

8936

Diag. Cht. No. 1211-2.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. 742-10-2-67 Office No. H-8936

LOCALITY

State Connecticut

General locality Thames River

Locality New London to Norwich

19 67

CHIEF OF PARTY

A. J. Patrick

LIBRARY & ARCHIVES

DATE Feb. 12, 1969

8936

HYDROGRAPHIC TITLE SHEET

H-8936

INSTRUCTIONS - The Hydrographic Sheet should be accompanied by this form,
filled in as completely as possible, when the sheet is forwarded to the Office.

FIELD NO.

742-10-2-67

State CONNECTICUT
General locality New London to Norwich
GALES FERRY
Locality THAMES RIVER
Scale 1:10,000 Date of survey 8/8/67 to 10/16/67
Instructions dated 3/31/66 & 5/19/67 Project No. OPR-414
Vessel Launch CS-1177, Skiff CS-758 and Skiff CS-528
Chief of party LCDR ARCHIBALD J. PATRICK
Surveyed by FLOYD R. GILDEN JR.
Soundings taken by echo sounder, ~~hand lead~~, pole _____
Graphic record scaled by PARTY PERSONNEL
Graphic record checked by PARTY PERSONNEL
Protracted by Harry R. Smith Automated plot by _____
Soundings penciled by Harry R. Smith Verification by: Fred Bean
Soundings in ~~fathoms~~ feet at MLW ~~M/L/V~~

REMARKS:

SHEET LAYOUT

OPR-414

FISHERS ISLAND SOUND
HYDROGRAPHIC FIELD PARTY 742
CHIEF OF PARTY: LCDR A.J. PATRICK
1967

1 JUNE - 30 JUNE
SCALE C.B.G.S. CHART 359

H-8936
742-10-2-67

742-05-1-67
H-8935

NEW LONDON

GROTON

NORWICH

Insert showing Northern
portion of sheet B

T.B.D.

DESCRIPTIVE REPORT
TO ACCOMPANY HYDROGRAPHIC SURVEY H-8936
(Field No. 742-10-2-67)

SCALE: 1:10,000

HFP-742

PROJECT: OPR-414

OFFICER -IN-CHARGE:

ARCHIBALD J. PATRICK
LCDR, USESSA

SURVEYED BY:

FLOYD R. GILDEN JR.

A. PROJECT

Work on project OPR-414 was done in accordance with Basic Instruction dated 31 March 1966 and Supplemental Instruction dated 19 May 1967.

B. AREA SURVEYED

The area covered by this survey is in the vicinity of Thames River and covers the area between Norwich and New London, Connecticut.

Latitude 41°22.30'N to 41°31.30'N

Longitude 72°02.50'W to 72°06.50'W

Field work on this survey commenced on the 8 day of August 1967 and ended on the 16 day of October 1967.

Junction was made on the south with contemporary survey H-8935 (Field No. 742-05-1-67), scale 1:5,000, 1967.

C. SOUNDING VESSELS

The following vessels were used to obtain hydrographic data on this survey:

<u>VESSEL</u>	<u>IDENTIFYING COLOR</u>
Launch CS-1177	BLUE
Skiff CS-758	RED
Skiff CS-528	GREEN

D. SOUNDING EQUIPMENT

Raytheon Graphic Recorder, model DE-723, serial No. 806, (47.5 KC) was used on Skiff CS-758. Raytheon Graphic Recorder, model DE-723, serial no. 927 was used on Launch CS-1177. Pole soundings only were obtained with Skiff CS-528. Corrections to be applied to echo soundings were

determined from daily bar checks. An abstract of these corrections is tabulated in APPENDIX "B" of this report.

E. SMOOTH SHEET

This survey ^{was} ~~will be~~ smooth plotted at the Atlantic Marine Center, Norfolk, Virginia.

F. CONTROL

Horizontal control was obtained by standard visual three-point sextant fix methods. APPENDIX "A" of this report contains a complete list of control used and the quality and source of the control.

G. SHORELINE

Shoreline detail was taken from manuscript T-11785, T-11784, and T-11783. Man made changes are noted on the boat sheet in red. These changes are in the followings areas: Latitude $41^{\circ}22.80'$ - Longitude $72^{\circ}05.88'$; Latitude $41^{\circ}28.90'$ - $72^{\circ}04.40'$. Note that construction still continues in the areas of Latitude $41^{\circ}28.90'$ - Longitude $72^{\circ}04.40'$.

T-11788 1:5000 Advance
plus cautious application
of 1965 photorevision and
1966 field edit (Op 69460-61)
should be used between
 $41^{\circ}22'30''$ and $24'30''$ CA

H. CROSSLINES

Crosslines were run at approximately 8% of the regular system of hydrography. Crosslines were in good agreement with the regular system of sounding lines.

