

T-12966

T-12966

NOAA FORM 76-35

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

DESCRIPTIVE REPORT

Type of Survey ShorelineJob No. Map No. T-12966....Classification No. Edition No. 1....

Field Edited

LOCALITY

State MassachusettsGeneral Locality Boston to Plum IslandLocality Magnolia Harbor19 65 TO 1968

REGISTRY IN ARCHIVES

DATE

DESCRIPTIVE REPORT - DATA RECORD

T-12966

PROJECT NO. (II):

Job PH-6601

FIELD OFFICE (III):

None

CHIEF OF PARTY

PHOTOGRAMMETRIC OFFICE (III):

Atlantic Marine Center

OFFICER-IN-CHARGE

Alfred C. Holmes - Director

INSTRUCTIONS DATED (II) (III):

Field - Aug. 4, 1965

Field - Aug. 19, 1965

Office - Oct. 8, 1965

Office - Jan. 27, 1966

Office - Feb. 2, 1966

Office - Apr. 28, 1966

Field - May 20, 1966

Office - July 11, 1966

Provisional instructions, Aerial photography

Instructions, Aerotriangulation

Instructions, Aerotriangulation

Supplement I

Supplement I

METHOD OF COMPILATION (III):

Wild B-8 Plotter

MANUSCRIPT SCALE (III):

1:10,000

STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):

1:15,000 Pantographed to 1:10,000

DATE RECEIVED IN WASHINGTON OFFICE (IV):

DATE REPORTED TO NAUTICAL CHART BRANCH (IV):

APPLIED TO CHART NO.

DATE:

DATE REGISTERED (IV):

SEPT. 1975

GEOGRAPHIC DATUM (III):

N.A. 1927

VERTICAL DATUM (III):

High Water

MEAN ~~SEA LEVEL~~ EXCEPT AS FOLLOWS:

Elevations shown as (25) refer to mean high water

Elevations shown as (5) refer to sounding datum

i.e., mean low water ~~mean low water~~

REFERENCE STATION (III):

LEE(GLOUCESTER LEPAGE GLUE COMPANY CHIMNEY) 1928

LAT.:

42°36' 56.755"

LONG.:

70°41' 28.109"

☒ ADJUSTED☐ UNADJUSTED

PLANE COORDINATES (IV):

Y = 589,822.23 Ft.

X = 817,731.98 Ft.

STATE

Massachusetts

ZONE

Mainland

MAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (II) FIELD PARTY, (III) PHOTOGRAMMETRIC OFFICE, (IV) WASHINGTON OFFICE.

WHEN ENTERING NAMES OF PERSONNEL ON THIS RECORD GIVE THE SURNAME AND INITIALS, NOT INITIALS ONLY.

DESCRIPTIVE REPORT - DATA RECORD

T-12966

FIELD INSPECTION BY (III):

None

DATE:

MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):

Air Photo Compilation, Date of Photography: August 31, 1965

PROJECTION AND GRIDS RULED BY (IV):

A. Roundtree

DATE

4/25/66

PROJECTION AND GRIDS CHECKED BY (IV):

R. Glaser

DATE

4/27/66

CONTROL PLOTTED BY (III):

L.O. Neterer, Jr.

DATE

9/15/66

CONTROL CHECKED BY (III):

C. Blood

DATE

9/15/66

RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):

H.P. Eichert

DATE

11/1/67

STEREOSCOPIC INSTRUMENT COMPILATION (III):

PLANIMETRY

Compiled: L.O. Neterer, Jr.

DATE

7/29/67

CONTOURS

DATE

MANUSCRIPT DELINEATED BY (III):

1:10,000 model: R.R. White

Reduction of T-12970 traced: L.L. Graves

DATE

8/22/67

8/22/67

SCRIBING BY (III):

W. Gilbert

DATE

PHOTOGRAMMETRIC OFFICE REVIEW BY (III):

Compilation: L.L. Graves

DATE

8/30/67

REMARKS:

Field Edit by: E.W. Hartford, July-September, 1968

DESCRIPTIVE REPORT - DATA RECORD

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CAMERA (KIND OR SOURCE) (III):

Wild RC-8 "S"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
65S 7256 thru 7258	8/31/65	08:00	1:30,000	*0.6 ft. below MLW
65S 7246 & 7247	8/31/65	07:45	1:30,000	*0.3 ft. below MLW
65S 7214 & 7215	8/31/65	07:30	1:30,000	*0.0 ft. MLW
65S 6944R & 65S 6945R	8/24/65	08:40	1:30,000	*8.3 ft. above MLW (Gloucester)
65S 6944R & 65S 6945R		08:40	1:30,000	*7.7 ft. above MLW (Annisquam)

Predicted TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: Portland Boston Harbor		9.0 9.5	10.4 11.0
SUBORDINATE STATION: Gloucester Harbor on Boston		8.7	10.1
SUBORDINATE STATION: Annisquam on Portland		8.5	9.9

WASHINGTON OFFICE REVIEW BY (IV): Bernard Kurs AMC

DATE:

March, 1974

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

2

RECOVERED:

1

IDENTIFIED:

1

NUMBER OF BM(S) SEARCHED FOR (II):

RECOVERED:

IDENTIFIED

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

REMARKS:

*Determined by readings on tide staffs at Merrimack River Entrance and Gloucester Harbor (Ten Pound Island). See Instructions - OFFICE-dated April 28, 1965.

