

5178

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5178

Form 504
Ed. June, 1923

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
R. S. Patton, Director

U. S. COAST & GEODETIC SURVEY
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JUL 17 1964

State: South Carolina

Acc. No. _____

DESCRIPTIVE REPORT

Air Photo }
Topographic }
Hydrographic }

Field No. 26
Sheet No. 5178

LOCALITY
~~Vicinity of Charleston Harbor and vicinity~~
~~Charleston Harbor and vicinity~~
~~Charleston City~~

19 34

CHIEF OF PARTY
E. H. Kirsch

PHOTOS NO.

M-71 through M-79-823A-8
M-53 through M-59-823A-8
M-24 through M-31-823A-8
M-14 through M-19-823A-8
M-146 - 823A-8

DATE

November 17, 1933
November 17, 1933
November 9, 1933
October 25, 1933
December 21, 1933

TIME

11:24 A.M.
10:45 A.M.
1:00 P.M.
8:25 A.M.
1:00 P.M.

PROJECTION BY

L. C. Ripley
L. C. Ripley

2-8-34

PROJECTION CHECKED BY

E. H. Kirsch
E. H. Kirsch

2-8-34

CONTROL PLOTTED BY

M. L. Smith
M. L. Smith

2-9-34

CONTROL CHECKED BY

E. S. Ethridge
E. S. Ethridge

2-9-34

CONTROL PLOTTED ON PHOTOS BY

F. H. McBeth
F. H. McBeth

CONTROL CHECKED ON PHOTOS BY

J. F. Richardson
J. F. Richardson

TOPOGRAPHY TRANSFERRED BY

F. H. McBeth
F. H. McBeth

TOPOGRAPHY CHECKED BY

E. J. Anderson
E. J. Anderson

SMOOTH RADIAL PLOT BY

M. D. Crook
M. D. Crook

2-8-34

RADIAL PLOT CHECKED BY

E. H. Kirsch
E. H. Kirsch

2-8-34

SCALE PLOT BY

J. H. Wulbern
J. H. Wulbern

DETAIL INKED BY

F. H. McBeth
F. H. McBeth

2-17-34

AREA DETAIL INKED: 7.7 Square statute miles.

LENGTH OF SHORELINE: 16 statute miles (more than 200 meters from opposite shore).

LENGTH OF STREAMS: 6.50 statute miles - Rivers and sloughs less than 200 meters wide.

LENGTH OF COASTLINE: None

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. 26

REGISTER NO. 5178

State South Carolina

~~vicinity of~~
General locality Charleston Harbor and Vicinity

Locality Charleston City (Nov. 17, 1933)

Scale 1:10,000 Date of survey Nov. 9, 1933
Oct. 25, 1933
Dec. 21, 1933, 19

Photographs -
Compilation - 2-17-34
Vessel Air Photo Compilation Party No. 21, Charleston, S. C.

Chief of party E. H. Kirsch

Surveyed by See data sheet in descriptive report

Inked by E. H. McBeth

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

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

Instructions dated November 10, 1933., 19

Remarks:

GENERAL INFORMATION

Statistics:

This sheet covers a total area of 7.70 square statute miles.

The length of shore line more than 200 meters from the opposite shore is 16 statute miles. This figure is taken along the base of piers and does not include measurements along their length.

The length of stream lines of less than 200 meters as measured down their center is 6.50 statute miles (small meandering streams have been measured).

Reports:

See Lt. B. H. Rigg's general report on field inspection 1933 and 1934. Submitted with Sheet No. 1.

See descriptive reports for aluminum control sheet "A" Reg. No. T-6080, "B" Reg. No. T-6069, "C" Reg. No. T-6070.

Lt. M. O. Witherbee, Chief of Party 1933 and 1934.

Photo Numbers:

Detail for this area is taken from parts of four different flights.

The area along the east edge was taken from M-71 - M-79 823A-8 series of photographs, taken November 17, 1933 at 11:24 AM. On this date high tide was at 7:10 AM and low tide at 1:39 PM.

