

10497

Diag. Cht. No. 1210-2.

FORM C&GS-504

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

## DESCRIPTIVE REPORT

Type of Survey Planimetric

Field No. Ph-163 Office No. T-10497

### LOCALITY

State Rhode Island

General locality Narragansett Bay

Locality Melville

10497

DESCRIPTIVE REPORT - DATA RECORD

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T-10497

Ph-163

Project No. (II): *Ph-163*      Quadrangle Name (IV):

Field Office (II): **East Providence, R. I.**

Chief of Party: **Ira R. Rubottom**

Photogrammetric Office (III): **Baltimore, Maryland**

Officer-in-Charge: **William F. Deane**

Instructions dated (II) (III):

(II) **9 April 1956**  
**13 March 1957**

Copy filed in Division of  
Photogrammetry (IV)

Method of Compilation (III): **Kelsh Plotter**

Manuscript Scale (III): **1:10,000**

Stereoscopic Plotting Instrument Scale (III): **1:6,000**  
**(Pantograph ratio 3/5)**

Scale Factor (III): **1.000**

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): **N.A. 1927**

Vertical Datum (III):

~~Mean low water or mean lower low water~~ **MHW**

Elevations shown as (25) refer to mean high water  
Elevations shown as (S) refer to sounding datum  
i.e., mean low water or mean lower low water

Reference Station (III): **DYER ISLAND, 1843**

Lat.: **41° 34' 56.699" (1749.2 m)**      Long.: **71° 17' 55.606" (1288.1 m)**

Adjusted

~~unadjusted~~

Plane Coordinates (IV):

State: **Rhode Island**      Zone: **---**

Y=

X=

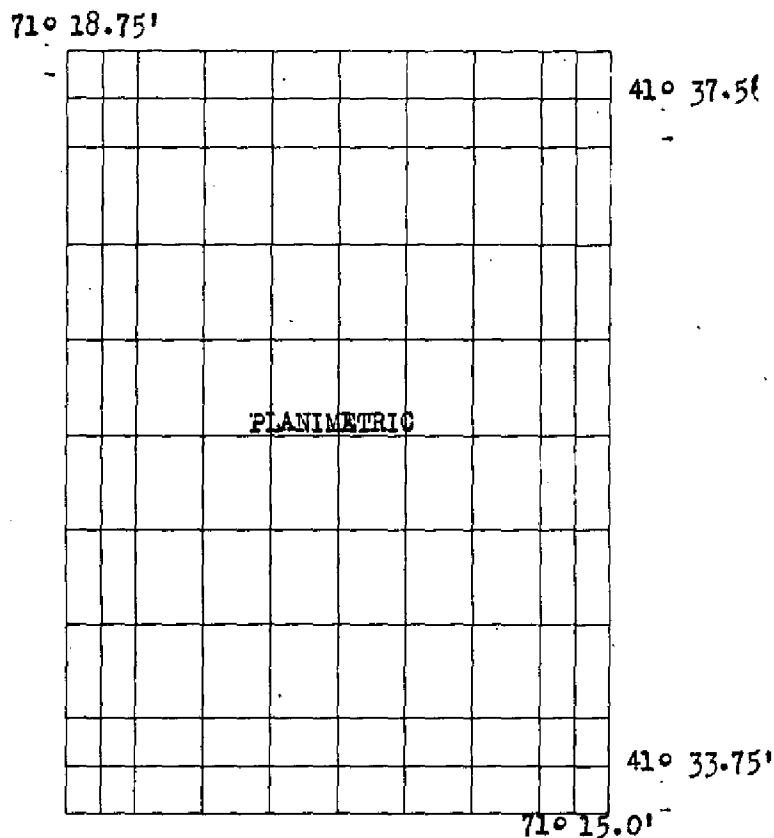
Roman numerals indicate whether the item is to be entered by (II) Field Party, (III) Photogrammetric Office,  
or (IV) Washington Office.

When entering names of personnel on this record give the surname and initials, not initials only.

DESCRIPTIVE REPORT - DATA RECORD

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY

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Areas contoured by various personnel  
(Show name within area)  
(II) (III)





DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): U.S.C. & G. S. "W" - 6" focal length.