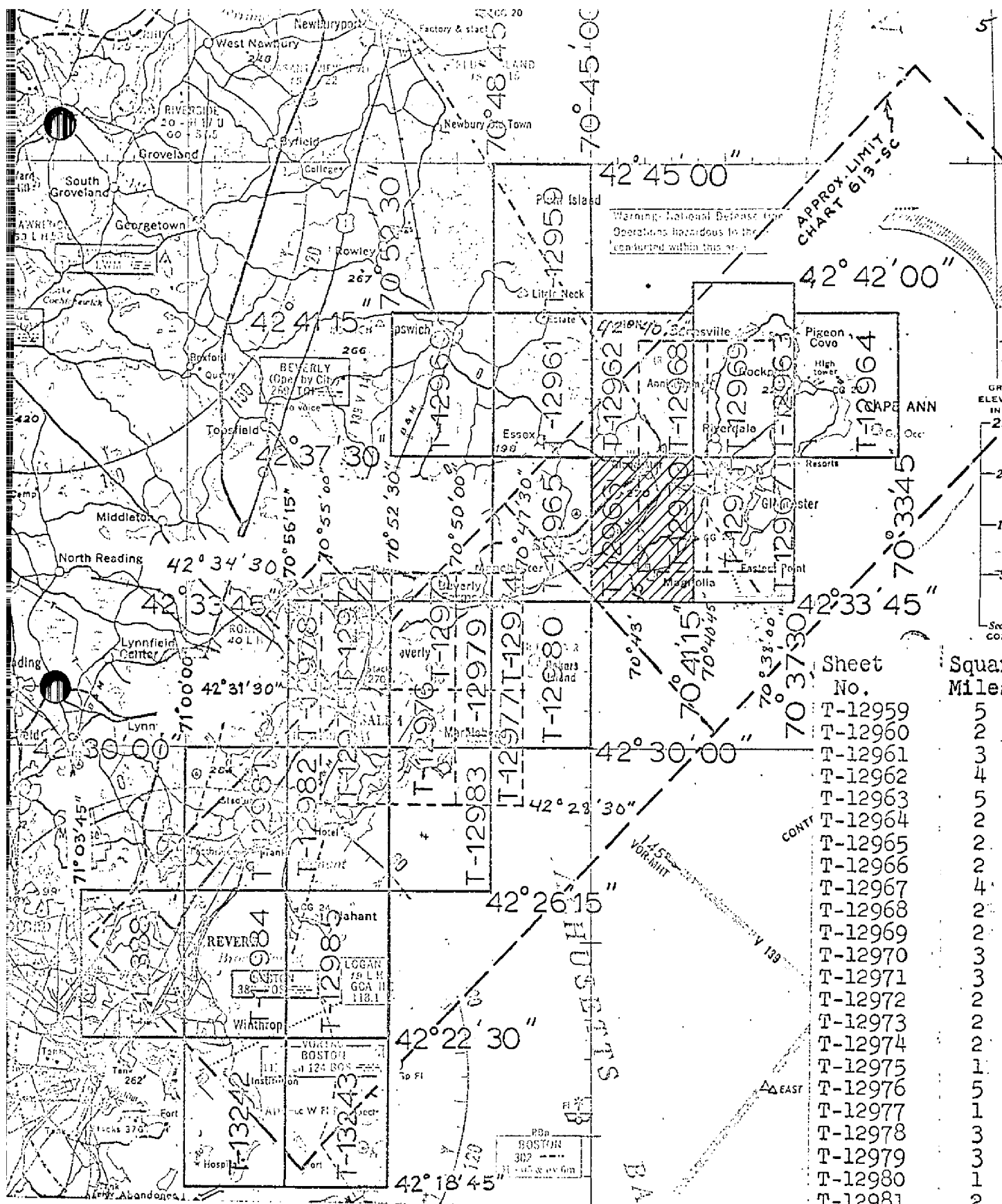
T-12966

COMPILATION RECORD

COMPLETION DATE

REMARKS

Alongshore for Hydro	Feb., 1968	Superseded
Field Edit applied and roads corrected from reduction of T-12970 (E. of 70° 43' 15" only)	Sept., 1969	Superseded
Final Review	March, 1974	



Sheet No.	Square Mile:
T-12959	5
T-12960	2
T-12961	3
T-12962	4
T-12963	5
T-12964	2
T-12965	2
T-12966	2
T-12967	4
T-12968	2
T-12969	2
T-12970	3
T-12971	3
T-12972	2
T-12973	2
T-12974	2
T-12975	1
T-12976	5
T-12977	1
T-12978	3
T-12979	3
T-12980	1
T-12981	2
T-12982	3
T-12983	2
T-12984	3
T-12985	2
T-12388	3
T-13242	3
T-13243	2

JOB PH-6601
BOSTON TO PLUM ISLAND
SHORELINE MAPPING AT 1:5,000 & 1:10,000 SCALE
CHART 613-SC
CHART TOPOGRAPHY AT 1:40,000 SCALE

6

SUMMARY TO ACCOMPANY

DESCRIPTIVE REPORTS PH-6601

This shoreline manuscript is one of thirty-one maps that make up this project. The primary purpose of the project is to provide contemporary shoreline for nautical chart construction. Maps were also used to provide photogrammetric hydro support data for the hydrographic surveys to be conducted in the same area.

The only field work prior to compilation was recovery and identification of horizontal control required for aerotriangulation.

Field edit was accomplished by a photogrammetric field party during the years 1967, 1968, 1969 and 1970. The field edit was adequate.

Cronaflex positives and ozalids of the manuscripts were furnished for the use of the field editor and the preparation of the hydrographers boat sheets. Accompanying these were specially prepared ratio photographs to aid in the location of hydrographic signals.

