

INTRODUCTION

The Charlestown Navy Yard Pier Management Plan has been developed in response to the Certificate of the Secretary of the Executive Office of Environmental Affairs on the Final Supplemental Environmental Impact Report for the Charlestown Navy Yard Redevelopment, EOE #02383 (FSEIR). Approval of the FSEIR culminated an extensive community planning process which commenced in 1987 and was geared towards setting the framework for continuing redevelopment in the Navy Yard over the next decade. The overall redevelopment program is described in the Draft Supplemental Environmental Impact Report for the Charlestown Navy Yard Redevelopment (DSEIR), approved by the Secretary on August 2, 1991. The Secretary's Decision on the City of Boston Harbor Plan, dated May 22, 1991 also included the Charlestown Navy Yard. In addition, Chapter 91 Licenses have been issued by the Department of Environmental Protection (DEP) for various individual projects in the Navy Yard.

It is not the intent of this Pier Management Plan to supersede any requirements of these aforementioned approvals. Rather, the Pier Management Plan seeks to elaborate and build upon such approvals toward further enhancing public access and enjoyment of activities along the entire waterfront of the Charlestown Navy Yard. The overall framework established by the Pier Management Plan will provide guidance for future resolution of any potential user conflicts that may be identified in the course of detailed layout and design of individual projects. American Disabilities Act (ADA) compliance will be required for all new facilities.

CHARLESTOWN NAVY YARD PIER MANAGEMENT PLAN

The CNY project area includes 14,000 linear feet of fixed pier or drydock water frontage. This extensive waterfront area offers a full spectrum of public berthing and a wide range of public uses. To address this unique opportunity in Boston's Inner Harbor a pier management plan has been created, covering that area beyond the National Park Service facility, that will effectively blend public and private resources to maximize the beneficial use of all waterfront areas in the Navy Yard.

The pier use plan for the Navy Yard, which is described in the DSEIR in Section 2.B.4, Vessel-Related Use Program, and supplemented in the following discussion, presents a broad array of water-dependent uses of the piers on land and water. Included are berths and service areas for the following range of vessel types:

- o Large Deep Draft Ships up to 1000 feet in length (Pier 11) and up to 700 feet in length (Pier 3)
- o Historic Vessels and Tall Ships (Piers 3 and 11, and Drydock 2)
- o Ocean-going Research Vessels visiting NEA (Yard's End)
- o Antique Boat Festival, Tug Boat Muster annual events (Piers 3 and 4)
- o Daily Inner Harbor Water Shuttle (Piers 4 and 10)
- o Public Landings and Water Taxi Docks (Piers 4 and 9 or 10)
- o Courageous Community Sailing Center (Pier 4)
- o Whale Watch Vessels (Pier 10 or 11)
- o Public Marinas (Piers 6, 8, and 9)
- o Temporary or Emergency Berthing (Little Mystic Channel)

Harborwalk currently provides 1.5 miles of publicly accessible walkway with a variety of inviting amenities, including benches, fishing areas, overlooks, interpretive exhibits, public art, wind and shade shelters, food concessions and vendor locations, and restrooms. Upon completion, Harborwalk will offer over 3 miles of continuous waterfront access.

Due to the diverse ownership and uses of the nine piers and two drydocks in the Yard, the pier management system will require a variety of management agreements and controls, depending on the underlying lease or deed. Therefore, the plan must address the Yard on a pier by pier basis.

As described in the FSEIR, the continuous Harborwalk is the essential unifying component in the development plan for the Navy Yard. The continuous, public and handicapped accessible Harborwalk, achieved through public ownership or easements, will tie together the piers and drydock amenities along the three mile perimeter of the Yard.

The Harborwalk will be achieved largely through privately funded construction projects as the Yard is developed. Each waterfront development plan shall include specific provisions for Harborwalk and public open space as defined by the Navy Yard Masterplan, Municipal Harbor Plan and Article 42F of the Boston Zoning Code. These controlling documents call for a minimum set back of 35 feet along the shoreline, a minimum 35 foot set back at all pier ends, a minimum 20 foot set back along the Little Mystic Channel (Parcel 6&7), and a minimum set back of 12 feet along all sides of piers. In order to encourage larger vessels to berth at Pier 11, a minimum setback along Pier 11 is established at 65 feet and its average setback is 75 feet.

Maintenance, oversight and insurance will be the responsibility of individual owners whose land Harborwalk crosses. 24 hour, year round access is to be guaranteed to these areas. Specific description of these responsibilities will be addressed in the following pier by pier management plan.

Piers 3 & 4

The management of Piers 3 & 4 have been combined into a single plan that addresses the entire Drydock #2 area. The proposed overall operational concept is to utilize Pier 3 as a "working" pier to support the public water related activities located at Pier 4.

Pier 3 is a 16,200 square foot existing pier which currently yields 780 linear feet of docking space. It will ultimately be reconstructed extending the existing pier by 350 feet seaward adding approx. 18,600 square feet of open space and 700 linear feet of docking space. As proposed, the total pier/open space area would be increased to 35,000 square feet and total docking to 1,430 linear feet.

The Management Plan calls for approximately 120' of dock space on the westerly side of Pier 3 to be used for ship repair and docking for special events. It is anticipated that the New England Historic Seaport (NEHS) and the Courageous Sailing Center (CSC) will be the main users of the dock and pier surface area for maintenance and repair of their respective vessels.

The CSC boat hoist, currently located on Pier 4, will be relocated to Pier 3. Vehicle access to Pier 3 will be limited to work and service related vehicles only, similar to the current system.

Pier 4 was reconstructed in 1978 and consists of a 60,600 square foot deck that provides approx. 1,540 linear feet of docking space. The Spirit of Massachusetts, currently located on Pier 3, will be relocated to Pier 4 for better public access. The Nantucket Lightship is prominently berthed at Drydock #2. Presently, access to board the ship is provided by means of gangways from the Pier 3 side of the Drydock. Future plans envision access from the Pier 4 side of the Drydock further enhancing

visitation and integrating Shipyard Park and Harborwalk with an active public attraction.

