

10. The clause in the river and harbor act calls for a report "with a view to securing a channel depth of 34 feet or such increased depth over the completed project as may be deemed advisable." The channel to Baltimore and a large part of Baltimore Harbor has a depth of 35 feet, and it is quite probable that vessels using the Curtis Bay channel will be as large and of as deep draft as any using the rest of the harbor. This office believes that the approved project for this channel should provide for an equal depth. The depth of 34 feet was requested by business interests affected, which realized the inadequacy of the present channel and the necessity for enlargement, but in their desire to secure relief were willing to accept the smallest channel and least depth which could answer the purpose. It is believed that the interests of navigation will be best served by having the project depth the same as for Baltimore Harbor, and it is recommended that, if this report is approved by proper authorities, the appropriating clause place the Curtis Bay channel in the project for "Patapsco River and channel to Baltimore," the channel to have such dimensions less than full project width and depth as the Chief of Engineers and the Secretary of War may decide that its commerce at the time requires. This method will permit enlargement when necessary without the delay of other preliminary examination, but the matter will at all times be under the control of Congress, as an enlargement could not be made without an appropriation for the purpose.

11. The terminal facilities at this place, which are all used exclusively by the various concerns owning them, are ample to handle the commerce, and the character of that commerce is such that the establishment of a public wharf is unnecessary. The oil company's pier is equipped with a pipe line for the delivery of oil in bulk into vessels; the chemical pier on the east side is equipped with cranes, trestle, and cars for unloading raw material; and the Baltimore & Ohio Railroad pier is equipped with trestles and chutes for dumping coal directly from the cars into vessels; 7,483 tons of coal were placed in a vessel from 156 cars in 4 hours and 10 minutes at this pier recently.

12. There are no questions of water power, land reclamation, or kindred subjects that could be considered in connection with any improvement of this channel.

13. Because of the facts and reasons stated, I am of the opinion that the channel in Curtis Bay and Patapsco River, Baltimore Harbor, Md., is worthy of further improvement by the General Government to the extent of deepening it to conform to the Baltimore Harbor channel and providing a proper turning basin at the upper end.

14. An estimate of the cost of the improvement can be made without further survey from data now on file in this office.

15. A sketch map of the locality, taken from a Coast Survey chart, accompanies this report.

LANSING H. BEACH.

UNITED STATES ENGINEER OFFICE,

New York City, November 30, 1912.

The CHIEF OF ENGINEERS, UNITED STATES ARMY:
Forwarded, concurring in the views of the district officer.

Wm. T. ROSELL,
Colonel, Corps of Engineers;
Division Engineer.

(Read information.)

BOARD OF ENGINEERS FOR RIVERS AND HARBOURS,

December 5, 1912.

The CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. For reasons stated herein, the board concurs with the district officer and the division engineer in recommending a survey in order to determine the extent and advisability of the improvement. It is requested that the district officer give additional information as to the number of vessels and tonnage of commerce that would be benefited by a depth of more than 30 feet.

For the board:

Wm. T. ROSELL,
Colonel, Corps of Engineers,
Senior Member of the Board.

PLAN AND ESTIMATE OF COST OF IMPROVEMENT OF CHANNEL IN CURTIS BAY AND IN PATAPSCO RIVER, BALTIMORE HARBOR, MD.

UNITED STATES ENGINEER OFFICE,

Baltimore, Md., December 21, 1912.

To: The Chief of Engineers, United States Army
(Through the Division Engineer).

Subject: Plan and estimate of cost of improvement of Curtis Bay, Md.

1. Referring to department letter of December 12, 1912, the following report is submitted with plan and estimates of cost of channel in Curtis Bay, and in Patapsco River, Baltimore Harbor, Md., with a view to securing a channel depth of 34 feet, or such increased depth over the completed project as may be deemed advisable, made pursuant to the requirements of the river and harbor act approved July 25, 1912.

2. Estimates are submitted for deepening the present 30 feet deep at mean low water by 250 feet wide channel to 34 feet at mean low water, continuing the planes of the present side slopes to the increased depth, thus making the bottom width 226 feet, and for deepening it to 35 feet at mean low water and maintaining the present bottom width of 250 feet, such widths and depths being considered suitable for boats of a maximum draft of 33 feet, for which the channel is designed; the latter dimensions being the more desirable and the former less so.

