

6069

U. S. COAST & GEODETIC SURVEY  
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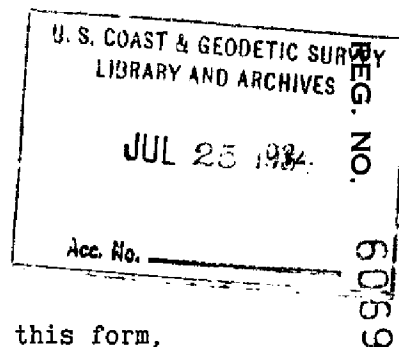
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Form 504 Ed. June, 1928	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY R. S. Patton, Director	
State: <u>South Carolina</u>	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. B <sup>6069</sup> 6069
LOCALITY	
<u>Charleston, S. C.</u>	
<u>Charleston Harbor</u>	
19 <u>34</u>	
CHIEF OF PARTY	
<u>Lt. H. O. Witherbee.</u>	

6069

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET



The Topographic Sheet should be accompanied by this form,  
filled in as completely as possible, when the sheet is for-  
warded to the Office.

6069

Field No. B

REGISTER NO. 6069

State South Carolina

General locality Charleston, S.C.

Locality Charleston Harbor

Scale 1-10,000 Date of survey Dec. to June, 1934

Vessel Party No. 2 and Party No. 19

Chief of party Lt. M. O. Witherbee

Surveyed by O. Mulford, A.M. Weber, & Addison S. Hall

Inked by " " "

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated November 2, 1933

Remarks: Original survey under direction of Lt. M. O. Witherbee.  
Supplementary survey under direction of Lt. Benjamin E. Rigg.

SHEET NO. B

DESCRIPTIVE REPORT TO ACCOMPANY  
ALUMINUM MOUNTED CONTROL  
SHEET NO. B

DATE OF INSTRUCTIONS - November 2, 1933.

SCOPE OF SURVEY - The work on this topographic sheet included the location of signals by plane table for hydrographic purposes, and the location of all docks to supplement and check the location of the same on the aerial photographs.

LANDMARKS - The following landmarks are included in the area of the sheet:

CHARACTER OF CONTROL USED - The control was furnished by second and third order triangulation stations.

TRAVERSES - No traverses run.

SURVEYING METHODS USED - The hydrographic signals were located on this sheet by cuts from at least three triangulation stations. The docks were located by setting up at convenient points, establishing the position of the table by a three point fix on triangulation stations, and locating all docks which could be reached from each set-up.

FORM LINES - No form lines.

CHANGES IN PROMINENT OBJECTS - No changes.

INCOMPLETE WORK - No incomplete or unreliable work.

PROCEDURE DEVIATING FROM STANDARD PRACTICE - No procedure differing from standard practice.

AGREEMENT WITH ADJACENT WORK - No junction with any other sheets.

NEW NAMES - No new Names..

LIST OF PLANE TABLE POSITIONS - Recoverable positions furnished on form 524.

PHOTOGRAPHS OF APPARATUS - None.

CHANGES OF SHORELINE - In locating the docks it was noted that the dock described as Columbus Street Terminal is shown on the chart as extending north to the Cooper River Bridge. At present it does not do so, due to

destruction of part of it by fire.

CHARACTER OF MARSH - No marshes.

BRIDGE CLEARANCE - The clearances of the Cooper River Bridge were obtained as follows: The table was set up at U.S.E.D. Drum. The location of the piers had been previously determined by cuts. For the piers, an angle of elevation was taken to the under side of the roadway, and an angle of depression to the surface of the water at the pier. Knowing the distance from the table to the pier, the clearance was computed, and a correction made for the tide, to give the clearance at mean high water. For the high point of the spans, an angle of elevation was taken, and the height above the table figured from the distance and angle. The height of the table above the water was then observed, added to the first height, and a correction applied for tide. Following are the figures: (Sheet attached)

RANGES - One range is shown on this sheet, the Drum Island channel Range. It was located by setting up in the field directly on the range, establishing a position by a three point fix, sighting on the more distant of the two range beacons, and drawing in the range the full length of the alidade. It was not possible to secure a good three point fix at any point on range on this sheet, so the table was set up on range at a point on sheet C, the next sheet north. The range was located as noted above, then a point on range and common to both sheets was transferred from sheet C to sheet B, and from this point on sheet B the range line was drawn to the front range beacon, which had been located by triangulation.

