

6009

U. S. COAST & GEODETIC SURVEY
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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

R. S. Patton, Director

State: New York.

DESCRIPTIVE REPORT

Topographic

~~XXXXXX~~

Sheet No. H 6009

LOCALITY

Hempstead Bay Long Island.

Jones Inlet to East Bay.

1933

CHIEF OF PARTY

Raymond P. Eymann.

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. H

REGISTER NO.

State New York

General locality Hempstead Bay Long Island, Island

Locality Jones Inlet to East Bay

Scale 1:10,000 Date of survey Sept.-Oct., 19 33

Vessel Shore Party #2 Project HT-132

Chief of party Raymond P. Eyman

Surveyed by A.M. Weber

Inked by A.M. Weber

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

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

Instructions dated February 25, 19 33

Remarks: For location of hydrographic signals and

control points for air photos.

...

DESCRIPTIVE REPORT
to accompany
Topographic Sheet "H"
Hempstead Bay- Long Island N.Y.
RAYMOND P. EYMAN - CHIEF OF PARTY.
Season - 1933.

a. GENERAL DESCRIPTION OF THE COAST.

Starting at a point opposite station Park on the ocean beach and progressing eastward, the shore consists of a sandy beach, with sand dunes back of the beach. This character of shore line continues to Jones Inlet and around the point to the channel. The small section of shore line run on the opposite side of the inlet has a sandy beach and is wooded back of the high water line. The most prominent landmark in this locality is the Jones Beach Tower, a high, brick, pyramidal tower of square cross section, 202 feet in height, lighted at night, and visible in any direction for many miles. It is about one-third mile west of station Park. There is a large building with two prominent towers about 600 meters west of Jones Beach Tower. Just east of the point at Jones Inlet and on the channel side, a large bight, bare at low water, makes in. Just east of this bight a dredged channel, about 100 meters wide, makes in for about 500 meters. East of this dredged channel the shore line is first sandy and then marshy for 950 meters, with mud flats extending out from high water about 150 meters. At this point an extensive fill in the form of a rough semi-circle, 400 meters in diameter, builds out into the channel. On the other side of this fill the shore is marshy for 550 meters, with grass growing out beyond the high water line for about 80 meters. Progressing eastward from here the shore is composed of fill for about 2000 meters. Opposite the Short Beach Coast Guard Station, which is on a small island in the middle of the channel, grass grows out for about 125 meters beyond high water. At the east end of the aforementioned section of filled ground a small bight makes in, which affords an excellent harbor for small boats. Going eastward from this bight the land is marshy for 1100 meters. Then there is a section of filled ground for 500 meters to a bridge, where the Jones Beach Causeway passes over a side channel running eastward. Going northward from this point the shore line is composed of filled ground and runs parallel to the Jones Beach Causeway for 1000 meters to a drawbridge. There are mud flats extending off shore in this section. Progressing northward from this drawbridge the shore line is composed of filled ground for 600 meters. It is then marshy from this point to station Team. The shore line in this section is very irregular, with numerous channels and off-lying islands, and the character of the entire shore is marshy. Starting at the southwest corner of Meadow I. and progressing eastward the shore is grassy, with a number of small shacks and summer residences. Flats extend about 50 meters off shore. The shore line continues grassy around the southeast point of the island and for about 300 meters up the channel to the north.

DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET "H",
HEMPSTEAD BAY, LONG ISLAND, NEW YORK - Continued

a. GENERAL DESCRIPTION OF THE COAST (Continued):

It

It is then marshy for 600 meters. From this point and around the north side of the island the shore is composed of filled ground, pumped up during dredging operations. Extensive mud flats and off-lying marsh are present on the north side of the island.

All of Jones I. that was run consisted of marshy land, with the exception of a small section of grassy and filled ground at the southwest point, around station Jon. Extensive mud flats lie on the north shore of the channel, just east of Jones I. and north of Short Beach Coast Guard. All of Deep Creek Meadow, Snipe I., and all that was run of Egg I., East I., Cuba I., Big Crow I., Ned Meadow, and False Channel Meadow consists of marshy land. Pettit Marsh consists of marshy land, with a large fill on the southeast point.

b. LANDMARKS.