Final review was accomplished at the Atlantic Marine Center from September, 1973 to April, 1974.

A cronaflex positive and negative of each reviewed manuscript are being forwarded for record and registry.

FIELD INSPECTION REPORT

T-12966

PROJECT PH-6601

There was no field inspection prior to compilation.

PHOTOGRAMMETRIC PLOT REPORT
Job PH-6601
Boston to Plum Island, Massachusetts

November 1, 1966

21. Area Covered

This report covers aerotriangulation for 1:5,000 and 1:10,000 scale surveys in an area north of Boston, Massachusetts. The 1:5,000 scale surveys are T-12968 thru T-12977; the 1:10,000 scale surveys are T-12959 thru T-12967 and T-12978 thru T-12985.

22. Method

Four strips were bridged by the analytic method. Strip 1 was at a scale of 1:30,000 using infrared photography; Strips 2 and 3 at a scale of 1:30,000 using color film; and Strip 4 using color film at a scale of 1:15,000.

The 1:30,000 scale bridges were to be used for the 1:10,000 scale compilation. The four-model 1:15,000 scale bridge was necessary to complete coverage on surveys T-12972 and T-12978.

Common points between the 1:30,000 and 1:15,000 scale photography were selected. Plane coordinate positions from our bridges were determined so that 1:15,000 scale models could be controlled to compile the 1:5,000 scale surveys. Plane coordinates are on the Massachusetts State Grid (Mainland). The attached aerotriangulation sketch shows location of strips bridged. Closures to control have been tabulated.

23. Adequacy of Control

Field identified control was supplemented by office identified horizontal control points and was adequate.

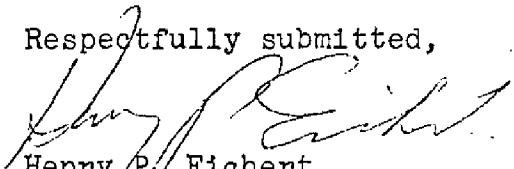
24. Supplemental Data

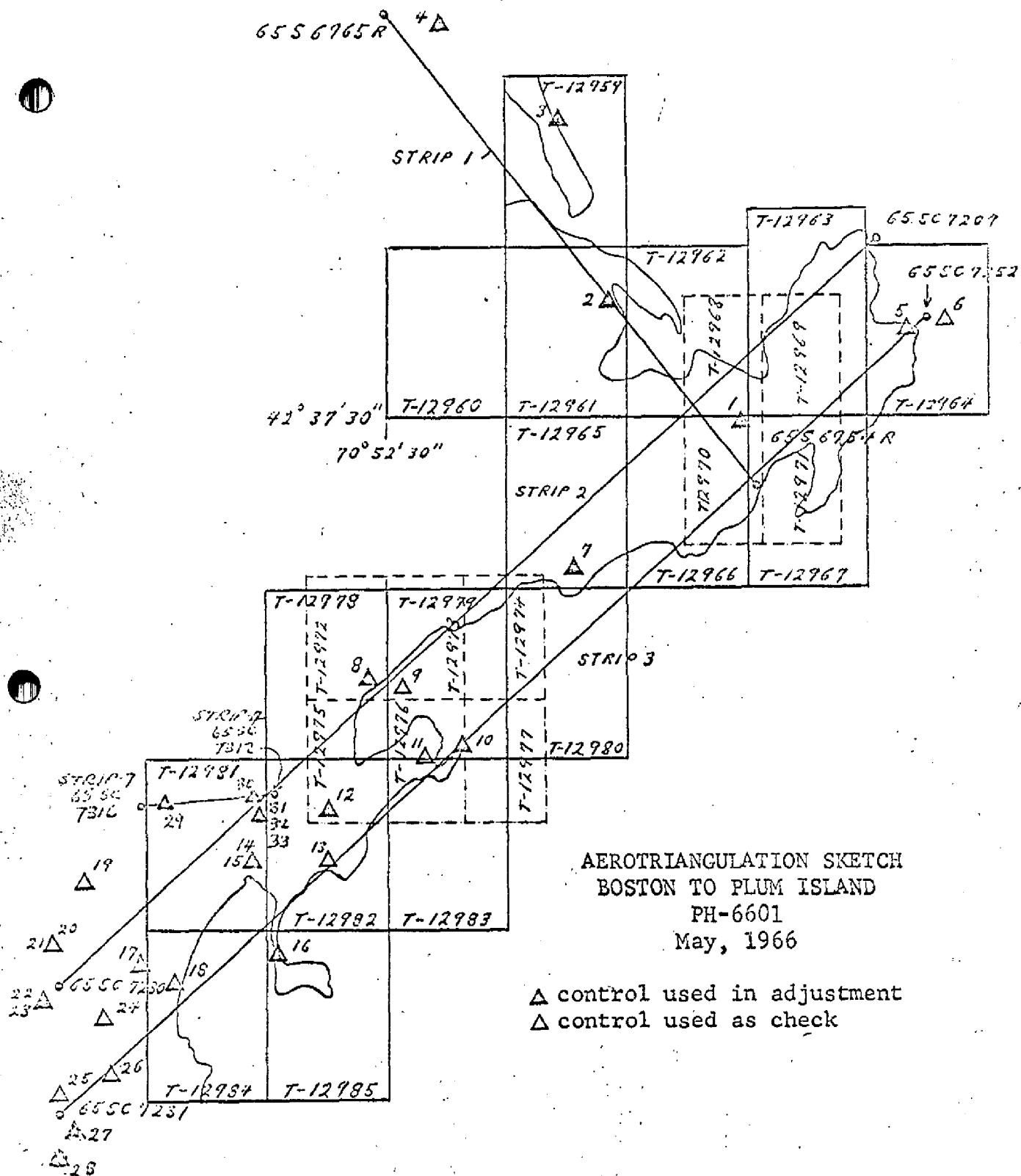
Vertical control points needed ^{as} ~~and~~ control for strip adjustments were taken from USGS quads.