Approximately 800 linear feet of dock on the dry dock side of Pier 4 will be set aside for public docking, i.e. MBTA shuttle (150 linear feet), short term public transient docking (210 linear feet), visiting ships in need of long docking space (310 linear feet), and 130 linear feet will be reserved primarily for the Spirit of Massachusetts. On the easterly side of Pier 4, 660 linear feet of dock space will be dedicated to the CSC fleet. This rededication will allow a more efficient float design that is anticipated to provide a significant increase in the berthing capacity of Pier 4. Furthermore, separation of larger boat activity from the smaller CSC boats on either side of Pier 4 will minimize operational conflicts.

The existing building on Pier 4 will be used for classroom and storage space for the CSC. Future City Capital funds could be used to extend the second floor section of the building for additional office space.

In order to enhance the existing use of the pier for public fishing, a fish cutting table will be installed at the end of the pier that will include a water and waste system to assist in the cutting and cleaning of any catch.

Public access to Pier 4 will be devoted to pedestrian use. No parking will be allowed on the pier. Vehicular access will be restricted to short term maintenance and service.

Pier 4 will remain in public ownership in compliance with documents transferring Shipyard Park from the Federal Government. It is envisioned that on Pier 4, a city agency will be responsible for operating and maintaining the pier in conjunction with the primary users. The pier will be dedicated to maximizing public use of the pier in conjunction with the Courageous Sailing Center (CSC), the City of Boston Parks and Recreation Department, the Boston Redevelopment Authority and the New England Historic Seaport (NEHS).

All revenue collected in connection with the use of Pier 4, i.e., license fees, special event fees, and short-term docking charges, etc., will be dedicated to the continued support of the Courageous Sailing Center, maintenance of the facilities, insurance, and any future capital improvements made to the facilities.

Drydock #2

Drydock #2 is 750 feet long by 94 feet wide and contains 81,000 square feet of watersheet. Directly adjacent to Drydock #2 are the offices of the Boston Marine Society, located in Building 32, which offer a maritime museum and library, open to the public. Shipyard Park Phase III, completed in 1991 at a total cost of \$2.5 million, includes a 1,700 linear foot bongazi walkway surrounding Drydock #2. The watersheet within Drydock #2 will be utilized for boat shows and other special maritime

events when coordinated with the mooring requirements of the Nantucket. For example, BRA is currently working with the organizers of Sail Boston to plan for the Navy Yard to host a number of Tall Ships and a series of related events during the visit of the Tall Ships Fleet to Boston Harbor in early July of 1992.

The Pump House

The Pump House (Building 123) located at the head of Pier 4 adjacent to Drydock #2 will be rehabilitated for use as a public information center and concession stand. The inclusion of a waiting area would transform the Pump House into a convenient, weather sheltered place for visitors and shuttle passengers to enter and depart the Navy Yard.

Pier 5

Pier 5 consists of a 85,800 square foot deck which could yield 1,450 linear feet of docking space provided however, that any future use does not interfere with the existing uses at Piers 4 and 6 as described below.

The proposed use for Pier 5 calls for the construction of 110 market rate housing units on the pier deck. Publicly accessible open space will be created by the use of set backs along both the sides and at the end of the pier. Final design of this project will be developed in response to the Municipal Harbor Plan approval and DSEIR certificate.

With regard to the docking availability for watersheet activity, both sides of the pier form the edge of the access channels for vessels based at Piers 4 and 6 respectively. This pattern of two piers with active floats with an intervening pier playing the "dummy" role ensures safe and efficient navigation. This model may be slightly adjusted in the future should it be discovered that adequate operational space exists on the watersheet to allow for the "dummy" pier to host limited docking activity. While the ends of this pier could be used for vessel docking, care must be taken to berth only heavier vessels which are less subject to wave and wake action, and then to avoid the potential for these heavier, likely longer vessels blocking access to the above described channels along the sides. This condition can only be addressed on a case by case basis and therefore must wait on proposals for specific vessels at specific locations.

Charlestown Holding Inc., the designated developer of Pier 5, will be responsible for insuring and maintaining the pier.

Pier 6

Pier 6 consists of a 40,625 square foot deck and affords approx. 1,320 linear feet of docking space. Shipyard Marina Trust d.b.a./Shipyard Quarters Marine, manages Pier 6 where it operates a 170 slip marina for small crafts averaging 30' in length. Typical

marina facilities are available and publicly accessible holding tank cleaning services have been made available at reasonable cost.

Of the 40,625 gsf of deck space on the pier, 30,000 gsf is dedicated to open space of which Harborwalk's easements are preserved along the edge of the pier. The Marina also manages a small chandlery with a restaurant on the second floor. Limited parking is available to staff and marina slip tenants on a entry card controlled basis.

All management, maintenance, and insurance issues are the responsibility of the marina operator.

Pier 7

Constellation Wharf houses 64 market rate condo units with 113 parking spaces. Of the 88,400 gsf deck area, over 20,000 gsf is set aside for open space by the dedication of several publicly accessible viewing areas along the pier sides and the creation of a Harborwatch at the end of the pier. All management responsibilities for maintenance and insurance lies with the condo association. Again, like Pier 5, Pier 7 acts as the "dummy" pier to afford channels along its sides as access to Piers 6 and 8.

Pier 8

Pier 8 consists of a 48,984 square foot deck and 1,110 linear feet of docking space along the pier's edge. Navy Yard Realty Trust d.b.a./Shipyard Quarters Marina, manages Pier 8, along with Pier 6. This marina currently offers 180 handicapped accessible slips for small and large vessels averaging 38' in length. 35,000 gsf is preserved as open space which is an integral part of Harborwalk. A small operator's office is maintained at the pier's end while a building housing women and mens locker rooms for marina patrons is located at the head of the pier.

Pier 9

Pier 9 is a dilapidated wood pier comprised of 37,000 sq.ft. of pile field/shadow pier. This structure is to be removed as part of the Army Corps of Engineer's Defense Environmental Restoration Program presently underway within the Navy Yard.

