5604

Diag. cht. 1210-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. 4 Office No. 5604

LOCALITY

State Massachusetts

General locality Apponagansett

Locality Bay, Slocum River
Buzzards Bay

1936

CHIEF OF PARTY

Thos B. Reed

LIBRARY & ARCHIVES

DATE November 4, 1936

B-1870-1 (1)++

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Form 504
Rev. Dec. 1933

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Photo
Topographic } *Sheet No.* T 5604
Hydrographic } Field No. 4

State Massachusetts

LOCALITY

Apponaganset Bay – Slocums R.
~~Clark Cove to Barneys Joy Pt.~~
Buzzards Bay

1936

CHIEF OF PARTY

Thos. B. Read

U. S. GOVERNMENT PRINTING OFFICE: 1934

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. 4

REGISTER NO T5604

State Massachusetts

General locality Buzzards Bay

Locality ~~Clark Cove to Barneys Joy Point~~ Apponaganset Bay — Slocums R.

Scale 1:10,000 Date of ~~survey~~ Photos Nov 15 1934, 19
Compilation May 1936

Vessel Field party 16

Chief of party Thos. B. Reed

Surveyed by See Data Sheet

Inked by Raymond S. Poor

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

Contour; Approximate contour; ~~Form line~~ interval feet

Instructions dated September 28, 1935

Remarks: Compiled on Scale 1:10,000

PHOTO TOPOGRAPHIC SHEET NO 4

REGISTER NO. T-5604

PHOTOS NO.	DATE	TIME
M328 to M342	Nov 15, 1934	11:41AM
M343 to M355	Nov 15, 1934	11:49AM

Projection by	Projection machine Washington Office	Feb. 1936
Triangulation & Traverse plotted by	M. H. Reese and R. S.Poor	Feb.-May, 1936
Triangulation & Traverse checked by	Thos B Reed	Feb -May, 1936
Topo Stations transfered from plane table sheets by	Washington Office	Feb 1936
Smooth Radial Plot by	Thos. B. Reed and R.S.Poor	Feb-April 1936
Detail Inked by	R. S. Poor	March- May 1936

~~Field inspection November and December 1935~~

STATISTICS

Area of detail inked(land area)	21.5 sq. Stat. Miles
Length of shore line(more than 200 meters from nearest opposite shore)	25.0 statute miles
Length of shoreline (Streams less than 200 meters wide)	15.0 statute miles

Datum North American 1927

Reference Station Mishaum Point 1844 Lat 41 30 55.573" (1714.5 m.) Long 70 57 16.581" (384.6 m.)
~~(adjusted)~~ - Unadjusted

Triangulation in process of readjustment and values from first adjustment not final.

Ref. Sta. —
X = 749,376.51 FT. } Mass. Grid.
Y = 188,301.42 FT. }

DESCRIPTIVE REPORT

to accompany

Photo Topographic Sheet No. T-5604

Clark Cove to Barney's Joy Point, Buzzards Bay, Massachusetts

Thos. B. Reed, Chief of Party.

DATE OF INSTRUCTIONS: Letter dated Sept. 28, 1935, No. 22-AA1990(16)

DATE OF SURVEY November 15,1934, with revision by Field Inspection Party November 1935 to February 1936.

GENERAL INFORMATION:

Photographs: This sheet was compiledfrom parts of two flights of 1:10,000 scale five lens aerial photographs taken by the Army Air Corps on November 15, 1934 with Model T3A Camera No. AC31-78-A. The flights were numbered M328 to M342, the numbers increasing from West to East; the photographs of the upper flight were numbered M343 to M355, the numbers increasing from East to West. The camera had a focal length of six inches and the photographs were taken from an elevation of approximately 5000 feet. The stage of the tide was computed to be 1.7 feet, and the mean range of tide in this vicinity is 3.7 feet.

General Description This sheet comprises of territory and coastline in the southern part of the Town of Dartmouth, Mass., from Clark Cove to Barney's Joy Point.

The Town of Dartmouth is composed of several small villages South Dartmouth(Padanaram), Apponaganset, Dartmouth(Russell's Mill) Bayview, Nonquitt and Potomska, the last three of these are summer colonies.

With the exception of South Dartmouth(Padanaram) the entire region would be classified as rural. The interior is heavily wooded with scattered farms, cultivated fields and pastures. The hills are a gentle rolling type and the maximum elevation is approximately 100 feet.

The entire coastline is strewn with boulders, ledges and offlying rocks which is charactistic of Buzzards Bay. There are a few sand beaches but they are rather small in extent. To the westward of Barney's Joy Point there are a few sand dunes . Barney's Joy Point and Slocums Neck is devoid of trees and is covered with low briars and grass. The land risés from the shore gently to an elevation of approximately 30 feet. Smith's Neck extends southward to Mishaum Pt., It is a narrow strip of land with an elevation of approximately 40' in the center.With the exception of a 20' bluff at the point the land rises gently from the water. There are a few scattered summer homes on this neck and what few trees there are low and not outstanding. Round Hill Point is prominent because of a small hill on top of which is awhite tower with an aviation beacon. There are four radio

masts,which are very prominent just to the westward of Round Hill Pt.

CONTROL:

Sources: Second and Third Order Triangulation by W. D.Patterson, 1934. Also the following stations:Mishaum Pt. S. E. North Gable of House, 1913, Mishaum Pt. S. E. Wind Mill near end 1913, Stone Tower with windmill 1913, Nonquitt, Myers stone water tower 1913 which were obtained from Publication No. 169, "Triangulation in Mass." and corrected to the N. A. 1927 Datum.

Second Order Traverse by the Works Progress Admistration of Massachusetts, 1936. (Positions computed by this party from data sent us from W. P. A. on 1927 N. A. Datum).

Topographic stations established by plane table party of W. D. Patterson in 1934 and 1935.

Errors: Triangulation Station Noyes Garage Tower 1913 was found to be 10 meters in error. This station did not hold on the radial plot although it was tied in good on the photos and on some of the photos it could be clearly seen. Since this station is a no check position and was not necessary for the control of the sheet it is not shown on this compilation. Errors in Topographic Stations are discussed under the heading "Comparison with Plane Table Sheets Nos T"D", T"C" and 6121. Reported to Geodesy 9/9/36

Other sources of control: No control, other than mentioned above was used in the Compilation of this Sheet.

