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BOSTON NAVY YARD:
A CASE STUDY IN THE PRESERVATION OF AN
URBAN INDUSTRIAL LANDSCAPE

MAY 1977

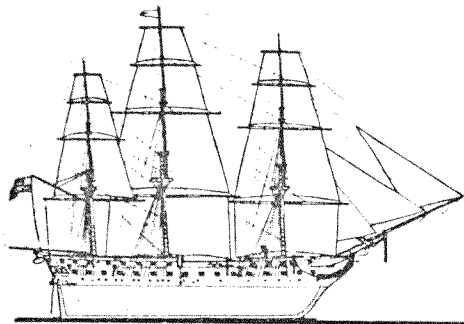
BY: SHARY PAGE BERG

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BOSTON NAVY YARD

A Case Study in the
Preservation of an Urban
Industrial Landscape

Shary Page Berg
HGSD May 1977



BOSTON NAVY YARD:

A Case Study in the Preservation of an Urban Industrial Landscape

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May 1977

"Growth and change have long been dominant in the American system of values. Things which have outlived their usefulness are removed and replaced. As they go, so do our opportunities to learn from them."

Report of the Lowell Historic Canal District Commission

I. INTRODUCTION

The Boston Navy Yard, located in Charlestown, Massachusetts, was operated as a naval facility from 1800 to 1974. It is of historic significance for its association with the establishment of the United States Navy, its role in the building and maintenance of many important ships and its contributions to naval operations and technology. Soon after the Yard was decommissioned in 1974, 27 acres of the 130-acre site were designated as a unit of the newly established Boston National Historical Park. The remainder of the Navy Yard was transferred to the General Services Administration pending studies by city and state officials as to the best use of the site. A multi-use plan encompassing preservation, recreation, housing, light industry and a hotel/conference center is currently being proposed by the Boston Redevelopment Authority.

The Boston Navy Yard represents a new type of preservation project. First of all, it is urban. Unlike most rural preservation projects, it must respond to the physical, cultural and economic stimuli of the surrounding area and must continue to be an integral part of the city. Secondly, it is industrial. Despite the enormous role that industry has played in the growth of our country, little attention has been paid to the role of industry in the American heritage. Industrial sites have traditionally been considered eyesores, something to be demolished so as not to block the view. Recently, however, we as a society have begun to recognize the importance of our industrial heritage, as evidenced by the new interest in mills and mill towns in New England. The third characteristic of this new type of preservation is that it is complex. Restoration is usually not the sole objective; often it must be integrated with other interests such as development and use. The project

areas are often large and difficult to define, and the administration frequently involves several agencies with different management philosophies.

III. HISTORICAL SIGNIFICANCE

Several hundred vessels were launched, commissioned or sent to sea from the Boston Navy Yard*, but its primary mission since the Civil War has been the conversion, overhaul and repair of the ships of the U.S. Navy. In addition, it was also a major center for research, development and testing.

The origins of the Navy Yard date to the spring of 1797, several months before the establishment of the U.S. Navy, when Congress recommended an appropriation for the establishment of a government dock-yard. Three years later, 43 acres of land and mudflats were purchased in Charlestown. Included in the site of the new shipyard was Moulton's Point where the British troops had landed and formed for their assault in the famous 1775 Battle of Bunker Hill

The Yard boasts many firsts in the annals of naval history. Among these are:

- the first warship built at a U.S. naval shipyard, Frolic, 18-gun sloop, 1813
- the first covered shipbuilding way, 1813
- the first ship of the line, Independence, 74 guns - forerunner of the battleship, 1814
- the first naval school for officers, forerunner of Annapolis, 1815