25. Photography

The color photography was excellent. The infrared photography, which is not particularly suited for bridging, was adequate.

Respectfully submitted,


Henry P. Eichert



Fit to control
(feet)

STRIP #1

1 MEAD 2 (MGS), 1934

target (+0.1, +0.1)

sub. pt. (-0.9, +1.7)

2 CHOATE, 1849

target (-0.4, -0.2)

3 PLUM ISLAND COAST GUARD CUPOKA, 1943

target (+0.5, +0.3)

sub. pt. (-2.8, +4.5)

4 OLD TOWN, 1850

target (-0.2, -0.2)

RM #1 (-0.2, +0.3)

STRIP #2

5 STONEHAVEN (ROCKPORT TOWN (MGS)), 1939

target (+1.2, -2.6)

sub. pt. A (-0.7, -1.6)

sub. pt. B (+1.3, -3.0)

- 1 MEAD 2 (MGS), 1934

target (0.0, +3.3)

sub. pt. (+0.7, +3.6)

7 MANCHESTER CHURCH DARK SPIRE, 1848

target $(-6.0, +0.8)$

sub pt. A $(-7.1, +3.1)$

~~sub pt. B~~

8 SALEM, NEW ENGLAND POWER CO. SOUTH STACK, 1957

office identified $(+4.8, +1.9)$

9 FORT PICKERING LIGHTHOUSE, 1877

office identified $(+6.0, +1.0)$

14 HIGH ROCK 2 (MGS)

sub pt. A $(+3.2, -4.4)$

sub pt. B $(+2.0, -2.8)$

15 HIGH ROCK 3, 1943

office identified $(+1.8, -3.7)$

17 REVERE CATHOLIC CHURCH TOWER, 1934

office identified $(-4.0, -4.0)$

19 BOOTH (MGS), 1934

sub pt. A $(+3.4, -1.4)$

24 CHELSEA QUIGLEY MEM. HOSPITAL W.T., 1958

office identified $(-1.5, +2.2)$

20 MEDFORD RADIO STATION WEEI-FM TOWER, 1958

~~sub pt. A~~ office identified $(+2.1, -1.0)$

21 MEDFORD TV STATION WNAC TOWER, 1958

office identified $(+5.3, -1.0)$

22 MEDFORD RADIO STATION WEET NE TOWER, 1958

office identified (+1.4, +3.0)

23 MEDFORD RADIO STATION WEET SW TOWER, 1958

office identified (+1.7, +3.1)

STRIP #3

28 BOSTON STATE HOUSE, 1934

office identified (+2.6, +5.5)

27 BOSTON CUSTOM HOUSE TOWER, 1916

office identified (+3.7, +4.7)

25 CHARLESTOWN BUNKER HILL MON., 1846

office identified (+2.2, +0.1)

26 EAST BOSTON, BOSTON and ALBANY R.R. TANK, 1916

office identified (+1.6, +5.5)

24 CHESLEA QUIGLEY MEM. HOSPITAL W.T., 1958

office identified (+7.3, -2.0)

17 REVERE CATHOLIC CHURCH TOWER, 1934

office identified (-4.0, -5.0)

18 REVERE BEACH STACK, 1919

office identified (-4.1, -2.2)

14 HIGH ROCK #2

sub ~~pt.~~ pt. B (+2.9, +3.9)

16 NAHANT COAST GUARD GUPOLA, 1919

office identified (+3.6, +6.4)

13 SWAMPSCOTT HIGH SCHOOL FINIAL, 1940

office identified $(+0.7, +3.4)$

12 SWAMPSCOTT LARGER STANDPIPE, 1934

office identified $(+0.7, +1.8)$

11 MARBLEHEAD, ABBOT TOWER, 1919

office identified $(-0.6, +4.4)$

10 MARBLEHEAD LIGHTHOUSE, 1914

office identified $(+2.0, +5.1)$

7 MANCHESTER CHURCH DARK SPIRE, 1848

target $(-3.5, -5.8)$

sub pt A $(-4.1, -5.2)$

1 MEAD 2 (MGS), 1934

target $(+3.8, -0.7)$

sub.pt. $(+6.2, -1.2)$

5 STONEHAVEN (ROCKPORT TOWN (MGS)), 1939

target $(-2.1, +0.3)$

sub pt A $(-1.3, +1.6)$

sub pt B $(-2.0, +1.2)$

6 STRAITS MOUTH LIGHTHOUSE, 1902

office identified $(-3.1, -5.2)$

STRIP # 4

29 DANVERS, COOKE & KRAUSE
~~COOKE~~ CO. CHIMNEY, 1919

HOME STA (-0.18 +0.79)

SS "A" (-0.01 -0.01)

SS "B" (-1.83 +1.74)

30 BEVERLY, UNITED SHOE MFG. CO. STK., 1934

(-0.01 -0.01)

31 BEVERLY, ODD FELLOWS CUPOLA, 1934

(-1.29 +1.55)

32 BEVERLY, ST. MARYS CHURCH SPIRE, 1934

(-1.32 -1.09)

33 BEVERLY, 1ST BAPTIST CHURCH, 1914

(+1.35 +1.10)

TIE POINTS

12601 (-0.28 -6.78)

