

4426

Form 504

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

Director

State: Massachusetts

DESCRIPTIVE REPORT

Topographic
~~Hydrographic~~

Sheet No.

4426

LOCALITY

Newburyport

Merrimack River Entrance

1929

CHIEF OF PARTY

H.E. Finnegan

GOVERNMENT PRINTING OFFICE

4426

DESCRIPTIVE REPORT TO ACCOMPANY TOPOGRAPHIC SHEET #1.

Instructions dated - August 1, 1928. 4426

GENERAL DESCRIPTION OF COAST

At the northern end of the sheet, the buildings, roller coaster, etc., at Cushing, make up a very prominent landfall. From Cushing to the entrance of Merrimack River, there are numerous scattered summer cottages fronting along the beach. Merrimack River is marked by two stone jetties. The outer ends of these jetties are awash at high water.

The north end of Plum Island is low and sandy with numerous summer cottages. Newburyport L.H., at this end of the island, is at times hard to distinguish from the numerous surrounding buildings. A prominent object which is easily distinguishable, is the Catholic Church about one-half mile south of the entrance. Sand dunes, some with elevations of about 60 feet, are prominent on Plum Island starting at a point approximately one mile south of Merrimack River entrance and extending southward.

The tall stack at Newburyport is very conspicuous.

LANDMARKS

Prominent landmarks listed for this locality are: Church Cross on Plum Island Catholic Church, Roller Coaster at Cushing, the Tall Stack at Newburyport, a Standpipe and Water Tank near Salisbury. These have been submitted on Form 567.

CHARACTER OF CONTROL USED

Butlers Toothpick 1866, Newburyport L.H. 1912, Salisbury Beach Catholic Church 1912, and Old Town 1850 were recovered as described. Plum 1928 was established at the southern limits of the survey and several additional intersection stations located.

Traverses were run from Butlers Toothpick to Salisbury Beach Catholic Church and from Newburyport L.H. to Plum.

CLOSING ERRORS OF TRAVERSES RUN

While running the traverse northward to the Salisbury Beach Catholic Church, considerable trouble was had with refraction while reading the rod. The closing error of the traverse was found to be far in excess of the allowable. An extension was put on the rod and the traverse re-run. The second traverse checked very closely. No unusual error was obtained in the traverse southward to Plum. Some minor adjustments were made on the sheet.

CHANGES IN PROMINENT OBJECTS, ETC.

Differences were found in the location of buildings and streets at both Salisbury Beach and Plum Island. At Cushing (Salisbury Beach) numerous prominent objects were located by triangulation and the main thoroughfare (Broadway) with surrounding buildings surveyed. A plan of Salisbury Beach was obtained from the local real estate company and checked in the field. The streets and roads shown marked with red are the only ones completed and in use. The southern end of Atlantic Ave. and the junction of Railroad Ave. with Broadway were located by this party and the street drawn in from the plan. The State Highway and Central Ave. were located in the same way. The Old Road shown, is only temporary and subject to change depending on the condition of the marsh which it borders.

Only the outer row of houses on the beach is shown. There are numerous cottages on either side of the shown, but as these are only temporary and not prominent in any way, they were not located.

No check could be made with the system of streets as shown on the chart with the exception of the southern end of Atlantic Ave. The electric car line has been removed southward of Broadway but is still in use northward along the State Highway to Hampton Beach.

A plan showing the streets and location of cottages on the northern end of Plum Island is also included with the sheet. This shows considerable difference in the roads and location of buildings. Roads or streets in actual use at the time of survey are shown marked with blue pencil on the plan and also shown on the topographic sheet. Only a general check on the location of cottages shown on the plan was made. These cottages are shown marked with red pencil. Additional cottages have been built since the time of survey of the plan, but as all the cottages are only temporary and not prominent, the additional ones are not shown.

In comparing information and location obtained relative to Badger Rocks with the chart and Topographic Sheet 355A, very little agreement was found. None of the rocks are bare at high water as shown on the chart. The rocks awash on the accompanying topographic sheet show the limits of this group. Part of this reef is made up of old wreckage and concrete of a former wharf. There are no rocks awash further off-shore.

