

THE REDEVELOPMENT OF BOSTON'S

ATLANTIC AVENUE WATERFRONT

by

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Signature of the Author

Accepted by

Professor Lawrence B. Anderson
Head, The Department of Architecture

February 7, 1961

Pietro Belluschi, Dean
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Dear Dean Belluschi:

In partial fulfillment of the requirements for the degree, Master in Architecture, I herewith respectfully submit a thesis entitled "The Redevelopment of Boston's Atlantic Avenue Waterfront."

Respectfully submitted,

 Fernando Migliassi

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Abstract

Along Atlantic Avenue, presenting a dreary picture of obsolescence and neglect, lies the historic downtown waterfront. In its vicinity the city began and generations of Bostonians lived as a seaport people. Today, few persons are aware of the great port that begins at the foot of State Street.

Once the center of Boston's waterborne commerce, the area has been experiencing a physical and commercial decline for the last 80 years, the causes and consequences of which will be considered in this study. At present, it houses a miscellany of warehousing and light industrial activities which depend little upon shipping access.

Concern for this situation and increased interest in the rehabilitation of this area has been aroused in the last 5 years. Consistent with this attitude, I have chosen the Redevelopment of Atlantic Avenue Waterfront as the design study of my thesis.

The Boston City Planning Board; the Greater Boston Chamber of Commerce; the Boston Society of Architects; City Planners, Architects and students of these disciplines have undertaken studies and made a number of proposals, furnishing very valuable information on the subject.

Giving credit to them, I have taken this data as a basis for my study, limiting my contribution, in this report, to the organizing, summarizing, and integrating of it, in order to draw out the concepts on the basis of which the rehabilitation of the area should be undertaken.

Aware of the limitations of a proposal of this nature, and knowing that many of the factors involved are beyond my control, it has been treated as a case study, aiming mainly toward a promotional scheme with the explicit purpose of seeking the expression of this particular form of urban life.

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INTRODUCTION

In modern times, all large population centers have been undergoing a life crisis, the cause of which we find in the unbalance created by the overlapping of new needs and their corresponding satisfaction to old urban structures. Growth of population, new means of transportation, new production techniques, new trends in commerce, etc., have upset the old urban patterns, bringing congestion and decay to the once efficient and alive downtown areas, making them increasingly unattractive for community life. Inevitable reaction in the form of decentralization is now occurring everywhere, aided and encouraged by rapid transit systems and the automobile.

It is needless to point out the loss and danger that this situation means to the social, economic and political life of the community. Enough literature has been released on the subject; now, as always before, it is the time to tackle the problem in a more direct way, analyzing and selecting the facts that can determine a criterion aiming towards its solution.

One first step, in this direction, is to restate the problem in more positive terms. The migration from urban centers to the suburbs does not necessarily mean only decay. "It also affords an opportunity for the communities to profit by the mistakes of the past, to construct new streets where needed, to rehabilitate the depressed area, to establish modern recreational opportunities, to provide adequate health, hospital,

school and cultural facilities, and to encourage commerce and industry in their proper locations."

One second step would be to bear in mind that any proposal affecting a part of the city must be generated not only by the potentials of the considered area itself, but also be informed by the consideration of the whole of the urban complex and their inter-relationship.

Since all these considerations apply to Boston, the same as to any other large city in America, I will approach the analysis and solution of the Atlantic Avenue Waterfront from the standpoint of the conclusions of these considerations. For this purpose, I have divided the factors to be analyzed into two broad categories: one comprising the human and spatial facts dealing with the Waterfront, as an articulation of the geographical space of Boston, its position on the Boston peninsula, and its relationship to the port and the sea; the other comprising the same facts dealing with it as a part of Boston's downtown district, its position, character, function, history, topography and particular relationships.

The purpose of the present report is to analyze them all and deduce the pertinent conclusions that will animate the concepts on the basis of which the rehabilitation of this area should be undertaken.

For a better understanding and use of the information herewith furnished, I intend to present it in sequence going from the generals to the particulars, and finally to synthesize it graphically as a stage immediately previous to the design proposal.

The Problem

The "Boston Herald" in its edition of April 3, 1956, page 18, includes an article entitled "Rediscovered Waterfront" that reads as follows:

"Boston's downtown waterfront was once the center of the city's business and commercial life. Its wharves were a forest of masts and prosperous warehouses and mercantile establishments crowded the shore area.

But, as port facilities spread down the harbor and business moved uptown, the old waterfront began to decline. Some wharves burned and were not replaced. Others fell in disrepair. More and more waterside buildings became vacant. And the whole area developed a shabby, neglected air.

Now the city is taking a second look at the waterfront. Badly overcrowded and with no place to expand, Boston is at last beginning to realize the value of space it has so long misused."

After describing briefly the main characteristics and estimated costs of a preliminary report-design for the redevelopment of this area, it was placed before the Mayor by the City Planning Board:

"The point is that waterfront redevelopment is not a luxury project for the city. It is a necessary step in the larger fight against urban decay. We must undertake this sort of long-range building not only on the waterfront, but in various parts of the city in order to start values rising again.

The waterfront plan is part and parcel of the General Plan promulgated by the Board five years ago. It is a good place to get the General Plan started. The Central Artery, which swings down to Atlantic Avenue at this point, is already creating all sorts of new potentials for the downtown area. If the city plans intelligently it can control the kind of buildings which springs up around the artery. It can maximize the benefit of the highway or throw away another golden opportunity."

And it concludes:

"More than the waterfront is at stake now. This project may well be the test of Boston's capacity to rebuild anywhere any time. It is an opportunity we no longer dare to ignore."

All this was said four years ago and it has been repeated ceaselessly since. Undoubtedly it will be repeated many more times, but these constant repetitions do not detract from the validity of the statement; on the contrary, the validity of the statements is affirmed, and make more evident the need to undertake the suggested and long-awaited enterprise.



Delineation of the Study Area and Context

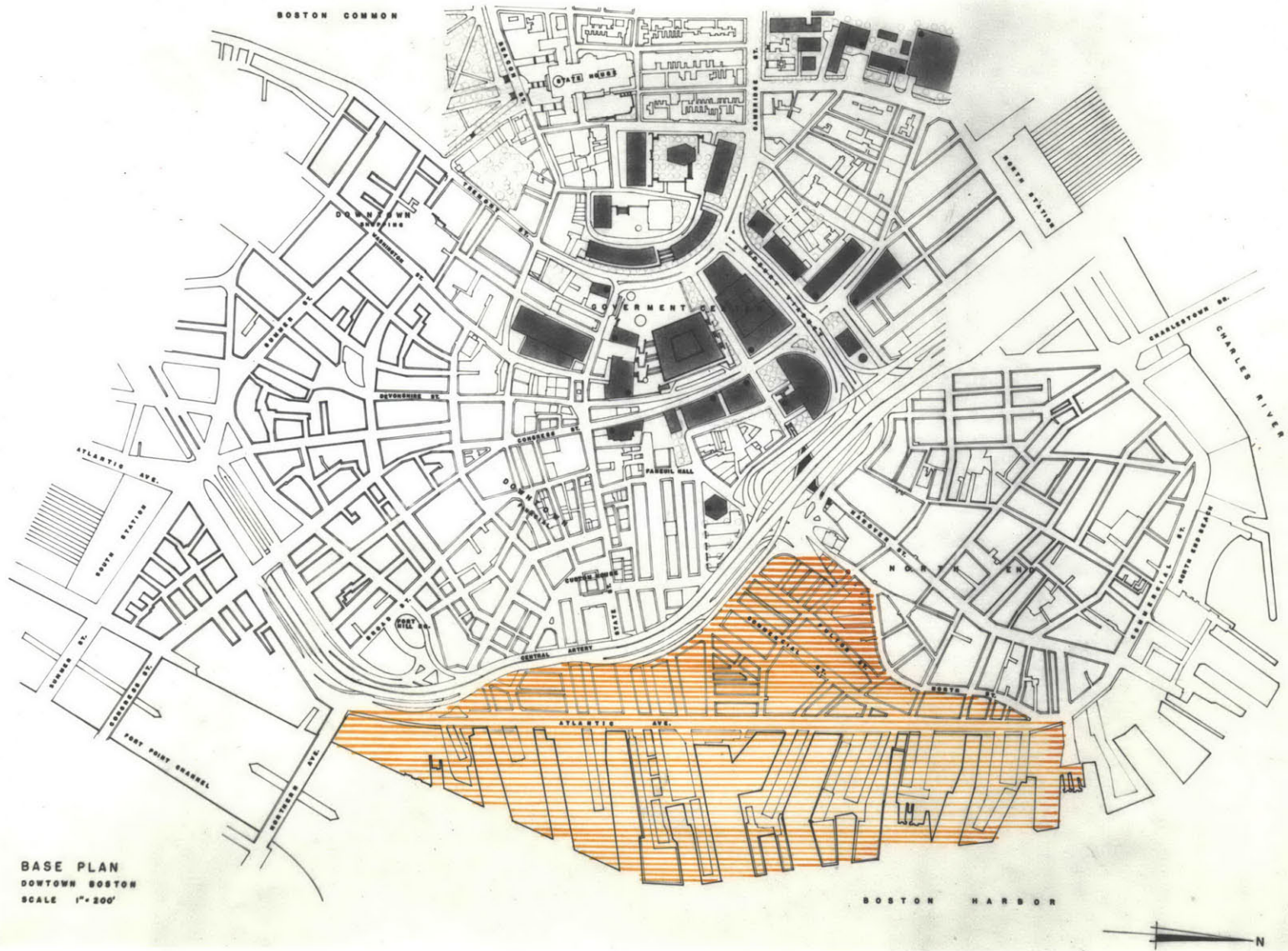
The problem area extends outward from the Central Artery to the U.S. Pierhead Line. North Street up to the new entrance of Sumner Tunnel is the northern limit. The junction of the Central Artery, Atlantic Avenue and Northern Avenue, is the southern limit.

The selection of these limits was governed by the following considerations:

1. Atlantic Avenue is at present the inner limit of the Waterfront itself. However, it is reasonable to consider the Central Artery as the west limit of this district, assuming that, according to the trend for the last 30 years, all the manufacturing and wholesaling activities now housed in the area will sometime move to a more convenient location (South Bay region) where good connections to the railroad system and easy accessibility by trucks can be afforded. In this case, the redevelopment of the triangular piece of land limited by the Artery, Atlantic Avenue, and Commercial Street, ought to be logically considered together with the redevelopment of the Waterfront itself. Besides all these considerations, the Central Artery provides to this area the strongest physical and visual edge in this direction.
2. The U.S. Pierhead Line must be accepted as the practicable limit on the channel side because it serves as the bulkhead line as well. Neither fill nor pier construction is permitted beyond this point.
3. North Street has long designated a boundary of the North End and also demarks the original shoreline. This boundary is felt to have both logic and significance and should be retained and clearly expressed.

4. Due to the lack of information about the profile and eventual use of the new and adjoining land which would be created at the entrance to Fort Point Channel when this proposed filling operation is actually carried through, I will consider, for the purpose of this study, the meeting point of the Central Artery, Atlantic Avenue, and Northern Avenue as the southern limit to this area.

The study area



Historical Background

Of the great amount of interesting material available on the history of Boston, I have chosen to concentrate on two aspects particularly relevant to the Waterfront problem and its site. One deals with the historical facts that explain the rise, decline, and future possibilities of Boston as a port. The other one deals with the enlargement process by which the Waterfront was extended into the harbor, taking its present shape.