12602 (-3.79 -3.20)

13601 (-2.56 -3.47)

14601 (-3.15 -1.53)

DESCRIPTIVE REPORT CONTROL RECORD

MAP T- T-12966	PROJECT NO. PH-6601	SCALE OF MAP 1:10,000	SCALE FACTOR	NONE
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STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE 0 1	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS (<i>1 Ft. = 3048006 meter</i>) FORWARD (BACK)
LEE(GLOUCESTER LEPAGE GLUE COMPANY CHIMNEY), 1928	Vol. 1 P. 880	NA 1927	42 36 56.755 70 41 28.109	1751.3 (1001.1) 640.6 (726.9)
B 7 S 7 1943 3 3	Vol. 1 P. 393	NA 1927	42 34 24.846 70 43 32.896	766.6 (1084.8) 750.3 (618.1)
KETTLE ISLAND 2, 1916	Vol. 1 P. 854	NA 1927	42 34 00.480 70 43 23.543	14.8 (1836.6) 537.0 (831.6)
WOE, 1943	Vol. 1 P. 374	NA 1927	42 34 46.153 70 41 39.492	1424.1 (427.3) 900.6 (467.7)
COMPUTED BY CHB	DATE 8/28/67	CHECKED BY CHB	DATE 9/19/69	

COMPILATION REPORT

T-12966

31. DELINEATION

The Wild B-8 Plotter was used to delineate the planimetry and the low water features. The shoreline was delineated from photography taken at high tide. Control for transfer of detail to the manuscript was based on control used for delineation by the B-8 plotter.

Photography was adequate.

32. CONTROL

See Photogrammetric Plot, dated November 1, 1966.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours are inapplicable.

Drainage was delineated from office interpretation of the photographs.

35. SHORELINE AND ALONGSHORE DETAILS

Delineation of shoreline and alongshore details was by office interpretation of photographs.

36. OFFSHORE DETAILS

No statement.

37. LANDMARKS AND AIDS

Appropriate Form 567s were submitted under date Sept. 26, 1969.

38. CONTROL FOR FUTURE SURVEYS

None

39. JUNCTIONS

Junctions are in agreement with 1:10,000 sheets T-12965 to the west, T-12967 to the east and T-12962 to the north. Junction with 1:5,000 scale, T-12968 is to the northeast. The area duplicates T-12970, scale 1:5,000 from Longitude 70°41' 15" to 70°43' 15".

There is no contemporary survey to the south.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

A comparison has been made with USGS Quadrangle GLOUCESTER, MA, scale 1:24,000, dated 1960.

47. COMPARISON WITH NAUTICAL CHARTS

A comparison was made with Chart C&GS 243, (IPWICH BAY TO GLOUCESTER HARBOR), scale 1:20,000.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None

ITEMS TO BE CARRIED FORWARD

None

Submitted by:

Richard R. White

R.R. White
Cartographic Technician
8/22/67

Approved:

Albert C. Rauck, Jr.

Albert C. Rauck, Jr.
Chief, Coastal Mapping Section

Sept. 24, 1973

GEOGRAPHIC NAMES

FINAL NAME SHEETS

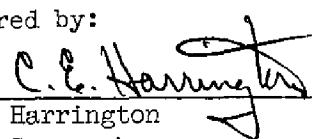
Ph-6601 (Boston to Plum Island, Mass.)

T-12966

Annisquam River
Biskie Head
Black Beach
Bond Hill
Boston and Maine (RR)
Buswell Pond
Clark Pond
Coolidge Point
Crow Island
David Rock
Fernwood Lake
Goldsmith Point
Graves Beach
Graves Island
Gray Beach
Great Egg Rock
Kettle Cove
Kettle Island
Lily Pond
Little Egg Rock
Little River
Magnolia
Magnolia Harbor
Magnolia Point
Massachusetts Bay
Mussel Point
Normans Woe
Normans Woe Cove
Normans Woe Rock
Popplestone Beach
Presson Point

Rafes Chasm
Saddle Rock
Stanwood Point
Susan Point
Town Head
Wallace Pond
West Gloucester
West Pond
White Beach
Wolf Hill

Prepared by:


C. E. Harrington
Staff Geographer

T - 12966

49. NOTES FOR THE HYDROGRAPHER AND FIELD EDITOR

Separate edit ozalids have been prepared for your respective uses. These are intended to simplify your efforts and eliminate the possibility of any duplication of edit procedures.

On each are noted pertinent remarks concerning doubtful interpretations or items of compilation requiring additional clarification and/or verification.

For the field editor, notes include all items inshore from the approximate M.L.W.L. All offshore items are noted for the Hydrographer's attention.

Among these items requiring edit by both parties, are "Landmarks and Aids". These are indicated by a numeral. The following key is an explanation of the attention they may require:

1. Object not visible on photos. Verify by edit.
2. Object visible, position verified.(by compiler)
3. Object visible, position re-determined. Verify by edit.
4. Object which may be a landmark or new aid. Verify by edit.

Forms 567 should be submitted for all "Landmarks and Aids".