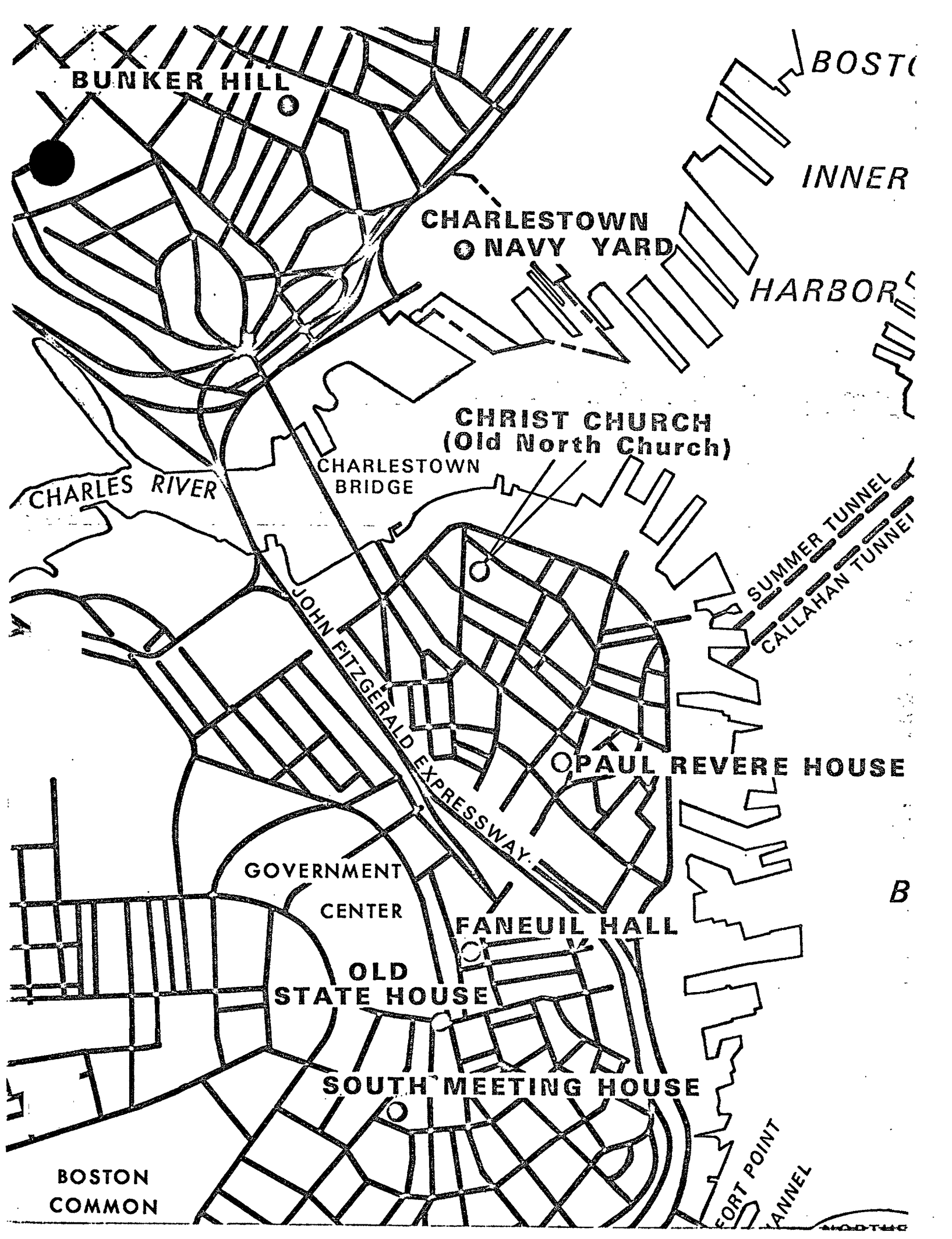
* The first name of the facility was the Charlestown Navy Yard. The name was changed to Boston Navy Yard in 1874 when Charlestown was annexed to Boston. In 1945, the name was changed again, to Boston Naval Shipyard. However, the site is best known today as the Boston Navy Yard.

- the first screw steamship in the world, Princeton, launched October 1852, was also the first man-of-war steamship
- the first torpedo boat in the world, Intrepid, launched March 1874
- the first wireless telegraph station, October 1903, sent first shore-to-ship and return messages
- the invention of the "die-lock" chain in 1926.

One of the first naval hospitals was built at the Navy Yard in 1803. The second oldest dry dock was completed in 1833, just seven days behind the one in Norfolk, Virginia, The Merrimac, famed for its battle with The Monitor in 1862, was built at the Navy Yard in 1855. For all but 40 years since 1803, the famous frigate, Constitution, better known as "Old Ironsides", has made the Navy Yard her home.

Several architects and engineers well known for their contributions have been associated with the development of the shipyard. Loammi Baldwin, engineer of the Middlesex Canal, is given credit for Dry Dock #1 and Charles Bulfinch has been mentioned as the possible architect of the Commandant's House, Alexander Parris, architect of Quincy Market, served in the capacity of architect and engineer for the Navy Yard off and on from 1828 until 1843.

The Navy Yard encompasses buildings of national architectural and historical significance. The entire area, including both land and buildings, is listed as a national historic landmark on the National Register of Historic Places. As such, it is protected from adverse federal actions by the Historic Preservation Act of 1966. Therefore, changes to the buildings or landscape are subject to review by the Advisory Council on Historic Preservation.



BUNKER HILL

BOSTON

INNER

**CHARLESTOWN
NAVY YARD**

HARBOR

**CHRIST CHURCH
(Old North Church)**

CHARLES RIVER

**CHARLESTOWN
BRIDGE**

**SUMMER TUNNEL
CALLAHAN TUNNEL**

JOHN FITZGERALD EXPRESSWAY

PAUL REVERE HOUSE

**GOVERNMENT
CENTER**

B

FANEUIL HALL

**OLD
STATE HOUSE**

SOUTH MEETING HOUSE

**BOSTON
COMMON**

**FORT POINT
CHANNEL**

III. RECENT HISTORY

When the Navy Yard celebrated its 150th anniversary in 1950, there were parades, dinners, speeches, demonstrations and department store exhibits. On July 1, 1974, one year before its 175th anniversary, the Yard was closed. It had been a significant part of the Boston economic and social scene since 1800.