Forwarded by,

Lt. Benjamin H. Rigg  
Chief of Party,  
H. & C. Engineer.

Respectfully submitted,

A. M. Weber  
A. M. Weber

Lt. M. O. Witherbee  
Chief of Party,  
H. & C. Engineer

# COOPER RIVER BRIDGE CLEARANCES

Location	Distance	Angle of Elevation	Angle of Depression To Water	Height of Table above Water	Clearance Uncorrected For Tide	Correction For Tide	Clearance Above Mean High Water
W. Main Pier W. Span	650 m.	3° 11'	0° 28'	----	136'	-1'	135'
High Point, W. Span	573 m.	4° 16'	----	5'	145'	-1'	144'
E. Main Pier W. Span	543 m.	4° 12'	----	5'	136'	-1'	135'
W. Second Pier E. Span	818 m.	2° 16'	0° 09'	----	113'	-1'	112'
W. Main Pier E. Span	900 m.	2° 29'	0° 08'	----	135'	-1'	134'
High Point E. Span	992 m.	2° 38'	----	5'	155'	-1'	154'
E. Main Pier E. Span	1144 m.	1° 58'	0° 06'	----	135'	-1'	134'
E. Second Pier E. Span	1257 m.	1° 29'	0° 05'	----	113'	-1'	112'

SUPPLEMENTARY REPORT TO ACCOMPANY  
ALUMINUM MOUNTED CONTROL SHEET

B

PURPOSE

The purpose of the supplementary survey on sheet B was to rod in additional shoreline for a check on the aerial photo-compilation, to cut in additional U.S.E.D. stations, and to locate topographically an old unnamed triangulation station on Shutes Folly Island.

SURVEYING METHODS USED

Shoreline was rodded in from set-ups on hydrographic signals previously cut in. Three point fixes were used to adjust position of the set-up where necessary. All landmarks were located by using three strong cuts from triangulation stations. In locating the old triangulation station on Shutes Folly Island, a set-up was made on U.S.E.D. Block, a third order triangulation station, and a cut and a taped distance taken to the triangulation station to be recovered.

CHARACTER OF MARSH - Correction.

Most of Shutes Folly Island, and practically all of the east shore of the Cooper River from Horse Creek to above the Cooper River Bridge, consists of mud and oyster shell covered with marsh grass two to three feet high.

U.S.E.D. STATIONS LOCATED AND RECOVERED

STATIONS RECOVERED-Triang.

U.S.E.D. WILT, 1933  
JOHNSON U.S.E.D., 1933  
U.S.E.D. MILL, 1933  
U.S.E.D. LINE, 1933  
U.S.E.D. ISLAND, 1933

STATIONS LOCATED BY TOPOGRAPHY

U.S.E.D. HAR  
~~U.S.E.D. P-7~~  
U.S.E.D. STANDARD  
U.S.E.D. DRUM  
U.S.E.D. BRIDGE  
U.S.E.D. BOR  
U.S.E.D. CHIMNEY  
U.S.E.D. TRADD

All of these stations had been permanently marked previous to the survey. Descriptions of stations on form 524 accompany report.

### LANDMARKS

A complete list of landmarks for the area covered by topographic sheet "B" is included on form No. 567.

St. John's Church Spire shown as a landmark on the present chart is not a prominent object and might easily be confused with another spire nearby. It should not be shown as a landmark.

An unnamed landmark appearing on the present charts approximately 200 m. northeast of the signal Mast of the Weather Bureau could not be identified, and should be removed from the chart.

All of the other landmarks on the present chart in the area covered by this sheet should remain on the chart.

The following landmarks described on the topographic sheet (indicated by symbol "L") and also on form No. 524 should be added to charts:

Francis Marion Hotel  
Penthouse Peoples Building  
Incinerator Stack  
Stack Cigar Factory  
Four main concrete piers Cooper River Bridge  
Black Tank Cigar Factory  
Front & Rear Ranges South Channel

### FIELD INSPECTION

Two and five-tenths statute miles of shoreline were rodged in as a check on the air photo-compilation. Points where rod readings were taken are shown by dots in breaks in the shoreline on the sheet. All points agreed within 3 m. with the shoreline on the celluloid sheet.