For the South shore of Daniels Island appearing along the North edge, the East shore of the Cooper River and its bridge approach, and Shutes Folly Island, Pictures M-53 to M-59 of the 823 A-8 series were used. This flight was flown on the 17th of November 1933 at 10:45 AM. The time of the tides was low at 7:10 AM and high at 1:39 PM.

Pictures M-24 to M-31 of the 823A-8 series were used in the compilation of Drum Island, the West shore of Cooper River, and a very considerable portion of the city of Charleston. The date of this flight is November 9, 1933 - taken at 1:00 PM they fall between high tide at 12:33 PM and low tide at 7:08 PM.

In conjunction with pictures M-24 to M-31 - 823A-8 pictures M-14 to M-19 of the same series were used for the area along the Western edge of the sheet. These pictures were taken at 8:25 AM the 25th of October 1933. On this date low tide was at 6:28 AM and high tide at 1:04 PM.

For the area along the Battery, at the South end of the

city, photograph M-146 - 823A-8 was used. This picture was taken at 1:00 PM December 21, 1933. On this date high tide was at 11:19 AM and low tide at 5:37 PM.

CONTROL

Sources:

Triangulation by C. D. Meaney 1932
 " " G. D. Cowie and R. L. Shoppe 1933
 " " M. O. Witherbee 1933
 " " L. P. Raynor 1924

Aluminum Control Sheet "A" Reg. No. 6080, "B" Reg. No. 6049, "C" Reg. No. 6070, by Lt. M. O. Witherbee 1933 and 1934.

Field positions were used reduced to N.A. 1927 datum.

Errors:

The Augusta, Ga., to Jacksonville, N. C. Arc, adjusted to N.A. 1927 datum gives the position of Δ Charleston, St. Phillips Church Spire with Cross 1932 as follows:

32° 46' 43.789" - 1348.9 meters
 79° 55' 52.434" - 1364.5 meters

The 1890 value reduced field position N.A. 1927 was used: it is as follows,

32° 46' 43.771" - 1348.3 meters
 79° 55' 46.442" - 1208.6 meters

Lt. Witherbee checked the old position in 1934. The Longitude of the above adjusted value must be in error.

COMPILATION

Method:

The standard radial line method was used as described in the U. S.C. & G. S. 1933 notes on the compilation of planimetric line maps from five lens aerial photographs.

Adjustment of Plot:

The radial plot was made on a full sized celluloid sheet using the several overlapping flights mentioned in another paragraph of this report. All single lens pictures had been enlarged so that the average scale of the pictures was 1:10,000. The radial plotted points were then transferred to Atlas Sheet No. 26, Reg. No. 5178 by laying one projection over the other and pricking through the points. No unusual adjustments were necessary on the radial plot.

Interpretation:

No great difficulty was encountered in delimitating the

high water line. The low water line was tentatively traced from the photos, enclosing the lighter areas along the high water line. Originally it was not an attempt to show low water, but rather a line determining certain visible shallow areas, running for perhaps some three miles in length. It was then checked against the soundings taken in the same area and it was found to coincide with the low water line in its entirety, with the exception of not more than a score of soundings, where the low water line was changed to agree with the hydrography.

The standard symbol used for designating wrecks defies a more precise location of the two vessels along the East shore of the Cooper River. They lie under the symbol designating them. The Northern one is a sunken concrete hull; the Southern one is a Ferry Boat destroyed by fire.

On the North shore of the Ashley River lying midway between triangulation station West Point and Colonial Lake is the beached wreck of an old steam Ferry Boat, the SAPHO.
* Shown on compilation.

Cooper River Bridge has been located with the aid of topographic positions for the piers and radial points at the two extremities. The curve over Drum Island has been sketched between the points of tangency. It is believed to be accurately placed.