3. It is proposed to maintain the present widened entrance and turning basin at the upper end, where the maximum cross section

will be. The widening at the entrance is made to facilitate the turning of vessels from the Patapsco River Channel, and the widening at the upper end is to enable vessels to turn before leaving the bay.

4. Estimates for improvement as described above, the material being mud, are as follows:

For a depth of 34 feet:

730,000 cubic yards, at 10 cents.....	\$73,000
Engineering, superintendence, and contingencies, 10 per cent.....	7,300
	<hr/>
	80,300
	<hr/>

For a depth of 35 feet:

1,124,600 cubic yards, at 10 cents.....	112,460
Engineering, superintendence, and contingencies, about 10 per cent....	11,240
	<hr/>
	123,700

5. It is believed that the yearly maintenance would not exceed \$4,000.

6. There are no facts additional to those given in the preliminary-examination report concerning the advisability of the improvement; and there is no question of terminal facilities involved, nor is there any water-power development that can be considered in connection with this improvement.

7. The total amount should be provided in one appropriation.

8. From the facts given in the preliminary-examination report and the above estimates, I am of opinion that the channel in Curtis Bay, and Patapsco River, Baltimore Harbor, Md., is worthy of improvement by the General Government to the extent of deepening it to 35 feet at mean low water and maintaining the present width of 250 feet, with a widened entrance and a turning basin at the upper end, as shown on the map accompanying this report.

LANSING H. BEACH.

[First indorsement.]

UNITED STATES ENGINEER OFFICE,
New York City, December 24, 1912.

The CHIEF OF ENGINEERS, UNITED STATES ARMY:

Forwarded, concurring in the views of the district officer.

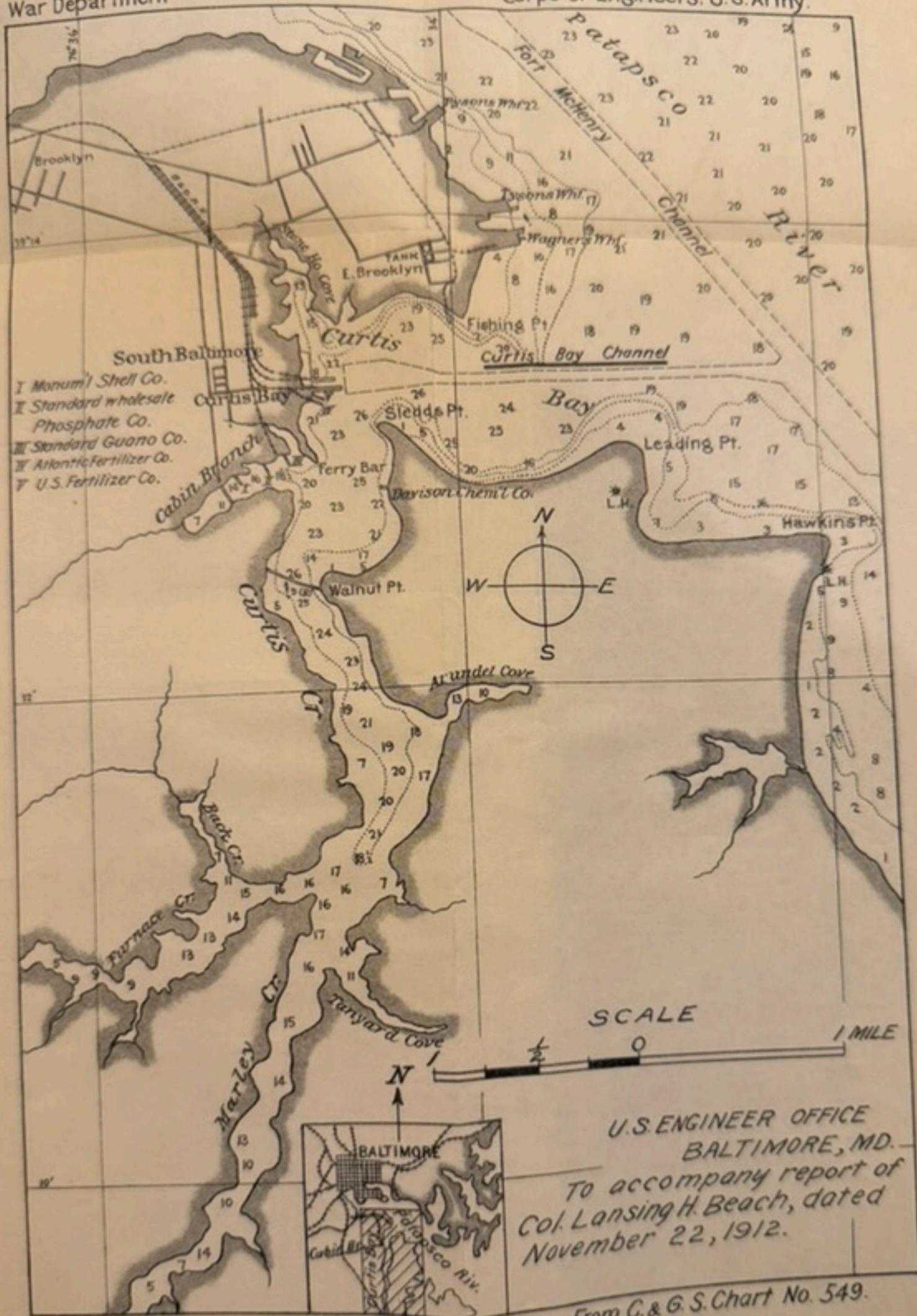
Wm. T. ROSELL,
Colonel, Corps of Engineers,
Division Engineer.