After completion of the Army Corp's work, Charlestown Holding, Inc., will reconstruct a pier stub consisting of approx. 10,000 square feet and install additional slips for small craft as an extension of the existing Pier 8 marina in accordance with the Vessel Related Use Program ~~approved by the Secretary in her Certificate on the DSEIR.~~ *presented to the SPBIR,* Conformance with marina pump out regulations and other controls will be required. All management, maintenance, and liability issues will be addressed by Shipyard Quarters Marina.

Pier 10

Pier 10 abuts Drydock #5 and contains 42,700 square feet of deck which provides 420 linear feet of docking space along the perimeter. The Charlestown Navy Yard Masterplan calls for the construction of a Yard's End water shuttle docking facility at Pier 10. The 120 foot water shuttle dock will replace the Little Mystic Landing originally programmed for Yard's End, along Pier 11, at the terminus of First Avenue. Future projects will produce 200 linear feet of docking along the balance of Pier 10 for associated vessels and will provide an additional 100 linear feet to be dedicated to public transient docking on a first come first served basis.

Pier 10 will provide a pivotal link in the Harborwalk concept by providing a connection across the end of Drydock #5 which, by means of a pedestrian foot bridge, will provide access along the waters edge and continue Harborwalk from Parcel 4 to Parcel 5. A total of 19,425 square feet of open space will be created following the redevelopment of Pier 10.

Parcel 5/Pier 11

Pier 11 includes Drydock #5 and the deck area south of First Avenue. This area totals 195,452 gsf including water area. The current site design calls for the creation of over 100,00 gsf of publicly accessible open space.

This generous open space program responds to the fact that Pier 11 represents the last deep water berthing location within the Navy Yard. By maintaining a minimum set back of 65 feet and an average setback of 75 feet along the 870 foot pier margin and installing the basic utilities required by larger vessels, a host of visiting ships will be able to utilize this 32' deep berth. This pier will provide a facility suitable for berthing large, deep draft ships such as U.S. and foreign flag naval vessels, research vessels, exhibit vessels, and other large visiting vessels such as tall ships. Priority will be given to visiting naval vessels.

No permanent floating docks will be permitted along the deep draft berthing area. However, a removable floating dock and ramps for use of smaller vessels may be deployed if needed, provided that such temporary dock can be easily detached and stored elsewhere.

It should be noted that when discussing the large deep draft berthing area, 710 feet lies within Parcel 5 and 160 feet lies within Parcel 6. For the purposes of this section, the total marginal pier length has been used to accurately describe the large deep draft berthing parameters. The maximum vessel length is 1,000 feet allowing for a 130 foot overhang at the southern end of the Pier.

The redeveloper of Parcel 5 will be responsible for management, maintenance and insurance for Pier 11.

Parcel 6

Parcel 6 abuts the Little Mystic Channel and as stated in the previous section contains a 160 foot portion of the large deep draft berthing area along Pier 11. There is an additional 160 feet of deep water berthing is available within and approaching the mouth of the Little Mystic Channel. This area could be used for berthing for modest sized vessels such as water shuttles. In no case shall this temporary docking be allowed to interfere with operations within the Little Mystic.

The Charlestown Navy Yard Masterplan calls for a minimum 20 foot set back from the pier edge which will add over 300 linear feet of Harborwalk offering another significant connection at Yard's End and the future site of a "working port" viewing area and plaque describing Charlestown's heritage as a working waterfront.

Charlestown Holdings Inc., the designated developer of Parcel 6, will be responsible for insuring and maintaining the pier and Harborwalk.

Parcel 7

Parcel 7 offers 420 feet of waterfront pier abutting the Little Mystic Channel but does not contain deep water for deep draft vessel berthing. It does however, provide a potential berthing area protected from wave and wake action. This area is suitable for short term transient docking facilities for more modest sized shallow draft vessels. Due to the proximity of Massport Pier 1 a single marginal dock would be the maximum provision allowable in order to guarantee efficient navigation for larger vessels using Mystic Pier #1. In no case shall the berthing of vessels along the Parcel 7 area of the channel be allowed to impair or impede the use of Mystic Pier #1.

The Charlestown Navy Yard Masterplan calls for a minimum 20 foot set back from the pier edge which will add over 420 linear feet of Harborwalk

Charlestown Holdings Inc., the designated developer of Parcel 7, will be responsible for insuring and maintaining the pier and the Harborwalk.

Little Mystic/Building 114

The Harborwalk area alongside Building 114 near the Little Mystic Channel will be used only for public walkway access and public safety vehicle access due to the fact that the building wall comes to the edge of the pier. Thus the walkway must be constructed in cantilever fashion to achieve the 20 foot wide walkway called for in the Charlestown Navy Yard Masterplan. This walkway will also be constructed with a slope capable of producing barrier free access to the Little Mystic Bridge approach.

The water area next to the pier, which has silted in at points reducing the available draft, will not be used for normal vessel berthing. It may be used for temporary

berthing of shallow draft vessels, potentially those displaced from Pier 11 during the visit of larger vessels. But in no case shall vessel berthing at this location impair the use of Mystic Pier #1.

