

CECW-NAD (1105-2-10a)

SUBJECT: Boston Harbor, Massachusetts

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on navigation improvements for Boston Harbor, Massachusetts. It is accompanied by the reports of the district and division engineers. These reports were prepared in response to a study authority contained a Senate Subcommittee on Public Works Resolution dated September 11, 1969, which directed the Secretary of the Army to conduct a study to determine determining whether any modifications of the recommendations contained therein are advisable at this time, with particular reference to modifying the project dimensions of the Main Ship Channel from deep water in Broad Sound to the upstream limit of the Federal project in the Mystic River. Further, the Energy and Water Development Appropriations Act for Fiscal Year 2000 provided funds to initiate the study with language requesting an evaluation of the deepening of the Main Ship, Reserved and Entrance Channels to Boston Harbor.

2. The reporting officers identified a plan for navigation to improvements to four separable segments of the existing project. The recommendation is supported by the non-Federal Sponsor, the Massachusetts Port Authority (Massport).

a. Main Channels Improvement Plan: The first improvement would provide deeper access from Massachusetts Bay to Massport's Conley Terminal in South Boston to enable deeper draft containerships to access the port's only container terminal. A depth of -50 feet at mean lower low water would be provided in the present 40-foot deep lane of the Broad Sound North Entrance Channel from the Bay to the Outer Confluence, with the channel widened in the bend opposite Finn's Ledge. A depth of 48 feet would be provided in the Main Ship Channel between the Outer Confluence and the Reserved Channel, the President Roads Anchorage, the lower Reserved Channel, and the Reserved Channel Turning Area. The Main Ship Channel above the Roads would be widened to 900 feet below Castle Island and 800 feet above Castle Island, with additional width provided in the bends of the Main Ship and North Entrance Channels. The Reserved Channel Turning Area would be widened to 1500 by 1600 feet, and further widened in its transition to the Reserved Channel. Massport would deepen the two deep berths at the Conley Terminal to a depth of at least three feet greater than that provided in the improved channel.

b. Main Ship Channel Deepening Extension to Massport Marine Terminal: The second improvement would extend the deepening of the Main Ship Channel above the Reserved Channel Turning Area to the Massport Marine Terminal, at a depth of -45 feet MLLW and width of 600 feet. Massport would provide a depth of at least -45 feet MLLW in the berth at the Marine Terminal. This improvement would enable deeper-draft dry bulk cargo carriers to access the terminal being redeveloped for this purpose by Massport.

c. Mystic River Channel at Medford Street Terminal: The third improvement would deepen an approximately 9.1-acre area of the existing 35-foot lane of the Mystic River Channel to -40 MLLW feet to improve access to Massport's Medford Street Terminal in Charlestown. Massport has already deepened the berth at this terminal to -40 feet MLLW and would maintain that depth in the future. This improvement would enable deeper-draft dry bulk cargo carriers to access the terminal being redeveloped for this purpose by Massport, by deepening the small 35-foot area lying between the existing 40-foot Federal channel lane and the 40-foot berth.

d. Chelsea River Channel: The fourth improvement would deepen the existing 38-foot Chelsea River Channel to -40 feet MLLW. The channel would be widened by about 50 feet along the East Boston shore in the bend immediately upstream of the McArdle Bridge and in the bend downstream of the Chelsea Street Bridge. The channel would also be widened through the new navigation opening of the Chelsea Street Bridge. This recommended improvement is contingent on replacement of the Chelsea Street Bridge by the State and City of Boston, and the agreement of the five principal terminals to deepen their berths to at least -40 feet MLLW.

3. The U.S. Environmental Protection Agency (EPA) has concurred in the determination that the improvement project dredged materials are parent materials (material below the authorized depth and not previously disturbed) of largely glacial origin and suitable for unconfined ocean water disposal. The project would require the removal of about 11.8 million cubic yards of dredged material and 1.0 million cubic yards of rock. The Federal NED Plan identified for this project would involve the placement of all of the dredged material and rock at the Massachusetts Bay Disposal Site (MBDS). However, it is the policy of the U.S. Army Corps of Engineers to use dredged material, where practicable, for beneficial use. Potential beneficial uses for the rock and other dredged materials were discussed by the reporting officers. Use of the rock for offshore reef creation and shore protection projects will be pursued in partnership with the State during project design. The feasibility of a plan by EPA to use the other dredged materials to cap the former Industrial Waste Site in Massachusetts Bay will also be pursued in partnership with that agency and others during project design. None of these potential beneficial uses are expected to add to the cost of the project.

4. Project costs are allocated to the commercial navigation purpose. Based on January 2008 price levels, the estimated total first cost of the project is \$303,604,000, with a Federal cost of \$174,132,000 and a non-Federal cost of \$129,472,000. The estimated total first cost includes about \$303,439,000 for general navigation features (GNF) and \$165,000 for lands, easements, rights of way, and relocations (LERR). The GNF cost includes channel excavation and disposal of dredged material. In accordance with Section 101 of WRDA 1986, as amended, the non-Federal cost includes 25 percent of the cost for the GNF during construction for the cost allocated to dredging up to a depth of 45 feet, 50 percent of the cost for the GNF during construction for the cost allocated to dredging to depths over 45 feet, and an additional cash payment of 10 percent of costs for the GNF, including interest, less credit for LERR, over a period not to exceed 30 years. In addition to this amount, the local sponsor will be investing about \$3,797,000 for local service facilities, which include bulkhead modifications and

dredging of berthing areas. The total cost of all features required to obtain the projected navigation benefits, including GNF, LERR, local service facilities, and aids-to-navigation, is estimated at \$307,691,000. Total average annual costs, based on a discount rate of 4 7/8 percent and a 50-year period of analysis, are \$16,349,000 and include increased annual operation and maintenance costs of \$412,000.

5. Washington level review indicates that the plan recommended by the reporting officers is technically sound, environmentally and socially acceptable, and economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies. Further the recommended plan complies with other administration and legislative policies and guidelines. The views of interested parties, including Federal, State and local agencies, have been considered.

6. I generally concur in the findings, conclusions, and recommendation of the reporting officers. Accordingly, I recommend that the proposed project be authorized in accordance with the reporting officers' recommended plan, with such modifications as in the discretion of the Chief of Engineers may be advisable, as it reasonably maximizes net benefits. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including WRDA 1986, as amended by Section 201 of WRDA 1996. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies.

7. The recommendation contained herein reflects the information available at this time. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress. However, prior to transmittal to Congress, the non-Federal sponsor, the Commonwealth of Massachusetts; Massport; interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

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Chief of Engineers