

T-12975

T-12975

NOAA FORM 76-35

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

DESCRIPTIVE REPORT

Type of Survey Shoreline (Photogrammetric)

Job No. PH-6601..... Map No. T-12975

Classification No. Edition No.

Field Edited

LOCALITY

State Massachusetts

General Locality Boston to Plum Island

Locality Salem Harbor

19 65 TO 19 68

Alfred C. Holmes, Director, AMC

REGISTRY IN ARCHIVES

DATE

DESCRIPTIVE REPORT - DATA RECORD

T-12975

PROJECT NO. (II): Job PH-6601		
FIELD OFFICE (II): None		CHIEF OF PARTY
PHOTOGRAMMETRIC OFFICE (III): Atlantic Marine Center, Norfolk, VA		OFFICER-IN-CHARGE Alfred C. Holmes, Director, AMC
INSTRUCTIONS DATED (III) (III): Field - August 4, 1965 Field - August 19, 1965 Provisional Instructions, Aerial Photography Office - October 8, 1965 Instructions, Aerotriangulation Office - January 27, 1966 Office - February 2, 1966 Instructions, Aerotriangulation Office - April 28, 1966 Field - May 20, 1966 Supplement I Office - July 11, 1966 Supplement I		
METHOD OF COMPILATION (III): Wild B-8 and Graphic		
MANUSCRIPT SCALE (III): 1:5,000	STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III): 1:7,500 Pantographed to 1:5,000	
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): NA 1927		VERTICAL DATUM (III): MHW 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 or mean lower low water
REFERENCE STATION (III): Salem, Naumkeag Chimney 1916		
LAT.: 42° 31' 00.507" (15.6)m	LONG.: 70° 53' 11.116" (253.8m)	☒ ADJUSTED ☐ UNADJUSTED
PLANE COORDINATES (IV): y = 553, -320.79 Ft. x = 765,426.24 Ft.		STATE Massachusetts
		ZONE Mainland
MAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (II) FIELD PARTY, (III) PHOTOGRAMMETRIC OFFICE, OR (IV) WASHINGTON OFFICE. WHEN ENTERING NAMES OF PERSONNEL ON THIS RECORD GIVE THE SURNAME AND INITIALS, NOT INITIALS ONLY.		

DESCRIPTIVE REPORT - DATA RECORD

T-12975

FIELD INSPECTION BY (III):

None

DATE:

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

Air Photo Compilation

Date of photography: August, 1965

PROJECTION AND GRIDS RULED BY (IV):

A.E. Roundtree

DATE

6/1/66

PROJECTION AND GRIDS CHECKED BY (IV):

R. Glaser

DATE

6/3/66

CONTROL PLOTTED BY (III):

L. Neterer

DATE

9/26/66

CONTROL CHECKED BY (III):

A. Santillan

DATE

9/26/66

RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):

H.P. Eichert

DATE

11/1/66

STEREOSCOPIC INSTRUMENT COMPILATION (III):

PLANIMETRY

A.L. Shands

Reviewed by: L.O. Neterer

DATE

2/23/67

CONTOURS

Inapplicable

DATE

2/23/67

MANUSCRIPT DELINEATED BY (III):

A.L. Shands

Roads and interior details corrected graphically by LLG

DATE

3/1/67

11/1/68

SCRIBING BY (III):

DATE

PHOTOGRAMMETRIC OFFICE REVIEW BY (III):

C.H. Bishop

DATE

3/9/67

REMARKS:

DESCRIPTIVE REPORT - DATA RECORD

3

T-12975

CAMERA (KIND OR SOURCE) (III):



Wild RC-8"S"

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
65-S-7184-7185	25 Aug. 65	10:12 EST	1:15,000	8.5 ft. above MLW*
65-S-7195-7196	25 Aug. 65	10:17 "	"	8.4 ft. above MLW*
65-S-7339R-7341R	31 Aug. 65	08:58 "	"	0.1 ft. below MLW*
65-S7349R-7351R	31 Aug. 65	09:04 "	"	0.1 ft. below MLW*

TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION: Boston		9.5	11.0
SUBORDINATE STATION: Salem		9.0	10.4
ORDINATE STATION:			



WASHINGTON OFFICE REVIEW BY (IV): Bernard Kurs, AMC

DATE:
12/1973

PROOF EDIT BY (IV):

DATE:

NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II):

RECOVERED:

IDENTIFIED:

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

4

RECOVERED:

3

IDENTIFIED

0

NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):