[For report of the Board of Engineers for Rivers and Harbors on survey, see p. 3.]

O

War Department

Corps of Engineers, U.S. Army.

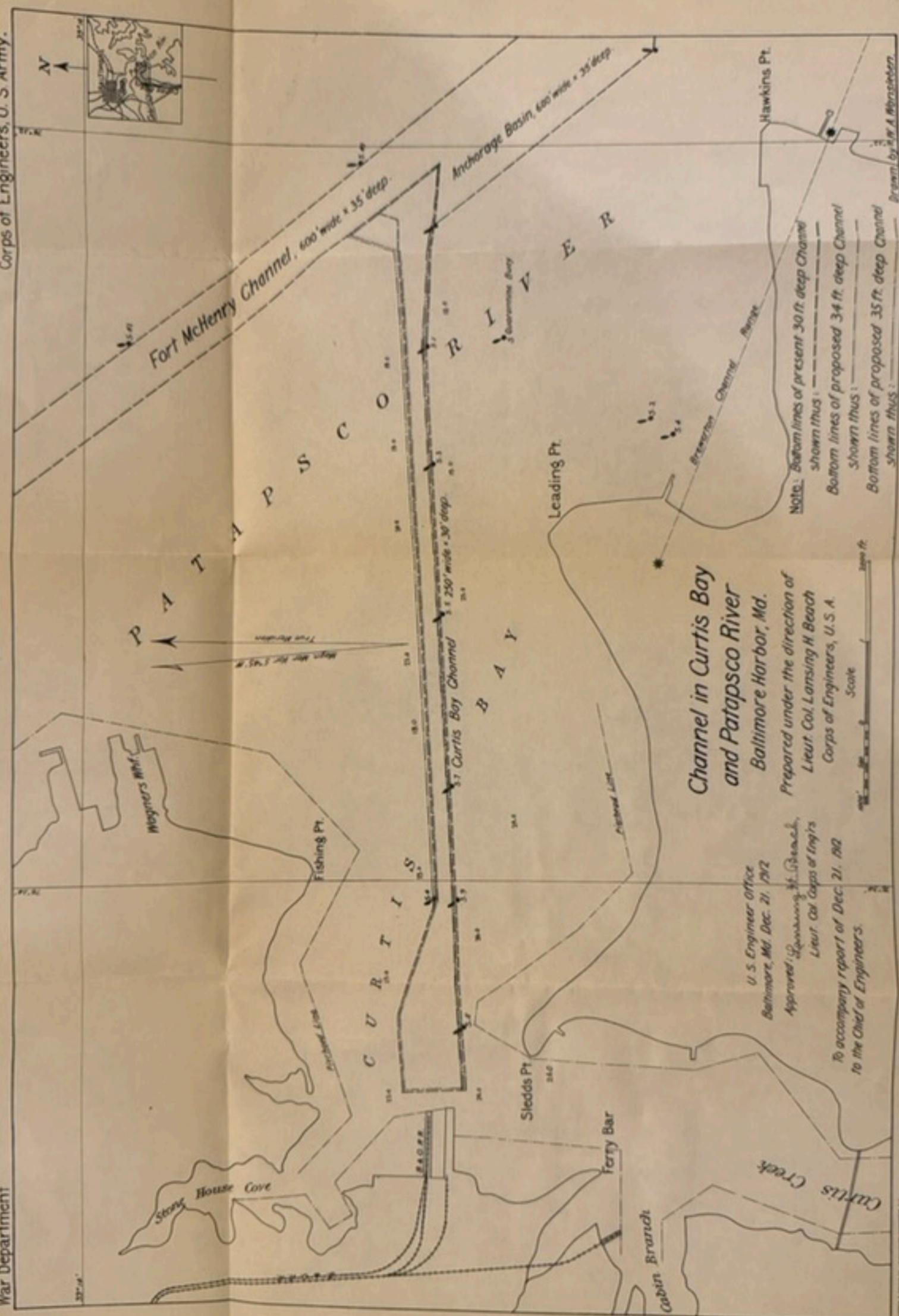


House Doc. No.

; 63d Cong., 1st Sess.

U.S. ENGINEER OFFICE
BALTIMORE, MD.
To accompany report of
Col. Lansing H. Beach, dated
November 22, 1912.

From C. & G. S. Chart No. 549.



CURTIS BAY CHANNEL, BALTIMORE HARBOR, MD.

2

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, March 19, 1913.

From: The Chief of Engineers, United States Army.

To: The Secretary of War.

Subject: Preliminary examination and plan and estimate of cost of improvement of channel in Curtis Bay, and in Patapsco River, Baltimore Harbor, Md.

1. There are submitted herewith, for transmission to Congress, reports dated November 22 and December 21, 1912, with maps, by Lieut. Col. L. H. Beach, Corps of Engineers, on preliminary examination and plan and estimate of cost of improvement, respectively, of channel in Curtis Bay, and in Patapsco River, Baltimore Harbor, Md., with a view to securing a channel depth of 34 feet, or such increased depth over the completed project as may be deemed advisable, called for by the river and harbor act approved July 25, 1912.

2. Curtis Bay is a tidal estuary of the Patapsco River. It is situated about $3\frac{1}{2}$ miles below the corporate limits of Baltimore and is commercially a part of that port. The present project, which has been completed, provides for a channel 250 feet wide and 30 feet deep. The banks of the bay are occupied by large manufacturing establishments, having an aggregate business of approximately 2,300,000 tons annually, and the locality is also an important coaling point for the Navy. The district officer is of opinion that this channel is worthy of further improvement by the General Government to the extent of deepening it to 35 feet to conform to the Baltimore Harbor Channel, and he submits an estimate of cost in the sum of \$123,700 for a channel of this depth and 250 feet bottom width. The annual cost of maintenance is estimated at \$4,000. The division engineer concurs in recommending the improvement proposed by the district officer.