The Yard traditionally served as a major blue collar employer in Boston and provided many contracts to private enterprise in the Boston area. During World War II, when a new ship was built and launched every month, 50,000 people, mostly civilians from the Boston metropolitan area, worked at the Yard. Although there were fewer employees after the war, the closing meant the loss of some 5,600 jobs for Boston residents alone.

Initial efforts were made to promote the site for manufacturing reuse, primarily port-related ship construction and ship conversion. This concept was motivated by the need to find new jobs for former Navy Yard employees. Following two years of marketing attempts, efforts to promote industrial reuse were suspended. City officials concluded that access was too limited for modern industrial use.

Subsequent to the Department of Defense's announcement that the Navy Yard was to be deactivated, the Secretary of the Interior suggested that a portion of the site be studied for inclusion in the National Park system. A new area study prepared by staff from both the Park Service and the Navy recommended that a national historic site be established to commemorate the history and development of our naval power and the role it played in our country's founding and expansion. The original proposal was for a single unit entitled BOSTON NAVAL SHIPYARD - U.S.S. CONSTITUTION NATIONAL HISTORIC SITE.

The purpose of the proposed national historic site was to preserve and

protect the most historic portion of the Boston Naval Shipyard and to assure the continued presence of the Constitution at its traditional berth for the benefit and inspiration of the people of the United States. Subsequently, numerous bills were introduced to establish a national historic site or complex. Public meetings were held in the fall of 1973 proposing the establishment of Boston National Historical Park. This legislation included the Navy Yard as one of the proposed sites.

IV. THE NAVY YARD TODAY

The Boston Navy Yard is located on the Boston Inner Harbor at the easternmost end of the peninsula which forms Charlestown. Here, at the confluence of the Charles and Mystic Rivers, approximately 84 acres of land and 46 acres of water comprise the Navy Yard. The northwestern, or landward edge, is defined by the Mystic River Bridge and ramp system which also serve as a barrier between the shipyard and Charlestown.

Charlestown is a dense, compact community undergoing intensive redevelopment and rehabilitation. Major projects include the realignment of the MBTA orange line subway, a new community college and other improvements resulting from new city infrastructure and rehabilitation loans and grants.

Situated at the foot of Breed's Hill and the Bunker Hill Monument, the Boston Navy Yard is located on a relatively flat piece of land created primarily from mudflats. There are 86 buildings, 4.6 miles of railroad and numerous docks and piers. The buildings contain approximately 3.5 million square feet of floor space, most of which is concentrated in 37 large buildings. The structures are primarily industrial facilities constructed during periods of war-time activity. Several are the sole examples of their type in the United States today. Other structures such as the various sail lofts and quarters are good examples of buildings common to 19th century shipyards.

The major structure of historical interest include the following:

- U.S.S. Constitution - the frigate Constitution is the oldest commissioned ship of the United States Navy. Built in Boston in 1797, the vessel was involved in many major battles in the first portion of the 19th century. She was condemned as unseaworthy in 1830, but Oliver Wendell Homes' poem "Old Ironsides" aroused such interest that funds were authorized to rebuild the ship. Today, the Constitution is the major attraction at the Navy Yard. She remains under the jurisdiction of the U.S. Navy. Interpretation is provided by sailors dressed in early 19th century uniforms.
- Dry Dock #1 - (1827-33) Authorized by President Andrew Jackson, this is one of the oldest dry docks in the country. It was considered a major feat of engineering at the time of its construction. The Constitution was the first ship to enter it and also the last.
- Ropewalk Complex - Buildings 58, 60, 62 - (approx. 1836). A unique granite structure 1,360 feet in length, the Ropewalk produced nearly all the Navy's rope for almost 135 years. Other buildings of the Ropewalk complex include the Hemp House and the Tarring House.
- The Commandant's House (Building G) - 1809? - The structure is a fine brick building of the federal style, sited at the highest point in the Navy Yard and commanding a substantial view of Boston Harbor. At one time, there were extensive gardens associated with the house, the remains of which are still in evidence today.

Other interesting structures include the octagonal-shaped Muster House (Building 31), the Engine House (Building 22) which currently houses the Constitution Museum and the Forge and Foundry (Building 105) where the "die-lock" chain was made.

The Navy Yard as we see it today reflects the enormous pressures for growth and the need for new facilities during World War II. During the last forty years, the Navy Yard lost many of the amenities traditionally associated with it and became a much less inviting place as cobbles were covered with asphalt, chain link fences appeared, and hastily-constructed additions were made to existing structures, or new buildings placed helter-skelter in any available

space. There was also a substantial change in scale in the latter years as huge new buildings were required to accomodate war-time production.