I. JUNCTIONS

Depths at junction on the south with survey H-8935 (742-05-1-67) are in agreement and depth curves can be adequately drawn at this junction, with the exception of the twelve foot curve on the west side of the river. The discrepancy here is due to the sounding being plotted on survey H-8935 with predicted tides and without velocity corrections being applied. *Curve discrepancy resolved -*

J. COMPARISON WITH PRIOR SURVEYS

The results of this survey were compared with the following prior surveys:

NUMBER	DATE	SCALE
2487	1900	1:10,000
2486	1900	1:10,000
2473	1900	1:50,000
1527	1882	1:10,000

No agreement was obtained due to the lack of soundings and time of prior surveys. In the channel this survey showed deeper depths in general.

All Pre Survey Items will be discussed under section "K" COMPARISON WITH CHART of this report.

K. COMPARISON WITH CHART

This survey was compared with chart C&GS 293, 20th Edition, dated May 15, 1967, scale 1:10,000, insert scale 1:5,000 and C&GS 359, 19th Edition, dated November 1, 1965, scale 1:20,000.

Good agreement was found with the charted features except as noted below:

FEATURE	POSITION	REMARKS
PSI #40E Log Boom	41°29.08' 72°04.58'	Relative position, shape and size of Log Boom remains the same, however Log Boom is in ruins. Also a bare rock reported by Coast Pilot west of the Log Boom and just southwest of Fort Point was searched for but not found. It is possible that this rock may be the end of the nearby dike. It is recommended this area be marked foul from position 11 "j" skiff CS-758 to position 12 "j" skiff CS-758 along the dike south and east down to the new bridge now under construction.
PSI #40D Subm. Wreck <i>150 ft. wreck from C of E bp 32225</i>	41°26.03' 72°05.67'	A search was made for this wreck utilizing a 100 foot chain sweep towed behind Launch CS-1177. (Volume #8, "b" day) There was no indication of this wreck in this area. Recommended this feature be deleted from the chart. <i>CONCUR</i>
PSI #40C Wreckage	41°22.85' 72°05.75'	This wreckage shown on chart still exist and should be retained on the chart. <i>CONCUR</i>

Newly found features to be charted:

FEATURE	POSITION	REMARKS
Wreck	41°29.75' 72°04.98'	Only keel and part of hull remain. (Vol. 1 page 40) ✓
Shoal (Rocky)	41°27.95' 72°04.24'	Least depth on shoal 1 foot MLW. (Vol. 8 page 24) <i>shown as *</i> ✓
Wreck (barge)	41°27.18' 72°04.99'	This barge came from manuscript T-11784 and was verified visually by this survey. (Vol. 3 page 65) ✓
Pile	41°26.64' 72°05.08'	Pile bares 3 feet MLW (Vol. 4 page 37) ✓
Pier	41°22.81' 72°05.85'	New pier located by this survey. (Vol. 7 page 4) ✓
Buoys (2)	1- 41°22.68' 72°05.74' 2- 41°22.68' 72°05.80'	These two private buoys should be charted. (Vol 7 page 25) only offshore buoy located <i>see note on next page</i> ✓
Wreck	41°23.97' 72°06.12'	Wreck bare 2.2 feet MLW. (Vol 9 page 53) ✓
Marina	41°26.01' 72°05.41'	This marina is still under construction. (Vol 9 page 60) ✓
Obstruction	41°26.60' 72°05.35'	Obstruction bare 4.0 feet MLW. (Vol 4 page 43) ✓
Rock	41°25.08' 72°05.86'	Rock ⁽³⁾ awash MHW. (Vol 8 page 31) ✓
Drain	41°22.63' 72°05.73'	Fix was obtained on offshore end of drain. The direction drain extends to shore is unknown. (Vol. 8 page 31) <i>Pipe 2 ✓</i> <i>at 8 ft</i>
Obstruction	41°22.53' 72°05.24'	Iron obstruction submerged 0.8 feet MLW. (Vol 8 page 49) ✓
Pontoons (steel)	41°27.98' 72°05.89'	Steel pontoons are joined together with steel and extend to shore. (Vol. 5 page 51) ✓

Features to be deleted from the chart.