CHANGES IN COASTLINE

The coastline northward from the entrance shows very little change. To the southward of the entrance, along Plum Island, the coastline shows an emergence varying from 10 to 30 meters starting at a point about one mile south of the entrance and continuing to the southern limits of the sheet.

The shoreline at the entrance inside of the jetties is subject to rapid changes due to the strong currents in that vicinity. Extensive changes have occurred at the northern point of Plum Island with the building up of the sand shoreline near the south jetty. The shoreline on the north side of the entrance is somewhat similar to that shown on the chart with a slight shift to the westward. The sand point near the Badgers has been shifted to the westward about 30 or 40 meters. The small creek at Black Rocks, shown to the eastward of Black Rock Creek has been filled in.

MISCELLANEOUS NOTES

The small landings, used as ferry landings, shown on both sides of the river, are only in place during the summer months.

Topographic signals are shown with circles approximately 2 millimeters in diameter instead of 3 millimeters in diameter as prescribed in the Topographic Manual.

The sheet shows a shrinkage of about 12 meters per mile in a northerly and southerly direction and about 5 meters per mile in a easterly and westerly direction.

A complete list of signals located and used, with a short description, is being included under the list of Plans Table position to facilitate the verifying of the Hydrographic Smooth Sheet.

*The survey conforms to the
requirements of the general and
specific instructions and is adequate.*

E. P. Ehlers, Dec. 4, 1929

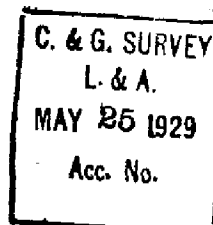
Carl F. Ehlers

Carl F. Ehlers,
Jr. H. & G. Eng'rs.

PLANE TABLE POSITIONS & TOPOGRAPHIC SIGNALS

Object & Name	Latitude	D. M.	Longitude	D. P.	Height	Remarks & Description
	0	Meters	0	Meters	Feet	
Flag	42 - 49	1802	70 - 48	1265		Flagpole on East end of House.
Shed	42 - 49	1625	70 - 48	1238		East gable of yellow house.
Dark	42 - 49	1270	70 - 48	1186		East gable of dark green house.
How	42 - 49	706	70 - 48	1140		Chimney on end house.
Back	42 - 49	812	70 - 49	468	45	Back Range, N. side of Merrimack River.
Red	42 - 49	690	70 - 49	231	22	Front Range, N. side of Merrimack River.
Gage	42 - 49	599	70 - 48	1113	6	Tide Gauge stand.
Mon	42 - 49	295	70 - 48	711	10	Heap of rocks marking bend in N. breakwater.
Post	42 - 49	127	70 - 49	139		Mooring post on beach, S. bank of Merrimack River.
Chim	42 - 48	1617	70 - 48	875		Chimney on C.G. Lookout.
Pole	42 - 48	1039	70 - 48	818		Flagpole at L.S.S.
Cor	42 - 48	420	70 - 48	758		S.E. corner of white house.
Brown Ho.	42 - 47	1627	70 - 48	722		Center of top of brown house on high sand dune.
Last	42 - 47	1024	70 - 48	620		Center of last house on beach.
Gas	42 - 47	424	70 - 48	538		Gas drum covered with signal cloth, set on sand dune.
Trunk	42 - 47	60	70 - 48	449	12	Old tree trunk set up on beach.
Dun	42 - 46	1502	70 - 48	389		Fir tree on sand dune.
Tel	42 - 46	1038	70 - 48	323		Banner on telephone pole.
House	42 - 48	1145	70 - 48	376		E. gable of McCabe's cottage near U.S.E. monument III
Tree	42 - 46	234	70 - 50	1316		Prominent tree on Old Town Hill.

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY



TOPOGRAPHIC TITLE SHEET

REG. NO.

4426

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

Field Letter No. 1

REGISTER NO. 4426

State Massachusetts

General locality Newburyport

Locality Merrimack River Entrance

Scale 1 - 10,000. Date of survey August 1, 1928.

Vessel Launch Ogden & #66

Chief of Party H.E. Fimmegan

Surveyed by C.F. Ehlers

Inked by C.F. Ehlers

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

Contour Approximate contour Form line interval ----- feet

Instructions dated August 1, 1928.

Remarks: Revision Survey