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PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
54-W-1149 thru 1152	4/22/54	1324	1:10,000	1.7 above MLW
56-W-240 thru 242	5/1/56	0930	"	2.5 above MLW
56-W-470 thru 471	"	1148	"	2.6 above MLW

Tide (III)  
(from predicted tables)

Reference Station: Newport, R. I.  
Subordinate Station: Prudence Island, Sandy Point  
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
	3.5	4.4
	3.9	4.9

Washington Office Review by (IV): S.G. BLANKENBAKER

Date: DEC. 1966

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 8.5 sq. mi.  
Shoreline (More than 200 meters to opposite shore) (III): 7.5 miles  
Shoreline (Less than 200 meters to opposite shore) (III): 0.5 "

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II):	29	Recovered: 15	Identified: 6
Number of BMs searched for (II):	4	Recovered: 4	Identified: 1

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III): see paragraph 38

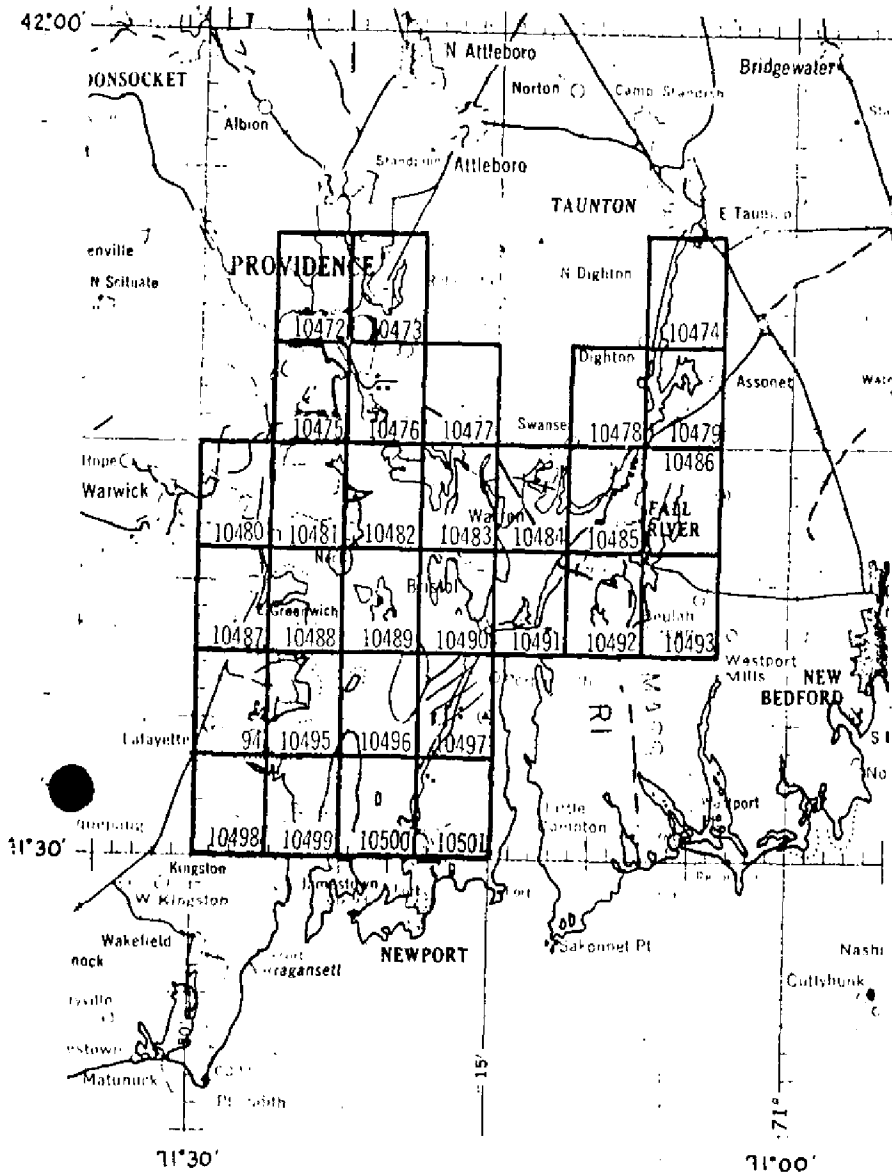
Remarks:

All bench marks searched for are Tidal Bench Marks.

