10016

10016

Diagram No. 1215-3

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. HSB-10-5-82

Registery No. H-10016

LOCALITY

State New Jersey

General Locality

Sublocality Navesink River

1982

CHIEF OF PARTY
LCDR G.W.Jamerson

LIBRARY & ARCHIVES

DATE January 5, 1987

☆U.S. GOV. PRINTING OFFICE: 1985—566-054

Area I
Phts
12324 sc A
12327
12326-lc

NOAA FORM 77-28 (11-72) | U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION | REGISTER NO.

HYDROGRAPHIC TITLE SHEET

H-10016

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. HSB-10-5-82

State: New Jersey

General locality: ~~Atlantic Coast~~

Locality: ~~Shrewsbury and Navesink Rivers~~ Navesink River

Scale: 1:10,000 Date of survey: May 17 - Sept. 16, 1982

Instructions dated: 26 March 1982 Project No.: OPR-B259-HSB-82

Vessel: NOAA Launch 0519; NOAA Skiff 1279

Chief of party: LCDR George W. Jamerson, NOAA

Surveyed by: Hydrographic Field Party - 5 (See Remarks)

Soundings taken by echo sounder, hand lead, pole: Raytheon DE-719B Echo Sounder; Sounding Pole

Graphic record scaled by: JWH, BAL, JMR, KLG, CSW, SRL

Graphic record checked by: JWH, BAL, [illegible]

Protracted by: ---------- Automated plot by: ~~Field Sheet PDP/8e~~ Xynetics 1201 Plotter (AMC)

Verification by: ~~AMC Verification Branch~~ D.V. Mason

Soundings in ~~fathoms~~ feet at MLW ~~MLW~~ ~~Feet at Mean Low Water~~

REMARKS: John W. Humphrey Jr., LT(jg), OIC

Brian A. Link, Assistant OIC

James M. Robinett

Karen L. Goodman

Charles S. Weisner

Sharon R. Linehan

Additions and revisions in red ink in Descriptive Report made during office processing.

AWOIS/SURF m&m 1/12/87

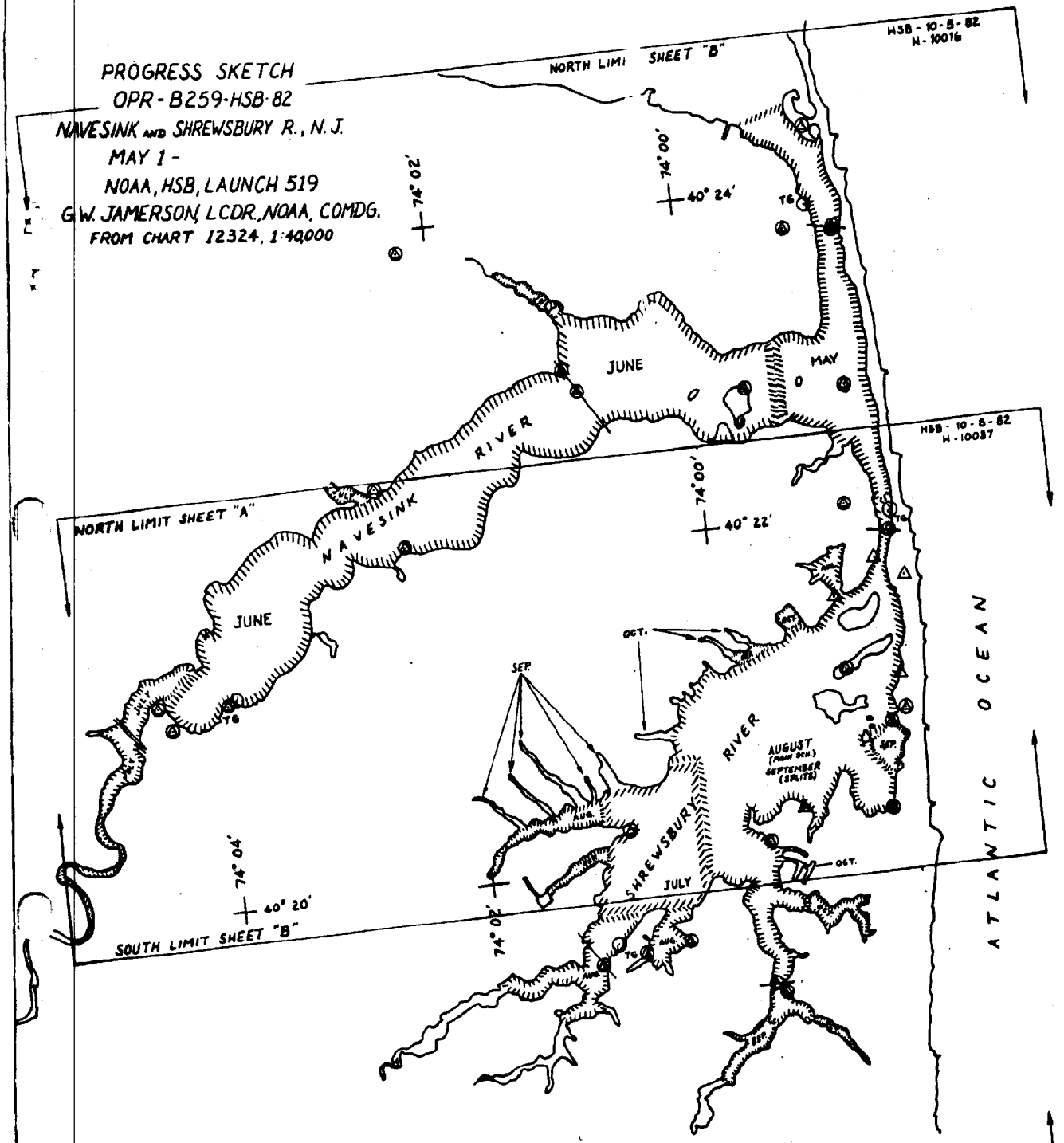
KWW 5/13/93

NOAA FORM 77-28 SUPERSEDES FORM C&GS-537.

☆ U.S. G.P.O. 1972-769-565/519 REG. #6-

1.

PROGRESS SKETCH
OPR-B259-HSB-82
NAVESINK AND SHREWSBURY R., N.J.
MAY 1 -
NOAA, HSB, LAUNCH 519
G.W. JAMERSON, LCDR., NOAA, COMDG.
FROM CHART 12324, 1:40,000



MAY	JUNE	JULY	AUG.	SEPT.	OCT.
1	3	1	2	0.5	0.1
27.0	106.9	135	140	90.0	20.0
24.5	70.25	37.5	71.25	40.5	13.5
0	18	23	6	30	0
6 / 2	9 / 0	3 / 0	7 / 5	0 / 2	0 / 0
2	0	2	1	0	0
		9.0		4.5	0
		1-7		8-15	0

FIELD WORK COMPLETED 10/6/82

LEGEND

SQ. N M SOUNDING
LNM MISC. DISTANCE
LNM SOUNDING LINE
BOTTOM SAMPLES
CONTROL STATIONS REC./SET
TIDE GAGES
L.N.M. CHAIN DRAG
P.S.R. ITEMS RESOLVED

DESCRIPTIVE REPORT
TO ACCOMPANY
HYDROGRAPHIC SURVEY H-10016
HSB-10-5-82

Scale: 1:10,000
Year: 1982
Chief of Party: Lt. Cdr. George W. Jamerson
Officer in Charge: Lt(jg) John W. Humphrey
Hydrographic Field Party #5

A. PROJECT

This survey was carried out in accordance with Project Instructions OPR-B259-HSB-82 dated March 26, 1982 and amended by Changes 1 and 2 dated April 1 and May 7 respectively.

B. AREA SURVEYED

This survey was conducted in the northern Shrewsbury River including Highlands Reach and Rumson Reach south to the Sea Bright Bridge and from the mouth of the Navesink River to its junction with the Garden State Parkway. The area surveyed is bounded by the following geographic limits:

North	40°24'19"N
South	40°19'54"N
East	73°58'30"W
West	74°05'30"W

The area surveyed is affected by a tidal range of 3.4 ft with an average maximum current of 0.6 knots at Red Bank to 2.5 knots at Highlands Bridge. The axis of the Highlands Reach and the Rumson Reach is northsouth and the section of the northern Shrewsbury River are most affected by the scouring action of the tidal currents.

Bottom topography in the "reaches" is jagged and irregular and the tidal effects are seen across the width of the river where the physical boundaries of the river are also those of the natural channel. The eastern shoreline in this area is characterized by numerous private piers and wooden and concrete bulkheads from the Atlantic Highlands Bridge to the southern limits of hydrography at 40°22'11"N. From the Highlands Bridge to the northern limit of hydrography at 40°24'10"N, the eastern shore is beachfront with scattered piles in ruins and wooden groins extending from shore.

The western side of the Highlands Reach from the northern limit of hydrography to the Highlands Bridge consists of private commerical piers and bulkheads. From the Highlands Bridge to the southern limit of hydrography, the western shoreline has a limited number of private piers and wooden bulkheads with the majority of shoreline consisting of marshy grass vegetation and small areas of sandy beachfront.

Moving into the Navesink River, bottom topography is generally flat excluding the navigable channel. The bottom shows a gradual sloping from the shoreline to about a two foot average depth at MLW for the area south of the channel and a three foot average depth at MLW for the area north of the channel on the east side of the Oceanic Bridge. This area is characterized by islands with beachfront and vegetation, exposed shoals and marsh grass islands. The bottom topography has areas of sand waves, where the tidal current is strong, but is generally flat and the navigable channel shows depths ranging from 5 ft to 13 ft.

Both the eastern and western shorelines west of the Oceanic Bridge are characterized by marsh grass vegetation, small areas of beachfront, private piers and bulkheads. Bottom topography west of the Oceanic Bridge gradually slopes toward the channel from both shorelines. It is generally deeper on the west side of the bridge with the natural channel covering a more substantial portion of the river width. The area north of Red Bank Reach shows signs of shoaling while the entire area around Red Bank, west from Red Nun buoy "22" to the ConRail RR Bridge is two foot shoaler than the area immediately extending east to Oceanic Bridge from Red Num buoy "22".

C. SOUNDING VESSELS

Soundings for this survey were obtained using Launch 519 and Skiff 1279.

D. SOUNDING EQUIPMENT AND CORRECTIONS TO ECHO SOUNDINGS

The following equipment was used aboard vessel 519:

EQUIPMENT	SERIAL NUMBER	J.D.
Raytheon DE719B	6212	137-162
Raytheon DE719B	7727	175 - end of survey

All survey records were scanned and checked by trained field survey personnel. Peaks and deeps considered significant that occurred between the regular sounding intervals were inserted on the generated master tape.

Fathometer calibration checks were made at frequent intervals on each day of hydrography. Any necessary adjustments were made and noted on the fathogram. Any departure of the trace from the calibration was corrected during the scanning process.

Velocity corrections were derived from bar check data (See Appendix "D" for velocity correction printout). Bar checks were taken on each day of hydrography, two per day whenever possible using Launch 519. Pole soundings were obtained using Skiff 1279 (See Position Abstract for listing by Julian Day). Bar check chains were measured before and after the project with the results being no correction need be applied.

A transducer draft of 1.2 ft was applied to all fathometer soundings taken by Launch 519. Settlement and squat correctors were determined on May 14, 1982 using the level method. A copy of the field data and Settlement and Squat Correctors versus RPM's for Launch 519 are appended to this report. Settlement and squat correctors will be applied via the TC/TI tape during the final processing of data by MOA23 Hydrographic Surveys Branch.

This survey was conducted using predicted tides based on daily predictions at Sandy Hook, New Jersey from the published Tide Table 1982. Tidal zoning was applied to hydrographic areas as provided by OPR-B259-HSB-82 Project Instructions. Tide correctors were applied during the off-line plotting process. Smooth tides were requested from the Chief, Tides and Water Levels Branch (OA/C23) in a letter dated December 13, 1982.

E. HYDROGRAPHIC SHEETS

All work was plotted on two mylar field sheets using a DP-3-5 automated plotter.