COMPILATION

Method: The usual five lens radial line method of plotting was used in the compilation of this sheet. In general, there were sufficient triangulation and traverse stations on the sheet to control the plot without the use of topographic stations established in 1934 by plane table. The radial plot was continued across the adjoining sheets .

Adjustments of plot:No unusual adjustment of the plot was necessary.

INTERPRETATION:

No difficulty was experienced in interpreting the detail from the photographs except where the detail was obscured by trees.

The interpretation of the high and low water line were made by the Field Inspection Party by sketching and actual measurements from objects that could be identified on the photographs. Field inspection in Nov. 1935. ~~Exact plot not given.~~

The sterescope was used in locating building wherever necessary although there may be some error as to the size and shape especially in that section between the two flights as there was not sufficient overlap and the photographs were not as distinct as they could have been.

CONVENTIONAL TOPOGRAPHIC SYMBOLS

Only graphic symbols, approved by the Board of Surveys and Maps were used, except as follows:

A small symbol () was used to denote brush, briars etc., as there was no conventional sign that applied.

Cultivated fields were left blank to avoid congestion and no attempt was made to distinguish between fields actually under cultivation and those sown with grass because of the practise to rotate the crops. Pastures were shown with a grass and brush symbol.

The channel in Paskamanset River(Slocums River) could be seen very clearly on the photographs and the limits are shown on this compilation in a blue dashed line.

Channel lines not shown on compilation. Hydrography satisfactory.

above Russells Mills (Dartmouth P.O.)
Below " " "

INFORMATION FROM OTHER SOURCES:

Street names in South Dartmouth(Padanaram) were obtained from a Town Map showing the street layout . Since it was impossible for us to secure a copy of this map the names are printed on the field prints.

A small scale map of Dartmouth showing the names of the roads was obtained andused for that purpose only.

GEOGRAPHIC NAMES:

Names of Geographic Features were obtained from U. S. C & G. S. charts plane table sheets and were verified by the field inspection party from local residents.

Conflicting Names: Little Island was obtained from C. S. Sawyer, town assessor for the Town of Dartmouth who has resided in this locality all his life. This island is located in Apponaganset River and is called Great Island on the Topographic Sheet No T"D",2216, and also on Charts Nos 249 & 252. It is shown on the official town map as Little Island.

Paskamanset River is known locally as Slocums River as far as the tide water goes. Above this point it is called Fresh River. The correct name,however,is Paskamanset,an old indian name which applies to the entire river. Tide water in this case ~~xx~~ goes as far as Dartmouth(Russells Mill as it is known locally) where there is a dam which prevents it from going farther. U. S. Geological Survey Quadrangle Sheet and the old Topo Sheet 2216 also have the name"Pamanset", shown but this is apparently an error in spelling because none of the local residents had ever heard of"Pamanset". The Coast Pilot has the Name Paskamanset River but no mention of Slocums River. This information was verified by the Post Master at Dartmouth(Russells Mill) and by C. S. Sawyer,the town assessor.

Two other names which seem to be in local usage and should be mentioned here are Padanaram and Russells Mills. Padanaram applies to South Dartmouth although South Dartmouth is the correct name. Hence,Padanaram Breakwater Lt, Padanaram Church Spire etc."Russells Mills" applies to Dartmouth although the mill is no longer in existence. These names,however are notused by the Post Office and are listed as South Dartmouth and Dartmouth respectfully.

New Names: There were no new names obtained in this area.

COMPARISON WITH OTHER SURVEYS:

Junctions. This sheet matches the adjoining sheet to the west with no differences.

If it is Russells Mills
see C-M [illegible] 9

Comparison with Topo Sheet No T"D" 6374 (Hydrographic control survey)

Topographic Stations Hit, Lik, Go, and Ask were located on the photographs and checked in with the plotted position. These stations are shown on this compilation. The actual high water line from Clark Cove to South Dartmouth Bridge checked in very closely to the topo parties. Many of the off lying rocks shown in this vicinity by the topo party fell within the low water line which could easily be seen on the photographs. Those lying outside the low water line checked in very closely to the Topo sheet location. At a point just to the northeast of Topo Station (40-36¼, 70-55¾) Hit the topo party shows a ledge symbol. However while this point has many off lying rocks and the shore is of a rocky nature it is not shown with a ledge symbol on this compilation. It should be mentioned that it is not shown with a ledge symbol on Topo. Sheet 2220. More rocks were shown at this point than were shown on Topo Sheet T-6374. These rocks could be seen on the photographs and their positions were checked by radial line plot and they are shown with the conventional sign.

At Moshers Point, the off lying rocks are shown differently on this compilation than on Topo Sheet T-6379. These rocks could be seen very clearly on the photographs and a dashed line indicating foul area was shown around this area. The larger rocks which are exposed at high tide checks in the the topo positions.

In Apponaganset River there was a large discrepancy in the high water line as determined by the Topo Party and by the Field Inspection Party. The dotted line shown on Topo Sheet No. T-6374 checks very closely with that taken from the photographs and marks the outside limit of the marsh grass. This was rechecked again in May 1936 by Lt. T. B. Reed and the compiler.

The H.W. Line shown on Topo Sheet 6374, 1934, is the storm water line. The ordinary High water line is shown correctly on this compilation.

Comparison with Topo Sheet No. T-6373 "C".

Topographic Stations Lad, Bid, Lam, Buy, Low, Era, Man Hen, Westerly and Wow of East Group of Radio Towers and Northerly and Southerly of West Group of Radio Towers were picked on the photographs and held in the radial plot. These stations are shown on this compilation. Topo Station Von(S. Gab. of Hangar) was picked and the station held on the radial plot but in as much as there is an aerial beacon on top of hangar 1.5 meters north of this point, it was considered of greater importance to locate the beacon. (Copy of this survey delivered to Airway Mapping Sec.)

There was a very good agreement between the high water line on Topo Sheet T-6373 and this compilation. At Round Hill Point many of the off lying rocks could be seen and were located on this compilation. Topo sheet merely shows a foul area in this region.

