6376

5739

Diag'd. on Diag. Ch. No. 1208-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Planimetric Map

Field No. ..... *Office No.* T-5739

LOCALITY

State Massachusetts

General locality Cape Cod, Mass.

Locality South Yarmouth

Photos. taken in 1938

1942

CHIEF OF PARTY

Lieut. L. W. Swanson

LIBRARY & ARCHIVES

DATE .....

8-1870-1 (1)

5739

Applied to chart 1209 2/24/43 G.M.E. (celluloid drwg - before review)

Applied to chart 258 (celluloid drwg. - after review) by G.R. 8/2/45

Form 537a
Ed. Nov. 1929

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No.....

REGISTER NO.

State Massachusetts

General Locality Cape Cod, Mass.

Locality South Yarmouth

Scale 1:10,000x0.990 Date of ~~survey~~ Photographs Nov.11 & Dec.14, 1938

Vessel

Chief of party L. W. Swanson

Surveyed by Field Inspection Lieut. A. L. Wardwell
Lieut. E. B. Lewey
Shoreline-E. C. Jastremski

Inked by Detail--J. Kubasco & E. C. Jastremski

Heights in feet above ..... to ground to tops of trees

Contour, Approximate contour, Form line interval ..... feet

Instructions dated August 15, 1939: Sept. 28, 1938
August 28, 1939: Nov. 3, 1938, 19....

Remarks: Sheets showing shoreline and Hydrographic signals and overlay for same sent to Washington Office April 7, 1939

GPO 200853

DATA RECORD T-5739

PHOTOGRAPHS

NUMBER	DATE	TIME	SCALE	ALTITUDE	STAGE OF TIDES*
2395	July 14, 1938	11:45	1:10,000x0.99	Unknown	2.3ft. above M.L.W.
2401	July 14, 1938	11:49	1:10,000x0.99	Unknown	2.4ft. above M.L.W.
2402	July 14, 1938	11:50	1:10,000x0.99	Unknown	2.4ft. above M.L.W.
2403	July 14, 1938	11:51	1:10,000x0.99	Unknown	2.4ft. above M.L.W.
2404	July 14, 1938	11:51	1:10,000x0.99	Unknown	2.4ft. above M.L.W.

*Tide prediction table South Yarmouth, Bass River. Mean range of tide 2.9ft., Spring range of tide 3.5ft.

Camera: U.S. Coast & Geodetic Survey nine lens camera (Focal length $8\frac{1}{4}$ inches.) All negatives on file in Washington Office.

A supplementary radial plot covering sheet T-5739 was made without employing templates; this was accomplished by making use of fifteen single lens photos obtained from the Department of Interior. They have been enlarged from 1:2,4000scale to 1:10,000 scale.

NUMBER	DATE	TIME	SCALE	ALTITUDE	STAGE OF TIDES*
G.S.F. 782 to 787	Dec. 12, 1938	11:23-11:28a.m.	1:10,000	Unknown	-.1 below M.L.W.
G.S.F. 558 to 561	Nov. 21, 1938	11:23-11:26a.m.	1:10,000	Unknown	3.1 above M.L.W.
G.S.F. 768 to 773	Dec. 14, 1938	11:31-11:36a.m.	1:10,000	Unknown	-.1 below M.L.W.

*Tide prediction table for South Yarmouth, Bass River: Mean range of tide 2.9ft., Spring Range of tide 3.5ft.

The focal length of the lens are unknown.

Some 8 x 10 single lens photographs obtained from the U.S. Army Engineers, were used in detailing buildings. The date, time, altitude of plane, focal length of lens, and stage of tide are all unknown. Below is a list of the photographs.

