Station Cocheo, 1932

$\phi = 40^{\circ} 45' 11.632''$ $\lambda = 73^{\circ} 56' 28.900''$

Tabular difference of R for $1''$ of $\phi = 101,201.83$
.65409209

| | | | |
|-----------------------------------|------------------------------|--------------------------------------|----------------------------|
| R (for min. of ϕ) | 24,271,465.09 | y' (for min. of ϕ) | 191,080,21 |
| Cor. for sec. of ϕ | - 1177.18 | Cor. for sec. of ϕ | + 1177.18 |
| R | 24,270,287.91 | y' | 192,257.39 |
| | | $y'' (= 2R \sin^2 \frac{\theta}{2})$ | + 5.44 |
| θ (for min. of λ) | + $0^{\circ} 02' 36.97970''$ | y | 192,262.83 |
| Cor. for sec. of λ | - 18.90297 | | |
| θ | + $0^{\circ} 02' 18.07673''$ | $\frac{\theta}{2}$ | $0^{\circ} 01' 09.03836''$ |
| θ'' | For machine computation | | For machine computation |
| | | log θ'' | |
| log θ'' | | colog 2 | 9.69897000 |
| S for θ | | S for $\frac{\theta}{2}$ | |
| log sin θ | sin θ | log sin $\frac{\theta}{2}$ | sin $\frac{\theta}{2}$ |
| log R | | $R \sin^2 \frac{\theta}{2}$ | .0000001120 |
| log x' | | log sin $\frac{\theta}{2}$ | 2.72 |
| x' | R sin θ | log R | |
| | 2,000,000.00 | log 2 | 0.30103000 |
| x | 2,016,246.89 | log y'' | |

$$x = 2,000,000.00 + R \sin \theta$$

$$y = y' + 2R \sin^2 \frac{\theta}{2}$$

y' = the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine

(see log tables)

R, y' , and θ are given in special tables

Geodetic positions from Lambert coordinates

State Calif - L.I.

Station _____

| | | | |
|--|--|---------------------------|-------------------|
| x | 2,024,000.00 | $R_b + A$ | 24,462,545.30 |
| C | 2,000,000.00 | y | 204,000.00 |
| $x' (= x - C)$ | 24,000.00 | $R_b + A - y$ | 24,258,545.30 |
| | | | 0.0004946709 |
| $\tan \theta$ | 0.0009893421 | R | 24,258,557.17 |
| θ | $\left\{ \begin{array}{l} 0^\circ 03' 24.06639 \\ + 311.989 \end{array} \right.$ | y | 204,000.00 |
| $\frac{\theta}{\ell} (= \Delta \lambda)$ | | y'' | 11.87 |
| | | y' | 203,988.13 |
| λ (central mer.) | 74° ' " | | (23218.7) |
| $-\Delta \lambda$ | 05 11.989 | ϕ (by interpolation) | 40° 47' 07.546 |
| λ | 73 54 48.011 | | 355.8m |
| | 73° 54' 30" $\pm 411.2m$ $+ 844.6$ | | $+ 465.6m$ |

 $\frac{1}{2} \text{ mm} \left\{ \begin{array}{l} 1850.8 \\ 1400.9 \end{array} \right.$

Station _____

(?)

| | | | |
|--|--|---------------------------|-------------------|
| x | 2,018,000.00 | $R_b + A$ | 24,462,545.30 |
| C | 2,000,000.00 | y | 204,000.00 |
| $x' (= x - C)$ | 18,000.00 | $R_b + A - y$ | 24,258,545.30 |
| | | | 0.0003710032 |
| $\tan \theta$ | 0.0007420066 | R | |
| θ | $\left\{ \begin{array}{l} 0^\circ 02' 33.04982 \\ + 233.992 \end{array} \right.$ | y | 204,000.00 |
| $\frac{\theta}{\ell} (= \Delta \lambda)$ | | y'' | 6.68 |
| | | y' | 203,993.32 |
| λ (central mer.) | 74° ' " | | (23413.7) |
| $-\Delta \lambda$ | 03 53.992 | ϕ (by interpolation) | 40° 47' 07.597 |
| λ | 73 56 06.008 | | 215.8m |
| | $+ 270.6m$ $+ 281.8m$ | | $+ 468.6m$ |