No. of Sheets	Type	Skews
1	Main Scheme Crossline	21, 21, 54
1	Detached Positions Bottom Samples Channel Lines	21, 21, 54

Soundings on the final field sheet are corrected for draft, predicted tides and sound velocity. The final smooth sheet will be plotted at the Atlantic Marine Center, Norfolk, Virginia.

All field records and the following tapes have been forwarded to AMC Processing Division:

Generated Master R/Az Tapes
Electronic Corrector Tapes
Velocity Corrector Tapes
Parameter Tapes
ASCII Signal Tapes
TC/TI Tapes

F. CONTROL STATIONS

Thirteen control stations of third order accuracy were used for this survey. They are:

SIGNAL # and NAME		LATITUDE	LONGITUDE
030	New Bridge (USE) 1934	40°23'45.789"N	73°58'40.347"W
031	~~Normal 1981~~ Norman, 1981	40°22'47.~~110~~109"	73°58'46.195"
032	Sea Bright 1981	40°21'56.110"	73°58'32.081"
033	Rumson Holy Cross Spire ~~1962~~ 1981	40°22'00.244"	73°58'50.532"

SIGNAL # and NAME	LATITUDE	LONGITUDE
039 Oceanic 1981	40°22'58.843"N	74°00'57.189"W
040 McLeese 1934	40°22'24.795"	74°02'35.381"
041 Flagpole 1981 Hake	40°21'16.090"	74°03'57.718"
042 Molly Pitcher Cupola 1934	40°21"10.281"	74°04'24.921"
043 Red Bank 1981	40°21'19.142"	74°04'29.782"
044 Navesink Lt. South 1934	40°23'45.240"	73°59'09.203"
047 Shrew, 1981 use	40°24'38.133"	73°58'46.611"
049 New Bridge RM 2 1981	40°23'45.314"	73°58'40.565"
066 AT&T Micro Tower 1982 wave	40°24'11.234" .208"	74°02'40.046" .319"

Station numbers 031, 032, 039, 041, 043, and 047 were established by AMC Coastal Mapping personnel. The following Photo Points were also used for horizontal control for hydrography:

SIGNAL # and Name	LATITUDE	LONGITUDE
006 PP 06	40°21'02.253"N	74°04'43.553"W
053 PP 15	40°22'48.869"	73°59'33.282"
054 PP 17	40°23'03.787"	74°01'01.260"
055 PP 04	40°22'04.262"	74°02'20.207"
057 PP 07	40°21'15.426"	74°04'51.848"
058 PP 05	40°21'16.726"	74°03'56.050"

All photo points except PP 06 were checked by third order Class I traverse by AMC, Coastal Mapping personnel. Positions supplied to the field party were established by photogrammetric methods. (See Section "S" Reference to Reports.)

G. HYDROGRAPHIC POSITION CONTROL

Range-azimuth position control was used with Del Norte equipment and a Wild T-1 for all hydrography except Julian Days 202 for Vesno 519 and days 187 and 189 for Vesno 1279 when See Field Sheet methods were used for control in some of the narrow creeks within the survey limits. The following equipment was used:

EQUIPMENT	SERIAL #
DMU/Master	182/263
DMU/Master	517/1060
Remote	180
Remote	222

Baseline calibrations were conducted on the following dates involving DMU/Master pairs used on survey vessels 519 and 1279 during the survey:

DATE	DMU/MASTER	BASELINE	TRUE DIST.
Apr 30	517/1060	Nauvoo Wharf - Sewer Plant	1879 m
Apr 30	182/263	Nauvoo Wharf - Sewer Plant	1879 m
Jun 14	517/1060	Nauvoo Wharf - Sewer Plant	1879 m
Jun 14	182/263	Nauvoo Wharf - Sewer Plant	1879 m
Jul 29	517/1060	Nauvoo Wharf - Sewer Plant	1879 m
Jul 29	182/263	Nauvoo Wharf - Sewer Plant	1879 m

Geographic positions were not computed for station Nauvoo Wharf and Sewer Plant, baseline distance was determined by repetitive observations using a Hewlett-Packard 3808A EDM.

Static point daily system checks were made laying alongside various pier corners in the working area. Distances from range-azimuth stations to calibration points were measured in the same manner as the baseline.

H. SHORELINE

Mainscheme lines were carried to the limit of navigation and to the shoreline whenever possible. Positions of shoreline soundings are in good agreement with the shoreline manuscript used for comparison (SM 8107 Shoreline Manuscript, Sheet B of A&B, TP-01138, 1:10,000 Scale, Navesink River). An along shore crossline was run 20 to 30 meters off the shore, parallel to it in all areas possible.

The majority of the northern shore of the Navesink River has marsh grass where the high water line intersects the shore. For hydrography, the seaward edge of the marsh grass is referred to as the shore when noting how close the sounding vessel was at the beginning and end of a sounding line.

Features shown on the shoreline manuscript were verified by the hydrographic party. Features not shown on the manuscript but present in the field were located, plotted and noted on the field sheet. A number of small piers and isolated features are not shown on the mainscheme field sheet. These are plotted on an overlay along with hydro positions checking their accuracy.

I. CROSSLINES

Crosslines were run at 45-90° to the mainscheme hydrography and accounted for 11% of the total sounding line mileage. Comparison of mainscheme and crossline hydrography shows excellent agreement from the mouth of the Navesink, west to the survey limit. Soundings in this area agree to within one foot with over 90% of the crosslines soundings.

Comparison of crossline soundings in Highlands Reach and Rumson Reach show differences up to four feet. This section of the Shrewsbury River is characterized by a very jagged bottom and strong tidal currents which cause the area to be continually changing. Bottom samples in this area show a mixture of coarse sand, broken shell and pebbles and mud, all of which are easily carried by the tidal current. This area has a rapid tidal change from ebb to flood (predicted tides for this area are less accurate than adjacent areas) and is also affected by water piling up from Sandy Hook Bay due to northeast winds and flowing into the mouth of the Shrewsbury River. These daily effects on the area of Highlands Reach and Rumson Reach would cause the predicted tides for these areas to be less accurate than in a less dynamic area of the river. Smooth tides applied to the sounding data will reduce the discrepancies between

the mainscheme and crossline soundings. It was discovered during contouring that predicted tides were not applied to JD 145 (Positions 167-248). Field sheet depths for this day are 0 to 5 feet too deep. Some of these soundings are channel lines in Rumson Reach, plotted on an overlay, and were not used in drawing the depth curves on the mainscheme field sheet.

J. JUNCTION SOUNDINGS

This survey junctions with the following contemporary surveys:

Area of Junction	Field #	Reg #	Scale	Date
South	HSB-10-8-82	H-10037	1:10000	May-Nov 82
North	HSB-10-10-82	H-10049	1:10000	Jul-Nov 82

Comparison of junction soundings between this survey and H-10049 shows good agreement with all compared soundings agreeing to two feet or less that are five meters or less apart. The junction soundings for the north end of the Navesink River survey were run on JD 302, (OPR-B139-WH-82; H-10049).

Junction soundings to the south show discrepancies in the area of the river with jagged bottom topography as noted above. On the west side of the river, north of the Sea Bright Bridge there is an area of shoaling extending 80 meters into the river. A better comparison of soundings is achieved when moving from the jagged bottom topography to the smooth sand shoal. Junction soundings for this area were obtained on JD 229 (OPR-B259-HSB-82; H-10037).

In both junction areas, the jagged bottom in the center of the river causes adjacent soundings to differ by 3-5 feet in some cases. Inspection of the echograms will show that moving a distance of 5 to 10 meters horizontally on the river (.5 to 1.0 mm on the boat sheet) resulted in depth differences of 2 to 20 feet.

K. COMPARISON WITH PRIOR SURVEYS

This survey was compared to Prior Survey No. 5616, scale 1:10,000, dated July-October 1934. The area from the northern survey limit 40°24'10"N to the southern limit in Rumson Reach, 40°22'10"N is not addressed in this section because no prior survey soundings were furnished to the field party. Taking the entire survey area in account, comparison with the prior survey shows good agreement with the majority of soundings agreeing to one foot or less. Areas of recent channel dredging, deposits of dredge material and shoaling are the areas where sounding discrepancies occur between the prior and contemporary surveys.

Working west from the mouth of the Navesink River, channel depths are 2-3 feet deeper than prior channel depths. The eastern edge of the marsh island adjacent to buoy "2B" shows evidence of shoaling as 0' soundings were obtained farther east than on the prior survey. To the north of this same marsh island,

channel depths are also 2-3 feet deeper than the prior surveys. This is an unmarked channel and the deeper depths are probably the results of scouring as the water is funneled between the island and the shoreline. The shoal area ENE of Barley Point shows excellent agreement between soundings. Marsh grass islands and exposed mud flats at low tide are the prominent features of the area.

From Barley Point, west to the Oceanic Bridge, depths have either remained constant or are one foot shoaler. The channel line in this section shows good agreement with the prior survey. West of the Oceanic Bridge, the channel soundings agree with the prior soundings except from the area of buoys Bl C "19" and Red Nun "20" extending to the area adjacent to the Red Bank Marine Park. Depths on the contemporary survey are 2-3 feet deeper in the channel, due to dredging.

Soundings adjacent to the channel on the north and south side show excellent agreement with prior survey soundings. Centerline soundings in the creek that extends to the western survey limit from Red Bank are 1-2 feet shoaler than those on the prior survey. McClees and Claypit creeks on the north side of the Navesink River also show signs of shoaling when compared with the prior surveys.

L. COMPARISON WITH THE CHART

Chart #	Edition	Date	Scale
12324	20	Dec 19, 1981	1:40,000
12326	35	Dec 19, 1981	1:80,000

The chart representation from 40°24'10" south to the junction buoys of the Navesink and Shrewsbury Rivers is accurate. Proceeding south from the Highlands Bridge, RN "16" appears to be charted on the same side of the chart delineated channel as the black buoys. The chart representation of the buoys, including RN "16", agrees with detached positions obtained by the field party. The chart representation of the channel at this location is incorrect and should be changed to reflect the channel limits as shown on the present survey. Red Nun buoy "20", immediately west of Bl C "19" and Bl C "1" immediately west of R N "20" are shown on the chart, but have no numerical designation charted. Three White-Orange horizontally banded Regulation Buoys mark a submerged rock JETTY that extends northeast 200 meters from the north corner of the large marsh grass island at the mouth of the Navesink River. This portion of the jetty is correctly charted. However, this same rock groin continues along the north shore of this island and blocks a charted opening before meeting the next island immediately west (40°22'48"N/ 73°59'08"W). This opening should be charted as a submerged jetty. This section of the jetty is exposed at times of low tide. The above description is shown on shoreline manuscript Sheet B, TP 001138, CM 8107 Navesink River, New Jersey 1:10,000. The jetty extends 75-meters west past this second island and

See Eval. Rpt. for R "N" buoy pos.

Concur with "no designation"

consists of rock and submerged piles. Westward from this point to a point 50-meters east of Barley Point, the jetty is not present, leaving a shoal opening. Rock remnants of a groin began 50-meters east of Barley Point and continued up to the shore of Barley Point.

On July 19, 1982 HFP-5 filed a Dangers to Navigation Report. This report was sent to the Commander, Third Coast Guard District (for inclusion in the Local Notice to Mariners) and NOS Chart Information Branch (OA/C322) through the Chief, Hydrographic Surveys Branch. This report defined an area of shoaling within the natural channel limits between R N "2A: and R N "2B" at the mouth of the Navesink River. concur

The shoaling is encroaching to the north in this area when compared with the prior survey. However, the danger to navigation occurred due to poor placement of R N "2A". This buoy was moved farther south in September so that the natural channel limit between buoys R N "2:, R N "2A" and R N "2B" represents safe navigation. Lighted buoy "1B" is improperly charted on the "Red" side of the channel. The buoy is located properly for safe navigation as indicated on the field sheet. The wreck charted at 40°22'54.8"N/73°59'23.3"W lies in a north-south orientation. concur Sea Eval. Rpt Charted as dangerous subm. wreck

Chart representation of approximate shoreline areas, sand and mud uncovers areas is accurate at the 1:40,000 scale. The new 1:15,000 scale chart will present a less cluttered representation of the junction area of the Navesink and Shrewsbury Rivers and all the uncovers areas to the east and southeast of Barley Point. The areas delineated as approximate shoreline are characterized by marsh grass.