PHOTOGRAMMETRIC OFFICE REVIEW

T-12966

1. PROJECTION AND GRIDS		2. TITLE		3. MANUSCRIPT NUMBERS		4. MANUSCRIPT SIZE	
LL Graves		LL Graves		LL Graves		LL Graves	
CONTROL STATIONS							
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY				6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations)		7. PHOTO HYDRO STATIONS	
LL Graves				LL Graves		None	
8. BENCH MARKS		9. PLOTTING OF SEXTANT FIXES		10. PHOTOGRAMMETRIC PLOT REPORT		11. DETAIL POINTS	
Not Applicable		None		Washington, Office H.P. Eichert		LL Graves	
ALONGSHORE AREAS (Nautical Chart Data)							
12. SHORELINE		13. LOW-WATER LINE		14. ROCKS, SHOALS, ETC.		15. BRIDGES	
LL Graves		LL Graves		LL Graves			
16. AIDS TO NAVIGATION		17. LANDMARKS		18. OTHER ALONGSHORE PHYSICAL FEATURES		19. OTHER ALONGSHORE CULTURAL FEATURES	
LL Graves		LL Graves		LL Graves		LL Graves	
PHYSICAL FEATURES							
20. WATER FEATURES				21. NATURAL GROUND COVER		22. PLANETABLE CONTOURS	
LL Graves				LL Graves		X X	
23. STEREOSCOPIC INSTRUMENT CONTOURS		24. CONTOURS IN GENERAL		25. SPOT ELEVATIONS		26. OTHER PHYSICAL FEATURES	
X X		X X		X X		LL Graves	
CULTURAL FEATURES							
27. ROADS		28. BUILDINGS		29. RAILROADS		30. OTHER CULTURAL FEATURES	
LL Graves		LL Graves		LL Graves		LL Graves	
BOUNDARIES							
31. BOUNDARY LINES				32. PUBLIC LAND LINES			
X X				X X			
MISCELLANEOUS							
33. GEOGRAPHIC NAMES				34. JUNCTIONS		35. LEGIBILITY OF THE MANUSCRIPT	
LL Graves				LL Graves		LL Graves	
36. DISCREPANCY OVERLAY		37. DESCRIPTIVE REPORT		38. FIELD INSPECTION PHOTOGRAPHS		39. FORMS	
		LL Graves		None		LL Graves	
40. REVIEWER				SUPERVISOR, REVIEW SECTION OR UNIT			
CHB CHB & LLG 8/30/67				Albert C. Rauck, Jr. Albert C. Rauck, Jr.			
41. REMARKS (See attached sheet)							
FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT							
42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.							
COMPILER *C.H. Bishop CHB 9/19/69				SUPERVISOR			
Reviewer: R.E. Smith 9/25/69				Albert C. Rauck, Jr.			
43. REMARKS							
Field Edit applied from: Reduction of Map Manuscript T-12970, Field Edit Ozalid for T-12966, Matte Ratio Prints.							
*Transfer of F.E. from reduction of T-12970.							

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FIELD EDIT REPORT

PH-6601

Boston to Plum Island

T-12966 67-1:10,000 T-12970 71-1:5000

GENERAL NOTES

This report is submitted for four T-sheets, field edited July thru September 13, 1968.

All notations on discrepancy sheets and Photographs are made in violet ink. The notations were made either directly on the discrepancy print or referenced to Photos.

51 METHODS

Field edit was accomplished by the following methods, by skiff and truck travel and by walking section of the shoreline.

All rock and ledge areas were inspected at or near low-water, and found to be compiled adequate. The rock and ledge heights were obtained by hand leveling from mean high-water line or from mean low-water.

All discrepancies on the field edit sheets have been verified directly on the sheets or referenced to a photograph.

Notations on photographs by sheet numbers are as follows.

T-12966	T-12967	T-12970	T-12971
65-S-7245	65-S-7049	65-S-7285	65-S-7049
7246	7051	7288	7050
		7292	7051
		7293	7292
		7294	7293
			7294

52 ADEQUACY OF COMPIATION

The compiotion of MHWL and MLWL around ledge and rock areas as a whole appeared to be adequate, several ledge and rock areas in question were inspected at low water and noted on the discrepancy print and referenced to a photograph. Compiation of piers, street and buildings was found to be good.

54 RECOMMENDATIONS

None

56 ROCKS

Several rocks were verified directly on the field edit sheets. All other rocks, rock areas, and additional rocks recommended for charting are noted on the field edit ozalids and referenced to photos.

57 NAUTICAL LANDMARKS AND FIXED AIDS

All nautical landmarks and fixed aids were inspected and submitted on form 567.

58 SUBMERGED PIPE LINES AND CABLES

All submerged pipe lines and cable areas are noted on the field edit ozalid and referenced to a photograph. These areas being verified either by Gloucester City engineers and by the electric light and power company.

59 LANDMARK BUILDINGS AND BLUFFS

Landmark building recommended for deletion and charting are noted directly on the discrepancy sheet. All addition landmark and water-front buildings recommended for charting are circled or outlined on the following photos. 65-S-7049, 50, 72, 45, 85, 88, 92, 93, and 94.

There are four new water-front buildings in Gloucester Harbor shown directly on the field edit ozalid.

All bluffs were investigated of shore and bluff recommended for charting are inked on the following photos. 65-S-7049, 50, 7245, 88, and 93.

Three public buildings are circled on photos 65-S-7050, and 7293.

60 STREETS

All street additions and classification are not on the field edit sheet and referenced to the photos.

Submitted by
E. W. Hartford
E. W. Hartford

28 oct. 1968

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

C&G.S. FORM 567
(11-42)

NONFLOATING AIDS TO NAVIGATION

TO BE CHARTED
UNDETERMINED
UNDETERMINED

Atlantic Marine Center

Jan. 8, 1969

I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on (attach copy) the charts indicated.