M-120-61	M-120-72	M-120-69
M-120-62	M-120-73	M-120-77
M-120-90	M-120-74	M-120-80
M-120-89	M-120-76	M-120-79
M-120-88	M-120-63	M-120-78
M-120-87	M-120-75	M-120-95
M-120-86	M-120-81	M-120-91
M-120-10	M-120-82	M-120-92
M-120-67	M-120-83	M-120-93
M-120-64	M-120-84	M-120-94

M-120-66 M-120-85 M-120-60
M-120-71 M-120-70

SUPPLEMENTAL SURVEYS

Graphic Control Surveys	None	None
Hydrographic Surveys	Lt. A. L. Wardwell	Nov. & Dec. 1938
Field Inspection	Lt. E. B. Lewey	July & Aug. 1941
Geographic Name Investigation	Lt. E. B. Lewey	July & Aug. 1941

The details on T-5739 are on the date of the single lens photographs obtained from the Department of Interior.

GENERAL INFORMATION

Chief of Party	L.W. Swanson	None
Projection by	Washington Office	February 1939
Projection checked by	Washington Office	February 1939
Control Plotted by	L.W.Swanson	Feb. 13, 1939 &
	W.VanLoon	April 15,1942
Control Checked by	R.A.Gilmor	Feb. 13, 1939 &
	J.F. Deal	April 16,1942
Radial Plot by	L.W. Swanson	Feb. 15, 1939 &
	R.A. Gilmor	Feb. 17, 1939
Radial Points Pricked by	W.E. Schmidt	Feb. 15, 1939
	W.VanLoon	May 1, 1942
Additional Points by	W.VanLoon	May 1, 1942
Hydrographic Points Pricked by	Lt. A. L. Wardwell	Feb. 15, 1939
Shoreline Inked by	E.C. Jastremski	June 22, 1942 to July 1, 1942
Detail(rough draft) Inked by	J. Kubasco	May 14,42 to June 13,42
	E.C.Jastremski	June 14,42 to July 7,42
Scale	1:10,000 x 0.990	
Scale Factor	0.990 L.W.Swanson	Feb. 2, 1939

STATISTICS

Area (land)	26 Statute Miles
Shoreline (more than 200 meters from opposite shore)	8 Statute Miles
Shoreline (less than 200 meters from opposite shore)	26 Statute Miles
Roads, Streams & Trails	320.5 Statute Miles
Railroads	7.5 Statute Miles
Time required for detailing shoreline	12 Working Days
Time required for detailing interiors	39 Working Days

REFERENCE STATION

Yarmouth High School Cupola, 1934 Datum N.A. 1927

Latitude 41° 39' 38.913" (1200 .5m) Adj.
Longitude 70° 11' 49.593" (1147 .4m)

Massachusetts system of grid coordinates X 256,024.67 Feet Y 243,513.10 Feet

DESCRIPTIVE REPORT
TO ACCOMPANY
AIR PHOTOGRAPHIC SURVEY SHEET NO. T-5739
STATE OF MASSACHUSETTS
CAPE COD, MASSACHUSETTS

Date of This Report: July 8, 1942

INSTRUCTIONS:

The topography on this sheet is part of project 227-B, the instructions for which are dated August 15, 1939; August 28, 1939; September 28, 1938; and November 3, 1939.

CONTROL:

The control consists of 22 triangulation stations falling within the limits of this sheet and shown by the triangulation symbols. Four additional triangulation stations fall just outside the limits of this sheet and they are not shown by the triangulation symbol.

The Triangulation Stations that are listed as follows are within the detailed limits of this sheet.

U. S. COAST & GEODETIC SURVEY

Bass River Lighthouse, 1847
Bass River, West jetty beacon light (Mass. Geod. S.), 1938
W. Harwich Holy Trinity Catholic Church Spire, 1934
*South Dennis, 1846
South Dennis Congregational Church, North Spire, 1887
W. Harwich Baptist Church Spire, 1934
Yarmouth High School Cupola 1934
South Yarmouth Methodist Church Spire, 1887
West Dennis Methodist Church, 1887
Eager, 1934
South Yarmouth, American Metallic Fabric Co., Brick Chimney, 1934
Lewis, 1934
Bass River Baptist Church Spire, 1934

*South Dennis cannot be pricked on photo as no description is obtainable.