Seven Pre-Survey Review Items were located within the survey limits:

PSR Item #1 - "Houseboat burned to waterline, above LW line at position 40°23'08.3"N/73°58'54.5"W. Wreck was not found but considered disproved by deficiency survey, 1967."
A fatho search and visual inspection of the area at low tide was conducted. No wreck or debris was found in the area. It is recommended that the wreck symbol be removed from the chart. concur

Sources: H-5616 (1934) CL-1350 (1967) Charted as dangerous Subm wk, ED

Quasie #1578 mbm 1/12/87

PSR Item #2 - "Dangerous remains of wooden vessel found covered one foot at MLW. Located at position 40°22'54.0"N/73°59'24.0"W from deficiency survey, 1967."
A full investigation was conducted with 10-meter line spacing using a one boat otter board chain sweep with 75-feet of sweep line deployed. The wreck lies in 5.6 feet of water at MLW, a least depth of 3.6 feet at MLW was obtained with a sounding pole. It is recommended that the wreck be charted as dangerous submerged in a north-south orientation. Corrected L.D. is 3.0 feet Chart as Swk of lat. 40°22'55"N, long. 73°59'23.88"W

Source: H-5216 (1934) Charted as dangerous Subm wk.

Quasie #1577 mbm 1/12/87

PSR Item #3 - "Unidentified wreck off Barley Point at position 40°22'5~~8~~.0"N/73°59'55.0"W." Charted as visible wreck, PA

Source: U.S. Power Sqdn. report CL 1265 (1974)

A full investigation was conducted with a one boat otter board chain sweep at a line spacing of 10-meters with ~~7~~5' of sweep line deployed. The minimum 150 meter radius was covered in the sweep. The initial investigation was conducted on July 13, 1982. On September 8, 1982 a supplemental investigation using the same methods was conducted in an area that the hydrographer felt was not sufficiently covered in the initial investigation. Line orientation was perpendicular to the initial drag lines. Coverage was expanded to an area adjacent to the charted island south of the position and also overlapped the original drag area to the north of the position, with 35' of sweep line deployed.

Awois #1575 mbm 1/2/87

No snags were incurred on either drag. It is recommended that this wreck be deleted from the chart.

Concur

PSR Item #4 - "Dangerous sunken wreck, 30-35 foot boat covered two feet at MLW located at position 40°22'40.2"N/74°01'15.0"W."

Source: Deficiency Survey Sp-NMC-12-67 CL-1350 (1967) Charted as 2WK

A full investigation was conducted using a one boat otter board chain sweep at a line spacing of 10-meters with ~~7~~5' of sweep line deployed. A snag was incurred within 30-meters of the charted position. A ~~2.4~~4.0 least depth at MLW was obtained using a sounding pole over the position of the unidentified snag presumed to be the wreck. It is recommended that the wreck remain charted but shifted to position 40°22'40.9"N/74°01'14.5"W.

Awois #1573 mbm 1/2/87

L.D. 4 feet (corrected)

Concur. See Eval. Report

PSR Item #5 - "Unconfirmed shallow area or obstruction in channel opposite lighted channel buoy 15."

Source: Local Notice to Mariners 6 (1977) Charted as "Subm obstr rep 1977"

Reduced line spacing of 25-meters was used to develop an area of shoaling extending from the south shore to 20-meters south of the southerly limits of the navigable channel (Fair Haven Reach). The hydrographer determined this was the shoaling described in the PRS report. Sufficient soundings were obtained in the channel in the immediate vicinity of Lt. B "15" to insure that the shoaling does not extend into the channel. The chart now shows a separate uncovers area between Lt. B "15" and an uncovers area extending off the south shoreline immediately to the south. It is recommended that the uncovers area on the chart be shown as continuous extending from the south shore of the Navesink River to a north limit of 0' soundings after smooth tides have been applied.

Awois #1574 mbm 1/2/87

Expunge charted note and chart area as shown on pres. survey.

PSR Item #6 - "Unidentified obstruction reported at position 40°21'11.0"N/74°04'15.0"W."

Source: Local Notice to Mariners 36 (1974) Charted as "obstr rep PA"

A full investigation was conducted. An obstruction

was found using a one boat otter board chain sweep at a line spacing interval of 10-meters. A snag was incurred near the charted obstruction. The unidentified snag presumed to be the obstruction lies in 2.4 foot of water at MLW and a 0.6 foot least depth at MLW was obtained using a sounding pole. It is recommended that the obstruction remain charted but the symbol be shifted to 40°21'11.3"N/74°04'12.5"W with a 0.5 foot least depth. Local knowledge reports on this item were non-conclusive. Corrected L.D is 3 feet chart as 3 obstr at plotted pos.

Sounding Vol. notes chain snagged on hard object "1 to 2 metas"

Awois # 1556 cmsm 1/12/87

PSR Item #7 - "A pole with wires and crossarms has fallen into the Navesink River on the upstream side and along the full length of the RR bridge." A representative of Western Union (owner of the lines) was contacted by telephone and stated that the poles and lines had gone down in an ice storm in the early 1970's and that all the poles and lines were removed. The hydrographer conducted a visual search of the area to verify the Western Union report. It is recommended that the "OBSTR REP 1974" note be deleted from the chart. Concur

Source: U.S. Power Sqdn. Rpt. CL 231 (1974) charted as "Obstr rep 1974"

Awois # 1555 cmsm 1/12/87

*Item description reports for individual Pre-Survey Review Items may be found included with the supplemental survey data.

M. ADEQUACY OF THE SURVEY

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

N. AIDS TO NAVIGATION

There are 38 floating navigation aids and three regulatory markers included within the limits of this survey. The limits of Sheet "B" include a portion of the Shrewsbury River as well as the entire Navesink River. The notation for each aid will have the river designation included with it ("N", "S").

All aids to navigation listed in this section are found in the Coast Guard Light List (CG-158-1982) under New Jersey, Sandy Hook Bay - Shrewsbury River and Navesink River (pp 237-239). These aids adequately serve their intended purpose with the exception of the inconsistancies discussed in section "L" of this report. See list of floating aids in accordian file containing hydro records. Do not concur - there are additional inconsistencies. See Eval. Rpt.

The following landmarks were verified in addition to those listed on the appended NOAA Form 76-40.

CHARTING NAME	DESCRIPTION	LAT/LON	(POS. SOURCE) METHOD OF VERIFICATION
Standpipe	Sw'ly of Leonardo Falls off smooth sheet	40°24'27.79" 74°04'43.43"	(FFA) Sextant cuts
Bldg	Vic of Highlands Navesink Not plotted on smooth sheet	40°24'24.7" 74°00'12.5"	(FFA) Sextant cuts
Tower Aband Lt. Ho.	(Navesink LT. South, 1934 Highlands, NY) (sig. 044) Plotted on smooth sheet	40°23'45.240" 73°59'09.203"	(NGS)
Cupola	(Highlands School, 1934) near Water- witch Not plotted on smooth sheet	40°24'11.25" 73°59'49.30"	(FFA)* Sextant cuts
Spire	(Rumson Holy Cross ~~Ch~~ Sp. ~~1962~~) Sig 033 1981 Plotted on smooth sheet	40°22'00.244" 73°58'50.532"	~~(NGS)~~ Field Pos.

*Highlands School, 1934 has a published G.P., however it was not included in the data furnished by NGS - N/CG174.

The positions of landmarks listed above from the FFA listing are intended for identification purposes only and should not supersede any existing position of higher accuracy.

O. STATISTICS

Linear Nautical Miles of Hydrography	78.25
Linear Nautical Miles of Crosslines	25.70
Linear Nautical Miles of Development	31.75
Total Linear Miles of Hydrography	135.70
Total Miscellaneous Miles	129.00
Total Miles Run	264.70
Square Miles of Hydrography	5.0
Total Number of Positions	2470
Bottom Samples	41
Bar Checks	28

P. MISCELLANEOUS

All soundings obtained using vessel 1279 (skiff) were by sounding pole. Horizontal control set by personnel from Coastal Mapping Division had to be supplemented with control established by field edit and HFP-5 personnel. Supplemental control was needed because control set in the fall of 1981 did not cover all the areas where hydrography was required. Personnel with hydrographic experience and knowledge of hydrographic requirements assisting the Coastal Mapping personnel would have saved time and work for all parties involved.

Photo points were useful to the field party during hydro operations. More photo points (PP-25 thru PP-54) would have been used in operations as some were located in useful areas for hydrography. Unfortunately the field party was not supplied with individual descriptions and descriptions of location for these points. Their general locations were shown on the shoreline manuscript CM-8107-TP-01138 Navesink River Sheet "B".

Control established by field edit and HFP-5 personnel was based on Third-Order station positions and not on photo points.

The pier area on the eastern side of Rumson Reach adjacent to the junction to the entrance to the Navesink River do not have sounding lines extending to shore due to congestion of moored boats. Detached positions and depths were obtained on all pier ends in this area. Estimations in the sounding volumes to the HWL in this area appear to be too short in some cases. D.P.s taken on the piers in this vicinity indicate the shoreline is correct and probably the incorrect estimations are due to confusion caused by the vessels moored in this area.

Q. RECOMMENDATIONS

See descriptions of individual PSR Items for recommendations for each item. It is recommended that the delineation of the channel from Highlands Bridge south to Bl C "21" be reviewed using the field party's final field sheet. The groin immediately east of Barley Point should be shown as submerged at MLW.

It is recommended that this survey supersede all prior surveys for charting.

R. AUTOMATED DATA PROCESSING

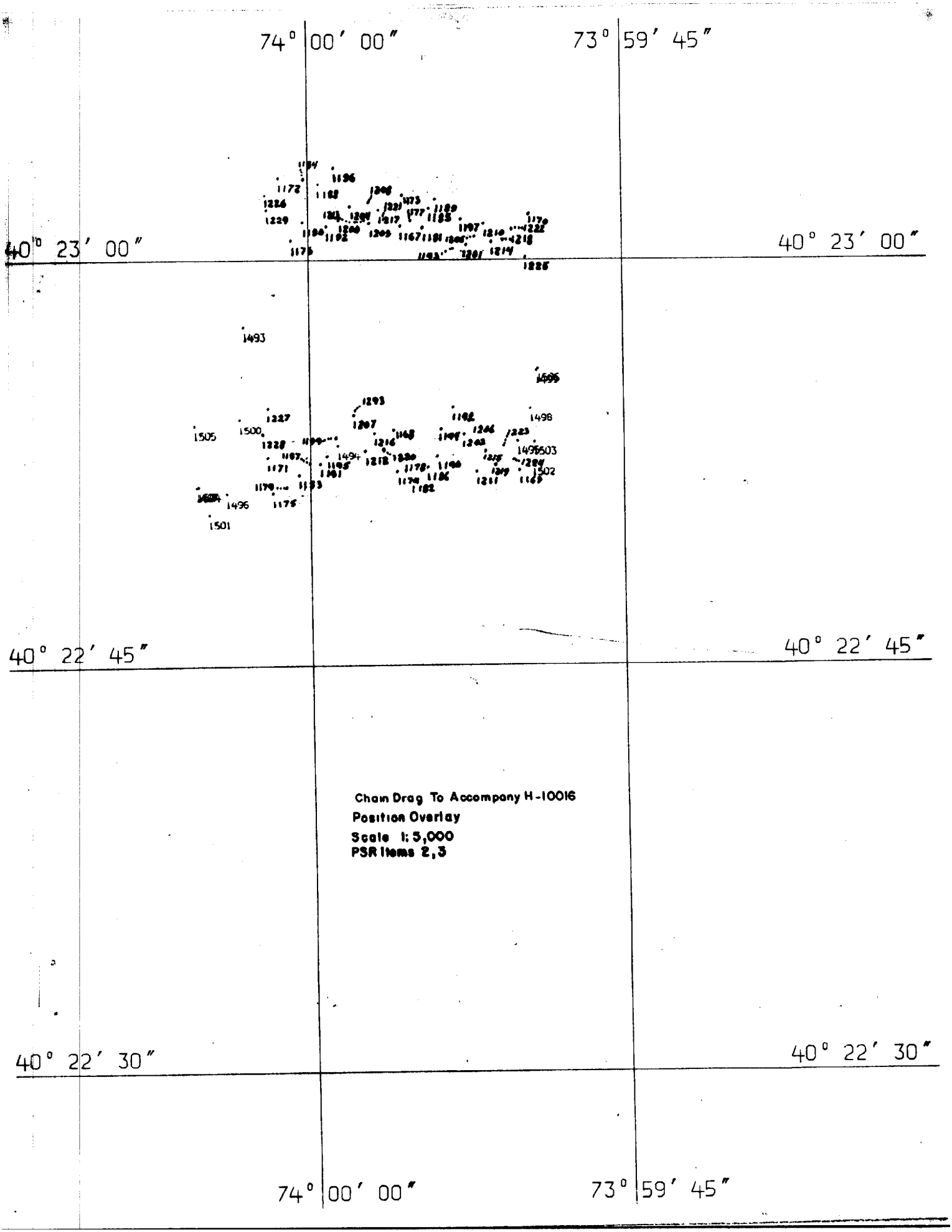
PROGRAM	VERSION
RK 201 Grid Signal and Lattice Plot	04/18/75
RK 212 Visual Table Load	04/01/74
RK 216 R/Az Non-Real Time Plot	02/09/81
RK 300 Utility Computations	02/05/76
RK 300 Data Reformat and Check	05/04/76
AM 401 Transverse Mercator State Plane Coordinates	04/01/73
AM 407 Direct/Inverse Computation	09/25/78
AM 602 Elinor	05/20/75