Although both parts are intimately related sections of one, single historical process, I have chosen to consider them separately in order to stress their different implications in relation to this study.

The Port

During the sixteenth century, Boston Bay provided shelter to fishermen venturing to the Grand Banks from Europe. By 1610, the year Boston was established, the first trade operations started. From then on, and through the commerce afforded by the harbor, it became the great city that we know.

In the early stages of its history, this port was mainly a center for the exportation to Europe of furs and other products of New England, as well as the supply depot for goods from Europe, much needed by the Colonists. Trade flourished,

and by 1700 her commerce was four times that of her rival, New York. Since this situation jeopardized England's trading interests, taxes, detrimental to the trade of Boston, were levied by the metropolis. Immediately smuggling became prevalent in the Bay region. As a reaction, British officials closed the port in 1774.

During the Revolution, all activity in the port was paralyzed. After General Howe's withdrawal from the city in 1776, efforts were concentrated on the outfitting of privateers who were not very successful due to the action of the Atlantic Patrol of the British.

After the Revolution, American tonnage did not increase until the new Constitution was adopted, putting an end to a ruinous competition among states. Though most seriously hurt of all American ports by the Revolution, by 1807 Boston surpassed Philadelphia and ran second only to New York in tonnage owned.

The nineteenth century boom brought plenty of commerce to every port in the country. Boston's possibilities, however, were hurt when the Erie Canal was completed and made cheap water transportation available for bulk cargo from the Great Lakes region all the way to New York via Buffalo, Albany, and the Hudson River. The invention of the steam railroad presented excellent opportunities, but Boston's capital failed to seize the initiative, and extend the early railroads beyond the Berk-

shires. By 1850, Boston commerce was wholly dependent for export goods on New York and Philadelphia-controlled railroads which had pushed into the heart of the country.

Another good opportunity was missed when Boston failed to adapt steam to navigation during the mid-nineteenth century. Only after the Civil War did steam play a significant part in her maritime service. By this time competitive steamship lines had grown into formidable proportions.

Throughout these years, Boston's ocean-rate was lower than her competitors, thus balancing their advantage of lower rail-rates. However, in 1877, the government equalized matters through rail-ocean freight rates; a measure that to this day constitutes a serious handicap which Boston shippers must overcome in bringing export goods to their wharves.

Nevertheless, during the late 1800's, Boston had remained second only to New York in shipping volume. This being a result of her enterprise in coastwise shipping, her prominent dealings with the Mediterranean, and her position as one of the two leading entry ports for immigration.

Since the 1920's, Boston has yearly remained sixth or seventh in tonnage handled except for World War II when she was one of the two leading ports for trans-Atlantic shipping.

The present Port of Boston Authority was organized in 1946 and undertook an enterprising program for a broad future expansion of water-borne commerce. Since then, Boston's shipping is showing a steady increase from year to year.

The Waterfront

Since the days of William Blackstone, the first white inhabitant, Boston has undergone many changes, but none has been greater than that of its shape and size.

By levelling and filling, the original peninsula, upon which Blackstone settled in the spring of 1625, has almost trebled in area, and has so changed its water front that hardly a foot of the shore line of the old Boston remains.

One of the first real enlargements of the city was the extension of State Street by the construction of Long Wharf in 1709-10. Oliver Noyes and others were granted the necessary permission to build the wharf with sufficient common sewer from Andrew Faneuil's Corner to the low-water mark. As finally completed, the pier was of the width of Market, or Water, subsequently known as King Street, and finally called State Street, being thirty feet wide and having a space of sixteen feet in the middle for boats to land and construction of warehouses and shops on the north side of the wharf some time prior to 1722 made the pier a part of King Street.

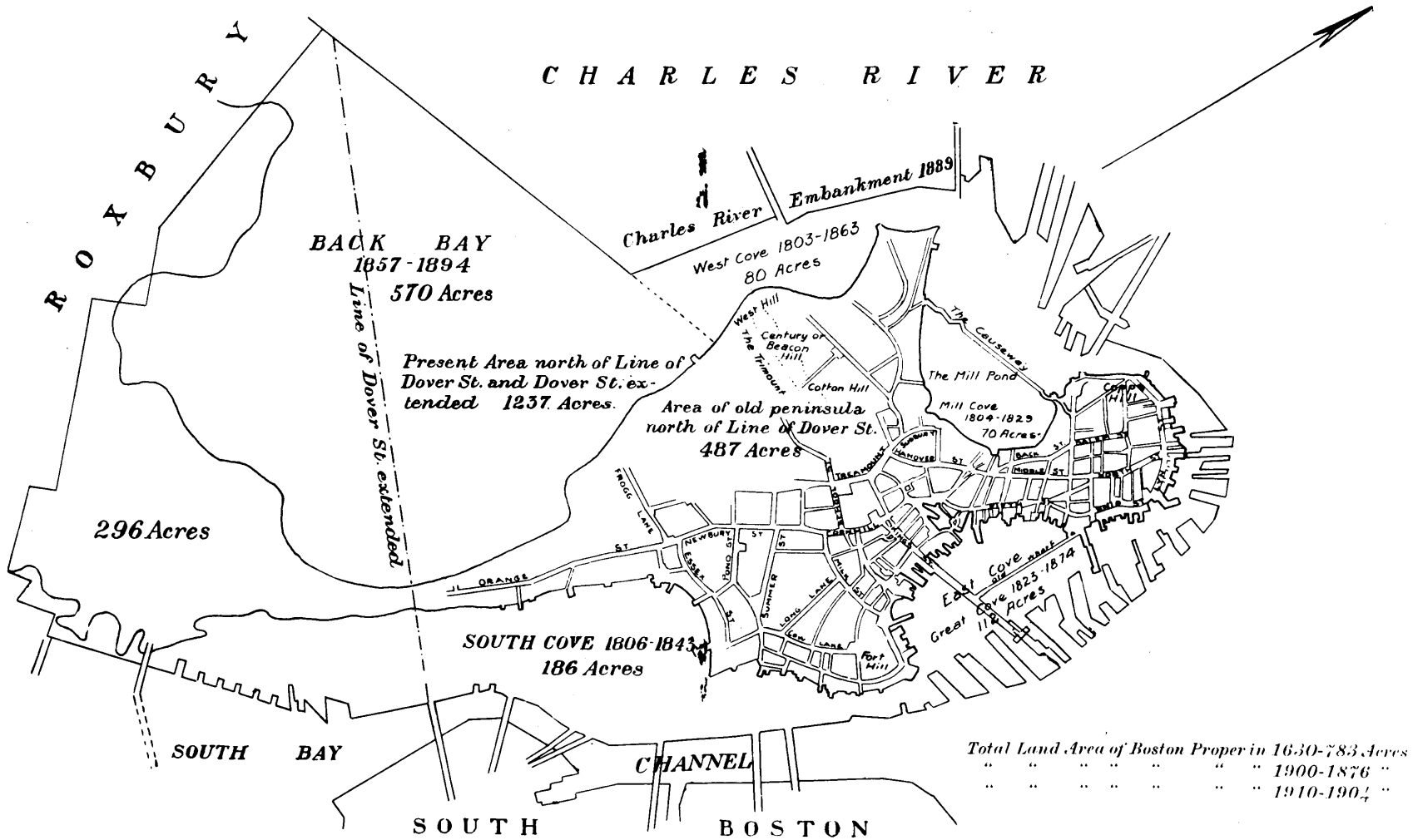
After the completion of Long Wharf, little was done to extend the city in the vicinity of the Town Cove until 1780, when there was further filling around Dock Square and about the foot of Merchant's Row. Under the administration of Josiah Quincy, between 1823 and 1826, an extensive public improvement took place in the vicinity of Dock Square. This was the filling in about the Town Dock in the neighborhood of Faneuil Hall, and the erection on the made land of a granite market-house, now Quincy Market, two stories high, five-hundred and thirty-five feet long, fifty feet wide, covering twenty-seven thousand feet of land, and costing \$150,000. Six new streets were added to Boston: South Market, North Market, the street leading to Long Wharf, now constituting a part of Commercial Street, Clinton Street, Roebuck's Passage (now constituting part of Merchant's Row), and Chatham Street.

As the result of filling, one hundred and twenty-seven thousand square feet of land and flats, and dock and wharf rights to the extent of one hundred and forty-two thousand square feet, were added to Boston. The initial cause of this improvement was the crowded condition of the City Hall market-place, and the total cost was about \$1,000,000. Mayor Quincy personally secured many of the options on the different estates purchased. The increase real estate values, as well as the additional property secured by the city, more than paid for the whole improvement. The accompanying map shows the extent of the work. A gradual extension was made in the direction of the bay, until finally the land was completely filled to the

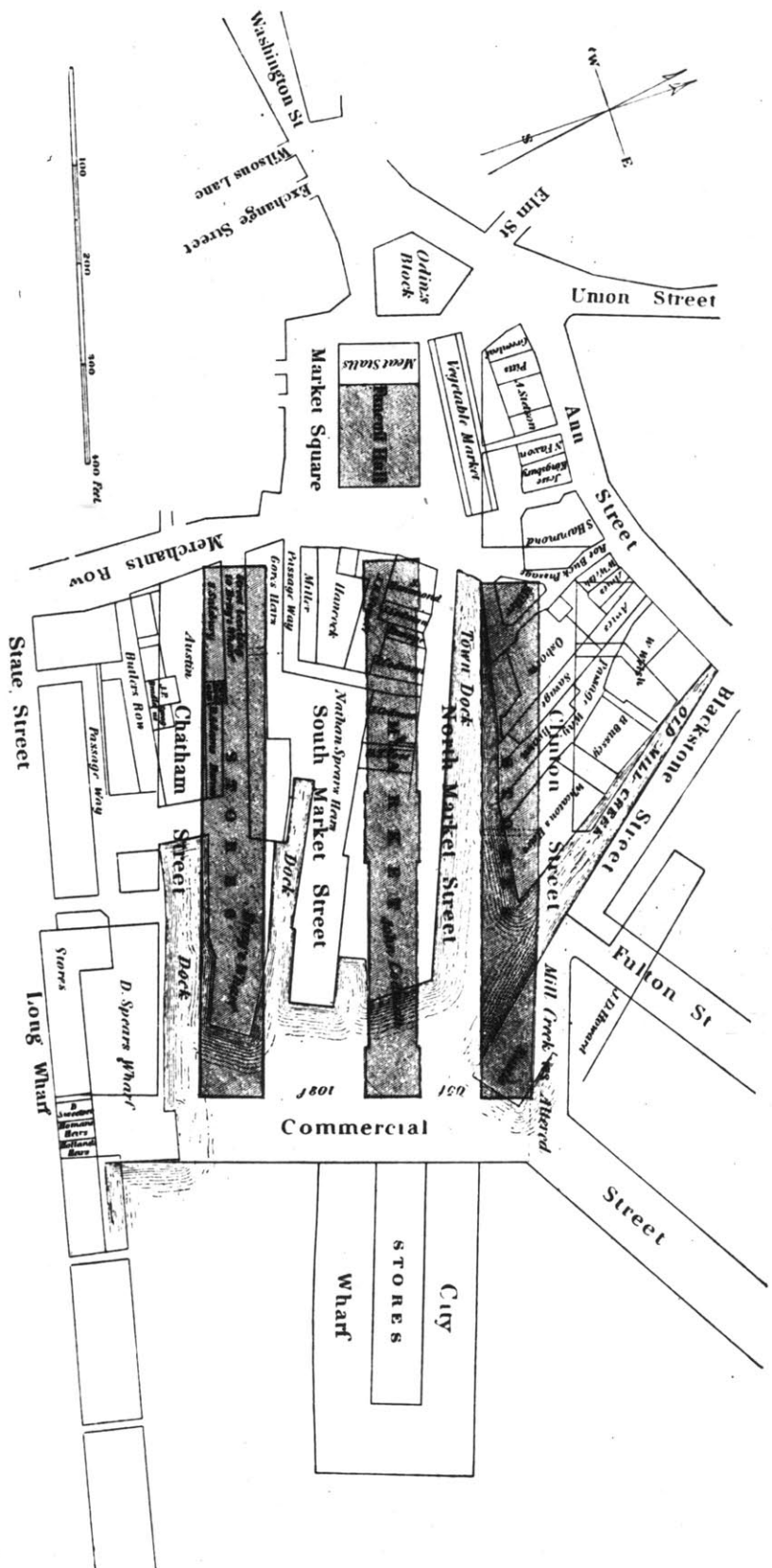
line of Atlantic Avenue. Commercial Street was completed in 1829, Fulton Street some years later.