MASSACHUSETTS GEODETIC SURVEY

M 28 P.U., 116C, 116F, 139A, 139B, and M 28 P.S.

The Triangulation Stations that follow fall outside the limits of this sheet:

U. S. COAST & GEODETIC SURVEY

W. Yarmouth Observation Tower, Flagpole, 1934
W. Yarmouth Congregational Church Spire, 1934
W. Yarmouth Englewood Hotel, Water Tank, 1934

MASSACHUSETTS GEODETIC SURVEY STATION

116B

RADIAL PLOT:

Sheets 5736, 5737, 5738, 5739, and 5740.

These sheets were plotted by the template method on a scale of 1:10,000 x 0.99. Dummy sheets, made up the same as the map drawings with projection lines and control plotted on them, were laid down on a large table. The dummy sheets were matched and secured with Scotch tape. The templates were then laid over the dummy sheets, and were held by control and centers of adjacent pictures. The templates were secured by Scotch tape.

It was necessary to make junctions between sheets 5740 and 5739, to reduce the plot of sheet 5740, which had been run from scale of one to scale of 0.99. The control and radial points were held to sheet 5740 when templates were laid down so that good junctions were made between the two sheets mentioned. The best control was at the east and west end of the plot; and the templates were laid down first at the west end, then at the east end, then joined together in the center of the plot by some control and flight lines. It was found after the plot was run, that between photos 2401 and 2407, approximately 35% of radial points are controlled by two cut intersection. In this area, there is about 60% overlap. It is thought by this office that with a single line of flight, 80% overlap is necessary for good intersections of radial points.

Paragraphs 2, 3, 4, 5 and 6 of General Notes Radial Plot on sheet 5740, 5741 and 5742 apply to this plot.

All controls that were available and could be plotted on the map drawing sheets and located on the photographs were used. Several Massachusetts Geodetic Survey control stations were located on the field prints and used to control the plot. These stations were plotted from the grid projection lines.

A supplementary radial plot covering sheet T-5739 was made without employing templates; this being accomplished by making use of fifteen single lens photos obtained from the Department of Interior, in addition to the nine lens photos.

Several excellent points were pricked on overlapping photographs. The photos were then held in place, holding all possible control stations and flight lines, and these points were cut in to establish evidence of the proper positions in which to lay the photos on which no control appeared. After these points were located, those showing excellent intersections were used as secondary control points when laying the photos to obtain the additional radial points for detailing.

Nine lens photos 2403 and 2404 have shrunken so much that it was necessary to adjust them between the control. In order to obtain control to do this in a satisfactory manner, several centers of the single lens photos were located on these nine lens photos and the flight lines used to supplement the control stations in making these shifts of position. A resulting plot was obtained, which is believed to be within the permissable amount of error acknowledged by this department.

DETAILING:

In field inspecting, it was noted that in general in the inland waters, the shoreline which constituted navigational limits, was the outside edge of the marsh, and shown on the map drawing as a light line. The shoreline elsewhere is shown with a heavy line. The marsh areas, along the shore were generally covered with high water, but the marsh grass protruded above high water, which would be visible to the navigator at mean high water.

It was decided in conference and from verbal instructions from Washington Office, that only public buildings, such as schools, churches, post offices, etc., would be shown on the map in congested areas and that only buildings along the shoreline back to the first street. (Street systems and culture would be put in as per written instructions.) All buildings have been added by the reviewer in the Wash. office. The above sheets are not now considered congested.

In detailing houses along the shore and in congested areas, excellent 8 x 10 single lens photographs, obtained from U. S. Army Engineers, were employed.

The single lens photos, obtained from the Department of Interior, and having a later date than the nine lens photographs, were used in inking the entire shore and shoal lines. The nine lens photographs were useless for detailing the shoreline due to the fact that a hurricane struck this particular vicinity after the nine lens photos were taken.

Single lens photographs were also used in detailing wooded area, towns and waterways. These were used because of their sharpness.