FEATURE	POSITION	REMARKS
Obstruction	41°23.16' 72°05.80' ₂	Area of 100 meter in diameter covered by wire drag, negative results. Unable to cover more area due to boats moored in area. (Vol. 8 page 47) ✓ <i>delete W.D. adequate</i>
Dolphin	41°23.23' ⁸ 72°05.83'	Area of 75 meters in diameter covered by wire drag, negative results. Unable to cover more area due to boats moored in area. (Vol. 8 page 40) ✓ <i>delete - W.D. adequate</i> <i>ON T-11783 Not plotted in smooth sheet</i>
Piles	1- 41°22.68' 72°05.74' 2- 41°22.68' 72°05.80'	These piles were searched for by wire drag, negative results. It is believed these piles could be private buoys. <i>see "Buoys (2)" note on previous page</i> <i>Charted from p 28012</i> <i>shown on T-11783 (incomplete)</i> <i>chart as buoys</i>
Pier	41°22.75' 72°05.98'	Pier has been removed. (Vol. 7 page 5) ✓
Piles	1- 41°23.13' 72°05.97'.27 2- 41°23.25' 72°05.38' ₃₃	These piles were searched for with the fathometer, negative results. Unable to drag areas due to boats moored. <i>delete</i> ✓
Pile	41°23.03' 72°05.74'	Area of 125 meters covered by wire drag, negative results. (Vol. 8 page 42) <i>delete - W.D. adequate</i> <i>Subm pile</i> <i>agH 2-5-70</i> <i>shown on T-11783 and 7</i>

Features to be changed on the chart.

Shoal	41°30.10' 72°04.92'	This shoal has shifted northward approximately 300 meters. ✓
5 foot depths	41°26.28' 72°05.77'	Chart C&GS8359 shows 5 foot in this area. This survey shows depths of 1 foot. ✓

L. ADEQUACY OF SURVEY

This survey is considered adequate and accurate to supersede prior surveys for charting purpose.

M. AIDS TO NAVIGATION

The U.S. Coast Guard maintains 21 floating aids and 17 fixed aids to navigation within the limits of this survey. These aids adequately serve the purpose for which they were established.

The following change is to be noted to Light List, Volume 1, Atlantic Coast, 1966:

Buoy # 8 is now lighted, Flashing 4 seconds, Red.

There were a total of 9 privately maintained aids to navigation within the limits of this survey. Two were not listed in the Light List. Location of these aids are in the general area of Latitude $41^{\circ}22.68'$, Longitude $72^{\circ}05.75'$ in approximately 15 feet of water and are maintained by the Thames River Shipyard Inc.

N. STATISTICS

VESSEL	No. OF POSITIONS	NAUT. MILES SOUNDING
Skiff CS-758	1288	110.4
Launch CS-1177	205	5.5
Skiff CS-528	<u>181</u>	<u>10.8</u>
TOTAL	1674	126.7

TOTAL AREA SURVEYED: 3.5 Sq. Naut. Miles

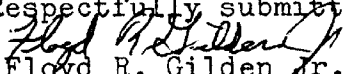
There were 74 bottom samples taken on this survey.

There were no current station or oceanographic stations observed within the limits of this survey.

The Tide Gage at Norwich, Connecticut furnished tide control for this survey. See APPENDIX "C" TIDAL NOTE for information on this station.

O. MISCELLANEOUS

On Launch CS-1177 a modified sweep was utilized to search for submerged objects. This sweep consisted of two trawl boards, identical to those used by shrimp trawlers, with 100 feet length of small chain between them. The trawl boards were bridled and towed in such a manner as to drag along the bottom approximately 150 feet behind the Launch, upon snagging an object the tow lines to the trawl boards would come together slowly allowing the coxswain sufficient time to stop the launch.

Respectfully submitted,

Floyd R. Gilden, Jr.
Surveying Technician

APPENDIX A

List of Signals

ABE	T-11783
ARV	HARVARD BOATHOUSE CUPOLA, 1934
BAG	T-11783
BAR	BARTLETT POINT ⁵ LIGHT NO-9 , 1934
BUD	T-11783
CAB	T-11783
CAT	T-11784
COW	T-11784
CUP	T-11783
DAW	T-11783
DAY	T-11783
FAR	T-11783
FAT	T-11783
FED	T-11783
FEW	T-11783
FIG	T-11783
FIT	T-11784
FLA	YALE CREWHOUSE FLAGSTAFF, 1934
FOR	T-11784 → NEW LONDON
FOX	CONNECTICUT COLLEGE STACK, 1934
GOB	T-11784
GUM	T-11784 ¹⁴
HEG	MOHEGAN DIKE LIGHT NO-26 , 1934
ICE	ICE HOUSE LIGHT NO. 5, 1960
IDA	T-11783
JAP	T-11784
JOE	T-11783
JUG	T-11784
KEN	T-11784 (green)
KIM	T-11784
LED	LEDGE (U.S.E.), 1934
LOW	LONG REACH LOWER LIGHT NO-14 , 1934
MAG	T-11783
MAX	T-11783
MET	T-11783
MID	T-11783
MIT	SMITH'S CHIMNEY, 1934
MIX	T-11784
MOO	T-11784 (blue) Top°
MOP	T-11784
NAG	BETH-JACOB SYNAGOGUE TOWER, 1934
NEY	HARVARD CHIMNEY, 1934