Tower @ Jones Beach).

East and west towers, large building 600 meters west of Jones Beach Tower.

Short Beach Coast Guard Station and Flag Tower.

c. CHARACTER OF CONTROL USED.

Control was furnished by main scheme, supplementary, and intersection triangulation stations, and by stations located by plane table cuts, although these were seldom used, the triangulation control usually being sufficient.

d. CLOSING ERRORS OF TRAVERSES RUN AND HOW ADJUSTED.

At practically every point on the sheet a three point fix was available, so that small errors were adjusted at each set-up and no shore line adjustment was necessary.

e. DESCRIPTION OF AUXILIARY SURVEYING METHODS.

In traversing along the ocean beach a 100 meter wire was used instead of the usual procedure of reading stadia distances. This expedited the work considerably, about one mile being taken between set-ups. Off-lying features were located both by plane table cuts and by direct rod readings, the rodman using a pulling boat to reach them.

f. FORM LINES VERIFIED.

None.

DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET "H",
HEMPSTEAD BAY, LONG ISLAND, NEW YORK. - Continued

g. CHANGES IN PROMINENT OBJECTS AND OFF-LYING FEATURES.

None noted.

h. INCOMPLETE WORK.

Extensive dredging operations are being carried on in the various channels shown on this sheet, and new channels are being cut through and old ones filled. For these reasons there are likely to be some changes in the near future in the shore line as it existed at the time of mapping. A number of the buoys located are removed in the fall, and had already been removed before the party left the scene of operations. They are replaced in the spring, but whether in exactly the same location as previously shown is not known to the topographer.

The shore line on this sheet was not completed, due to the closing of the season, but photographs were obtained of this locality, and the gaps may be filled in from the photographs. However, some photographs that were taken in the spring proved to be worthless in some sections, due to the many changes that were caused by dredging.

i. PROCEDURE DEVIATING FROM STANDARD PRACTICE.

Use of a 100 meter wire on the ocean beach, as noted in section E of this report.

j. FAILURE TO JOIN PROPERLY WITH ADJACENT WORK.

None.

k. NEW NAMES.

None.

l. LIST OF PLANE-TABLE POSITIONS.

Included with report.

m. PHOTOGRAPHS.

Aerial photographs were taken of most of the region covered by the sheet in the spring, and further photographs to complete the region were taken in the fall. The photographs taken in the spring were found to be unreliable on account of the extensive dredging operations carried on during the summer. Those taken in the fall may cover some of the changes, but, since dredging was carried on well into the fall, these may also be unreliable in some places.

n. CHANGES OF COAST LINE.

Before taking the sheet in the field the old shore line was traced on from the chart. In running the present shore line it was found to

DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET "H",
HEMPSTEAD BAY, LONG ISLAND, NEW YORK - Continued

n. CHANGES OF COAST LINE (Continued)

vary greatly from the old, as traced from the chart; in fact, there were very few places where it came near coinciding. Among the most important changes the following were noted:

A new channel has been cut through north of Short Beach Coast Guard Station.

A new channel, about 80 meters wide, where no previous channel existed, has been cut through Pettit Marsh. This channel runs from the Bay of Fundy to The Narrows, near Freeport. Only the southeasterly end of this channel is shown on this sheet.

The small channel, shown on the chart as cutting through the northwest corner of Meadow I., has been widened and straightened and is now the western entrance to the Bay of Fundy, the larger channel just north of it being now a flat.

A considerable change has taken place in the location of Jones Inlet, it having moved west about 300 meters.

o. CHARACTER OF MARSHES.

Most of the terrain on this sheet is marshy in character. In most places a pronounced vertical bank is visible, which was usually taken as high water. Sometimes the high water floods back of this bank, and the land is so flat that an accurate location of the high water line would be impossible, except in using the vertical bank. At other points there is no vertical bank, and the high water line is very indefinite, a variation of a few inches in tide being sufficient to change the high water line by many meters. In such cases an average line was attempted. In several places marshy territory is shown out beyond the high water line.