The Navy Yard is basically a city within a city with its own streets, police, hospital, and telephone exchange and even the ability to generate its own electricity. We think of it as being an industrial site, but as at many early industrial sites, the amenities were very much apparent. There were barracks and officers' quarters scattered throughout the Navy Yard with their small, landscaped areas. There were tree-lined avenues and formal parks and parade grounds. Flirtation Walk, adjacent to the Ropewalk, was where sailors strolled with their dates. The tennis courts are a relatively recent addition, but prior to World War II there was a large recreation field on the site of the proposed Boston Redevelopment Authority (B.R.A.) park. The Navy Yard also served as a community gathering place. Its grounds were frequently opened to the public for strolling, picnicking or special events such as ship launchings.

Although much of the Navy Yard is asphalt-covered, there are patches of cobbles and brick and many old photos to serve as a reminder that this was not always the case. Remnants of the past grandeur include the flag pole and cannon on the lawn in front of the Commandant's House. The area was once known as Gunshot Park when there were rows and rows of perfectly stacked cannon balls. There was another area known as Cannon Park where the cannons were laid out at one time, and an anchor park with all the old anchors. The remains of some of these are buried under the asphalt.

The parade ground in front of the Marine Barracks is a large expanse of lawn whic is still sometimes used as a drill field, but more often serves as a recreation area for Navy Yard residents and park staff. The highlight, though, in terms of the landscape, are the grounds around the Commandant's House. There are hedges, orchards, ceremonial plantings and lawns, all reflecting

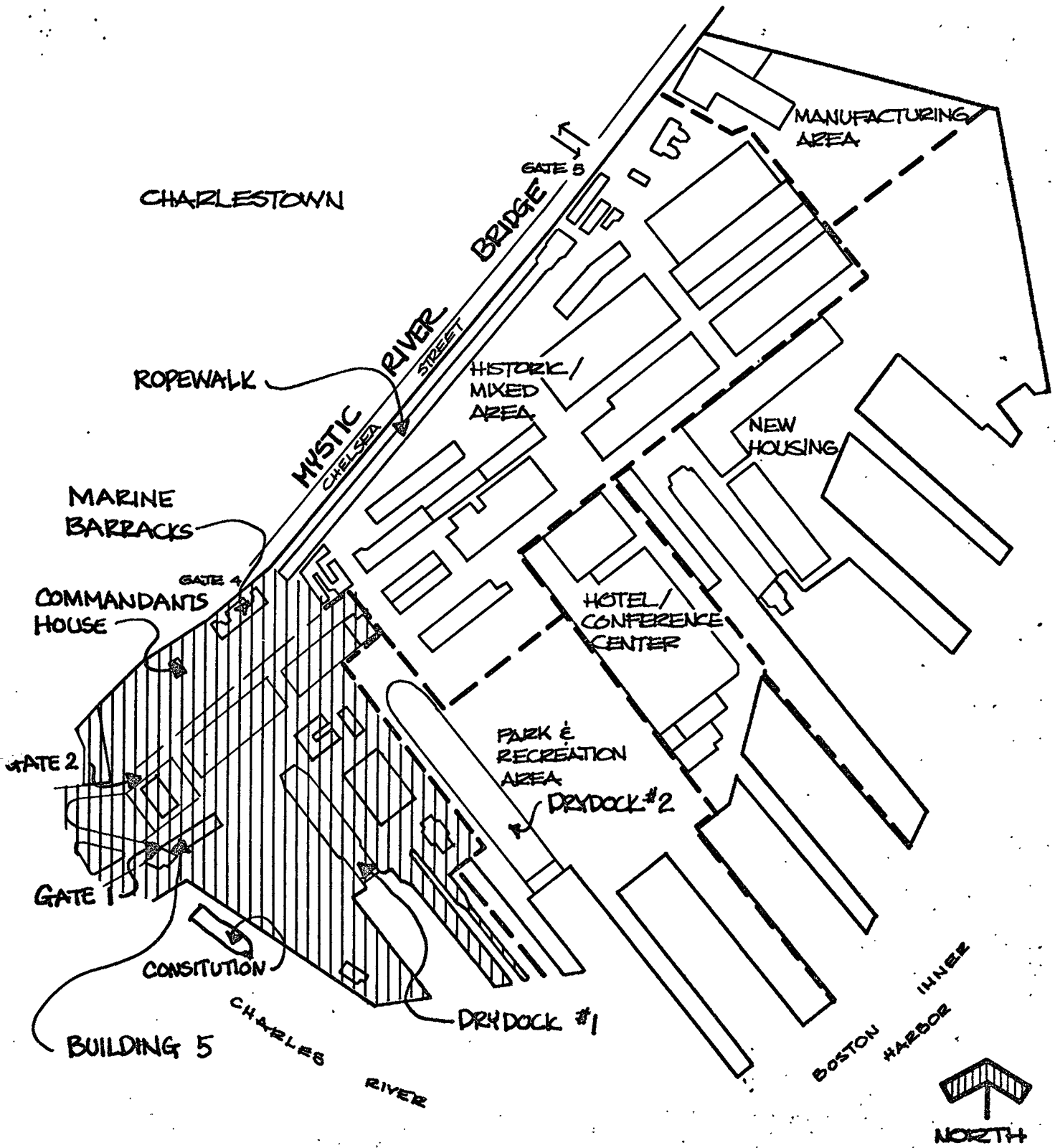
the horticultural tastes of various commandants and their wives. The Commandant was an important figure in the Charlestown community, and the house and gardens were a symbol of his stature.