Atlantic Avenue was projected in 1868, and the filling completed in 1874. The material of which Atlantic Avenue was made came from the cutting down of Fort Hill, which was originally an eminence fifty feet high. With the exception of Washington Street, this avenue was one of the most expensive streets ever laid out by Boston, the total cost being \$2,400,000. The material was brought in cars and dumped on the old docks along the line of the Barricado, and it is estimated one hundred and eighty-seven thousand five hundred and seventy cubic yards were filled in between low and high water mark along the line of the avenue. The filling completed the reclamation of the one hundred and twelve acres of the Town Cove, levelled the thirteen acres of Fort Hill, and yielded valuable business land along the main harbor front of the city. In the section originally the site of the Town Cove are now to be found the market district of the city, the Custom House, much of the warehouse district of Atlantic Avenue and the coast-wise steamship companies, the produce exchange, and much of State Street, now as always the financial section of the city. ^{1.}

Map of the original peninsula, showing fillings and present shore line

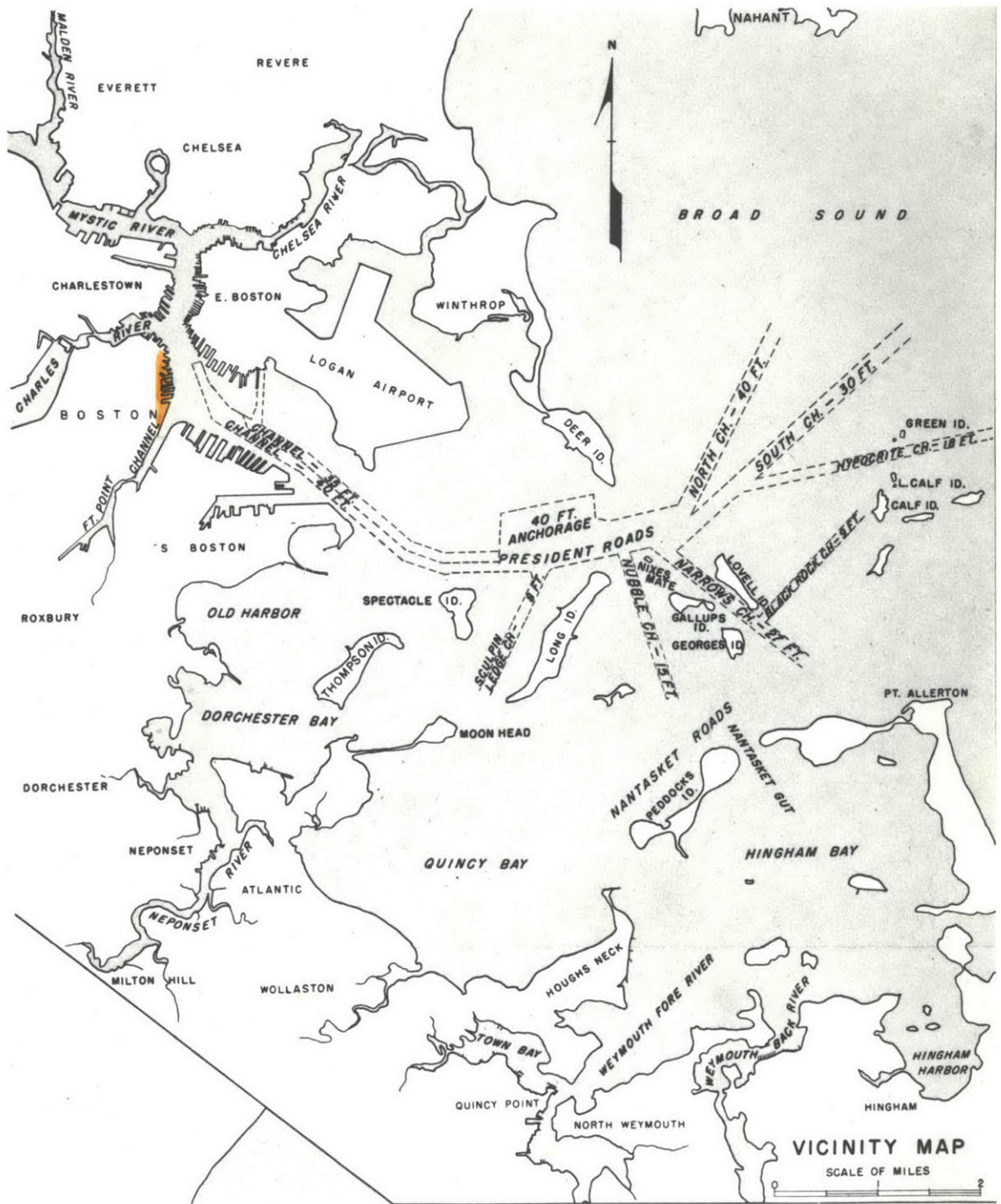


Surveyed in 1823, by S.P. Fuller



Fillings due to the construction of Quincy Hall Market
1823-1826

THE WATERFRONT AND THE PORT



Massachusetts Bay

The Port of Boston, Massachusetts

General Description

Boston is situated on Massachusetts Bay, and is one of the more important ports of the United States, considered both from the standpoint of its facilities and the extent and value of its commerce. The harbor includes all the tidewater lying within a line from Point Allerton to the end of Deer Island, comprising an area of about 47 square miles, exclusive of the islands. The entrance between these two points is about 4 1/3 miles wide and the distance from the Point Allerton-Deer Island line to the Charlestown Navy Yard via the 40-foot channel is about 7 miles.

The city of Boston includes within its limits East Boston, Charlestown, South Boston, Roxbury, Dorchester, and Neponset. East Boston is on the northeastern side of the harbor and is separated from Boston proper and Charlestown by the main ship channel, and from Chelsea by Chelsea River. South Boston fronts on the bay and the lower part of the main ship channel, and is separated from Boston by the Fort Point Channel. Charlestown fronts on the main ship channel at its upper end and on Mystic River and Charles River, and is separated from Boston proper by the latter stream.

Tides: The mean range of tides is 8.9 feet at Boston Lighthouse and 9.6 feet in the upper harbor, in Chelsea River, and in Fort Point Channel. The extreme range is about 4 feet greater.

Weather conditions:

Open season for navigation - The channels of this harbor are navigable throughout the year.

Prevailing winds - The prevailing winds are southwesterly during the summer, and westerly during the winter. At all seasons the heaviest gales are generally from northeast or east.

Ice - Ice rarely forms in the main channels. Occasionally during severe winters the greater part of the harbor is frozen, but towboats and steamers keep the main channels open. The Charles, Mystic, and Chelsea Rivers, and the minor passageways in the harbor are sometimes frozen during severe weather.

Fog - Fogs are prevalent along this coast in summer. They are of frequent occurrence during June, July, and August. Winds from the east to southwest bring in fog; westerly and northerly winds clear it away.

Precipitations - There is no rainy or dry season. Rain is distributed quite evenly throughout the year. The mean annual precipitation, computed from the Weather Bureau records of 50 years, is 40.14 inches. The snow season runs from November through March with an average fall of 40 inches a year.

Temperature - The mean annual temperature, computed from the Weather Bureau records of 105 years, is 51°F. The highest temperature recorded between 1872 and 1945 was 104° and the lowest - 18°. The sun is visible for approximately 58% of a possible 4459 hours.

Port and Harbor facilities:

There are 226 piers, wharves, and docks at the port of Boston, most of which are located on the main ship channel at East Boston, Boston proper, Charlestown, and South Boston and on the Chelsea River and Chelsea waterfront. The piers are generally of open pile, timber deck construction, extending from stone or timber bulkheads with solid fill. Many of the piers have direct connections with one or more of the rail lines serving the port and nearly all of them are accessible by wide paved streets. A number of dry and/or cold storage

warehouses are located in close proximity to the waterfront and the general cargo terminals are provided with transit sheds and cargo-handling facilities so that freight can be handled efficiently and expediently. Depth of water in the berthing areas at the cargo-handling facilities generally do not exceed 35 feet although a depth of 40 feet is available at Commonwealth Pier Number 5 on the South Boston front. At some of the outfitting wharves of the Bethlehem Steel Company there is also a depth of 40 feet in the berthing area, and at Pier Number 2 in the Simpson Yard of this company the berth for the floating dry dock Number 1 has a depth of 47 feet.

The Port at Atlantic Avenue Waterfront.

The 29 facilities on the waterfront of the City of Boston along the Main Ship Channel and Charles River include several large terminals formerly used for handling coastwise and overseas general cargo which were diverted to other uses during World War II. Among such terminals are the Union Wharf at the foot of Clark Street and the Lewis Wharf South Pier near the junction of Atlantic Avenue and Commercial Street, which are now used for storage of wool; the Commercial Wharf South Pier, north of the foot of Richmond Street, and the T-Wharf at the foot of South Market Street, both of which are used for receiving and processing fish and lobsters and for berthing fishing boats; the Central Wharf at the foot of Milk Street, now used for berthing Government vessels; and India Wharf at the foot of India Street, which is a terminal for excursion vessels. Most of the terminals along this por-

tion of the waterfront are served by the Union Pacific Railroad, with connections to other railroads serving the port.

Topography - The Atlantic Avenue Waterfront and wholesale produce facilities to the west occupy the flat land created when the Great Cove was filled during the 1860's. The North End residential zone to the west and offices to the south are almost coterminus with the original shoreline which approximates the 20' contour mark.

The average differential between mean high-tide and mean low-tide is 9.50 feet. The highest tide on record occurred in 1851 when it reached a level of 15.0 feet above the low-tide datum of 0.00. Seldom, however, does the tide range over 4.0 feet above mean high-tide level or 3.00 feet below mean low-tide.

The existing wharf decks along Atlantic Avenue are approximately 14.0 feet above mean low-tide, while the water depth below mean low-water varies from 11.0 feet at Row's Wharf to 24.0 feet at Sargent's Wharf.².