In mapping the City of Charleston some consideration has been taken of the multiple purposes for which the map may be used. The inking has been kept heavy at a possible sacrifice to neatness, due to possible reductions in size being wanted, and to aid in keeping the work open the street widths have been kept at a distance measured to include side walks. Except within yard limits, all railroads have been shown and they have been placed with the idea of identifying the properties of the S.A.L., A.C.L., Southern and the Port Utilities Commission. The distance between the cross ties on tracks has not been kept constant but has gradually differed to conform with the surroundings, and it has been thought impractical to differentiate between single and double tracks in the street car lines.

For possible further reference the Street Car system of Charleston is here described:

All lines are double track with the following exceptions which are single tracks:

- 1 King St., between Calhoun and Broad Sts.
- 2 East Bay St., between the Custom House and South of intersection of Queen St.
- 3 Wentworth St., between King and Meeting Sts.
- 4 Calhoun St., between Ogier and King Sts.
- 5 Spring St., between Rutledge Ave., and King St.
- 6 King St., between Line and Cleveland Sts.
- 7 Meeting St., North of Line is a single with the exception of a double track from Cool Blow to Mt. Pleasant St.
- 8 The Rutledge Ave., line is single track North of Cleveland St.

The yacht Basin near triangulation station "West Point" was in the course of construction, with Federal Appropriations. This source has been discontinued and it is doubtful if further work on this project will be accomplished for some time.

Numerous questions might arise over Charleston Streets. There are a number of Lanes, Courts, Alleys, and places, some of which are too narrow for any but pedestrian traffic. Running through settled areas, their lack of breadth makes them invisible from the photos and they have consequently not been located.

Streets of some importance which have not been located on this map are given below:

- 1 Cromwells Alley - South of Beaufain, between Franklin and Smith Sts.
- 2 Clifford Alley - North of Queen, between King and Charles Sts.
- 3 Cedar St., North of Calhoun and leading off of Alexander St.
- 4 Lightwood Alley - Running North from Atlantic St., between East Battery and Church Street.
- 5 Between Huger and Congress Sts., Senate and Carondelet Sts., have not been located.
- 6 Westcoat Court - between Cannon and Spring Sts.
- 7 Bedon Alley running North from Tradd for one block between Church and East Bay Sts.
- 8 Philadelphia runs for one block North of Queen St., between Church and State Sts.

Many lesser important streets not running the length of a single block and apparently bearing no names but used for residential and industrial purposes have not been shown.

In line with Laurens St., extended Northeast is a rail-^{32.478} road running over a narrow trestle over the water for the distance shown. At one time this may have been a pier as there are delapidated pilings strewn for a distance suitable for this explanation, to the South and extending parallel with track. Their general condition and number has made it inadvisable to show them.

Approaching the North edge of the sheet and running parallel to King St., is a maize of detail. To the East and paralleling King St., are the double tracks of both the A.C.L. and the Southern Railroads while to the West and running parallel are from two to four tracks used in conjunction with the industrial properities lying on the sheet joining to the West. This detail has been simplified to avoid confusion. ** King St. is main thoroughfare running north and south direction in the N.W. corner of sheet.*

There has been no attempt made to show the City Dump and the filling operations being carried on North of Columbus Street in the Vicinity of New Market Creek.

The Pipe line running from the Standard Oil Co., Refinery to the company pier has been exaggerated in order to more easily identify, and to escape confusion with roads. It consists of three large pipes and a board walk running at some elevation above the surface of the ground.

Names Hobcaw Point has been
changed to Remeley Point on the
compilation pending Mr. Bacon's decision

In the absence of a definite symbol defining trestle work the Pipe Line running from the Standard Oil Co., Pier over a trestle has been shown with the parallel "cat Walk".

Within the cemetery area shown there are five cemeteries; Magnolia, St. Lawrence, Bethany, K. K. B. S. (Hebrew) and the one for negroes.

Information from other Sources;

Appreciation is hereby expressed to Mr. Dingle the City Engineer whose office is in the Court House, for the loan of the Port Utilities Corporation Property Map. The map helped considerably in the interpretation of railroads etc., along the water front. Appreciation is also due to Mr. J. H. Garety, Chief Engineer of the Port Utilities Commission for the loan of property map useful in the identification of track layouts to the North of town. While nothing was transferred from these maps they were valuable in assisting in interpreting detail and names.