$$\tan \theta = \frac{x - C}{R_b + A - y} \left\{ \begin{array}{l} + 850.8 \\ - 704.9 \end{array} \right.$$

$$y'' = 2R \sin^2 \frac{\theta}{2}$$

$$y' = y - y''$$

$$\Delta \lambda = \frac{\theta}{\ell}$$

C is constant added to x' in computation
of coordinates

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

R_b is map radius of lowest parallel

$$R = (R_b + A - y) \sec \theta$$

A is value of y' for R_b ; in most cases it is zero

ϕ is interpolated from table of y'

Geodetic positions from Lambert coordinates

State A. G. - L. I.

Station _____

| | | | |
|--|---|------------------------|--|
| x | 2,018,000.00 | R _b + A | 24,462,545.30 |
| C | 2,000,000.00 | y | 198,000.00 |
| x' (= x - C) | 18,000.00 | R _b + A - y | 24,264,545.30 |
| | | | 0.0003709115 |
| tan θ | 0.0007418231 | R | |
| θ | { 0° 02' 33.01197 | y | 198,000.00 |
| | + 233.934 | y'' | - 6.68 |
| $\frac{\theta}{\ell} (= \Delta \lambda)$ | | y' | 197,993.32 |
| λ (central mer.) | 74° | | |
| - Δλ | 03 53.934 | φ (by interpolation) | 40° 46' 08.310 |
| λ | 73 56 06.066 | | ^(1407.2) ^(256.3 m) +233.8 m +512.6 |
| | ^{.10110} ¹⁸⁷¹ 142.3 | | ¹³⁸⁵⁰ ^{146.7} 256.3 |
| | | | +374.2 m +284.6 |

 $\left\{ \begin{array}{l} 1850.8 \\ 1407.2 \end{array} \right.$

Station _____

| | | | |
|--|---|------------------------|--|
| x | 2,018,000.00 | R _b + A | 24,462,545.30 |
| C | 2,000,000.00 | y | 192,000.00 |
| x' (= x - C) | 18,000.00 | R _b + A - y | 24,270,545.30 |
| | | | 0.0003708198 |
| tan θ | 0.0007416397 | R | 24,270,551.97 |
| θ | { 0° 02' 32.97414 | y | 192,000.00 |
| | + 233.876 | y'' | - 6.67 |
| $\frac{\theta}{\ell} (= \Delta \lambda)$ | | y' | 191,993.33 |
| λ (central mer.) | 74° | | |
| - Δλ | 03 53.876 | φ (by interpolation) | 40° 45' 09.023 |
| λ | 73 56 06.123 | | ^(1407.6) ^(278.3 m) +254.0 m +556.6 m |
| | ^{.10205} ¹⁸⁷¹ 142.6 | | ¹⁵⁰³⁸ ^{147.0} 278.3 |
| | | | +377.8 m +287.2 m |

$$\tan \theta = \frac{x - C}{R_b + A - y}$$

$$\Delta \lambda = \frac{\theta}{\ell}$$

$$y'' = 2R \sin^2 \frac{\theta}{2}$$

$$y' = y - y''$$

C is constant added to x' in computation
of coordinates

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

$$R = (R_b + A - y) \sec \theta$$

R_b is map radius of lowest parallel

A is value of y' for R_b; in most cases it is zero

φ is interpolated from table of y'

REVIEW OF AIR PHOTO COMPILATION T 5458
Scale 1:5,000

Comparison with Graphic Control Surveys

There are no graphic control surveys in this area.