Town maps were very helpful in locating and naming various streets, roads, ponds and rivers. The width of the streets in the city are not exaggerated but are the proper size. The cross country roads and highways are shown with the center line only and are classified. A few intersections are shown with double lines. All D.F.L. and D.D.L. roads not designated should be shown 6 meters wide. The number of railroad tracks are as shown on map.

Cranberry bogs are shown by "C.B." all lines in bogs not marked as roads, are ditches. Drainage source of a few ponds is indeterminable.

Cemeteries, third class roads, and the shoal lines are all shown with dashed lines.

The stereoscope was used to examine drainage, buildings, and trails, which were difficult to identify.

TOWN MAPS:

A number of streets and roads have been named on this map to tie in with the towns of Harwich, Dennisport and South Yarmouth.

HYDROGRAPHIC SIGNAL:

A number of natural objects have been located on this sheet for use as hydrographic signals. These objects are shown by black circles, 1.5mm in diameter. The description of the signals are all on the overlay. These descriptions have been transferred to the map manuscript by the reviewer in the Wash. office.

GEOGRAPHICAL NAMES:

A list of the geographical names will be found in the appendix on Form M-234. The names are also on the sheet and overlay.

COMPARISON WITH PREVIOUS SURVEYS:

The following changes are present between the present map and T-402, (1851) along practically the entire southern shore, the shoreline has moved northward an average of 40 meters. There are two instances in which the shoreline has moved southward. This occurs at the eastern entrance of Swan Ponds (50 meters), and near the eastern entrance of Herring River (50 meters average).

The Swan Pond River has changed its course a bit with its greatest change being a distance of approximately 100 meters.

In general the interior shoreline of the two sheets agree rather well except at the Swan Pond east of South Dennis. The pond contains two small islands whose positions in reference to the new sheet and T-402 disagree. This is probably due to an error in the previous survey.

The shoreline of this pond has also extended southward of the point directly west of the smaller of the two islands.

~~At latitude 41° 39', longitude 70° 12' 30", the east and west portion of the marsh has been washed away.~~

On the mainland, roads and streets are in agreement with T-402 excepting where changes in new roads and new street systems have occurred.

Sheet T-402 does not show the New York, New Haven, and Hartford R.R. which runs through the vicinity of German Hill, South Dennis, and North Harwich.

The following changes are present between the present map and T-553 (1855).

Along the southern shore, the shoreline has moved northward an average of 25 meters. At the Bass River entrance, the shoreline has extended southward a maximum of 98 meters. The pond west of Bass River Village has been renamed from Studley's to Swan Pond.

The remaining detail of T-553 agrees very well with the new sheet.

The following changes have occurred between the present map and T-356 (1847). Along the southern shore, the shoreline has moved northward an average of 34 meters. At the western entrance of the Bass River the shoreline extends westward a maximum of 202 meters. The remaining detail of T-356 agrees very well with the new sheet.

The comparison of the old maps with the new sheet was made by placing new datum lines on the old maps and matching them individually with the new sheet.

JUNCTIONS:

A good junction was made with sheets T-5740 and T-5738 to the east and north on the west end. There were no junctions on the ~~north,~~ south, ~~or east end.~~

RECOVERABLE TOPOGRAPHIC & HYDROGRAPHIC STATIONS:

There were ~~no~~ 23 stations of the above within the limits of this sheet.

LANDMARKS:

In this area, there ~~are no~~ is one landmark recommended for charting purposes. See chart letter 180-1945

BRIDGE INFORMATION:

The information concerning bridges crossing streams and rivers is given on the sheet.

REMARKS:

This survey is complete in every detail for charting purposes with no shoreline radial point being in error of more than 5 meters and no inland radial point being in error of more than 10-12 meters.