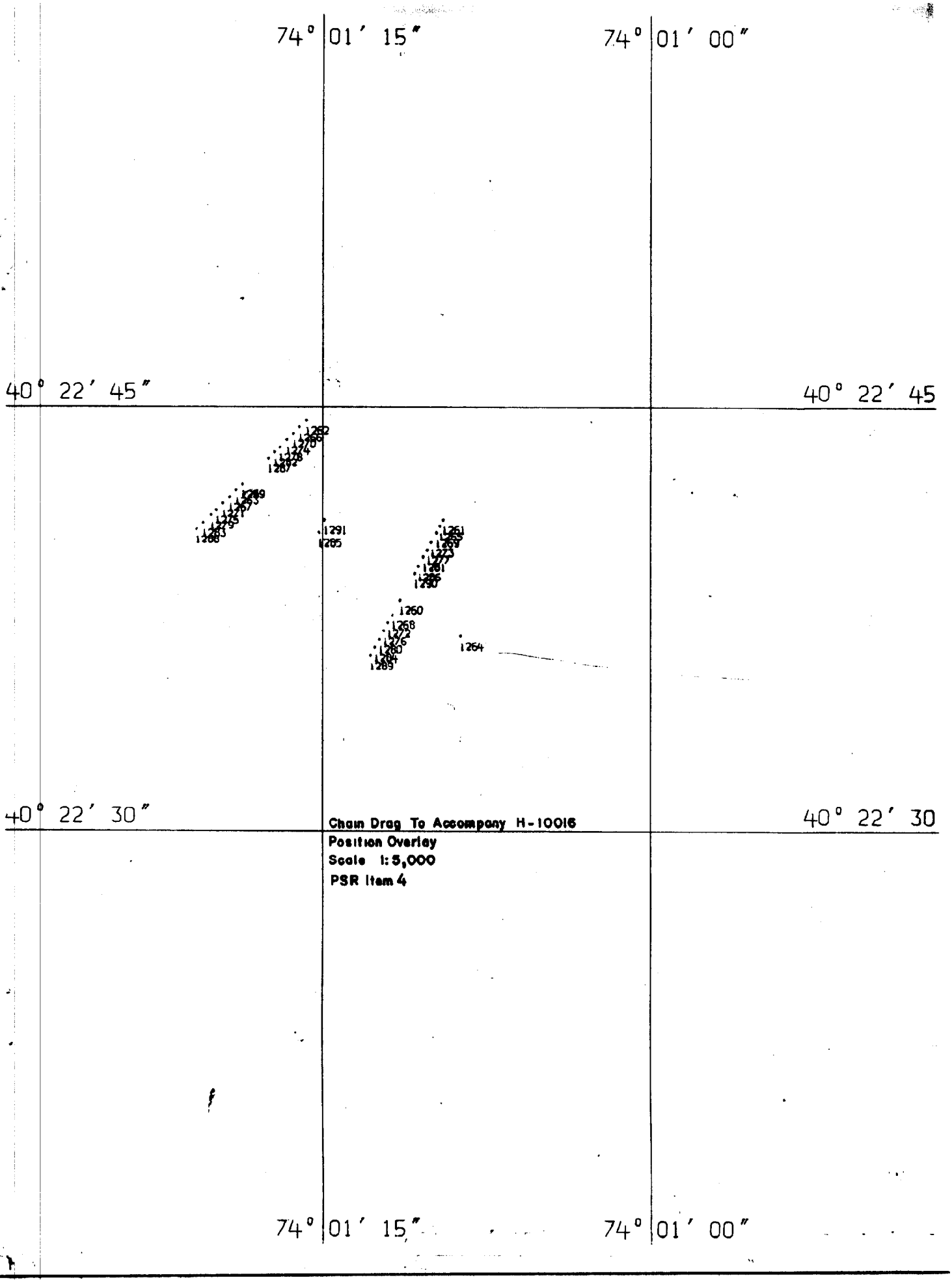
S. REFERENCE TO REPORTS

Descriptive Report for H-10037

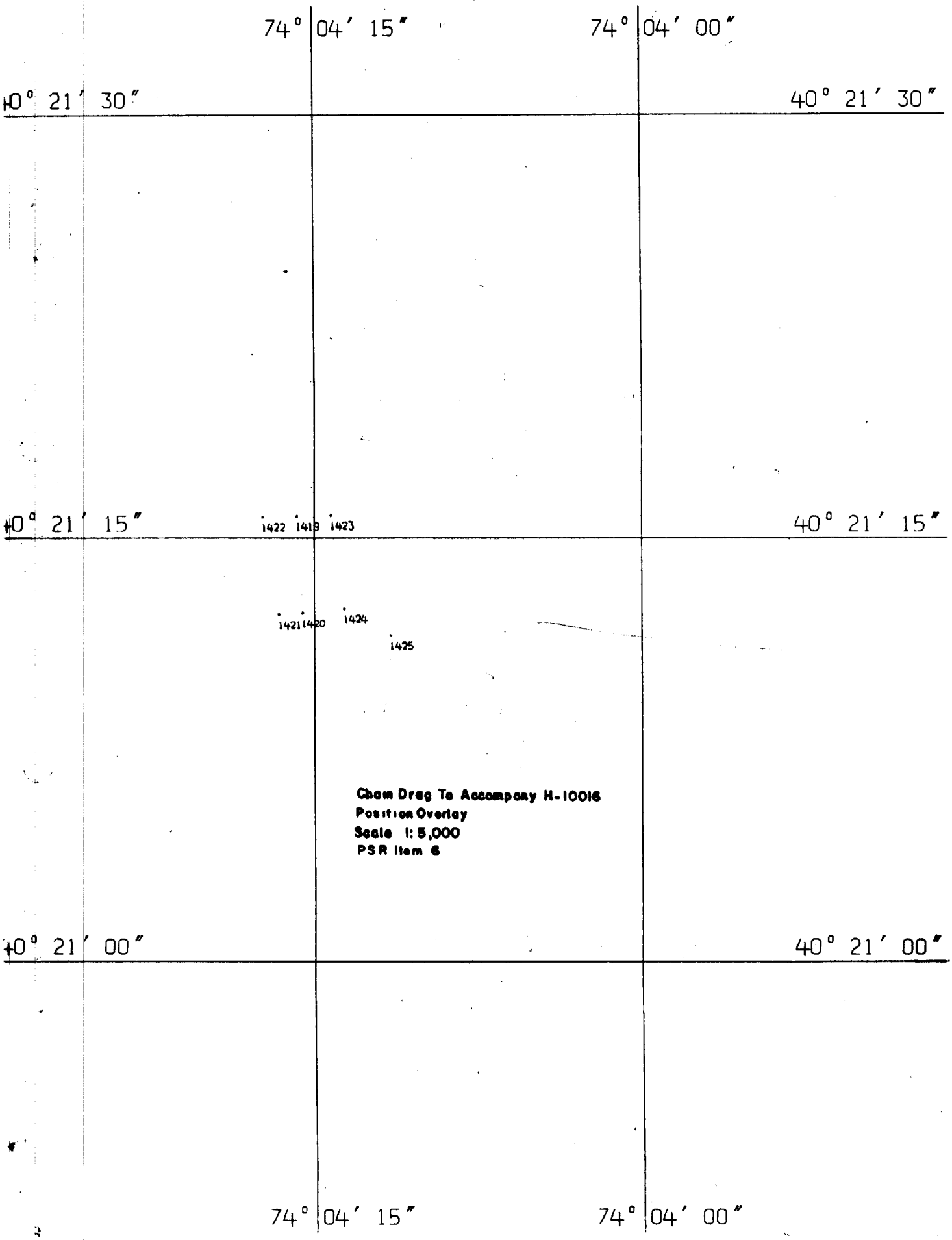
Respectfully submitted,

John W. Humphrey
Lt(jg) NOAA
OIC, HFP-5


74° 00′ 00″
73° 59′ 45″
40° 23′ 00″
40° 22′ 45″
40° 22′ 30″
1493
1505
1500
1501
1496
1498
1502
1503
Chain Drag To Accompany H-10016
Position Overlay
Scale 1:5,000
PSR Items 2,3



Chain Drag To Accompany H-10016
Position Overlay
Scale 1:5,000
PSR Item 4


74° 04′ 15″
74° 04′ 00″
40° 21′ 30″
40° 21′ 15″
40° 21′ 00″
1422
1418
1423
1421
1420
1424
1425
Chan Drag To Accompany H-10016
Position Overlay
Scale 1:5,000
PSR Item 6

FIELD TIDE NOTE
H-10016

Field tide reduction of soundings were based on predicted tides from Sandy Hook, New Jersey, and were corrected for predetermined tidal zone values from OPR-B259-HSB-82, utilizing a PDP8/e Computer and Program RK500. All times of both predicted and recorded tides are Universal Coordinate Time (GMT).

The number and type of tide gage installed, their geographic locations, dates of installation/removal, leveling, plane of reference and period of operation are appended to this note, along with a copy of a letter to OA/C23 requesting verified hourly heights of tides from the gages listed in this report.

The respective gages reportedly operated properly during this project.

On Julian Days 243 and 245 tide levels at Red Bank (Station # 853-1833) and Highlands Reach (Station #853-1712) were observed and recorded during hydrography. These data were forwarded to the Chief, Tides and Water Levels Branch (OA/C23). Staffs were levelled at the removal of the ADR tide gage and also at the end of the project.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

Date: 13 December 1982

To: Chief, Tides and Water Levels Branch, OA/C23

From: John W. Humphrey, Lt.jg, NOAA - original is signed
Officer-in-Charge
Hydrographic Field Party-5

Subj: Tidal Data for OPR-B259-HSB-82, Shrewsbury River, N.J.