THE WATERFRONT AND THE CITY

The Downtown Core

Downtown Boston is an area of some two-hundred and fifty city blocks, extending from Massachusetts Avenue to the Waterfront and from North Station to South Station. It excludes all residential areas and areas occupied by the New England Mechanical Center and the Massachusetts General Hospital.

Since the Downtown Core is a compound of several districts that identify themselves according to the predominance of a determined activity, it is my intention to analyze them one by one in order to determine the degree of influence of their function and character upon the waterfront area.

The districts to be analyzed are:

- a) The Retail Core
- b) The Faneuil Hall Market Area
- c) The Office Center
- d) The New Center of Government
- c) Finally, the North End, even though, technically, it is not a district of the Downtown Core, it will be included in this analysis due to its close relationship to the Waterfront.



The Downtown Core

Faneuil Hall Market Area

Between Atlantic Avenue and Dock Square, and Chatham and North Streets lies the Faneuil Hall Market area.

The first Faneuil Hall Market was built in 1742. During its first hundred and fifty years, the market area was able to adapt to the growth of population by expanding into buildings on filled land along the waterfront. In 1826 the Quincy Market was built, partially on filled land, and the two flanking warehouses on either side were built at the same time.

During the twentieth century, the market began to adapt itself to changing methods of transportation and an increased demand for space by seeking new locations. This was the beginning of a separation of the market commodities. The fish market traditionally located on T-Wharf moved partly to the Fish Pier in South Boston in 1910, the remainders staying until now on Atlantic Avenue. The Fruit Auction previously located on Central Wharf moved in 1914 to Charlestown and later, in 1953, moved again to South Boston. Finally, in 1952-53, at the time of the construction of the Central Artery, the wholesale meat dealers moved to New Market Square.

In spite of these movements, the wholesale food market is expected to continue to be the principal activity in this area although it is likely to decline over time. The larger

and more standardized wholesale food operations will tend to be located in outlying market areas, leaving behind a residual market which is characterized by the scale of operations, including auxiliary retail sales, and by the handling of local produce, highly perishable items, and specialized items or imported foods.³

The Retail Core

From a small settlement on the edge of the North End, in the early times of the city, the commercial center of Boston moved to the area alongside the Boston Common in the 1880's. By then, Washington, Tremont and the cross streets had become lined with shops, replacing the fine homes that existed before.

Together with the rapid growth of the city at the end of the last century and the beginning of this, the subway system was built having the downtown shopping district as its focus.

With the expansion of the business district into the Back Bay, many high^P-riced shopping activities moved from the older core to the newer quarters along Boylston and Newbury Streets, making this area an important sub-center of the shopping district.

Covering an area of approximately 38 acres, the shopping district is closely bounded by other major commercial areas. On the north and east lies the office district. To the south, there is a mixture of commercial produce areas, the principal ones being: textile wholesaling and manufacturing, amusement and consumer services. On the west lies the Boston Common.

The major units within the district are: 1) the Washington Street frontage between School and Essex Streets; 2) the Tremont Street frontage (along the east side) from Boylston to School Streets; 3) the cross streets between Tremont and Washington Streets - Winter and West Streets; Temple Place and Summer Street from Washington Street to the Church green (at the foot of Bedford Street).

The units differ functionally, in terms of types of retailing and other related uses, the detail of which is not relevant to this study.

The use of new suburban centers, answering the demands of an increasing population further removed from the old center, has brought some changes, both in direction of overall plant required and merchandizing policies of retailing in the downtown. The total plant has begun to contract (In 1956-7, one department store and two large apparel stores closed.). New growth has been principally in the continued expansion of two major department stores, large enough to set their own policies in spite of the trends.

This contraction will mean a probably decrease in the variety and choice offered to the shoppers. It will also mean that land at the center will be open to re-use by other activities that can afford the location. ⁴.

The Office Center

The downtown office district is a wedge between the retail area and the Central Artery. Recent office activities have been pushing into the retail section and this trend should continue with office functions occupying more and retailing less of downtown land.

Accessibility is one substantial advantage underlying the growth of the office activity. Two rapid transit lines serve the area, offering fast commuting to the clerical employees who comprise a majority of the district's daytime population.

The Central Artery puts the office district with ⁱⁿ quick reach of many sections of metropolitan Boston. Completion of the inner Belt Expressway and radial expressways will give executives easy accessibility to any major point in the metropolis.

Sizable increases in convenient parking have been achieved in recent years. The municipal parking program alone has added 3,000 spaces, within the office center since 1950.

At one time traffic congestion, parking shortages and building obsolescence threatened the stability of the office center. But impressive progress on the first two problems and a start of the third has helped the district to remain in tact and to register strong gains in total employment as

indicated in a recent study by the Greater Boston Economic Study Committee.

Logan International Airport is just ten minutes away. Boston's two rail terminals and some of the major port facilities are even closer.

The presence of business services of the widest range is another obvious advantage. Downtown amenities: hotels, clubs, restaurants, shops provide another anchor.

Future changes in office technology and economics, decentralization of the labor force, and new locational patterns of major company administrative functions will all affect the growth of downtown. On the basis of recent performance the net outlook is good.

A final factor is the body of public policy which directly affects office location. Today, communications between downtown civic leaders and political leaders are more effective than ever before. Both now recognize that their futures are inextricably woven together. They can and should successfully meet the challenge of the coming decades. ^{5.}

The New Center of Government

During the past 300 years Dock Square has been variously a center of shipping and commerce, a meeting place for revolutionaries, a headquarters for government, a meat and produce market.

But the Dock and the Square are gone. What remains is a portion of the market and number of historic places.

A block up the slope is Scollay Square which, in its gilded youth, had been a focus of business, and then at a mellow middle-age, a center for the arts, entertainment and hospitality.

Since then, dilapidation of the gaudiest type has swept through the Square.

In 1930, a group of architects headed by William Stanley Parker, proposed a new City Hall and Plaza at Scollay Square. After several years of intergovernmental negotiations, the project was dropped.

Picking up the thread in 1946, the City Planning Board proposed an ambitious government center including the new City Hall, a federal office building, state office building and peripheral commercial development.

For three years, planners, public officials, and business leaders have been advancing this scheme. So far \$50 million is

in site.

City, state and county buildings adjoin the Scollay Square-Dock Square area on two sides. It is therefore logical for them to carry their expansion programs into this district in a new, carefully planned complex.

In addition to City Hall, state and federal office buildings, a new Massachusetts Employment Security building is planned for construction now, and a new county building is anticipated later on.

Interlaced with the public buildings will be modern, private buildings for businesses now in the area and for others that will be attracted to first-class space in a new prestige location.

Employment in the area is expected to triple, which should bring an influx of local service establishments.

This section is virtually dead center on the metropolitan highway and transit systems, immediately adjacent to downtown office and financial centers.

The conservation area would encompass Faneuil Hall, Quincy Market, and one block left basically intact since the early 18th century.

They would be refurbished and reset, but not atrophied. Instead, they would be part of the city's daily life. The ground floor of Faneuil Hall would continue to function as a market.

Low and open in scale, the Center would form a valley between the towers of Charles River Park and the wall of State Street buildings which mark the beginning of the downtown business core.

The other axis would run from Beacon Hill to the waterfront. The Center would intermesh with, and invigorate all four adjoining neighborhoods.^{6.}

The North End

"The North End is an aging undustrial area located on the northern side of the study area, being North Street its accepted line limit, and inhabited by a low-income ethnic group. As the site of the original Boston colony, it was an important residential area of the day. Relics of this day still remain. From the time of the great wave of immigration, it has been the first settling place of immigrants from Europe. From 1850 to the present it has successively housed newly arrived Irish, Jewish and Italian immigrants, who settled immediately upon arriving from the docks. In 1905 it became a predominantly Italian colony, and presently over 90% of the population is of Italian origin, bound into a strong social unit.

A series of physical changes have taken place. The original peninsula was filled in and eventually the area was rebuilt almost entirely with four-story brick tenements crowded together on small plots of land, the pattern which exists today. The pattern has developed many of the characteristics of a slum.

The North End now presents a difficult problem. Its image as a slum and the potential of the land as high-tax producing property have raised cries for redevelopment. Political pressures on the part of the inhabitants, and social costs have tended to muffle these cries."

Proposals for renewal of this area have been already made. The present use of this land and its convenient location with respect to the commercial and office center have been commanding factors to decide to keep it residential, offering housing to people who either want or need to live close to the downtown core. 7.

Circulation and Transportation

The greatest avenues of approach and communication on the Waterfront are the Central Artery and its connected network, Summer Street, Northern and Atlantic Avenues, and Commercial Street. These roads and streets connect the Waterfront area with the storage facilities, sales areas, and all the major entrance and exit routes of Boston and the metropolitan area.

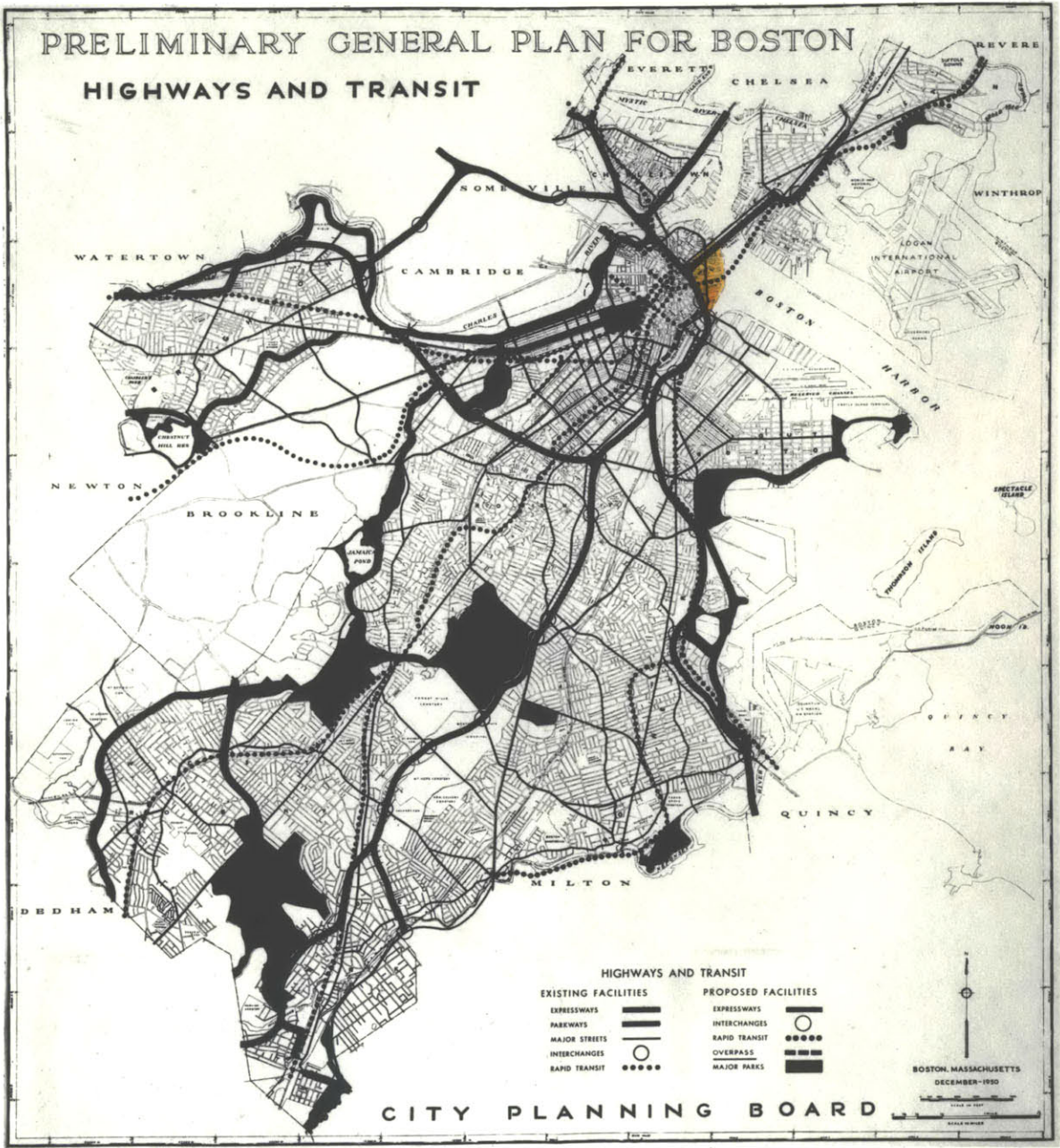
Within the site, Atlantic Avenue is the major trucking and automobile route, connecting North and South Stations and their adjacent bridges leading to outlying districts such as Charlestown and South Boston, respectively.