Names:

The names appearing on this sheet are taken from Chart No. 470 of the Coast and Geodetic Survey and from the Port Utilities Commission Map mentioned above. *One new name, "Mathis Ferry Road" has been submitted for Mr. Bacon's approval. E.A.W.*

^a Chart No. 470 shows the point of land South of Mollasses Creek to be Hobcow Point. According to the local and reliable information this point of land is known as Remley Point.^x It was named Hobcow Point on the Air Photo Sheet. ~~*This name has been submitted for consideration.*~~
See opposite page. E.A.W.

Comparison with other Surveys:

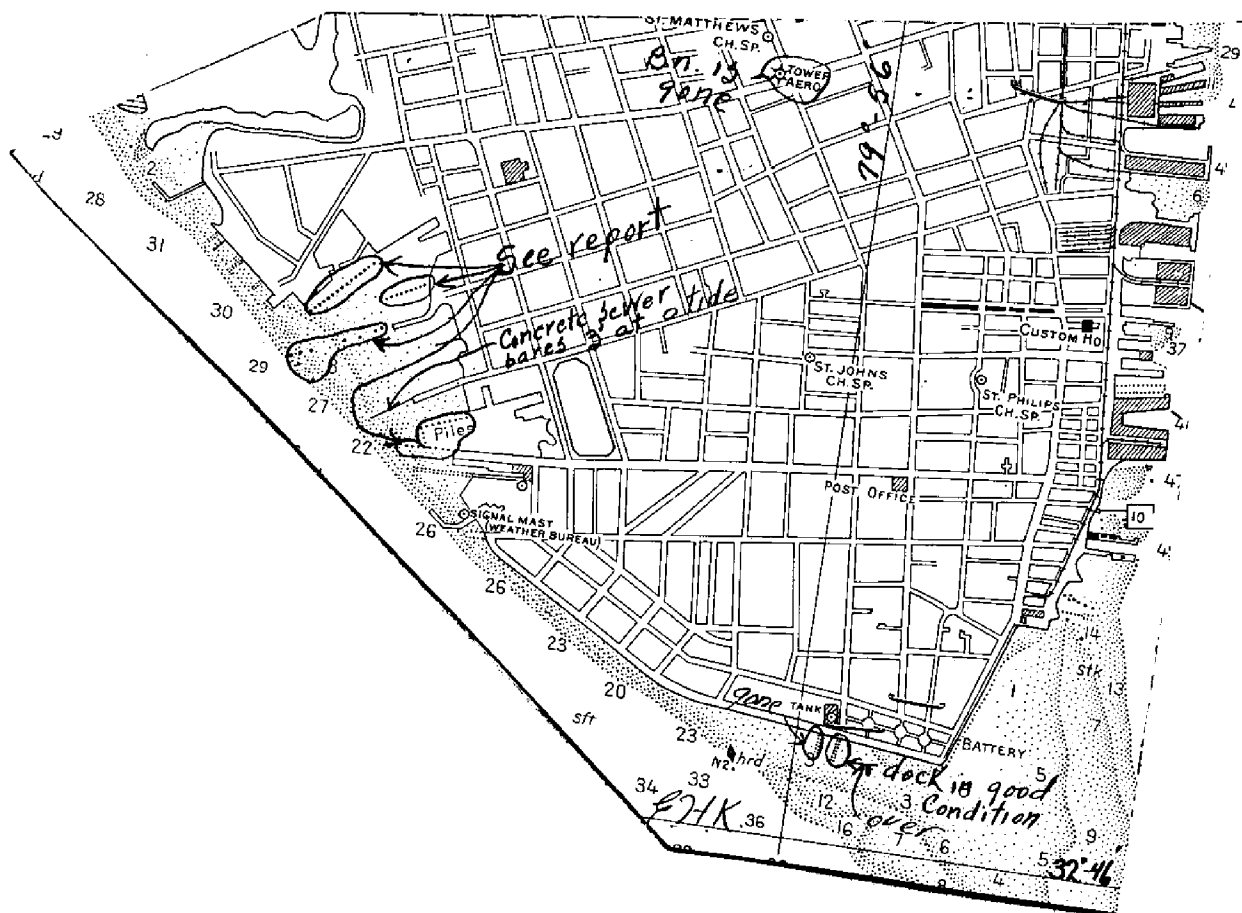
This sheet joins sheet No. 5175 on the North, 5181 on the South, 5177 on the East and 5179 on the West. Satisfactory junctions have been made on the four sheets.