Respectfully submitted,

E. C. Jastremski
E. C. Jastremski
Junior Engineering Aide

Reviewed by: J. L. Rihn
J.L.Rihn
Principal Photogrammetric Aide

Approved and Forwarded Aug 15, 1947

L. W. Swanson
L.W.Swanson
Chief of Party

GEOGRAPHIC NAMES

Survey No. T-5739

(☒ See Geographic Name Sheet No. 4)

Name on Survey	A, On Chart No. 1208, 1209	B, On previous survey No. 553, T356, 402	C, On U.S. quadrangle Maps	D	E, From local information	F, On local Maps R-Dennis, Ba-Barnstable, Y-Yarmouth	G, P. O. Guide or Map	Rand McNally Atlas	K, 1938 Descriptive Report No. 5740	
✓ Bass River	*	*	*	9,10,		*	*			1 ✓
✓ Bass River (Village)		*				*				2 ✓
✓ Big Sandy Pond				10	Y					3 ✓
(Flax Pond)		*	*						*	4 —
✓ Duck Pond				9	(Position changed)				*	5 ✓
✓ Dogfish Bar	*									6 =
✓ Eagle Pond Fresh Pond		*	*	8,9,	D				*	7 ✓
✓ Flax Pond		*	*	8,10,	Y	(N.of South Yarmouth)				8
✓ Grand Cove	*	*	*	9	D					9 ✓
✓ German Hill		*		10						10 ✓
✓ (German's Hill)			*							11 —
✓ Greenough Pond				8,10,	Y					12 ✓
✓ Halfway Pond			*	8,10,	Y					13 ✓
✓ Herring River	*	*	*	8						14 ✓
Horse Pond				8,10,	Y				*	15 ✓
(Big Sandy Pond)			*						*	16
Kelleys Bay			*	9						17 ✓
(Kellys Bay)				9	D					18 —
(Kelley's Bay)		*								19 —
Kelleys Pond			*			(USGB decision) *				20 ✓
(Kelleys Pond)				9	D					21 —
(Kelley's Pond)		*								22 —
Kill Pond Bar	*									23 —
Long Pond	*	*	*	8,10,	Y				*	24 ✓
Lewis Pond	*	*	*	8,10,	Y					25 ✓
Lewis Bay (OK, but not on sheet)	*	*	*	8 10,11	Ba,Y	*	*	*		26 =
Lilly Pond	*	*	*	8,10,	Y					27 ✓

M 234

GEOGRAPHIC NAMES

Survey No. T-5739

(See Geographic Name Sheet No. 4)

Name on Survey	A, On Chart No. 1208, 1209	B, On previous survey No. T-356, 402, 553	C, On U. S. quadrangle Maps	D, From local information	E, D-Dennis; Ba-Barnstable, Y-Yarmouth	F, On local Maps	G, P. O. Guide or Map	H, Rand McNally Atlas	K, 1938 Descriptive report No. 5740	M-1300	
(Kelly's Run)		*									1
(Crowell's Pond)		*									2
Nickersons Cove				9							3
Nantucket Sound	*		*	8	D, Y,	*	(USC&B decision)				4
North Harwich			*			*					5
Plashes Pond			*	8,10,	Y				*		6
Parkers Neck	*			10	Y						7
Parkers River	*	*	*	10	Y						8
Sears Pond		*	*	8 9,10,	Y D				*		9
Sand Pond		*	*	8							10
(Sandy Pond)									*		11
Swan Pond	*	*	*	8,9,	(SE of South Dennis) D	*			*		12
South Yarmouth	*	*	*	10		*					13
Swan Pond River	*	*	*	9	D						14
(Swan River)(Highway Sign)				9	D						15
Swan Pond Seine Pond		*	*	8,10,	Y	(USC&B decision) (w of Bass River)	*		*		16
(Studleys Pond)	*										17
(Studley's Pond)		*									18
South Dennis		*	*			*					19
Turtle Pond			*	10	Y						20
The Plashes				9	D						21
The Run (Crowell Pond)				10	Y	(USC&B decision)					22
Uncle Stephens Pond				9	D						23
West Dennis	*		*	10		*	*				24
Ware Creek			9'	9	D						25
West Yarmouth	*				y	*	*	*			26
											27
											M 234