About a mile west of Round Hill Point there is a small creek that breaks through the beach. At this point there was considerable difference between the topo sheet and the compilation. However this point is subject to considerable change with every storm. The high water line shown on this compilation was drawn in by the field inspection party November 1935 and checked with actual measurements.

Comparison to Topo Sheet 6121

Topographic Stations Rat, Rug, Tan Ink, Hoe, Boy, Big, Arm Arc, Sow, Mac, Mut and Wit were located on the photographs and are shown on this compilation as their positions checked with the radial line plot. Topo Station Dal(S. Gab. Yellow Hse) was 10 meters out of position as deter-

(41-31¼, 70-59¼)

mined by the radial line plot. This point was easily identified on the photographs. This station is ~~not~~ shown on the compilation. Topo station Hot (flagstaff on house peak) was 25 meters in error as located by radial line plot. Station seemed to be picked OK as there was no other building at this point. The shoreline was also 25 meters in error at this point. This error was in a westerly direction and with all the triangulation stations holding on the radial plot this ~~is improbable and the~~ station is ~~not~~ considered correct as shown on the compilation. Topo station "Ire" was approximately 5 meters off as determined by the radial line plot. This station was a chimney on the peak of a house and was easily identified on the photographs. Other topo stations nearby were holding on the radial line plot. This station is ~~not~~ shown on this compilation in the radial plot position. in the radial plot position.

The following stations Led, Raw, Sap, Ado, Abe and Ivy could not be accurately located on the photographs so no attempt was made to do so. These stations are shown on the compilation and the positions are the same as on the topo sheet.

At the end of Mishaum Pt, the H. W. line is approximately 10 meters different . This shoreline was sketched in by the field inspection party and measurements taken at different points. At this point there are many rocks all along the beach and the rocks that are covered at H. T. are a different color. This line shows up very plainly on the photographs and the actual H. W. line is just inside this line.

The off lying rocks at the mouth of Little River are slightly different in shape but in the same position. It is supposed that these rocks were sketched in by the topo party rather than rodded in and they are drawn in as they appeared on the photographs.

At Barneys Joy Pt a dotted line for foul area was placed on this compilation as there are many off lying rocks in this area. The rocks that could be seen are located.

There is considerable difference at the mouth of a small creek that breaks through the beach west of Barneys Joy Point. However there is considerable current and it causes many changes. During southeast storms, this outlet is sometimes blocked entirely and has to be dug out to prevent polution of Allens Pond. The H.W. line shown was drawn in from the Field Inspection Party's sketches and measurement made in November 1935. In the marsh just north of this point there are some differences in the locations of some of the islands. These pictures were very close to scale and the detail well defined.

Comparison to Old Topo Sheet 2216.

Only the outstanding changes and differences will be mentioned in this comparison.

Sloop ?

On the west shore near the entrance to Paskamanset River the beach has built up between 40 and 50 meters since 1895.

Sheet 2216 shows many off lying rocks on the west side of Mishaum Pt while recent surveys show only one rock awash. H-5630 shows a number of rocks in this area.

Three rocks awash west of Salters Point are at least 50 meters out of position on 2216 see page 8, Review H-5882

The pond west of Salters Point was very different in 1895 than

at the present time. It is probably due to a lower water level in the pond at the time of the old survey. There is no outlet for the pond but the water seeps through the beach which is quite narrow at the present time.

The marsh west of Round Hill Point on the old survey has for the most part been filled in.

The old survey shows a large rock south of Dumpling Rock L. H. of which there is no indication on the photographs. Recent plane table sheet shows no large rock at this point either. *There is no rock here. See descriptive report T-6373 page 2.*

North of Round Hill Point at Keel Rock, the old survey shows two rocks while recent survey only shows one, the easterly. Photographs show only one rock. *H-5882 shows two rocks awash.*

Salt Works near Apponaganset River Bridge and at Ricketsons Point as shown on old survey are no longer in existence.

Other changes in the interior such as roads and building are not mentioned. However the old roads shown on 2216 check in very well with the compilation.

Comparison to Charts

Marsh west of Round Hill Point has been filled in.

Wharf north of Round Hill Point is no longer in existence.1933 Edition of Coast Pilot mentions this wharf .

Salt Works shown on Chart near Apponaganset River Bridge is no longer in existence.

Many small wharves north of Round Hill Point and at South Dartmouth have been built also many houses near the shoreline.

Marsh shown on northwest shore of Clark Cove has practically all been reclaimed and filled in.

LANDMARKS:

A list of Landmarks for Charts of this area was submitted by Lieut W. D.Patterson in connection with hydrographic surveys in 1934 and 1935. No additional landmarks have been established since that time

RECOMMENDATION FOR FURTHER SURVEYS

This compilation is believed to have a probable error of not more than 3 meters in position of welldefined detail of importance for charting purposes and of 5 meters for other detail.

To the best of my knowledge thiscompilation is complete in all detail of importance for charting purposes within the accuracy stated above, and as mentioned in the foregoing report,no further surveys are required.

Approved & Forwarded,
Thos B Reed
Chief of Party

Respectfully submitted,
Raymond S. Poor
Raymond S Poor
Surveyor, C & G Survey Party No. 16

T 5601
#1

	Remarks	Decisions
1		
2		
3	Chart 1210	
4		
5	Chart 1210 had Slocums but since DGN is for Slocums River, adjacent, we should, to be consistent use same	Slocums
6	Chart 1210 had "Allen"	Allens
7	comp. overlay had Allen, but since competent authority has added "s" in case of adjacent "Allens Pond" it should be followed in this case.	Allens
8		
9		
10		
11	1210 has Smith. 249 is O.K.	Smiths
12		
13		
14		
15		
16		
17		
18		
19		
20	the stream is "Paskamansett River" above Russells Mill (Dartmouth R.I.) but it is	
21	"Slocums River" below that town; i.e.	
22	the tidal part is Slocums River. D.G.N.	
23	See line 12-13 pg #1.	Slocums
24		
25		
26	actual road is not shown, but chart 1210 gives authority for "Horse Neck" see also #1742	Horse Neck
27		