APPENDIX A (cont)

NOR	T-11784
NOT	T-11784
NUT	T-11783
OAK	T-11784
OWL	T-11784
PIE	SAND PIER LIGHT ¹⁵ NO. 37 , 1934
PIG	T-11783
POL	T-11783
POP	T-11784
PRI	PRIDE PIER ¹⁶ LIGHT NO. 30 , 1934
QUO	T-11785
RAT	T-11784
REA	LONG REACH UPPER ⁹ LIGHT NO. 17 , 1934
RIP	T-11784
ROC	PERCH ROCK ¹³ LIGHT NO. 33 , 1934
ROT	T-11785
ROW	T-11784
ROX	T-11785
ROY	T-11785 (blue) <i>Topo</i>
RUB	T-11785
RUT	T-11784
SAD	T-11785
SAM	BAILEY POINT LIGHT NO. 6, 1934 (<i>Topo</i>) Rebuilt 1941
SCO	SCOTCH CAP LIGHT 1, 1960
STA	GATTS COMPANY <u>STACK</u> , 1934
TAN	T-11783
TOM	T-11784
TOW	T-11783
URN	BURNT HOUSE PIER ¹⁸ LIGHT NO. 32 , 1934
USE	NO. 2 (U.S.E.), 1934
VAL	T-11785
VAT	T-11784
VEX	T-11784
VIA	T-11783
VIB	T-11783
VIM	T-11784
VIC	T-11783 (blue) <i>Topo</i>
WAG	T-11784
WER	LOWER COAL DOCK ²⁰ LIGHT NO. 40 , 1934
WIG	T-11783
YAK	T-11783
YAM	COAST GUARD ACADEMY STACK, 1934
YES	T-11784
ZAG	T-11784
ZOO	T-11783
ZOT	T-11784
ZOR	T-11783
Woo	T-11784
PuP	T-11784

APPENDIX B
Corrections to Echo Soundings

Skiff CS-758	Fath. Depth (Ft.)	Corr. (Ft.)
Fathometer, DE-723, # 806	0.0 to 4.1	0.0
All days	4.2 to 6.9	+0.2
	7.0 to 11.3	+0.4
	11.4 to 15.9	+0.6
	16.0 to 21.9	+0.8
	22.0 to 29.1	+1.0
	29.2 to 36.1	+1.2
	36.2 to Deeper	+1.4
Launch CS-1177	0.0 to 6.0	-0.6
Fathometer, DE-723, # 927	6.1 to 12.0	-0.4
"a" day	12.1 to 20.2	-0.2
	20.3 to Deeper	0.0
Launch CS-1177	0.0 to 8.6	-0.6
Fathometer, DE-723, # 927	8.7 to 18.0	-0.4
"b" day	18.1 to 22.6	-0.2
	22.7 to Deeper	0.0

APPENDIX C
TIDAL NOTE

GAGE LOCATION:	Norwich, Connecticut Lat. $41^{\circ}31.36'$ Long. $72^{\circ}04.64'$
GAGE TYPE:	Pressure Recording
STAFF:	Mean Low Water corresponds to 2.1 feet on the staff.
CORRECTIONS:	No Time or height corrections were applied to data obtained from gage in reducing soundings.
TIME MERIDIAN:	75th

TIDE NOTE FOR HYDROGRAPHIC SHEET

November 9, 1967

~~Norwich, Connecticut~~

Atlantic Marine Center

Plane of reference approved in
9 volumes of sounding records for

HYDROGRAPHIC SHEET 8936

Locality: Gales Ferry, Thames River, Connecticut

Chief of Party: A.J. Patrick (1967)

Plane of reference is mean low water

Tide Station Used (Form C&GS-681):

Norwich, Connecticut

Height of Mean High Water above Plane of Reference is as follows:

3.1 feet

Remarks

Tide reducers for the following positions have been revised
in red and verified.

<u>Vol.</u>	<u>Position</u>
2	C7 - C12


Chief, Tides and Currents Branch

APPENDIX C
GEOGRAPHIC NAMES

Photo Party 61 submitted a special report on geographic names during the 1966 season. There were no changes or additions to this report by Hydrographic Field Party 742. This report covered the area between Point Judith, Rhode Island to Connecticut River Entrance, Connecticut.

APPENDIX D

Approval Sheet to Accompany
Hydrographic Survey H-8936 (742-10-2-67)

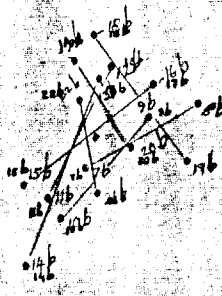
The field and office work was accomplished under my supervision.

The hydrography and descriptive report was done by Floyd R. Gilden Jr.