The positions given have been checked after listing by

Allen L. Powell
Allen L. Powell
Director, AMC

Chief of Party

STATE MASSACHUSETTS			POSITION						METHOD OF LOCATION AND SURVEY No.	DATE OF OCCASION Verifi.	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE #		LONGITUDE #		DATUM							
			° ' "	D.M. METERS	° ' "	D.P. METERS								
	IPSWICH BAY													
	ANNISQUAM RIVER													
LIGHT 35	Channel Light 35													
	Black Cylindrical Structure		42 37	20.03 618	70 41	21.42 488	N.A. 1927		Photo T-12970	7/16/68	x	x		233 243
LIGHT 39	Channel Light 39													
	Black Cylindrical Structure		42 37	11.63 359	70 41	09.57 218	N.A. 1927		Photo T-12970	7/16/68	x	x		233 243
LIGHT 46	Channel Light 46													
	Red Cylindrical Structure		42 36	17.15 1455	70 40	16.55 1061	N.A. 1927		Photo T-12970	7/16/68	x	x		233 243
	</													

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

USCGM-DC 14234-P

TO BE DELETED
TO BE DELETED
TO BE DELETED

STRIKE OUT TWO

LANDMARKS FOR CHARTS

Atlantic Marine Center

Jan. 8, 1969

I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be
~~deleted~~ (deleted from) the charts indicated.

The positions given have been checked after listing by

L. L. Graves

Allen L. Powell

Director, AMC

Chief of Party

STATE	MASSACHUSETTS	CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION						METHOD OF LOCATION AND SURVEY NO.	DATE OF EXAMINE Verifi.	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED	
					LATITUDE*		LONGITUDE*										
					°	'	D.M. METERS	°	'	D.P. METERS							
			GLOUCESTER HARBOR														243

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and noncharting aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

USCGM-16234-P01

v by P. Powell

25



NONFLUORESCENT LANDMARKS FOR CHARTS

TO BE CHARTED
XXXXXXXXXX
XXXXXXXXXX

STRING OUT TWO

Jan. 8 19 69

Atlantic Marine Center

I recommend that the following objects which have been inspected from seaward to determine their value as landmarks be charted on ~~XXXXXX~~ the charts indicated.
The positions given have been checked after listing by *L. L. Graves*

L. L. Graves

Allen L. Powell

Director, AMC

Chief of Party

STATE	MASSACHUSETTS			POSITION						METHOD OF LOCATION AND SURVEY No.	DATE OF REVISION Verifi.	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED	
	CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE*		LONGITUDE*		DATUM								
				• 1	• 2	• 1	• 2									
TWIN TOWER	Round Tower	GLoucester Harbor	Stone Ht = 80 (130)	42 35	05.96	70 41	34.17	N.A.	Photo	T-12970	7/23/68	x			233	
					184		786	1927					243			
					53.64	70 41	03.47	N.A.	Photo		x		233			
					1655		79	1927			x		243			
MARKER			Range Rear, Wood Lattice													
CHIMNEY		White Triangle, 8 ft. above ground	(Lee 1928) Gloucester Lepage	42 34	49.24	70 41	50.12	N.A.	Photo	T-12970	10/14/68	x			233	
					1541		1150	1927					243			
			Glue Factory Chimney, Round													
			Red Brick Ht = 155 (165)	42 36	56.755	70 41	28.109	N.A.	Triang.	T-12970	7/23/68	x			233	
			1751.3		640.6	1927				243						

This form shall be prepared in accordance with Hydrographic Manual, Publication 20.2, Sec. 1-55, 2-39, 6-36, 7-18 to 22 inclusive, and Fig. 79. Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

TO BE CHARTED
VC-06-REF-1010
FOREF-DELETED

STRIKE OUT TWO

NON-TECHNICAL AIDS OR LANDMARKS FOR CHARTS

Atlantic Marine Center
September 22, 1969

I recommend that the following objects which have ~~(been inspected)~~ been inspected from seaward to determine their value as landmarks be charted on ~~(the charts)~~ the charts indicated.

The positions given have been checked after listing by

Charles H. Bishop
Charles H. Bishop

Allen L. Powell, Director, AMC Chief of Party

Allen L. Powell, Director, AMC Chief of Party

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, Publication 20-2, Sec. 1-35, 2-39, 6-36, 7-13 to 22 inclusive, and Fig. 79. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. Revisions shall show both the old and new positions. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

* TABULATE SECONDS AND METERS

in the

REVIEW REPORT T-12966

SHORELINE

MARCH, 1974

61. GENERAL STATEMENT:

See Summary which is page six (6) of the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Visual comparison was made with Registered Survey No. 3764 dated 1919 at 1:10,000 scale. They agree only generally since there is a difference in datum. Many natural changes have occurred over the period of about 40 years. No direct comparison was made on the discrepancy print. For the area east of Magnolia Point and the northeastern section of this survey see T-12970 at 1:5,000 scale.

This survey supersedes any prior listed survey for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Comparison was made with USGS Quadrangle Gloucester, MA, at 1:24,000 scale dated 1960. There is general agreement only. For the area eastward of Magnolia Point and the northeast portion of the sheet see the report for T-12970.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with verified Boat Sheet H-9090 at 1:10,000 scale dated 1969. There is very good agreement between the two surveys. East of Magnolia Point see report for T-12970.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Chart 243 at 1:20,000 scale, dated Oct. 6, 1973. There is some discrepancy on the shoreline. Some of the difference is because of natural change.

The rest can be attributed to improved methods of mapping since the base for the original shoreline was made. The differences are noted on the discrepancy print in red.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This survey complies with project instructions and meets the National Standards of Map Accuracy.