M 234

GEOGRAPHIC NAMES

Survey No. T5601

Name on Survey	#1 Chart 1210	A On Chart No. 249	A On Chart No. 252	B On previous survey No. Chart	C On U.S. quadrangle Maps	D From local information	E On local Maps / Town plan of Dartmouth	F P.O. Guide or Map / Road Map of Mass / U.S.B.G.B.	G Rand McNally Atlas	H U.S. Light List	K	T5601
Mishaum Pt.	*	✓	✓		✓		✓		✓			1
Buzzards Bay	*	✓			✓		✓		✓			2
Barneys Joy Pt	*	✓					✓	✓				3
Pawn RK	*	✓										4
Slocums Neck	*				✓							5
Allens Pond	*				✓				✓			6
Allens Neck Road						✓						* 7
Jordan Road							✓					* 8
Barneys Joy Road							✓	✓				* 9
Potomska		*			✓	✓						10
Smiths Neck	*	✓	✓		✓							11
Salters Pt		*	✓		✓		✓		✓			12
Dumpling Rock Lt					✓	✓				✓		* 13
Dumpling Rocks	✓	*	✓									14
Round Hill Pt.	*	✓	✓		✓	✓	✓		✓	✓		15
Round Hill Pt. Lt.						✓						* 16
White Rock	*	✓	✓									17
Ragged Rocks		✓	*									18
Round Hill Airport						✓						* 19
Smiths Neck Road						✓	✓					* 20
Little River	✓	*			✓		✓		✓			21
Little River Road						✓	✓					* 22
Slocums River	*				✓	✓	✓	✓				23
Great Neck					✓	✓						* 24
Goose Id.					✓	✓						* 25
Horse Neck Road	*						✓					26
Gaffeny Road						✓						* 27

Names underlined in red approved on 7/2/36 by [illegible]

"T 5601
#2

	Remarks	Decisions
1		
2		
3		
4	old survey sheets and old charts show "Bowhead Rocks"	Rocks
5		
6		
7	chart 1210 has Ricketson	Ricketsons
8	DGN not double "T"	set
9	" " "	"
10	Some local people say "Bay View" (see GN 113) but since there is no post office it was decided to	Bayview
11	combine as one word, being in line with USBGN policy in similar cases	1/10
12	It is "Paskamanset River" above Russells Mill, (Dartmouth P.O.) but it is Slocums River	
13	below that town, i.e. the tidal part is Slocums River. see line 23 pg. #1 USBGN	Paskamanset
14		
15		
16		
17	SEE also G.N. 114 & E.R.H.	Russells Mills
18		
19		
20		
21	called "Great I" on charts 249, 251, but is error.	Little
22	"Padanaram" is an old time name for the modern South Dartmouth; both should not now be used. "Padanaram" persists, however, as applied to various features	
23		
24	in this locality. see line 6, above	
25	Plan of Dartmouth has "Clarks"	Clark
26	only one "T" DGN	set
27	Mr Green and myself gave this name, to account for disappearance of "Hunts R.R." from chart. this is between Mishaum & Round Hill Pts.	see B.N. 15455 C.L. 370 (1914) C.L. 143 (1915)

M 234

GEOGRAPHIC NAMES
Survey No. T 5604
2

Name on Survey		Chart 1210	A On Chart No. 249	B On previous survey No. 252	C On U. S. quadrangle Maps	D From local information	E On local Maps (town plan of Dartmouth)	F P. O. Guide or Map (Road Map of Mass / USGS)	G Rand McNally Atlas	H U. S. Light List	K	T5601	
Potomska Road						✓	✓					*	1
Dundee Road						✓						*	2
Nonquitt	*	✓	✓		✓		✓	✓	✓				3
Bare Kneed Rocks Bn.		*	✓										4
Keel Rock		✓	*										5
Padanaram Breakwater Lt						✓				✓		*	6
Ricketsons Pt.	✓	*	✓		✓								7
Apponagansett Bay		*	✓		✓		✓	✓	✓				8
Apponagansett River	✓	*	✓		✓		✓	✓					9
Bayview 7/10 ebb	*	✓	✓			✓							10
Gulf Road						✓						*	11
Bakersville Road						✓						*	12
Paskamanset River						✓		✓				*	13
Woodcock Road						✓	✓					*	14
Fisher Road						✓	✓					*	15
Dartmouth					✓	✓	✓	✓	✓			*	16
~~Russells Mills~~						✓	✓					*	17
Chase Road							✓						18
Russells Mills Road						✓	✓					*	19
Tucker Road							✓						20
Little Id.						✓	✓					*	21
South Dartmouth									✓				22
~~[illegible]~~					✓				✓				23
Moshers Pt.		*	✓		✓	✓							24
Clark Cove	*	✓	✓		✓		✓		✓				25
Apponagansett	*	✓	✓		✓								26
Hunts Rk. Breakwater				* office									27
~~Dartmouth E.S.~~						✓		✓					

Names underlined in red approved on 7/12/36 by [illegible]

M 234

REVIEW OF AIR PHOTO COMPILATION T-5604

Scale 1:10,000

Although two of the contemporary topographic surveys, T-6373 and T-6374, have been filed and reviewed as topographic surveys, they have been handled in connection with this review as graphic control surveys.

Comparison with Graphic Control Surveys

T-6121 (1934), 1:10,000

In addition to the discrepancies listed on pages 4 and 5 of this descriptive report, T-5604, there are also differences in high water line delineation at 40° 30 3/4', 71° 00' and 40° 32 1/2', 71° 00'. In the first case there is a slight eastward shift in the detail on T-6121 as well as a difference in interpretation. In the second case there is a westward shift in the detail on T-6121 as well as a difference in interpretation. The photographs have been examined and the compilation considered correct. About five more triangulation stations were used in this area on the compilation than on the plane-table survey.

All detail on T-6121 over the common area is shown on this survey except temporary signals and the magnetic meridian.

T-6374 (1935), 1:10,000

In addition to the discrepancies discussed on page 4 of this descriptive report, T-5604, it was noted that in a number of places T-6374 shows the rock awash symbol inside the low water line while T-5604 shows the boulder symbol. Since the beach in this area is boulder strewn the symbols on T-5604 are accepted.

There are a number of rocks located on this survey which are not on T-6374.

All detail on T-6374 over the common area is shown on this survey except buoys, temporary signals and the magnetic meridian.

T-6373 (1935), 1:10,000

The comparison between T-6373 and this survey is adequately covered on page 4 of this descriptive report, T-5604.