Comparison with Previous Topographic Surveys

T 3226 (1911), 1:10,000

T 3226 is a series of small mounted sections of old chart No. 369⁴ showing revisions to the date of this survey. Many cultural changes have taken place since the date of T 3226 and the compilation is adequate to supersede T 3226 in all points of detail within the area common to the two surveys.

T 3242 (1912), 1:5,000

T 3242 consists of field corrections applied to a mounted copy of old chart No. 369⁵, showing revisions since the date of the information used in compiling the chart. As above, cultural changes are so numerous that it does not seem necessary to list them. The compilation is adequate to supersede T 3242 in all points of detail within the area common to the two surveys.

Comparison with Hydrographic Surveys

The latest hydrographic surveys in this area were made in 1886 and 1890 and no comparison is made with these surveys.

Comparison with the Charts

Comparison with charts Nos. 226 and 745 is made on pages 6 and 7 of the preceding report where the more important changes are listed. Numerous minor discrepancies exist such as errors in position and shape of buildings, etc. Extensive revision of the charts will be necessary in order to bring them up to date. Refer to pages 5 and 6 of the preceding report for discussion of items in course of change at the present time. The photographs have been carefully examined for omissions of buildings, piles, etc.

The shoreline, in general, is in very good agreement.

The sunken wreck charted at lat. 40° 46.6' N., long. 73° 56.3' W. on chart 226 cannot be discerned on the photographs, was not noted by the field inspection party and therefore is not shown on the compilation. Its existence is not disproved.

The sunken wreck charted at lat. 40° 46.4' N., long. 73° 56.2' W., in Hallets Cove, chart 226, falls inside of an area that is now filled in. The high water line at this point has been changed about 30 meters. The shape of the L-shaped pier at this point is erroneously shown on chart 226. Its correct shape is shown on the compilation.

The wrecks charted at lat. $40^{\circ} 46.2' N.$, long. $76^{\circ} 56.2' W.$ on chart 226 in Hallets Cove cannot be seen on the photographs and are not shown on the compilation. One wreck is shown in this position about midway between the two charted.

The wreck charted on charts 226 and 369 "400 yards east true from Negro Point Light" between the Hell Gate Bridge and the new Tri-Borough Bridge occurred since the date of the photographs and therefore cannot be located from the photographs. Its position is somewhat indefinite (see chart letter No. 206 (1936) for position) and for that reason it is not plotted on the compilation.

The rocks awash charted on the Astoria Park waterfront, lat. $40^{\circ} 46.7' N.$, long. $73^{\circ} 55.6' W.$ cannot be seen on the photographs and are not shown on the compilation. **The existence of these rocks is not disproved**

The rock awash charted just off the westerly shore of Blackwells Island, lat. $40^{\circ} 46.2' N.$, long. $73^{\circ} 56.7' W.$ cannot be seen on the photographs and is not shown on the compilation. **The existence of this rock is not disproved.**

Coast Pilot

Atlantic Coast Pilot, Section B, page 258, second paragraph.

In discussing the new Tri-Borough Bridge across the East River at Wards Island, the Coast Pilot states that the bridge will be an "arch structure". From the newspaper photographs accompanying this report it will be noted that the bridge is of the suspension type. **The attention of the Coast Pilot Section has been called to this matter.**

Landmarks and Aids to Navigation

All landmarks and non-floating aids to navigation charted or listed in the 1936 Light List are shown on the compilation.

Plane Coordinate Grid

After consultation with the Division of Geodesy, the following items were agreed upon regarding the use of the State plane coordinate systems in the vicinity of New York City:

- (1) The ^{New York} ~~Long Island~~ System of Plane Coordinates, on a Lambert Projection is to be used in the area of New York Harbor, extending northward in New York State to latitude $41^{\circ} 10'$, easterly along the north shore of Long Island Sound to the Connecticut State line, southward to include Sandy Hook and the shores of Sandy Hook Bay and Raritan Bay, westward to include the west shores of Arthur Kill and Newark Bay, the City of Bayonne, N.J., and the west shore of the Hudson River.
- (2) The New Jersey ~~State~~ System of Plane Coordinates on a Transverse Mercator Projection is to be used, in addition to the Long Island system, on all sheets that fall within the limits of the State of New Jersey.
- (3) The New Jersey system alone is to be used on all sheets of the State of New Jersey that show no waterfront detail in the New York Harbor area, described in (1) above.