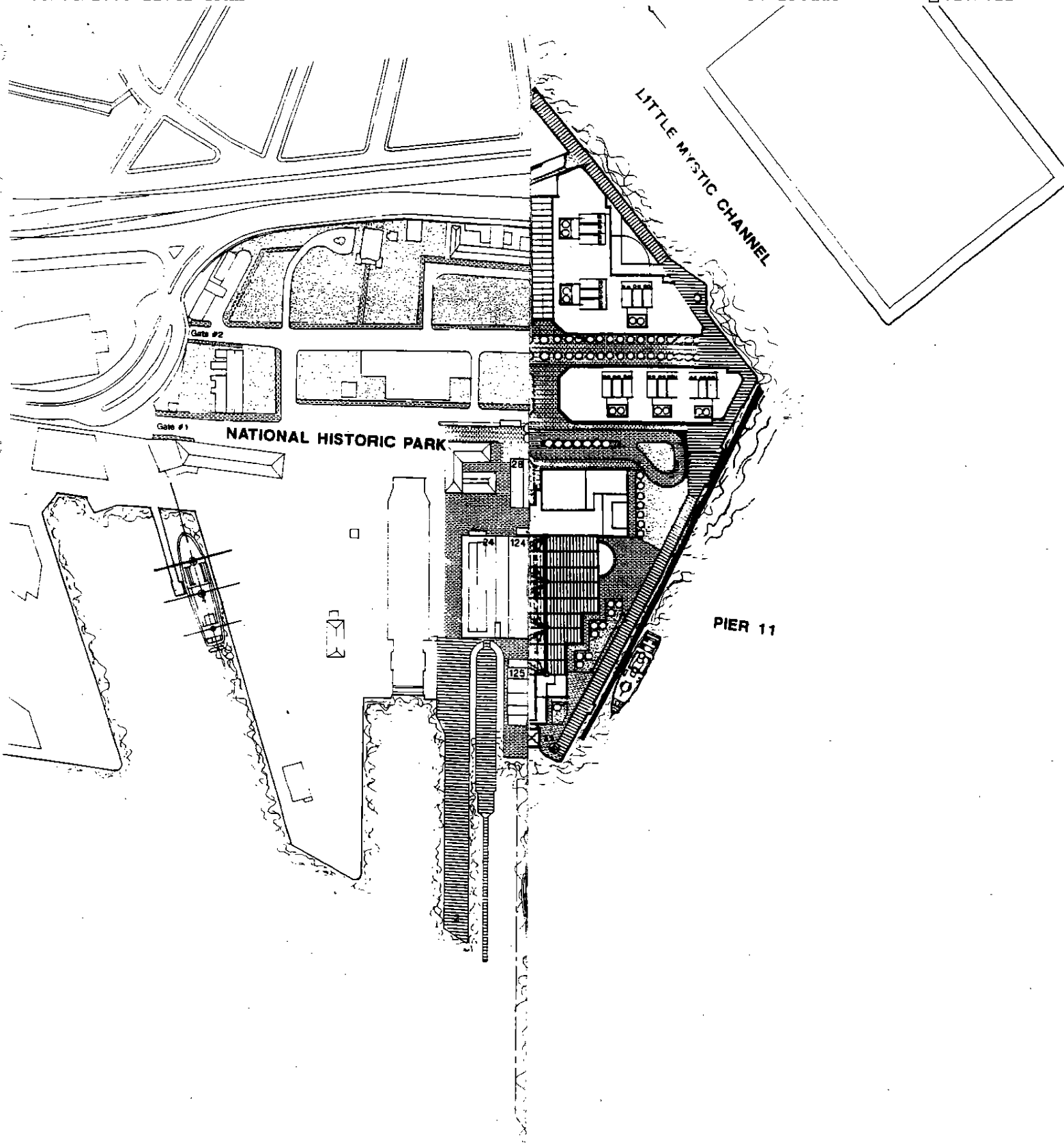
Navigation and Watersheet Operations

In preparing this plan attention has been paid to the general, operational characteristics and maneuvering requirements of vessels which currently or in the future will use the slips, docks, and channels of the CNY watersheet. This analysis has included a wide range of issues from assuring that large vessels visiting Pier 11 will not impair the use of the proximate Main Ship Channel, through a review of turning areas at the water-shuttle/public landing docks at Pier 10, to the recognition of the need for access channels along Piers 5, 7, and the removal of Pier 9. Moreover, BRA staff has reviewed the operational practices and experience at Long Wharf in order to shed light on what maneuvering conflicts might arise, and how these might be resolved.

The result of this investigation is that the planned pattern of water-sheet usage does not present any unresolvable maneuvering conflicts, assuming the typical level of accommodation and cooperation among pier managers and vessel operators. No doubt some conflicts will be reached when the piers have achieved full utilization, but these cannot be defined or anticipated at the plan level.

CONCLUSION

This Pier Management Plan is intended to describe how the water's edge and watersheet of the Charlestown Navy Yard will accommodate public access with special emphasis on access for the large range of vessels which have or will have reason to resort to the CNY. This plan sets out a pattern of use, care, and maintenance of the pier structures and protection of the watersheet throughout the Yard, with the exception of the area managed by the National Park Service. It establishes the means by which the objective of a fully accessible urban harborfront is to be achieved in the process of the full redevelopment of the Charlestown Navy Yard.



NATIONAL HISTORIC PARK

LITTLE MYSTIC CHANNEL

PIER 11

APPENDICES

Appendix A consists of the Vessel Related Use Program from the Charlestown Navy Yard Supplemental Final Environmental Impact Report (FSEIR), EOE # 2383, approved by the Secretary of Environmental Affairs on December 23, 1991. Please note that since the completion of this Program the proposed Yard's End Water Shuttle Dock has been resited at Pier 10.

Appendix B consists of the NOAA Chart depicted Near Shore Water Depths submitted in the FSEIR.

Appendix C consists of a map depicting Charlestown Navy Yard Harbor Lines which was submitted in the FSEIR, and since adjusted to reflect further discussions with DEP.

APPENDIX A

APPENDIX A

Vessel-related Use Program

The pier use plan for the Navy Yard, which is described in the DSEIR in Section 2.B.4, Vessel-Related Use Program, and supplemented in the following discussion, presents a broad array of water-dependent uses of the piers on land and water. Included are berths and service areas for the following range of vessel types:

- o Large Deep Draft Ships up to 1000 feet in length (Pier 11) and up to 700 feet in length (Pier 3)
- o Historic Vessels and Tall Ships (Piers 3 and 11, and Drydock 2)
- o Ocean-going Research Vessels visiting NEA (Yard's End)
- o Antique Boat Festival, Tug Boat Muster annual events (Piers 3 and 4)
- o Daily Inner Harbor Water Shuttle (Piers 4 and 10 or 11)
- o Public Landings and Water Taxi Docks (Piers 4 and 9 or 10)
- o Courageous Community Sailing Center (Pier 4)
- o Whale Watch Vessels (Pier 10 or 11)
- o Public Marinas (Piers 6, 8, and 9)
- o Temporary or Emergency Berthing (Little Mystic Channel)

On the decks of the piers Harborwalk provides over 14,000 lineal feet of publicly accessible walkway with a variety of inviting amenities, including benches, fishing areas, overlooks, interpretive exhibits, public art, wind and shade shelters, food concessions and vendor locations, and restrooms.