V. PLANS FOR ADAPTIVE REUSE

The Navy Yard is a complex urban site which has evolved over the years. Its growth and management in the past have been guided by its purpose as a facility of the United States Navy. Now that it has ceased to function as a Navy yard, a new set of principles will have to be developed for its management and use. These new principles will have to reconcile the efforts to preserve the site with the economic and social forces which are exerted by the surrounding community.

Following the closing of the Navy Yard and the designation of 27 acres as a unit of Boston National Historical Park, the City of Boston began analysis and planning studies to determine the use of the remaining 103 acres of the Navy Yard. Extensive study resulted in the conclusion that the site was too large, too complex, and too varied for a single use and that a mixed development would be most appropriate. Current plans show the area divided into two districts, a historic district and a new development district. The historic district contains buildings identified as having outstanding significance. It would be linked visually with the national park and individual buildings would be adapted for tourism and institutional use while respecting the integrity of the facades.

The new development district, on the other hand, contains many 20th century industrial buildings which overshadow the historic structures and visually block the historic district from the waterfront. Adaptive use of the large twentieth century buildings is very difficult so it is likely that future projects within the new development district would be based on extensive



|||| CHARLESTOWN
 NAVY YARD UNIT
 BOSTON N.H.P.
 --- PROPOSED
 BOSTON REDEVEL-
 OPMENT AUTHORITY
 USE AREA
 BOUNDARIES

Boston Redevelopment Authority

Proposed Use Areas

Charlestown Navy Yard

CHARLESTOWN NAVY YARD - SPECIAL STUDY
 BOSTON NATIONAL HISTORICAL PARK

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demolition and new construction. A mixture of housing, hotel/conference center, park development and light manufacturing uses will occur. The waterfront will be developed as a park. Substantial areas would be available for marina and docking purposes for recreational boating. There may even be a collection of historic ships moored at Dry Dock #2.

The B.R.A. will begin their work in the Navy Yard this spring. The first phase will be the development of a waterfront park adjacent to Dry Dock #2. At the ceremony in which the land for the park was transferred from the federal government to the City of Boston, Mayor White made a comparison between this park and the recently constructed waterfront park in downtown Boston. There are many similarities in the type of landscape and in the need for recreation and waterfront activities. Both are a part of an effort on the part of the city to reclaim the waterfront. Although Boston has many miles of shoreline, most of it has been inaccessible in the past.

The development portion of the B.R.A. proposal presents greater difficulties. A set of guidelines is currently being developed for which buildings are to remain, which are to be demolished and which are to be restored to an earlier era. The basic task facing the B.R.A. is to remove some of the more obtrusive modern additions and restore some of the more pleasant features which characterized the Navy Yard in the past while responding to modern economic pressures.

These plans are all directly dependent upon the provisions of adequate access into the portion of the Yard which is not managed by the National Park Service. Gates 1, 2, and 4 are located within the authorized N.P.S. boundary and before land transfers can occur, certain management and planning decisions have to be made.

A recent Park Service study looked at five alternative access schemes. The recommended alternative proposed that Gate 4 be used for general pedestrian access and also for automobile access to the adaptive use portion of the Navy

Yard. This would result in substantial impacts to the historic structures outside the national park area and increased traffic through the national park but would greatly facilitate the adaptive reuse portion of the project. The decision is a difficult one and there is no solution which is ideal, given the complex needs to be met.

If this alternative is indeed the one finally chosen, the Park Service and the B.R.A. will have to work closely to implement a project which respects the concerns of both. One person involved in the planning process suggested that problems had been created by the fact that a boundary line had been drawn and territories sharply defined. He pointed out that there are historic buildings throughout the site and that, even though it would be difficult, a more flexible boundary might have brought the two agencies together and made them more sympathetic to each other's concerns.

VII. BOSTON NAVY YARD AS A UNIT OF BOSTON NATIONAL HISTORICAL PARK

Boston National Historical Park was authorized by Public Law 93-431 on October 1, 1974 "...in order to preserve for the benefit and inspiration of the people of the United States as a national historical park certain historic structures and properties of outstanding national significance located in Boston, Massachusetts and associated with the American Revolution and the founding of the United States." The bill gave the Secretary of the Interior authority to acquire and manage seven historical sites: Charlestown Navy Yard, Faneuil Hall, Paul Revere House, the Old State House, Old North Church, Old South Meeting House, and Bunker Hill. The funding authorized by the Interior Committee included \$11.5 million for the Yard. An estimated \$12.8 million was authorized for refurbishing, restoring and developing the other six sites.