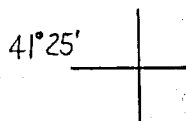
The report and records for this survey are complete and adequate to the best of my knowledge.

Approved and forward,

Archibald J. Patrick
Archibald J. Patrick
LCDR, USESSA



NO. 1



WIRE DRAG OVERLAY (NO SOUNDINGS)

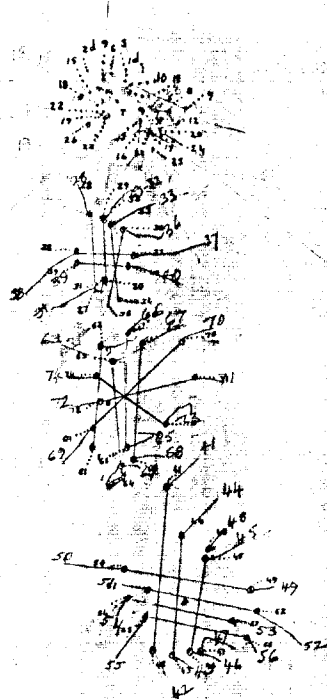
HFP-742-10-2-67

H-8936

POSITION 7-23 b

LAUNCH CS-1177 OCT. 6, 1967

72° 05'



41°23'

NO. 2

72° 05'

WIRE DRAG OVERLAY (NO SOUNDINGS)
BFP-742-10-2-67- H-8936
d-DAY
POSITION 1-56, 61-74

NORFOLK HYDROGRAPHIC PROCESSING BRANCH

ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8936 (742-10-2-67)

GENERAL

This appears to be an excellent basic survey. Soundings are in good agreement at crossings and depth curves follow normal configurations.

Overlays showing the plotted positions observed while towing the modified sweep, as described in paragraph "O" of the descriptive report, are being submitted with the smooth sheet. No obstructions were found.

Respectfully submitted,



Hugh L. Proffitt
Chief, Hydro Processing Br. AMC

Norfolk, Va.
Feb. 5, 1969

GEOGRAPHIC NAMES
Survey No. H-8936

Name on Survey	A On Chart No.	B On previous survey No.	C On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K
Allyn Point									1
Bailey Point									2
Barflett									3
Clark Cove									4
Easter Point									5
Gales Ferry									6
Harrisons									7
Horton Cove									8
Long Cove									9
Mamacoke Cove									10
Mamacoke Hill									11
Mill Cove									12
Montville Station									13
Norwich									14
Perche Rock									15
Poquetanuck Cove									16
Sand Point									17
Shetucket River									18
Smith Cove									19
Thames River									20
Trading Cove									21
Walden Island									22
New London									23
Massapeag									24
Pennimar Reef									25
Long Rock									26
Indian Hill									27

Names approved

Aug. 12, 1969

Frank W. Pickett

OFFICE OF HYDROGRAPHY AND OCEANOGRAPHY

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8936

FIELD NO. 742-10-2-67

Connecticut -- Thames River, New London to Norwich

SURVEYED: August 8, 1967, through October 16, 1967

SCALE: 1:10,000

PROJECT NO.: OPR-414

SOUNDINGS: Pole Soundings
DE-723 Raytheon Graphic
Recorder

CONTROL: Sextant angles
on shore signals

Chief of Party.....	A. J. Patrick
Surveyed by.....	F. R. Gilden, Jr.
Protracted by.....	H. R. Smith
Soundings Plotted by.....	H. R. Smith
Verified and Inked by.....	F. Bean (AMC)
Reviewed by.....	G. K. Myers
.....	Date: Nov. 18, 1969
Inspected by.....	R. H. Carstens

1. Description of the Area

This is an inshore survey of the Thames River and its tributaries from lat. $41^{\circ}22.5'$ to lat. $41^{\circ}31.5'$. Along-shore features include dredged berths with piers and rows of dolphins, located primarily within the areas of the U.S. Naval Station. In the upper extremities of the river, dikes protrude from shore and extend parallel to the dredged channel.

A dredged channel extends the full length of this part of the river. Adjacent areas are generally shoal. Minor depressions and several low water areas appear offshore. Some small coves indent the shoreline with bridges spanning their entrances into the river.

Predominant bottom characteristics in this area are mud and sand. Evidences of a rocky bottom are found in a shoal area between Bartlett and Gales Ferry, while patches of grass appear south of Massapeag.

east end

The rocks located on the west side of Munneseke Hill are considered to be the same as appears in advanced manuscript T-11788, which have been verified through examination of 1965 air photographs. The geographic positions of rocks are disregarded as appropriately shown on the smooth sheet.

2. Control and Shoreline

The source of control is adequately described in Part F of the Descriptive Report.