Chart No. 470 shows only one wreck lying off Hobcow^a Point, but from field inspection reports there are two in that vicinity at present as shown on this sheet. The field party also reported a rock lying near the front range Beacon of the Drum Island Channel Range. *(Later Located on ACS Sheet 8 shown on Compilation) E.H.K.*

The following variations from Chart No. 470 of this area were found:

(1) The Aero To-wer shown on the chart as existing on the top of the Francis Marion Hotel has been removed. The nearest beacon and the one now used for covering this area will be found on Atlas Sheet No. 24, Reg. No. 5176.

(2) The dolphins bordering the Ferry slip on the East side of the Cooper River are further extended in Chart No. 470 than on the accompanying map. The position of these as shown on the photographs does not justify such an extension.



This dock was
destroyed by a severe
storm and is now a
dock ruins as shown on
the Compilation

E.H.K.

(3) The railroad spur running North of Vardell Creek, and paralleling it, is no longer there. That area is marshy, and there are no indications of there ever having been a fill in that area.

(4) The configuration of the pier at Castle Pinckney on Shutes Folly Island is incorrect. Information gathered from local residents is that there has been a fire on the properties at the South end of this island, and it is possible that the difference may be due to its consequent destruction and rebuilding.

(5) The old chart shows a quartermile stretch of road joining two other roads North of the cemetery. This road does not show on the photographs and the nature of the terrain through which it is shown is such as leads to doubt as to its existence. At most it cannot be more than an unimproved field road, impassable in rainy weather and it is consequently not shown.

(6) The pier belonging to the Charleston Dry Dock and Machine Co., on Chart No. 470 is shown including the dry dock. This dock is floatable and from field inspection made by the compiler, it does not appear at present on the company property.

(7) On the enclosed section of chart No. 470 there are four groups of piles circled. Field examination shows that about 50% of these piling are down. Those that remain are decayed at the water line and will probably be down in a year or two. The area is bare mud flats at low water, so they can hardly be considered a menace to navigation, and they should not be considered as landmarks. It is recommended that they be removed from the chart.

(8) Dock shown at Station U.S.E.D. TRADD was traced from Aluminum Control Sheet "B" Reg. No. 6067.

(9) Dolphins along Charleston Side of Ashley River near U.S.E.D. WEST POINT 1933 and SIGNAL TOWER 1919 was traced from Aluminum Control Sheet.

(10) Station STACK 1932 is the tallest of the two adjoining stacks appearing on chart 470.

(12) A dock at the mouth of the Wando River appearing on Chart 470 just South of Molasses Creek is gone but the photos for this sheet show a dock just North of the Drum Island Channel Range that does not appear on Chart 470.

(11) These additional spires have been added to those appearing on chart 470

Flynn's Church	Grace Church
St. Michaels Church	Unitarian Church.
St. Pauls Church	

Landmarks:

A complete list of landmarks for charts and recoverable topographic stations will be submitted with aluminum control sheet "A" Reg. No. 6070, "B" Reg. No. 6067, "C" Reg. No. 6070. Lt. M.O. Witherbee Chief of Party 1933 and 1934.

Recommendations for further Surveys:

It is believed that the compilation has a probable error of not more than 3 meters in position of well defined detail of importance for charting and of not more than 6 meters for other data.

It is believed that the compilation is complete and reliable and that no further examination of this area is necessary.

Remarks:

Cooper River Bridge Notes:

Town Creek span clearance at center of span is 135 feet. ^{above M.H.W.} ↓

Horizontal clearance between piers is 600 feet.