# PLANIMETRIC MAPPING PROJECT PH - 163

Narragansett Bay, Mass. - Rhode Island

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## OFFICIAL MILEAGE FOR COST ACCO

SHEET NO.	lin. Mi. SHORELINE	sq. ft.
10472	10	12
10473	7	12
10474	- 0 -	10
10475	8	10
10476	6	11
10477	2	13
10478	1	13
10479	7	12
10480	2	13
10481	4	13
10482	9	14
10483	6	11
10484	9	8
10485	8	10
10486	7	10
10487	3	13
10488	6	6
10489	7	3
10490	8	7
10491	8	6
10492	1	11
10493	3	13
10494	2	13
10495	5	6
10496	5	4
10497	5	7
10498	- 0 -	14
10499	10	7
10500	6	11
10501	2	13

TOTALS 158 294

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SUMMARY TO ACCOMPANY DESCRIPTIVE REPORT  
T-10497

Job PH-163, comprised of thirty planimetric surveys, covers Narragansett Bay, Rhode Island-Massachusetts.

A complete field inspection preceded compilation. Limited field edit was accomplished in conjunction with contemporary hydrographic survey H-8395. The project was bridged by multiplex and compiled by Kelsh plotter.

The accompanying addendum to this Summary includes information concerning the adequacy and accuracy of project maps. The review report includes additional information concerning the subject map.



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ADDENDUM TO SUMMARIES TO ACCOMPANY  
JOB PH-163 MAPS T-10472 through T-10501  
(ACCURACY AND FUTURE SURVEYS)

Most of the project maps were used in contemporary hydrographic survey operations. Four hydrographic surveys accomplished in the period of time between 1943 and 1955 cover the project area outside the areas of contemporary surveys.

The contemporary hydrographic surveys have been registered. With one exception they are classified "basic". Survey H-8367 is classified as "basic for charting only".

Considerable difficulty was experienced during smooth plotting and verification of some hydrographic surveys in using signals located by plane table methods. Many of the objects were identified on field photographs by the plane table party. Field identification of these objects was re-examined in the Baltimore Office, Compilation Unit. Some of the objects were relocated photogrammetrically and this revised information was furnished for use in smooth plotting.

The Norfolk Processing Office Addendum to Accompany Survey H-8316 mentions difficulties experienced when plotting sextant angles locating piles, piers, shoreline changes, etc. -- they were seldom in agreement with photogrammetric manuscript positions. The Washington office verifier was unable to adjust the subject information using the available hydrographic data. To assist in resolving the discrepancies, the Photogrammetry Division (Washington Office Review Group) rechecked signal locations on Maps T-10472, T-10473, T-10475 and T-10476. Fifty-seven signal locations and random portions of shoreline were revised by graphic methods using available field photographs that included field identified primary control and signals. This additional work is subject to error due to the condition of the photographs and the more limited use of project control; many discrepancies between the surveys, however, were resolved by using the revised information. No requests for similar rechecks were made by verifiers of other hydrographic surveys.

In part, the problems encountered in survey H-8316 (and H-8394) during hydrography and by verifiers can be attributed to the enlargement of these photogrammetric maps from 1:10,000 to 1:5,000 scale for use in hydro support. Similar problems on

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4

other hydrographic surveys were attributed, in part, to incorrect transfer of signals, substandard plotting and use of weak sextant fixes.

Control for project bridging (multiplex) was classified "over abundant" (150 stations). While 25% of the stations were "difficult to see", only two stations were not held. Pass points between strips were averaged-adjustment less than 0.5 mm.

In addition to the previously mentioned supplemental work (relocation of signals and shoreline), two stereoplanigraph models were set to test horizontal map accuracy. The models covered parts of maps T-10472 and T-10473. A datum difference was found to exist between Bureau control and MGS and USGS control. Adjustment of these difference produced no appreciable shift in map details.

Rock information mapped on some of the photogrammetric surveys was incomplete as the result of poor photography inadequately supplemented by field inspection. The hydrographer located many rocks missed on the photogrammetric survey; and, in addition, the hydrographic survey reviewers found it necessary to bring forward considerable rock information without the benefit of verification by either the photogrammetric surveys or the contemporary hydrographic surveys.

