

10499

orig.

Diag. Cht. No. 1210-2.

Form 504 U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	Planimetric
Field No. Ph-163	Office No. T-10499
LOCALITY	
State	Rhode Island
General locality	Narragansett Bay
Locality	Jamestown-North Kingstown Bridge
<u>1956-57</u>	
Ira R. Rubottom	CHIEF OF PARTY Chief of Party
William F. Deane, Balto.	District Officer
LIBRARY & ARCHIVES	
DATE	26 FEB 1968

COMM-DC 61300

10499
T

DESCRIPTIVE REPORT - DATA RECORD

T- 10499

Ph-163

Project No. (II): ~~78120~~ Quadrangle Name (IV):

Field Office (II): East Providencè, R. I.

Chief of Party: Ira R. Ribottom

Photogrammetric Office (III): Baltimore, Md.

Officer-in-Charge: William F. Deane

Instructions dated (II) (III):

Copy filed in Division of
Photogrammetry (IV)

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

Method of Compilation (III): Kelsh Plotter and Multipler

Manuscript Scale (III): 1:10,000

Stereoscopic Plotting Instrument Scale (III):

1:10,000 (multiplex)

Scale Factor (III): 1.000

1:6,000 (Kelsh-Pantograph ratio 3/5)

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):

Vertical Datum (III):

N.A. 1927

~~Mean Sea Level~~ 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): BARBERS HEIGHTS, 1868

Lat.: 41° 31' 44.329" (1367.6 m) Long.: 71° 25' 28.224" (654.3 m)

Adjusted
~~Coordinates~~

Plane Coordinates (IV):

State:

Zone:

Y=

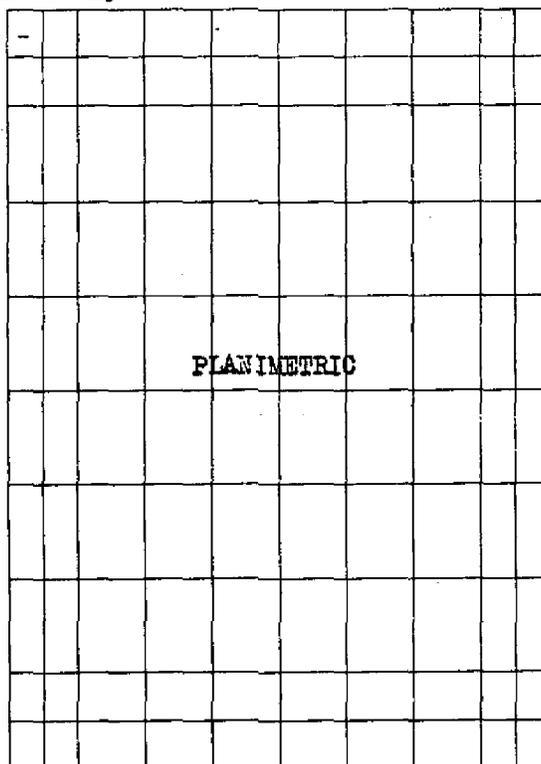
X=

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

71° 26.25'



41° 33.75'

PLANIMETRIC

41° 30.0'

71° 22.5'

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

DESCRIPTIVE REPORT - DATA RECORD

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Field Inspection by (II): **Mathew A. Stewart**
Leo F. Beugnet

Date ~~May~~ - October 1956

Planetable contouring by (II):

Date:

Completion Surveys by (II): * see below

Date:

Mean High Water Location (III) (State date and method of location):
1956 (Photogrammetric), date of photography

Projection and Grids ruled by (IV): **J. B. Phillips**

Date: 8/6/57

Projection and Grids checked by (IV): **J. B. Phillips**

Date: 8/6/57

Control plotted by (III): **J. C. Cregan**

Date: 8/23/57

Control checked by (III): **B. Kurs**

Date: 9/9/57

Radial Plot or Stereoscopic Control extension by (III): **E. L. Rolle**

Date: 9/30/57

Planimetry **J. C. Richter**
Stereoscopic Instrument compilation (III):
Contours

Date: 1/31/58

Date:

Manuscript delineated by (III):

Date:

Photogrammetric Office Review by (III): **D. M. Brant**

Date: 9/30/59

Elevations on Manuscript
checked by (II) (III):

Date:

FIELD EDIT:
LIMITED FIELD EDIT ACCOMPLISHED DURING
HYDROGRAPHIC SURVEY H-8367, DATED 1956-57
NO DISCREPANCY PRINT WAS SUBMITTED

DESCRIPTIVE REPORT - DATA RECORD

Camera (kind or source) (III): C&GS Type "W" 6" focal length

Number	Date	PHOTOGRAPHS (III)		Scale	Stage of Tide
		Time (EST)			
56-W-157 thru 159	5/1/56	0828		1:10,000	1.3 above MLW
56-W-198 thru 200	"	0856		"	1.6 " "

Tide (III)

(From predicted tables)

Reference Station: Newport, R. I.
Subordinate Station: Wickford, R. I.
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
	3.5	4.4
	3.8	4.7

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): 7 Sq. mi.

Shoreline (More than 200 meters to opposite shore) (III): 13 mi.

Shoreline (Less than 200 meters to opposite shore) (III): none

Control Leveling - Miles (II):

Number of Triangulation Stations searched for (II): 27 Recovered: 20 Identified: 7

Number of BMs searched for (II): 3 Recovered: 3 Identified: 1

Number of Recoverable Photo Stations established (III):

Number of Temporary Photo Hydro Stations established (III): none

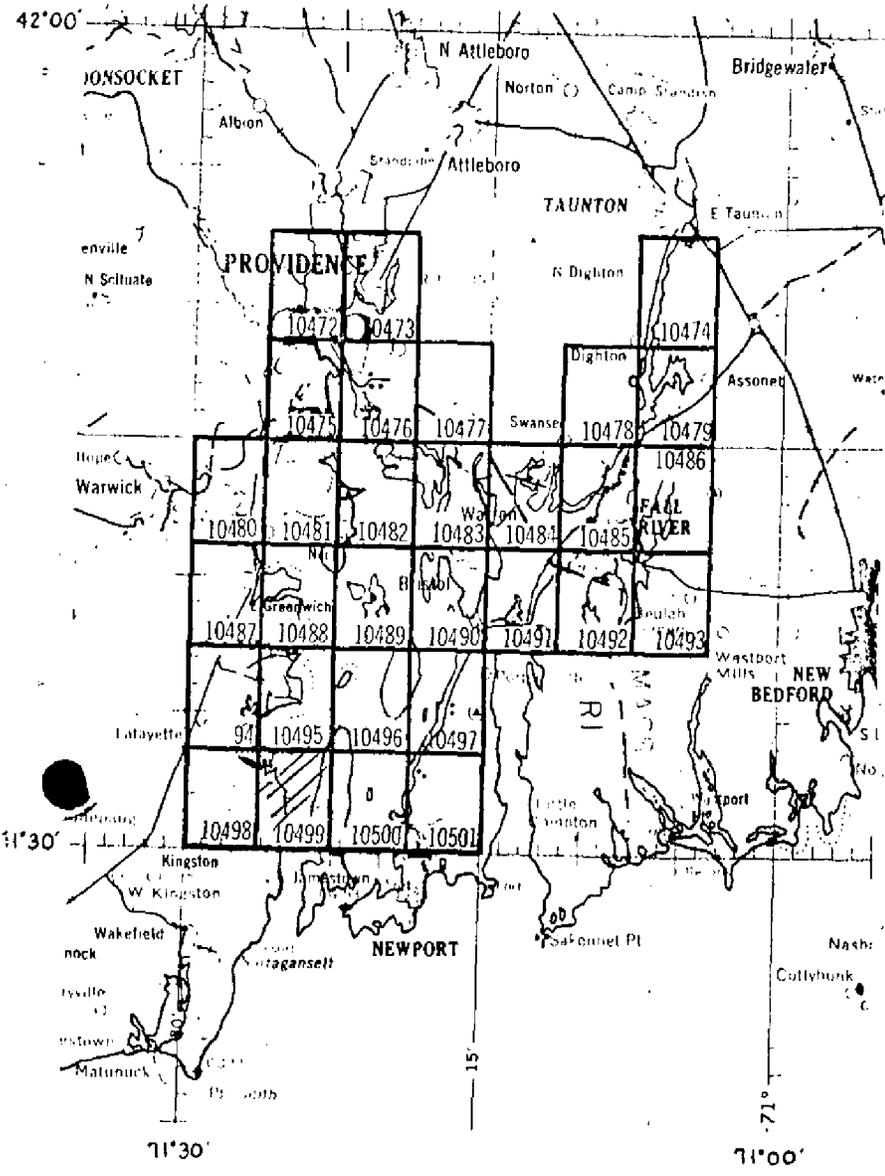
Remarks:

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 ACC

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

TOTALS 158 204

SUMMARY TO ACCOMPANY DESCRIPTIVE REPORT
T-10499

Job PH-163, comprised of 30 planimetric surveys, covers Narragansett Bay, Rhode Island-Massachusetts.

A complete field inspection preceded compilation. A limited field check of T-10499 details was accomplished in conjunction with Contemporary Survey H-8367, 1956-57.

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

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). see

FIELD INSPECTION REPORT
Project 25120
Map T-10499

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 PHOTOGRAPHS -
56W 156 THRU 159
198 " 200

PHOTOGRAPHS 56W 156 THRU 159,
199 & 200 WERE
MISSING AT THE TIME
OF FINAL REVIEW -
APPARENTLY LOST.

MAP T-10422

PROJECT NO. Ph-163

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR y -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
			FORWARD	(BACK)	FORWARD	(BACK)		FORWARD	(BACK)	
NARRAGANSETT CHURCH, 1912	G-6522 p. 139	N.A. 1927	41	29	33.045	1019.5	831.5			
			71	25	33.569	778.7	613.1			
ROME, 1912	G-6230 p. 94	"	41	32	50.768	1566.2	284.8			
			71	25	30.787	713.6	677.0			
PLUM BEACH LIGHTHOUSE, 1897	p. 94	"	41	31	48.609	1499.6	351.4			
			71	24	20.592	477.4	913.6			
DUTCH ISLAND LIGHTHOUSE, 1868	G-4644 p. 40	"	41	29	47.777	1474.0	377.0			
			71	24	17.321	401.8	989.9			SOUTH OF PROJECT
HULL, 1868	G-4740 p. 57	"	41	32	14.025	432.7	1418.3			
			71	22	36.344	842.5	548.3			
BOULDER (USE) 1909	G-6522 p. 134	"	41	31	28.793	888.3	962.7			
			71	25	21.262	493.0	898.1			
GETTY, 1940	G-4681 p. 44	"	41	29	24.053	742.0	1109.0			
			71	24	00.608	14.1	1377.7			SOUTH OF PROJECT
CARR, 1940	G-4644 p. 39	"	41	31	16.666	514.2	1336.8			
			71	23	00.560	13.0	1378.2			
FOX, 1912	G-6230 p. 94	"	41	33	15.723	485.1	1365.9			
			71	25	04.374	101.4	1289.1			
BARBERS HEIGHTS, 1868	G-6522 p. 134	"	41	31	44.329	1367.6	483.4			
			71	25	28.224	654.3	736.7			
HAZARD (USE) 1909	p. 135	"	41	31	24.658	760.7	1090.3			
			71	25	35.912	832.7	558.5			
WINDMILL, 1912	p. 138	"	41	27	47.81	1474.9	376.1			
			71	25	56.06	1301.0	91.4			SOUTH OF PROJECT