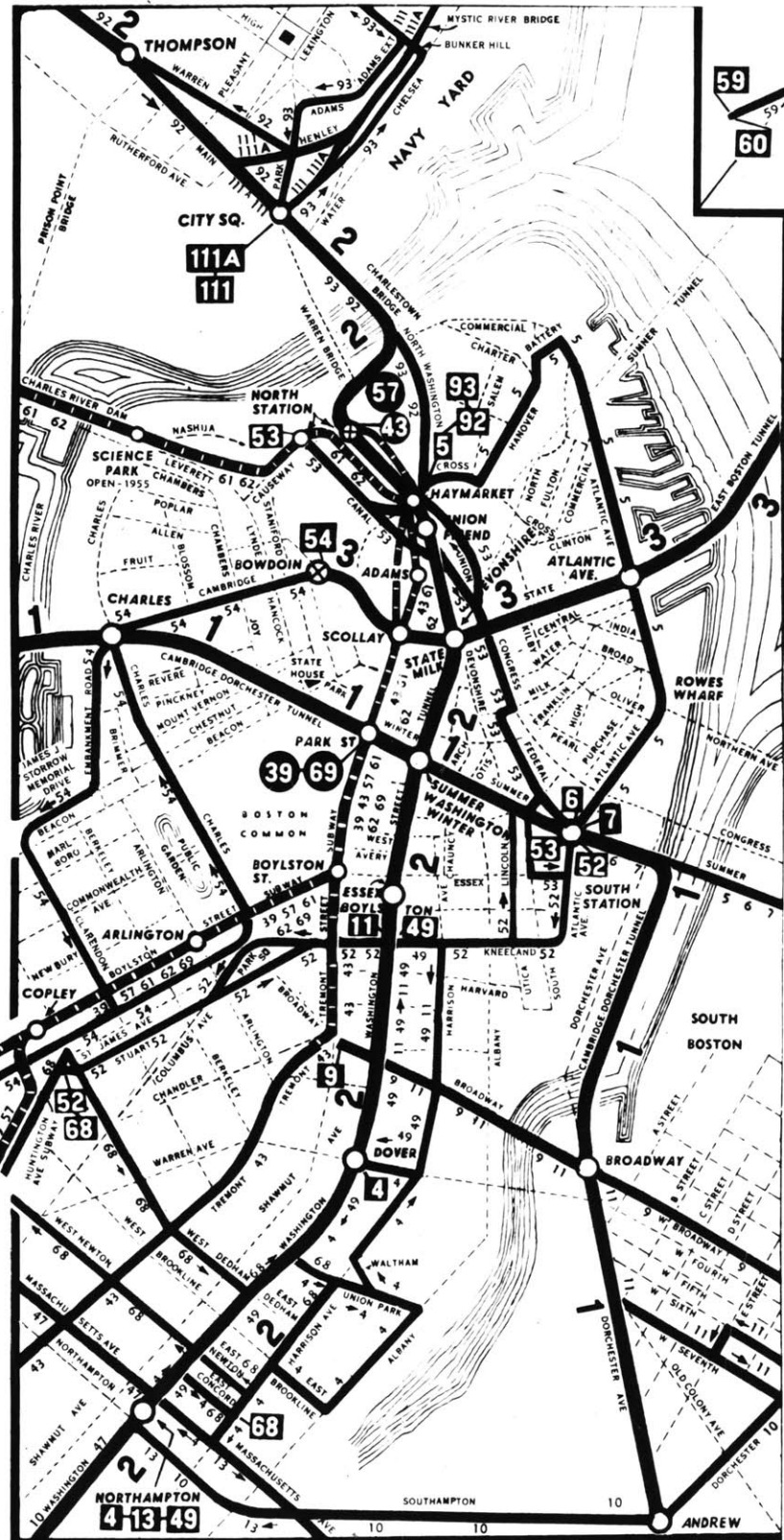
The portion of Commercial Street, leading into the North End's interior, and Hanover Street, are the second most important routes in this area. They link the northernmost part of the Waterfront with Sumner Tunnel and the interior of Boston's central business district. The new tunnel already started, parallel to Sumner Tunnel is expected to absorb the heavy traffic to and from East Boston.

Public transportation: The subway accesses to the waterfront area are located at North and South Stations and at Atlantic Avenue. These lines converge on central Boston with connections to the outlying districts. There is a single bus line serving the area; it runs from South Boston to South Station via Summer Street with a spur to pier 5, and a loop from North to South Station along Atlantic Avenue.

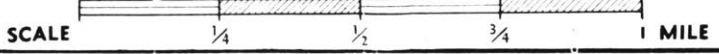
PRELIMINARY GENERAL PLAN FOR BOSTON

HIGHWAYS AND TRANSIT





M.T.A. LINES IN CENTRAL BOSTON



CONCLUSION

There is little about this Waterfront area in its present state of development which suggest its real potential. Of necessity, therefore, the following proposal will address itself especially to new uses and facilities which may be visualized and recommended for this area. A final restatement of the most significant present problems will be in order as a preliminary.

1. With few exceptions, the physical plant presents a dreary picture of absolescence, neglect, and vulnerability to fire.

There are only two fireproof structures of any consequence in the area from the MTA power station to the Appraisers Store Building at Northern Avenue. In addition to this, much of the pier-work itself is in an advanced state of decay.

2. Location of activities within the area has been generally haphazard, and continued operation, a wasteful expedient.

Once the center of Boston's waterborne commerce, this area houses now a miscellany of warehousing and light industrial facilities, which depend little upon shipping access. For these, the problem has been one of adapting out-moded piers and commercial structures to meet present-day processing and goods-handling requirements, with heavy reliance upon shipment by truck. Little demonstration is required to show that this adaptation has been something less than successful. Meanwhile, this significant section of Boston's waterfront is lost as a site for waterfront activities of any importance.

In consequence, this area is beset with an accumulation of problems, and there is little evidence of any interest in, or capacity for, effectively solving these problems through a process of self-regeneration arising from within the area itself. Both of these conditions strongly suggest that new goals must be set for the area, and an overall development program undertaken, if this area is to become again an asset to Boston, as a city and a port.

The following proposal takes two forms. First, it identifies those basic waterfront functions which are thought to represent this area's highest inherent potential, and which, at the same time, would appear to be most consistent with prospects for contiguous areas inland. Second, it takes the form of a proposed physical layout of the architectural arrangement of the facilities stated in the program, which would meet the demands of the proposed redevelopment program.

THE PROPOSAL

The Proposal

Within the analyzed area's potentials and relationships, there are two main uses recommended for an effective re-development program:

1. Predominantly PUBLIC USE, of this waterfront area, is proposed primarily because of its character and location. It affords the possibility of establishing the only feasible connection between the Downtown Core and the sea, thus recognizing the character of the city as a port. On the other hand, this is the section of the harborport which is most easily reached by the greatest number of people, both by car and by MTA.

Within this context the following facilities are recommended:

- a. A maritime Center, including a museum, aquarium and the display of the U.S.S. Constitution, would be consistent with the basic character of the area, both functional and historical.

- b. An excursion wharf, which would afford an attractive setting for a selection of waterfront shops and restaurants, as well as terminal facilities for excursion boats, and tie-up space for smaller craft.

- c. A public marina, intended primarily as an organized and protected tie-up area for small craft using this section of the harbor as a base of operations; this facility may also be expected to serve as significant point of arrival and short-term lay-over for visiting craft.

2. A HOUSING DEVELOPMENT, together with providing a good way of financing an operation of this nature, would also satisfy the demand for living quarters in the downtown area.

The advantages of this site for this purpose are numerous. Plenty of sun, light, and air will be available; a clear, unobstructed view of the harbor and its activities will be possible; the area will be within walking distance of downtown Boston; commercial, cultural, and recreational facilities would be located nearby for the community's use; finally, the Central Artery will be immediately available for ready access to outlying districts.

Together with these two basic uses, the area lends itself for the setting of a number of other related activities of public and semi-public characters, such as Hotels, office spaces, ship services, and a variety of retail commerce. It is therefore, recommended, finally, that a section of this area be set aside for an assortment of these establishments.

PROGRAM

1. Produce Market

- a. In addition to the Faneuil Hall Market Area, a compound wholesale-retail market will be provided with 100,000 square feet, net floor area, and a covered space, for the public while making their purchases, combined with the booths. Each booth shall be provided with a counter facing the public for the display of the produce.
- b. Truck servicing from the rear.
- c. Services in connection with produce market:

offices	2,000 square feet
restaurant	4,000 square feet

2. Public Marina

Adequately protected from the channel by a breakwater along the pierhead line. Initial capacity for 200 small boats.

- a. Berth for vessels from 25 to 60 feet, supplied with connections for water, electricity and telephone.
- b. Berths for yachts and motor boats under 25 feet.
- c. Float space where racing dingies may be hauled out when not in use.
- d. Foat near clubhouse, where row boats can be tied up temporarily.

- e. Berth or moorings for visiting yachts and motorboats, adjacent to clubhouse.
- f. Boat ramp.
- g. Fueling facilities.

3. Clubhouse

Placed so that it affords a good view of the marina.

In addition to 30,000 square feet of clubhouse floor area, a service and sales display space for recreational boats and equipment will be located on the water as part of the marina.

- a. showroom 5,000 square feet
- b. storage room for new boats, adjacent to showroom with truck accessibility 2,000 square feet
- c. motor shop 1,000 square feet
- d. carpenter shop with ramp from the water 1,500 square feet
- e. offices, etc. 1,000 square feet

4. Waterfront Commercial Aquarium

- a. Public space (lounge lobby, toilets, etc.)
- b. Exhibitions (various sizes of aquarium tanks, penguin tanks, display cases, etc.)
- c. Staff (director and secretary)
- d. Laboratory and workshop
- e. Services (locker rooms, closets, reservoirs, mechanical equipment)

Total: 50,000 square feet

5. Maritime Museum

Will be designed in connection with the exhibit of the U.S.S. Constitution presently on display at the Charlestown Navy Yard.