3. These reports have been referred, as required by law, to the Board of Engineers for Rivers and Harbors, and attention is invited to the board's accompanying report of February 17, 1913, concurring with the views of the district officer and the division engineer.

4. After due consideration of the above-mentioned reports, I concur in general with the views of the district officer, the division engineer, and the Board of Engineers for Rivers and Harbors, and therefore, in carrying out the instructions of Congress, I report as follows: That the improvement by the United States of channel in Curtis Bay, and in Patapsco River, Baltimore Harbor, Md., is deemed advisable so far as to secure an available channel depth of 35 feet and a channel width of 250 feet increased at entrances and on curves, following in general the methods described in the report of the district officer at an estimated cost of \$123,700 for first construction and \$4,000 annually for maintenance, these estimates being based on the supposition that the construction work will, as now seems desirable and advantageous, be prosecuted under a first appropriation of the full amount of the estimate cost.

W. H. BIXBY,
Chief of Engineers, United States Army.

CURTIS BAY CHANNEL, BALTIMORE HARBOR, MD.

3

REPORT OF THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS
ON SURVEY.

[Third indorsement.]

BOARD OF ENGINEERS FOR RIVERS AND HARBORS,
February 17, 1913.

THE CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. Curtis Bay is a tidal estuary of the Patapsco River, with which it is connected at a point $3\frac{1}{2}$ miles below the corporate limits of Baltimore City. Although the bay is situated beyond the city limits, the establishments upon its banks have their offices in the city, and the commerce has been considered a part of that of Baltimore. The mean range of tide is a little over 1 foot.

2. The existing project adopted by the act of June 13, 1902, which provides for a channel 250 feet wide and 30 feet deep, was completed in 1903. There has been expended to June 30, 1912, on the existing and previous projects \$255,000. The controlling depth in Chesapeake Bay and Patapsco River being 35 feet, those interested desire a similar depth into Curtis Bay, so as to admit any vessel entering Baltimore Harbor.