These surveys have been used, in part, for nautical charting through both direct application of details and indirectly through contemporary hydrographic surveys. As previously mentioned, all but one of the contemporary hydrographic surveys have been registered as "basic surveys". Registration of these maps is recommended. Future use of the maps for hydro support purposes is not recommended due to the previously discussed problems that were encountered. Re-bridging by analytic aerotriangulation and new mapping with new color and infrared photography is recommended.

S. G. Blankenbaker  
S. G. Blankenbaker

NOTE: POLITICAL BOUNDARIES - With the exception of the Mass.-Rhode Island state line, none of the numerous mapped political boundaries are shown on modern charts. In consideration of the loss of some field photographs, and requests by photogrammetric office reviewers for field verification of boundaries, it is recommended that the project maps not be considered sources for political boundaries (with the exception of the state line). sgs



FIELD INSPECTION REPORT  
Project 25120  
Map T-10497

Please refer to the Field Inspection Report for Map T-10494  
for all data pertaining to this map.

*Martin C. Moody*  
Martin C. Moody  
Cartographic Survey Aid

Approved:

*Ira R. Rubottom*

Ira R. Rubottom  
Chief of Party

FIELD INSPECTION ~~REPORT~~  
PHOTOGRAPHS -

56W 229, 240, 241, 242,  
471

54W 1148, 1149, 1150, 1151  
1194

PHOTOGRAPHS 56W 471, 54W 1194  
WERE MISSING AT THE TIME OF  
FINAL REVIEW - APPARENTLY  
LOST.



U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEY  
DESCRIPTIVE REPORT  
CONTROL RECORD

MAP T. 10497

PROJECT NO. Ph-163

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR $\mu$ -COORDINATE LONGITUDE OR $x$ -COORDINATE	DISTANCE FROM GRID IN FEET, OR PROJECTION LINE IN METERS	DATUM CORRECTION	N.A. 1927 - DATUM DISTANCE FROM GRID OR PROJECTION LINE IN METERS	FACTOR DISTANCE FROM GRID OR PROJECTION LINE IN METERS
PRUDENCE ISLAND LIGHTHOUSE, 1912	G-4740 p. 65	N.A. 1927	41 36 20.798 71 18 14.587	641.6 1209.4 337.8 1051.6			
DYER ISLAND, 1843	p. 57	"	41 34 56.699 71 17 55.606	1749.2 101.8 1288.1 101.8			
BLACK TANK, 1932	p. 66	"	41 37 26.35 71 15 43.38	812.9 1038.1 1004.2 384.8			
PORTSMOUTH BELFRY 1869	G-6522 p. 145	"	41 36 12.79 71 14 53.78	394.6 1456.4 1245.4 144.0		EAST OF PROJECT	
MCCURRY'S PT, 1917	G-6242 p. 99	"	41 34 32.648 71 14 13.000	1007.2 843.8 301.2 1088.8		EAST OF PROJECT	
FOUR CORNERS BELFRY, 1869	G-6522 p. 146	"	41 34 30.97 71 11 22.52	955.5 895.5 521.7 868.3		EAST OF PROJECT	
QUAKER 3, 1932	G-1246 p. 3	"	41 35 02.100 71 15 18.249	64.8 1786.2 422.7 967.1			
SCHLEGEL FARM WHITE SILO, 1917	G-6242 p. 102	"	41 35 48.026 71 11 56.986	1481.7 369.3 1319.7 69.8		EAST OF PROJECT	
WHITE CONCRETE STACK, 1932	G-4740 p. 66	"	41 37 29.489 71 15 55.185	909.8 941.2 1277.5 111.5			
SMITH STONE BOAT- HOUSE CUPOLA, 1912	G-6522 p. 143	"	41 36 14.72 71 16 31.26	454.1 1396.9 723.9 665.5			
FLAGSTAFF, 1913	p. 140	"	41 36 12.746 71 16 24.891	393.2 1457.8 576.4 813.0			
MELVILLE GREY TANK, 1932	G-4740 p. 65	"	41 35 25.547 71 17 12.733	788.2 1062.8 294.9 1094.8			

1 FT. = 3048006 METER

COMPUTED BY J. C. Richter

DATE 23 July 1957

CHECKED BY: Henry P. Eichert

DATE 24 July 1957

COMM-DC-57843



COAST AND GEODETIC SURVEY  
CONTROL RECORD

MAP T-10497

PROJECT NO. Ph-163

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

[illegible]

1 FT = 3048006 METER

COMPUTED BY: J. C. Richter

DATE.....23 July 1957

CHECKED BY: Henry P. Eichert

DATE 24 July 1957

COMM-DC-57843



COMPILATION REPORT  
Ph-163  
T-10497

31. DELINEATION

The kelsh plotter was used for delineation. Shoreline and photo-hydro points were delineated separately from the planimetry.