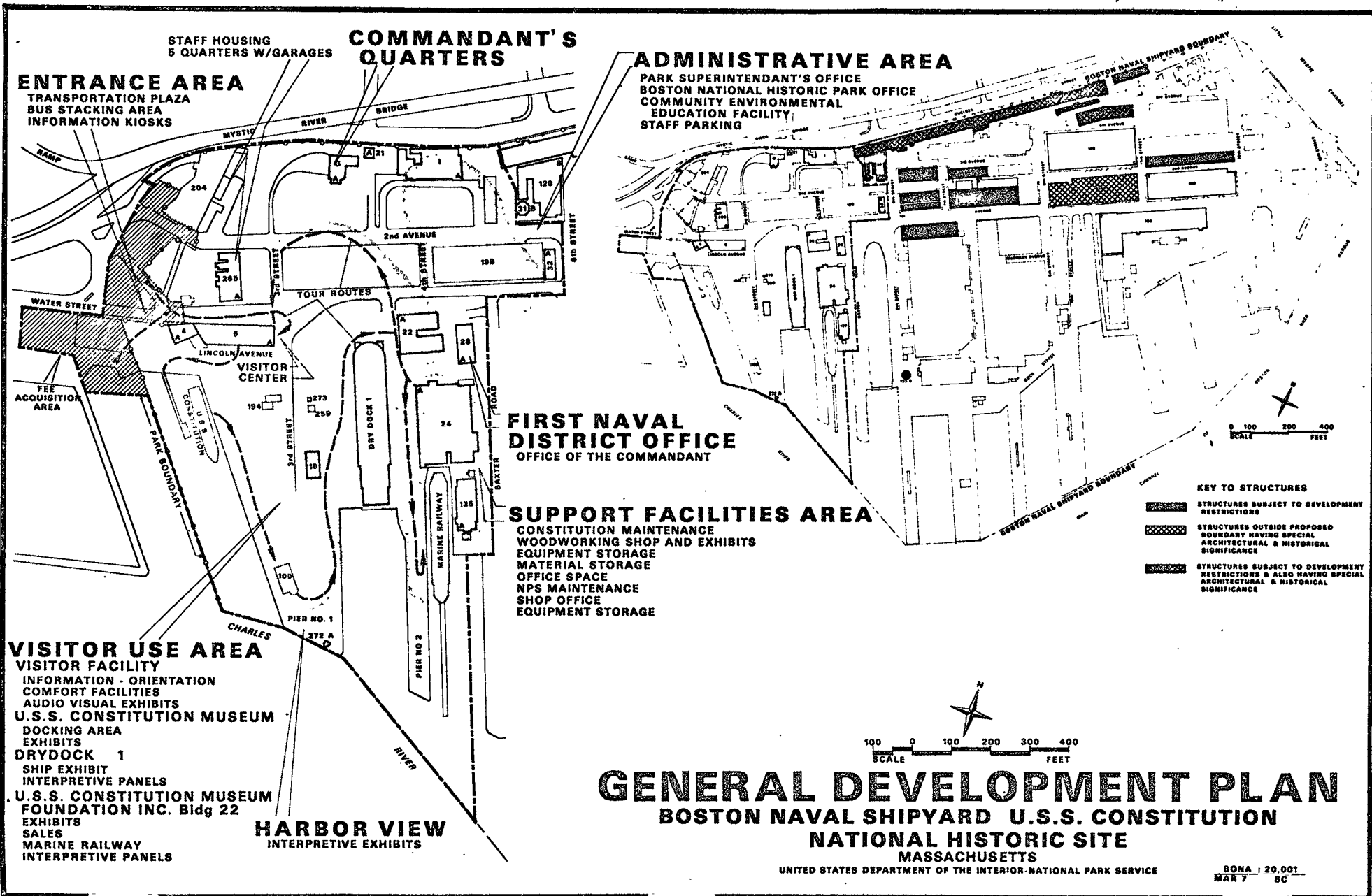
The creation of the Boston National Historical Park represents an entirely new type of park management and an entirely new character of park for the National Park Service. The intent is to structure an organization that will permit the sharing of responsibilities, costs and operations to the degree

possible, appropriate or agreeable with all concerned organizations and interested citizens. Funding and technical assistance are provided by the Park Service but much of the day to day operation is carried out by local organizations.

Management objectives for the Navy Yard have not been finalized because discussions are still underway to determine the overall structure of the park. However, the following issues have been raised over the years and final plans will probably reflect a similar point of view:

- architectural diversity will be retained by not attempting any historical scene restoration. Changes in facilities reflect technological growth and the response to these advances.
- historic resources will be evaluated for the feasibility of limited restoration to portions of individual structures and grounds.
- the removal of selected non-historical structures of recent origin will be considered to eliminate the cluttered atmosphere of buildings and structures scattered everywhere in the yard.
- rehabilitation of structures for adaptive uses will primarily involve the interior of the structures. This type of activity has been a way of life at the Navy Yard where adaptations were constantly made for improved efficiency and new uses.
- the Commandant's House, the Marine Barracks and the Parade Ground are a part of the setting for the historic site and should be shown to the public. Grounds should be developed to enhance the industrial setting.