There are a number of rocks located on this survey which are not on T-6373.

Topographic station VON (S. Gable of Hanger) which was located on T-6373 is not shown on this survey. This survey shows an aerial beacon located by the radial plot which is 1.5 meters north of station VON. a copy of this compilation T-5604 showing air Bn. and radio Towers has been delivered to airway mapping section 0390

All detail on T-6373 is shown on this survey except station VON, buoys, temporary signals and the magnetic meridian.

Comparison with Previous Topographic Surveys

T-183 bis (1844), 1:10,000

There is good general agreement between T-183 and this survey. The entrance to Allens Pond at 41° 30 3/4', 71° 00' on T-183 has closed and a new entrance blasted out at 41° 30 3/4', 71° 00 1/2'; see descriptive report T-6121, page 2. The marsh area around Allens Pond has changed. The point at 41° 31 1/2', 70° 58 3/4' has built out some 200 meters. The small marsh island at the entrance to ~~Packamansett~~ Slocums River is gone. There are several rocks on T-183 which are not shown on this survey. The discussion and disposal of these rocks is given in the reviews of H-5630 and H-5630 Addl. Work. The reef island off Barneys Joy Point on T-183 is shown as two rocks awash on this survey. The low water line north of Barneys Joy Point on T-183 extends far beyond the low water line on T-5604, which is accepted as correct; see review H-5630 addl. work, page 5, paragraph 6d(5).

T-193 bis (1844), 1:10,000; T-194 bis (1844), 1:10,000

The shoreline agreement is good. Several rocks on T-193 are not on this survey but are covered by H-5630, H-5880 and H-5882.

T-2216 (1895), 1:10,000

Comparison of T-2216 with this survey is covered on page 5 of this descriptive report, T-5604.

The three rocks some 400 meters east of Barneys Joy Point are about 30 meters too far east on T-2216.

T-2217 (1895-6), 1:10,000; T-2220 (1895), 1:10,000

There is good general agreement in shoreline between these 1895 surveys and T-5604. However, there are a few changes in the marsh details. A number of the fences located on T-2217 still exist and the agreement of these fences with this survey is very good.

T-4612 (1931), 1:10,000

T-4612 is a survey of Round Hill Point. Four radio towers, an airway beacon, and Dumpling Rock Lighthouse were located by this planetable survey. A few roads were run in as well as the shoreline around Round Hill Point.

The shoreline on T-4612 is in error by as much as 20 meters in some places.

The airway beacon and the lighthouse have since been located by triangulation. The radio towers have been located on this survey, T-5604, as well as on T-6373. The radio towers, airway beacon and lighthouse on T-4612 disagree with these latter locations by as much as 10 meters, and should be rejected.

T-5604, in conjunction with the disposal of rocks discussed in reviews of H-5630, H-5880 and H-5882, is adequate to supersede T-183, T-193, T-194, T-2216, T-2217, T-2220 and T-4612 over the common area except for hachures and contours.

Comparison with Contemporary Hydrographic Surveys

H-5630	(1934),	1:10,000
H-5630, Addl. Work	(1935),	"
H-5880	"	"
H-5882	"	"

There are no conflicts with the hydrography. There are, however, a few minor conflicts in the inside marsh areas between the hydrography of H-5630 and the shoreline of T-5604.

There are a number of rocks located on T-5604 which are not on the hydrographic surveys. The delineation of the rocks at the mouth of Little River, (41° 31 3/4', 70° 51') is different on the two surveys, T-5604 being accepted as correct, (see page 5 of this descriptive report). There are also errors in the shoreline of H-5880 at the upper end of Apponaganset River as discussed on page 4 of this descriptive report, T-5604. These omissions and errors have been called to the attention of the Chief of Field Records Section.

Comparison with Charts 1210, 252 and 249

Corrections and additions to the charts as a result of this survey are discussed under Comparison with Previous Surveys and on page 6 of this descriptive report.

All landmarks and aids to navigation in this area are shown on this survey, see chart letters No. 802 (1934) and No. 903 (1935).

Frank G. Evans

Sept. 17, 1936.

REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party: Thos B. Reed — Field No 4 Compiled by: R.S. Poor

Project: Vicinity of Westport Mass. — Instructions dated: Sept 28, 1936

1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,c,d,e,g and i; 26; and 64)

   Yes

2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g,n)

   Yes

3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d,e)

   Yes

4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)

   Yes

5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.

   Yes

6. The control and adjustment of the photo plot are discussed in the descriptive report. ~~Unusual or large adjustments are discussed in detail and limits of the area affected are stated~~. (Par. 12b; 44; and 66 c,h,i)

   Yes

7. High water line on marshy ~~and mangrove~~ coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)

   Yes

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs." M-67

8. The representation of low water lines, reefs, ~~coral reefs~~ and rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)

Yes

9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)

Located by plane table by party of W. D. Patterson, 1935.

10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)

Furnished by W. D. Patterson in conjunction with hydrographic and topographic survey of this area in 1935. No changes since then.

11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)

Yes

12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k)

Yes

13. The geographic datum of the compilation is N. A. 1927 and the reference station is correctly noted.

Yes

14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)

Yes

15. The drafting is satisfactory and particular attention has been given the following:

1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.

   Yes

2. The degrees and minutes of Latitude and Longitude are correctly marked.

   Yes

3. All station points are exactly marked by fine black dots.
Yes

4. Closely spaced lines are drawn sharp and clear for printing.
Yes

5. Topographic symbols for similar features are of uniform weight. Yes

6. All drawing has been retouched where partially rubbed off. Yes

7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.
Yes

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time.

17. Remarks: Yellow stains appearing on this compilation could not be removed without a great deal of difficulty. At the time the lines were removed the celluloid appeared to be clean and the ink was not on the celluloid for any great length of time. Stains did not appear for some time after actual removal of lines. Extra Heavy ink was used, which seems to have more tendency to cause yellow stains on the celluloid than the Light Heavy.

18. Examined and approved;

Thos B Reed
Chief of Party

19. Remarks after review in office:

Reviewed in office by: Frank G Einstein

Examained and approved:

E. F. Green
Chief, Section of Field Records

Fred. L. Peacock
Chief, Section of Field Work

L. O. Colbert
Chief, Division of Charts

G Wade
Chief, Division of Hydrography and Topography.