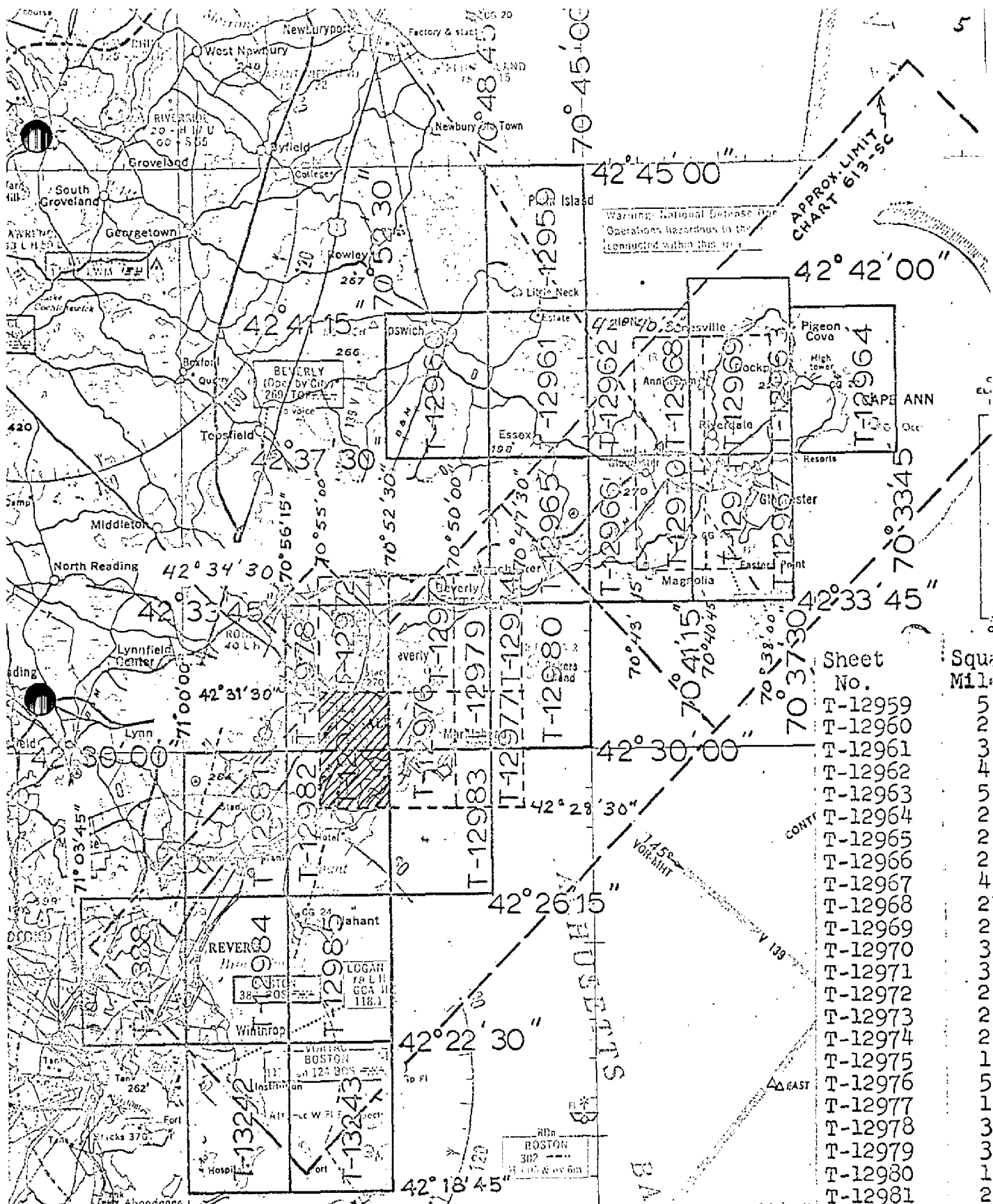
NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III):

REMARKS:

*The stage of tide at the time of photography was determined by readings on a staff at Gloucester Harbor (Ten Pound Island). See Instructions (Office) dated April 28, 1966.



COMPILATION RECORD	COMPLETION DATE	REMARKS
Compilation Complete Pending Field Edit.	Feb. 1967	Superseded
Field Edit Applied Compilation Complete	Aug. 1968	Superseded
Final Review	Dec. 1973	



Sheet No.	Square Miles
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
TOTAL	79

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

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-12975

Job 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.