The Long Island System of Plane Coordinates is shown on this compilation, having been drawn on the projection ruling machine, through grid intersections whose geodetic positions were computed. Positions computed by O. S. Adams; positions plotted by R. M. Berry and checked by L. A. McGann; grid drawn by R. E. Ask. *R. M. Berry*
R. E. Ask

General

The compilation has been thoroughly checked with the field inspection photographs and no omissions of detail of any consequence were found. The compilation seems to have been carefully drawn and it is believed that it is accurate within the limits stated on page 10 of the preceding report.

May 15, 1936.

Ralph Moore Berry

Ralph M. Berry.

Frank G. Cook

REVIEW OF AIR PHOTO COMPILATION NO. T-5458.

Chief of Party: Roswell C. Bolstad

Compiled by: See STATISTICS
sheet.

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

- ✓ 1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64)
- ✓ 2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 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) None.
- ✓ 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) None.
- ✓ 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. None.
- ✓ 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 ~~New water lines, reefs, coral reefs and~~ rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41) See paragraph Interpretation.
- ✓ 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) Previously submitted. Suggestions for amending.
- ✓ 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)
* See form for Geographic Names, particularly "Blackwells Island.
- ✓ 13. The geographic datum of the compilation is N.A. 1927 and the reference station is correctly noted.
- ✓ 14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j) See paragraph Junctions.
- ✓ 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)


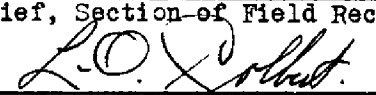
- ✓ 16. No additional surveying is recommended at this time.
See paragraph "Recommendations for Further Surveys".
- ✓ 17. Remarks: Because of party shut-down in July 1935 Mr. Peckworth, draftsman, was unable to complete the detailing of this compilation; it has been completed in the Baltimore office by the chief of party.
- 18. Examined and approved;




Roswell C. Belstad, Jr. H. & G. Engr.
Chief of Party

- 19. Remarks after review in office:

Reviewed in office by: 
r-Frank G. Estaine

Examined and approved:


Chief, Section of Field Records

Chief, Division of Charts


Chief, Section of Field Work

Chief, Division of Hydrography
and Topography.



A NEW BRIDGE APPEARS ON THE SKYLINE OF NEW YORK: AN AERIAL VIEW
OF THE \$48,000,000 TUBBOUGH BRIDGE.
Showing the Piers on Ward's Island and on the Astoria Side. In the Foreground is the
Hell Gate Bridge and in the Background the Queensboro Bridge.