- a. Public space (lounge, lobby, toilets, etc.).
- b. Exhibitions (temporary exhibits, historical collections, etc.).
- c. Staff.
- d. Services (locker rooms, mechanical equipment).
- e. 210 feet for Constitution.

Total: 40,000 square feet

6. Sightseeing Boat Terminal

- a. Berthing space for 2 sightseeing boats (250 feet long).
- b. 250 foot pier for fishing parties
- c. Small terminal with ticket office, waiting space, and toilets.

7. Rental Office Area

80,000 square feet

8. Hotel

Approximately 250 rooms: 100,000 square feet

9. Stores

100,000 square feet

10. Outdoor Skating Rink

With artificial ice, about 40,000 square feet, not including the connected dressing rooms, restaurants, cafeterias, etc.

11. Housing

For a minimum of 6,000 people with the average household unit of 3,0.

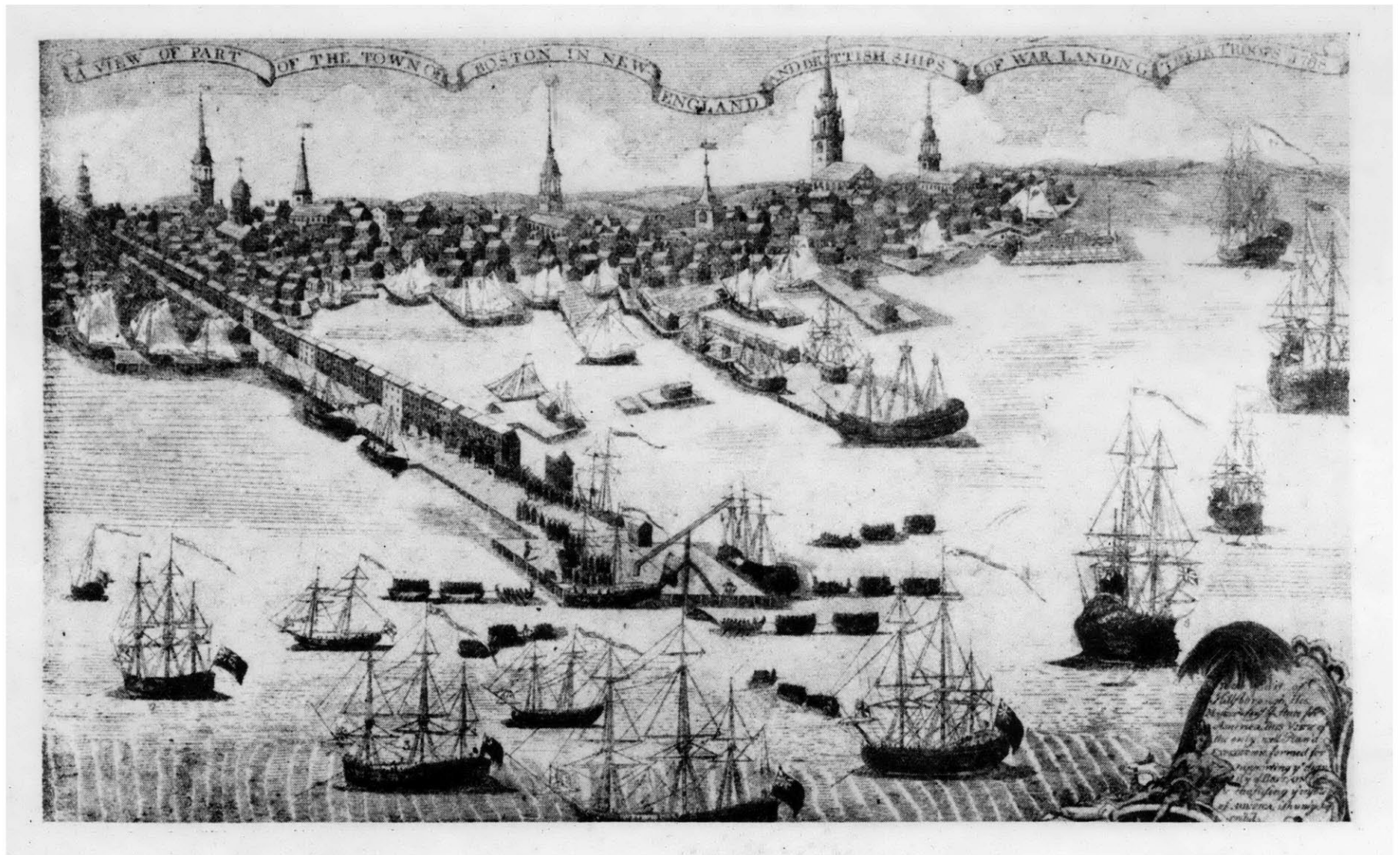
- a. Assumed gross floor area: 1,000 square feet per family.
- b. Nurseries: provide for 31 children per 1,000 persons.
- c. Kindergarten, elementary and high school (present facilities in North End to be utilized or expanded if need be).
- d. Religious Center.
- e. Recreational; in conjunction with general facilities.
- f. Arts; in conjunction with neighborhood schools and library in the Community Center.
- g. Neighborhood Shopping.
Shopping Center (present facilities in North End to be utilized).
Small groceries will be conveniently located in apartment dwellings.
- h. Gas service: 30,000 square feet.
- i. Parking: 0,65 cars per family (assumed 240 square feet per car).

12. Parking

General assumptions:

- a. Market 500 cars
- b. Marina 300 "
- c. Clubhouse 300 "
- d. Aquarium 300 "

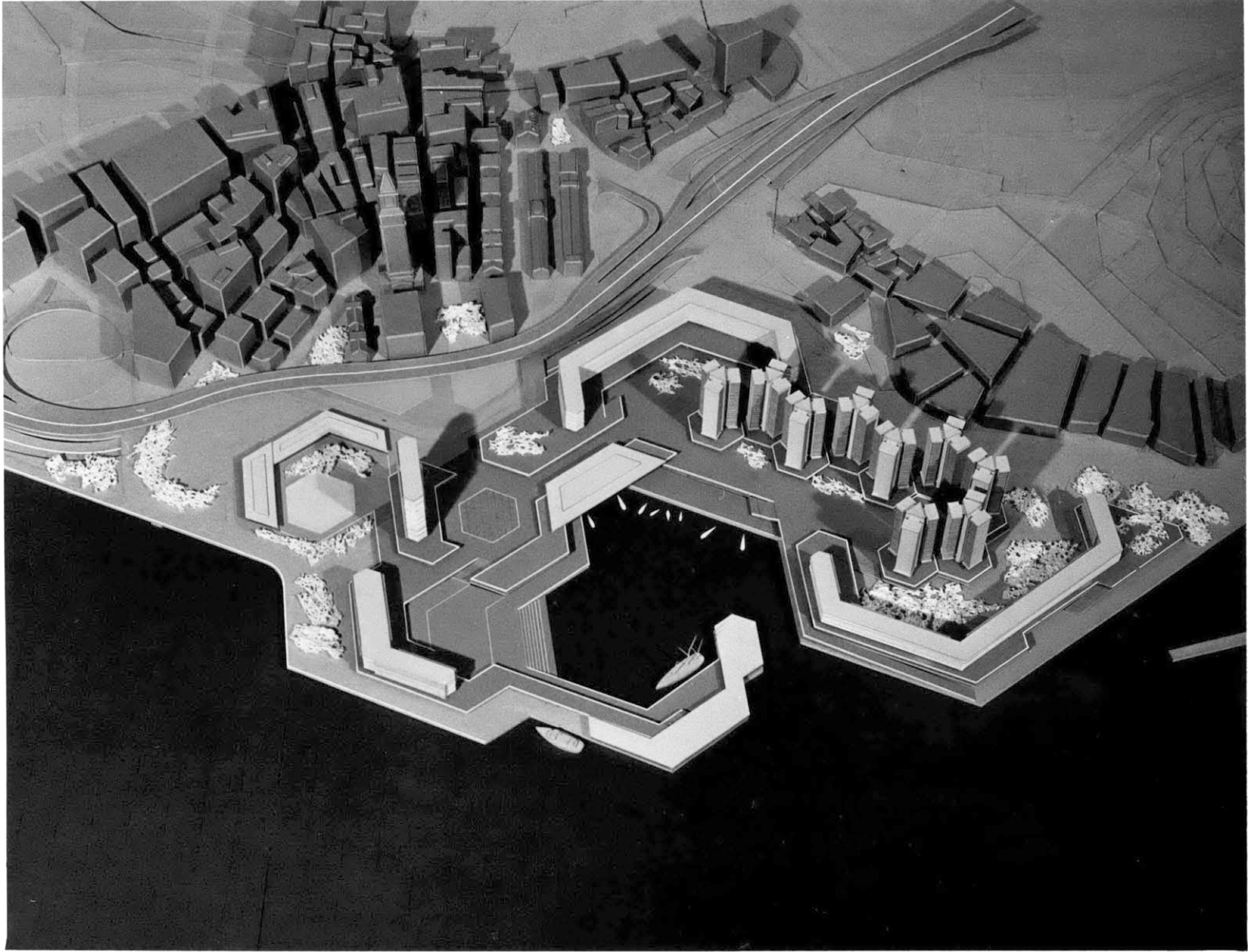
- e. Ice Skating Rink 200 cars
- f. Boat Terminal 400 "
- g. Hotel 200 "
- h. Maritime Museum 100 "
- i. Office 300 "
- j. Stores 400 "
- k. One space per 40 square feet of dining area will
be considered for restaurants.