It is requested that verified hourly heights of Tides, using Greenwich Mean Time, from the operating tide gages listed below, be forwarded to the Processing Division (CAM 3), Atlantic Marine Center, Norfolk, VA. 23510

GAGE NAME	NUMBER	LATITUDE	LONGITUDE
Sea Bright (Shrewsbury River)	853-1804	40°21.9'N	73°58.5'W
Gooseneck Bridge (Shrewsbury River)	853-1925	40°19.6'N	74°01.0'W

It is requested that the Time and Height Correctors for each gage be zoned as per Project Instructions for the area described within the following points:

LATITUDE	40°19.8'N, 40°24.5'N
LONGITUDE	73°57.8'W, 74°05.3'W

This information is requested for the following Times and Dates:

MASTER SIGNAL LIST

OPR-B259-HSD-32

H-10516

836	7	40	21	02253	074	04	43553	254	0000	000000	P.P. Photo Pt. 06 TP-01138 (CMD,1981)
813	6	40	13	13267	073	59	53136	240	0000	000000	Photo Pt. 12 TP-01138 (CMD,1981)
813	5	40	13	12367	073	59	53226	240	0000	000000	Photo Pt. 13 TP-01138 (CMD,1981)
826	8	40	21	43476	073	53	56495	240	0000	000000	Photo Pt. 20 TP-01138 (CMD,1981)
822	7	40	19	38915	074	00	06436	240	0000	000000	Photo Pt. 22 TP-01138 (CMD,1981)
823	8	40	19	29374	074	00	58649	240	0000	000000	Photo Pt. 23 TP-01138 (CMD,1981)
838	2	40	23	45739	073	53	40347	250	0000	000000	New Bridge USE,1934(NGS)
831	5	40	22	47109	073	53	46195	250	0000	000000	Norman, 1981 (CMD)
832	7	40	21	56110	073	53	32031	250	0000	000000	Sea Bright, 1981 (CMD)
833	5	40	22	00244	073	53	50532	139	0000	000000	Rumson Holy Cross Church Spire, 1962 (NGS) 1981
834	6	40	21	02104	073	52	03749	250	0000	000000	Gun, 1981 (CMD)
835	5	40	22	01901	073	52	03336	139	0000	000000	Monmouth Beach Cupola, 1934 (NGS)
836	3	40	21	10905	074	00	40824	250	0000	000000	Little Silver, 1981 (CMD)
837	4	40	22	24074	073	59	45169	250	0000	000000	Raccon USE,1934 RM 2(NGS)
839	2	40	22	53344	074	00	57139	250	0000	000000	Oceanic, 1981 (CMD)
840	8	40	22	24795	074	02	35331	250	0000	000000	McCleese, 1934 (NGS)
841	7	40	21	16095	074	03	57713	139 250	0000	000000	Flagpole, 1981 (CMD)
842	3	40	21	12021	074	04	24021	139	0000	000000	Molly Pitcher Cupola, 1934 (NGS)
843	6	40	21	19142	074	04	29739	250	0000	000000	Red Bank, 1981 (CMD)
844	3	40	23	45249	073	59	39283	139	0000	000000	Navesink Light South, 1934 (NGS)
845	7	40	23	45337	073	59	39169	250	0000	000000	Rich, 1940 (NGS)

046	3	40	23	47259	073	59	12544	139	0000	000000	Navesink Light North, ~~1934~~ 1940 (NGS)
047	7	40	24	37137	073	53	46611	253	0000	000000	Shrew, 1981 (CMD)
~~048~~	~~7~~	~~40~~	~~27~~	~~41727~~	~~074~~	~~00~~	~~03311~~	~~139~~	~~0000~~	~~000000~~	~~Sandy Hook Lthse, Finial, 1940 (NGS)~~
049	7	40	23	45314	073	53	40565	250	0000	000000	New Bridge RM 2,1981(CMD)
051	~~7~~	~~40~~	~~00~~	~~04340~~	~~074~~	~~00~~	~~05730~~	~~250~~	~~0000~~	~~000000~~	USE 1934 RM2, 1981 ~~McCleese RM 1, 1981 (CMD)~~
~~050~~	~~4~~	~~40~~	~~03~~	~~43540~~	~~073~~	~~53~~	~~33927~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 00 TP-01138 (CMD,1981)~~
053	6	40	22	43769	073	59	33238	243	0000	000000	Photo Pt. 15 TP-01138 (CMD,1981)
054	0	40	23	03737	074	01	01960	243	0000	000000	Photo Pt. 17 TP-01138 (CMD,1981)
055	7	40	22	04262	074	00	02007	243	0000	000000	Photo Pt. 04 TP-01138 (CMD,1981)
~~056~~	~~7~~	~~40~~	~~21~~	~~03979~~	~~074~~	~~04~~	~~38007~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 08 TP-01138 (CMD,1981)~~
057	0	40	21	15426	074	04	51343	243	0000	000000	Photo Pt. 07 TP-01138 (CMD,1981)
053	7	40	21	16726	074	03	56059	243	0000	000000	Photo Pt.05 TP-01138 (CMD,1981)
~~059~~	~~4~~	~~40~~	~~22~~	~~15325~~	~~073~~	~~53~~	~~39663~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 01 TP-01138 (CMD,1981)~~
~~060~~	~~6~~	~~40~~	~~21~~	~~53763~~	~~073~~	~~53~~	~~36570~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 16 TP-01138 (CMD,1981)~~
~~061~~	~~4~~	~~40~~	~~21~~	~~40556~~	~~073~~	~~53~~	~~36056~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 03 TP-01138 (CMD,1981)~~
~~062~~	~~7~~	~~40~~	~~22~~	~~16231~~	~~073~~	~~53~~	~~40299~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 10 TP-01138 (CMD,1981)~~
~~063~~	~~7~~	~~40~~	~~22~~	~~12735~~	~~074~~	~~00~~	~~42015~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 19 TP-01138 (CMD,1981)~~
~~064~~	~~3~~	~~40~~	~~19~~	~~34941~~	~~074~~	~~01~~	~~17181~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 18 TP-01138 (CMD,1981)~~
~~065~~	~~7~~	~~40~~	~~19~~	~~40433~~	~~073~~	~~59~~	~~41733~~	~~243~~	~~0000~~	~~000000~~	~~Photo Pt. 11 TP-01138 (CMD,1981)~~
066	3	40	24	11234 OB	074	02	40544 319	139	0000	000000	Highlands AT&T Micro Tower,1982 (HSB,HFP 5)

Positions with a (CMD) source were supplied by Coastal Mapping Division, Atlantic Marine Center, from the Coastal Mapping Traverse run in 1981. Position for Signal 066 was derived from intersect observations from third order control points by the field party. Field Records will be submitted to AMC,HSB, for final review and disposition.

NOAA FORM 76-40 (8-74)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Replaces C&GS Form 567.

NONFLOATING AIDS [redacted]

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

[X] TO BE CHARTED / [ ] TO BE REVISED / [ ] TO BE DELETED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
	HSB-HFP5	New Jersey	Navesink River	8/82

The following objects HAVE [X] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
B259-HSB-82	HSB-10-5-82	H-10016	1927 North American

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
LIGHT	(Navesink LT. North, 1940) Sig. 46	40 23	47.250	73 59	10.544	Plotted on smooth sheet NGS Position	V-Vis 5/24/82	12324
LIGHT "1"	(Little Silver Creek Lt. #1) (not listed in USCG L.L.)	40 20	22.098	74 00	48.564	Off smooth sheet	F-2-6-L 5/24/82	12324
LIGHT "2"	(Oceanport Creek Lt. #2) (not listed in USCG L.L.)	40 19	50.526	74 00	50.468	Off Smooth Sheet	F-2-6-L 5/24/82	12324
LIGHT "4"	Vic of (Galilee) (not listed in USCG L.L.)	40 20	15.644	73 58	59.154	Off smooth Sheet	F-2-6-L 5/26/82	12324
LIGHT	Chapel Hill South Channel Range Rear Lt. *	40 23	55.130	74 03	32.774	not plotted on smooth sheet	F-2-6-L 8/6/82	12324
	*NOTE: Light was removed from tower during entire period of survey.							
	re L-134(83)							

(47)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	Lt(jg) John W. Humphrey	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	Lt(jg) John W. Humphrey	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS
Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.
EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED
Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field Identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.
EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.
EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED
When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.
EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH
Enter 'V-Vis.' and date.
EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

☆ U.S.GPO:1975-0-665-080/1155

NOAA FORM 76-40
(8-74)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Replaces C&GS Form 567.

~~NONFLOATING AIDS OR~~ LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- [X] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

[X] TO BE CHARTED [ ] TO BE REVISED [ ] TO BE DELETED	REPORTING UNIT (Field Party, Ship or Office)	STATE	LOCALITY	DATE
	HSB-HFP5	New Jersey	Navesink River	8/82

The following objects HAVE [X] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.	JOB NUMBER	SURVEY NUMBER	DATUM
B259-HSB-82	HSB-10-5-82	H-10016	1927 North American

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
MICRO TOWER	(Atlantic Highlands AT&T Micro Tower, 1982)	40 24	11.234	74 02	40.~~846~~ -0.32		F-3-6-L 9/3/83	12324
SPIRE	(First Presb. Ch of Red Bank Spire, 1982)	40 20	47.572	74 03	15.115		F-3-6-L 9/3/82	12324

(84)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	**NAME**	**ORIGINATOR**
OBJECTS INSPECTED FROM SEAWARD	Lt(jg) John W. Humphrey	☐ PHOTO FIELD PARTY ☒ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	Lt(jg) John W.Humphrey	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS
Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.
EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED
Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.
EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.
EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED
When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.
EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH
Enter 'V-Vis.' and date.
EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

NOAA FORM 76-40 (8-74)

Replaces C&GS Form 567.

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

[redacted] LANDMARKS FOR CHARTS

ORIGINATING ACTIVITY
- [x] HYDROGRAPHIC PARTY
- [ ] GEODETIC PARTY
- [ ] PHOTO FIELD PARTY
- [ ] COMPILATION ACTIVITY
- [ ] FINAL REVIEWER
- [ ] QUALITY CONTROL & REVIEW GRP.
- [ ] COAST PILOT BRANCH

(See reverse for responsible personnel)

- [ ] TO BE CHARTED
- [ ] TO BE REVISED
- [x] TO BE DELETED

REPORTING UNIT (Field Party, Ship or Office): Photo, Rockville, MD
STATE: New Jersey
LOCALITY: Shrewsbury River
DATE: 8/82

The following objects HAVE [x] HAVE NOT [ ] been inspected from seaward to determine their value as landmarks.

OPR PROJECT NO.:
JOB NUMBER: CM-8107
SURVEY NUMBER: TP-01138
DATUM:

CHARTING NAME	DESCRIPTION (Record reason for deletion of landmark or aid to navigation. Show triangulation station names, where applicable, in parentheses)	POSITION LATITUDE ° ′	LATITUDE ″ D.M. Meters	POSITION LONGITUDE ° ′	LONGITUDE ″ D.P. Meters	METHOD AND DATE OF LOCATION (See instructions on reverse side) OFFICE	FIELD	CHARTS AFFECTED
RADIO TOWER	(Monmouth Beach Coast Guard Radio Tower, 1962) Tower reported destroyed 11/2/81	40 20	32.350	73 58			V-VIS Twr destroyed 5/21/82	12324
TANK	Tank has been destroyed 5/16/82	40 21	.0	74 04	.6		V-VIS destroyed 5/16/82	12324
RADIO TOWER	Tower has been removed 5/12/82	40 21	.7	74 58	.6		V-VIS Twr removed 5/12/82	12324
TANK	(Long Branch JCP&L Co Gas Tank, 1934) Tank is being dismantled 5/13/82	40 18		73 59			V-VIS being dismantled 5/13/82	12324
FLAGPOLE	(Ft. Monmouth Flagpole, 1934) Station destroyed pole has been moved. Not visible enough for landmark.	40 19		74 02			V-VIS not visible 5/21/82	12324
	L-134(83)							

(69)

RESPONSIBLE PERSONNEL		
TYPE OF ACTION	NAME	ORIGINATOR
OBJECTS INSPECTED FROM SEAWARD	Lt(jg) John W. Humphrey	☐ PHOTO FIELD PARTY ☐ HYDROGRAPHIC PARTY ☐ GEODETIC PARTY ☐ OTHER *(Specify)*
POSITIONS DETERMINED AND/OR VERIFIED	Lt(jg) John W. Humphrey	FIELD ACTIVITY REPRESENTATIVE
		OFFICE ACTIVITY REPRESENTATIVE
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES		☐ REVIEWER ☐ QUALITY CONTROL AND REVIEW GROUP REPRESENTATIVE

INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'

(Consult Photogrammetric Instructions No. 64,

OFFICE

I. OFFICE IDENTIFIED AND LOCATED OBJECTS

Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object.