NOTES: Stations Shor, Long, Al, and Ly were located by a combination of a three point fix with a theodolite, and one or more theodolite cuts. They are shown as triangulation stations, but in the strictest sense of the word are probably not. Station Chimney, Large Green House, 1926, corresponds in position to station Chimney, White House, Dark Roof, 1926. It was plotted in the same position, checked perfectly with three plane table cuts, and also was checked by several theodolite cuts. The previous description seems to be in error.

The red circles with the arrows are channel markers. They are of two types, striped black and white posts and black posts with white acorn top. They have arrows pointing to the channel.

Forwarded

Raymond P. Eymann
Raymond P. Eymann
Chief of Party

Respectfully submitted

A. M. Weber
A. M. Weber
Topographer

PLANE TABLE POSITIONS

Object and description	Latitude	D.M. Meters	Longitude	D.P. Meters	Height	Remarks
Black and white marker	40-37	1510 (341)	73-33	1307 (103)		Striped marker with arrow toward channel
Black and white marker	40-37	1519 (332)	73-33	1195 (215)		"
Sign	40-37	1526 (325)	73-33	1231 (179)		
Black and white marker	40-37	1428 (423)	73-33	1024 (386)		"
Pipe, small brown shack	40-37 ✓	1216 (635)	73-33	796 (614)		
Pipe, dark house, red roof, white columns	40-37 ✓	693 (1158)	73-33	679 (731)		
Pole, red house, green roof	40-37 ✓	861 (990)	73-33	361 (1049)		
Pipe, white house, green roof	40-37 ✓	961 (890)	73-33	234 (1176)		
Flagpole, TCM	40-37 ✓	999 (852)	73-33	200 (1210)		
Brick chi, center dark house	40-37 ✓	1027 (824)	73-33	190 (1220)		
Pipe, E. end white house (Nip)	40-37 ✓	358 (1493)	73-33	221 (1189)		
Chi, large white house, green roof	40-38 ✓	754 (1097)	73-33	55 (1355)		△ Chimney (Lone Bldg) 1933
Black and white marker	40-36	1035 (816)	73-33	1353 (58)		Striped marker with arrow toward channel
Black and white marker	40-36	960 (891)	73-33	1304 (107)		"
Black and white marker	40-36	1046 (805)	73-33	1135 (276)		"
Black and white marker	40-36	1163 (688)	73-33	1095 (316)		"
Black and white marker	40-36	1213 (638)	73-33	814 (597)		"
Black and white marker	40-36	1318 (533)	73-33	599 (811)		"
Black and white marker	40-36	1470 (381)	73-33	688 (722)		"
Black and white marker	40-36	1484 (367)	73-33	702 (708)		"
Black and white marker	40-36	848 (1003)	73-33	332 (1079)		"
E. Gable, yellow house YEL	40-36 ✓	151 (1700)	73-33	243 (1168)		
Chi, Prospect Gun Club GUN	40-36 ✓	63 (1788)	73-34	00 (1411)		
Black and white marker	40-35	1845 (6)	73-33	1339 (72)		"
Flagpole	40-35 ✓	1843 (8)	73-33	1101 (310)		
Chi, small gray house GRAY	40-35 ✓	1805 (46)	73-33	825 (586)		
E. Gable, green house BUL	40-35 ✓	1775 (76)	73-33	269 (1142)		