Cooper River Span - clearance at center 154 feet, ^{above M.H.W.}

Clearance for 300 feet at center 150 feet, clearance at main piers 135 feet.

Horizontal clearance between piers is 1000 feet. *See below.*

There is a flashing red aero beacon at the top of each of the four main towers.

Since this sheet was compiled two docks - Ft. Sumter Hotel and the S.C. Yacht Club - were destroyed by a storm. The yacht club dock has been rebuilt on the original piling and has been left on this sheet, while piling only is shown for the former Ft. Sumter Dock.

All topo stations used as landmarks, U.S.E.D. stations, all tanks, stacks and beacons shown in black circles were transferred from A.C.S. direct to this sheet.

See also description and sketch submitted by Lt. M. O. Witherbee, 1933. (*of Cooper River Bridge*) *Attached..*

Assisted by:

E. H. Kirsch
E. H. Kirsch,
Chief of Party

Submitted by:

F. H. McBeth
F. H. McBeth.

Bridges: This report did not give the datum plane for bridge clearances but the plan table control sheet gives these same clearances as above Mean High Water.

B. G. Jones

REVIEW OF PHOTO TOPOGRAPHIC SURVEY NO. T-5178

Title (Par. 56) S. C. Charleston Harbor, Charleston City

Chief of Party E. H. Kirsch

Compiled by F. H. McBeth

Project F.P.-13-S.C. 1933-35

Instructions dated

Air Photo Compilation Party No. 21.

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 8; and 16, a, b, c, d, e, g and i.) ✓
2. The character and scope of the compilation satisfy the instructions and the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs". ✓
3. The control and adjustment of the radial plot were adequate. (Par. 12, 29.) ✓
4. There is sufficient control on maps from other sources that were transmitted by the field party for their application to the charts. (Par. 28.) No information taken from outside sources.
5. High water line on marshy and ~~mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
6. 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.) ✓
7. Important details shown on previous surveys and on the chart have been compared with this sheet and a statement has been entered in the report regarding the removal from the chart or change in position of important detail such as rocks, lights, beacons, prominent objects, bridges, docks, and structures along the water front. ✓
8. The span, draw and clearance of bridges are shown. (Par. 16c.) ✓
The Cooper River Bridge has been built since the U.S. Engineers List of Bridges had been published. No U.S. data available.
9. The data furnished by the Field Inspection is adequate. ✓ *Ram*

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Use reverse side for extending remarks.

10. The descriptive report covers all details listed in the Manual, so far as they apply to this survey. (Par. 64, 65 and 66.) ✓
11. The descriptive report also contains all additional information required in photo topography as prescribed in the instructions and in the "Notes on the Compilation of Planimetric Line Maps from Five Lens Aerial Photographs". ✓
12. The descriptions of recoverable stations and references to shore line were accomplished on Form 524, and scaling of positions checked. (Par. 29, 30 and 57.) Submitted with A.C.S. Sheets
Plotted in office by Benson. Aug. 1934.
13. A list of landmarks for charts was furnished on Form 567 and scaling of positions checked. (Par. 16d, e, 60.) Submitted with A.C.S. Sheets
14. The geographic datum of the sheet is N. A. 1927 and the reference station is correctly noted. (Par. 34.)
15. Junctions with contemporary surveys are adequate. ✓
16. Geographic names are shown on the sheet and are covered by the Descriptive Report. (Par. 64, 66k.) ✓
17. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46.) ✓
18. No additional surveying is recommended. ✓

19. Remarks:

See following page.