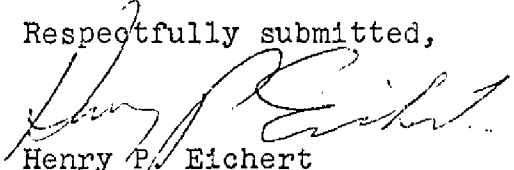
24. Supplemental Data

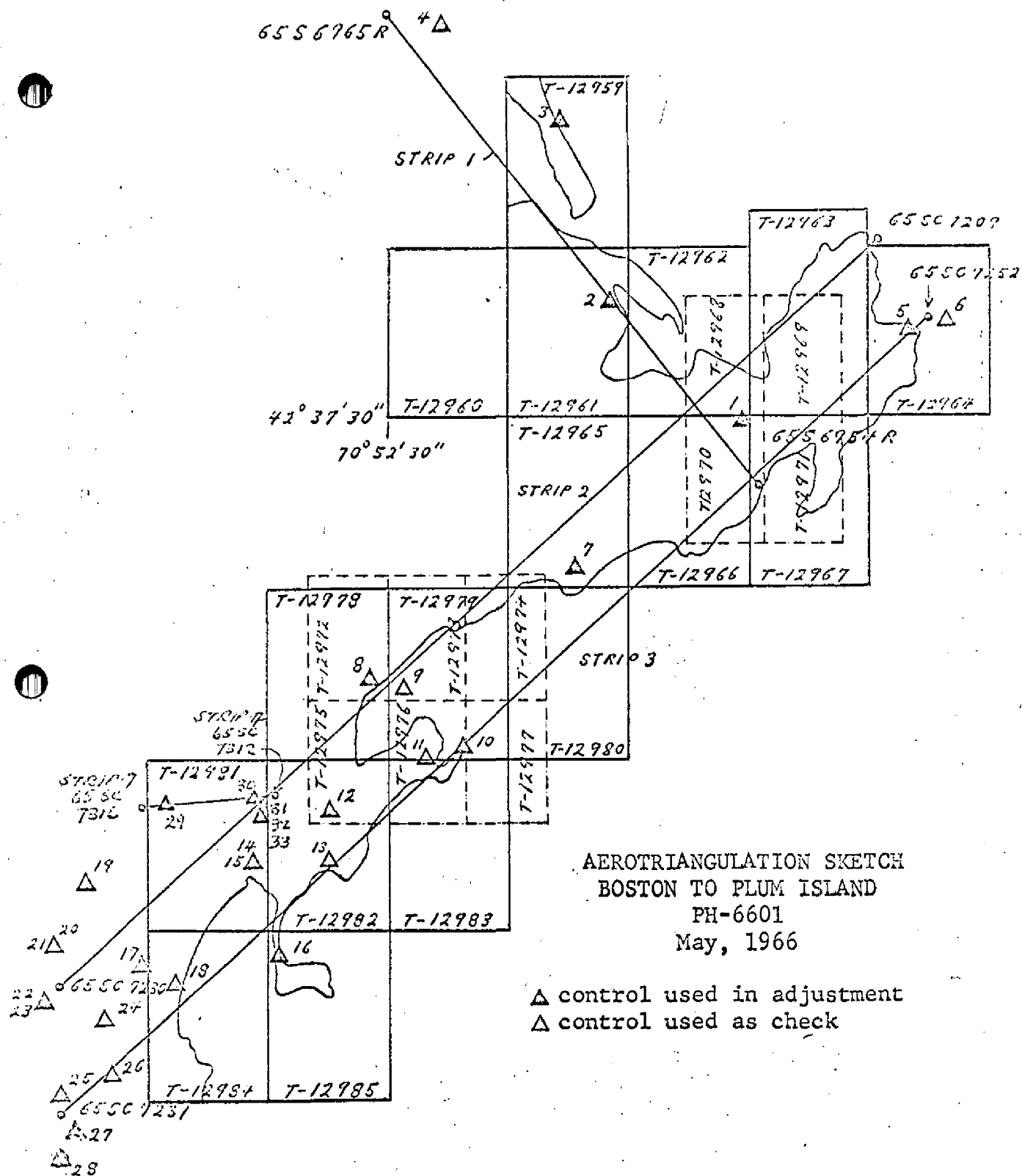
Vertical control points needed ^{as} ~~and~~ control for strip adjustments were taken from USGS quads.