M-350

T-5604

PLANE COORDINATE GRID SYSTEM

Positions of grid intersections used for fitting the grid to this compilation were computed by Division of Geodesy and the computation forms are included in this report.

Positions plotted by R.E. Ask & H.D. Reed, Jr.

Positions checked ~~by~~ on Ruling machine

Grid inked on machine by H.D.R., Jr.

Intersections inked by H.D.R., Jr.

Points used for plotting grid:

x = 740,000 FT y = 215,000 FT	x 745,000 y 205,000
x 740,000 y 190,000	x y
x 755,000 y 190,000	x y
x 756,000 y 215,000	x y

Triangulation stations used for checking grid:

Ref. Sta. 1. Mishaum Point, 1844 — x = 729,376.51 FT — y = 188,301.42 FT.

x = 752,879.36 — y = 215,095.80

2. Padanaram Ch. Spire, 1844

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

T-5604

Form No. 742
DEPARTMENT OF COMMERCE
U. S. Coast and Geodetic Survey
Ed. May 1935

GEODETIC POSITIONS FROM LAMBERT COORDINATES

State Mass. Station

x	755,000	R_b+A	23,545,477.32
C	600,000	y	190,000.00
x' $(=x-C)$	+ 155,000	R_b+A-y	23,355,477.32
log $(x-C)$	5.1903 3170	$\frac{\theta}{2}$ (in secs.)	684.3170
log (R_b+A-y)	7.3684 6312	log $\frac{\theta}{2}$	2.8352 5733
log tan θ	7.8218 6858	log S	4.6855 7168
θ	° 22 44.6340	log sin $\frac{\theta}{2}$	7.5208 2901
	1364.6340		
log θ (θ in secs.)	3.1362 8734	log sin^2 $\frac{\theta}{2}$	5.0416 5802
log l	4.8271 9388	log 2	0.3010 3000
log $\frac{\theta}{l}$	3.3090 9346	log R*	7.3647 4631
$\Delta\lambda$ $(=\frac{\theta}{l})$	2037.4405	log y''	2.7111 5111
		y''	514.22
λ (central mer.)	71° 30' 00.0000		
$-\Delta\lambda$	- 33 57.4405	R_b+A-y	23,355,477.32
λ	70 56 02.5595	y''	+ 514.22
		R	23,355,991.54
		y	196,000.00
		y''	− 514.22
		y'	189,485.78
		ϕ (by interpolation)	41 31 11.9921

$\tan\theta=\frac{x-C}{R_b+A-y}$

$\Delta\lambda=\frac{\theta}{l}$

$\lambda=\lambda$ (central mer.)$-\Delta\lambda$

$y''=2R\sin^2\frac{\theta}{2}$

$y'=y-y''$

C is constant added to x' in computation of coordinates

R_b is map radius of lowest parallel

A is value of y' for R_b; in most cases it is zero

ϕ is interpolated from table of y'

* Use (R_b+A-y) as an approximate value of R and later correct this value when R is obtained below.

U. S. GOVERNMENT PRINTING OFFICE 11—11524

T-5604 E

Plane coordinates on Lambert projection

State Mass. Station Mishaum Point 1844

$\phi = 41^\circ\ 30'\ 55''.573$ $\lambda = 70^\circ\ 57'\ 16''.581$

Tabular difference of R for 1" of ϕ = 101.21933

R (for min. of ϕ)		23,367,278.53		y' (for min. of ϕ)		182,198.79	
Cor. for sec. of ϕ		− 5,625.06		Cor. for sec. of ϕ		+ 5,625.06	
R		23,361,653.47		y'		187,823.85	
				y'' (=2R $\sin^2 \frac{\theta}{2}$)		+ 477.57	
θ (for min. of λ)		+ 0° 22' 10".0227		y		188,301.42	
Cor. for sec. of λ		− 11.1379					
θ		+ 0° 21' 58".8848		$\frac{\theta}{2}$		0° 10' 59".4424	
θ''	For machine computation	+ 1318".8848			For machine computation		
				log θ''		3.12020686	
log θ''		3.12020686+		colog 2		9.69897000	
S for θ		4.6855 7186−10		S for $\frac{\theta}{2}$		4.6855 74 13	
log sin θ	sin θ	7.8055 7872		log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$	7.6847 5099	
log R		7.3685 0358			R sin $\frac{\theta}{2}$	4.8733 2557	
log x'		5.1742 8230		log $\sin^2 \frac{\theta}{2}$	R $\sin^2 \frac{\theta}{2}$	2.3780 0556	
x'	R sin θ	149,376.51		log R			
		+ 2,000,000.00		log 2		0.30103000	
x		749,376.51		log y''		2.6790 3556	
						477.57	

$x = 2{,}000{,}000.00 + R \sin \theta$

$y = y' + 2R \sin^2 \frac{\theta}{2}$

y' = the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y', and θ are given in special tables

(R 340)

T-5604

Form No. 742
DEPARTMENT OF COMMERCE
U. S. Coast and Geodetic Survey
Ed. May 1935

GEODETIC POSITIONS FROM LAMBERT COORDINATES

State Mass. Station

x	745,000	R_b+A	23,549,477.32
C	600,000	y	205,000.00
x' $(=x-C)$	+145,000	R_b+A-y	23,344,477.32
log $(x-C)$	5.1613 6800	$\frac{\theta}{2}$ (in secs.)	640.5800
log (R_b+A-y)	7.3681 8415	log $\frac{\theta}{2}$	2.8065 7338
log tan θ	7.7931 8385	log S	4.6855 7204
θ	° 21′ 21.″1601	log sin $\frac{\theta}{2}$	7.4921 4546
	1281.″1601		
log θ (θ in secs.)	3.1076 0340	log sin^2 $\frac{\theta}{2}$	4.9842 9092
log l	5.8271 9388	log 2	0.3010 3000
log $\frac{\theta}{l}$	3.2804 0952	log R*	7.3681 8441
$\Delta\lambda$ $(=\frac{\theta}{l})$	1907.2583	log y''	2.6535 0650
		y''	450.30
λ (central mer.)	71° 30′ 00.″0000		
$-\Delta\lambda$	− 31 47.2583	R_b+A-y	23,344,477.32
λ	70 58 12.7417	y''	+ 450.30
		R	23,344,927.62
		y	205,000.00
		y''	− 450.30
		y'	204,549.70
		ϕ (by interpolation)	41 33 40.9167

$\tan\theta=\dfrac{x-C}{R_b+A-y}$

$\Delta\lambda=\dfrac{\theta}{l}$

$\lambda=\lambda$ (central mer.)$-\Delta\lambda$

$y''=2R\sin^2\dfrac{\theta}{2}$

$y'=y-y''$

C is constant added to x' in computation of coordinates

R_b is map radius of lowest parallel

A is value of y' for R_b; in most cases it is zero

ϕ is interpolated from table of y'

* Use (R_b+A-y) as an approximate value of R and later correct this value when R is obtained below.