GEOGRAPHIC NAMES

Survey No. T-5739

(See Geographic Name Sheet No. 4)

Name on Survey	A. On Chart No. 1208, 1209	B. On previous survey No. T-356, 402, 553	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps D-Dennis, Ba-Barnstable, Y-Yarmouth	F. P. O. Guide or Map	G. Rand McNally Atlas	H. 1938 Descriptive Report No. 5740	K. M-1300	
Elishas Pond				10	Y					1 ✓
James Pond		*	*	8,10,	Y				*	2 ✓
Dennis Port	*		*			*	*			3 ✓
West Harwich	*	*	*			*	*			4 ✓
Eldredge Pond				8						5 ✓
										6
NOTE: NAMES IN PARENTHESIS NOT RECOMMENDED										7
										8
Perch Pond										9 ✓
Wrinkle Point										10 ✓
Bass River sta.										11
South Dennis Sta.										12 ✓
State Nos. 28, 134										13 ✓
Stage Island										14
Horseshoe Cove										15
		Names underlined in red approved by L. Heck on 12/27/45								16
										17
										18
										19
										20
										21
										22
										23
										24
										25
										26
										27

M 234

NAUTICAL CHARTS BRANCH

SURVEY NO. T-5739

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
2/24/43	1209	G.H.E	Examined after Review - No further Corrn to 1209 Before ~~After~~ Verification and Review GHE 8/25/50
8/2/45	258	G.R.	~~Before~~ After Verification and Review Completely applied.
1-14-47	257	M Andros	~~Before~~ After Verification and Review " "
4/26/50	1208	H.F. Hegman	~~Before~~ After Verification and Review Examined not applied.
			Before After Verification and Review E.A.P.M. 100 Corr
6-18-53	1209	O. Chapman	Superseded by T-12493, T-12494, & later photo revision Considered Adequate Applied previous
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

M-2168-1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

Division of Photogrammetry

Review of Planimetric Map T-5739

Radial Plot. -

The radial plot is described in detail in the descriptive report and has been accepted without further check in this office.

Field Inspection and Detailing. -

The manuscript as received from the photogrammetric office was incomplete and rather carelessly detailed. Additions and corrections made during the review are shown in red and include shoreline, woodland limits, and buildings.

Comparison with Hydrographic Surveys. -

T-5739 was compared with H-6471, 1:10,000, 1938. The low water line on T-5739 has been corrected to agree with H-6471.

Comparison with Previous Topographic Surveys. -

Refer to page 6 of the descriptive report for a comparison made by the photogrammetric office.

T-5739 has been compared with the following older surveys during this review and is adequate to supersede those surveys over the common areas:

T-290	1:10,000	1846	T-553	1:10,000	1855
T-356	1:10,000	1847	T-795	1:10,000	1859
T-402	1:10,000	1851	T-6114	1:10,000	1934

Comparison with Geological Survey Quadrangles. -

T-5739 has been compared with the Harwich and Dennis, Mass., 1:31,680, 1940, quadrangles and is in general agreement with those quadrangles.

Nautical Charts. -

T-5739 was applied to Chart 1209 in February 1942 prior to this review. While most of the changes made on T-5739 during the review are of little consequence to the 1:80,000 scale chart, these changes have been so numerous that the reviewed manuscript should be compared with the chart for additional chart corrections when Chart 1209 is again taken up for correction.

Reviewed by H. E. Rees under the direction of R. M. Berry, April 7, 1945.

Review report prepared from reviewer's notes by B. G. Jones, December 5, 1946.

APPROVED:

B. G. Jones 12/46
B. G. Jones, Technical Asst.
Div. of Photogrammetry

H. C. Edmunston
Chief, Nautical Chart Br.
Division of Charts

K. T. Adams
Chief, Div. of Photogrammetry

C. R. Green
Chief, Div. of Coastal Surveys