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 CUPOLA, 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)

12
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, 1954

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

~~radio~~ office identified $(+2.1, -1.0)$

21 MEDFORD TV STATION WNAC TOWER, 1958

office identified $(+5.3, -1.0)$

22 MEDFORD RADIO STATION WEEI NE TOWER, 1958

office identified (+1.4, +3.0)

23 MEDFORD RADIO STATION WEEI SW TOWER, 1958

office identified (+1.7, +3.1)

STRIP #3

23 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 ~~to~~ pt. B (+2.9, +3.9)

16 NAHANT COAST GUARD CUPOLA, 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 HEAD 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 & ~~COOKE~~ KRAUSE CO. CHIMNEY, 1919

HOME STA (-0.78 +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-12975 PROJECT NO. PH-6601 SCALE OF MAP 1:5,000 SCALE FACTOR

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR Y COORDINATE LONGITUDE OR X COORDINATE	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION IN METERS (1 Ft. = 3048006 meter) FORWARD (BACK)
DERBY WHARF LIGHTHOUSE 1877	Vol. I Pg. 828	NA 1927	42° 30' 59.33" 70° 53' 02.56"	1830.7 (20.7) 58.4 (1311.3)
SALEM, ST. JAMES CATHOLIC CHURCH SPIRE 1916	Vol. I Pg. 52	"	42° 31' 12.677" 70° 54' 20.158"	391.2 (1460.2) 460.1 (909.5)
SALEM, IMMACULATE CONCEPTION CATHOLIC CHURCH SPIRE 1934	Vol. I Pg. 93	"	42° 31' 16.243" 70° 53' 25.438"	501.2 (1350.2) 580.6 (789.0)
SALEM, NAUMKEAG CHIMNEY 1916	Vol. I Pg. 854	"	42° 31' 00.507 70° 53' 11.116"	15.6 (1835.8) 253.8 (1115.9)
SALEM HOSPITAL CHIMNEY 1919	Vol. I Pg. 870	"	42° 30' 42.585" 70° 54' 27.863"	1314.0 (537.4) 636.1 (733.7)
SWAMPSCOTT LARGER STANDPIPE 1934	Vol. I Pg. 54	"	42° 28' 39.252" 70° 54' 37.805"	1211.2 (640.2) 863.5 (507.0)
SOUTH SALEM NORMAL SCHOOL CHIMNEY, 1919	Vol. I Pg. 870	"	42° 30' 14.685" 70° 53' 29.606"	453.1 (1398.3) 676.0 (693.9)
SALEM COURTHOUSE CUPOLA 1934	Vol. I Pg. 52	"	42° 53' 23.774" 70° 53' 49.163"	733.6 (1117.8) 1122.2 (247.4)
COMPUTED BY LLG	DATE 10/13/66	CHECKED BY JSP	DATE 10/17/66	15

COMPILATION REPORT

T-12975

Project Ph-6601

31. DELINEATION:

The mean high water line was compiled graphically from infrared ratio photographs taken at MHW. Features south of Latitude 42° 29' 00" were compiled graphically from color ratio photographs taken at MLW. All other features were compiled with the Wild B-8 using color photographs taken at MLW.

32. CONTROL:

See Photogrammetric Plot Report. Bridge point number 51603 would not hold and was not used.

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:

See paragraph 31. The mean low water line, reef and ledge limits were delineated from office interpretation of photographs. Rock elevations were determined with Wild B-8 and are to be verified by the hydrographer.

36. OFFSHORE DETAILS:

No statement.

37. LANDMARKS AND AIDS:

Appropriate copies of Form 567 for Landmarks and Aids have been submitted to the Washington Office under date November 19, 1968.

38. CONTROL FOR FUTURE SURVEYS:

None.

39. JUNCTIONS:

Junctions are in agreement with T-12972 (1:5,000) and T-12978 to the north, T-12976 (1:5,000), T-12979 (1:10,000), and T-12983 (1:10,000) to the east; T-12978 (1:10,000) and T-12982 (1:10,000) to the west and T-12982 (1:10,000) to the south.

40. HORIZONTAL AND VERTICAL ACCURACY:

No statement.

46. COMPARISON WITH EXISTING MAPS:

Comparison has been made with U.S.G.S. Quadrangles Salem, Mass., and Lynn, Mass., scales 1:24,000, both dated 1956.

47. COMPARISON WITH NAUTICAL CHARTS:

Comparison has been made with U.S.C. & G.S. Chart 240, scale 1:25,000, 8th edition, revised February 8, 1965 and Chart 241, scale 1:10,000, 3rd edition, dated September 30, 1965.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY:

None.

ITEMS TO BE CARRIED FORWARD:

None.