U. S. GOVERNMENT PRINTING OFFICE 11—11524

Geodetic positions from Lambert coordinates

State Illass. Station 740,000 / 215,000

x		$R_b + A$	23,549,477.32
C		y	215.000
x' (= x − C)	+ 140,000	$R_b + A - y$	23,334,477.32
tan θ		R	
θ	° ′ ″ / ″		
		y	215,000
$\frac{\theta}{\ell}$ (= Δλ)		y″	− 419.98
		y′	214,580.02
λ (central mer.)	71 ° 30′ ″		
− Δλ	30 42.2815	φ (by interpolation)	41 ° 35 19.9117
λ	70 59 17.7185		

Station 755,000 / 215,000

x		$R_b + A$	23,549,477.32
C		y	215,000
x' (= x − C)	+ 155,000	$R_b + A - y$	23,334,477.32
tan θ		R	
θ	° ′ ″ / ″		
		y	215,000
$\frac{\theta}{\ell}$ (= Δλ)		y″	− 514.79
		y′	214,485.21
λ (central mer.)	71° 30′ ″		
− Δλ	33 59.6633	φ (by interpolation)	41 ° 35 18.9751
λ	70 56 00.3367		

$$\tan\theta = \frac{x - C}{R_b + A - y}$$

$$\Delta\lambda = \frac{\theta}{\ell}$$

$\lambda = \lambda$ (central mer.) $- \Delta\lambda$

$R = (R_b + A - y) \sec\theta$

$$y'' = 2R \sin^2\frac{\theta}{2}$$

$y' = y - y''$

C is constant added to x′ in computation of coordinates

R_b is map radius of lowest parallel

A is value of y′ for R_b; in most cases it is zero

φ is interpolated from table of y′

(M-28)

5604
5602

Geodetic positions from Lambert coordinates

State Mass. Station 740,000 / 190,000

x		$R_b + A$	23,549,477.32
C		y	190,000
x' (= x − C)	+140,000	$R_b + A - y$	23,359,477.32
tan θ		R	
θ	° ′ ″ / ″		
		y	190,000
$\frac{\theta}{\ell}$ (= Δλ)		y″	− 419.53
		y′	189,580.47
λ (central mer.)	71 ° 30′ ″		
− Δλ	30 40.3099	φ (by interpolation)	41 ° 31′ 12″.9276
λ	70 59 19.6901		

Station 710,000 / 210,000

x		$R_b + A$	23,549,477.32
C		y	210,000
x' (= x − C)	+110,000	$R_b + A - y$	23,339,477.32
tan θ		R	
θ	° ′ ″ / ″		
		y	210,000
$\frac{\theta}{\ell}$ (= Δλ)		y″	− 259.22
		y′	209,740.78
λ (central mer.)	71 ° 30′ ″		
− Δλ	24 07.2035	φ (by interpolation)	41 ° 34 32.1022
λ	71 05 52.7965		

$$\tan\theta = \frac{x - C}{R_b + A - y}$$

$$\Delta\lambda = \frac{\theta}{\ell}$$

$\lambda = \lambda$ (central mer.) $- \Delta\lambda$

$R = (R_b + A - y) \sec\theta$

$$y'' = 2R \sin^2\frac{\theta}{2}$$

$y' = y - y''$

C is constant added to x′ in computation of coordinates

R_b is map radius of lowest parallel

A is value of y′ for R_b; in most cases it is zero

φ is interpolated from table of y′

(M-28)

Plane coordinates on Lambert projection

State Mass. Station 740,000 / 215,000

ϕ = 41° 35′ 19.″9117 λ = 70° 59′ 17.″7185

Tabular difference of R for 1″ of ϕ = 101.21917

R (for min. of ϕ)		23,336,912.75	y′ (for min. of ϕ)		212,564.57
Cor. for sec. of ϕ		− 2015.45	Cor. for sec. of ϕ		+ 2015.45
R		23,334,897.30	y′		214,580.02
			y″ (=2R sin² $\frac{\theta}{2}$)		+ 419.98
θ (for min. of λ)		+ 0° 20′ 49.″4153	y		215,000.00
Cor. for sec. of λ		− 11.9020			
θ		20 37.5133	$\frac{\theta}{2}$		° 10′ 18.″7566.5
θ''	For machine computation	″		For machine computation	
			log θ''		
log θ''			colog 2		9.69897000
S for θ			S for $\frac{\theta}{2}$		
log sin θ	sin θ	.0059995978	log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$	.0029998124
log R				R sin $\frac{\theta}{2}$	70,000.314
log x′			log sin² $\frac{\theta}{2}$	R sin² $\frac{\theta}{2}$	209.988
x′	R sin θ	140,000.70	log R		
		2,000,000.00	log 2		0.30103000
x		740,000	log y″		

$x = 2{,}000{,}000.00 + R \sin \theta$

$y = y' + 2R \sin^2 \frac{\theta}{2}$

y′ = the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y′, and θ are given in special tables