3. The northerly and westerly banks of this bay are occupied by large manufacturing concerns, the amount of business transacted being reported for 1911 as approximately 2,300,000 tons, having a value of nearly \$12,000,000. These are the interests desiring further improvement. It appears also that the Navy Department is interested in this improvement, as Curtis Bay is one of the principal coal-loading ports for the Navy.

4. The act calls for a report with a view to securing a channel depth of 34 feet, or such increased depth as may be deemed advisable. The district officer states that the channel to Baltimore and a large part of the harbor has a depth of 35 feet, and it is quite probable that vessels using the Curtis Bay channel will be as large and of as deep draft as any using the rest of the harbor. He believes that a similar depth should be provided in Curtis Bay.

5. A survey having been made, the district officer presents an estimate of \$80,300 for deepening the present 30-foot channel to 34 feet at mean low water, continuing the planes of the present side slopes to the increased depth, making the bottom width 226 feet; and one of \$123,700 for deepening to 35 feet at mean low water, maintaining the present bottom width of 250 feet, the maintenance in either case being \$4,000. He reports the locality as worthy of improvement in accordance with the larger estimate, in which view the division engineer concurs. A delegation from the locality appeared before the board on February 17, 1913, in relation to this improvement.

6. This bay, on which there are large manufacturing and other industries handling an extensive commerce, is commercially a part of Baltimore Harbor. It uses the same class of large vessels and for its full development should have the same depth as Baltimore Harbor and entrance thereto. In view of all the facts presented, the board concurs with the district officer and the division engineer and reports that in its opinion it is advisable for the United States to undertake the further improvement of Curtis Bay by providing a channel depth of 35 feet at mean low water and a bottom width of

CURTIS BAY CHANNEL, BALTIMORE HARBOR, MD.

Rivers & Harbors - Md.
B. C. S. MEMORIAL

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE CHIEF ON ENGINEERS, REPORT ON EXAMINATION OF CHANNEL IN CURTIS BAY, AND IN PATAPSCO RIVER, BALTIMORE HARBOR, MD., WITH PLAN AND ESTIMATE OF COST OF IMPROVEMENT, WITH A VIEW TO SECURING A CHANNEL DEPTH OF 34 FEET, OR SUCH INCREASED DEPTH OVER THE COMPLETED PROJECT AS MAY BE DEEMED ADVISABLE.

APRIL 10, 1913.—Referred to the Committee on Rivers and Harbors and ordered to be printed, with illustrations.

WAR DEPARTMENT,
Washington, April 9, 1913.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I have the honor to transmit herewith a letter from the Chief of Engineers, United States Army, dated 19th ultime, together with copies of reports from Lieut. Col. L. H. Beach, Corps of Engineers, dated November 22 and December 21, 1912, with maps, on preliminary examination and plan and estimate of cost of improvement, respectively, of channel in Curtis Bay and in Patapsco River, Baltimore Harbor, Md., made by him in compliance with the provisions of the river and harbor act approved July 25, 1912.

Very respectfully,

LINDLEY M. GARRISON,
Secretary of War.

250 feet; at a total estimated cost of \$123,700 for first construction and \$4,000 annually thereafter for maintenance. The total amount should be provided in one appropriation. The district officer recommends that if the project is adopted, the appropriating clause place the Curtis Bay channel in the project for "Patapsco River and channel to Baltimore." This appears desirable and is recommended.

7. In compliance with law, the board reports that there are no questions of terminal facilities, water power, or other subjects so related to the project proposed that they may be coordinated therewith to lessen the cost and compensate the Government for expenditures made in the interests of navigation.

For the board:

WM. T. ROSELL,
Colonel, Corps of Engineers,
Senior Member of the Board.

PRELIMINARY EXAMINATION OF CHANNEL IN CURTIS BAY AND IN PATAPSCO RIVER, BALTIMORE HARBOR, MD.

UNITED STATES ENGINEER OFFICE,
Baltimore, Md., November 22, 1912.

From: Lieut. Col. Lansing H. Beach, Corps of Engineers.

To: The Chief of Engineers, United States Army

(Through the Division Engineer).

Subject: Preliminary examination of Curtis Bay, Md.