Submitted by:

A. L. Shands

A.L. Shands

Cartographer - 3/1/67

Approved:

Albert C. Rauck, Jr.

Albert C. Rauck, Jr.

Chief, Coastal Mapping Section, AMC

Sept. 24, 1973

GEOGRAPHIC NAMES

FINAL NAME SHEETS

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

T-12975

Beach Bluff
Clifton
Forest River
Forest River Park
Long Point
Marblehead
Massachusetts Bay
North River
Palmer Cove
Palmer Point
Phillips Beach
Pickering Point
Salem
Salem Common
Salem Harbor
South River
South Salem

Prepared by:

C. E. Harrington
C. E. Harrington
Staff Geographer

T -12975

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. 12975

1. PROJECTION AND GRIDS CHB	2. TITLE CHBQ	3. MANUSCRIPT NUMBERS CHB	4. MANUSCRIPT SIZE
CONTROL STATIONS			
5. HORIZONTAL CONTROL STATIONS OF THIRD-ORDER OR HIGHER ACCURACY CHB	6. RECOVERABLE HORIZONTAL STATIONS OF LESS THAN THIRD-ORDER ACCURACY (Topographic stations) X		7. PHOTO HYDRO STATIONS X
8. BENCH MARKS X	9. PLOTTING OF SEXTANT FIXES X	10. PHOTOGRAMMETRIC PLOT REPORT Bridge - W.O.	11. DETAIL POINTS X
ALONGSHORE AREAS (Nautical Chart Data)			
12. SHORELINE CHB	13. LOW-WATER LINE CHB	14. ROCKS, SHOALS, ETC. CHB	15. BRIDGES CHB
16. AIDS TO NAVIGATION CHB	17. LANDMARKS CHB	18. OTHER ALONGSHORE PHYSICAL FEATURES CHB	19. OTHER ALONGSHORE CULTURAL FEATURES CHB
PHYSICAL FEATURES			
20. WATER FEATURES CHB	21. NATURAL GROUND COVER X		22. PLANETABLE CONTOURS X
23. STEREOSCOPIC INSTRUMENT CONTOURS X	24. CONTOURS IN GENERAL X	25. SPOT ELEVATIONS X	26. OTHER PHYSICAL FEATURES X
CULTURAL FEATURES			
27. ROADS CHB	28. BUILDINGS CHB	29. RAILROADS CHB	30. OTHER CULTURAL FEATURES CHB
BOUNDARIES			
31. BOUNDARY LINES X		32. PUBLIC LAND LINES X	
MISCELLANEOUS			
33. GEOGRAPHIC NAMES CHB	34. JUNCTIONS CHB		35. LEGIBILITY OF THE MANUSCRIPT CHB
36. DISCREPANCY OVERLAY X	37. DESCRIPTIVE REPORT CHB	38. FIELD INSPECTION PHOTOGRAPHS X	39. FORMS CHB
40. REVIEWER CHB Charles H. Bishop 3/9/67		SUPERVISOR, REVIEW SECTION OR UNIT 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 CHB C/HB Reviewed by: RES 8/30/68 9/3/68		SUPERVISOR Albert C. Rauck, Jr. Albert C. Rauck, Jr.	
43. REMARKS Field Edit Applied From: Field Edit Ozalid and The Following Matte Ratio Photographs: 65 S 7340, 65 S 7349, 65 S 7351.			

FIELD EDIT REPORT

PH-6601

Boston to Plum Island

T-12959 T-12975 T-12976 T-12978 T-12980

GENERAL NOTES

This report is submitted for four T-sheets, field edited May and June 1968 one sheet T-12980 was field edited June 1967 and is being returned.

Most discrepancies on sheet T-12978 are referenced to sheet T-12975 because of duplication. A few in the northwest corner of sheet T-12978 are noted directly on the sheet or referenced to photo 65-S-7315.

All notations on T-sheet and Photographs are made in violet ink. The notations were made either directly on the discrepancy sheet or referenced to photos.

51 METHODS

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

All rock and ledge areas were inspected at or near low-water. The rock and ledge heights were obtained by hand leveling from mean high-water or mean low-water lines, or by using hourly tide heights obtained from the ship Pierce.

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-12975	T-12976	T-12978	T-12959
65-S-7340	65-S-7324	65-S-7315	65-S-7263
7349	7325		
7351	7350		
	7351		
	7352		
	7353		

52 ADEQUACY OF COMPILATION

The compilation of MHWL and MLWL around ledge areas as a whole appeared to be good, several ledge areas were inspected at low water, these are noted on the discrepancy print and referenced to a photograph. Compilation of piers, streets, and buildings was found to be good.