Plane coordinates on Lambert projection

755,000
215,000

State Mass. Station

ϕ = 41° 35′ 18.9751 λ = 70° 56′ 00.3367

Tabular difference of R for 1″ of ϕ = 101.21917

R (for min. of ϕ)		23,336,912.75	y′ (for min. of ϕ)		212,564.57
Cor. for sec. of ϕ		− 1920.64	Cor. for sec. of ϕ		+ 1920.64
R		23,334,992.11	y′		214,485.21
			y″ (=2R sin² $\frac{\theta}{2}$)		+ 514.79
θ (for min. of λ)		+ 0 ° 22′ 50.3265	y		215,000.00
Cor. for sec. of λ		− .2262			
θ		+ 22 50.1003	$\frac{\theta}{2}$		° 11′ 25.05015
θ''	For machine computation	″		For machine computation	
			log θ''		
log θ''			colog 2		9.69897000
S for θ			S for $\frac{\theta}{2}$		
log sin θ	sin θ	.0066423849	log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$	.0033212107
log R				R sin $\frac{\theta}{2}$	77,500.426
log x′			log sin² $\frac{\theta}{2}$	R sin² $\frac{\theta}{2}$	257.395
x′	R sin θ	155,000.00	log R		
		2,000,000.00	log 2		0.30103000
x		755,000	log y″		

$x = 2{,}000{,}000.00 + R \sin \theta$

$y = y' + 2R \sin^2 \frac{\theta}{2}$

y′= the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y′, and θ are given in special tables

5604

Plane coordinates on Lambert projection

740,000
190,000

State Mass. Station

ϕ = 41° 31′ 12.9276 λ = 70° 59′ 19.6901

Tabular difference of R for 1″ of ϕ = 101.21917

R (for min. of ϕ)		23,361,205.37		y′ (for min. of ϕ)			188,271.95
Cor. for sec. of ϕ		− 1308.52		Cor. for sec. of ϕ			+ 1308.52
R		23,359,896.85		y′			189,580.47
				y″ (=2R sin² $\frac{\theta}{2}$)			+ 419.53
θ (for min. of λ)		+ 0° 20′ 49.4153		y			190,000.00
Cor. for sec. of λ		− 13.2264					
θ		+ 20 36.1889		$\frac{\theta}{2}$			10′ 18.09445
θ″	For machine computation	″			For machine computation		
				log θ″			
log θ″				colog 2			9.69897000
S for θ				S for $\frac{\theta}{2}$			
log sin θ	sin θ	.0059931770		log sin $\frac{\theta}{2}$	sin $\frac{\theta}{2}$		.0029966020
log R					R sin $\frac{\theta}{2}$		70,000.314
log x′				log sin² $\frac{\theta}{2}$	R sin² $\frac{\theta}{2}$		209.763
x′	R sin θ	140,000.00 6		log R			
		2,000,000.00		log 2			0.30103000
x		740,000		log y″			

x = 2,000,000.00 + R sin θ

y = y′ + 2R sin² $\frac{\theta}{2}$

y′ = the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y′, and θ are given in special tables

(R 340)

MASSACHUSETTS GEODETIC SURVEY
WORKS PROGRESS ADMINISTRATION
PROJECT NO. 165-14-6085
100 NASHUA STREET BOSTON

ELMER C. HOUDLETTE
DIRECTOR

November 19, 1936

Lieutenant Thomas B. Reed
U. S. Coast and Geodetic Survey
New London, Connecticut

Dear Sir:

Enclosed are Coordinates of traverse stations established for the Coast Survey in the vicinity of Dartmouth for use as control for their air photos.

Very truly yours,

Wilbert H. Connor

Wilbert H. Connor
Assistant Director

WHC:HCA
Enc.

November 21, 1936.

Respectfully forwarded to the Director, U. S. Coast and Geodetic Survey.

Thos. B. Reed.

Station	X	Y
Joy	740,949.82	187,061.52
82A	739,809.98	188,976.79
82B	736,923.54	193,573.63
82C	735,483.47	194,589.77
82D	734,418.04	198,676.29
82E	734,351.52	200,676.65
82F	734,619.58	~~208,714.50~~
82G	732,379.80 72.54	208,324.35 51.07
Dartmouth #2	728,647.10	207,966.03

Closure 1:11,000

96°

9.5

	X	Y
82H	735,725.17	209,811.26
82Ha	735,832.37	210,466.83
82Hb	735,677.97	211,284.04
82Hc	735,969.70	212,645.83
82Hd	736,219.82	213,020.22
82He	737,439.10	213,369.81
82Hf	739,013.33	213,448.07
82Hg	739,388.47	213,859.98
82Hh	739,838.94	215,193.58
82Hj	740,650.86	216,242.81
82J	741,963.94	216,584.38
82K	742,143.58	215,689.11
82Ka	742,340.84	215,073.40
82Kb	742,739.53	213,563.10
82Kc	743,363.77	213,150.79
82L	744,132.80	212,756.17
82M	749,915.77	213,381.20
82N	751,552.80	214,174.88
82P	751,890.80	214,507.86
Podanarum Gray Ch.	752,879.36	215,045.80
	87.74	1.90

Station	X	Y
Dartmouth 2	728,647.10	207,966.03
Dartmouth 2a	727,468.75	208,730.68
82AA	727,085.72	209,447.33
82AB	725,515.65	212,378.14
82ABa	725,034.18	212,027.15
82ABb	724,329.48	211,554.91
82ABc	723,335.97	210,125.56
82ABd	722,252.60	209,134.21
82AC	721,047.93	208,546.82
82AD	719,886.62	208,407.74
82AE	717,597.88	208,032.02
82AF	715,867.25	208,527.42
82AFa	713,383.13	208,140.07
82AFb	712,564.20	207,999.59
82AG	711,932.25	207,954.18
82AH	711,708.68	209,321.57
82AHa	710,442.73	209,211.55
82AHb	708,886.68	208,622.42
82AJ	707,814.27	207,965.84
82AK	706,935.43	207,681.50
82AKa	704,776.02	206,450.09
82AKb	704,255.66	206,014.63
82AKc	703,598.33	205,468.96
82AKd	703,569.43	204,871.97
82AKe	703,439.71	204,467.08
82AKf	703,402.92	204,035.06
82AL	702,857.76	203,471.37
82AM	702,280.50	200,754.16
82AMa	702,500.51	198,030.08
82AMb	702,766.85	196,928.17
82AMc	702,900.41	196,271.85
Nootas 2	703,053.89	195,874.46

210 681.5
207 681.5
231.85

applied to drawing of chart 237 - Nov. 17, 1936 - J.F.W.
" " " " " 1210 - Dec. 12, 1938 - K.R.
" " " " " 252 Mar. 2, 1939 - J.F.W.