EXAMPLE: 75E(C)6042
8-12-75

FIELD

I. NEW POSITION DETERMINED OR VERIFIED

Enter the applicable data by symbols as follows:

F - Field	P - Photogrammetric
L - Located	Vis - Visually
V - Verified	
1 - Triangulation	5 - Field Identified
2 - Traverse	6 - Theodolite
3 - Intersection	7 - Planetable
4 - Resection	8 - Sextant

A. Field positions* require entry of method of location and date of field work.

EXAMPLE: F-2-6-L
8-12-75

*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.

FIELD (Cont'd)

B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.

EXAMPLE: P-8-V
8-12-75
74L(C)2982

II. TRIANGULATION STATION RECOVERED

When a landmark or aid which is also a triangulation station is recovered, enter 'Triang. Rec.' with date of recovery.

EXAMPLE: Triang. Rec.
8-12-75

III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH

Enter 'V-Vis.' and date.

EXAMPLE: V-Vis.
8-12-75

**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.

NOAA FORM 76-40 (8-74)

SUPERSEDES NOAA FORM 76-40 (2-71) WHICH IS OBSOLETE, AND EXISTING STOCK SHOULD BE DESTROYED UPON RECEIPT OF REVISION.

☆ U.S.GPO:1975-0-665-080/1155

Form Approved. Budget Bureau No. 41-R2455

ESSA FORM 77-6
(10-68)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

COAST PILOT REPORT

PLEASE MAIL TO:

Director
Coast and Geodetic Survey
Environmental Science Services Administration
ATTENTION: C325
Rockville, Maryland 20852

This record of your experience and observations when coasting, entering port, and/or following inside channels will be used to correct, amplify, or confirm the description now given in the Coast Pilot.

Please use additional sheets if more space is needed.

Additional report forms will be provided upon receipt of each report.

GEOGRAPHIC LOCATION

Navesink and Shrewsbury Rivers, New Jersey

LATITUDE	LONGITUDE	CHART NUMBER	COAST PILOT NUMBER
		12324	Two

VESSEL	MASTER/COMMANDING OFFICER
Hydrographic Field Party - 5	LTj.g. John W. Humphrey Jr.
DATE OF OBSERVATION June 1982	**OBSERVER** Field Party Personnel

I. LANDMARKS: Mention those visible from seaward and useful for navigation (day and/or night); include natural ranges and indicate the pair of marks forming a range. Photographs of landmarks difficult to describe are solicited; each view should be labeled with the distance off and the direction towards which the camera was pointed.

TYPE	CHARTED YES	CHARTED NO	LATITUDE (Approximate)	LONGITUDE (Approximate)	DESCRIPTIVE INFORMATION HELPFUL IN IDENTIFICATION

II. RADAR: List best radar targets and, if known, give maximum useful radar range at which the object can be positively identified and used. Mention under remarks places you have observed radar returns to be misleading.

NAME OR TYPE OF FEATURE *(Include approximate latitude and longitude if necessary to identify on chart)*	MAXIMUM USEFUL RANGE

III. ROUTES: Where entrance and inside routes are not marked by aids to navigation, show recommended directions for Coast Pilot (latitude and longitude of entrance point, and distances and true courses made good); include natural steering ranges if available.

(50.)

USCOMM-DC 36063-P68

IV. DANGERS: Mention those of concern to the navigator where special caution should be indicated in the Coast Pilot.

V. CURRENTS: Indicate places you have experienced conditions of current where special caution should be mentioned in the Coast Pilot.

VI. ANCHORAGES: Mention best anchorage in the area and other secure anchorages having good holding ground.

LOCATION *(Include anchorage bearings and natural ranges if available)*

TYPE OF BOTTOM OBSERVED:

	EXCEL	GOOD	FAIR	POOR	COMMENT
HOLDING QUALITY					
PROTECTION OFFERED					
ACCESSABILITY					

RECOMMENDED FOR VESSELS:

LENGTH	DRAFT
____ TO ____ FT.	____ TO ____ FT.

VII. REMARKS: Information reviewed on pages 252 and 253 in Coast Pilot 2 (Cape Cod to Sandy Hook, Seventeenth edition , January 1982) is adequate for the Navesink River. It is recommended by the hydrographer that the controlling depths be reviewed after office verification of survey H-10016

VIII. OTHER COAST PILOT CHANGES

U.S. COAST PILOT

NUMBER	EDITION	PAGE	LINE(S)

NOTE: Any chart(s) submitted with your report to show conditions will be replaced free of charge.

READ: STRIKE OUT: INSERT AFTER: *(Circle one)*

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

DATE: 19 July 1982
TO: Chief, Chart Information Branch, OA/C322
THRU: LCDR. G.W. Jamerson, Chief, Hydrographic Surveys Branch
FROM: Lt.(jg) J.W. Humphrey, OIC, Hydrographic Field Party - 5
SUBJECT: Danger to Navigation Report

The placement of red nun Buoys "2A" and "2B" at the mouth of the Navesink River (U.S. Coast Guard Light List, pages 238-239) have created a danger to navigation. Shoaling to 0 ft. at Mean Low Water within the currently marked channel limits has been found at the following position: 40/22/57N - 73/59/04W.

The channel in this area is oriented southwest to northeast, with shoaling extenting from 40/22/55.5N - 73/59/05W northeasterly to 40/23/01N - 73/58/57W, and from the northwest edge of the channel, 50 meters southeast towards the center of the channel.

Lt. Buckelew, of the U.S. Coast Guard Third District, Aids to Navigation Office, Govenors Island, New York, was informed of this danger via telephone on July 12 and 19, 1982 by Lt.(jg) J.W. Humphrey.

Attached is a tracing of the section of the survey field sheet showing the shoaling in this area. Depths shown are subject to office verification by OA/CAM 3, Norfolk, Va.

The shoaling was found while conducting a basic survey of the Navesink River (OPR-B259-HSB-82), using range/azimuth positioning, third order control stations, Del Norte electronic positioning system, and a Wild T-1.

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SURVEY

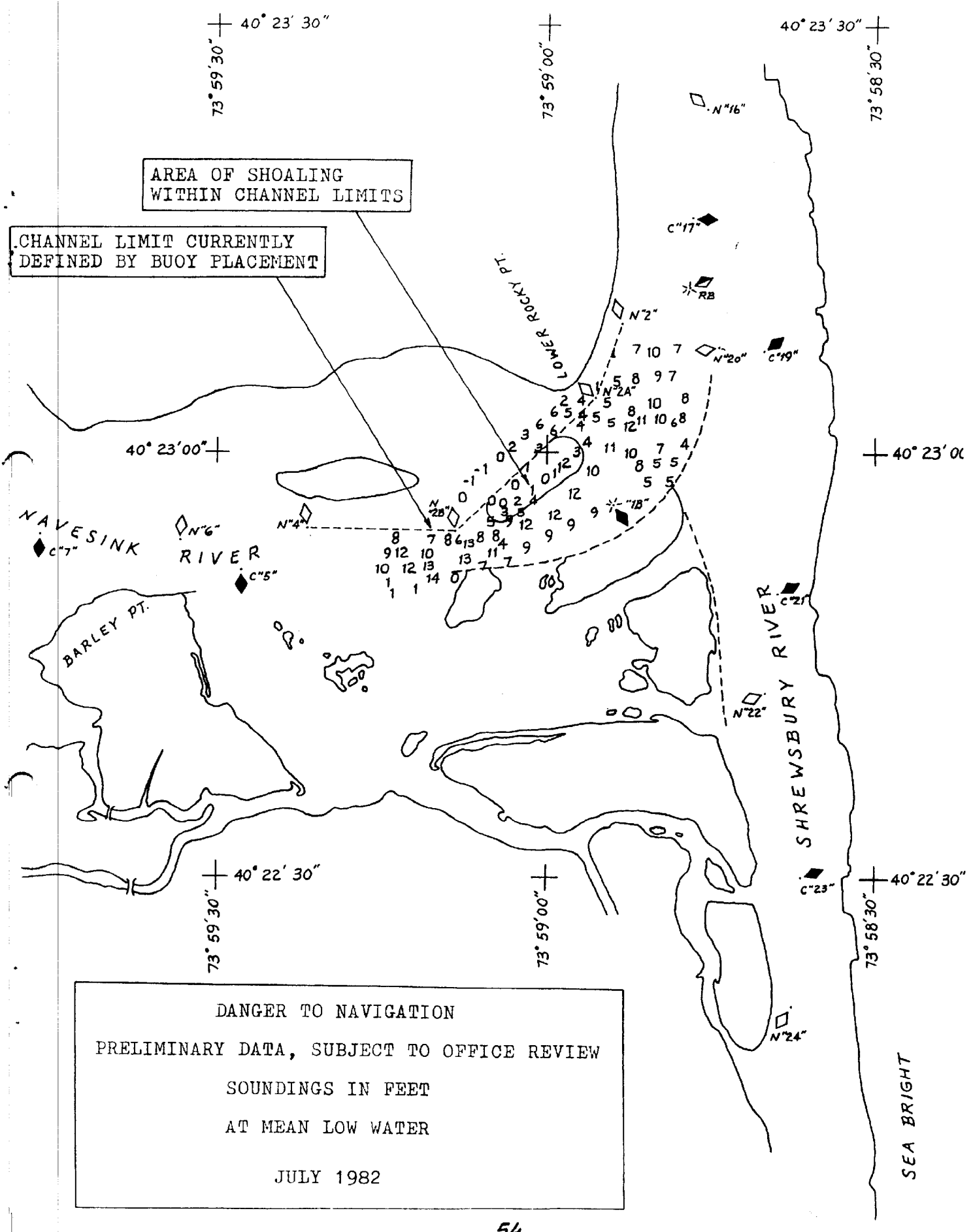
DATE: 19 July 1982
TO: Commander, Third Coast Guard District
THRU: LCDR. Jamerson, Chief, Hydrographic Surveys Branch
FROM: Lt(jg) Humphrey, OIC, Hydrographic Field Party - 5
SUBJECT: Danger to Navigation Report for Local Notice to Mariners

The placement of red nun Buoys "2A" and "2B" at the mouth of the Navesink River (U.S. Coast Guard Light List, pages 238-239) have created a danger to navigation. Shoaling to 0 ft. at Mean Low Water within the currently marked channel limits has been found at the following position: 40/22/57N - 73/59/04W.

The channel in this area is oriented southwest to northeast with shoaling extending from 40/22/55.5N - 73/59/05W northeasterly to 40/23/01N- 73/58/57W, and from the northwest edge of the channel 50 meters southeast towards the center of the channel.

LT Buckelew of the U.S. Coast Guard Third District, Aids to Navigation office, Governors Island, New York was informed of this danger via telephone on July 12, 1982 by Lt(jg) Humphrey.

Attached is a tracing of the section of the survey field sheet showing the shoaling in this area. Depths shown are subject to office verification by the National Ocean Survey.


AREA OF SHOALING
WITHIN CHANNEL LIMITS
CHANNEL LIMIT CURRENTLY
DEFINED BY BUOY PLACEMENT
40° 23' 30"
73° 59' 30"
73° 59' 00"
73° 58' 30"
40° 23' 00"
40° 22' 30"
LOWER ROCKY PT.
BARLEY PT.
NAVESINK
RIVER
SHREWSBURY RIVER
SEA BRIGHT
N"16"
C"17"
RB
N"2"
N"20"
C"19"
N"2A"
N"4"
N"6"
N"28"
"18"
C"7"
C"5"
C"21"
N"22"
C"23"
N"24"
DANGER TO NAVIGATION
PRELIMINARY DATA, SUBJECT TO OFFICE REVIEW
SOUNDINGS IN FEET
AT MEAN LOW WATER
JULY 1982

APPROVAL SHEET
SURVEY H-10016 (HSB-10-5-82)

The hydrographic records transmitted with this report are complete and adequate.

No direct supervision was given by me during field work and the field sheet was examined only during routine field inspection of the hydro party by the former Chief of Party, Lt. Cdr. George W. Jamerson.