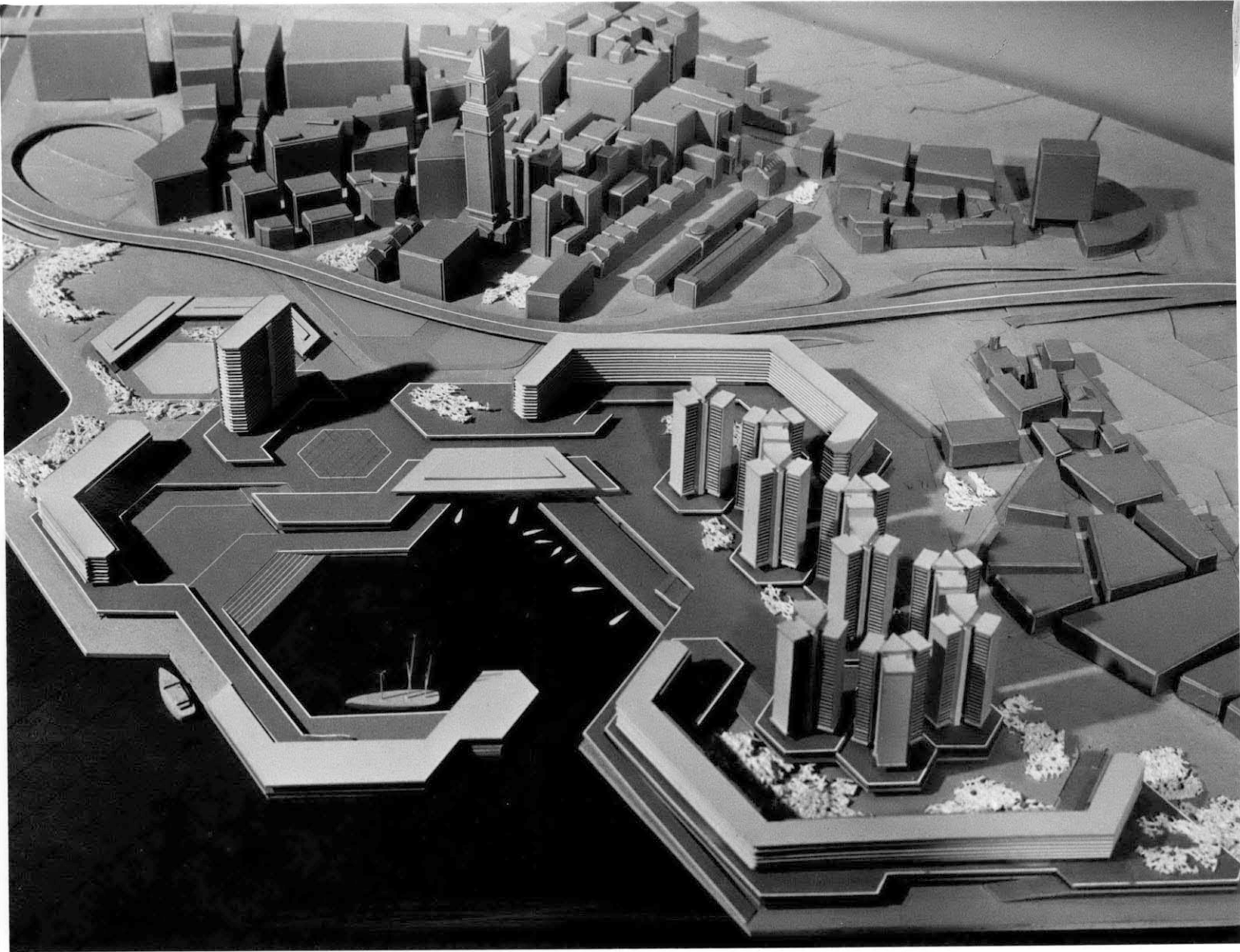


THE PAST

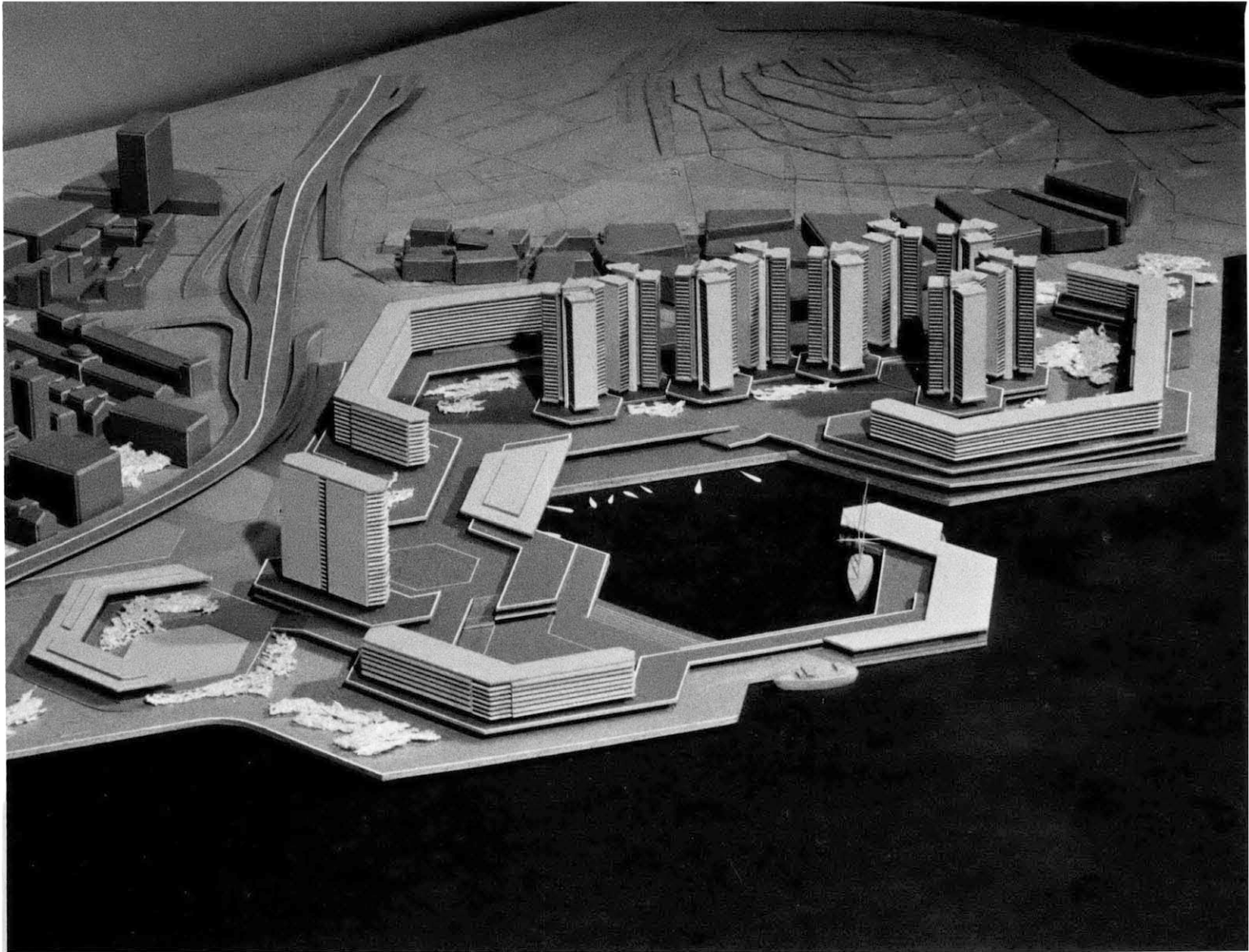


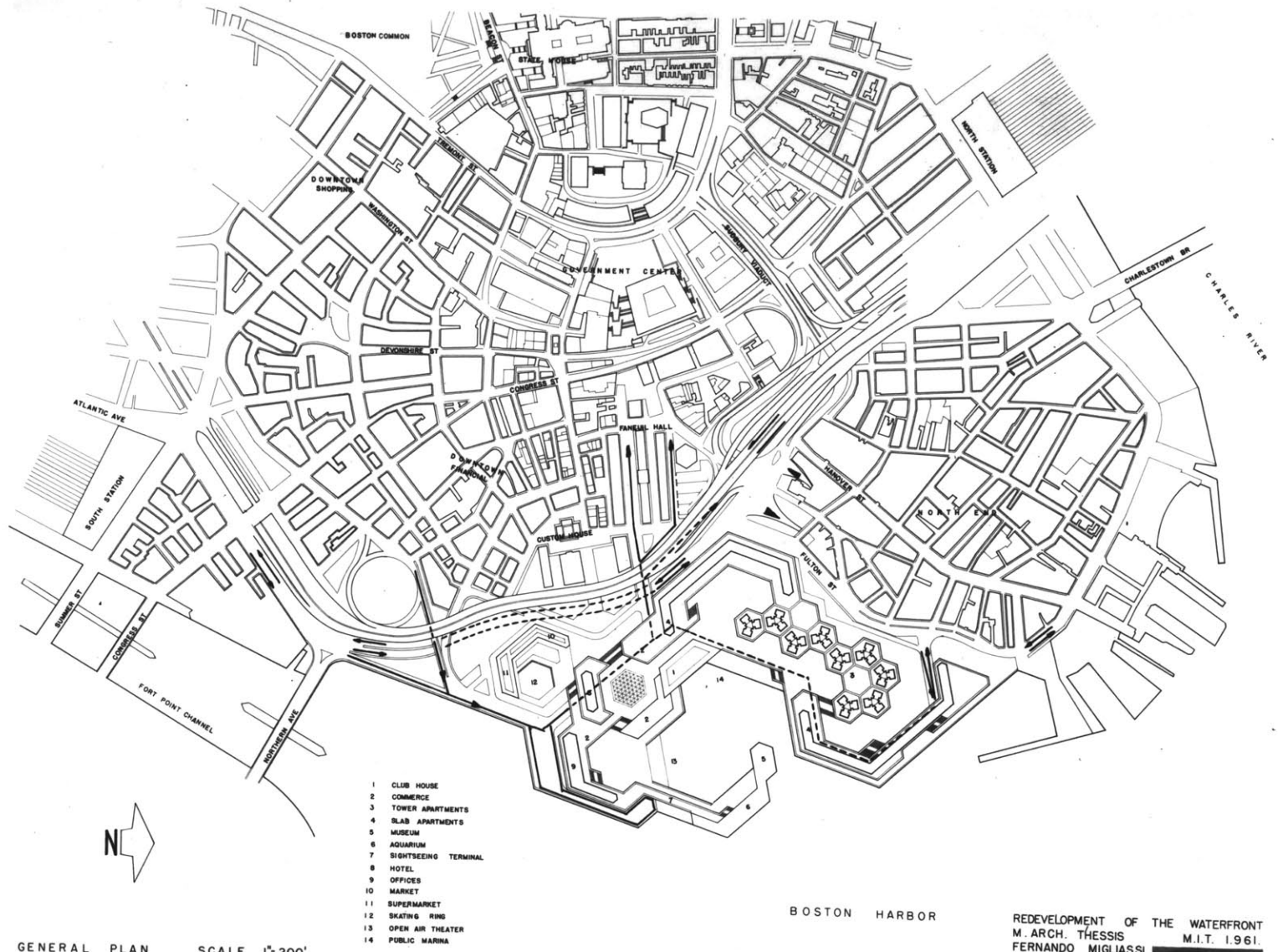
THE PRESENT







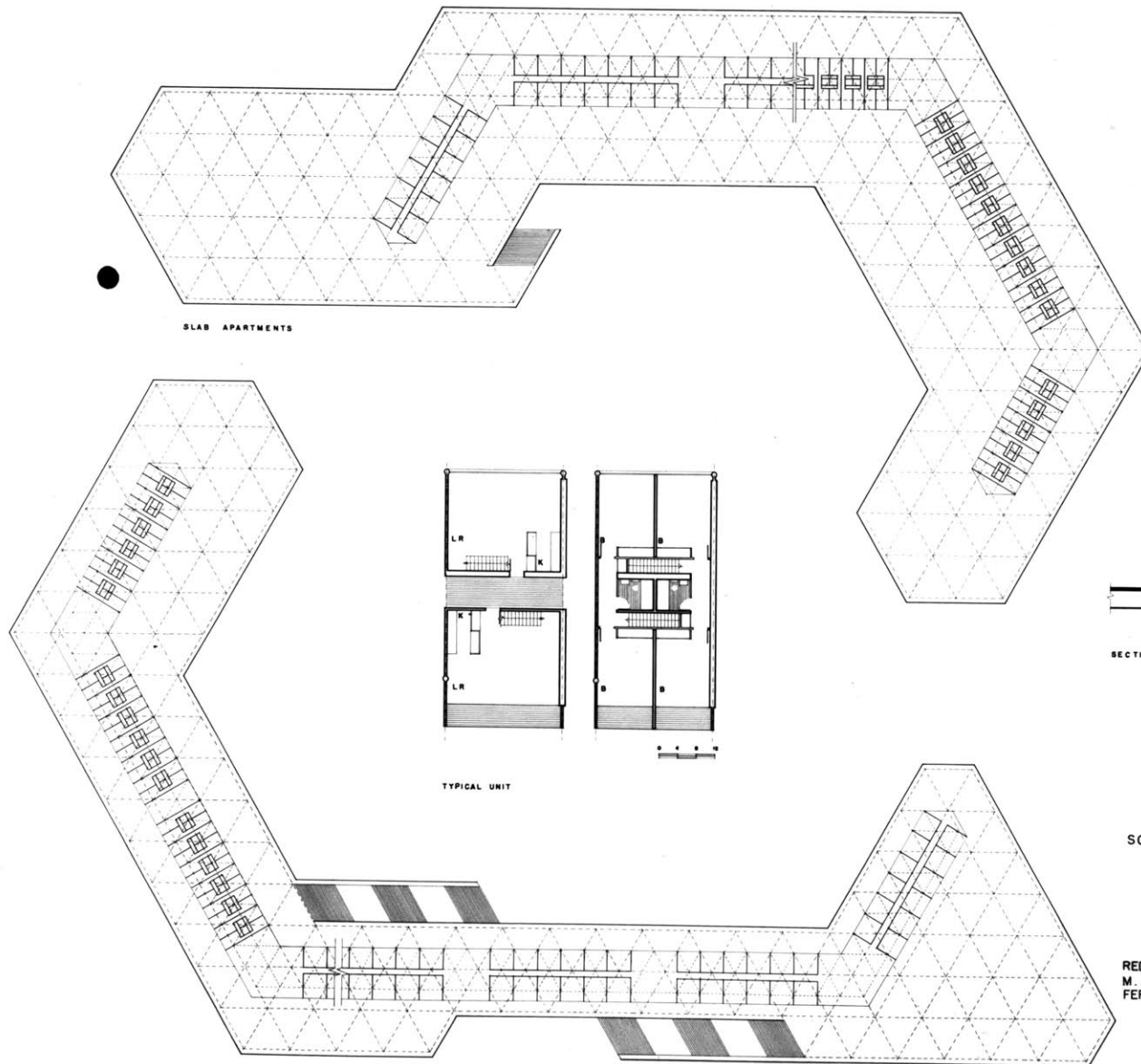




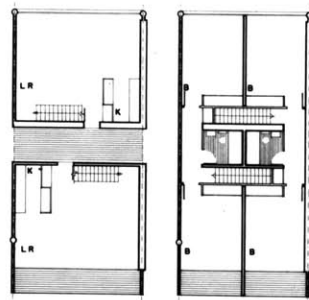
GENERAL PLAN SCALE 1"=200'

BOSTON HARBOR

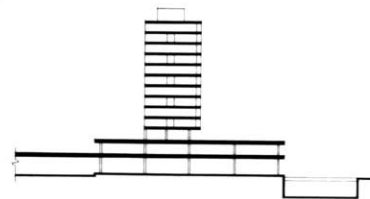
REDEVELOPMENT OF THE WATERFRONT
 M. ARCH. THESIS
 FERNANDO MIGLIASSI M.I.T. 1961.



SLAB APARTMENTS



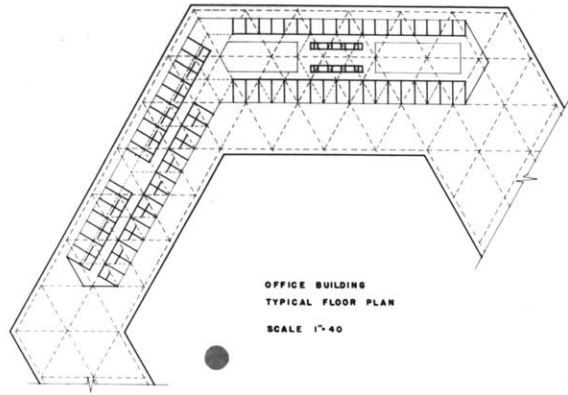
TYPICAL UNIT



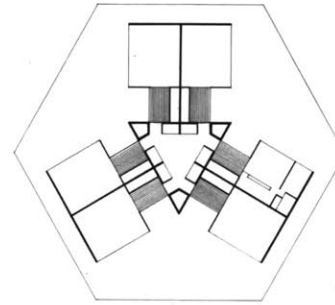
SECTION

SCALE 1"=40'

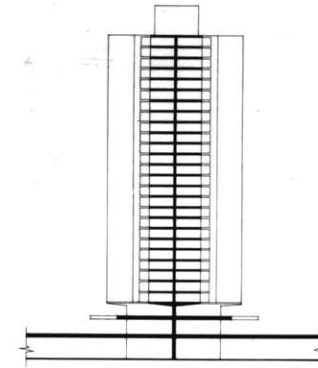
REDEVELOPMENT OF THE WATERFRONT
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 FERNANDO MIGLIASSI



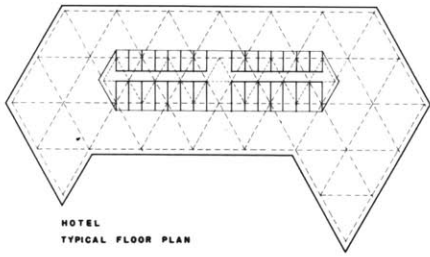
OFFICE BUILDING
TYPICAL FLOOR PLAN
SCALE 1"=40'



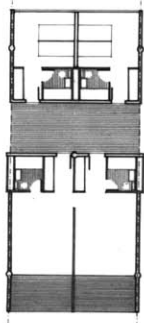
TOWER APARTMENTS
SCALE 1"=20'



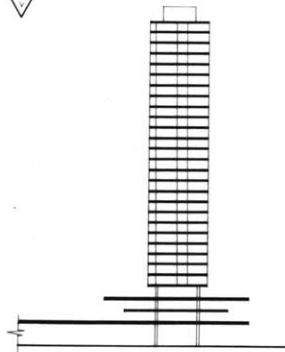
SECTION



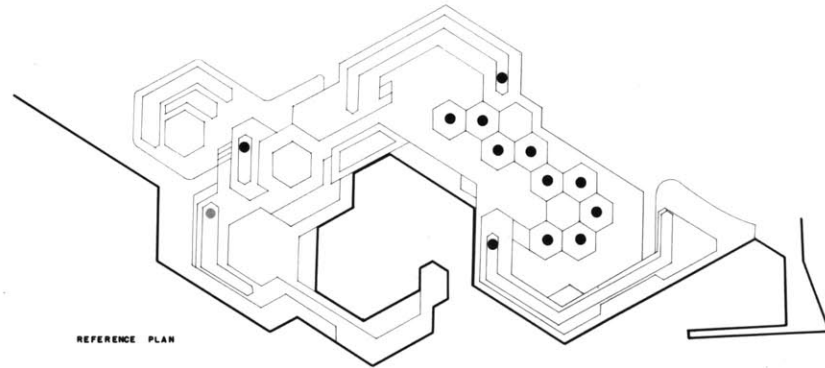
HOTEL
TYPICAL FLOOR PLAN



TYPICAL UNIT

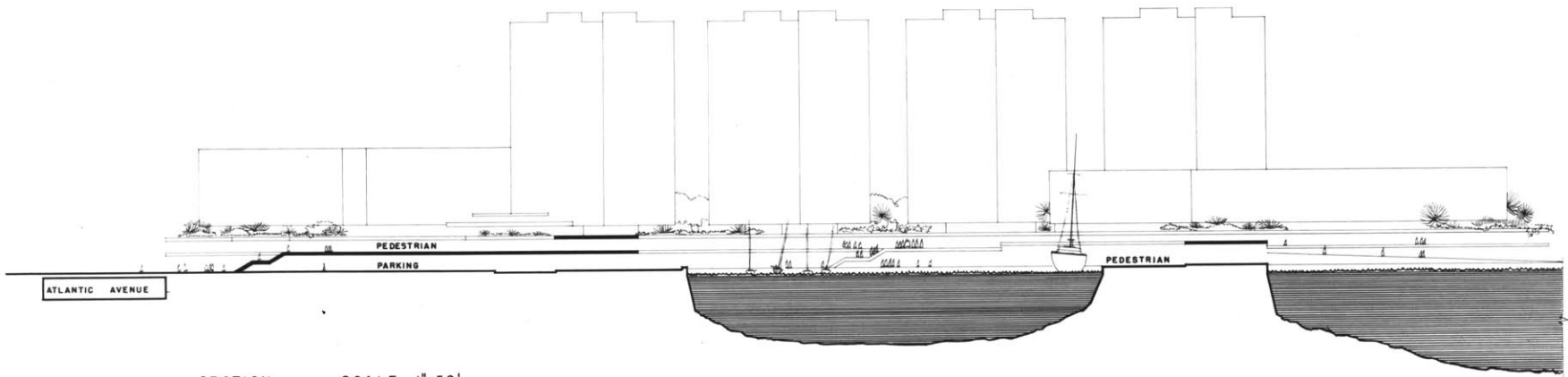


SECTION



REFERENCE PLAN

REDEVELOPMENT OF THE WATERFRONT
M. ARCH. THESIS M.I.T. 1961.
FERNANDO MIGLIASSI



SECTION SCALE 1"=50'

REDEVELOPMENT OF THE WATERFRONT
M.A.R.C.H. T.H.E.S.I.S. M.I.T. 1961
FERNANDO MIGLIASSI

FOOTNOTES

1. Peterson, Charles P., The Redevelopment of Boston's Atlantic Avenue Waterfront - M.I.T. Thesis, 1955.
State Street Trust Company, Boston's Growth, 1910.
2. Corps of Engineers of the United States Army and United States Maritime Commission, The Port of Boston Massachusetts, Port Series No. 3 (Revised 1946).