1 FT. = 3048006 METER
COMPUTED BY J. C. Richter

DATE 19 July 1957

CHECKED BY J. C. Cregan

DATE 5 August 1957

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

MAP T. 10499

PROJECT NO. Ph-163

SCALE OF MAP 1:10,000

SCALE FACTOR 1.000

STATION	SOURCE OF INFORMATION (INDEX)	DATUM	LATITUDE OR μ -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	
					FORWARD	(BACK)		FORWARD	(BACK)	FORWARD	(BACK)
JAMESTOWN BRIDGE EAST NAVIGATION LIGHT, 1943	G-5984 p. 91	N.A. 1927	41	31	36.190	734.5					
			71	23	49.971	232.5					
JAMESTOWN BRIDGE WEST NAVIGATION LIGHT, 1943	"	"	41	31	37.432	696.2					
			71	23	58.213	41.4					
JAMESTOWN BRIDGE WEST BEACON, 1943	"	"	41	31	37.657	689.2					
			71	23	58.160	42.7					
JAMESTOWN BRIDGE EAST BEACON, 1943	"	"	41	31	36.411	727.7					
			71	23	49.908	234.0					
BROWN (USE), 1912	G-6522 p. 135	"	41	31	49.521	323.2					
			71	25	55.423	106.1					
BROWINGS HOUSE CHIMNEY, 1868	G-6522 p. 145	"	41	32	00.27	1842.7					
			71	25	49.65	239.9					
RAILROAD (USE), 1912	p. 134	"	41	32	33.341	822.4					
			71	25	45.250	341.9					
Sub. Sta. ROME, 1912	Comp.	"	41	32		295.7					
			71	25		658.5					
Sub. Sta. HULL, 1868	"	"	41	32		1379.1					
			71	22		617.1					
Sub. Sta. BOULDER (USE), 1909	"	"	41	31		879.4					
			71	25		899.7					

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COMPILATION REPORT
Project Ph-163
T-10499

The photogrammetric plot report for this survey is part of the descriptive report for survey No. T-10472.

31. DELINEATION

The Kelsh plotter and multiplex were used for delineation. The west flight was delineated by multiplex.

32. CONTROL

Horizontal control was adequate.

Vertical control is inapplicable.

33. SUPPLEMENTAL DATA

U.S.G.S. Wickford quadrangle 1959 edition for county boundary.
Final Name Sheet, dated 5 March 1957.
Planetable Sheet, Ph 1-M-56 used for comparison.
Copy of Boat Sheet, H-8367 used for comparison.

34. CONTOURS AND DRAINAGE

Drainage is complete.
Contours are inapplicable.

35. SHORELINE AND ALONGSHORE DETAILS

All shoreline details are from field inspection which was thorough.

No low-water or shoal lines were shown except in the vicinity of Great Creek where it was noted by the field inspector.

36. OFFSHORE DETAIL

Refer to paragraph 8 of the field report.

37. LANDMARKS AND AIDS

One landmark was submitted on Form 567.

38. CONTROL FOR FUTURE SURVEYS

No recoverable topographic stations were established. Photo-hydro signals for survey T-10499 were located on planetable sheet Ph-1-M-56. A comparison was made between survey T-10499 and a film positive copy of the plane table sheet. All signals that could be identified agreed within the allowable error.

39. JUNCTIONS

Junctions have been made as follows:

- To the north with T-10495.
- To the east with T-10500.
- To the south with T-11432 (Ph-142)
- To the west with T-11498.

40. HORIZONTAL AND VERTICAL ACCURACY

No comment.

41. BOUNDARIES

The county and town boundaries were taken from the U.S.G.S. quad.

42 - 45. Inapplicable.

46. COMPARISON WITH EXISTING MAPS

U.S.G.S. 7½ minute quadrangle Wickford, R. I., scale 1:24,000, 1959.

The comparison of survey T-10499 with USGS Wickford, R. I. quad. *X see below* indicates considerable discrepancies in planimetry in the vicinity of Conanicut Island. Eldridge Avenue (Route 138) when leaving the Jamestown North Kingstown Bridge is 4 mm. north of the position shown on Survey T-10499.

Bureau Survey No. T-5751, scale 1:20,000.

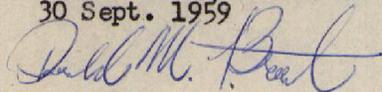
47. COMPARISON WITH NAUTICAL CHARTS

Chart No. 236, scale 1:20,000, 8th edition published January 12, 1953; revised February 20, 1956.

Items to be applied to nautical charts immediately. None.

Items to be carried forward: None.

Respectfully submitted
30 Sept. 1959



Donald M. Brant
Carto. (Photo.)

Approved and forwarded

William F. Deane
William F. Deane,

CDR, C&GS
Baltimore District Officer

X Refer to final review report.