Vessel-Related Use Program

Several comments received on the DSEIR reflected a desire to locate the Yard's End water shuttle dock at Pier 10. A viable, alternative location for this dock is Pier 11. Meritorious arguments have been made for both locations. For example, the Boston Shipping Association (Letter 12) and the Boston Harbor Association (Letter 13) urge a Pier 10 location while the Executive Office of Transportation and Construction (Letter 8) advocates a Pier 11 location. The vessel-related use program presented herein reflects a Pier 10 location for the water shuttle since building setback issues are more critical for Pier 10 than for Pier 11. However, final location decisions have not been made and can most appropriately be addressed in the context of the development of detailed designs for the marina and the aquarium.

The commitment to provide water shuttle docking facilities at Yard's End -- either at Pier 10 or Pier 11 -- is part of this FSEIR and will help maximize active public use of this area while reducing traffic and parking impacts. The building setbacks outlined in the vessel-related use plan will accommodate either location for the water shuttle dock since a shift from the Pier 10 location depicted in the plan to Pier 11 will entail a shift to an area with a wider building setback. No significant additional environmental

impacts are anticipated to be associated with a shift of the water shuttle dock location from Pier 10 to Pier 11, and either location is consistent with the level of water shuttle usage assumed in this FSEIR.

If Pier 10 is ultimately determined to be the preferred water shuttle location, the following planning guidelines for the overall vessel-related use program would obtain:

o Pier 10

- Provision of a public water shuttle terminal (120-foot floating dock) with handicapped accessible ramp and shelter.
- Reservation of appropriate length of pier for additional dock to accommodate future anticipated demand.
- Provision of additional floating dock as required to facilitate operation of the Pier 9 marina and New England Aquarium.

o Pier 11

- Provision of 870-foot clear multi-use pier for larger vessels using existing pier head with pilings and bollards. Visiting ships would be relatively infrequent but would be given priority use (estimated average of 10-30 days/year) to include: (1) visiting Naval vessels such as aircraft carriers, cruisers, destroyers with maximum draft of 32 feet; (2) visiting tall ships; (3) visiting merchant vessels; and (4) other large visiting vessels (in excess of 250 feet) requiring deep draft berth and minimal servicing.
- Normal use (estimated 335-355 days/year) would be by New England Aquarium related vessels, including research vessels, exhibit vessels, etc.
- No permanent floating docks would be permitted in areas reserved for large vessels. However, a removable floating dock and ramps for use by smaller vessels could be deployed if needed, which could be easily detached and stored elsewhere when larger ships are using such area of Pier 11.
- Dredge program scheduled for 1994-95 could be used to deepen berth along Pier 11 for largest visiting vessels subject to analysis of pier conditions and approval by the Army Corps of Engineers.

Alternatively, if Pier 11 is determined to be most advantageous for the water shuttle location, the multi-use pier reservation would be modified to 700± feet. Provision of a 120-foot floating dock water shuttle terminal with appropriate expansion capacity would be required.

The remainder of the vessel-related use program would be essentially unchanged regardless of the water shuttle location. It would include the following elements:

o Pier 9

- Provision of a marina of up to 150 slips.
- Accommodation of a water taxi dock, 60-foot public landing and general hotel landing, which facilities could also be accomplished in conjunction with Pier 10 if more complementary use patterns are determined to obtain based on detailed design and resolution of water shuttle location.

o Little Mystic Channel

- The Navy Yard Pier along the Little Mystic Channel will be used only for public walkway access, public safety vehicles, and temporary berthing for vessels. The watersheet, which has silted in at points (some areas with 5-foot to 10-foot depth along the Pier), will not be used for normal vessel berthing purposes in order to leave the channel open for vessel access to Massport's Mystic Pier No. 1 to the north. The pier face may be used periodically for temporary berthing of small or shoal draft vessels, particularly those displaced from Pier 11 while large vessels are there, as it is one of the most protected water sheets in the harbor with limited exposure and a short fetch to the east. Consideration will be given to partial dredging to allow for medium draft (15 feet) vessels. Vessel access beyond the Chelsea Street Bridge is limited to small boats because of very limited bridge clearance (approximately 10 feet).

The vessel-related use program for Yard's End is illustrated on Figure 8. In addition, Figure 9 illustrates the vessel-related use program for Piers 3, 4, 5 and 6. Building setbacks pursuant to the zoning are also depicted on these Figures. These setbacks are tailored to accommodate the vessel-related use program as described in the following.

Building Setbacks to Allow for Vessel-Related Uses

With respect to the new development of Parcels 4, 5, 6, and 7, and the reuse of Building 114, the setbacks stipulated in the zoning vary depending upon pier use and configuration. The south facing Harborwalk in front of Parcel 4 will be a minimum of 35 feet to correspond to the width of the walk connecting to Pier 4. Additional open space will be provided, with final configuration dependent on detailed project design. For purposes of the public marina and hotel dock, the 35-foot width is ample for truck servicing, public safety, and pedestrian use. The width of the walk is wider than found on most existing piers in the downtown and is comparable to the plaza in front of Rowes Wharf.

Along the side of Pier 10 a minimum 12-foot setback is available expanding to 12 feet and then expands to 35 feet with a harbor observation area at the pier end. This width, combined with a greater plaza setback at the inboard end, is sufficient to allow for water shuttle and pedestrian use as well as basic public safety access. For example, Commonwealth Pier presently accommodates passenger embarkation and debarkation for large excursion vessels with a similar building setback from the high water mark. Service vehicles are not presently anticipated along this portion of the pier edge. A greater setback width would be required in the event service vehicles were to use this area routinely.