The shoreline originates with incomplete manuscripts T-11783, T-11784, and T-11785 of 1965, and thus may be subject to revision after review. Minor revisions of the shoreline by the hydrographer appear in red on the smooth sheet.

see note at G

3. Hydrography

- A. Depths at crossings are in good agreement.
- B. The usual depth curves are adequately delineated. The three-foot depth curve was added to more adequately delineate the bottom configuration.
- C. The development of bottom configuration and investigation of least depths are considered adequate.

4. Condition of the Survey

The plotting, sounding records, and Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual, except that the triangulation station name of lights and the Light List designations were not properly shown on the smooth sheet.

5. Junctions

An adequate junction was made with H-8935 (1967) on the south. On the north, the present survey extended to the project limits.

6. Comparison With Prior Surveys

A.	H-114	(1839)	1:10,000
	H-115	(1841)	1:10,000
	H-1006	(1869)	1:1,200
	H-1242	(1874)	1:10,000
	H-1527	(1882)	1:10,000

These prior surveys taken together cover the common area of the present survey and are prior to any alterations from dredging or spoiling created by

construction of the dikes, naval berths, and Federal Channel Projects. These manmade improvements have made great changes in the bottom. In addition, sedimentation has resulted in leveling the bottom to a more even surface.

At the entrances and in some coves a shoaling from 1-2 feet has occurred, while a greater filling of 5-6 feet in depths appears in limited areas of some prior depressions. These changes are considered to be due to a gradual filling by current and tide deposits, hence the decreasing depths. The character of the bottom sediments have remained the same between the prior and present surveys.

In Poquetanuck Cove a few prior soundings have been retained in the sparsely developed area on the present survey to extend the continuity of the channel. With these additions the present survey is considered adequate to supersede the prior surveys in the common area.

B.	H-2473	(1900)	1:5,000
	H-2486	(1900)	1:10,000
	<u>H-2487</u>	<u>(1900)</u>	<u>1:10,000</u>

These prior surveys cover largely the natural channel areas. Dredging has altered these to a major extent. An occasional line crossing inshore flats indicate a shoaling of 1 to 2 feet. In the channel on the east side of the river northeast of Bartlett shoaling of 4 to 8 ft. has occurred.

The present survey is adequate to supersede the prior surveys within the common areas.

7. Comparison With Charts 293 (latest print date 6/16/69)
and 359 (latest print date 6/9/69)

A. Hydrography

Most of the charted hydrography originates with the previously discussed surveys, supplemented by partial application of the boat sheet (Bp-73112) and the verified smooth sheet of the present survey and from prior and subsequent information furnished by the Corps of Engineers and U.S. Navy.

Specific mention is made of the following:

1. Many soundings in the immediate vicinity of the Navy piers at the Submarine Base have been charted from subsequent Navy surveys of 1968 (Bps. 75578-79) and should be retained on the chart, with the exception of the 37-ft. sounding at lat. $41^{\circ}23.33'$, long. $72^{\circ}05.37'$ which appears as a 31-ft. depth on the aforementioned surveys.
2. The 6-ft. sounding charted at lat. $41^{\circ}26.94'$, long. $72^{\circ}04.95'$ from a Corps of Engineers condition survey of 1962 (Bp-62959) falls in depths of 12-14 ft. on the present survey and is probably 1 fm. in error. It is considered discredited by the present survey and should be deleted from the chart.
3. The 17-ft. sounding charted at lat. $41^{\circ}24.01'$, long. $72^{\circ}05.67'$ from a Corps of Engineers survey of 1965 (Bp-40984) has been discredited by the present survey and should be deleted from the chart.
4. Many rocks awash charted along shore originate with contemporary field edit information included on Bps. 69459-69461 and Bps. 71052-71054 and should be retained on the chart.
5. The 12-ft. sounding charted at lat. $41^{\circ}31.42'$, long. $72^{\circ}04.56'$ from a Corps of Engineers survey of 1904 has been discredited by the present survey and should be deleted from the chart.
6. The obstructions charted in $41^{\circ}27:03'$, long. $72^{\circ}04.52'$ from Bp-71053 are noted in the records of the present survey to be a mooring buoy and floating dock and should be disregarded in charting. APR 10 1968
7. The obstruction charted in 22-ft. depths in $41^{\circ}27.16'$, long. $72^{\circ}05.15'$ from Bp-71053 showing features from air photographs without field edit, was not noted by the hydrographic party. As the identity of the obstruction has not been determined the obstruction is considered to be of a temporary nature and should be deleted from the chart. APR 10 1968

8. The submerged wreck charted in lat. $41^{\circ}26.02'$, long. $72^{\circ}05.65'$ from a Corps of Engineers survey of 1938, Bp-32225, was adequately investigated by a chain drag on the present survey and is considered disproved. It should be deleted from the chart.