1. In compliance with department letter of August 5, 1912, the following report on the preliminary examination of channel in Curtis Bay, and in Patapsco River, Baltimore Harbor, Md., with a view to securing a channel depth of 34 feet, or such increased depth over the completed project as may be deemed advisable, as provided for in the river and harbor act of July 25, 1912, is submitted.

2. Curtis Bay is the mouth of Curtis Creek, a tributary of the Patapsco River, into which it empties on the west side at a point $\frac{3}{4}$ miles below the corporate limits of Baltimore City. The bay and creek are navigable for a distance of about $7\frac{1}{2}$ miles from the main ship channel in the Patapsco River. Although it is beyond the civil jurisdiction of the city, it really forms a part of Baltimore Harbor; the establishments upon its banks have their offices in that city, and its commerce has always been included in that of the port of Baltimore in the annual reports of the Chief of Engineers. The mean range of tide is a little over 1 foot.

3. The northerly and westerly banks of this bay are occupied by various manufacturing concerns, the Ellis Oil Co.'s naval fuel station, the settlements of South Baltimore and East Brooklyn, and the terminal coal piers of the Baltimore & Ohio Railroad Co. There is a large fertilizer factory on the easterly bank, opposite Cabin Branch, and two such factories and a shell mill on this branch. The repair station of the United States Revenue Service is located on the easterly side of the stream just above the bridge.

4. Before any work was done by the Government in this bay, which forms a harbor about 1 mile long by three-fourths of a mile wide, there was a natural depth of from 22 to 26 feet of water, with

a controlling depth of 20 feet between it and the channel in Patapsco River.

5. The first preliminary examination of this locality was made in 1890 (see Report of the Chief of Engineers, 1891, p. 1243), and resulted in the adoption of a project July 15, 1892, for a channel 27 feet deep at mean low water, with a bottom width of 150 feet, at an estimated cost of \$85,000. Forty thousand dollars was appropriated for this work, and its expenditure resulted in a channel 25 feet deep and 150 feet wide, with an additional depth of 2 feet for a width of 70 feet along the axis, for a distance of about $2\frac{1}{2}$ miles from the Patapsco River channel toward the coal piers in the harbor. This project was never completed, having been changed by the river and harbor act of June 13, 1902, which provided for a channel 250 feet wide and 30 feet deep, at an estimated cost of \$196,000. This is the present project, and was completed November 30, 1903.

6. There has been appropriated to date under both projects for this channel \$260,000. The expenditures to June 30, 1912, amounted to \$255,000, of which \$22,316.64 was for maintenance.

7. The controlling depth in Chesapeake Bay and Patapsco River is 35 feet, and those now interested in the further improvement of the channel into Curtis Bay desire that it be deepened so as to admit any vessel entering Baltimore Harbor.

8. The commercial statistics by water, both import and export, for 1911 are given as follows:

2,047,382 tons of coal, at \$3 per ton.....	\$6,142,146
25,000 tons of fertilizer, at \$20 per ton.....	500,000
35,000 tons of fertilizer, at \$25 per ton.....	875,000
70,000 tons of fertilizer, at \$17.50 per ton.....	1,225,000
100,000 tons of naval fuel oil, at \$20 per ton.....	2,000,000
80,000 tons of chemicals, at \$14 per ton.....	1,120,000
	11,862,146

In moving this freight all classes of vessels are used—large sea-going barges, coasting schooners, deep-sea sailing ships, and steamers. The last includes the large naval colliers recently built at this port, having a beam of 65 feet and draft of over 28 feet, with a cargo of 12,500 tons.

9. The desired improvement of this channel is a matter of more than local importance and affects the entire country in its influence upon the supply of coal for the Navy. A letter from the Acting Secretary of the Navy concerning the passage of a special bill for this purpose is as follows:

NAVY DEPARTMENT,
Washington, March 29, 1912.

MY DEAR CONGRESSMAN: I beg to inform you that I am this day addressing a letter to the chairman of the House Committee on Rivers and Harbors, urging the passage of bill H. R. 20829, introduced by you, for the deepening of the Curtis Bay channel, Baltimore Harbor.

The proposed improvements of this channel would not only benefit the commerce of Baltimore and the State of Maryland, but would be of the greatest value to the Navy, in admitting the latest type naval colliers to the railroad piers for loading coal. Curtis Bay is one of the chief loading ports for the Navy, and might easily become an invaluable military asset in time of war. This department is therefore pleased to cooperate with you in urging the above-mentioned bill.

Faithfully yours,

BEEKMAN WINTHROP,
Acting Secretary of the Navy.