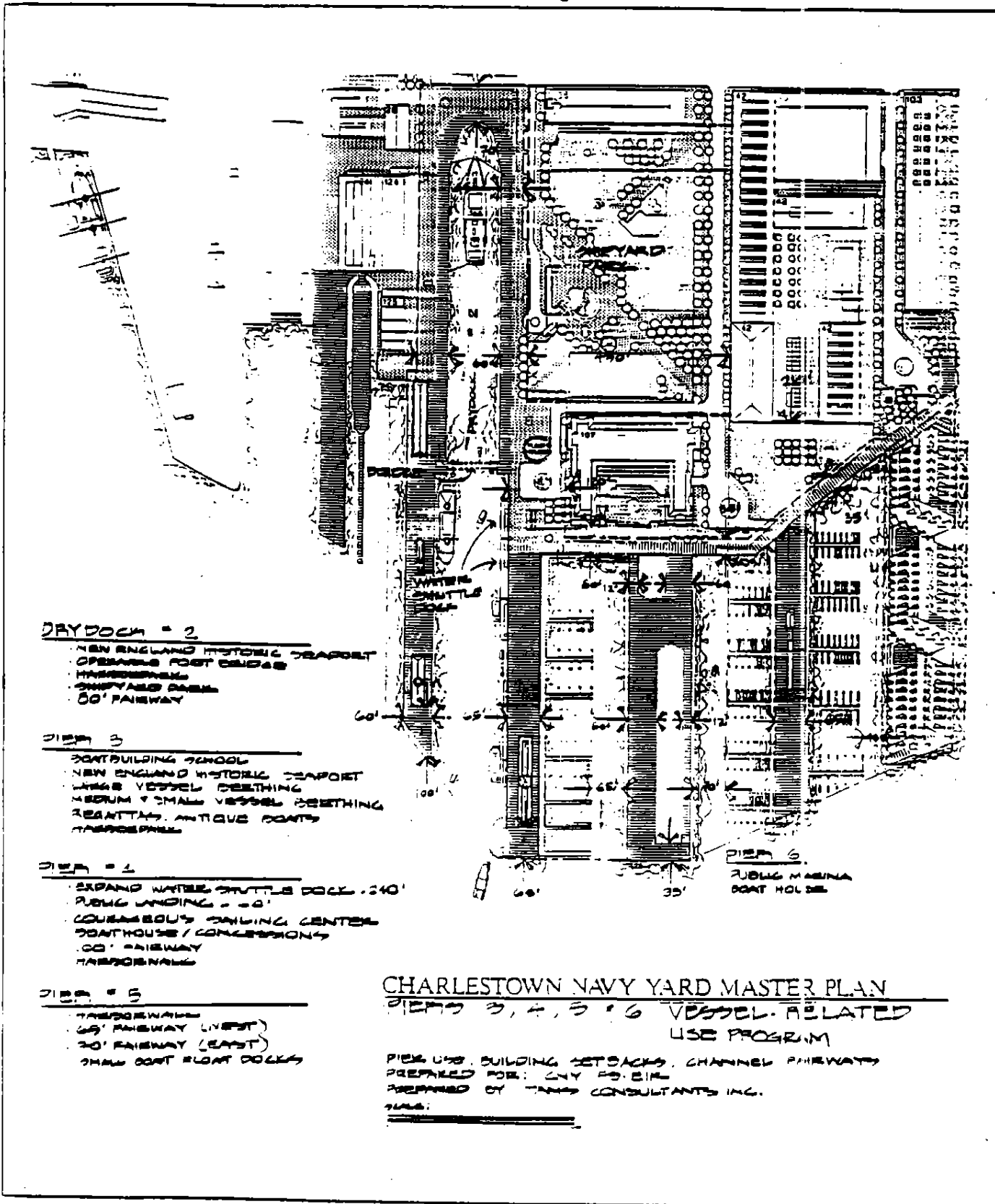
On the Pier 11 side of the Aquarium, there is a mandatory 75-foot average and 65-foot minimum setback. The primary purpose of the large apron is to allow for the servicing and access to periodic visits by large ships as well as more frequent visits by research vessels to the New England Aquarium. The broad apron would accommodate service needs and gangways while providing a reasonable buffer for the Aquarium. When not being used for larger vessel berthing, the broad setback area would serve as a major Harborpark public open space and waterfront promenade at Yard's End, while also being suitable for special events around vessel visits like those staged in tents near the U.S.S. Constitution. The promenade could also serve as a viewing area for Aquarium exhibits.

The Pier 11 face along Parcel 6 has a 20 foot setback allowing for large vessel mooring lines, Harborwalk access, and public safety and service vehicles. No permanent small boat docks would be permitted along the portions of Pier 11 face reserved for large vessels to ensure availability for deep draft (32 feet) berthing.

The northeast pier face on the Little Mystic Channel would serve as a pedestrian and service access way with a 20-foot width. The narrower width reflects the choice to preclude all but temporary vessel berthing along the partially silted pier face. The pier would only accommodate vessel berthing as an emergency or overflow location, such as on a 4th of July celebration, or when Pier 11 was being used by a larger vessel. Spot dredging may be needed to improve the temporary berthing.

The Building 114 face currently sits on the bulkhead edge but will receive an outboard pile-supported 12-foot walkway to allow for continuity of the Harborwalk and emergency access. No permanent vessel uses are proposed along this pier face, which at this point has vestigial pile fields from earlier bridgeworks.

Piers 3, 4, 5 and 6 Vessel-Related Use Program



DRYDOCK # 2
 NEW ENGLAND HISTORIC SEAPORT
 OPERABLE FOOT BRIDGE
 HARBOURWALK
 SHIPYARD BARRACKS
 60' FAIRWAY

PIER 3
 BOATBUILDING SCHOOL
 NEW ENGLAND HISTORIC SEAPORT
 LARGE VESSEL BERTHING
 MEDIUM & SMALL VESSEL BERTHING
 REANTIQUE ANTIQUE BOATS
 BOATYARD

PIER 4
 EXPAND WATER SHUTTLE DOCK - 240'
 PUBLIC LANDING - 80'
 COURTHOUSE SAILING CENTER
 BOATHOUSE / CONCESSIONS
 100' FAIRWAY
 HARBOURWALK