9. The 4 obstructions charted in the vicinity of lat. $41^{\circ}22.6'$, long. $72^{\circ}05.7'$ from Bp-69461 were considered, after reexamination of the photographs, to be mooring buoys. These charted obstructions should be disregarded.

10. The 2 submerged piles charted in the vicinity of lat. $41^{\circ}22.68'$, long. $72^{\circ}05.75'$ correspond to 2 privately maintained buoys on the present survey and should be so charted.

The present survey is adequate to supersede the prior charted hydrography except as noted above.

B. Topography

1. The dolphins charted at piers 19-25 of the naval installation from Chart Letter 1708, 1965, and contemporary field edit information (Bp-69460) appear as ruins on the present survey and should be retained on the chart.

2. The piers, piles, and ruins charted in the vicinities of Smith and Mamacoke Caves originate with contemporary field edit information Bp-69461 and should be retained on the chart.

3. The marine railway charted at lat. $41^{\circ}23.37'$, long. $72^{\circ}05.41'$ from a U.S. Navy map of 1947 (Bp-44555) was neither proved nor disproved by the present survey and should be retained on the chart.

4. The noise measurement pier charted at lat. $41^{\circ}23.27'$, long. $72^{\circ}05.36'$ from Chart Letter 62, 1969, subsequent to the present survey should be retained on the chart.

5. The piles charted in the immediate vicinity of lat. $41^{\circ}23.26'$, long. $72^{\circ}05.34'$ originate with 1960 air photographs. Chart Letter No. 287 (65) and 116 (65) report removal of piles and pier in this vicinity and piles as presently charted should be deleted.

6. The dolphins charted at lat. $41^{\circ}22.67'$, long. $72^{\circ}05.88'$ and lat. $41^{\circ}22.64'$, long. $72^{\circ}05.83'$ from contemporary field edit information (Bp-69461) should be retained on the chart.

7. The pier ruins charted at lat. $41^{\circ}27.63'$, long. $72^{\circ}04.41'$ from 1943 air photographs were neither proved nor disproved by the present survey and should be retained on the chart.

8. The ruins charted at lat. $41^{\circ}25.4'$, long. $72^{\circ}05.5'$ from 1943-44 air photographs were neither proved nor disproved by the present survey and should be retained on the chart.

9. The piers charted at lat. $41^{\circ}24.95'$, long. $72^{\circ}05.29'$ from 1960 air photographs (Bp-98240) were neither proved nor disproved by the present survey and should be retained on the chart.

10. The pier charted at lat. $41^{\circ}28.3'$, long. $72^{\circ}03.77'$ from 1960 air photographs (Bp-98240) was not mentioned by the hydrographer. However, contemporary field edit information shows the pier to be nonexistent and therefore should be deleted from the chart.

11. The piles charted at lat. $41^{\circ}25.72'$, long. $72^{\circ}05.57'$ from 1960 air photographs (Bp-98240) were neither proved nor disproved by the present survey and should be retained on the chart.

12. The pilings charted at lat. $41^{\circ}25.45'$, long. $72^{\circ}05.89'$ from 1960 air photographs (Bp-98240) were neither proved nor disproved by the present survey and should be retained on the chart.

13. The pier ruins charted at lat. $41^{\circ}25.45'$, long. $72^{\circ}05.97'$ from Chart Letter 646, 1939, were neither proved nor disproved by the present survey and should be retained on the chart.

14. The bridge charted at lat. $41^{\circ}28.90'$, long. $72^{\circ}04.50'$ from Chart Letter 1642, 1968, is subsequent to the present survey and should be retained on the chart.

15. The ~~small slopes~~^{shapes} charted in lat. $41^{\circ}23.13'$, long. $72^{\circ}05.27'$ and $41^{\circ}22.68'$, $72^{\circ}05.31'$ from H-2473 could not be identified on 1965 photographs and are considered to be nonexistent. The latter shape probably corresponds to the rock awash which falls about 20 meters to the northward on the present survey.

16. The three sets of pier ruins charted in the vicinity of lat. $41^{\circ}22.72'$, long. $72^{\circ}05.82'$ to represent remnants of structures previously existing in these areas appear to be somewhat misleading as air photographs show the areas to be completely filled with boats. If these remnants have not already been removed it is probable that they are so deep as to have little effect on the use of the slips and therefore it is recommended that the ruins be removed from the chart.

17. The following charted items were adequately investigated with the chain-drag and are considered disproved.

1. Pile charted in lat. $41^{\circ}23.02'$, long. $72^{\circ}05.73'$
2. Obstruction charted in lat. $41^{\circ}23.16'$, long. $72^{\circ}05.81'$
3. Dolphin charted in lat. $41^{\circ}23.28'$, long. $72^{\circ}05.82'$

Except as noted above, the present survey is adequate to supersede the charted information within the common area.