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PHOTOGRAMMETRIC OFFICE REVIEW

T.

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

4a. 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. *Edmund W. Beut* _____ *Henry J. Fisher* _____
 Reviewer 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.

 Compiler Supervisor

43. Remarks: *Refer to Final Review Report*
-Side heading 64

REVIEW REPORT
Planimetric Map T-10499
December 1966

61. General Statement

Approximately one-half this map has been used for hydrographic survey support purposes -- H-8367, dated 1956-57. The remainder of the mapped area is covered by survey H-6970, dated 1944.

Survey H-8367 was considered basic only for charting. Inadequacies in the survey were related, principally, to hydrographic operations.

During review of both H-8367 and H-6970 a thorough evaluation of prior Bureau topographic information (registered surveys and nautical charts) was made. For this reason no comparison was made with prior surveys, except survey T-5751, during this review of T-10499.

62. Comparison with Registered Topographic Surveys

T-5751	1:20,000	1944
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Map T-10499 supersedes the prior survey for nautical charting purposes in the common area.

63. Comparison with Maps of Other Agencies

USGS Quad, Wickford	1:24,000	1957
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The compilation report (T-10499) mentions a discrepancy between T-10499 and the quad in position of roads on Conanicut Island (amounting to approximately 4 mm. -- when the quad is enlarged to 1:10,000 scale). The discrepancy was verified during the subject review; no practicable means exist, however, for checking the horizontal accuracy of T-10499 by office methods -- field photographs containing control are missing, and details on older Bureau surveys are outdated. The positions of several road intersections from prior survey T-5751 agree approximately with positions of the apparent same features mapped on T-10499.

64. Comparison with Contemporary Hydrographic Surveys

H-8367	1:10,000	1956-57
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No changes were made on the hydrographic survey in details provided through T-10499. As a result of incomplete field

1-9-68

GEOGRAPHIC NAMES

FINAL NAME SHEET

PH-163 (Rhode Island)

T-10499

- ✓ America Ledge
- ✓ Barber Heights
- ✓ Bissel Cove
- ✓ Casey Point
- ✓ Conanicut Island
- ✓ Dick Rock
- ✓ Duck Cove
- ✓ Dutch Island
- ✓ Dutch Island Harbor
- ✓ Fowler Rock
- ✓ Fox Island
- ✓ Great Creek
- ✓ Great Ledge
- ✓ Greene Point
- ✓ Halfway Ledge
- ✓ Hamilton
- ✓ Hull Ledge
- ✓ Jamestown (Township)
- ✓ Jamestown Brook
- ✓ Jamestown-No. Kingston Bridge
- ✓ Jamestown Shores
- ✓ Little Tree Point

W. P.

- ✓ Mill Rock
- ✓ Narragansett Bay
- ✓ Old ~~Sergeant~~ *Sergeant*
- ✓ Packard Rocks
- ✓ Plum Beach
- ✓ Plum Beach Point
- ✓ Plum Point
- ✓ Red Rock
- ✓ Rome Point
- ✓ Sand Point
- ✓ Saunderstown
- ✓ Seal Rock
- ✓ Sinker Rock
- ✓ Slocum Ledge
- ✓ The Brothers
- ✓ The Clump
- ✓ The Hummucks
- ✓ The Narrows
- ✓ Wild Goose Ledge
- ✓ Wild Goose Point
- ✓ Windmill Hill
- West Passage*

Approved by:

A. Joseph Wraight
 A. Joseph Wraight
 Chief Geographer

Prepared by:

Frank W. Pickett
 Frank W. Pickett
 Cartographic Technician

NOTES TO REVIEWER

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T-10499

Boston Neck Road on Survey T-11432, (Ph-142) which joins Survey T-10499 was scribed as minimum width (0.036"). During review of Survey T-10499 it was found that the correct road width is 0.048". The correct road width was used on Survey T-10499, (Ph-163).

There is a discrepancy of approximately 25 mm. between the position of the photo-hydro station ACE on plane table sheet Ph-1-M-56 and its identification on field photograph 56-W-198. The identification is marked "doubtful" on the field photograph.