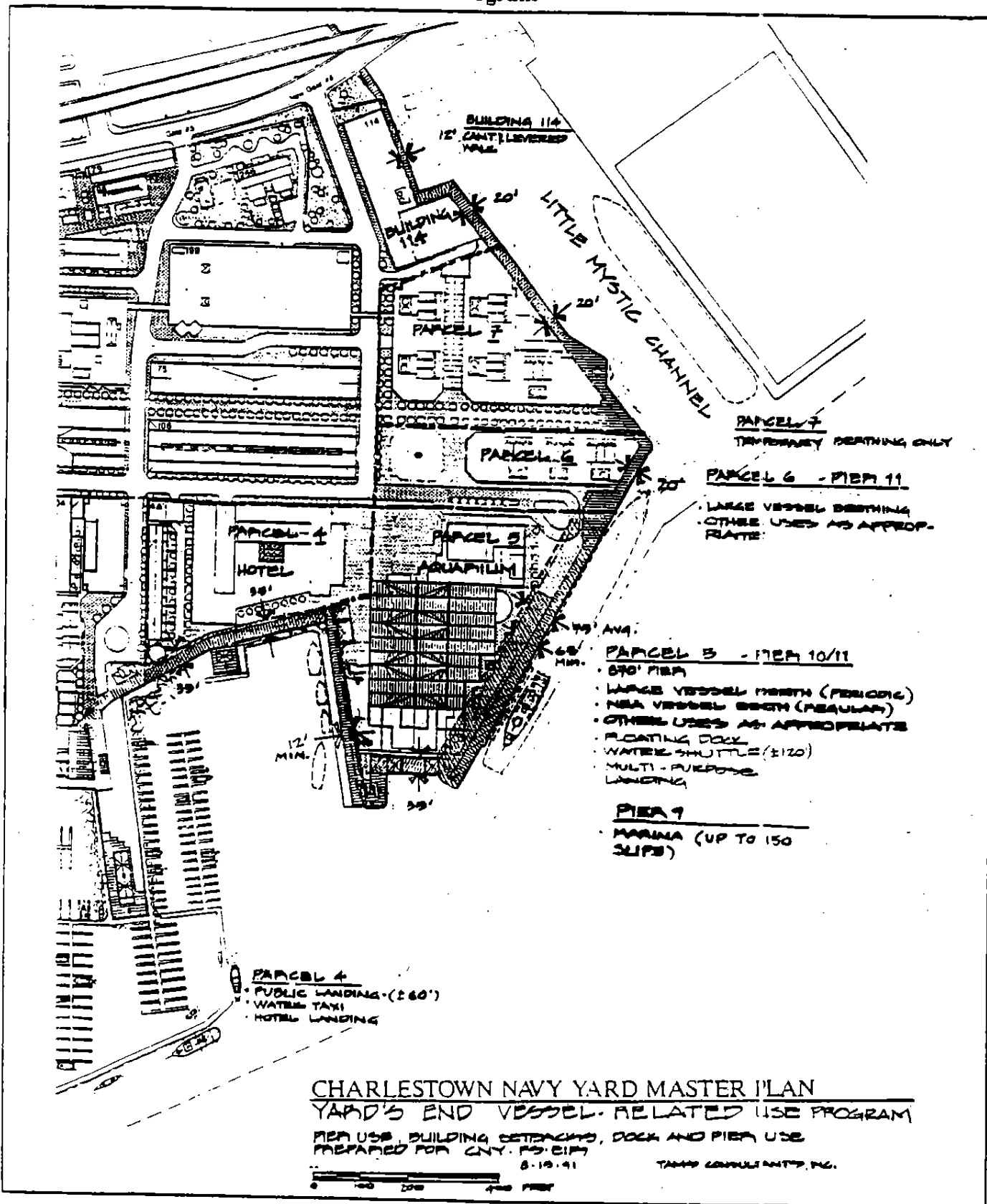
PIER 5
 HARBOURWALK
 60' FAIRWAY (WEST)
 20' FAIRWAY (EAST)
 SMALL BOAT FLOAT DOCKS

PIER 6
 PUBLIC MARINA
 BOAT HOLDS

CHARLESTOWN NAVY YARD MASTER PLAN PIERS 3, 4, 5 & 6 VESSEL-RELATED USE PROGRAM

PIER USE, BUILDING SETBACKS, CHANNEL FAIRWAYS
 PREPARED FOR: CIVIL ENGINEERING
 PREPARED BY: TAMS CONSULTANTS INC.
 DATE:

Yard's End Vessel-Related Use Program



APPENDIX B

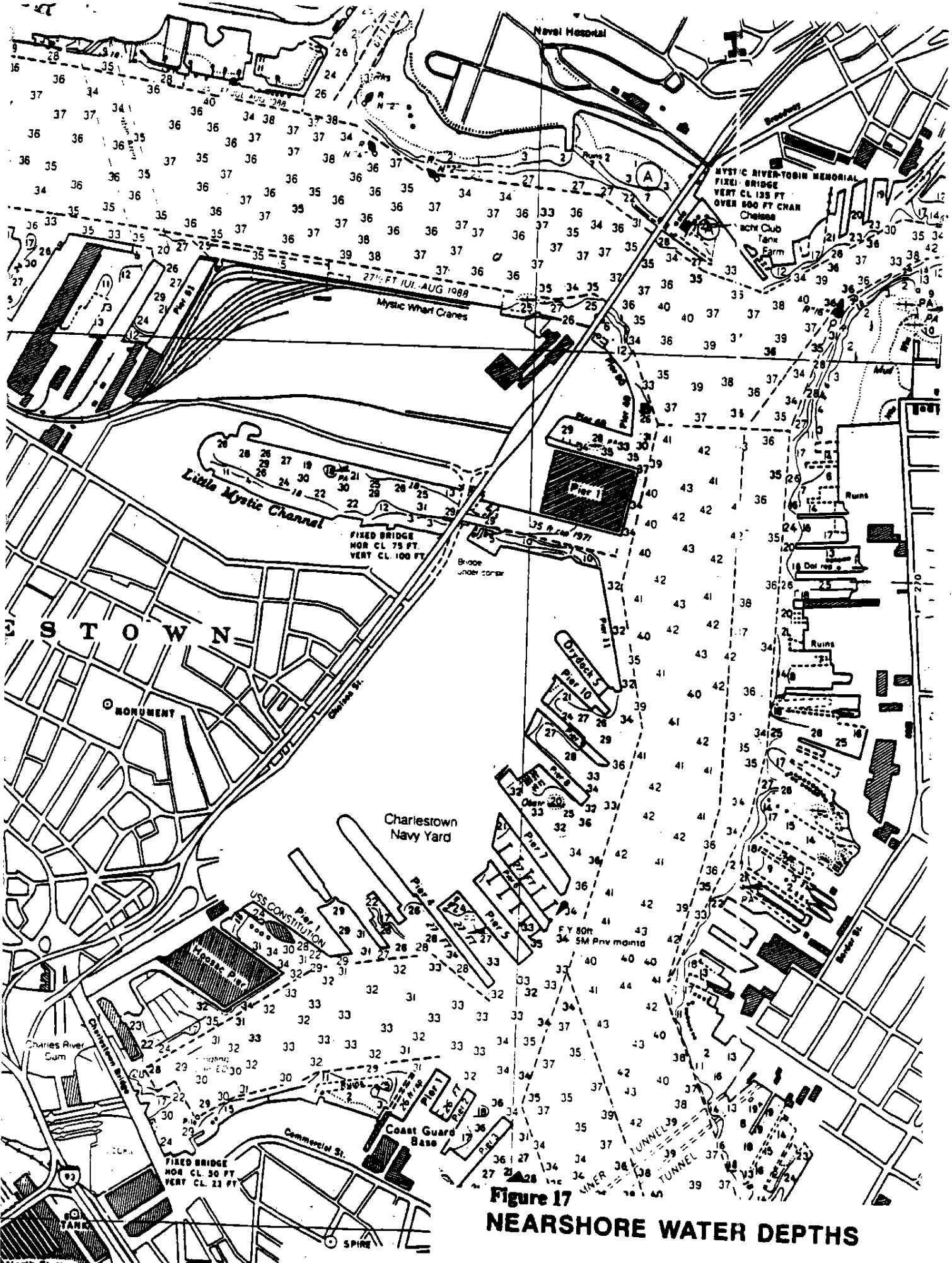
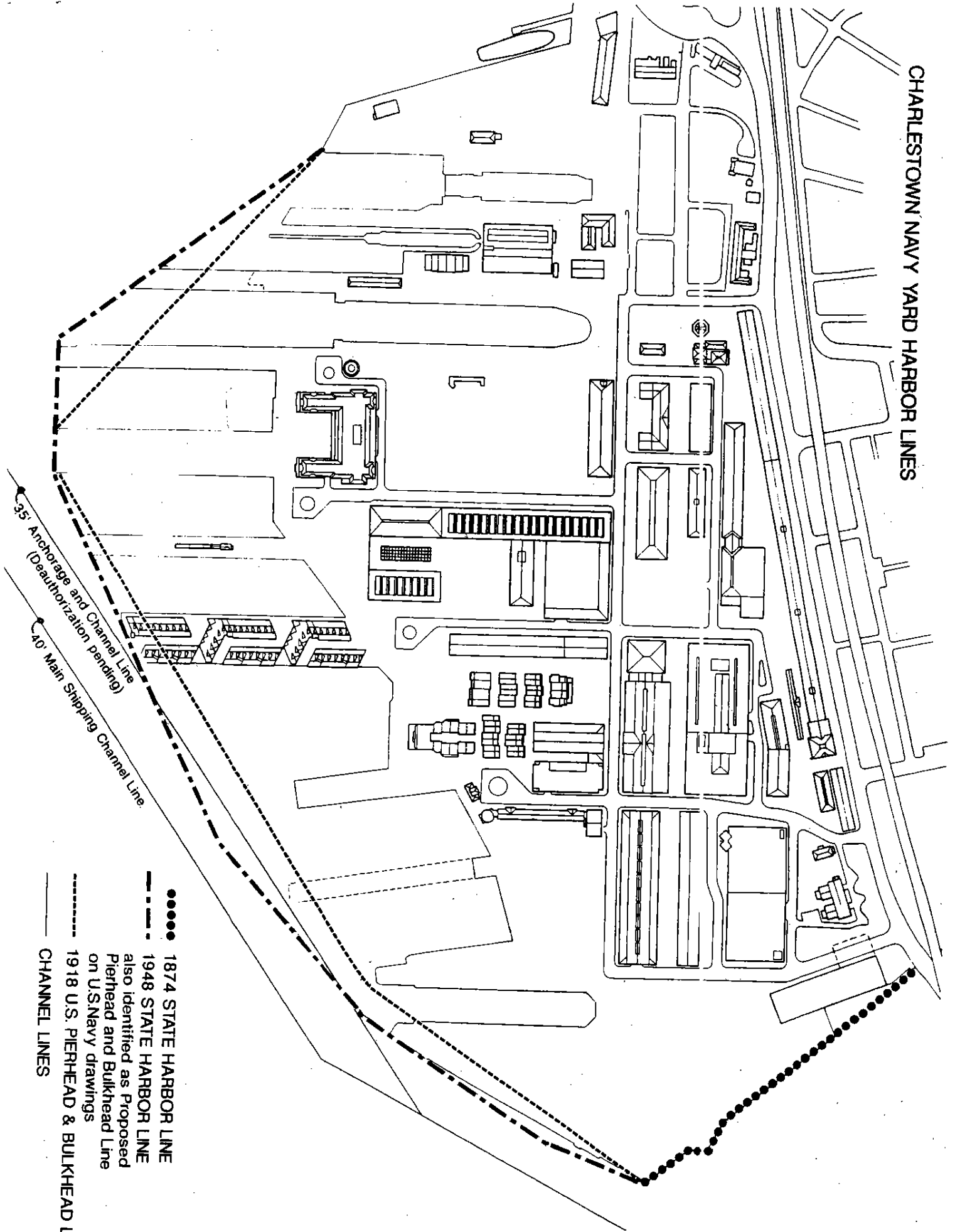


Figure 17
NEARSHORE WATER DEPTHS
FROM NOAA CHART

NOTE B
 An Act of Congress..

APPENDIX C

CHARLESTOWN NAVY YARD HARBOR LINES



- 1874 STATE HARBOR LINE
- 1948 STATE HARBOR LINE
also identified as Proposed Pierhead and Bulkhead Line on U.S. Navy drawings
- 1918 U.S. PIERHEAD & BULKHEAD LINE
- CHANNEL LINES