C. Controlling Depths

1. The charted controlling depth note--24 ft. reported, 1966--in lat. $41^{\circ}26.55'$, long. $72^{\circ}05.22'$ from prior Corps of Engineers survey information, Chart Letter 780, 1966, is in agreement with the present survey and should be retained on the chart.

8.

2. The charted controlling depth note--42 ft., October 1966--at Naval pier #17 in lat. $41^{\circ}23.9'$, long. $72^{\circ}05.8'$ originating with Chart Letter 227, 1967, is in agreement with the present survey and should be retained on the chart.

3. In charted controlling depth areas in the main channel of the Thames River, present depths are as much as 1 ft. shoaler than prior Corps of Engineers surveys of 1961-1966.

D. Aids to Navigation

The fixed and floating aids located on the present survey are in substantial agreement with the chart and adequately mark the features intended, with the exception of the three fixed lights in lat. $41^{\circ}29.18'$, long. $72^{\circ}04.65'$ originating with Chart Letter 768, 1959, prior to the present survey. Since these aids were referred to in the 1967 Light List, and there is no indication of any source subsequent to the survey that these aids had been removed, it is recommended that these lights be retained on the chart.

8. Compliance With Project Instructions


This survey adequately complies with the Project Instructions.

41°22'30" to 24'30" should be 1:5000 This survey was enlarged to apply to the 1:5000 inset of chart 293 07m

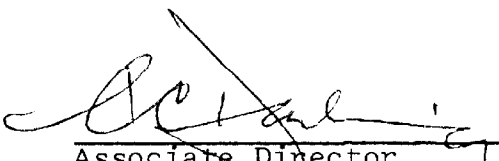
9. Additional Field Work

The survey is considered an excellent basic survey and no additional field work is recommended at this time.

Examined and Approved:



Chief
Marine Chart Division



Associate Director
Office of Hydrography
and Oceanography

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. H-8936..

Records accompanying survey: Smooth sheets ...1...;
 boat sheets ...1...; sounding vols. ...9...; wire drag vols. ...9...;
 Descriptive Reports ...1...; graphic recorder envelopes ~~3~~...;
 special reports, etc.1 Cahier-Fatho-grams

The following statistics will be submitted with the cartog-
 rapher's report on the sheet:

Number of positions on sheet	1674.
Number of positions checked	...96.
Number of positions revised	...2.
Number of positions revised (refers to depth only)	...12.
Number of soundings/erroneously spaced	...min.
Number of signals erroneously plotted or transferred	...0...
Topographic details	Time .4.hrs
Junctions	Time 12..."
Verification of soundings from graphic record	Time .40.hrs
Special adjustments	Time .none.

Verification by Fred Bean..... Total time 142.hrs Date 2/4/69

Reviewed by *George K. Dwyer*..... Time ¹⁷³154 hrs Date 11/18/69

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8936

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.

1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
293	2/27/69	C. A. White	Full Part Before After Verification Review Inspection Signed Via Drawing No.
359	3/28/69	J. M. O'Connor	Full Part Before After Verification Review Inspection Signed Via Drawing No.
116	5/7/69	C. J. Sunday	Full Part Before After Verification Review Inspection Signed Via Drawing No.
293	11/19/70	Alexander Lyab	Full Part Before After Verification Review Inspection Signed Via Drawing No.
293	Sep 70	R. D. Samochi	Full Part Before After Verification Review Inspection Signed Via Drawing No. Full application only of hydrography; partial of shoreline (for that and rocks, reexamine all sources and check against 1969 photos) <i>Ph</i>
116 &	Aug 71	R. D. Samochi	Full Part Before After Verification Review Inspection Signed Via Drawing No. #12 <i>Applied area in common w/ cht. 293 & #24</i> <i>App'd review directly outside cht 293</i>
293	6 Sept. 71	Cesar Chapman	Full Part Before After Verification Review Inspection Signed Via Drawing No. <i>Proof Deleted duplicate set of rocks from Chart</i> <i>LW Curve</i>
293	2-20-73	Lyle R. Everhart	Full Part Before After Verification Review Inspection Signed Via Drawing No. #27 <i>RE EXAM. NO CORR - CONSIDERED FULLY</i> <i>APPLIED</i>
359	4-25-73	Lyle R. Everhart	Full Part Before After Verification Review Inspection Signed Via Drawing No. #27 <i>APPLIED ENTIRE BASIC SURVEY</i>
116-50	"B" 6-1-73	John R. Bailey	Full Part Before After Verification Review Inspection Signed Via Drawing No. #14 <i>FULLY APP'D thru Drwg. 359</i> <i>#27</i>

[illegible]