20. Examined and approved:

E. H. Kirsch

E. H. Kirsch Chief of Party

21. Remarks after review in office:

Reviewed in office by:

B. J. Jones
~~*L. O. Robert*~~

Examined and approved:

E. J. Green
Chief, Section of Field Records

L. O. Robert
Chief, Division of Charts

K. Borden
Chief, Section of Field Work

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

Topographic Stations:

The following recoverable topographic stations as shown on the compilation described on form 524 are filed under plane table control survey

No. T-6069:

White gable porch (d)
Black water tank (d)
Low stack power house (d)
Stack cigar factory (d)
Black water tank (d)
 (Cigar factory)
Black water tank (P.U.C.) (d)
Penthouse, Peoples Building (d)
Incinerator stack (d)
Beacon No. 3 (d)
 (Cooper River)
Castle Pinckney Light (d)
4 Main Piers
 Cooper River Bridge
 (Dog (d)
 (End (d)
 (Ace (d)
 (Bad (d)
Drum Island Rear Range Light (d)
Drum Island Front Range Light (d)
U.S.E. Har (d)
U.S.E. Standard (d)
U.S.E. Drum (d)
U.S.E. Bridge (d)
U.S.E. Bor (d)
U.S.E. Chimney (d)
U.S.E. Tradd (d)
Castle Pinckney (d)
Yacht Club Tower (d)
Era (d)

The following stations are filed under T-6070:

U.S.E. Pipe (d)
Light No. 8 (d)
Low Flat Tank (d)
Gray Tank (d)
Tall Black Tank (d)
Tall Red Brick Stack (d)
Tall Slim Black Stack (d)

The following stations are filed under T-6080:

Mt. Pleasant Rear Range Light (d)
Light No. 1 (d)

Comparison with Other Surveys:

There is satisfactory agreement with T-6069, T-6070, and T-6080. (Air Photo Control Surveys) All detail of a permanent nature shown on these sheets is shown on the compilation.

Differences with chart 470 are completely noted in the report except for the following:

(1) The street development with a center whose approximate latitude is $32^{\circ} 49' 00$ meters, longitude $79^{\circ} 56' 1020$ meters. This, evidently, does not exist.

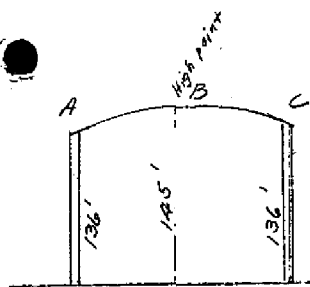
(2) Triangulation Station Staak 1932 is shown out of position on Chart 470. ()

Comparison was also made with T-3414 (1910); T-3854 (1921); T-4433 (1928). This compilation is adequate to supersede these surveys for the area they have in common. The compilation is complete in detail.

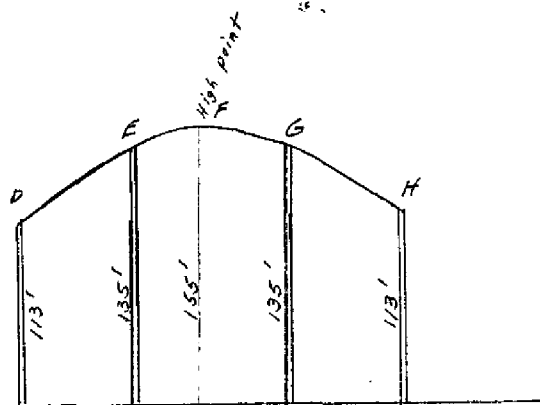
B. G. Jones

Cooper River Bridge Clearances.

Looking north



Water Level $(12^{\frac{45}{20}} \text{ PM})$ Jan. 8, '34.



West Span

East Span

Observations taken from $12^{\frac{45}{20}} \text{ PM}$ to $1^{\frac{30}{20}} \text{ PM}$ Jan. 8, '34.

Angles from sta. Drum

Computations.