Reviewed by:



Bernard Kurs
Cartographer

Approved for forwarding:



Victor E. Serena
Chief, Photogrammetric Branch, AMC

Approved:

Chief, Photogrammetric Branch  Chief, Coastal Mapping Division

REVIEW REPORT T-12970

SHORELINE

MARCH, 1974

61. GENERAL STATEMENT:

See Summary which is p. six (6) of the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Comparison was made with T-9079 at 1:10,000 scale with 1952 photography and field edited 1953. There was very good agreement except in areas where natural changes are to be expected. These areas are grass in water, marshy shoreline and sandy beaches. There are no significant differences.

This survey supersedes any prior listed surveys for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A visual comparison was made with USGS Quadrangle Gloucester, MA, dated 1960 at 1:24,000 scale. The visual comparison indicates general agreement with some minor changes of grass in water and marsh mean high water line.

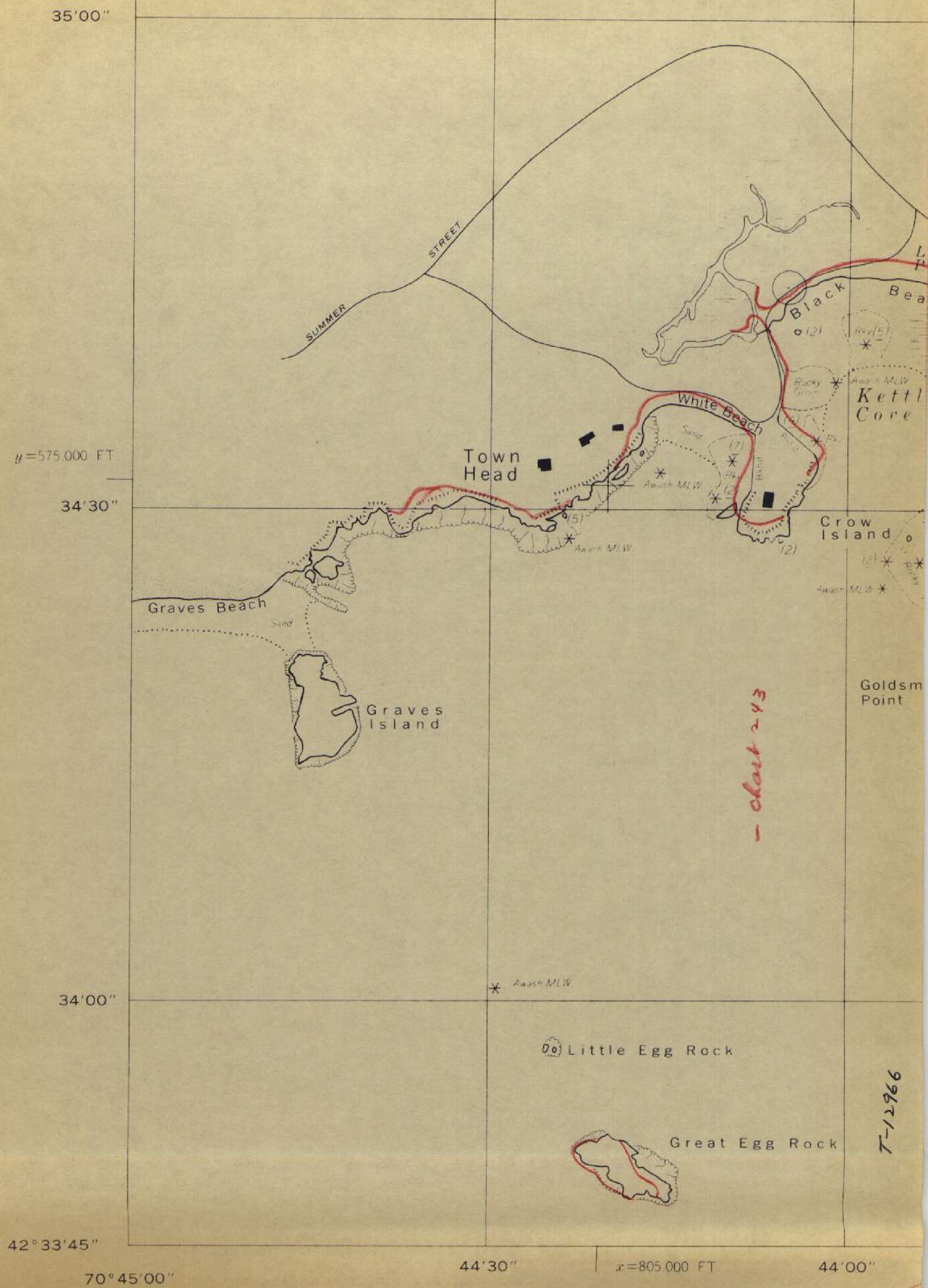
64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with final Boat Sheet H-8942 at 1:5,000 1969, with excellent agreement, two (2) boat sheets from the explorer (no H-number) dated 1967 at 1:5,000 scale. Comparison is good except for minor changes made during the 1968 field edits.

65. COMPARISON WITH NAUTICAL CHARTS:

Comparison was made with Chart 233 at 1:10,000 scale dated Jan. 6, 1973. There was good agreement except for items as mentioned under Par. 62. The only significant difference is an extensive marina at the bend in the Blyman Canal at Lat. 42°36' 45" on the eastern edge of the sheet. The area west of "Normans Woe," was visually compared with Chart 243 at 1:20,000 scale dated Oct. 6, 1973 and appears to be in good agreement.





x=815.000 FT

42°00"

41°30"

70°41'15"

42°37'30"



37°00"

y=590.000 FT

36°30"

- chart 243

T-12966