32. CONTROL

Horizontal control was adequate. Vertical control is inapplicable.

33. SUPPLEMENTAL DATA

Final map standard dated 5 March 1957

38. CONTROL FOR FUTURE SURVEYS

No topographic stations were established.

Twenty-five photo-hydro stations fall within the limits of this manuscript and were located on planetable sheet No. Ph-I-J-56.

Refer to the "Descriptive Report to Accompany Graphic Control Survey Sheets Ph-I-A-56 through Ph-I-N-56" submitted for this project.

Refer also to letter 711/rab dated 7 August 1958, subject: "Smooth Sheet H-8395, Project CS-13870 (PH-163) Narragansett Bay", copy of which is attached to report for T-10489.

39. JUNCTIONS

Junctions have been made as follows:

To the north with T-10490.

To the east with T-11428 (Ph-142)

To the south with T-10501.

To the west with T-10496.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41. through 45.

Inapplicable.

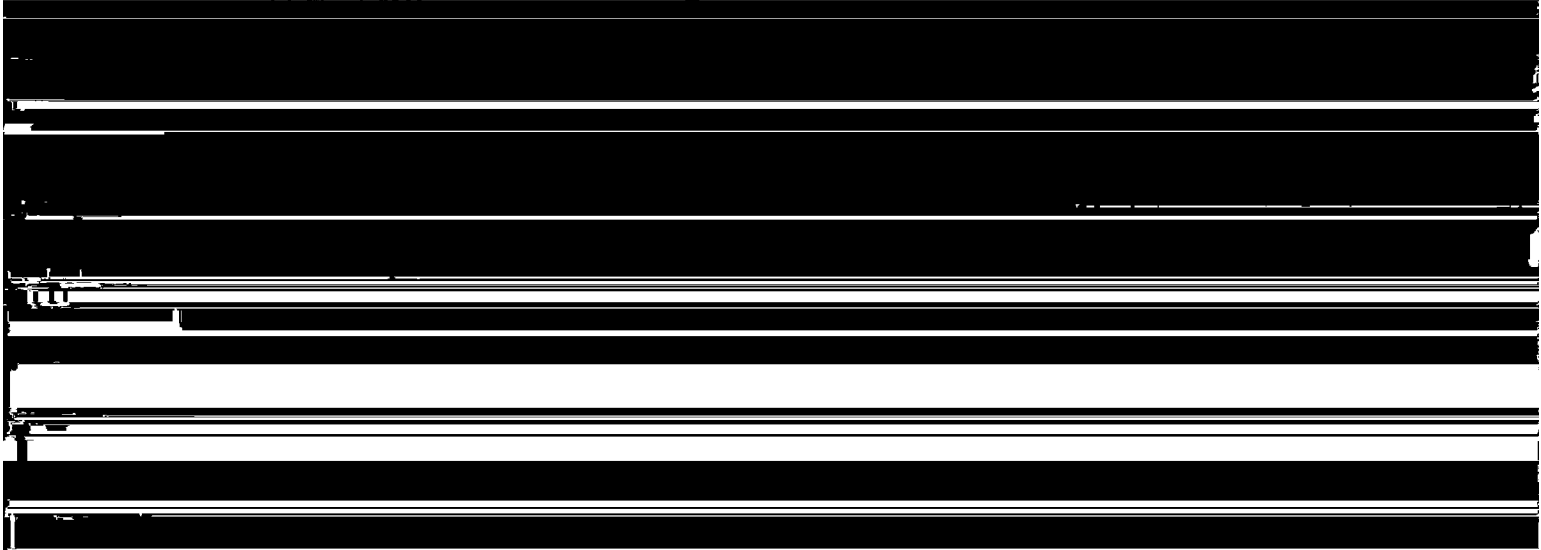
46. COMPARISON WITH EXISTING MAPS

U.S.G.S. 7½ min. quad. Prudence Island, R. I., scale 1:24,000 edition of 1955.