### AIDS TO NAVIGATION

A list of all non-floating aids to navigation follows, with the geographic positions of those not already cut in by triangulation:

Name	Lat.	D.M.	Long.	D.P.
✓ Front Range Bn. Drum Island	32° 48'	1182	79° 54'	868
✓ Rear Range Bn. Drum Island	32° 48'	975	79° 54'	492
✓ Beacon No. 4 Dun 95. - Lt.	32° 47'	1386	79° 55'	672.5

Name	Lat.	D.M.	Long.	D.P.
✓ Beacon No. 3 <i>let - station fully 7 N.</i>	32° 46'	1836	79° 54'	1481
✓ Beacon No. 2 <i>let - station fully 7 N.</i>	32° 46'	1572.5	79° 54'	374
✓ Ripley Bn.				
✓ Spindle	32° 45'	1643.0	79° 54'	504
Castle Pinckney Bn.	Cut in by triangulation, Witherbee 1933			
Rear Range Bn.				
South Channel	Cut in by triangulation Witherbee 1933			
Front Range Bn.				
South Channel	" "	" "	" "	" "
Wappoo Creek Bn.	" "	" "	" "	1928
✓ Bn. No. 1				
James Is. Creek	32° 45'	1424	79° 56'	151
✓ Bn. No. 3				
James Is. - Creek	32° 45'	1396	79° 56'	421
Bn. No. 5				
James Island				

Drum Island Channel Range is discussed in report accompanying sheet "C". South Channel Range was checked for azimuth and found to agree within 08' of azimuth given in Local Light List.

Respectfully submitted by,

Addison S. Hall

Forwarded by Lt. Benjamin H. Rigg



DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

## LANDMARKS FOR CHARTS

Charleston, S. C.

July 13, 1934

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

Benjamin H. Edge

Chief of Party

[illegible]

A list of objects carefully selected because of their value as landmarks as determined from seaward together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) offshore, (2) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

**Topo Sheet B.**

## LANDMARKS FOR CHARTS

Charleston, S. C.

July 13 1934

DIRECTOR, U. S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

below, and should be charted.  
Same as letter 495 (1934)

Benjamin H. Biggs, *Biggs*  
Chief of Party

DESCRIPTION Indicated on sheet by symbol "L"	POSITION					METHOD OF DETER- MINATION	CHARTS AFFECTED
	LATITUDE		LONGITUDE		DATUM		
	°	'	°	'			
Fort Sumter Hotel Tank 2,3	32	46	347.2	79 55	1474.2	N.A. 1927	1924 △ 1239 & 470 837
St. Philips Church Spire 1,2,3	32	46	1348.8	79 55	1203.2	" Granger 1890	" △ " " 837
St. Michaels Church Spire 1,2,3	32	46	1049.5	79 55	1347.7	" "	" " " 837
St. Matthews Church Spire 1,2,3	32	47	364.7	79 56	376.7	" "	" " " 837
Francis Marion Hotel 1,2,3	32	47	270.4	79 56	330.8	" 1924 △	" " " 837
Stack Power House 1,2,3	32	47	865.9	79 55	977.2	" Witherbee △ 1933	" " " 837
Low Stack, Power House 2,3	32	47	(1000.0) 848.3	79 55	(596.2) 965.2	" Plane- Table	" " " 837
Water Tank Black (Age) 2,3	32	46	(153.7) 1694.6	79 55	(689.1) 872.5	" "	" " " 837
Incinerator Stack 2,3	32	47	(125.6) 1722.7	79 56	(1315.1) 246.3	" "	" " " 837
Water Works Tank 1932 1,2,3	32	48	181.1	79 56	848.1	" 1932 △	" " " 837
4 Main Concrete Piers Cooper R. Bridge 1,2,3 Dog No. 1 1,2,3	32	48		79 54		" Plane- Table	" " " 837
	32	48	(1122.1) 426.2	79 54	(262.0) 1299.1	" "	" " " 837
	32	48	(1365.2) 483.1	79 55	(1501.6) 53.7	" "	" " " 837
End No. 2 1,2,3	32	48	(1553.0) 295.3	79 55	(378.) 1183.1	" "	" " " 837
Age No. 3 1,2,3	32	48	(1632.0) 216.3	79 55	(200.1) 1361.0	" "	" " " 837
Bed No. 4 1,2,3	32	48				" "	" " " 837

A list of objects carefully selected because of their value as landmarks as determined from seaward together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

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Landmarks applied to Chart 792 Jan. 8, 1937 H.E. MacLean