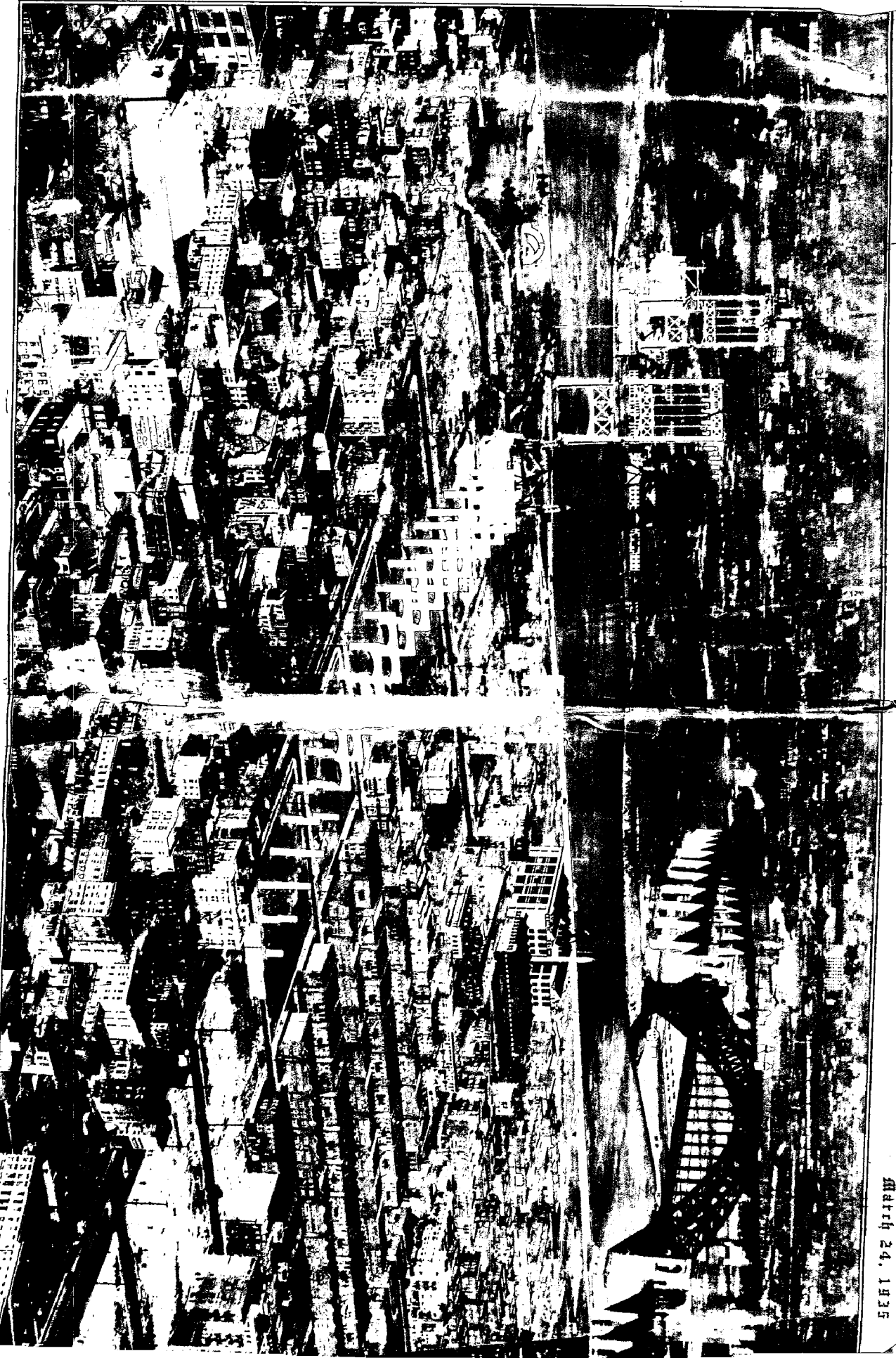


A NEW BRIDGE APPEARS ON THE SKYLINE OF NEW YORK: AN AERIAL VIEW
OF THE \$43,000,000 TRIBOROUGH BRIDGE,
Showing the Piers on Ward's Island and on the Astoria Side. In the Foreground Is the
Hell Gate Bridge and in the Background the Queensboro Bridge.