2. 1933

Object and description	Latitude	D.M. Meters	Longitude	D.P. Meters	Height	Remarks
Black and white marker	40-35	1802 (49)	73-33	153 (1258)		Striped marker with arrow to channel
Black and white can buoy "F"	40-35	1424 (427)	73-33	819 (592)		
Black and white nun buoy "E"	40-35	1124 (727)	73-33	1163 (248)		
Red bbl., no number	40-35	1517 (334)	73-33	1040 (371)		
Chi on brown shack ✓	40-38 ✓	1256 (595)	73-32	677 (733)		
Chi on green shack ✓	40-38 ✓	1102 (749)	73-32	575 (835)		
Pipe, S. end gray shack HIT	40-37 ✓	1215 (636)	73-32	412 (998)		
Chi, S. end green shack GO	40-37 ✓	977 (874)	73-32	302 (1108)		
Chi, E. end red house H67	40-37 ✓	678 (1173)	73-32	118 (1292)		
Chi, W. end small dark shack CAN	40-37 ✓	22 (1829)	73-32	254 (1156)		
Chi, SW end red house CORK	40-36 ✓	1324 (527)	73-32	319 (1091)		
Yellow sign, "Cable Crossing"	40-36 ✓	329 (1522)	73-32	193 (1218)		
W. Gable, white house dark roof BAR	40-37 ✓	371 (1480)	73-31	870 (540)		
Chi on shack HUM	40-37 ✓	38 (1813)	73-31	363 (1047)		
Pipe, red house STOP	40-36 ✓	1748 (103)	73-31	1358 (52)		
Black marker	40-36	417 (1434)	73-31	88 (1323)		White acorn top, arrow to channel
Black marker	40-36	366 (1485)	73-31	755 (656)		"
Black marker	40-36	212 (1639)	73-31	1019 (392)		"
Coast Guard Flagstaff SUB	40-36 ✓	193 (1658)	73-31	1002 (409)	As top of land	
Sign "Cable Crossing"	40-35 ✓	1818 (33)	73-31	1051 (360)		
W. Gable gray shed NEAR	40-35 ✓	1230 (621)	73-31	926 (485)		
Sign	40-35	973 (878)	73-31	492 (919)		
Sign	40-35	1004 (847)	73-31	385 (1026)		
Sign	40-35	1034 (817)	73-31	268 (1143)		
W. Gable, large white boathouse GAB	40-38	1075 (776)	73-30	1332 (78)		

Object and description	Latitude	D.M. Meters	Longitude	D.P. Meters	Height	Remarks
Flagpole	40-38	1366 (485)	73-30	1325 (85)		
Chi, brown house	40-38	1024 (827)	73-30	1235 (175)		
Yellow sign	40-38	738 (1113)	73-30	723 (687)		
Pipe on shack	40-38	190 (1661)	73-30	894 (516)		
Chi, bait house BOAT	40-37✓	445 (1406)	73-30	1051 (359)		
Black marker BARE	40-37	63 (1788)	73-30	513 (897)		White acorn top, arrow to channel
Black marker	40-37	310 (1541)	73-30	574 (836)		"
Black marker	40-37	488 (1363)	73-30	558 (852)		"
Black marker NOR	40-37	659 (1192)	73-30	551 (859)		"
Sign	40-37	619 (1232)	73-30	330 (1080)		
Sign	40-37	641 (1210)	73-30	176 (1234)		
Sign	40-37	815 (1036)	73-30	245 (1165)		
Sign	40-37	810 (1041)	73-30	284 (1126)		
Orange marker	40-37	631 (1220)	73-30	309 (1101)		
Orange marker	40-37	641 (1210)	73-30	291 (1119)		
Orange marker	40-37	723 (1128)	73-30	323 (1087)		
Orange marker	40-37	705 (1146)	73-30	364 (1046)		
Black marker	40-36	366 (1485)	73-30	1211 (200)		White acorn top, arrow to channel
Black marker	40-36	444 (1407)	73-30	1156 (255)		"
Black marker	40-36	528 (1323)	73-30	1251 (160)		"
Black marker	40-36	1098 (753)	73-30	750 (661)		"
Black marker	40-36	1161 (690)	73-30	511 (900)		"
Black marker	40-36	1348 (503)	73-30	454 (956)		"
Black marker	40-36	1455 (396)	73-30	368 (1042)		"
Black marker	40-36	1546 (305)	73-30	317 (1093)		"
Black marker	40-36	1593 (258)	73-30	372 (1038)		"