54 RECOMMENDATIONS:

None

56 ROCKS

Very few rocks were verified directly on the field edit sheets. However areas of rocks in question and rocks recommended for charting are noted on the field edit sheet and referenced to

photos.

These are inked on the following photos.

T-12976	T-12975
65-S-7324	65-S-7340
7325	7351
7350	
7351	
7352	
7353	

NAUTICAL LANDMARKS AND FIXED AIDS

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

58 LANDMARK BUILDINGS AND BLUFFS

Three landmark buildings are ^{recommended} ~~recomend~~ for deletion, one each on the following T-sheets, T-12975, T-12976, and T-12978. All landmark buildings recommended for charting are circled and labeled as such on the following photos.

65-S-7324, 7350, 7352

All bluffs were investigated off shore and bluffs recommended for charting are inked on the following photos.

65-S-7324 7350 7352

All Public Buildings are circled on the following photos,
65-S-7340  7349 7352

59 STREETS

All street additions and classifications for T-sheets T-12975 and T-12976 are noted on the field edit sheet and referenced to the photos.

Submitted by

E. W. Hartford
E. W. Hartford

2 June 1968

~~NONFLOATING AID TO NAVIGATION~~ LANDMARKS FOR CHARTSTO BE CHARTED
TO BE REMOVED
TO BE DELETED } STRIKE OUT TWO

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

The positions given have been checked after listing by

Lawrence L. Graves
Lawrence L. Graves*Howard S. Cole*
Howard S. Cole

Atlantic Marine Center, Norfolk, Va. Nov. 19, 1968

Director, AMC

Chief of Party

STATE	MASSACHUSETTS			SIGNAL NAME	DESCRIPTION	POSITION						METHOD OF LOCATION AND SURVEY No.	DATE OF OCCASION - Verified	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
	CHARTING NAME	LATITUDE #	LONGITUDE #			DATUM											
							° ' "	D.M. METERS	° ' "	D.P. METERS							
	SPIRE		42 31	16.243 501.2	70 53	25.438 580.6	NA 1927				Tri. T-12975	5/24/68	X	X			240 241
	SPIRE		42 31	12.677 391.2	70 54	20.158 460.1	"				"	"	X	X			240 241
	STANDPIPE		42 30	55.74 1720	70 54	54.01 1233	"				Photo T-12975	6/7/68	X	X			240 241
	CHURCH TOWER		42 31	01.20 37	70 53	34.21 781	"				"	"	X	X			240 241
	STACK		42 31	00.507 15.6	70 53	11.116 253.8	"				Tri. T-12975	"	X	X			240 241
	STACK		42 30	42.585 1314.0	70 54	27.863 636.1	"				"	"	X	X			240
	STANDPIPE		42 28	39.252 1211.2	70 54	37.805 863.5	"				"	"	X	X			240
	CHURCH TOWER		42 31	23.76 733	70 53	36.71 838	"				Photo T-12975	"	X	X			240

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

REVIEW REPORT T-12975

SHORELINE

December, 1973

61. GENERAL STATEMENT:

See summary which is page 6 of the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Comparison was made with Registered Survey 3766 dated 1919 at 1:10,000 scale. There is a difference in datum therefore only a visual comparison was made. The changes are natural and man made. No markings on the comparison sheet were made.

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

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

A visual comparison was made with U.S.G.S. Quadrangles Salem, Mass. and Lynn, Mass. Both are at 1:24,000 scale and dated 1956. The two surveys are in very good agreement.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with a copy of Boat Sheet H-9012, 1968 at 1:5,000 scale. The two surveys are in excellent agreement.

65. COMPARISON WITH NAUTICAL CHARTS:

A visual comparison was made with Chart 240 at 1:25,000, scale dated May 19, 1973. There is good agreement with the exception of natural and man-made changes. 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:

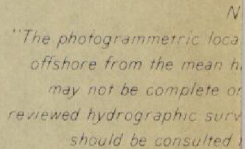
Bernard Kurs
Bernard Kurs
Cartographer

Approved for forwarding:

Victor E. Serena
Victor E. Serena
Chief, Photogrammetric Branch, AMC

Approved:

Randall C. Youngblood
Chief, Photogrammetric Branch *for* Chief, Coastal Mapping Division



30

53'15"

70° 53'

52'45"

Chart 240 1:25,000

29'45"

Forest River

Flood gate

DISMANTLED RR

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