Bureau Survey No. T-5751 (1944) scale 1:20,000 date of issue June 1949.

47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 236, scale 1:20,000, 9th edition, published February 17, 1958, revised 9/22/58.



PHOTOGRAMMETRIC OFFICE REVIEW

T. 10497

1. Projection and grids ☒ 2. Title ☒ 3. Manuscript numbers ☒ 4. Manuscript size ☒

5a. Classification label ☒

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 ☒ 8. Bench marks ☒  
9. Plotting of sextant fixes ☒ 10. Photogrammetric plot report ☒ 11. Detail points ☒

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline ☒ 13. Low-water line ☒ 14. Rocks, shoals, etc. ☒ 15. Bridges ☒ 16. Aids to navigation ☒ 17. Landmarks ☒ 18. Other alongshore physical features ☒ 19. Other along-shore cultural features ☒

PHYSICAL FEATURES

20. Water features ☒ 21. Natural ground cover ☒ 22. Planetable contours ☒ 23. Stereoscopic instrument contours ☒ 24. Contours in general ☒ 25. Spot elevations ☒ 26. Other physical features ☒

CULTURAL FEATURES

27. Roads ☒ 28. Buildings ☒ 29. Railroads ☒ 30. Other cultural features ☒

BOUNDARIES

31. Boundary lines ☒ 32. Public land lines ☒

MISCELLANEOUS

33. Geographic names ☒ 34. Junctions ☒ 35. Legibility of the manuscript ☒ 36. Discrepancy overlay ☒ 37. Descriptive Report ☒ 38. Field inspection photographs ☒ 39. Forms ☒

40. Joseph W. Borasek  
Reviewer

Henry P. Eichel  
Supervisor, Review Section or Unit

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.

S. G. BLANKENBAKER

Compiler

Supervisor

43. Remarks: Dec. 1966

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REVIEW REPORT  
T-10497  
December 1966

61. General Statement

The greater part of this map has been used for hydrographic survey support purposes -- survey H-8395, dated 1957. The remainder of the mapped area is covered by survey H-6859, dated 1943. A considerable amount of alongshore details (rocks, piles, etc.) shown on both hydrographic surveys and nautical charts was not mapped on this survey. This resulted from incomplete field inspection and photography that was poor for the purpose of interpreting the subject details.

62. Comparison with Registered Topographic Surveys

T-5751	1:20,000	1944
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T-10497 supersedes the prior survey for nautical charting purposes in the common area.

63. Comparison with Maps of Other Agencies

USGS quad, Prudence Island	1955
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No significant differences were noted.

64. Comparison with Contemporary Hydrographic Surveys

H-8395	1:10,000	1957
--------	----------	------

H-8395 has been reviewed and registered. The few corrections in photogrammetric survey details, shown in red on the smooth sheet, were applied to T-10497 during this review. Prior to smooth sheet plotting, the positions of some hydro signals established by plane table were redetermined by photogrammetric methods in the Baltimore office.

65. Comparison with Nautical Charts

No. 263	1:20,000	July 1966
No. 353	1:40,000	Jan. 1966

The charts contain information from sources more recent than the subject survey.

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66. Adequacy of Results and Future Surveys

Except as qualified under side heading 61, this survey meets Bureau requirements. The Addendum to the Summary contains information pertaining to the adequacy and accuracy of project maps. The maps will be registered; remapping, however, is recommended for future hydrographic survey support purposes.

Reviewed by:

S. G. Blankenbaker  
S. G. Blankenbaker

Approved by:

Charles L. Heinn  
Chief, Photogrammetric Branch

J. Ralph Sobieniski FEB 09 1968  
Chief, Photogrammetry Division

John P. Boyer 2/25/68  
Chief, Marine Chart Division

1-9-68

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-163 (Rhode Island)

T-10497

✓Almy Hill

✓Arnold Point

✓Barker Brook

✓Bullocks Wharf

✓Butts Hill

✓Carr Point

✓Coggeshall Point

✓Dyer Island

✓East Passage

✓Homestead

✓Lawton Valley

✓Lehigh Hill

✓Melville

✓Narragansett Bay

✓Newport Station

✓Portsmouth

✓Portsmouth Station

✓Prudence Island

✓Quaker Hill

✓Rhode Island

✓Sandy Point

✓Turkey Hill

✓Weaver Cove

Approved by:

*A. Joseph Wraight*  
A. Joseph Wraight  
Chief Geographer

Prepared by:

*Frank W. Pickett*  
Frank W. Pickett  
Cartographic Technician

U.S. DEPARTMENT OF COMMERCE  
COAST AND GEODETIC SURVEYTO BE CHARTED  
~~TO BE DELETED~~

STRIKE OUT ONE

~~NONFLUATING AIDS/ON~~ LANDMARKS FOR CHARTS

Baltimore, Maryland

January 20, 1959

I recommend that the following objects which have ~~Noted/Not~~ been inspected from seaward to determine their value as landmarks be charted on ~~Deleted/Not~~ the charts indicated.

The positions given have been checked after listing by John C. Richter

William F. Deane,

Chief of Party.

STATE	RHODE ISLAND				POSITION							METHOD OF LOCATION AND SURVEY NO.	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
	CHARTING NAME	DESCRIPTION	SIGNAL NAME	LATITUDE *		LONGITUDE *					DATUM						
				°	'	D.M. METERS	°	'	D.P. METERS								
										"							
TANK	steel, water	ht=140(156)	BLA	41	37	26.35	71	15	43.38	N.A.	T-10497	16 May 1936	X			236, 278, 353, 1210	
	round, white brick	ht= (109(114))		41	37	812.9	71	15	1001.2	1927		16 May 1936	X			236, 278, 353, 1210	
STACK	(A) White Concrete Stack	1932)	WHI	41	37	29.189	71	15	55.185	"	"	"	X				
	steel, skeleton			41	35	2.3	71	15	18.0	"	Photo. T-10497	30 Oct 1956	X			353, 1210	
TOWER	structure	ht=70(151)		41	35	70	71	15	128	"	T-10497	1956	X			353, 1210	
	steel, water	ht=50(123)	BRA	41	35	23.856	71	16	32.703	"	Triang. T-10497	5 Jul 1956	X			236, 353	
PIPE	(A) Brad	1915)		41	35	736.0	71	17	757.5	"	"	14 Aug 1956	X			236, 353, 1210	
	round, brick	ht= 100(108)	RED	41	35	18.206	71	17	14.117	"	"	(1932)	X				
STACK	(A) Melville, Red Stack	1932)		41	35	561.7	71	17	327.0	"	Photo. 10497	16 Aug 1956	X			236, 353	
	steel, water	ht=122(287)	FAR	41	34	54.4	71	16	14.4	"	10497	1956	X				
TANK				41	34	1677	71	16	334	"							
Deleted	thru to	283(65)	24														

Y 20, 1959

landmarks be

Chief of Party.

CHARTS  
AFFECTED

353, 1210

HARBOR CHART  
INSHORE CHART  
OFFSHORE CHART

X I

and nonfloating  
area and not by

Comm-DC 28356



**TO BE CHARTED  
Y0/PB/PALLET**

**STRIKE OUT ONE**

## NONFLOATING AIDS OR LANDMARKS FOR CHARTS

Baltimore, Maryland

January 20, 1959

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

The positions given have been checked after listing by John C. Richter

**William F. Deane**  
*Chief of Party.*

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating aids* to navigation, if redetermined, shall be reported on this form. 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

Comm-DC 28356

## NONFLOATING/AIDS/ON LANDMARKS FOR CHARTS

Morgan City, La.

5 Feb. 1957

that the following objects which have *(date/slot)* been inspected from seaward to determine their value as landmarks be *(id from)* the charts indicated.

Isaiah Y. Fitzgerald

/s/ I. R. Rubottom

Chief of Party.

[illegible]

be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating* if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by any sheets. Information under each column heading should be given.

## MEETERS

## RECORD OF APPLICATION TO CHARTS.

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. T-10497

## 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
236	7/9/68	J. Hogan	Full Part Before After Verification Review Inspection Signed Via Drawing No. 35 - <del>Applied minor topo con.</del>
1210	4/17/69	H. Quimby	Full Part Before After Verification Review Inspection Signed Via Drawing No. 50 - Examined, no correction.
278	2-17-73	W. Chell	Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.
			Full Part Before After Verification Review Inspection Signed Via Drawing No.