The General Development Plan on the following page (portions of which are out of date) shows the National Park portion of the Navy Yard and the proposed uses. One of the biggest problems park interpreters face at the moment is a lack of interest in the Navy Yard itself. The Constitution draws the largest crowds of any historic attraction in the Boston area, but most people assume that is all there is to see. Now that much of the area has been secured against hazards, tours of the Navy Yard and slide shows illustrating its



ENTRANCE AREA
 TRANSPORTATION PLAZA
 BUS STACKING AREA
 INFORMATION KIOSKS

STAFF HOUSING
 5 QUARTERS W/GARAGES

COMMANDANT'S QUARTERS

ADMINISTRATIVE AREA

PARK SUPERINTENDANT'S OFFICE
 BOSTON NATIONAL HISTORIC PARK OFFICE
 COMMUNITY ENVIRONMENTAL
 EDUCATION FACILITY
 STAFF PARKING

FIRST NAVAL DISTRICT OFFICE
 OFFICE OF THE COMMANDANT

SUPPORT FACILITIES AREA

CONSTITUTION MAINTENANCE
 WOODWORKING SHOP AND EXHIBITS
 EQUIPMENT STORAGE
 MATERIAL STORAGE
 OFFICE SPACE
 NPS MAINTENANCE
 SHOP OFFICE
 EQUIPMENT STORAGE

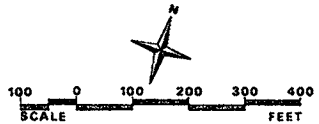
VISITOR USE AREA

VISITOR FACILITY
 INFORMATION - ORIENTATION
 COMFORT FACILITIES
 AUDIO VISUAL EXHIBITS
 U.S.S. CONSTITUTION MUSEUM
 DOCKING AREA
 EXHIBITS
 DRYDOCK 1
 SHIP EXHIBIT
 INTERPRETIVE PANELS
 U.S.S. CONSTITUTION MUSEUM
 FOUNDATION INC. Bldg 22
 EXHIBITS
 SALES
 MARINE RAILWAY
 INTERPRETIVE PANELS

HARBOR VIEW
 INTERPRETIVE EXHIBITS

KEY TO STRUCTURES

- STRUCTURES SUBJECT TO DEVELOPMENT RESTRICTIONS
- STRUCTURES OUTSIDE PROPOSED BOUNDARY HAVING SPECIAL ARCHITECTURAL & HISTORICAL SIGNIFICANCE
- STRUCTURES SUBJECT TO DEVELOPMENT RESTRICTIONS & ALSO HAVING SPECIAL ARCHITECTURAL & HISTORICAL SIGNIFICANCE



GENERAL DEVELOPMENT PLAN

**BOSTON NAVAL SHIPYARD U.S.S. CONSTITUTION
 NATIONAL HISTORIC SITE
 MASSACHUSETTS**

UNITED STATES DEPARTMENT OF THE INTERIOR-NATIONAL PARK SERVICE

BONA 20,001
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history are beginning to attract more visitors. On a recent tour, the guide jokingly referred to Dry Dock #1 as "our very own Grand Canyon" and when one looks along the dry dock to the harbor the man-made feature becomes almost as impressive. The scale of it, the engineering involved and the history of the men and ships who occupied it make an exciting story.

In marked contrast to the Dry Dock is the elegant, residential character of the Commandant's House. The gardens, even in their current state of disrepair, are like a retreat into another world. Five species of birds were spotted during a recent visit, and the trees are varied enough to be a small arboretum. The tennis courts in front of the Marine Barracks will probably be removed and replaced by lawn, making a much more park-like setting which is also in keeping with the historic scene.

One of the greatest problems facing the Park Service is access. Although the Navy Yard is part of the Freedom Trail, it is $2\frac{1}{2}$ miles from Old North Church and isolated from the six other sites of Boston National Historical Park. The recent realignment of the Orange line makes the nearest subway station $\frac{2}{3}$ mile from the Navy Yard. A parking and bus-unloading area is planned just outside the Navy Yard, adjacent to Gate 1. Vehicular circulation within the park will be kept to a minimum. Presumably, there will be some sort of transportation system to discourage use of private cars between the seven sites which comprise the park.

The buildings on the site will be put to a variety of uses. Building 5, adjacent to the Constitution, will be developed as a visitor center. The Commandant's House will be partially refurnished as a museum. Building 22 will continue to house the privately operated Constitution Museum. Other buildings will serve as quarters for park staff, as park headquarters and maintenance area, and as special facilities for specific Park Service functions. The North Atlantic Preservation Lab and the Appalachian Trail Project of the

Park Service are located in Building 28. Boston University is currently seeking a cooperative agreement with the Park Service by which it would be able to use Navy Yard facilities to operated an urban environmental education center. Space is also provided for the staff of the Constitution.

VII. THE HISTORIC LANDSCAPE

In this report, I have been primarily concerned with the administrative and management issues of the Navy Yard. As mentioned in the introduction, this type of project deserves close scrutiny because it will be occurring more and more frequently. If Sturbridge, Williamsburg and Plimoth Plantation are typical of early preservation efforts, then perhaps the Navy Yard is typical of a new era. While the early examples are rural, residential, relatively small and set apart from the surrounding area, the more recent examples are urban, industrial, large and complex.