3. Moul, Harry E., The Boston Produce Market and Environs, An Analysis of Form and Activity with a Proposed Synthesis, M.I.T. Thesis, 1960.
4. Savitsky, Joseph, An Approach Towards the Redevelopment of the Downtown Shopping District of Boston, M.I.T. Thesis, 1958.
5. Greater Boston Chamber of Commerce, Greater Boston Business, Fall, 1959.
6. Ibid.
7. Frasca, John Robert, The Renewal of the North End of Boston, M.I.T. Thesis, 1959.

BIBLIOGRAPHY

Boston City Planning Board. General Plan for Boston, 1950.

Boston City Planning Board. North End Waterfront Proposal, A Preliminary Report, May 1956.

Corps of Engineers of the United States Army and United States Maritime Commission. The Port of Boston Massachusetts, Port Series No. 3 (Revised 1946).

Frasca, John Robert. The Renewal of the North End of Boston, M.I.T. Thesis, 1959.

Greater Boston Chamber of Commerce. Greater Boston Business, Fall, 1959.

Greater Boston Economic Study Committee. A Report on Downtown Boston, 1959.

Lynch, Kevin. The Image of the City, Joint Center for Urban Studies, The Technology Press & Harvard University Press, 1960.

Moul, Harry E. The Boston Produce Market and Environs, an Analysis of Form and Activity with a Proposed Synthesis, M.I.T. Thesis, 1960.

Peterson, Charles P. The Redevelopment of Boston's Atlantic Avenue Waterfront, M.I.T. Thesis, 1955.

Peterson, John M. A New Passenger Terminal for the Port of Boston, Massachusetts, M.I.T. Thesis, 1959.

Savitsky, Joseph. An Approach towards the Redevelopment of the Downtown Shopping District of Boston, M.I.T. Thesis, 1958.

State Street Trust Co. Boston's Growth, 1910.