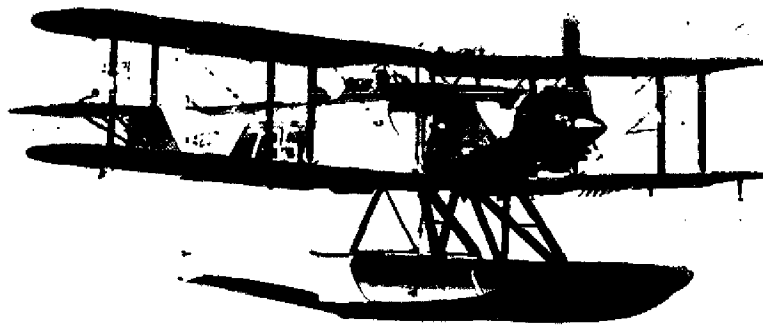
Photomontage
Picture Section

The New York Times

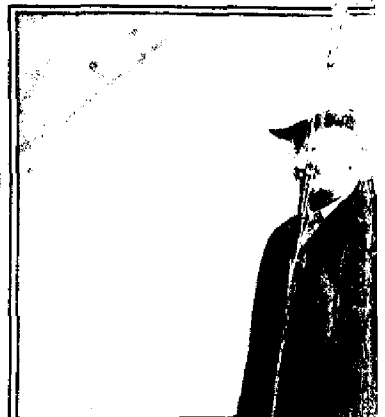
Sunday,
March 24, 1935



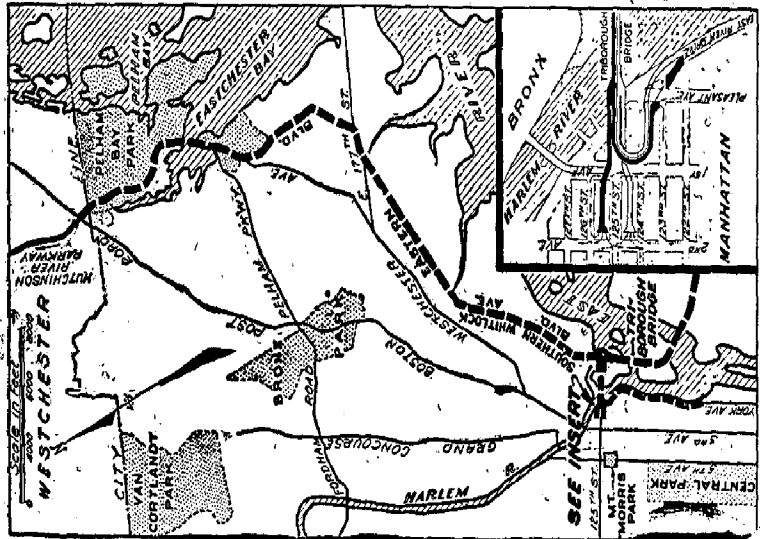
THE NEW BRIDGE WHICH WILL CONNECT THREE BOROUGH
OF NEW YORK CITY.
THE QUEENS APPROACH TO THE BRIDGE.



BRITAIN'S COMBINED FLEET AT "THE ROCK": A RECONNAISSANCE PLANE
Flying Over a Battleship and Three Flotillas of Destroyers Approaching Gibraltar,
at the Start of the Exercises of the Home Fleet and the Mediterranean Fleet.
(Times Wide World Photos.)



Triboro Bridge Approaches



Final plans were announced yesterday by the Triboro Bridge Authority for the approaches to the bridge. These maps show how the approaches will be worked out. Whitlock Ave. between Liggett and Hunt Point Aves. will be developed into parkway. Two bridges will be reconstructed, those over the Bronx River and Westchester Creek. A new approach will be provided along the East River, from York Ave. to 92d St. to the bridge at 125th St. and First Ave. in Manhattan.

WELFARE IS. FERRY MOVED TO 78TH ST.

Transfer from 86th St. Halted as Victory for Moses, Who Declared Route Should Be Shortened.

The 86th St. ferry, which plies between Manhattan and Welfare Island, carrying visitors and employees to and from public institutions on the island, was moved to 78th St. today and will be known hereafter as the 78th St. ferry. The change was a minor victory for Park Commissioner Robert Moses, who recommended it a year ago as an economy measure to reduce the length of the ferry's voyage. At a public hearing Aldermanic President Bernard H. Deusch opposed the change, as did proprietors of back gardens along 86th St., the main street of the German-American Yorkville section.

Report for Supplemental T 5458
Filed 11/19/36

1. minor corrections added to supplemental
in vol 11/19/36.