Topographic Sheet "H"

Plane table positions (cont)

Sheet-4

Object and description	Latitude	D.M. Meters	Longitude	D.P. Meters	Height	Remarks
Black marker	40-36	1643 (208)	73-30	443 (967)		White acorn top, arrow to channel
Sign	40-36	1637 (214)	73-30	228 (1182)		
Chi, white house DIS	40-36 ✓	846 (1005)	73-30	232 (1179)	12'	
Flagpole E end of 3 S.B.	40-35 ✓	1196 (655)	73-30	672 (739)		
Flagpole C of 3 S.B.	40-35 ✓	1228 (623)	73-30	703 (708)		
Flagpole W. end of 3 S.B.	40-35 ✓	1191 (660)	73-30	725 (686)		
E. Tower, large bldg.	40-35 ✓	1245 (606)	73-30	1244 (167)		
W. Tower, large bldg. WEST	40-35 ✓	1239 (612)	73-30	1280 (131)		△ Tower (West Pointed Jones Beach) 1933

This plane table survey was made subsequent to air photo compilation T-5058, has been compared with T-5058. Corrections to T-5058, latitude $40^{\circ}38'$ to $40^{\circ}39'$, long. $75^{\circ}30'$ to $75^{\circ}31'$ have been plotted on correction sheet. No. . . . and will be applied to T-5058 at the next printing.

Larnedson
March 25, 1935.

REVIEW OF TOPOGRAPHIC SURVEY No. 6009

Title (Par. 56) *Hempstead Bay, Long I., Jones Inlet to East Bay, New York*

Chief of Party *R.P. Eymann* Surveyed by *A.M. Weber* Inked by *A.M. Weber*

Ship *Shore party* Instructions dated *Feb. 25, 1933* Surveyed in *Sept. Oct. 1933*

1. The survey and preparation for it conform to the requirements of the Topographic Manual. (Par. 7, 8, 9, 13, 16.) ✓
2. The character and scope of the survey satisfy the instructions. ✓
3. The control and closures of traverses were adequate. (Par. 12, 29.) ✓
4. The amount of vertical control that the Manual specifies for -contours-formlines- was accomplished. (Par. 18, 19, 20, 21, 22, 23.)
None
5. The delineation of -contours-formlines- is satisfactory. (Par. 49, 50.) *None*
6. There is sufficient control on maps from other sources that were transmitted by the field party to enable their application to the charts. (Par. 28.) *None submitted*
7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, 44.) ✓
8. The representation of low water lines, reefs, coral reefs and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41.) ✓
9. Rocks and other important details shown on previous surveys and on the chart were verified. (Par. 25, 26, 27.)
10. The span, draw and clearance of bridges are shown. (Par. 16c.)
No bridges shown on this sheet.
11. ~~Locations and elevations of summits are given. (Par. 19, 51.)~~
12. ~~The tree line was shown on mountains. (Par. 16g.)~~

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.

13. The descriptive report covers all details listed in the Manual, in so far as they apply to this survey. (Par. 64, 65, 66, 67.) ✓
14. The descriptive report also contains additional information required in ~~aero-topography~~ relative to type of photographs, method of compilation and type of ground control.
15. ^{No} ~~The~~ descriptions of recoverable stations and references to shore line were accomplished on Form 524. (Par. 29, 30, 57, 67 except scaling of DMs and DP's, 68.) *They are listed in the Descriptive Report.*
16. A list of landmarks for charts was furnished on Form 567 and plotting checked. (Par. 16d, e, 60.) *A general list for this project is filed a letter 707/1933. The Desc. Report lists several Landmarks but positions are not scaled.*
17. The magnetic meridian was shown and declination was checked. ✓ (Par. 17, 52.)
18. The geographic datum of the sheet is *North American 1927* and the reference station is correctly noted. (Par. 34.) *Seconds are given in meters only.*
19. Junctions with contemporary surveys are adequate. ✓
20. Geographic names are shown on the sheet and are covered by the Descriptive report. (Par. 64, 66k.) ✓
21. The quality of the drafting is good. (Par. 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50.) ✓
22. No additional surveying is recommended. ✓
23. The Chief of Party inspected and approved the sheet and the descriptive report. ~~after review by~~
24. Remarks:

Reviewed in office by *R. J. Christman, Feb. 26, 1934.*

Examined and approved:

L. O. Colbath
Chief, Section of Field Records

W. B. Papenhausen
Chief, Division of Charts

J. S. Borden
Chief, Section of Field Work

G. H. de
Chief, Division of Hyd. and Top.

6009

Form 504
Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic }
~~Hydrographic~~ } Sheet No. 6009

Additional work

State New York

LOCALITY

Long Island

Hempstead Bay

1934

CHIEF OF PARTY

M.O. Witherbee

U. S. GOVERNMENT PRINTING OFFICE: 1934

Additional work

Additional work

DESCRIPTIVE REPORT

TO ACCOMPANY TOPOGRAPHIC SHEET NO. 6009

a.

This sheet was accomplished during the 1933 field season. Due to the filling in in connection with the construction of the new Meadow Brook Causeway and highways along the north shore of Jones Beach, said shoreline was re-run and noted in pencil.

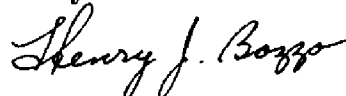
The shoreline of Bellmore Creek and the canal next east of it was run and the signals located. An insert of the same scale was made for the continuation of Bellmore Creek. The shoreline of Island Creek was run from the bridge to the edge of the sheet. This was done on account of a discrepancy between the hydrography and the shoreline as determined from aerial photographs. The shoreline as determined by plane table indicates that the shoreline from the photographs is in error from 10 to 20 meters in this part of the creek. The signals were located on the creek east of Whale Neck Point and a small portion of the shoreline was run near the setups. An insert of the same scale was made for the continuation of same.

The small island formerly occupied by the Short Beach Coast Guard Station has been removed since the 1933 work was completed.

The channel markers located in 1933 were, in some cases, just temporarily marked and have since been replaced by the more permanent type. All of the channel markers on the sheet were checked by sextant fixes and those out of position more than five meters were crossed out in pencil and relocated, those no longer in existence were crossed out and all new ones located.

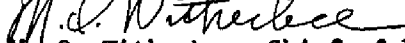
Standard methods were used in the location of the shoreline and signals. Three point fixes at times included topographic stations due to the fact that the re-erection of signals over triangulation stations would not be practical.

Respectfully submitted



Henry J. Bozzo

Forwarded approved,



M. O. Witherbee, Chief of Party.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Washington Office,

May 15, 1935

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:

From data obtained by Comdr. G. D. Cowie April 24-26, 1935

Plotted on this topo sheet and scaled by

J. L. McCormick

Chief of Party.

DESCRIPTION	POSITION					METHOD OF DETERMINATION	CHARTS AFFECTED
	LATITUDE		LONGITUDE		DATUM		
	°	D. M. METERS	°	D. P. METERS			
NEW LOCATIONS OF CHANNEL MARKERS ON T-6009							
Channel Marker	40 36	1801	73 33	907	NA 1927	Topo	579
" "	40 36	1607	73 33	766	"	"	"
" "	40 35	1463	73 32	1322	"	"	"
" "	40 37	291	73 30	515	"	Sextant	"
Channel Markers to be deleted on T-6009							
Channel Marker	40 36	1128	73 33	971	NA 1927		579
✓ " "	40 35	1530	73 32	1399	"		"
✓ " "	40 35	1577	73 32	1231	"		"
✓ " "	40 36	218	73 31	1022	"		"
✓ " "	40 36	1160	73 30	512	"		"
✓ " "	40 37	1518	73 33	1196	"		"
✓ " "	40 37	1524	73 33	1231	"		"
✓ " "	40 37	1761	73 33	1287	"		"
✓ " "	40 37	1508	73 33	1308	"		"

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, flagstaves and like objects are not sufficiently permanent to chart.