A

$$\begin{aligned} \text{Dist.} &= 650 \text{ m.} \\ \angle \text{el.} &= 3^{\circ}-11' \\ \angle \text{dep.} &= \frac{28'}{3^{\circ}-39'} \\ \text{height} &= 136' \end{aligned}$$

B

$$\begin{aligned} \text{Dist.} &= 573 \text{ m.} \\ \angle \text{el.} &= 4^{\circ}-16' \\ \text{HI} &= 5' \\ \text{height} &= 145' \end{aligned}$$

C

$$\begin{aligned} \text{Dist.} &= 543 \text{ m.} \\ \angle \text{elevation} &= 4^{\circ}-12' \\ \text{HI} &= 5' \\ \text{height} &= 136' \end{aligned}$$

D

$$\begin{aligned} \text{Dist.} &= 818 \text{ m.} \\ \angle \text{el.} &= 2^{\circ}-16' \\ \angle \text{dep.} &= \frac{09'}{2^{\circ}-25'} \\ \text{height} &= 113' \end{aligned}$$

E

$$\begin{aligned} \text{Dist.} &= 900 \text{ m.} \\ \angle \text{el.} &= 2^{\circ}-29' \\ \angle \text{dep.} &= \frac{08'}{2^{\circ}-37'} \\ \text{height} &= 135' \end{aligned}$$

F

$$\begin{aligned} \text{Dist.} &= 992 \text{ m.} \\ \angle \text{el.} &= 2^{\circ}-38' \\ \text{HI} &= 5' \\ \text{height} &= 155' \end{aligned}$$

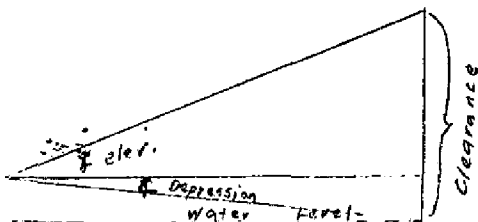
G

$$\begin{aligned} \text{Dist.} &= 1144 \text{ m.} \\ \angle \text{el.} &= 1^{\circ}-58' \\ \angle \text{dep.} &= \frac{06'}{2^{\circ}-04'} \\ \text{height} &= 135' \end{aligned}$$

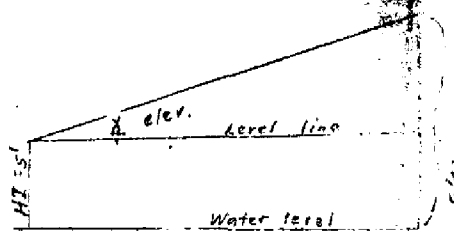
H

$$\begin{aligned} \text{Dist.} &= 1257 \text{ m.} \\ \angle \text{el.} &= 1^{\circ}-29' \\ \angle \text{dep.} &= \frac{05'}{1^{\circ}-34'} \\ \text{height} &= 113' \end{aligned}$$

A, D, E, G, H
figured this way



B, C, F figured
this way as
water level would
be seen



GEOGRAPHIC NAMES

Survey No. T-5178

Date. Nov. 23, 1934

Chart No. 470, 1239

Diagram No. 1239

* Approved by the Division of Geographic Names, Department of Interior.

● Not Approved by the Division of Geographic Names, Department of Interior.

R, Referred to the Division of Geographic Names, Department of Interior.

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	<u>Rexley Point</u>	<u>Hobcaw Point</u> *	✓	✓	
	<u>Mathis Ferry Road</u>	— none. —	11/1/40	USG	
	<u>Daniel Island</u>	Chart 470			
	<u>Wando River</u>	do			
	<u>Cooper River</u> ?	do	change location		
	<u>Ashley River</u>	do			
	<u>Hog Island</u>	do			
	<u>Town Creek</u>	do			
	<u>Charleston</u>	do			
	<u>Shutes Folly Island</u>	do			
	<u>Horse Creek</u>	do			
	<u>Hobcaw Creek</u>	do			
	<u>Molasses Creek</u>	do			
	<u>Newmarket Creek</u>	do			
	<u>Vardell Creek</u>	do			
	<u>Four Mile House</u>	do			
	<u>Myers</u>	do			
	<u>Magnolia Station</u>	do			
	<u>Drum Island</u>	same			
	<u>Phuk Island</u>	This name refers to a high ground area in latitude 45½°.			
		names approved 10/15/35			
		K.T.A.			

Applied to competition of chart 491. June 10, 1935
G. H. S.

Applied to chart 837 Oct 1, 1935 H.M.C.
" " " 1239 Apr. 1937 2.M.A.