This survey is complete and adequate with no additional field work recommended.

Ronald W. Jones
Lt. Cdr., NOAA
Chief, Hydrographic Field Parties Section

HYDROGRAPHIC SURVEY STATISTICS
REGISTRY NO.: H-10016

Number of positions	2315
Number of soundings	6805
Number of control stations	21

	TIME-HOURS	DATE COMPLETED
Preprocessing Examination	33	17 MAR 83
Verification of Field Data	983	30 JAN 86
Quality Control Checks	142	
Evaluation and Analysis	40	28 FEB 86
Final Inspection	8	17 MAR 86
TOTAL TIME	1206	

Marine Center Approval 23 MAR 86

Transmittal letter of survey and survey records will be included in the Descriptive Report to identify the records accompanying the survey.

NOAA FORM 61-29
(12-71)

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

LETTER TRANSMITTING DATA

REFERENCE NO.

MOA23-137-86

DATA AS LISTED BELOW WERE FORWARDED TO YOU BY *(Check)*:

☐ ORDINARY MAIL ☐ AIR MAIL

☒ REGISTERED MAIL ☐ EXPRESS

☐ GBL *(Give number)* _____

TO:

Chief, Data Control Branch, N/CG243
Room 151, WSC-1
Hydrographic Surveys Branch
National Ocean Service
Rockville, MD 20852

DATE FORWARDED

11 December 1986

NUMBER OF PACKAGES

two (2)

NOTE: A separate transmittal letter is to be used for each type of data, as tidal data, seismology, geomagnetism, etc. State the number of packages and include an executed copy of the transmittal letter in each package. In addition the original and one copy of the letter should be sent under separate cover. The copy will be returned as a receipt. This form should not be used for correspondence or transmitting accounting documents.

H-10016 (HSB-10-5-86)
OPR-B259-HSB-84--Navesink River

Pkg. 1: (tube)
- 1 Smooth Sheet
- 2 Excess Sounding Overlays
- 1 Position Overlay
- 1 Original Descriptive Report

Pkg. 2: (box)
- 1 Cahier containing Final Position Printout and Control Listing
- 1 Cahier containing Final Sounding Printout and L-File Listing
- 1 Folder containing data remove from Original Descriptive Report

FROM: *(Signature)*

Robert G. Roberson

RECEIVED THE ABOVE
(Name, Division, Date)

Dwayne S. Clark
January 5, 1987
N/CG243

Return receipted copy to:

Chief, Hydrographic Surveys Branch,
N/MOA23
Atlantic Marine Center
439 W. York Street
Norfolk, VA 23510-1114

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SERVICE

TIDE NOTE FOR HYDROGRAPHIC SHEET

Date: 03/11/85

Marine Center: Atlantic

OPR: B 259

Hydrographic Sheet: H - 10016

Locality: Navesink River, New Jersey

Time Period: August 31 - September 16, 1982

Tide Station Used: 853-1804 Sea Bright, NJ

Plane of Reference (Mean Low Water): 2.61 ft.

Height of Mean High Water Above Plane of Reference: 3.3 ft.

Remarks: Recommended Zoning:

For Hydrography run in the Navesink River after the operating tide station had been removed, use the following zoning; (see other page)

for Donald Carrier
Chief, Tidal Datums Section

A. East of longitude 73°59.0'.

1) north of latitude 40°23.1' apply -45 minute time correction and x1.28 range ratio to all heights.

2) south of latitude 40°23.1' to 40°22.5' apply -30 minute time correction and x1.16 range ratio to all heights.

3) south of latitude 40°22.5' to 40°22.2' apply -15 minute time correction and x1.07 range ratio to all heights.

4) south of latitude 40°22.2' to 40°21.6' zone direct.

B. West of longitude 73°59.0' to 74°00.0', apply x1.10 range ratio to all heights.

C. West of longitude 74°00.0' to 74°02.0' apply +15 minute time correction and x1.10 range ratio to all heights.

D. West of longitude 74°02.0' apply +30 minute time correction and x1.13 range ratio to all heights.

DATE: May 3, 1983

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center:

Hourly heights are approved for

Tide Station Used (NOAA Form 77-12): 853-1712 Highland Bridge, NJ
853-1804 Sea Bright, NJ
853-1833 Red Bank, NJ
853-1925 Gooseneck Bridge, NJ ← Not used

Period: May 17-September 16, 1982

RCJ
10-18-85

HYDROGRAPHIC SHEET: H-10016

OPR: B259

Locality: Navesink and Shrewsbury Rivers, New Jersey

Plane of reference (mean ~~lower~~ low water): 853-1712 = 1.56 ft.
853-1804 = 2.61 ft.
853-1833 = 2.35 ft.
853-1925 = 3.09 ft.

Height of Mean High Water above Plane of Reference is 853-1712 = 4.2 ft.
853-1804 = 3.3 ft.
853-1833 = 3.7 ft.
853-1925 = 2.8 ft.

REMARKS: Recommended Zoning:
See Page 2

James R Hubbard
Chief, Tidal Datums Section, Tides & Water Levels Branch

May 3, 1983

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

OPR-B259 H-10016, H-10037

II. IN THE NAVESINK RIVER, NEW JERSEY

A. East of Longitude 73°59.0'

1. North of latitude 40°23.1' zone direct on 853-1712.[1]

2. South of 40°23.1' to 40°22.8' zone on 853-1712[2] apply +15 minute time correction x0.90 range ratio.

3. South of 40°22.8' to 40°22.5' zone on 853-1712,[3] apply +30 minute time correction x0.90 range ratio.

4. South of 40°22.5' to 40°22.2' zone on 853-1712,[4] apply +45 minute time correction x0.83 range ratio.

5. South of 40°22.2' to 40°21.6' zone direct on 853-1804. ← *see Tide note dated 3/11/85

B. West of 73°59.0' to 74°00.0' zone on 853-1712.[5] apply +30 minute time correction x0.83 range ratio.

C. West of 74°00.0' to 74°02.0' zone on 853-1833,[6] apply -15 minute time correction.

D. West of 74°02.0' zone direct on 853-1833[7]

V Plot

DATE: May 3, 1983

U. S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET
OPR-B259 H-10016, H-10037

I. IN THE SHREWSBURY RIVER, NEW JERSEY

A. East of Longitude 73°58.9'

1. North of latitude 40°21.6' zone direct on 853-1804.
2. South of 40°21.6' zone on 853-1804 apply +15 minute time correction.

B. West of 73°58.9' to 74°00.0'

1. North of 40°19.8' zone on 853-1925 apply -30 minute time correction, x1.09 range ratio on 853-1925.

2. South of 40°19.8' to 40°19.4' zone on 853-1925, apply -15 minute time correction.

3. South of 40°19.4' zone direct on 853-1925.

C. West of 74°00.0' to 74°00.8'

1. North of 40°19.0' zone on 853-1925 apply -15 minute time correction.

2. South of 40°19.0' zone direct on 853-1925.

D. West of 74°00.8' zone direct on 853-1925.

NOAA FORM 76-155
(11-72)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

GEOGRAPHIC NAMES

SURVEY NUMBER

H-10016

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	
BARLEY POINT										1
BLACK POINT CREEK										2
BLOSSOM COVE										3
CLAYPIT CREEK										4
FAIR HAVEN										5
FOURTH CREEK										6
GUYOT POINT										7
HIGHLANDS (locality)										8
JONES POINT										9
LEWIS POINT										10
LOCUST										11
LOCUST POINT										12
LOWER ROCKY POINT										13
McCLEES CREEK										14
NAVESINK										15
NAVESINK RIVER										16
NEW JERSEY (title)										17
RED BANK (locality)										18
RUMSON										19
SEA BRIGHT					Approved:					20
SHREWSBURY RIVER										21
SWIMMING RIVER					Charles E. Harrington					22
UPPER ROCKY POINT					Chief Geographer - N/CG2x5					23
					FEB 19 1986					24
										25

NOAA FORM 76-155 SUPERSEDES C&GS 197

ATLANTIC MARINE CENTER
EVALUATION REPORT

REGISTRY NO.: H-10016 FIELD NO.: HSB-10-5-82

New Jersey, Navesink River

SURVEYED: May 17 through September 16, 1982

SCALE: 1:10,000 PROJECT NO.: OPR-B259-HSB-82

SOUNDINGS: Raytheon DE-719B Echo Sounder, Sounding Pole

CONTROL: Del Norte/Theodolite (Range/Azimuth) "See Boat Sheet" method

Chief of Party	G. W. Jamerson
Surveyed by	J. W. Humphrey, Jr.
	B. A. Link
	J. M. Robinett
	K. L. Goodman
	C. S. Weisner
	S. R. Linehan
Automated Plot by	Xynetics 1201 Plotter (AMC)

1. INTRODUCTION

a. No unusual problems were encountered during the processing of this survey.

b. Changes in the Descriptive Report were made in red ink during office processing.

2. CONTROL AND SHORELINE

a. The source of control is adequately described in sections F and G of the Descriptive Report.

b. Shoreline originates with Class III registered map TP-01138 (1981). Shoreline revisions in red are by the hydrographer.

c. The submerged wreck at latitude 40°23'34"N, longitude 74°01'18"W shown on TP-01138 was not mentioned by the hydrographer and was transferred as a submerged wreck to the smooth sheet during evaluation.

3. HYDROGRAPHY

a. Depths at crossings are in good agreement.

b. The standard depth curves are adequately delineated except some portions of the 0- and 6-foot depth curves in some areas along bulkheads and piers and in proximity to shore.

c. The 3-foot depth curve was added during verification to better delineate the bottom configuration.

4. CONDITION OF SURVEY

The smooth sheet and accompanying overlays, hydrographic records, and reports comply with the requirements of the Hydrographic Manual, except that additional sounding lines should have been run in Claypit Creek where small boat piers exist along shore.

5. JUNCTIONS

Adequate junctions were effected with H-10049 (1982) on the north and H-10037 (1982) on the south.

6. COMPARISON WITH PRIOR SURVEYS

a. H-5234a (1932) 1:10,000
H-5616 (1934) 1:10,000

The prior surveys cover the entire area of the present survey except in the area of Shrewsbury River south of the bridge located in the vicinity of latitude 40°23'47"N, Longitude 73°58'45"W. Here, the prior survey (H-5616) indicates soundings were obtained by the U.S. Engineers Department (U.S. Army Corps of Engineers).

Federal Channel Projects in the area of the present survey existed prior to the surveys of 1934; however, to what extent these projects were completed is unknown. Changes in the bottom due to dredging and spoiling created by the construction of later channel projects and a new highway bridge are revealed in a comparison with the present survey. For example, a spoil bank uncovering at low water presently falls in the vicinity of latitude 40°22'50"N, longitude 74°00'15"W where a marked channel with depths of 7 to 10 feet is shown on the prior survey. Prior and present depths in remaining areas of the river differ only by ± 2 feet. These differences are considered a result of extensive residential and commercial construction projects that have taken place.

With the addition of a few items brought forward to supplement present hydrography, the present survey is adequate to supersede these prior surveys in the common area.

b. TP-00760 (1974-1975) 1:10,000

This prior Class III registered shoreline map covers part of the present survey. With the addition of some piles brought forward as submerged piles to supplement present hydrography, the present survey is adequate to supersede the prior survey in the common area.

7. COMPARISON WITH CHART 12324 (20th Edition, December 19, 1981)

a. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration, supplemented by U.S. Army Corps of Engineers surveys and other miscellaneous sources.

Attention is directed to the following items:

(1) The wreck covered by 2 feet of water charted at latitude 40°22'40"N, longitude 74°01'15"W from an NOS deficiency survey of 1967 (Chart Letter 1350 of 1967) was reported to be a 30- to 35-foot boat. No additional information was provided. Evidence of the submerged wreck found during the present survey was a snag of the chain drag at latitude 40°22'40.87"N, longitude 74°01'14.47"W. A least depth of 4 feet determined by sounding pole at the snag may not be the least depth because surrounding depths are also 4 feet. Therefore, the wreck covered 2 feet should be retained on the chart but moved to the present survey (snag) position.