In most cases, the recent projects are not solely museums, although that may be one function. They are an integral part of modern life. This is a different type of preservation which must respond to many interests. It is less pure but a great deal more real. There is a need for both.

Springfield Armory in Springfield, Massachusetts is one example of an urban industrial preservation project. At one time, the Armory was comprised of several different sites scattered throughout the city. When the Armory was deactivated in 1968, the most historic portion, Armory Square, was designed for use as a museum and the campus of a community college. A public television station currently occupies a portion of the museum building and the local schools use some of the grounds as athletic fields. One of the most surprising aspects of Springfield Armory is that it is not the foreboding military establishment that one would expect, but much more like a college campus in appearance. The main quad reminded me very much of Harvard Yard. There are

many problems at Springfield which point out the need for safeguards and carefully worded agreements but the alternative to adaptive reuse would probably have been demolition and the loss of a part of our national heritage.

In contrast to the institutional reuse at Springfield, many urban waterfronts are being revitalized as lively public and commercial space. This type of project, as exemplified by the Boston and Newburyport Waterfronts, is really an interweaving of preservation and urban design. The water and the waterfront which played such an important role in early American life, formerly necessary for food and transportation, are now being recycled amenities.

Perhaps the most ambitious and sophisticated urban, industrial preservation project is taking place in Lowell, Massachusetts. A study has recently been completed recommending the creation of an urban cultural park along the mills and canals of the city. The proposal calls for a variety of uses and activities cooperatively managed by several levels of government. The park, if approved by Congress, would be without precedent in this country. It might serve as a model for future cooperation in meeting urban, cultural, and recreational needs.

These projects represent a new way of looking at the landscape. We have to be able to see beyond the chain link fence and the asphalt to recognize the potential of such sites. We as a society can no longer afford the luxury of the rural dream. We have to recognize the value of our urban and industrial sites and create opportunities to use them and learn from them.

VIII. APPENDIX: SOURCES OF HISTORIC INFORMATION

A substantial report has been compiled by the Park Service listing maps, plans, and photographs on file at the Navy Yard. The intent of this section

is not to duplicate that information but to summarize the primary sources pertaining to the historic landscape. (By "landscape" I mean not only planting plans, but also the roads and paths, the layout of the buildings, the fences and the paving materials.)

There are numerous site plans of the Navy Yard available. The earliest one (probably drawn in 1801) shows the boundaries and features of the land purchased by the government together with some ideas for improvement. The general grid format of the Yard is shown in a proposed site plan prepared by Loammi Baldwin in 1828. Plans for the mid-1800's are somewhat unclear and contradictory, one of the hazards of historical research. A major problem is that proposed features are intermingled with existing ones and not clearly labelled as to which is which. Beginning in 1857, there is a fairly complete year-by-year site development record. An 1874 plan of the Commandant's House shows an excellent site plan of the vicinity including the formal gardens and the cast iron fence along Salem Turnpike. Trees and plants are labelled as to placement and type. The most recent site plan of the Commandant's House shows improvements to the grounds made in 1958.

The Navy Yard was the subject of many, many photographs and these provide a good deal of information about character, materials and use of the various spaces. I have not checked what aerial photographs are available but since the Navy Yard was a military installation, it may well have been one of the first areas to be photographed from the air. If so, old air photos might be useful in reconstructing planting plans and circulation systems. Financial records are another source of information. For example, in 1866, a request was made for \$43,900 for paving around the Ropewalk.

Because of its significance to the community, the Navy Yard is mentioned in many local histories and in engineering journals. There was also a Navy Yard newspaper which documented many of the events and improvements which occurred. Some archaeological research has revealed buried cannons. This information

has been supplemented by interviews with former Navy Yard employees, some of which have been videotaped.

IX. BIBLIOGRAPHY

City of Boston, A Proposal to the Commonwealth of Massachusetts and the Inter-agency Economic Adjustment Committee for Development Planning Assistance in Regard to Charlestown Naval Base and South Boston Naval Annex, Office of the Mayor, Boston, 1973.

National Park Service, Environmental Assessment of Management Alternatives for Boston National Historical Park, North Atlantic Region, Boston, 1976.

National Park Service, Charlestown Navy Yard: Special Study, North Atlantic Region, Boston, 1976.

Norton, Bettina A. The Boston Naval Shipyard, 1800-1974. Bostonian Society, Boston, 1975.

Public Law 93-431.

Report of the Lowell Historic Canal District Commission to the Ninety Fifth Congress of the United States of America. U.S. Government Printing Office, Washington, D.C. 1977.

Wright, David. Boston Naval Shipyard: Architectural and Environmental Inventory. Report to the National Park Service, Boston, 1974.

Personal interviews were also conducted with the staff members at Charlestown Navy Yard and the North Atlantic Regional Office of the National Park Service, April 1977.