(2) The pier charted at latitude 44°22.42'N, longitude 74°02.68'W was not verified or disproved on the present survey and should be charted as pier ruins that uncover at MLW.

(3) The pile, PA charted at latitude 40°22.75'N, longitude 74°00.15'W, from a miscellaneous source, does not appear on TP-00760 or TP-01138. This feature was not found by the hydrographer during a visual search at low tide. This information was obtained in a conversation with the hydrographer. The charted pile presently falls in an area that uncovers at MLW. This item should be expunged from the chart.

(4) The three areas delimited by dashes, labeled piles, charted in the vicinity of latitude 40°22'09"N, longitude 74°01'51"W, latitude 40°22'09"N, longitude 74°02'15"W, and latitude 40°22'03"N, longitude 74°02'36"W from TP-00760 were identified as mooring areas containing floats by the photo party in 1982 as noted on a discrepancy print. These floats do not appear on TP-01138. It is considered these items are mislabeled on the TP-sheet and are of a temporary nature. These items should be expunged from the chart.

(5) No evidence of charted piles that bare at MHW at the following locations from TP-00760 was found during a visual search of the bottom by the hydrographer. These piles should be expunged from the chart.

Location
Latitude (N), Longitude (W)
40°22'40", 74°01'05"
40°21'58", 74°02'51"
40°22'44", 74°00'32"

(6) A pile charted at latitude 40°22'44"N, longitude 74°00'34"W from TP-00760 was found at low tide by the hydrographer. This pile should be retained on the chart as shown on the present survey.

(7) The obstruction bare at MHW from TP-00760, and charted but not labeled at latitude 40°22'59"N, longitude 73°59'23"W, does not appear on TP-01138. This item is charted in a low water area in proximity to a marsh island, and was noted to be not visible in 1982 by a photo party. The obstruction was not found during a visual search of the bottom by the hydrographer. This item is considered nonexistent and should be removed from the chart.

The present survey is adequate to supersede the charted hydrography within the common area, except as noted above and in section L of the Descriptive Report.

b. Controlling Depths

(1) The "Shl rep 1977" note in a 6-foot controlling depth of the channel charted in the vicinity of latitude 40°21'15"N, longitude 74°04'42"W is verified by the present survey. Chart present survey depths unless subsequent information has been furnished by the U.S. Army Corps of Engineers.

(2) The "4 ft rep 1980" note in the channel charted in the vicinity of latitude 40°21'18"N, longitude 74°04'22"W is in conflict with present depths. Chart the depths as shown on the present survey unless subsequent information has been furnished by the U.S. Army Corps of Engineers. The "Shl rep 1977" note in the channel at latitude 40°21'17"N, longitude 74°04'18"W should be expunged from the chart.

(3) The "3 FT 1967" note charted in the vicinity of latitude 40°20'48"N, longitude 74°04'55"W is in conflict with present survey depths. Chart depths as shown on the present survey unless subsequent information has been furnished by the U.S. Army Corps of Engineers.

(4) The "2 FT 1960-1967" note in the channel charted in the vicinity of latitude 40°22.6'N, longitude 74°00.0'W falls in areas that uncover on the present survey. Chart the depths as shown on the present survey unless subsequent information has been furnished by the U.S. Army Corps of Engineers.

(5) The table of controlling depths for Navesink River and part of Shrewsbury River covered by the present survey is based on U.S. Army Corps of Engineers surveys of 1967, 1978, and 1981. These depths are in agreement with present survey depths, except at Red Bank Reach in the vicinity of latitude 40°21'15"N, longitude 74°04'06"W. Here, present depths are about 1 foot shoaler. The "Shl rep" note, charted adjacent to the channel limits, describes the condition of the channel and is verified by present depths. Chart the depths as shown on the present survey unless subsequent information has been furnished by the U.S. Army Corps of Engineers.

c. Aids to Navigation

The aids to navigation located on the present survey are in substantial agreement with their charted positions and adequately mark the features intended, except for the following:

(1) Red nun buoy "16" charted at latitude 40°23.4'N, longitude 73°59.8'W in Shrewsbury River is shown on the wrong side of the channel as noted by the hydrographer. However, chart 12324, 23rd edition, dated June 1, 1985, shows the buoy charted on the correct side of the channel.

(2) Red nun buoy "2B" is located about 120 meters south of its charted position after it was moved during the present survey as stated in section L of the Descriptive Report.

(3) Black buoy "1B" (lighted) located at latitude 40°22'58"N, longitude 74°00'04"W falls about 100 meters south of its charted position. The charted position of the buoy is considered to be in error.

(4) The buoys located along Barley Point Reach and Fair Haven Reach on the present survey differ from their charted positions as follows:

Buoy Number	Location Lat. (N), Long. (W)	Approximate Distance/Direction from Charted Position
Black "7" (lighted)	40°22'54", 73°59'46"	160 meters southeast
Black "9" (lighted)	40°22'58", 74°00'04"	80 meters north
Red nun "10"	40°22'59", 74°00'09"	90 meters northeast
Black can "11"	40°22'56", 74°00'16"	180 meters east
Red nun "12"	40°22'57", 74°00'21"	60 meters east
Black "13" (lighted)	40°22'55", 74°00'39"	135 meters northeast
Black "15" (lighted)	40°22'45", 74°01'21"	70 meters northeast
Black can "19"	40°21'56", 74°03'21"	50 meters east
Red nun "20"	40°21'57", 74°03'23"	50 meters east
Black can "21"	40°21'43", 74°03'34"	185 meters northeast
Red nun "22"	40°21'44", 74°03'36"	170 meters northeast
Black can "23"	40°21'35", 74°03'42"	280 meters northeast
Red nun "24"	40°21'31", 74°03'36"	275 meters northeast
Red nun "26"	40°21'23", 74°03'54"	255 meters northeast

(5) Red nun buoy "4," black buoy "5" (lighted), and red nun buoy "6" located at latitude 40°22'55"N, longitude 73°59'22"W; latitude 40°22'52"N, longitude 73°59'28"W; and latitude 40°22'54"N, longitude 73°59'33"W on the present survey fall about 85 meters to the northeast, 90 meters to the northeast, and 190 meters east, respectively, of their charted positions.

(6) Red buoy "18" (lighted), located at latitude 40°22'08"N, longitude 74°03'04"W on the present survey, falls about 20 meters to the northeast of its charted position.

(7) Red nun buoy "16" located at latitude 40°22'21"N, longitude 74°02'30"W on the present survey falls about 30 meters southwest of its charted position.

The differences between the charted positions of certain floating aids and their locations on the present survey, as noted above, reveal significant changes in their positions that have occurred probably as a result of dredging and the movement of ice during the winter months in this area. The Aids to Navigation Unit was informed of these discrepancies during the evaluation of the survey.

8. COMPLIANCE WITH INSTRUCTIONS

This survey adequately complies with the project instructions, except as noted in section 4 of this report.

9. ADDITIONAL FIELD WORK

This is a good basic survey and no additional work is recommended.

D. V. Mason
Cartographic Technician
Verification of Field Data

G. K. Myers
Chief, Standards Section (N/CG242)
Hydrographic Surveys Branch
Evaluation and Analysis

R. R. Hill
Senior Cartographic Technician
Verification Check

Inspection Report
H-10016

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, development of critical depths, cartographic symbolization, and verification or disproval of charted data. The survey complies with National Ocean Service (NOS) requirements except as noted in the Evaluation Report. The survey records comply with NOS requirements except where noted in the Evaluation Report.

Inspected

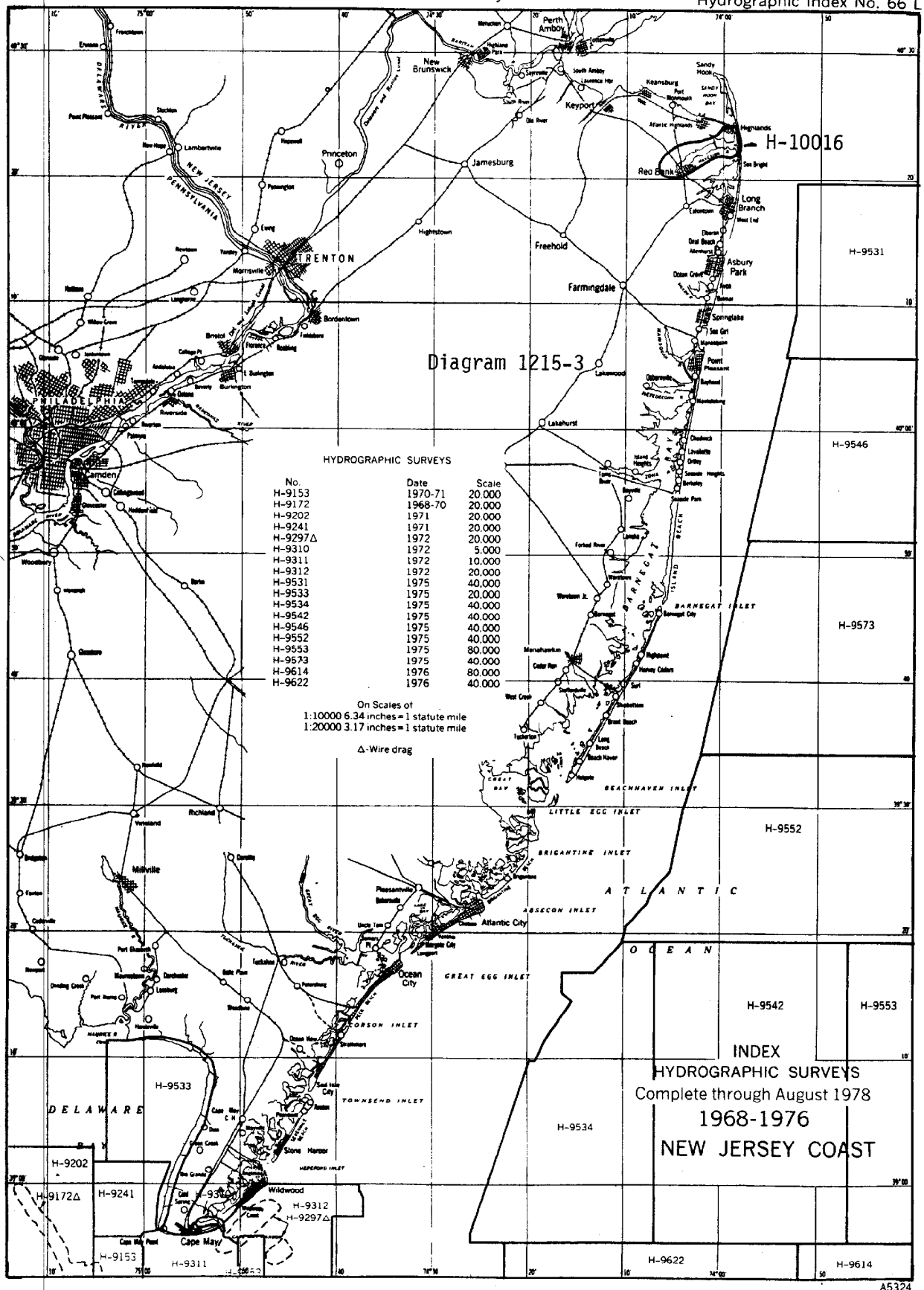
Dale E. Westbrook
Deputy Chief, Hydrographic Surveys
Branch (N/CG24x1)

Approved

Wesley V. Hull, RADM, NOAA
Director, Atlantic Marine Center

DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Survey
Rockville, Maryland

Hydrographic Index No. 66 L



A5324

NOAA FORM 75-96
(10-83)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

MARINE CHART BRANCH

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-10016

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
12327	4-8-97	M. Hetrick	Full Part Before After Marine Center Approval Signed Via
			Drawing No. 105 Found DR, missing when survey originally
			applied to Dwg # 97 - Changes Part to Full Appl'd.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
			Full Part Before After Marine Center Approval Signed Via
			Drawing No.
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			Full Part Before After Marine Center Approval Signed Via
			Drawing No.

SUPERSEDES C&GS FORM 8352 WHICH MAY BE USED.

Appd To Stds 1-6-97 [illegible]